4

Intelligent HMI and Monitors
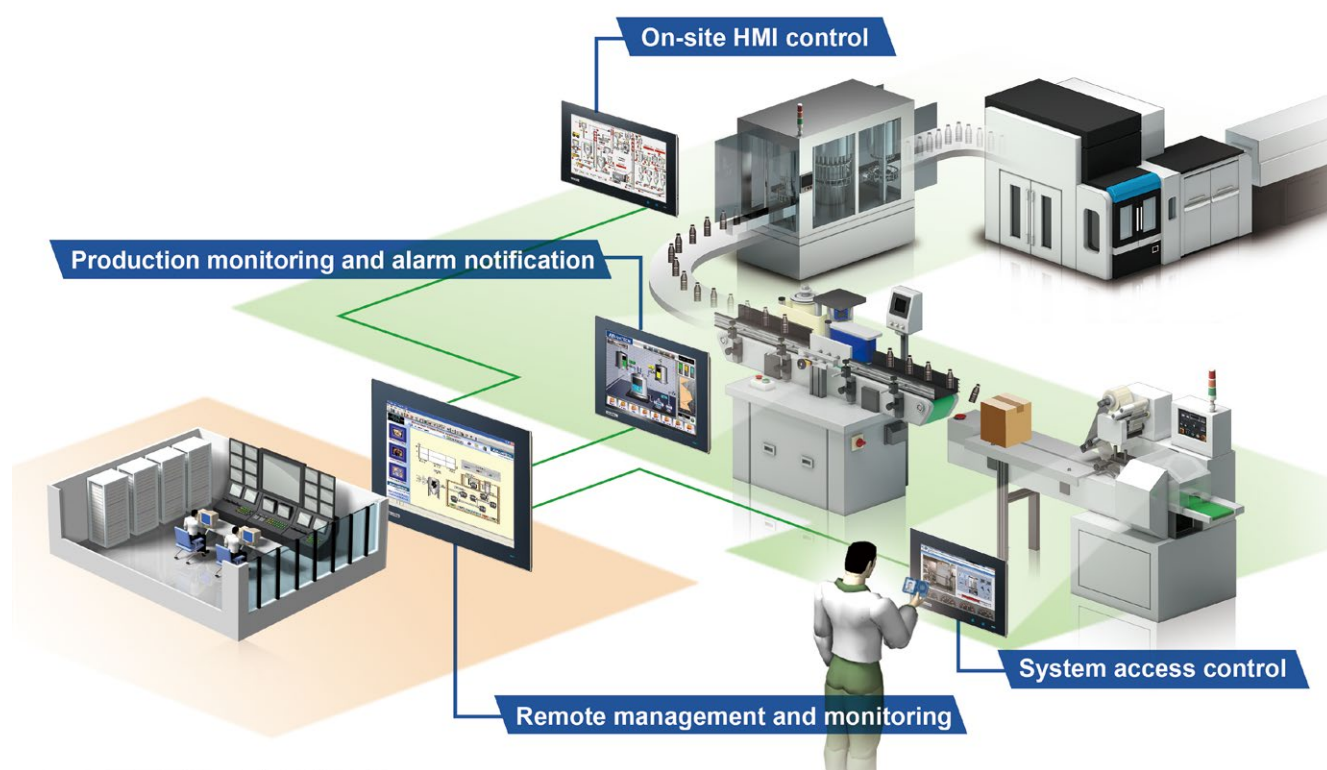
Introduction

To facilitate data visualization in Industry 4.0 applications, Advantech offers a diverse range of rugged and reliable HMI products of varying size (from 3.5" to 21.5") and screen ratio (4:3 and 16:9). Our HMI product categories include high-performance control panels that can be embedded into equipment and machines, low-power industrial thin clients for process monitoring, web terminals for next-generation smart factory applications, and standard industrial monitors. In addition to standard products, Advantech also provides customized domain-focused products to satisfy the needs of specific industries.

All Advantech HMI products are equipped with relevant software (WebAccess/HMI, WebAccess/SCADA or WISE-PaaS/RMM) as well as Advantech's iDOOR technology, making them suitable for various applications.

On-site HMI control

Production monitoring and alarm notification

Remote management and monitoring

System access control

Product Categories

Modular Series

In response to ongoing advances in Industry 4.0, Advantech has created its new series of modular panel PC solutions based on three performance-segmented modules — a control panel, industrial thin-client, and industrial monitor. The modular design of our solutions allows the computing box modules to be interchangeably combined with our display modules to provide comprehensive platform solutions for specific field applications. This modularization offers many advantages, including flexible configuration, rapid integration and deployment, reduced system downtime and maintenance costs, and support for future expansion.

Control Panel

Advantech's control panel series of PC-based open control platforms feature a high-performance, fanless design and can be integrated with a wide variety of machines in diverse environments to support complex machine control tasks and data visualization applications. The optimized design includes three Gigabit LANs that support multiple fieldbus communication protocols, an IP66-rated front panel that protects against dust and water ingress, and support for flexible iDOOR and PCIe expansion, making these platforms particularly ideal for industrial automation control operations.

Thin Client Terminals

Advantech's thin client modules feature a compact, fanless, and low-power design that supports multiple aspect ratios (4:3 and 16:9) and allows the modules to be equipped with a range of display sizes (5.7" to 21.5"). These thin client modules are primarily deployed as manufacturing execution systems (MESs) or for work flow monitoring and production process visualization. Under the Industry 4.0 trend, thin clients are widely utilized in distributed control architectures because of their easy deployment and suitability for the centralized management of devices and information. This architecture allows the OS to be quickly dispatched from server to client following a hardware replacement while still ensuring data security.

Operator Panel

With SCADA software moving toward cloud-based applications, simple web-based terminals with HTML5 browser support have become an economical option for process monitoring. Advantech's WebOP series of operator panels feature a range of display sizes (7" to 12") and support multiple communication interfaces (e.g., RS-232/422/485, Ethernet, and USB). Bundled with WebAccess/HMI software, Advantech's WebOP series supports over 450 PLC communication protocols, ensuring convenient integration with equipment made by a comprehensive range of manufacturers.

Domain Focused

In addition to standard products, Advantech provides domain-focused systems with customizable features designed to satisfy specific requirements across various vertical markets. Verified with ATEX Class 1 Division 2/EN 50155 certification, Advantech's domain-focused rugged HMIs are sufficiently robust for operation in extreme environments typical of the locomotive, food and beverage, oil and gas, and machine tool manufacturing industries. Ensuring system flexibility and compatibility are also major focus points for Advantech when designing domain-focused HMI products.

Industrial Monitors

Independent controllers and industrial PCs embedded in machines require an interface for data processing and visualization, for which Advantech produces industrial monitors in a range of sizes (6", 12.1", 15", 17", 18.5", to 21.5"). Featuring an industrial-grade LED LCD with a backlight lifetime of 50,000 hours, high IP-rated bezel, and wide temperature support, our industrial monitors are equipped to withstand operation in harsh environments. Versatile mounting options (panel, wall, desktop, rack, and VESA arm) are also supported to ensure easy installation for various usage scenarios.

Modular Panel PCs

Panel Module

P/N	FPM-D12T-AE	FPM-D15T-AE	FPM-D17T-AE	FPM-D18W-AE	FPM-D21W-AE
Panel Size	12"	15"	17"	18.5"	21.5"
Resolution	1024 x 768	1024 x 768	1280 x 1024	1366 x 768	1920 x 1080
Touch	5-wire resistive touch	Projected capacitive touch	Projected capacitive touch	Projected capacitive touch	Projected capacitive touch
Wi-Fi Antenna	-	✓	✓	✓	✓
NFC Reader	-	△	△	△	△
IP Rating	IP66-rated front panel	IP66-rated front panel	IP66-rated front panel	IP66-rated front panel	IP66-rated front panel

Box Module

Coming Soon

P/N	TPC-B200-E12AE	TPC-B200-J12AE	TPC-B500-633AE	TPC-B500-653AE	TPC-B500-6C2AE	TPC-B500-673AE
CPU	Intel® Atom® E3940 Processor	Intel® Celeron® J3455 Processor	Intel® Core™ i3-6100U	Intel® Core™ i5-6300U	Intel® Celeron 3955U	Intel® Core™ i7-6600U
Memory	4 GB DDR3L 1600 MHz SO-DIMM	4 GB DDR3L 1600 MHz SO-DIMM	8 GB DDR4 2133 MHz SO-DIMM	8 GB DDR4 2133 MHz SO-DIMM	4 GB DDR4 2133 MHz SO-DIMM	8 GB DDR4 2133 MHz SO-DIMM
I/O	2 x RS-232/422/485, 2 x USB 3.0, 2 x USB 2.0, 2 x GbE, 1 x Line Out, 1 x DP	2 x RS-232/422/485, 2 x USB 3.0, 2 x USB 2.0, 2 x GbE, 1 x Line Out, 1 x DP	1 x RS-232, 1 x RS-232/422/485, 2 x USB 3.0, 2 x USB 2.0, 3 x GbE, 1 x Line Out, 1 x DP	1 x RS-232, 1 x RS-232/422/485, 2 x USB 3.0, 2 x USB 2.0, 3 x GbE, 1 x Line Out, 1 x DP	1 x RS-232, 1 x RS-232/422/485, 2 x USB 3.0, 2 x USB 2.0, 3 x GbE, 1 x Line Out, 1 x DP	1 x RS-232, 1 x RS-232/422/485, 2 x USB 3.0, 2 x USB 2.0, 3 x GbE, 1 x Line Out, 1 x DP
Expansion	1 x Full-size mini PCIe	1 x Full-size mini PCIe	1 x Half-size PCIe, 2 x full-size mini PCIe	1 x Half-size PCIe, 2 x full-size mini PCIe	1 x Half-size PCIe, 2 x full-size mini PCIe	1 x Half-size PCIe, 2 x full-size mini PCIe
Power Input	24 V_{DC} ± 20%	24 V_{DC} ± 20%	24 V_{DC} ± 20%	24 V_{DC} ± 20%	24 V_{DC} ± 20%	24 V_{DC} ± 20%
Operating System	Microsoft® Windows 10 IoT Enterprise LTSB	Microsoft® Windows 10 IoT Enterprise LTSB	Microsoft® Windows WES7 (32/64-bit), Windows 7 (32/64-bit), Ubuntu 16.04, Windows 10 IoT Enterprise LTSB	Microsoft® Windows WES7 (32/64-bit), Windows 7 (32/64-bit), Ubuntu 16.04, Windows 10 IoT Enterprise LTSB	Microsoft® Windows WES7 (32/64-bit), Windows 7 (32/64-bit), Ubuntu 16.04, Windows 10 IoT Enterprise LTSB	Microsoft® Windows WES7 (32/64-bit), Windows 7 (32/64-bit), Ubuntu 16.04, Windows 10 IoT Enterprise LTSB
Mount Options	Panel, stand, and VESA mount (with optional mounting kit)	Panel, stand, and VESA mount (with optional mounting kit)	Panel, stand, and VESA mount (with optional mounting kit)	Panel, stand, and VESA mount (with optional mounting kit)	Panel, stand, and VESA mount (with optional mounting kit)	Panel, stand, and VESA mount (with optional mounting kit)

Monitor Box Modules

P/N	FPM-B700-AE
Video Interface Available	HDMI, DP, DVI, VGA, iLink
Power Input	24 V_{DC} ± 20%
Mount Options	Panel, stand, and VESA mount
iLINK Technology	Supported

TPC-5000 Series

Modular Multi-Touch Panel Computer with 21.5" Full HD/18.5" HD/17" SXGA/ 15" XGA/12" XGA LED LCD and 6th Gen. Intel® Core™/Celeron® Processor

Features

- Intel® Celeron® 3955U/Core™ i3-6100U/i5-6300U/i7-6600U processor with 4/8 GB DDR4 SODIMM
- Industrial-grade LED LCD with a lifespan of 50,000 hours
- Modular design enables flexible configuration and easy maintenance
- Display modules available in various sizes with projected capacitive or 5-wire resistive touch control
- Programmable home key and iKey for adjusting system settings
- Built-in TPM 2.0 technology
- 2 x full-size mini-PCIe and 1 x half-size PCIe
- IP66-rated front panel protects against water and dust
- 3 x LAN with multiple fieldbus protocol support and LAN surge protection
- Panel logo can be customized
- Supports SSD expansion

Introduction

The TPC-5000 series of preconfigured control panel systems is the first of Advantech's TPC range of modularized industrial panel solutions. TPC-5000 series systems comprise a box module powered by a 6th Gen Intel® Core™/Celeron® processor combined with an industrial-grade LED LCD module, providing compact and fanless control panel solutions that support high-performance computing. Built to withstand diverse industrial environments, the TPC-5000 display modules feature an IP66-rated front panel for water and dust resistance, a scratch-resistant glass panel that supports projected capacitive or 5-wire resistive touch control, and a robust enclosure with die-cast aluminum alloy front bezel. Meanwhile, the TPC-5000 box modules feature MRAM and TPM 2.0 technology and 3 x LANs with surge protection and multiple fieldbus protocol support for increased data security and network connectivity. To expand the system functions and capabilities, optional iDoor and Wi-Fi/NFC modules can be integrated with the TPC-5000 series systems. Designed for flexible expansion and easy maintenance, TPC-5000 series systems can also be integrated with optional iDoor and Wi-Fi/NFC modules for enhanced functionality.

Specifications

General

- **BIOS** AMI UEFI
- **Certification** BSMI, CCC, CE, FCC Class A, UL, EAC, 61010
- **Cooling System** Fanless design
- **Enclosure** Front bezel: Die cast aluminum alloy
  Back housing: SECC
- **Mount Options** Panel, stand, and VESA (with optional kit)
- **OS Support** Microsoft® Windows WES7 (32/64-bit), Windows 7 (32/64-bit), Windows 10 IoT Enterprise LTSB
- **Power Input** 24 V_{DC} ± 20%
- **Power Consumption** 27W typical, 90W max.
- **Watchdog Timer** 1 ~ 255 sec (system)

Hardware

- **CPU** 6th Gen Intel® CeleronR 3955U 2.00 GHz
  6th Gen Intel® Core™ i3-6100U 2.30 GHz
  6th Gen Intel® Core™ i5-6300U 2.40 GHz
  6th Gen Intel® Core™ i7-6600U 2.60 GHz

- **Memory** TPC-B500-6C2AE: 4 GB DDR4 2133 MHz SODIMM SDRAM (up to 16 GB)
  TPC-B500-633AE/653AE/673AE: 8 GB DDR4 2133 MHz SODIMM SDRAM (up to 16 GB)
- **LAN** 3 x 10/100/1000BASE-T (2 x Intel® I210, 1 x Intel® I219)
- **Expansion Slots** 1 x Half-size PCIe
  2 x Full-size mini PCIe
- **Storage** 1 x M.2 (2280) SATA slot
  1 x 2.5" SATA SSD slot
  1 x CFast (optional via iDoor module)
- **I/O** 1 x RS-232, 1 x RS-232/422/485
  2 x USB 3.0, 2 x USB 2.0
  1 x Audio line out
  1 x DisplayPort 1.2 Out

Environment

- **Humidity** 10 ~ 95% RH @ 40 °C, non-condensing
- **Ingress Protection** IP66-rated front panel
- **Vibration Protection** With SSD: 3 Grms (5 ~ 500 Hz) (operating, random vibration)
- **Operating Temperature** 0 ~ 55 °C (32 ~ 131°F); 0 ~ 50 °C (32 ~ 122 °F) for 18.5" display panel
- **Storage Temperature** -20 ~ 60 °C (-4 ~ 140 °F)
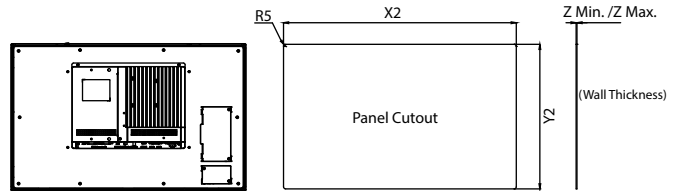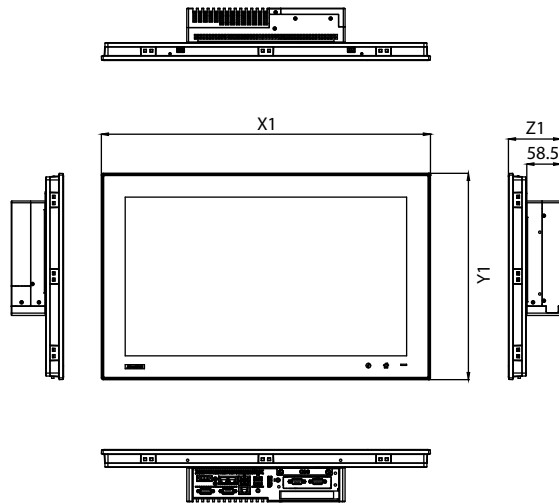
Display Panel Modules

	Display Size	12.1"	15"	17"	18.5"	21.5"
LCD Panel	Display Type	XGA TFT LED LCD	XGA TFT LED LCD	SXGA TFT LED LCD	HD TFT LED LCD	Full HD TFT LED LCD
	Max. Resolution	1024 x 768	1024 x 768	1280 x 1024	1366 x 768	1920 x 1080
	Max. Color	16.2M	16.7M	16.7M	16.7M	16.7M
	Luminance	600 cd/m²	400 cd/m²	350 cd/m²	250 cd/m²	300 cd/m²
	Viewing Angle (H/V)	160°/140°	160°/140°	160°/140°	170°/160°	178°/178°
	Backlight Life	50,000 hr	50,000 hr	50,000 hr	30,000 hr	50,000 hr
	Contrast Ratio	700:1	700:1	800:1	1000:1	5000:1
Touchscreen	Type	5-wire resistive	Projected capacitive	Projected capacitive	Projected capacitive	Projected capacitive
	Light Transmission	Above 75%	90% ± 3%	90% ± 3%	90% ± 3%	90% ± 3%
	Anti-Glare Treatment	Yes	Yes	Yes	Yes	Yes
	Built-in iKey	No	Yes	Yes	Yes	Yes
Expandability	Wi-Fi/NFC Support on Front Panel	No	Optional	Optional	Optional	Optional
Certification		IEC-61010-2	No	Yes	Yes	No	No

Dimensions

Unit: mm

Display Size	Panel Dimensions (mm)			Cutout Size (mm)		Wall Thickness	
	X1	Y1	Z1	X2	Y2	Z Min.	Z Max.
12"	311.8	238	85.6	303	229	1	6
15"	383.2	307.3	86	374.5	298.5	1	6
17"	410.4	343.4	86.8	401.3	334.8	1	6
18"	488	309	88.8	479.3	300.3	1	6
21.5"	558.4	349.8	88.8	550.3	341.8	1	6

Ordering Information

Preconfigured Modular Systems

- **TPC-5152T-633AE** 15" XGA touch panel with Intel® Core™ i3-6100U dual-core processor (2.30 GHz) and 8 GB RAM
- **TPC-5172T-633AE** 17" SXGA touch panel with Intel® Core™ i3-6100U dual-core processor (2.30 GHz) and 8 GB RAM
- **TPC-5212W-633AE** 21.5" FHD touch panel with Intel® Core™ i3-6100U dual-core processor (2.30 GHz) and 8 GB RAM

*Contact your local sales team for configuration queries.

Standalone Modules

Box Modules	TPC-B500-6C2AE	TPC-B500-633AE	TPC-B500-653AE	TPC-B500-673AE
Description	Intel® Celeron® 3955U, 4 GB DDR4	Intel® i3-6100U, 8 GB DDR4	Intel® i5-6300U, 8 GB DDR4	Intel® i7-6600U, 8 GB DDR4

| Display Panel Modules	FPM-D12T-AE	FPM-D15T-AE	FPM-D17T-AE	FPM-D18W-AE	FPM-D21W-AE
Description	12.1" XGA	15" XGA	17" SXGA	18.5" HD	21.5" Full HD

Optional Accessories

- **1702002600** Power cable (US) 1.8 M
- **1702002605** Power cable (EU) 1.8 M
- **1702031801** Power cable (UK) 1.8 M
- **1700000596-11** Power cable (China/Australia) 1.8 M
- **96PSA-A120W24T2** Adapter 100 ~ 240V 120W 24V 5A
- **98R35000020** mPCIe HDMI & VGA module for TPC 5000
- **98R35000010** Wi-Fi module 802.11 bgn/RT5390 1T1R with USB signal
- **98R35000000** USB NFC/RFID module ADT-006
- **TPC-RUSB-W10LTSBV** Win10 IoT Enterprise LTSB OS with recovery image for Intel® Core™ i3/i5 and Celeron®
- **TPC-RUSB-W10LTSBH** Win10 IoT Enterprise LTSB OS with recovery image for Intel® Core™ i7
- **TPC-5000T-VMKE** VESA mounting kit for TPC 5000 and 2000 Series
- **TPC-1000T-WMKE** VESA and Wall mounting kit for TPC series from 10" to 17" panels

iDoor Modules

- **PCM-24D2R4-AE** 2-Port isolated RS-422/485 mPCIe, DB9
- **PCM-27D24DI-AE** 24-Channel isolated DI/O w/ counter mPCIe, DB37
- **PCM-26D2CA-AE** 2-Port isolated CANBus mPCIe, CANopen, DB9
- **PCM-24R1TP-AE** 1-Port Gigabit Ethernet, Intel® 82574L, mPCIe, RJ45
- **PCM-26D1DB-MAE** 1-Port Hilscher netX100 fieldbus mPCIe, PROFIBUS, DB9, master

Front View
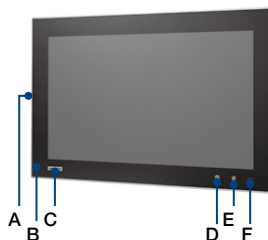
A. Wi-Fi antenna
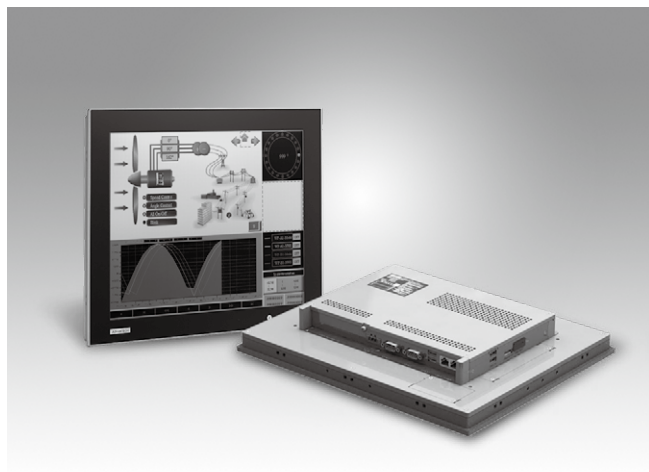B. NFC card reader
C. Logo
D. iKey
E. Home key
F. Power indicator

Rear View
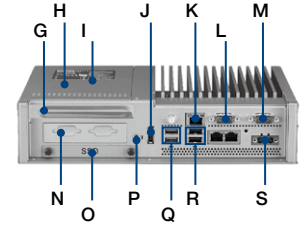
G. Half-size PCIe
H. 2 x mPCIe
I. M.2 for storage
J. DisplayPort
K. 3 x LAN
L. RS-232
M. RS-232/422/485

N. iDoor expansion
O. SSD bay
P. Audio out
Q. 2 x USB 3.0
R. 2 x USB 2.0
S. Power input

Application Software

WebAccess/SCADA	Advantech WebAccess is a 100% web-based SCADA (supervisory control and data acquisition) software that serves as an IIoT platform by providing open interfaces for partners to develop IoT applications for diverse vertical markets.
WebAccess/HMI	WebAccess/HMI is human-machine interface (HMI) software based on Microsoft's Windows operating system. This software features excellent communication and monitoring capabilities, supports more than 350 PLC communication protocols, and offers a wide choice of screen design objects to satisfy diverse integrations of factory automation and HMI operation and monitoring requirements.
CODESYS	CODESYS is an open control solution that allows users to easily develop a PC-based real-time control system, enables real-time PLC or PLC/SoftMotion control with flexible fieldbus options such as PROFINET, EtherCAT, EtherNet/IP, CANopen, and Modbus TCP/RTU, and facilitates on-site visualized HMI operation. The software/hardware flexibility and the stability of a PC-based cabinet controller are suitable for various control applications in vertical industries.

TPC-2000 Series

Modular Industrial Thin-Client Panel Computer with 21.5" Full HD/18.5" HD/ 17" SXGA/15" XGA/12" XGA LED LCD and Intel® Celeron® J3455 Processor

1 Software and Industry Solutions
2 Industrial Server
3 Intelligent System
4 Intelligent HMI and Monitors
5 Automation Computers and Controllers
6 Industrial Communication
7 Remote I/O Modules
8 Industrial I/O and Video Solutions

Features

- Intel® Celeron® J3455 quad-core, 1.50 GHz, processor with 4GB DDR3L SODIMM
- Modular design enables flexible configuration and easy maintenance and upgrades
- Front panel module with P-CAP multi-touch sensor available in various sizes (the 12.1" module is equipped with 5-wire resistive touch control)
- Industrial-grade LED LCD with a lifetime of 50,000 hours (18.5" 30,000 hours)
- Built-in intelligent home key and i-key (only for models with P-CAP touch control)
- System status LED indicators in front panel
- Supports 1 x full-size mini PCIe, 1 x iDoor module, and 1 x HDD bay
- IP66-rated front panel and panel mount
- Built-in Wi-Fi antenna and NFC reader on front panel (with optional Wi-Fi/ NFC module)
- Integrated power isolation to minimize field interference
- Supports Advantech's WISE-PaaS/RMM remote device management software
- Up to 3 levels of logo customization (optional)

R33138   CCC   CE   FCC   c UL us LISTED E180881 I.T.E.   EAC

Introduction

The TPC-2000 series is the first modular range of Advantech's industrial thin-client offerings. Featuring a low-power Intel® Celeron® J3455 processor with 4GB of DDR3L SODIMM and an industrial-grade LCD with 6H surface hardness and P-CAP or 5-wire resistive touch control, TPC-2000 series systems offer a sufficient display area and excellent computing performance in a compact, fanless form factor. The modular design ensures flexible configuration according to usage requirements and easy maintenance/upgrades. The system's robust enclosure is equipped with a die-cast aluminum alloy front bezel and IP66 rating for protection from dust and water ingress, making the TPC-2000 series suitable for harsh environments. TPC-2000 systems also feature a mini-PCIe slot that can be used to integrate Advantech's iDoor technology to support additional I/O, isolated digital I/O, fieldbus protocols, 3G/GPS/GPRS communication, and MRAM in order to satisfy the requirements of various industrial automation applications. Moreover, optional Wi-Fi/NFC antennas can be built into the front panel for enhanced connectivity and signal reception.

System Specifications

General

- **BIOS** — AMI UEFI
- **Certification** — BSMI, CCC, CE, FCC Class A, UL, EAC
- **Cooling System** — Fanless design
- **Enclosure** — Front bezel: Die cast aluminum alloy
  Back housing: SECC
- **Mount Options** — Panel mount kit with optional stand mount and VESA mount kits
- **OS Support** — Microsoft® Windows 10 IoT Core, Windows 10 IoT Enterprise LTSB Entry
- **Power Input** — 24 V_{DC} ± 20%
- **Watchdog Timer** — 1 ~ 255 sec (system)

System Hardware

- **CPU** — Intel® Celeron® J3455, 1.50 GHz
- **Memory** — 4 GB of DDR3L 1600 MHz SODIMM SDRAM (up to 8 GB)
- **LAN** — 2 x Intel® I210 10/100/1000BASE-T
- **Expansion Slots** — 1 x full-size mini PCIe with support for a GSM 11.11 SIM card
- **Storage** — 1 x M.2 (2242)
  1 x 2.5" SATA SSD
- **I/O** — 2 x RS-232/422/485
  2 x USB 3.0
  2 x USB 2.0
  1 x Audio line out
  1 x DisplayPort

Environment

- **Humidity** — 10 ~ 95% RH @ 40 °C, non-condensing
- **Ingress Protection** — IP66 rating for the front panel
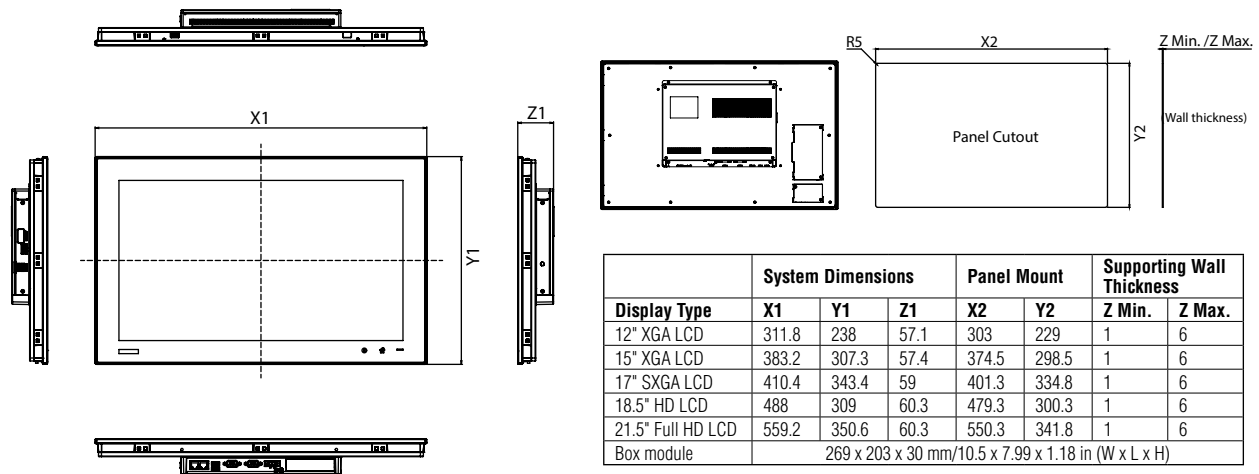- **Vibration Protection** — With SSD: 1 Grms (5 ~ 500 Hz) (operating, random vibration)

System/Front Panel Selection

Category	Item		12.1"	15"	17"	18.5"	21.5"
LCD	Display Type		XGA TFT LED LCD	XGA TFT LED LCD	SXGA TFT LED LCD	HD TFT LED LCD	Full HD TFT LED LCD
	Max. Resolution		1024 x 768	1024 x 768	1280 x 1024	1366 x 768	1920 x 1080
	Max. Color		16.2M	16.7M	16.7M	16.7M	16.7M
	Luminance (cd/m²)		600	400	350	250	300
	Viewing Angle (H/V°)		160/140	160/140	160/140	170/160	178/178
	Backlight Life		50,000 hr	50,000 hr	50,000 hr	30,000 hr	50,000 hr
	Contrast Ratio		700:1	700:1	800:1	1000:1	5000:1
Touch Panel	Type		5-wire resistive	Projected capacitive	Projected capacitive	Projected capacitive	Projected capacitive
	Light Transmission		Above 75%	90% ± 3%	90% ± 3%	90% ± 3%	90% ± 3%
	Treatment		Anti-glare	Anti-glare	Anti-glare	Anti-glare	Anti-glare
System	Temperature	Operating	0 ~ 50 °C (32 ~ 122 °F)	0 ~ 50 °C (32 ~ 122 °F)	0 ~ 50 °C (32 ~ 122 °F)	0 ~ 50 °C (32 ~ 122 °F)	0 ~ 50 °C (32 ~ 122 °F)
		Storage	-30 ~ 70 °C (-22 ~ 158 °F)	-30 ~ 70 °C (-22 ~ 158 °F)	-30 ~ 70 °C (-22 ~ 158 °F)	-20 ~ 60 °C (-4 ~ 140 °F)	-20 ~ 60 °C (-4 ~ 140 °F)
	Power Consumption		46.5 W	44 W	51 W	48 W	55 W
	Wi-Fi/NFC in Front Panel		N/A	Antenna integrated into the front panel with the inclusion of an optional module			
	Built-In iKey		No	Yes	Yes	Yes	Yes

Dimensions

Unit: mm

Display Type	System Dimensions			Panel Mount		Supporting Wall Thickness	
	X1	Y1	Z1	X2	Y2	Z Min.	Z Max.
12" XGA LCD	311.8	238	57.1	303	229	1	6
15" XGA LCD	383.2	307.3	57.4	374.5	298.5	1	6
17" SXGA LCD	410.4	343.4	59	401.3	334.8	1	6
18.5" HD LCD	488	309	60.3	479.3	300.3	1	6
21.5" Full HD LCD	559.2	350.6	60.3	550.3	341.8	1	6
Box module	269 x 203 x 30 mm/10.5 x 7.99 x 1.18 in (W x L x H)						

Ordering Information

Configurable System

Box Module	TPC-B200-J12AE
Description	Intel® Celeron® J3455, 1.50 GHz, processor with 4 GB DDR3L

Panel Module	FPM-D12T-AE	FPM-D15T-AE	FPM-D17T-AE	FPM-D18W-AE	FPM-D21W-AE
Description	12.1" XGA TFT LED LCD	15" XGA TFT LED LCD	17" SXGA TFT LED LCD	18.5" HD TFT LED LCD	21.5" Full HD TFT LED LCD

Pre-Configured System

- **TPC-2121T-J12AE** Modular TPC with 12.1" XGA LCD, Intel® Celeron® J3455 quad-core (1.50 GHz) processor, 4 GB RAM, and resistive touch control
- **TPC-2151T-J12AE** Modular TPC with 15" XGA LCD, Intel® Celeron® J3455 quad-core (1.50 GHz) processor, 4 GB RAM, and P-CAP touch control
- **TPC-2181W-J12AE** Modular TPC with 18.5" HD LCD, Intel® Celeron® J3455 quad-core (1.50 GHz) processor, 4 GB RAM, and P-CAP touch control

Optional Accessories

- **PWR-247-CE** 60W DC 24V/2.5A power adaptor
- **1702002600** Power cable (US) 1.8 M
- **1702002605** Power cable (EU) 1.8 M
- **1702031801** Power cable (UK) 1.8 M
- **1700000596-11** Power cable (China/Australia) 1.8 M
- **TPC-5000T-VMKE** Wall mount kit for 12" to 21" modular TPC systems
- **TPC-1000H-SMKE** Stand mount kit for 10" to 17" modular TPC systems
- **TPC-RUSB-W10LTSBE** Win 10 IoT Ent LTSB 2016 multi language ORY Entry EPKEA
- **98R35000010** Wi-Fi module 802.11 bgn/RT5390 1T1R with USB signal
- **98R35000000** USB NFC/RFID module ADT-006

iDoor Modules

- **PCM-26D2CA-AE** SJA1000 CANBus with CANOpen and 2 x DB9
- **PCM-26D1DB-MAE** Hilscher netX100 with FieldBus, ProfiBus, and 1 x DB9
- **PCM-27D24DI-AE** Digital I/O with 16 x DI/8 x DO, isolation, and 1 x DB37
- **PCM-24D2R4-AE** OXPCIe-952 UART with isolated RS-422/485 and 2 x DB9
- **PCM-24D2R2-AE** OXPCIe-952 UART with isolated RS-232 and 2 x DB9
- **PCM-24R2GL-AE** 2-port Gigabit LAN Intel i350 PCIe mini card
- **PCM-24R1TP-AE** Intel 82574L with GbE, IEEE 1588 PTP, and 1 x RJ45
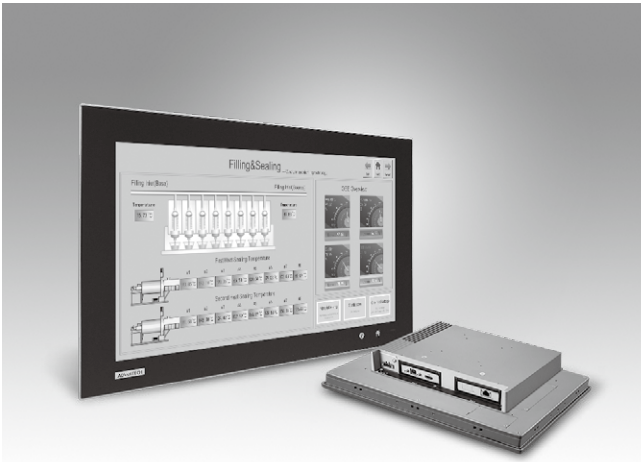
* Contact Advantech for more options.

Rear View
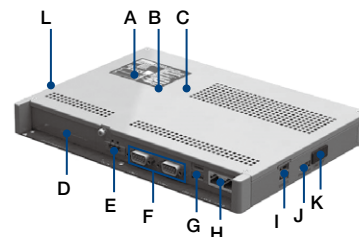
A. Hard disk bay
B. mPCIe
C. M.2 (SATA only)
D. iDoor
E. Power input
F. 2 x RS-232/422/485
G. 2 x USB 3.0
H. 2 x LAN (10/100/1000)
I. 2 x USB 2.0
J. DisplayPort
K. Audio Line Out
L. Antenna

Application Software

WebAccess/SCADA	Advantech WebAccess/SCADA is a 100% browser-based IIoT software platform aimed at supervisory control and data acquisition (SCADA) operations. WebAccess/SCADA provides open interfaces that allow our customers and partners to develop unique IoT applications for different vertical markets. In addition to supporting traditional SCADA functions, the platform features an HTML5-based user interface and intelligent dashboard to facilitate cross-platform, cross-browser data analysis. Moreover, WebAccess/SCADA not only offers built-in widgets, but is also equipped with an innovative Widget Builder that enables customers to build their own widgets.
WebAccess/HMI	Advantech WebAccess/HMI is human-machine interface (HMI) software based on Microsoft's Windows operating system. This software features excellent communication and monitoring capabilities, supports more than 350 PLC communication protocols, and offers a wide choice of screen design objects to satisfy diverse integrations of factory automation and HMI operation and monitoring requirements.

▲ Back to Top

FPM-7002 Series

Modular Industrial Monitors with 21.5" Full HD/18.5" HD/17" SXGA/ 15" XGA/12" XGA LED LCD
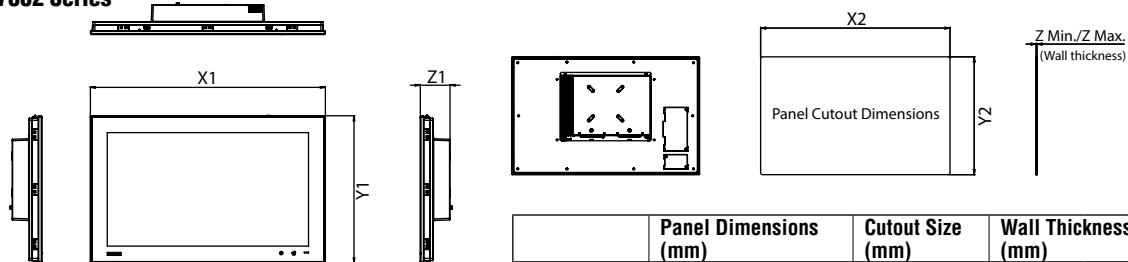
1 Software and Industry Solutions
2 Industrial Server
3 Intelligent System
4 Intelligent HMI and Monitors
5 Automation Computers and Controllers
6 Industrial Communication
7 Remote I/O Modules
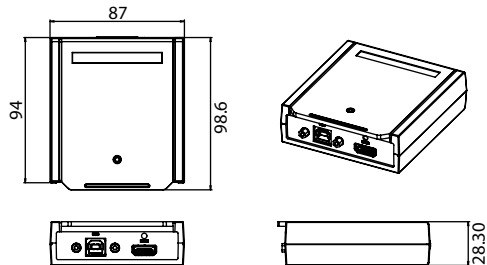8 Industrial I/O and Video Solutions

Features

- Industrial-grade LED LCD with a lifespan of 50,000 hours
- Modular design enables flexible configuration of video interfaces (HDMI, DP, iLink)
- Display modules available in various sizes with projected capacitive or 5-wire resistive touch control
- Front-facing iKey for OSD buttons
- Can support 2 box PC controllers simultaneously
- Supports Picture-in-Picture technology
- IP66-rated front panel protects against water and dust
- Panel logo can be customized
- Supports a signal transmission distance of up to 100 m with iLINK technology

R33138 CCC CE FCC c UL us LISTED E180881 I.T.E. EAC

Introduction

The FPM series of modular industrial monitors extend the functionality of typical industrial monitors. The flexible modularized design allowed users to change the video interface according to their usage demands. Additionally, unlike traditional industrial touch monitors that can only support controllers in a one-to-one capacity, the FPM series monitors can support two controllers simultaneously. Moreover, with the inclusion of Picture-in-Picture (PiP) technology, users can easily change the display layout and switch between units that need operating.

The FPM-7002 model also supports Advantech's iLINK technology, a long-distance data transmission solution. This technology is designed to resolve issues of touch signal degradation. The provision of pre-installed Wi-Fi and NFC antennas is another feature that allows users to flexibly configure the monitor systems.

Specifications

General

- **OSD Controls** — OSD control on front-facing iKey
- **Certification** — BSMI, CCC, CE, FCC Class A, UL
- **Enclosure** — Front panel: Die cast magnesium alloy / Rear cover: SECC
- **Mount Options** — Panel, wall, desktop, VESA
- **Power Input** — Phoenix jack with: 24 V_{DC} input
- **Power Consumption** — 25 W
- **I/O Slots** — 2
- **Video Port** — Fully customizable via I/O

Environment

- **Operating Temperature** — 0 ~ 55 °C (32 ~ 131 °F)
- **Storage Temperature** — -20 ~ 60 °C (-4 ~ 140 °F)
- **Humidity (Storage)** — 10 ~ 90% non-condensing
- **Vibration** — 5 ~ 500 Hz, 1 Grms (operating, random)
- **IP Rating** — IP66 for front panel

Display Panel Modules

	Display Size	12.1"	15"	17"	18.5"	21.5"
LCD Panel	Display Type	XGA TFT LED LCD	XGA TFT LED LCD	SXGA TFT LED LCD	HD TFT LED LCD	Full HD TFT LED LCD
	Max. Resolution	1024 x 768	1024 x 768	1280 x 1024	1366 x 768	1920 x 1080
	Max. Color	16.2M	16.7M	16.7M	16.7M	16.7M
	Luminance	600 cd/m²	400 cd/m²	350 cd/m²	250 cd/m²	300 cd/m²
	Viewing Angle (H/V)	160°/140°	160°/140°	160°/140°	170°/160°	178°/178°
	Backlight Life	50,000 hr	50,000 hr	50,000 hr	30,000 hr	50,000 hr
	Contrast Ratio	700:1	700:1	800:1	1000:1	5000:1
Touchscreen	Type	5-wire resistive	Projected capacitive	Projected capacitive	Projected capacitive	Projected capacitive
	Light Transmission	Above 75%	90% ± 3%	90% ± 3%	90% ± 3%	90% ± 3%
	Anti-Glare Treatment	Yes	Yes	Yes	Yes	Yes
	Built-In iKey	No	Yes	Yes	Yes	Yes
Expandability	Wi-Fi/NFC Support on Front Panel	No	Optional	Optional	Optional	Optional
Certification	IEC-61010-2	No	Yes	Yes	No	No

All product specifications are subject to change without notice.   ▲ Back to Top   Last updated: 31-Aug-2018

Dimensions

Unit: mm

FPM-7002 Series

FPM-M700 Series

Display Size	Panel Dimensions (mm)			Cutout Size (mm)		Wall Thickness (mm)	
	X1	Y1	Z1	X2	Y2	Z Min.	Z Max.
12"	311.8	238	67.4	303	229	1	6
15"	383.2	307.3	67.8	374.5	298.5	1	6
17"	410.4	343.4	68.6	401.3	334.8	1	6
18"	488	309	70.6	479.3	300.3	1	6
21.5"	558.4	349.8	70.6	550.3	341.8	1	6

Ordering Information

Configurable System

Box Modules	FPM-B700-AE
Description	Modular FPM computing box with bare BOM and 2 x I/O slots

I/O Modules	FPM-M700-HDAE	FPM-M700-DPAE	FPM-M700-RXAE	FPM-M700-TRAE
Description	HDMI module for the modularized FPM series	DP module for the modularized FPM series	RX module for the modularized FPM series	TX+RX module for the modularized FPM series

| Display Panel Modules	FPM-D12T-AE	FPM-D15T-AE	FPM-D17T-AE	FPM-D18W-AE	FPM-D21W-AE
Description	12.1" XGA	15" XGA	17" SXGA	18.5" HD	21.5" Full HD

Pre-Configured System

- **FPM-7212W-PHAE** 21.5" FHD touch panel with PCAP touch control, 1 x HDMI, and 1 x extension slot

Note: Please contact your local sales team for configuration queries.

Optional Accessories

- **1702002600** Power cable (US) 1.8 M
- **1702002605** Power cable (EU) 1.8 M
- **1702031801** Power cable (UK) 1.8 M
- **1700000596-11** Power cable (China/Australia) 1.8 M
- **96PSA-A120W24T2** Adapter 100 ~ 240V 120W 24V 5A
- **98R35000010** Wi-Fi module 802.11 bgn/RT5390 1T1R with USB signal
- **98R35000000** USB NFC/RFID module ADT-006

Front View
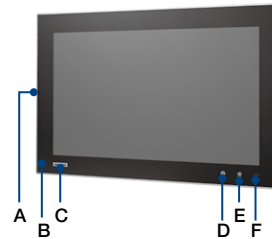
A. Wi-Fi antenna
B. NFC card reader
C. Customizable logo
D. iKey
E. Home key
F. Power indicator

Rear View
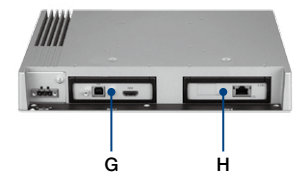
G. I/O slot 1
H. I/O slot 2

5 x Interchangeable Display Modules for
TPC-B200 Computing Box
TPC-B500 Computing Box
FPM-B700 Computing Box

Interchangeable Display Modules with 21.5" Full HD/18.5" HD/17" SXGA/15" XGA/12" XGA LED LCD

Features

- Modular front display design in three application-based module categories, enabling flexible configurations
- Front panel module with P-CAP multi-touch sensor available in various sizes (12.1" module is equipped with 5-wire resistive touch control)
- Industrial-grade LED LCD with 50,000 hours (18.5" 30,000 hours) lifetime
- Built-in intelligent home key and i-Key (only models with P-CAP touch)
- System status LED indicators in front panel
- IP66-rated front panel and panel mount
- Built-in Wi-Fi antenna and NFC reader on front panel (with optional Wi-Fi/NFC module)
- Rear mounted computing box module is necessary to activate display module

Introduction

Advantech's modular display series offers five display modules ranging between 12.1" and 21.5" inches in size to go with three computing boxes (TPC-B200/TPC-B500/ FPM-B700) for a total of 25 potential configurations that can be flexibly adapted to various scenarios. Modular display series are equipped with industrial grade LCD and Projected Capacitive touch (12" Resistive touch) screens, providing the best user experience and reliable operation. The modular design ensures flexible configuration and easy maintenance/upgrades. Its robust enclosure is equipped with a die-cast aluminum alloy front bezel and IP66 rating for protection from dust and water ingress. Moreover, optional Wi-Fi/NFC antennas can be built into the front panel for enhanced connectivity and signal reception.

Specifications

| Category	Item	12.1"	15"	17"	18.5"	21.5"
LCD	Display Type	XGA TFT LED LCD	XGA TFT LED LCD	SXGA TFT LED LCD	HD TFT LED LCD	Full HD TFT LED LCD
	Max. Resolution	1024 x 768	1024 x 768	1280 x 1024	1366 x 768	1920 x 1080
	Max. Color	16.2M	16.7M	16.7M	16.7M	16.7M
	Luminance (cd/m²)	600	400	350	250	300
	Viewing Angle (H/V°)	160/140	160/140	160/140	170/160	178/178
	Backlight Life	50,000 hr	50,000 hr	50,000 hr	30,000 hr	50,000 hr
	Contrast Ratio	700:1	700:1	800:1	1000:1	5000:1
Touch Panel	Type	5-wire resistive	Projected capacitive	Projected capacitive	Projected capacitive	Projected capacitive
	Light Transmission	Above 75%	90% ± 3%	90% ± 3%	90% ± 3%	90% ± 3%
	Treatment	Anti-glare	Anti-glare	Anti-glare	Anti-glare	Anti-glare
Part Number		FPM-D12T-AE	FPM-D15T-AE	FPM-D17T-AE	FPM-D18W-AE	FPM-D21W-AE

Note: Display modules cannot work independently. A computing box module is necessary to operate the display module.

5 x Interchangeable Display Modules for
TPC-B200 Computing Box
TPC-B500 Computing Box
FPM-B700 Computing Box

Dimensions

Unit: mm
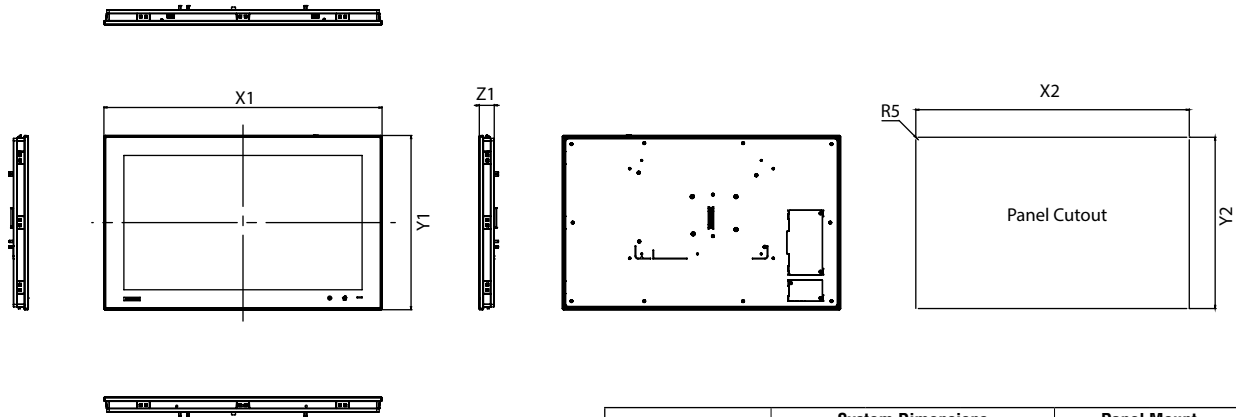
Display Type	System Dimensions			Panel Mount	
	X1	Y1	Z1	X2	Y2
12" XGA LCD	311.8	238	27.1	303	229
15" XGA LCD	383.2	307.3	27.5	374.5	298.5
17" SXGA LCD	410.4	343.4	28.3	401.3	334.8
18.5" HD LCD	488	309	30.3	479.3	300.3
21.5" Full HD LCD	559.2	350.6	30.3	550.3	341.8

Ordering Information

Panel Module P/N	FPM-D12T-AE	FPM-D15T-AE	FPM-D17T-AE	FPM-D18W-AE	FPM-D21W-AE
Description	12.1" XGA TFT LED LCD	15" XGA TFT LED LCD	17" SXGA TFT LED LCD	18.5" HD TFT LED LCD	21.5" Full HD LED LCD

Note: Display modules cannot work independently. A computing box module is necessary to operate the display module.

Configurable Rear Computing Box

Box Module P/N	Description
TPC-B200-J12AE	Intel® Celeron® J3455 1.50 GHz processor with 4 GB DDR3L
TPC-B500-6C2AE	Intel® Celeron® 3955U 2.00 GHz processor with 4 GB DDR4
TPC-B500-633AE	Intel® Core™ i3-6100U 2.30 GHz processor with 8 GB DDR4
TPC-B500-673AE	Intel® Core™ i7-6600U 2.60 GHz processor with 8 GB DDR4
TPC-B500-653AE	Intel® Core™ i5-6300U 2.40 GHz processor with 8 GB DDR4
FPM-B700-AE	Monitor Rear Box without I/O module (Coming Soon!)

Note: FPM-B700 does not include an I/O module. Up to two I/O modules are necessary for signal reception.

Configurable I/O Module for FPM-B700

I/O Module P/N	Description
FPM-M700-HDAE	HDMI + +USB Touch Module
FPM-M700-DPAE	Display + USB Touch Module
FPM-M700-TRAE	iLINK Tx + Rx Module
FPM-M700-RXAE	iLINK Rx Module

Optional Accessories

Part Number	Description
98R35000010	Wi-Fi module 802.11 bgn/RT5390 1T1R with USB signal
98R35000000	USB NFC/RFID module ADT-006

TPC-B500
TPC-B200
FPM-B700

Computing Box Modules with 6th Gen. Intel® Core™/Celeron® Processor

Features

- TPC-B200: Intel Celeron J3455 with 4GB SODIMM
- TPC-B500: Intel Core i3-6100U/i5-6300U/i7-6600U/ Celeron 3955U with 8GB SODIMM
- FPM-B700: monitor box supports up to 2 ports of video signal
- Supports two independent video interfaces with picture-in-picture (PiP) functionality and a signal transmission distance of up to 100 m via iLINK technology
- Front panel modules in varying size equipped with P-CAP multi-touch sensors (the 12.1" module features 5-wire resistive touch control)
- Supports PCIe, mini PCIe, M.2, and SSD expansion

R33138 CCC CE FCC c(UL)us LISTED E180881 I.T.E. EAC

1 Software and Industry Solutions
2 Industrial Server
3 Intelligent System
4 Intelligent HMI and Monitors
5 Automation Computers and Controllers
6 Industrial Communication
7 Remote I/O Modules
8 Industrial I/O and Video Solutions

Introduction

Advantech's TPC computing box modules are powered by a 6th generation Intel® Core™/Celeron® processor. When combined with an industrial-grade LED LCD module, the TPC series provides compact and fanless control panel solutions that support high-performance computing. The system's flexible modular design allow users to alter the video interfaces, simultaneously support two controllers via PiP technology, and extend the signal transmission distance to 100 m via iLINK technology.

Specifications

Series	TPC-2000	TPC-5000				FPM-7000
Module P/Ns	TPC-B200-J12AE	TPC-B500-6C2AE	TPC-B500-633AE	TPC-B500-653AE	TPC-B500-673AE	FPM-B700
CPU	Intel® Celeron® J3455 1.50GHz	6th Gen Intel® Celeron® 3955U 2.00 GHz	6th Gen Intel® Core™ i3-6100U 2.30 GHz	6th Gen Intel® Core™ i5-6300U 2.40 GHz	6th Gen Intel® Core™ i7-6600U 2.60 GHz	-
Memory	4 GB (8 GB optional) DDR3L SDRAM	4 GB (8 GB optional) DDR4 SDRAM	8 GB DDR4 SDRAM	8 GB DDR4 SDRAM	8 GB DDR4 SDRAM	-
Storage	1 x M.2 (2242) 1 x 2.5" SATA SSD	1 x M.2 (2280) SATA 1 x 2.5" SATA SSD 1 x CFast (optional via iDoor module)				-
LAN	2 x 10/100/1000 BASE-T (2 x Intel® I210)	3 x 10/100/1000BASE-T (2 x Intel® I210, 1 x Intel® I219)				
Expansion Slots	1 x Full-size mini PCIe (supports GSM 11.11 SIM card)	1 x Half-size PCIe 2 x Full-size mini PCIe				See ordering information, FPM-M700
I/O	2 x RS-232/422/485 2 x USB 3.0 2 x USB 2.0 1 x Audio line out 1 x DisplayPort	1 x RS-232, 1 x RS-232/422/485 2 x USB 3.0, 2 x USB 2.0 1 x Audio line out 1 x DisplayPort 1.4 out				
Power Input	24 V$_{DC}$ ± 20%	24 V$_{DC}$ ± 20%				24 V$_{DC}$ ± 20%
OS	Windows 10 IoT Enterprise LTSB	Microsoft® Windows WS7P Windows 10 IoT Enterprise LTSB				-

Dimensions

Unit: mm

TPC-B200

269

203

30

TPC-B500

269

203

58.50

FPM-B700

269

203
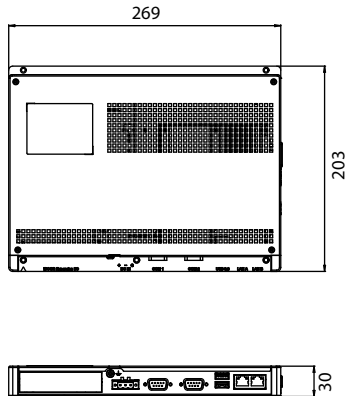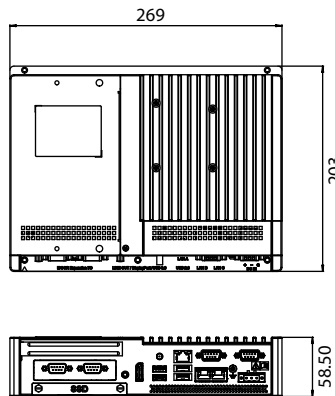
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Ordering Information

Panel Module P/N	FPM-D12T-AE	FPM-D15T-AE	FPM-D17T-AE	FPM-D18W-AE	FPM-D21W-AE
Description	12.1" XGA TFT LED LCD	15" XGA TFT LED LCD	17" SXGA TFT LED LCD	18.5" HD TFT LED LCD	21.5" Full HD LED LCD

Optional Rear Computing Box

Box Module P/N	Description
TPC-B200-J12AE	Intel® Celeron® J3455 1.50 GHz processor with 4 GB DDR3L
TPC-B500-633AE	Intel® Core™ i3-6100U 2.30 GHz processor with 8 GB DDR4
TPC-B500-653AE	Intel® Core™ i5-6300U 2.40 GHz processor with 8 GB DDR4
TPC-B500-673AE	Intel® Core™ i7-6600U 2.60 GHz processor with 8 GB DDR4
TPC-B500-6C2AE	Intel® Celeron® 3955U 2.00 GHz processor with 4 GB DDR4
FPM-B700-AE	Rear box without an I/O module (coming soon)

Optional I/O Module for FPM-B700

I/O Module	Description
FPM-M700-HDAE	HDMI + +USB touch module
FPM-M700-DPAE	Display + USB touch module
FPM-M700-TRAE	iLINK Tx + Rx module
FPM-M700-RXAE	iLINK Rx module

Optional Accessories

Part Number	Description
98R35000010	Wi-Fi module 802.11 bgn/RT5390 1T1R with USB signal
98R35000000	USB NFC/RFID module ADT-006

High-Performance Control Panels

Model		TPC-1881WP	TPC-1581WP
CPU		4th Gen. Intel® Core™ i7/i3 Processor	4th Gen. Intel® Core™ i3 Processor
Memory		4 GB DDR3L	4 GB DDR3L
		1600 MHz SO-DIMM	1600 MHz SO-DIMM
		SDRAM	SDRAM
Display	Display Type	TFT LED LCD	TFT LED LCD
	Display Size	18.5"	15.6"
	Max. Resolution	1366 x 768	1366 x 768
	Max. Colors	16.7M	16.7M
	Luminance cd/m²	300 nits	300 nits
	VieWINg Angle (H/V°)	170/160	170/160
	Backlight MTBF	50,000 hr	50,000 hr
	Touchscreen	Projected capacitive touch	Projected capacitive touch
Network (LAN)		10/100/1000BASE-T x 2	10/100/1000BASE-T x 2
I/O Ports		RS-232/422/485 x 1 USB 3.0 x 2, HDMI 1.4 x 1 Audio line out x 1, USB 2.0 x 1 (△) Audio MIC x 1 (△)	RS-232/422/485 x 1 USB 3.0 x 2, HDMI 1.4 x 1 Audio line out x 1, USB 2.0 x 1 (△) Audio MIC x 1 (△)
HDD (Optional)		2.5" SATA HDD	2.5" SATA HDD
Intelligent Keys		Quick access through built-in front bezel function and home key button	Quick access through built-in front bezel function and home key button
CompactFlash Slots		CFast slot x 1	CFast slot x 1
Expansion Slots		Full-size mini PICe	Full-size mini PICe
Digital Input/Output		-	-
Ingress Protection		Front panel: IP66	Front panel: IP66
DC Power Input (Voltage)		24 V$_{DC}$ ± 20%	24 V$_{DC}$ ± 20%
Enclosure		Front bezel: Die cast aluminum alloy Back housing: PC/ABS resin	Front bezel: Die cast aluminum alloy Back housing: PC/ABS resin
Mounting		Panel mount	Panel mount
Weight		6 kg (13.22 lb)	7 kg (15.44 lb)
Operating Temperature		0 ~ 55°C (32 ~ 131°F)	0 ~ 55°C (32 ~ 131°F)
Dimensions		488.1 x 309.1 x 56.7 mm (19.2" x 12.2" x 2.2")	419.7 x 269 x 56.7 mm (16.52" x 10.59" x 2.23")
Certification		BSMI, CCC, CE, FCC Class A, UL	BSMI, CCC, CE, FCC Class A, UL
Operating System		Windows 7/8, WES7, WEC7, Linux, Windows 10 Enterprise LTSB	Windows 7/8, WES7, WEC7, Linux, Windows 10 Enterprise LTSB

High-Performance Control Panels

Model		TPC-1782H	TPC-1582H	TPC-1282T
CPU		4th Gen. Intel® Core™ i7/i3 Processor	4th Gen. Intel® Core™ i3 Processor	5th Gen. Intel® Core™ i3 Processor
Memory		4 GB DDR3L	4 GB DDR3L	4 GB DDR3L
		1600 MHz SO-DIMM	1600 MHz SO-DIMM	1600 MHz SO-DIMM
		SDRAM	SDRAM	SDRAM
Display	Display Type	TFT LED LCD	TFT LED LCD	TFT LED LCD
	Display Size	17"	15"	12.1"
	Max. Resolution	1280 x 1024	1024 x 768	1024 x 768
	Max. Colors	16.7M	16.2M	16.2M
	Luminance cd/m²	350 nits	400 nits	600 nits
	VieWINg Angle (H/V°)	170/160	160/140	160/140
	Backlight MTBF	50,000 hr	50,000 hr	50,000 hr
	Touchscreen	Resistive	Resistive	Resistive
Network (LAN)		10/100/1000BASE-T x 2	10/100/1000BASE-T x 2	10/100/1000BASE-T x 2
I/O Ports		RS-232/422/485 x 1 USB 3.0 x 2, HDMI 1.4 x 1 Audio line out x 1, USB 2.0 x 1 (△) Audio MIC x 1 (△)	RS-232/422/485 x 1 USB 3.0 x 2, HDMI 1.4 x 1 Audio line out x 1, USB 2.0 x 1 (△) Audio MIC x 1 (△)	RS-232/422/485 x 1 USB 3.0 x 2, HDMI 1.4 x 1 Audio line out x 1, USB 2.0 x 1 (△) Audio MIC x 1 (△)
HDD (Optional)		2.5" SATA HDD	2.5" SATA HDD	2.5" SATA HDD
Intelligent Keys		-	-	-
CompactFlash Slots		CFast slot x 1	CFast slot x 1	CFast slot x 1
Expansion Slots		Full-size mini PICe/half-size PCIe	Full-size mini PICe/half-size PCIe	Full-size mini PICe/half-size PCIe
Digital Input/Output		-	-	-
Ingress Protection		Front panel: IP65	Front panel: IP65	Front panel: IP66
DC Power Input (Voltage)		24 V$_{DC}$ ± 20%	24 V$_{DC}$ ± 20%	24 V$_{DC}$ ± 20%
Enclosure		Front bezel: Die cast aluminum alloy Back housing: PC/ABS resin	Front bezel: Die cast aluminum alloy Back housing: PC/ABS resin	Front bezel: Die cast aluminum alloy Back housing: PC/ABS resin
Mounting		Desktop, Wall or Panel Mount	Desktop, Wall or Panel Mount	Desktop, Wall or Panel Mount
Weight		6 kg (13.23 lb)	5.5 kg (12.13 lb)	3.2 kg (7.02 lb)
Operating Temperature		0 ~ 55°C (32 ~ 131°F)	0 ~ 55°C (32 ~ 131°F)	0 ~ 55°C (32 ~ 131°F)
Dimensions		414 x 347.5 x 84 mm (16.3" x 13.68" x 3.31")	383 x 307 x 78.5 mm (15.08" x 12.09" x 3.09")	311.8 x 238 x 77.2 mm (12.28" x 9.38" x 3.04")
Certification		BSMI, CCC, CE, FCC Class A, UL	BSMI, CCC, CE, FCC Class A, UL	BSMI, CCC, CE, FCC Class A, UL
Operating System		Windows 7/8, WES7, WEC7, Linux, Windows 10 Enterprise LTSB	Windows 7/8, WES7, WEC7, Linux, Windows 10 Enterprise LTSB	Windows 7/8, WES7, WEC7, Linux, Windows 10 Enterprise LTSB

TPC-1881WP

18.5" HD TFT LED LCD Multi-Touch Panel Computer with 4th Gen. Intel® Core™ i3/i7 Processor

1
Software and Industry Solutions

2
Industrial Server

3
Intelligent System

4
Intelligent HMI and Monitors

5
Automation Computers and Controllers

6
Industrial Communication

7
Remote I/O Modules

8
Industrial I/O and Video Solutions

Features

- Industrial-grade 18.5" HD TFT LCD with 50K lifetime and LED backlight
- 4th Gen Intel® Core™ i3-4010U/i7-4650U with 4 GB/8 GB DDR3L SDRAM
- 16:9 widescreen display with PCAP multi-touch
- IP66-rated front panel and panel mount
- Built-in intelligent home key and iKey for intuitive operation
- Front-facing LED indicators show operating status
- Diverse system I/O and isolated digital I/O via iDoor technology
- Supports fieldbus protocols via iDoor technology
- 3G/GPS/GPRS/Wi-Fi capabilities via iDoor technology
- Supports battery backup MRAM via iDoor technology
- Chassis grounding protection
- HDMI and audio multimedia support
- Anti-scratch surface with 7H hardness

Introduction

The TPC-1881WP features a 4th Generation Intel Core i3-4010U/i7-4650U 1.7 GHz processor with 4 GB/8 GB DDR3L SDRAM to support high-performance computing. For enhanced durability and reliability, the system's 18.5" HD TFT LCD features an anti-scratch surface with 7H hardness, 16:9 widescreen aspect ratio, and multi-touch control. With the inclusion of Advantech's iDoor technology system via the mini PCIe slot, the system can be equipped with additional I/O, isolated digital I/O, fieldbus protocols, 3G/GPS/GPRS/Wi-Fi communication, and MRAM. Moreover, the integrated HDMI and audio ports allow a secondary monitor and speakers to be attached for increased functionality.

Specifications

General

- **BIOS** AMI UEFI
- **Certification** BSMI, CCC, CE, FCC Class A, UL
- **Cooling System** Fanless design
- **Dimensions (W x H x D)** 488 x 309 x 56.7 mm (19.21 x 12.17 x 2.23 in)
- **Enclosure** Front bezel: Die cast aluminum alloy
  Back housing: PC/ABS resin
- **Mounting** Panel Mount
- **OS Support** Microsoft® Windows WES7 (32/64-bit), WE8S (64-bit), Windows 7 (32/64-bit), Windows 8 (64-bit), Ubuntu 14.04.2 LTS, Windows 10 IoT Enterprise LTSB
- **Power Consumption** 28W typical, 60W max. (without add-on card)
- **Power Input** 24V_{DC} +/- 20%
- **Watchdog Timer** 1 ~ 255 sec (system)
- **Weight (Net)** 7 kg (15.44 lbs)

System Hardware

- **CPU** 4th Gen Intel Core i3-4010U/ i7-4650U 1.7 GHz
- **Chipset** Lynx Point-LP
- **Memory** 4 GB DDR3L 1600 MHz SODIMM SDRAM
- **LAN** 2 x 10/100/1000BASE-T (1 x supports iAMT)
- **Expansion Slots** 1 x Full-size mini PCIe
- **Storage** 1 x CFast
  1 x 2.5" SATA SSD
- **I/O** 1 x RS-232, 1 x RS-232/422/485
  2 x USB 3.0, 1 x HDMI 1.4
  1 x Audio line out, 1 x USB 2.0 (optional)
  1 x Audio mic in (optional)

LCD Display

- **Display Type** HD TFT LED LCD
- **Display Size** 18.5
- **Max. Resolution** 1366 x 768
- **Max. Colors** 16.7M
- **Luminance cd/m²** 300
- **Viewing Angle (H/V°)** 170/160
- **Backlight Life** 50,000 hr
- **Contrast Ratio** 500:1
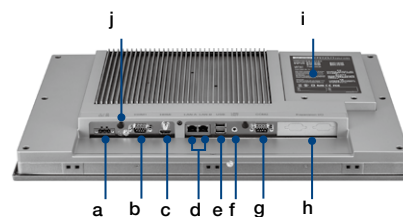
Touchscreen

- **Light Transmission** ≥88%
- **Resolution** 4096 x 4096 dot
- **Type** Projected capacitive

Environment

- **Humidity** 10 ~ 95% RH @ 40°C, non-condensing
- **Ingress Protection** Front panel: IP66
- **Operating Temperature** 0 ~ 55 °C (32 ~ 131 °F)
- **Storage Temperature** -20 ~ 60 °C (-4 ~ 140 °F)
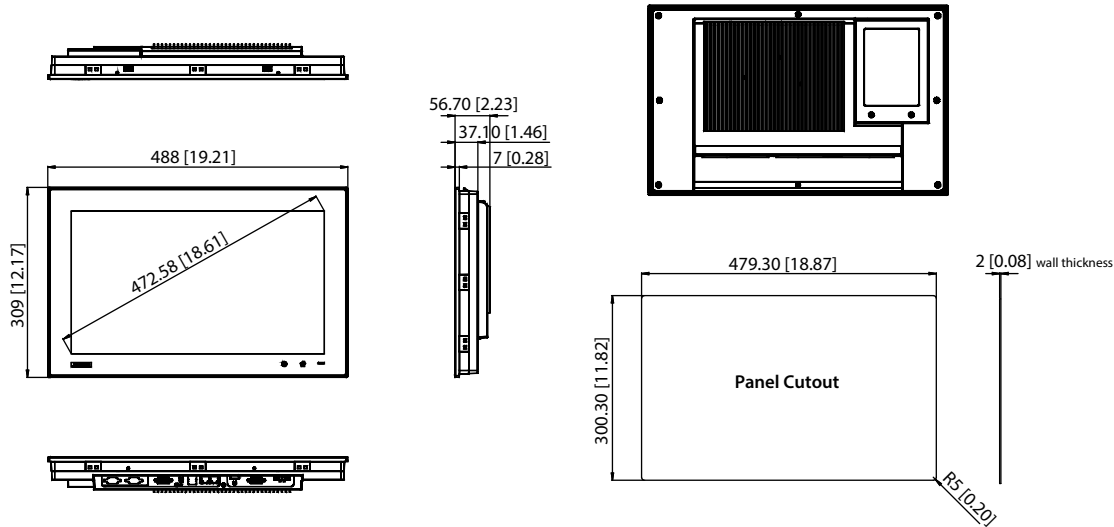- **Vibration Protection** With HDD: 1 Grms (5 ~ 500 Hz) (Operating, random vibration)

Rear View

a. 24V_{DC} Power
b. COM port RS-232
c. HDMI
d. GbE
e. USB 3.0
f. Audio line out
g. COM port RS-232/422/485
h. Expansion I/O (iDoor)
i. 2.5" SATA SSD and mini PCIe slots
j. SMA connector for antenna

Dimensions

Unit: mm [inch]

56.70 [2.23]
37.10 [1.46]
7 [0.28]

488 [19.21]
472.58 [18.61]
309 [12.17]

479.30 [18.87]
300.30 [11.82]
2 [0.08] wall thickness
R5 [0.20]

Panel Cutout

Panel Cutout Dimensions: 479.3 x 300.3 (18.87 x 11.82 in)

Ordering Information

- **TPC-1881WP-433AE** 18.5" HD Multi-Touch Panel PC, Intel i3-4010U, 4GB, iDoor
- **TPC-1881WP-473AE** 18.5" HD Multi-Touch Panel PC, Intel i7-4650U, 4GB, iDoor
- **TPC-1881WR-433AE** 18.5" HD Resistive Touch Panel PC, Intel i3-4010U, 4GB, iDoor
- **TPC-1881WPH-453AE** 18.5" widescreen PCT with i5, 4G RAM, C1D2

Optional Accessories

- **96PSA-A150W24T2** Adapter 100-240V 150W 24V
- **1702002600** Power Cable US Plug 1.8 M
- **1702002605** Power cable EU Plug 1.8M
- **1702031801** Power cable UK Plug 1.8M
- **1700000596-11** Power Cable China/Australia Plug 1.8 M
- **EWM-W151H01E** 802.11bgn RTL8188EE 1T1R, Half-size mini PCIe (also need 9656EWMG00E)
- **9656EWMG00E** Half-size miniPCIe to Full-size miniPCIe bracket set
- **1750000318** EMI Antenna 2DBI 2.4GHz SMA CONN for ARK-3384
- **1750003222** 802.11b/g 5dBi Dipole Antenna
- **1750003418** Wireless Antenna AN2400-5901RS R/P SMA.M9dB

Embedded OS

- **2070013889** TPC-xx81WP WS7P x86 MUI Image v4.13
- **2070013489** TPC-xx81WP WS7P x64 MUI Image v4.12
- **2070014320** TPC-1881WR WS7P X64 MUI Image V4.14
- **2070014920** TPC-1881WP-433AE WIN10ENT LTSB Image
- **2070014921** TPC-1881WP-473AE WIN10ENT LTSB Image

S/W Bundle Offering

- **WA-CT1881W-3RHE5AE** TPC-1881WP-433AE, Control RTE & Visua., 128G SSD, 2MB MRAM, WES7P
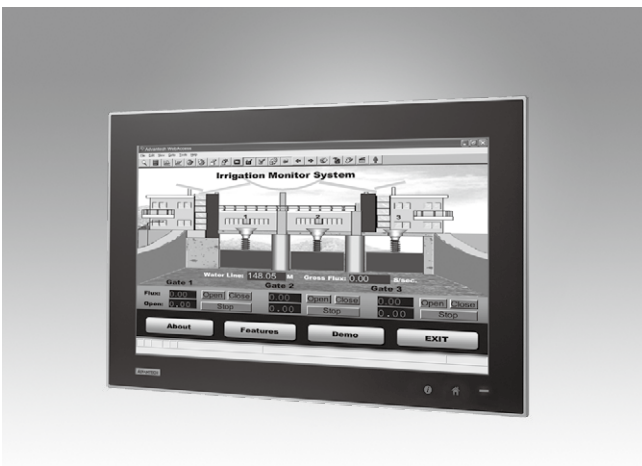
iDoor Modules

- **PCM-2300MR-AE** MR4A16B, 2MByte
- **PCM-26D1PB-AE** Hilscher netX100 FieldBus, ProfiBus, DB9 x 1
- **PCM-26D2CA-AE** SJA1000 CANBus, CANOpen, DB9 x 1
- **PCM-24D2R4-AE** OXPCIe-952 UART, Isolated RS-422/485, DB9 x 2
- **PCM-24D2R2-AE** OXPCIe-952 UART, Isolated RS-232, DB9 x 2
- **PCM-24D4R4-AE** OXPCIe-954 UART, Non-Isolated RS-422/485, DB37 x 1
- **PCM-24D4R2-AE** OXPCIe-954, UART, Non-Isolated RS-232, DB37 x 1
- **PCM-27D24DI-AE** Digital I/O, 16DI / 8DO, DB37 x 1

Application Software

WebAccess/SCADA	Advantech WebAccess/SCADA is a 100% browser-based IIoT software platform aimed at supervisory control and data acquisition (SCADA) operations. WebAccess/SCADA provides open interfaces that allow our customers and partners to develop unique IoT applications for different vertical markets. In addition to supporting traditional SCADA functions, the platform features an HTML5-based user interface and intelligent dashboard to facilitate cross-platform, cross-browser data analysis. Moreover, WebAccess/SCADA not only offers built-in widgets, but is also equipped with an innovative Widget Builder that enables customers to build their own widgets.
WebAccess/HMI	Advantech WebAccess/HMI is human-machine interface (HMI) software based on Microsoft's Windows operating system. This software features excellent communication and monitoring capabilities, supports more than 350 PLC communication protocols, and offers a wide choice of screen design objects to satisfy diverse integrations of factory automation and HMI operation and monitoring requirements.
CODESYS	The CODESYS application-ready-package offering includes a PC-based panel controller with multi-touch control, high-performance Intel Core i multi-core processor, SSD, 2 MB MRAM, Microsoft Windows Embedded 7 Pro OS, and CODESYS Control Runtime & Visualization software. This package allows users to easily develop a PC-based real-time control system, enables real-time PLC or PLC/SoftMotion control with flexible fieldbus options such as PROFINET, EtherCAT, EtherNet/IP, CANopen, and Modbus TCP/RTU, and facilitates on-site visualized HMI operation. The software/hardware flexibility and the stability of a PC-based cabinet controller are suitable for various control applications in vertical industries.

TPC-1881WPH

18.5 FHD TFT LED LCD Intel® 4th Generation Core i5 Multi-Touch Panel Computer

1 Software and Industry Solutions
2 Industrial Server
3 Intelligent System
4 Intelligent HMI and Monitors
5 Automation Computers and Controllers
6 Industrial Communication
7 Remote I/O Modules
8 Industrial I/O and Video Solutions

Features

- Industrial 18.5 FHD TFT LCD with 50K Lifetime LED Backlight
- Intel 4th Generation Core i5 4300U with 4GB/8GB DDR3L SDRAM
- 16:9 Wide Screen with PCT Multi-Touch
- IP66 Approved Front Protection & Panel Mounting
- Built-in Intelligent Home key and i Key for Intuitive UI
- Front LED Indicator to Show Operating Status
- Diverse system IO and Isolated Digital IO by iDoor Technology
- Supports Fieldbus Protocol by iDoor Technology
- 3G/GPS/GPRS/WiFi Communication by iDoor Technology
- Supports Battery-backup MRAM by iDoor Technology
- Chassis Grounding Protection
- HDMI and Audio Multimedia Support
- Certified with UL CID2 for hazardous environments

Introduction

With growing up in Multi-Touch technology, the TPC-1881WPH features Intel 4th Generation Core i5-4300U 1.9GHz processor with 4GB/8GB DDR3L SDRAM provides the high computing performance. Moreover, it is designed to be safely operated for a variety of industry application certified with UL Class I Division 2 for hazardous environments. Through the Mini-PCIe slot, Advantech iDoor technology can provide more I/O connectors, Isolated Digital IO, the Fieldbus Protocol, 3G/GPS/GPRS/WiFi Communication and Battery-backup MRAM. A 2nd monitor and speaker can be attached via the integrated HDMI and Audio port.

Specifications

General

- **BIOS** — AMI UEFI
- **Certification** — BSMI, CCC, CE, FCC Class A, UL C1D2
- **Cooling System** — Fanless design
- **Dimensions (W x H x D)** — 488 x 309 x 56.7 mm (19.21" x 12.17" x 2.23")
- **Enclosure** — Front bezel: Die cast aluminum alloy
  Back housing: PC/ABS resin
- **Mounting** — Panel Mount
- **OS Support** — Microsoft® Windows WES7 (32/64-bit), WE8S (64-bit), Windows 7 (32/64-bit), Windows 8 (64-bit), Ubuntu 14.04.2 LTS, Windows 10 IoT Enterprise LTSB
- **Power Consumption** — 28W Typical, 60W Max. (Without Add-on card)
- **Power Input** — $24V_{DC}$ +/- 20%
- **Watchdog Timer** — 1 ~ 255 sec (system)
- **Weight (Net)** — 7kg (15.44 lbs)

System Hardware

- **CPU** — Intel 4th Generation Core i5-4300U 1.9GHz
- **Chipset** — Lynx Point-LP
- **Memory** — 4GB DDR3L 1600MHz SO-DIMM SDRAM (up to 8GB)
- **LAN** — 10/100/1000BASE-T x 2 (one port supports iAMT)
- **Expansion Slots** — Pull-size mini PCIe
- **Storage** — CFast slot x 1
  2.5" SATA SSD slot x 1
- **I/O** — RS-232 x 1, RS-232/422/485 x 1
  USB 3.0 x 2, HDMI 1.4 x 1
  Audio line out x 1, USB 2.0 x 1 (optional)
  Audio MIC x 1 (optional)

LCD Display

- **Display Type** — HD TFT LED LCD
- **Display Size** — 18.5
- **Max. Resolution** — 1920 x 1080
- **Max. Colors** — 16.7M
- **Luminance cd/m²** — 350
- **Viewing Angle (H/V°)** — 170/160
- **Backlight Life** — 50,000 hr
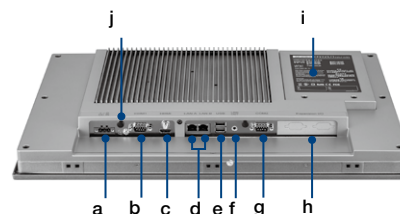- **Contrast Ratio** — 1000:1

Touchscreen

- **Light Transmission** — ≥88%
- **Resolution** — 4096 x 4096 dot
- **Type** — Projected capacitive

Environment

- **Humidity** — 10 ~ 95% RH @ 40°C, non-condensing
- **Ingress Protection** — Front panel: IP66
- **Operating Temperature** — 0 ~ 55°C (32 ~ 131°F)
- **Storage Temperature** — -20 ~ 60°C (-4 ~ 140°F)
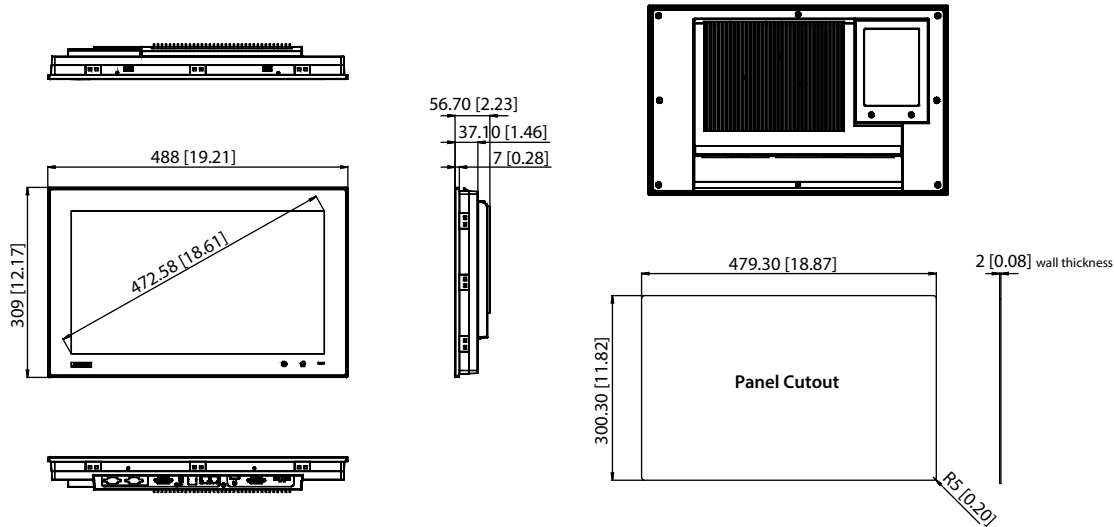- **Vibration Protection** — With HDD: 1 Grms (5 ~ 500 Hz) (Operating, random vibration)

Rear View

a. $24V_{DC}$ Power
b. COM Port RS-232
c. HDMI
d. GbE
e. USB 3.0
f. Audio Line out
   (Line out port using cable ties for suitable mechanical secured is accepted.)
g. COM Port RS-232/422/485
h. Expansion I/O (iDoor)
i. 2.5" SATA SSD, CFast and Mini PCIe Slot
j. SMA Connector for Antenna

Dimensions

Unit: mm [inch]

56.70 [2.23]
37.10 [1.46]
7 [0.28]

488 [19.21]

472.58 [18.61]

309 [12.17]

479.30 [18.87]

2 [0.08] wall thickness

300.30 [11.82]

Panel Cutout

R5 [0.20]

Panel Cutout Dimensions: 479.3 x 300.3 (18.87" x 11.82")

Ordering Information

- **TPC-1881WPH-453AE**   18.5" widescreen PCT with i5, 4G RAM, C1D2

Optional Accessories

- **96PSA-A150W24T2**   Adapter 100-240V 150W 24V
- **1702002600**   Power Cable US Plug 1.8 M
- **1702002605**   Power cable EU Plug 1.8M
- **1702031801**   Power cable UK Plug 1.8M
- **1700000596-11**   Power Cable China/Australia Plug 1.8 M
- **EWM-W151H01E**   802.11bgn RTL8188EE 1T1R, Half-size mini PCIe (also need 9656EWMG00E)
- **9656EWMG00E**   Half-size miniPCIe to Full-size miniPCIe bracket set
- **1750000318**   EMI Antenna 2DBI 2.4GHz SMA CONN for ARK-3384
- **1750003222**   802.11b/g 5dBi Dipole Antenna
- **1750003418**   Wireless Antenna AN2400-5901RS R/P SMA.M9dB

Embedded O/S

- **2070013889**   TPC-xx81WP WS7P x86 MUI Image v4.13
- **2070013489**   TPC-xx81WP WS7P x64 MUI Image v4.12
- **2070014320**   TPC-1881WR WS7P X64 MUI Image V4.14
- **2070014920**   TPC-1881WP-433AE WIN10ENT LTSB Image
- **2070014921**   TPC-1881WP-473AE WIN10ENT LTSB Image

iDoor Modules

- **PCM-2300MR-AE**   MR4A16B, 2MByte
- **PCM-26D1PB-AE**   Hilscher netX100 FieldBus, ProfiBus, DB9 x 1
- **PCM-26D2CA-AE**   SJA1000 CANBus, CANOpen, DB9 x 1
- **PCM-24D2R4-AE**   OXPCIe-952 UART, Isolated RS-422/485, DB9 x 2
- **PCM-24D2R2-AE**   OXPCIe-952 UART, Isolated RS-232, DB9 x 2
- **PCM-24D4R4-AE**   OXPCIe-954 UART, Non-Isolated RS-422/485, DB37 x 1
- **PCM-24D4R2-AE**   OXPCIe-954, UART, Non-Isolated RS-232, DB37 x 1
- **PCM-27D24DI-AE**   Digital I/O, 16DI / 8DO, DB37 x 1

Application Software

WebAccess/SCADA	Advantech WebAccess is a 100% web based SCADA (Supervisory Control And Data Acquisition) software and it acts as an IIoT Platform providing open interfaces for partners to develop IoT applications for different vertical markets. In addition to traditional SCADA functions, WebAccess has an intelligent Dashboard, to provide users with cross-platform, cross-browser data analysis and user interface using HTML5 technology. As well as the built-in widgets, WebAccess also provides Widget Builder to allow customers to build their own.
WebAccess/HMI	WebAccess/HMI is Human Machine Interface (HMI) software based on Microsoft's Windows operating system. It utilizes a PC's ample resources, ie speed, storage, multimedia, peripheral devices, and large screen to produce a complex human-machine interface. WebAccess/HM with its communication and monitoring ability supports more than 350 PLC communication protocols and a wide choice of screen design objects, to satisfy multiple integrations of factory automation and all-round human-machine interface operation and monitoring requirements.
CODESYS	The Codesys application-ready-package offering which includes PC-based Panel Controller with multi-touch panel, high performance Intel Core-i multi-core processor, SSD, 2MB MRAM, Microsoft Windows embedded 7 Pro and CODESYS Control Runtime & Visualization. This allows users to easily achieve an open control solution, the PC-based real-time control system, enabling real-time PLC or PLC/Softmotion control with flexible Fieldbus options such as PROFINET, EtherCAT, EtherNet/IP, CANopen, Modbus TCP/RTU and providing the on-site visualized HMI operation. The software/hardware flexibility and stability of PC-based Cabinet Controller is able to fulfill various control applications in vertical industries.

TPC-1782H

17" SXGA TFT LED LCD Touch Panel Computer with 4th Gen. Intel® Core™ i3 Processor

Features

- Industrial-grade 17" SXGA TFT LCD with 50K lifetime and LED backlight
- 4th Gen Intel® Core™ i3-4010U/i7-4650U with 4 GB DDR3L SDRAM
- Compact, fanless embedded system with aluminum alloy front bezel
- IP65-rated front panel and panel mount
- Durable touchscreen with 5-wire resistive touch control
- Supports expansion via PCIe 1x and mini PCIe
- Diverse system I/O and isolated digital I/O via iDoor technology
- Supports fieldbus protocols via iDoor technology
- 3G/GPS/GPRS/Wi-Fi capabilities via iDoor technology
- Supports MRAM via iDoor technology
- Chassis grounding protection
- Supports Advantech's SNMP Subagent software
- Supports Advantech's WISE-PaaS/RMM remote management software

Introduction

The TPC-1782H touch panel computer is equipped with a 17" SXGA TFT LCD, low-power 4th Gen Intel® Core™ i3-4010U/i7-4650U 1.7 GHz processor, and 4 GB DDR3L SDRAM to deliver high-performance computing in a compact, fanless system. To enhance the system's durability, TPC-1782H features an IP65-rated front panel that protects against dust and water ingress, a die-cast aluminum alloy front bezel, and 5-wire resistive touch control. TPC-1782H also includes PCIe and mini PCIe slots to extend the system functionalities and satisfy diverse automation application needs. Moreover, Advantech's iDoor technology can be integrated via the mini PCIe slot in order to provide additional I/O connectors, isolated digital I/O, fieldbus protocols, 3G/GPS/GPRS/Wi-Fi communication, and MRAM. The integrated HDMI and audio ports allow a secondary monitor and speakers to be attached for increased functionality.

Specifications

General

- **BIOS** — AMI UEFI
- **Certification** — BSMI, CCC, CE, FCC Class A, UL
- **Cooling System** — Fanless design
- **Dimensions (W x H x D)** — 414 x 347.5 x 84 mm (16.3 x 13.68 x 3.31 in)
- **Enclosure** — Front bezel: Die cast aluminum alloy / Back housing: PC/ABS resin
- **Mounting** — Desktop, Wall or Panel Mount
- **OS Support** — Microsoft® WES7 (32/64-bit), Windows 7 (32/64-bit), Windows Embedded 8.1 Industry Pro (64-bit), Windows 10 IoT Enterprise LTSB
- **Power Consumption** — 20W typical, 60W max. (without add-on card)
- **Power Input** — $24V_{DC} \pm 20\%$
- **Watchdog Timer** — 1 ~ 255 sec (system)
- **Weight (Net)** — 6 kg (13.23 lbs)

System Hardware

- **CPU** — 4th Gen Intel Core i3-4010U/i7-4650U 1.7 GHz
- **Chipset** — Lynx Point-LP
- **Memory** — 4 GB DDR3L 1600 MHz SODIMM SDRAM
- **LAN** — 2 x 10/100/1000BASE-T (1 x supports iAMT)
- **Expansion Slots** — 1 x half-size PCIe, 1 x full-size mini PCIe
- **Storage** — 1 x CFast / 1 x 2.5" SATA SSD
- **I/O** — 1 x RS-232, 1 x RS-232/422/485 / 2 x USB 3.0, 1 x HDMI 1.4 / 1 x Audio line out, 1 x USB 2.0 (optional) / 1 x Audio mic in (optional)

LCD Display

- **Display Type** — SXGA TFT LED LCD
- **Display Size** — 17"
- **Max. Resolution** — 1280 x 1024
- **Max. Colors** — 16.7M
- **Luminance cd/m²** — 350
- **Viewing Angle (H/V°)** — 160/140
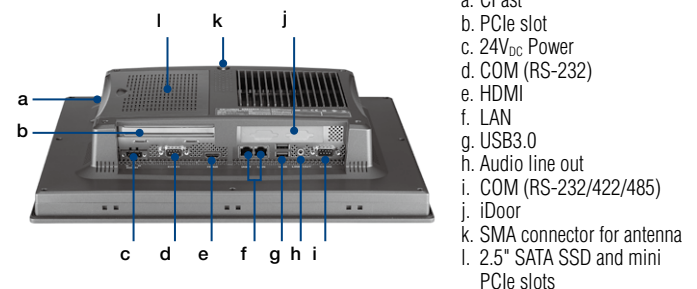- **Backlight Life** — 50,000 hr
- **Contrast Ratio** — 800:1

Touchscreen

- **Lifespan** — 36 million touches at single point
- **Light Transmission** — Above 75%
- **Resolution** — Linearity
- **Type** — 5-wire analog resistive
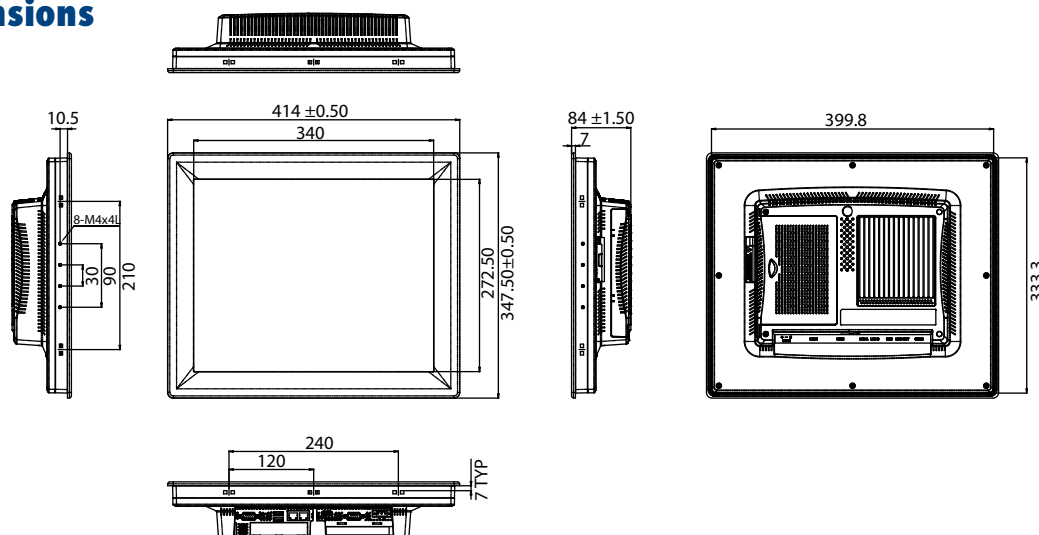
Environment

- **Humidity** — 10 ~ 95% RH @ 40 °C, non-condensing
- **Ingress Protection** — Front panel: IP65
- **Operating Temperature** — 0 ~ 55 °C (32 ~ 131 °F)
- **Storage Temperature** — -20 ~ 60 °C (-4 ~ 140 °F)
- **Vibration Protection** — With HDD: 1 Grms (5 ~ 500 Hz) (Operating, random vibration)

Rear View

a. CFast
b. PCIe slot
c. $24V_{DC}$ Power
d. COM (RS-232)
e. HDMI
f. LAN
g. USB3.0
h. Audio line out
i. COM (RS-232/422/485)
j. iDoor
k. SMA connector for antenna
l. 2.5" SATA SSD and mini PCIe slots

All product specifications are subject to change without notice.   ▲ Back to Top   Last updated: 31-Aug-2018

Dimensions

Unit: mm

414 ±0.50
340
10.5
8-M4x4L
30
90
210
272.50
347.50±0.50

84 ±1.50
7

399.8
333.3

240
120
7 TYP

Panel Cutout Dimensions: 400.8 x 334.3 mm (16.03 x 13.37 in)

Ordering Information

- **TPC-1782H-433AE**   17" SXGA Panel PC, Intel i3-4010U, 4GB, iDoor, PCIe
- **TPC-1782H-473AE**   17" SXGA Panel PC, Intel i7-4650U, 4GB, iDoor, PCIe

Optional Accessories

- **96PSA-A150W24T2**   Adapter 100-240V 150W 24V
- **1702002600**   Power Cable US Plug 1.8 M
- **1702002605**   Power Cable EU Plug 1.8 M
- **1702031801**   Power Cable UK Plug 1.8 M
- **1700000596-11**   Power Cable China/Australia Plug 1.8 M
- **TPC-1000H-WMKE**   TPC VESA Mounting Kit from 10" to 17" TPC
- **TPC-1000H-SMKE**   TPC Stand kit from 10" to 17" TPC
- **EWM-W151H01E**   802.11bgn RTL8188EE 1T1R, Half-size Mini-PCIe (also need 9656EWMG00E)
- **9656EWMG00E**   Half-size miniPCIe to Full-size miniPCIe bracket set
- **1750000318**   EMI Antenna 2DBI 2.4GHz SMA CONN for ARK-3384
- **1750003222**   802.11b/g 5dBi Dipole Antenna
- **1750003418**   Wireless Antenna AN2400-5901RS R/P SMA.M9dB

Embedded OS

- **2070013102**   TPC-xx82 WS7P x64 MUI Image v4.12 B005
- **2070013700**   TPC-xx82 WS7P x86 MUI Image v4.12

iDoor Modules

- **PCM-24D2R4-AE**   2-Port Isolated RS-422/485 mPCIe, DB9
- **PCM-27D24DI-AE**   24-Channel Isolated Digital I/O w/ counter mPCIe, DB37
- **PCM-26D2CA-AE**   2-Port Isolated CANBus mPCIe, CANOpen, DB9
- **PCM-24R1TP-AE**   1-Port Gigabit Ethernet, Intel® 82574L, mPCIe, RJ45
- **PCM-24S2WF-AE**   WiFi 802.11 a/b/g/n 2T2R w/ Bluetooth4.0, Half-size mPCIe, 2-port SMA
- **PCM-26R2EC-MAE**   2-Port Hilscher netX100 FieldBus mPCIe, EtherCAT, RJ45, Master
- **PCM-26R2EI-MAE**   2-Port Hilscher netX100 FieldBus mPCIe, EtherNet/IP, RJ45, Master
- **PCM-26R2S3-MAE**   2-Port Hilscher netX100 FieldBus mPCIe, Sercos III, RJ45, Master

Application Software

WebAccess/SCADA	Advantech WebAccess/SCADA is a 100% browser-based IIoT software platform aimed at supervisory control and data acquisition (SCADA) operations. WebAccess/SCADA provides open interfaces that allow our customers and partners to develop unique IoT applications for different vertical markets. In addition to supporting traditional SCADA functions, the platform features an HTML5-based user interface and intelligent dashboard to facilitate cross-platform, cross-browser data analysis. Moreover, WebAccess/SCADA not only offers built-in widgets, but is also equipped with an innovative Widget Builder that enables customers to build their own widgets.
WebAccess/HMI	Advantech WebAccess/HMI is human-machine interface (HMI) software based on Microsoft's Windows operating system. This software features excellent communication and monitoring capabilities, supports more than 350 PLC communication protocols, and offers a wide choice of screen design objects to satisfy diverse integrations of factory automation and HMI operation and monitoring requirements.
CODESYS	The CODESYS application-ready-package offering includes a PC-based panel controller with multi-touch control, high-performance Intel Core i multi-core processor, SSD, 2 MB MRAM, Microsoft Windows Embedded 7 Pro OS, and CODESYS Control Runtime & Visualization software. This package allows users to easily develop a PC-based real-time control system, enables real-time PLC or PLC/SoftMotion control with flexible fieldbus options such as PROFINET, EtherCAT, EtherNet/IP, CANopen, and Modbus TCP/RTU, and facilitates on-site visualized HMI operation. The software/hardware flexibility and the stability of a PC-based cabinet controller are suitable for various control applications in vertical industries.

TPC-1582H

15" XGA TFT LED LCD Touch Panel Computer with 4th Gen. Intel® Core™ i3 Processor

1 Software and Industry Solutions
2 Industrial Server
3 Intelligent System
4 Intelligent HMI and Monitors
5 Automation Computers and Controllers
6 Industrial Communication
7 Remote I/O Modules
8 Industrial I/O and Video Solutions

Features

- Industrial-grade 17" SXGA TFT LCD with 50K lifetime and LED backlight
- 4th Gen Intel® Core™ i3-4010U with 4 GB DDR3L SDRAM
- Compact, fanless embedded system with aluminum alloy front bezel
- IP65-rated front panel and panel mount
- Durable touchscreen with 5-wire resistive touch control
- Supports expansion via PCIe 1x and mini PCIe
- Diverse system I/O and isolated digital I/O via iDoor technology
- Supports fieldbus protocols via iDoor technology
- 3G/GPS/GPRS/Wi-Fi capabilities via iDoor technology
- Supports MRAM via iDoor technology
- Chassis grounding protection
- Supports HDMI and multimedia audio
- Supports Advantech's WISE-PaaS/RMM remote management software

Introduction

The TPC-1582H touch panel computer is equipped with a 15" XGA TFT LCD, low-power 4th Gen Intel® Core™ i3 1.7 GHz processor, and 4 GB DDR3L SDRAM to deliver high-performance computing in a compact, fanless system. To enhance the system's durability, TPC-1582H features an IP65-rated front panel that protects against dust and water ingress, a die-cast aluminum alloy front bezel, and 5-wire resistive touch control. TPC-1582H also includes PCIe and mini PCIe slots to extend the system functionalities and satisfy diverse automation application needs. Moreover, Advantech's iDoor technology can be integrated via the mini PCIe slot in order to provide additional I/O connectors, isolated digital I/O, fieldbus protocols, 3G/GPS/GPRS/Wi-Fi communication, and MRAM. The integrated HDMI and audio ports allow a secondary monitor and speakers to be attached for increased functionality.

Specifications

General

- **BIOS** — AMI UEFI
- **Certification** — BSMI, CCC, CE, FCC Class A, UL
- **Cooling System** — Fanless design
- **Dimensions (W x H x D)** — 383 x 307 x 78.5 mm (15.08 x 12.09 x 3.09 in)
- **Enclosure** — Front bezel: Die cast aluminum alloy
  Back housing: PC/ABS resin
- **Mount Options** — Desktop, Wall or Panel Mount
- **OS Support** — Microsoft® Windows WES7 (32/64-bit), WES8 (64-bit), Windows 7 (32/64-bit), Windows 8 (64-bit), Linux Kernel 3.x, Windows 10 IoT Enterprise LTSB
- **Power Consumption** — 18W typical, 60W max. (without add-on card)
- **Power Input** — $24V_{DC} \pm 20\%$
- **Watchdog Timer** — 1 ~ 255 sec (system)
- **Weight (Net)** — 5.5 kg (12.13 lbs)

System Hardware

- **CPU** — 4th Generation Intel Core i3-4010U 1.7 GHz
- **Chipset** — Lynx Point-LP
- **Memory** — 4 GB DDR3L 1600 MHz SODIMM SDRAM
- **LAN** — 2 x 10/100/1000BASE-T (1 x supports iAMT)
- **Expansion Slots** — 1 x half-size PCIe, 1 x full-size mini PCIe
- **Storage** — 1 x CFast
  1 x 2.5" SATA SSD
  1 x mSATA (via mini PCIe)
- **I/O** — 1 x RS-232, 1 x RS-232/422/485
  2 x USB 3.0, 1 x HDMI 1.4
  1 x Audio line out, 1 x USB 2.0 (optional)
  1 x Audio mic in (optional)

LCD Display

- **Display Type** — XGA TFT LED LCD
- **Display Size** — 15"
- **Max. Resolution** — 1024 x 768
- **Max. Colors** — 16.2M
- **Luminance cd/m²** — 400
- **Viewing Angle (H/V°)** — 160/140
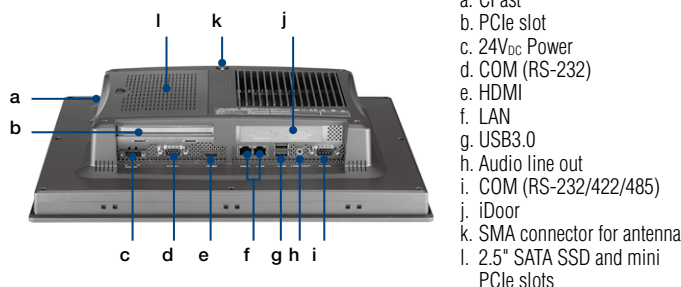- **Backlight Life** — 50,000 hr
- **Contrast Ratio** — 700:1

Touchscreen

- **Lifespan** — 36 million touches at single point
- **Light Transmission** — Above 75%
- **Resolution** — Linearity
- **Type** — 5-wire analog resistive
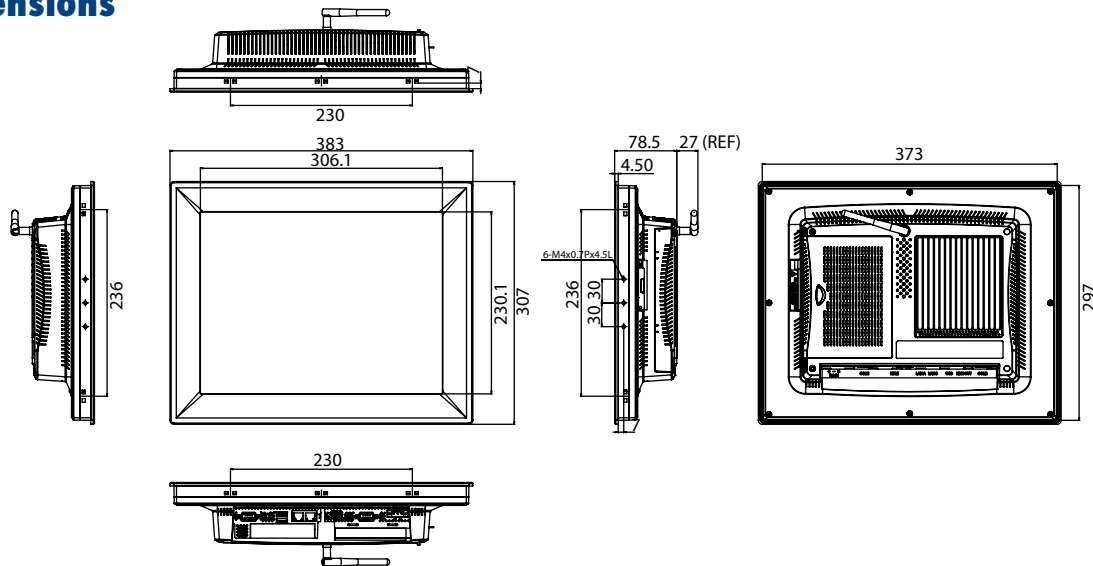
Environment

- **Humidity** — 10 ~ 95% RH @ 40 °C, non-condensing
- **Ingress Protection** — Front panel: IP65
- **Operating Temperature** — 0 ~ 55 °C (32 ~ 131 °F)
- **Storage Temperature** — -20 ~ 60 °C (-4 ~ 140 °F)
- **Vibration Protection** — With HDD: 1 Grms (5 ~ 500 Hz) (Operating, random vibration)

Rear View

a. CFast
b. PCIe slot
c. $24V_{DC}$ Power
d. COM (RS-232)
e. HDMI
f. LAN
g. USB3.0
h. Audio line out
i. COM (RS-232/422/485)
j. iDoor
k. SMA connector for antenna
l. 2.5" SATA SSD and mini PCIe slots

All product specifications are subject to change without notice.   ▲ Back to Top   Last updated: 31-Aug-2018

TPC-1582H

Dimensions

Unit: mm

230

383
306.1

236

230.1
307

230

78.5   27 (REF)
4.50

6-M4x0.7Px4.5L

236   30 30

373

297

Panel Cutout Dimensions: 374.5 x 298.5 mm (14.74 x 11.75 in)

Ordering Information

- **TPC-1582H-433BE**   15" XGA Panel PC, Intel i3-4010U, 4GB, iDoor, PCIe

Optional Accessories

- **96PSA-A150W24T2**   Adapter 100-240V 150W 24V
- **1702002600**   Power Cable US Plug 1.8 M
- **1702002605**   Power Cable EU Plug 1.8 M
- **1702031801**   Power Cable UK Plug 1.8 M
- **1700000596-11**   Power Cable China/Australia Plug 1.8 M
- **TPC-1000H-WMKE**   TPC VESA Mounting Kit from 10" to 17" TPC
- **TPC-1000H-SMKE**   TPC Stand kit from 10" to 17" TPC
- **EWM-W151H01E**   802.11bgn RTL8188EE 1T1R, Half-size Mini-PCIe (also need 9656EWMG00E)
- **9656EWMG00E**   Half-size miniPCIe to Full-size miniPCIe bracket set
- **1750000318**   EMI Antenna 2DBI 2.4GHz SMA CONN for ARK-3384
- **1750003222**   802.11b/g 5dBi Dipole Antenna
- **1750003418**   Wireless Antenna AN2400-5901RS R/P SMA.M9dB

Embedded OS

- **2070013102**   TPC-xx82 WS7P x64 MUI Image v4.12 B005
- **2070013700**   TPC-xx82 WS7P x86 MUI Image v4.12

iDoor Modules

- **PCM-24D2R4-AE**   2-Port Isolated RS-422/485 mPCIe, DB9
- **PCM-27D24DI-AE**   24-Channel Isolated Digital I/O w/ counter mPCIe, DB37
- **PCM-26D2CA-AE**   2-Port Isolated CANBus mPCIe, CANOpen, DB9
- **PCM-24R1TP-AE**   1-Port Gigabit Ethernet, Intel® 82574L, mPCIe, RJ45
- **PCM-24S2WF-AE**   WiFi 802.11 a/b/g/n 2T2R w/ Bluetooth4.0, Half-size mPCIe, 2-port SMA
- **PCM-26R2PN-MAE**   2-Port Hilscher netX100 FieldBus mPCIe, PROFINET, RJ45, Master

- **PCM-26R2EC-MAE**   2-Port Hilscher netX100 FieldBus mPCIe, EtherCAT, RJ45, Master
- **PCM-26R2EI-MAE**   2-Port Hilscher netX100 FieldBus mPCIe, EtherNet/IP, RJ45, Master
- **PCM-26R2S3-MAE**   2-Port Hilscher netX100 FieldBus mPCIe, Sercos III, RJ45, Master

Application Software

WebAccess/SCADA	Advantech WebAccess/SCADA is a 100% browser-based IIoT software platform aimed at supervisory control and data acquisition (SCADA) operations. WebAccess/SCADA provides open interfaces that allow our customers and partners to develop unique IoT applications for different vertical markets. In addition to supporting traditional SCADA functions, the platform features an HTML5-based user interface and intelligent dashboard to facilitate cross-platform, cross-browser data analysis. Moreover, WebAccess/SCADA not only offers built-in widgets, but is also equipped with an innovative Widget Builder that enables customers to build their own widgets.
WebAccess/HMI	Advantech WebAccess/HMI is human-machine interface (HMI) software based on Microsoft's Windows operating system. This software features excellent communication and monitoring capabilities, supports more than 350 PLC communication protocols, and offers a wide choice of screen design objects to satisfy diverse integrations of factory automation and HMI operation and monitoring requirements.
CODESYS	The CODESYS application-ready-package offering includes a PC-based panel controller with multi-touch control, high-performance Intel Core i multi-core processor, SSD, 2 MB MRAM, Microsoft Windows Embedded 7 Pro OS, and CODESYS Control Runtime & Visualization software. This package allows users to easily develop a PC-based real-time control system, enables real-time PLC or PLC/SoftMotion control with flexible fieldbus options such as PROFINET, EtherCAT, EtherNet/IP, CANopen, and Modbus TCP/RTU, and facilitates on-site visualized HMI operation. The software/hardware flexibility and the stability of a PC-based cabinet controller are suitable for various control applications in vertical industries.

TPC-1581WP

15.6" WXGA TFT LED LCD Multi-Touch Panel Computer with 4th Gen. Intel® Core™ i3 Processor

Features

- Industrial-grade 15.6" HD TFT LCD with 50K lifetime and LED backlight
- 4th Gen Intel® Core™ i3-4010U with 4 GB DDR3L SDRAM
- 16:9 widescreen display with PCAP multi-touch
- IP66-rated front panel and panel mount
- Built-in intelligent home key and iKey for intuitive operation
- Front-facing LED indicators show operating status
- Diverse system I/O and isolated digital I/O via iDoor technology
- Supports fieldbus protocols via iDoor technology
- 3G/GPS/GPRS/Wi-Fi capabilities via iDoor technology
- Supports MRAM via iDoor technology
- Chassis grounding protection
- HDMI and audio multimedia support
- Anti-scratch surface with 7H hardness

Introduction

The TPC-1581WP features a 4th Gen Intel Core i3-4010U 1.7 GHz processor with 4 GB DDR3L SDRAM to support high-performance computing. For enhanced durability and reliability, the system's 15.6" HD TFT LCD features an anti-scratch surface with 7H hardness, 16:9 widescreen aspect ratio, and multi-touch control. With the inclusion of Advantech's iDoor technology system via the mini PCIe slot, the system can be equipped with additional I/O, isolated digital I/O, fieldbus protocols, 3G/GPS/GPRS/Wi-Fi communication, and MRAM. Moreover, the integrated HDMI and audio ports allow a secondary monitor and speakers to be attached for increased functionality.

Specifications

General

- **BIOS** — AMI UEFI
- **Certification** — BSMI, CCC, CE, FCC Class A, UL
- **Cooling System** — Fanless design
- **Dimensions (W x H x D)** — 419.7 x 269 x 56.7 mm (16.52 x 10.59 x 2.23 in)
- **Enclosure** — Front bezel: Die cast aluminum alloy; Back housing: PC/ABS resin
- **Mount Options** — Panel
- **OS Support** — Microsoft® WES7 (32/64-bit), Windows 7 (32/64-bit), Windows Embedded 8.1 Industry Pro (64-bit) Ubuntu 14.04.2 LTS, Windows 10 IoT Enterprise LTSB
- **Power Consumption** — 18W typical, 60W max. (without add-on card)
- **Power Input** — $24V_{DC} \pm 20\%$
- **Watchdog Timer** — 1 ~ 255 sec (system)
- **Weight (Net)** — 6 kg (13.22 lbs)

System Hardware

- **CPU** — 4th Gen Intel® Core™ i3-4010U 1.7 GHz
- **Chipset** — Lynx Point-LP
- **Memory** — 4 GB DDR3L 1600 MHz SODIMM SDRAM
- **LAN** — 2 x 10/100/1000BASE-T
- **Expansion Slots** — Full-size mini PCIe
- **Storage** — 1 x CFast; 1 x 2.5" SATA SSD; 1 x mSATA (via mini PCIe slot; cannot used simultaneously with iDoor)
- **I/O** — 1 x RS-232/422/485, 1 x RS-232, 2 x USB 3.0, 1 x HDMI 1.4, 1 x Audio line out, 1 x USB 2.0 (optional), 1 x Audio mic in (optional)

LCD Display

- **Display Type** — WXGA TFT LED LCD
- **Display Size** — 15.6
- **Max. Resolution** — 1366 x 768
- **Max. Colors** — 16.7M
- **Luminance** — 300 cd/m²
- **Viewing Angle (H/V°)** — 170/160
- **Backlight Life** — 50,000 hr
- **Contrast Ratio** — 500:1

Touchscreen

- **Light Transmission** — ≥88%
- **Resolution** — 2048 x 2048 dot
- **Type** — Projected capacitive

Environment

- **Humidity** — 10 ~ 95% RH @ 40 °C, non-condensing
- **Ingress Protection** — IP66-rated front panel
- **Operating Temperature** — 0 ~ 55 °C (32 ~ 131 °F)
- **Storage Temperature** — -20 ~ 60 °C (-4 ~ 140 °F)
- **Vibration Protection** — With HDD: 1 Grms (5 ~ 500 Hz) (operating, random vibration)

Ordering Information

- **TPC-1581WP-433BE** — Multi-touch panel PC with 15.6" HD display, Intel i3-4010U, 4 GB SDRAM, and iDoor
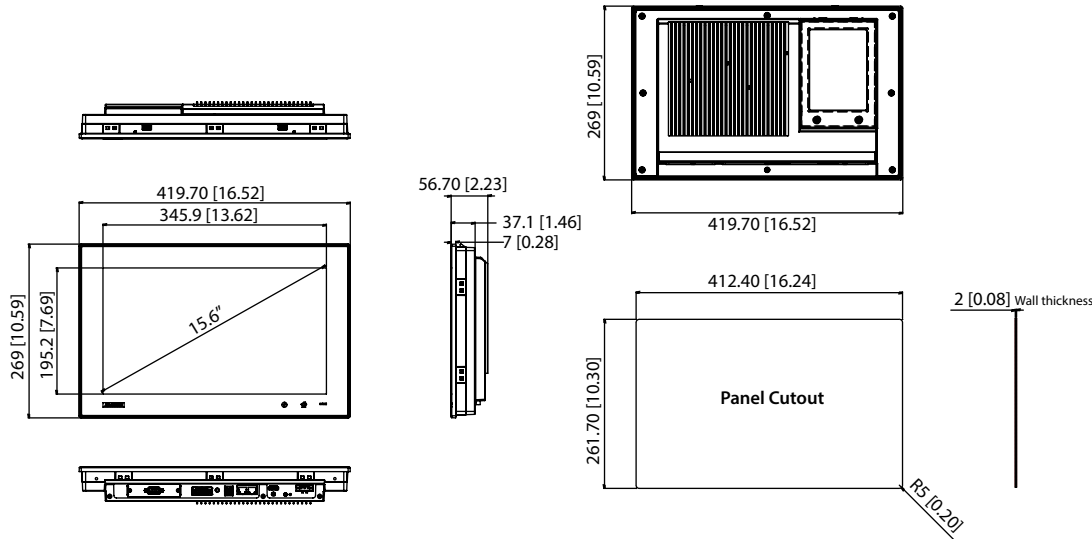
Rear View
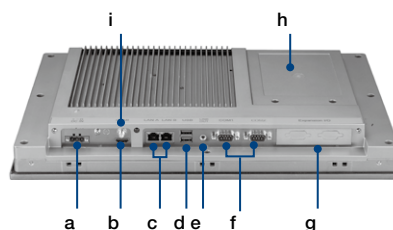
a. $24V_{DC}$ power
b. HDMI
c. GbE
d. USB3.0
e. Audio line out
f. COM port, RS-232/422/485, and RS-232
g. Expansion I/O (iDoor)
h. 2.5" SATA SSD, CFast, and mini PCIe slot
i. SMA connector for antenna

All product specifications are subject to change without notice.   ▲ Back to Top   Last updated: 31-Aug-2018

Dimensions

Unit: mm [inch]

419.70 [16.52]
345.9 [13.62]
56.70 [2.23]
37.1 [1.46]
7 [0.28]
269 [10.59]
195.2 [7.69]
15.6"

269 [10.59]
419.70 [16.52]

412.40 [16.24]
2 [0.08] Wall thickness
261.70 [10.30]
Panel Cutout
R5 [0.20]

Panel Cutout Dimensions: 261.7 x 412.4 mm (10.30 x 16.24 in)

Optional Accessories

▪ **96PSA-A150W24T2**	Adapter 100 ~ 240 V, 150W, 24 V
▪ **1702002600**	Power cable (US) 1.8 M
▪ **1702002605**	Power cable (EU) 1.8 M
▪ **1702031801**	Power cable (UK) 1.8 M
▪ **1700000596-11**	Power cable (China/Australia) 1.8 M
▪ **EWM-W151H01E**	802.11bgn RTL8188EE 1T1R, half-size mini PCIe (also need 9656EWMG00E)
▪ **9656EWMG00E**	Half-size mini PCIe to full-size mini PCIe bracket set
▪ **1750000318**	EMI antenna 2DBI 2.4GHz SMA CONN for ARK-3384
▪ **1750003222**	802.11b/g 5dBi dipole antenna
▪ **1750003418**	Wireless antenna AN2400-5901RS R/P SMA.M9dB

Embedded OS

▪ **2070013487**	TPC-xx81WP WS7P x64 MUI image v4.12 B003
▪ **2070013889**	TPC-xx81WP WS7P x86 MUI image v4.13
▪ **2070014320**	TPC-1881WR WS7P X64 MUI image V4.14
▪ **2070014920**	TPC-1881WP-433AE WIN10ENT LTSB image
▪ **2070014921**	TPC-1881WP-473AE WIN10ENT LTSB image

S/W Bundle Offering

▪ **WA-CT1581W-3RHE5AE**	TPC-1581WP-433AE with Control Runtime & Visualization, 128 G SSD, 2 MB MRAM, and WES7P

iDoor Modules

▪ **PCM-24D2R4-AE**	2-port isolated RS-422/485 mPCIe, DB9
▪ **PCM-27D24DI-AE**	24-channel isolated digital I/O w/ counter mPCIe, DB37
▪ **PCM-26D2CA-AE**	2-port isolated CAN bus mPCIe, CANOpen, DB9
▪ **PCM-24R1TP-AE**	1-Port Gigabit Ethernet, Intel® 82574L, mPCIe, RJ45
▪ **PCM-24S2WF-AE**	Wi-Fi 802.11 a/b/g/n 2T2R w/Bluetooth 4.0, half-size mPCIe, 2-port SMA
▪ **PCM-26D1DB-MAE**	1-port Hilscher netX100 fieldbus mPCIe, PROFIBUS, DB9, Master
▪ **PCM-26R2PN-MAE**	2-port Hilscher netX100 fieldbus mPCIe, PROFINET, RJ45, Master
▪ **PCM-26R2EC-MAE**	2-port Hilscher netX100 fieldbus mPCIe, EtherCAT, RJ45, Master
▪ **PCM-26R2EI-MAE**	2-port Hilscher netX100 fieldbus mPCIe, EtherNet/IP, RJ45, Master
▪ **PCM-26R2S3-MAE**	2-port Hilscher netX100 fieldbus mPCIe, Sercos III, RJ45, Master

Application Software

WebAccess/SCADA	Advantech WebAccess/SCADA is a 100% browser-based IIoT software platform aimed at supervisory control and data acquisition (SCADA) operations. WebAccess/SCADA provides open interfaces that allow our customers and partners to develop unique IoT applications for different vertical markets. In addition to supporting traditional SCADA functions, the platform features an HTML5-based user interface and intelligent dashboard to facilitate cross-platform, cross-browser data analysis. Moreover, WebAccess/SCADA not only offers built-in widgets, but is also equipped with an innovative Widget Builder that enables customers to build their own widgets.
WebAccess/HMI	Advantech WebAccess/HMI is human-machine interface (HMI) software based on Microsoft's Windows operating system. This software features excellent communication and monitoring capabilities, supports more than 350 PLC communication protocols, and offers a wide choice of screen design objects to satisfy diverse integrations of factory automation and HMI operation and monitoring requirements.
CODESYS	The CODESYS application-ready-package offering includes a PC-based panel controller with multi-touch control, high-performance Intel Core i multi-core processor, SSD, 2 MB MRAM, Microsoft Windows Embedded 7 Pro OS, and CODESYS Control Runtime & Visualization software. This package allows users to easily develop a PC-based real-time control system, enables real-time PLC or PLC/SoftMotion control with flexible fieldbus options such as PROFINET, EtherCAT, EtherNet/IP, CANopen, and Modbus TCP/RTU, and facilitates on-site visualized HMI operation. The software/hardware flexibility and the stability of a PC-based cabinet controller are suitable for various control applications in vertical industries.

TPC-1282T

12.1" XGA TFT LED LCD Touch Panel Computer with 5th Gen. Intel® Core™ i3 Processor

1 Software and Industry Solutions

2 Industrial Server

3 Intelligent System

4 Intelligent HMI and Monitors

5 Automation Computers and Controllers

6 Industrial Communication

7 Remote I/O Modules

8 Industrial I/O and Video Solutions

Features

- Industrial-grade 12.1" XGA TFT LCD with 50K lifetime and LED backlight
- 5th Gen Intel® Core™ i3-5010U with 4 GB DDR3L SDRAM
- Compact, fanless embedded system with aluminum alloy front bezel
- True-flat, IP65-rated front panel
- Durable touchscreen with 5-wire resistive touch control
- Supports expansion via PCIe 1x and mini PCIe
- Diverse system I/O and isolated digital I/O via iDoor technology
- Supports fieldbus protocols via iDoor technology
- 3G/GPS/GPRS/Wi-Fi capabilities via iDoor technology
- Supports MRAM via iDoor technology
- Chassis grounding protection
- Supports HDMI and multimedia audio
- Supports Advantech's SNMP Subagent software
- Supports Advantech's WISE-PaaS/RMM remote management software

Introduction

The TPC-1282H touch panel computer is equipped with a 12.1" XGA TFT LCD, low-power 5th Gen Intel® Core™ i3-5010U 2.10 GHz processor, and 4 GB DDR3L SDRAM to deliver high-performance computing in a compact, fanless system. To enhance the system's durability, TPC-1282H features an IP66-rated front panel that protects against dust and water ingress, a die-cast aluminum alloy front bezel, and 5-wire resistive touch control. TPC-1282H also includes PCIe and mini PCIe slots to extend the system functionalities and satisfy diverse automation application needs. Moreover, Advantech's iDoor technology can be integrated via the mini PCIe slot in order to provide additional I/O connectors, isolated digital I/O, fieldbus protocols, 3G/GPS/GPRS/Wi-Fi communication, and MRAM. The integrated HDMI and audio ports allow a secondary monitor and speakers to be attached for increased functionality.

Specifications

General

- **BIOS** — AMI UEFI
- **Certification** — BSMI, CCC, CE, FCC Class A, UL
- **Cooling System** — Fanless design
- **Dimensions (W x H x D)** — 311.8 x 238 x 77.2 mm (12.28 x 9.38 x 3.04 in)
- **Enclosure** — Front bezel: Die cast aluminum alloy
  Back housing: PC/ABS resin
- **Mounting** — Desktop, Wall or Panel Mount
- **OS Support** — Microsoft® WES7 (32/64-bit), Windows 7 (32/64-bit), Windows Embedded 8.1 Industry Pro (64-bit), Windows 10 IoT Enterprise LTSB
- **Power Consumption** — 19W typical, 60W max. (without add-on card)
- **Power Input** — $24V_{DC} \pm 20\%$
- **Watchdog Timer** — 1 ~ 255 sec (system)
- **Weight (Net)** — 3.2 kg (7.02 lbs)

System Hardware

- **CPU** — 5th Generation Intel Core i3-5010U 2.10 GHz
- **Chipset** — WildcatPoint-LP
- **Memory** — 4 GB DDR3L 1600 MHz SODIMM SDRAM
- **LAN** — 10/100/1000BASE-T x 2
- **Expansion Slots** — Half-size PCIe and full-size mini PCIe
- **Storage** — 1 x CFast
  1 x 2.5" SATA SSD
  1 x mSATA (via mini PCIe)
- **I/O** — 1 x RS-232, 1 x RS-232/422/485
  2 x USB 3.0, 1 x HDMI 1.4
  1 x Audio line out, 1 x USB 2.0 (optional)
  1 x Audio mic in (optional)

LCD Display

- **Display Type** — XGA TFT LED LCD
- **Display Size** — 12.1"
- **Max. Resolution** — 1024 x 768
- **Max. Colors** — 16.2M
- **Luminance cd/m²** — 600
- **Viewing Angle (H/V°)** — 160/140
- **Backlight Life** — 50,000 hr
- **Contrast Ratio** — 700:1

Touchscreen

- **Lifespan** — 36 million touches at single point
- **Light Transmission** — 81 ± 3%
- **Resolution** — Linearity
- **Type** — 5-wire analog resistive

Environment

- **Humidity** — 10 ~ 95% RH @ 40°C, non-condensing
- **Ingress Protection** — Front panel: IP66
- **Operating Temperature** — 0 ~ 50 °C (32 ~ 122 °F)
- **Storage Temperature** — -20 ~ 60 °C (-4 ~ 140 °F)
- **Vibration Protection** — With HDD: 1 Grms (5 ~ 500 Hz) (Operating, random vibration)
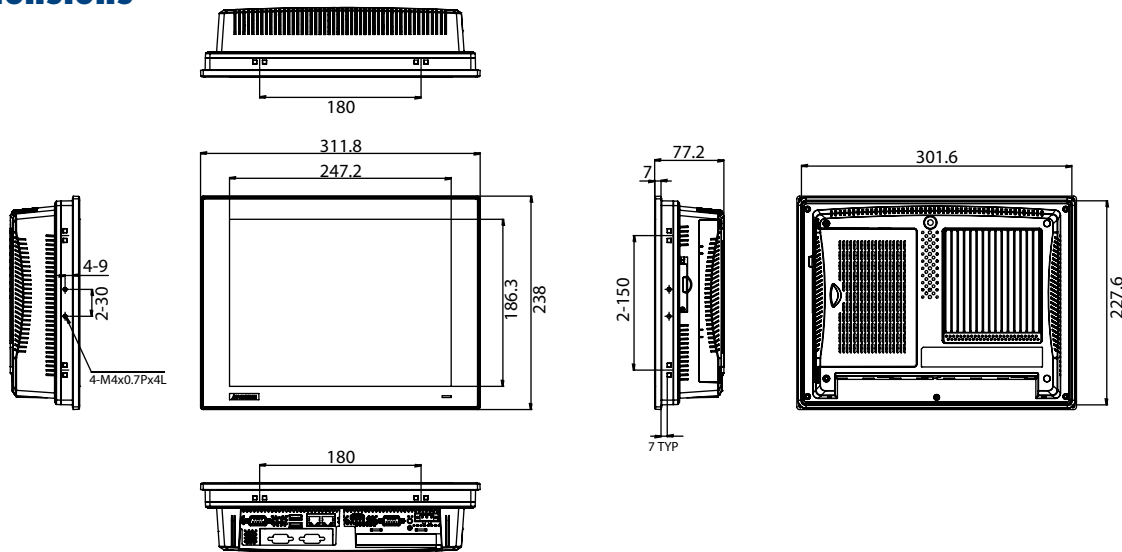
Rear View
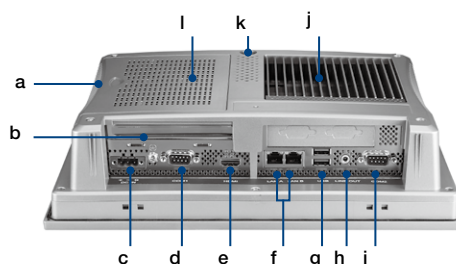
a. CFast
b. PCIe Slot
c. $24V_{DC}$ Power
d. COM1 (RS-232)
e. HDMI
f. LAN
g. USB3.0
h. Audio line out
i. COM2 (RS-232/422/485)
j. iDoor
k. SMA connector for antenna
l. 2.5" SATA SSD and mini PCIe slots

TPC-1282T

Dimensions

Unit: mm

180

311.8
247.2
186.3
238

4-9
2-30
4-M4x0.7Px4L

77.2
7
2-150
7 TYP

301.6
227.6

180

Panel Cutout Dimensions: 303 x 229 mm (11.93 x 9.02 in)

Ordering Information

- **TPC-1282T-533AE** 12.1" XGA Panel PC, Intel i3-50101U, 4GB, iDoor, PCIe

Optional Accessories

- **96PSA-A150W24T2** Adapter 100-240V 150W 24V
- **1702002600** Power Cable US Plug 1.8 M
- **1702002605** Power Cable EU Plug 1.8 M
- **1702031801** Power Cable UK Plug 1.8 M
- **1700000596-11** Power Cable China/Australia Plug 1.8 M
- **TPC-1000H-WMKE** TPC VESA Mounting Kit from 10" to 17" TPC
- **TPC-1000H-SMKE** TPC Stand kit from 10" to 17" TPC
- **EWM-W151H01E** 802.11bgn RTL8188EE 1T1R, Half-size Mini-PCIe (also need 9656EWMG00E)
- **9656EWMG00E** Half-size miniPCIe to Full-size miniPCIe bracket set
- **1750000318** EMI Antenna 2DBI 2.4GHz SMA CONN for ARK-3384
- **1750003222** 802.11b/g 5dBi Dipole Antenna
- **1750003418** Wireless Antenna AN2400-5901RS R/P SMA.M9dB

Embedded OS

- **2070013700** WS7P x86 V4.12 B001 MUI. for TPC-1282T
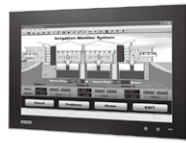- **2070015290** WS7P x64 V4.17 B001 MUI for TPC-1282T

iDoor Modules

- **PCM-24D2R4-AE** 2-Port Isolated RS-422/485 mPCIe, DB9
- **PCM-27D24DI-AE** 24-Channel Isolated Digital I/O w/ counter mPCIe, DB37
- **PCM-26D2CA-AE** 2-Port Isolated CANBus mPCIe, CANOpen, DB9
- **PCM-24R1TP-AE** 1-Port Gigabit Ethernet, Intel® 82574L, mPCIe, RJ45
- **PCM-24S2WF-AE** WiFi 802.11 a/b/g/n 2T2R w/ Bluetooth4.0, Half-size mPCIe, 2-port SMAPCM-26R2PN-MAE   2-Port Hilscher netX100 FieldBus mPCIe, PROFINET, RJ45, Master

- **PCM-26R2EC-MAE** 2-Port Hilscher netX100 FieldBus mPCIe, EtherCAT, RJ45, Master
- **PCM-26R2EI-MAE** 2-Port Hilscher netX100 FieldBus mPCIe, EtherNet/IP, RJ45, Master
- **PCM-26R2S3-MAE** 2-Port Hilscher netX100 FieldBus mPCIe, Sercos III, RJ45, Master

Application Software

WebAccess/SCADA	Advantech WebAccess/SCADA is a 100% browser-based IIoT software platform aimed at supervisory control and data acquisition (SCADA) operations. WebAccess/SCADA provides open interfaces that allow our customers and partners to develop unique IoT applications for different vertical markets. In addition to supporting traditional SCADA functions, the platform features an HTML5-based user interface and intelligent dashboard to facilitate cross-platform, cross-browser data analysis. Moreover, WebAccess/SCADA not only offers built-in widgets, but is also equipped with an innovative Widget Builder that enables customers to build their own widgets.
WebAccess/HMI	Advantech WebAccess/HMI is human-machine interface (HMI) software based on Microsoft's Windows operating system. This software features excellent communication and monitoring capabilities, supports more than 350 PLC communication protocols, and offers a wide choice of screen design objects to satisfy diverse integrations of factory automation and HMI operation and monitoring requirements.
CODESYS	The CODESYS application-ready-package offering includes a PC-based panel controller with multi-touch control, high-performance Intel Core i multi-core processor, SSD, 2 MB MRAM, Microsoft Windows Embedded 7 Pro OS, and CODESYS Control Runtime & Visualization software. This package allows users to easily develop a PC-based real-time control system, enables real-time PLC or PLC/SoftMotion control with flexible fieldbus options such as PROFINET, EtherCAT, EtherNet/IP, CANopen, and Modbus TCP/RTU, and facilitates on-site visualized HMI operation. The software/hardware flexibility and the stability of a PC-based cabinet controller are suitable for various control applications in vertical industries.

Industrial Thin-Client Terminals

Model	TPC-1840WP	TPC-1751T		TPC-1551WP
CPU	AMD G-series T56E 1.65GHz	Intel® Atom™ E3827 1.75 GHz Processor	Intel® Celeron® J1900 2.0 GHz Processor	Intel® Atom™ E3827 1.75 GHz Processor
Memory	4 GB (Optional 8 GB) DDR3L 1600 MHz SO-DIMM SDRAM	4 GB (Optional 8 GB) DDR3L 1600 MHz SO-DIMM SDRAM		4 GB (Optional 8 GB) DDR3L 1600 MHz SO-DIMM SDRAM
Display — Display Type	HD TFT LED LCD	SXGA TFT LED LCD		WXGA TFT LED LCD
Display — Display Size	18.5"	17"		15.6"
Display — Max. Resolution	1366 x 768	1280 x 1024		1366 x 768
Display — Max. Colors	16.7M	16.7M		16.7M
Display — Luminance cd/m²	300 nits	350 nits		400 nits
Display — VieWINg Angle (H/V°)	170/160	160/140		170/160
Display — Backlight MTBF	50,000 hr	50,000 hr		50,000 hr
Touchscreen	Projected capacitive	Resistive		Projected capacitive
HDD (Optional)	2.5" SATA x 1	via optional kit		via optional kit
Network (LAN)	10/100/1000BASE-T x 2	10/100/1000BASE-T x 2		10/100/1000BASE-T x 2
I/O Ports	RS-232 x 3 RS-232/422/485 x 1 - USB 2.0 x 2	RS-232 x 1, RS-232/422/485 x 1 USB 3.0 x 1 USB 2.0 x 1		RS-232 x 1, RS-232/422/485 x 1 USB 3.0 x 1 USB 2.0 x 1
CompactFlash Slots	-	CFast slot x 1		CFast slot x 1
Expansion Slots	Full-size mini PCIe	Full-size mini PCIe		Full-size mini PCIe
DC Power Input (Voltage)	24 V$_{DC}$ ± 20%	24 V$_{DC}$ ± 20%		24 V$_{DC}$ ± 20%
Dimensions	488 x 309 x 56.7 mm (19.21" x 12.17" x 2.23")	413.7 x 347.2 x 63.8 mm (16.28" x 13.68" x 2.5")		419.7 x 269 x 61.9 mm (16.52" x 10.59" x 2.44")
Weight	7 kg	6 kg		5 kg
Front cover	Front bezel: Die cast aluminum alloy	Front bezel: Die cast aluminum alloy		Front bezel: Die cast aluminum alloy
Operating Temperature	0 ~ 55°C (32 ~ 131°F)	-20 ~ 60°C (-4 ~ 140°F)		0 ~ 55°C (32 ~ 131°F)
Ingress Protection (Front Panel)	IP66	IP66		IP66
Certification	BSMI, CCC, CE	BSMI, CCC, CE		BSMI, CCC, CE
	FCC Class A, UL	FCC Class A, UL, KCC		FCC Class A, UL
Operating System	Windows 7, WES7	Windows 7, WES7, WEC7, Linux, Windows 10 Enterprise LTSB		Windows 7, WES7, WEC7, Linux, Windows 10 Enterprise LTSB

Industrial Thin-Client Terminals

Model	TPC-1551T	TPC-1251T	TPC-1051WP	TPC-651T
CPU	Intel® Atom™ E3827 1.75 GHz Processor	Intel® Atom™ E3827 1.75 GHz Processor	Intel® Atom™ E3827 1.75 GHz Processor	Intel® Atom™ E3827 1.75 GHz Processor
Memory	4 GB (Optional 8 GB) DDR3L 1600 MHz SO-DIMM SDRAM	4 GB (Optional 8 GB) DDR3L 1600 MHz SO-DIMM SDRAM	4 GB (Optional 8 GB) DDR3L 1600 MHz SO-DIMM SDRAM	4 GB (Optional 8 GB) DDR3L 1600 MHz SO-DIMM SDRAM
Display — Display Type	XGA TFT LED LCD	XGA TFT LED LCD	WXGA TFT LED LCD	VGA TFT LED LCD
Display — Display Size	15"	12.1"	10.1"	5.7"/6.5"
Display — Max. Resolution	1024 x 768	1024 x 768	1280 x 800	640 x 480
Display — Max. Colors	16.7M	16.2M	262K	262K
Display — Luminance cd/m^2	400 nits	600 nits	300 nits	550/800 nits
Display — VieWINg Angle (H/V°)	160/140	160/140	170/170	160/140
Display — Backlight MTBF	50,000 hr	50,000 hr	25,000 hr	50,000 hr
Touchscreen	Resistive	Resistive	Projected capacitive	Resistive
HDD (Optional)	2.5" SATA x 1	2.5" SATA x 1	2.5" SATA x 1	2.5" SATA x 1
Network (LAN)	10/100/1000BASE-T x 2	10/100/1000BASE-T x 2	10/100/1000BASE-T x 2	10/100/1000BASE-T x 2
I/O Ports	RS-232 x 1, RS-232/422/485 x 1 USB 3.0 x 1 USB 2.0 x 1	RS-232 x 1, RS-232/422/485 x 1 USB 3.0 x 1 USB 2.0 x 1	RS-232 x 1, RS-232/422/485 x 1 USB 3.0 x 1 USB 2.0 x 1	RS-232 x 1, RS-232/422/485 x 1 USB 3.0 x 1 USB 2.0 x 1
CompactFlash Slots	CFast slot x 1	CFast slot x 1	CFast slot x 1	CFast slot x 1
Expansion Slots	Full-size mini PCIe	Full-size mini PCIe	Full-size mini PCIe	Full-size mini PCIe
DC Power Input (Voltage)	24 V$_{DC}$ ± 20%	24 V$_{DC}$ ± 20%	24 V$_{DC}$ ± 20%	24 V$_{DC}$ ± 20%
Dimensions	383.20 x 307.30 x 61.10 mm (15.09" x 12.10" x 2.41")	311.80 x 238 x 57.2 mm (12.28" x 9.37" x 22.52")	283.1 x 202.3 x 61.4 mm (11.15" x 7.96" x 2.42)	199 x 152 x 58.9 mm (7.83" x 5.98" x 2.32")
Weight	3.9 kg	2.6 kg	2.6 kg	1.5 kg
Front cover	Front bezel: Die cast aluminum alloy	Front bezel: Die cast aluminum alloy	Front bezel: Die cast aluminum alloy	Front bezel: Die cast aluminum alloy
Operating Temperature	-20 ~ 60°C (-4 ~ 140°F)	-20 ~ 60°C (-4 ~ 140°F)	-20 ~ 55°C (-4 ~ 131°F)	-20 ~ 60°C (-4 ~ 140°F)
Ingress Protection (Front Panel)	IP66	IP66	IP66	IP66
Certification	BSMI, CCC, CE	BSMI, CCC, CE	BSMI, CCC, CE	BSMI, CCC, CE
	FCC Class A, UL, KCC	FCC Class A, UL, KCC	FCC Class A, UL	FCC Class A, UL
Operating System	Windows 7, WES7, WEC7, Linux, Windows 10 Enterprise LTSB	Windows 7, WES7, WEC7, Linux, Windows 10 Enterprise LTSB	Windows 7, WES7, WEC7, Linux, Windows 10 Enterprise LTSB	Windows 7, WES7, WEC7, Linux, Windows 10 Enterprise LTSB

TPC-1751T

17" TFT LED LCD Thin-Client Terminal with Intel® Atom™ Processor

1 Software and Industry Solutions
2 Industrial Server
3 Intelligent System
4 Intelligent HMI and Monitors
5 Automation Computers and Controllers
6 Industrial Communication
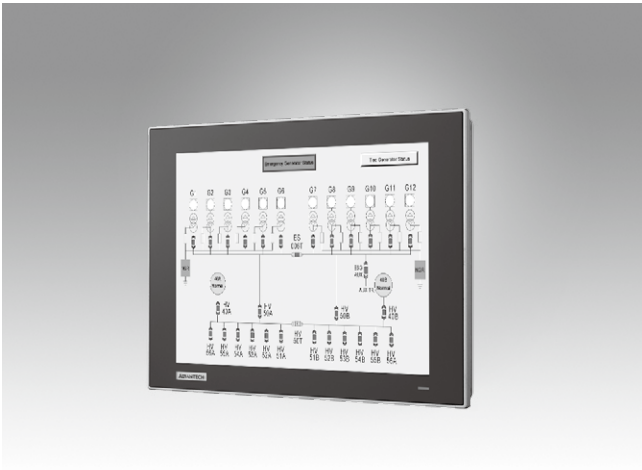7 Remote I/O Modules
8 Industrial I/O and Video Solutions

Features

- Industrial-grade 17" SXGA TFT LCD with 50K lifetime and LED backlight
- Intel® Atom™ E3827 1.75 GHz dual-core/Celeron® J1900 2 GHz quad-core processor with 4 GB DDR3L SDRAM
- Compact, fanless embedded system with aluminum alloy front bezel and chassis grounding protection
- Wide operating temperature range -20 ~ 60 °C (-4 ~ 140 °F)
- True-flat touchscreen with IP66-rated front panel/non-flat touchscreen with IP65-rated front panel
- Front-facing LED indicators to show operating status
- Durable touchscreen with 5-wire resistive touch control
- Supports Advantech's iDoor technology for integrating optional accessories
- Supports Advantech's SNMP Subagent software
- Supports Advantech's WISE-PaaS/RMM remote management software

Introduction

The TPC-1751T thin-client terminal is equipped with a 17" SXGA TFT LCD, low-power Intel® Atom™ E3827 1.75 GHz dual-core/Celeron® J1900 2 GHz quad-core processor, and 4 GB DDR3L SDRAM to deliver high-performance computing in a compact, fanless system. For enhanced durability, TPC-1751T features a true-flat touchscreen with IP66-rated front panel, die cast aluminum alloy front bezel, and 5-wire resistive touch control. In addition to supporting a wide operating temperature range (-20 ~ 60 °C/-4 ~ 140 °F), TPC-1751T includes a full-size mini PCIe slot for extending the system functionalities to satisfy diverse automation application needs. Moreover, Advantech's iDoor technology can be integrated via the mini PCIe slot in order to provide additional I/O connectors, isolated digital I/O, fieldbus protocols, 3G/GPS/GPRS/Wi-Fi communication, and MRAM.

Specifications

General

BIOS	AMI UEFI
Certification	BSMI, CCC, CE, FCC Class A, UL, KCC
Cooling System	Fanless design
Dimensions (W x H x D)	413.7 x 347.2 x 63.8 (16.28 x 13.68 x 2.5 in)
Enclosure	Front bezel: Die cast aluminum alloy Back housing: SECC
Mount Options	Desktop, wall, and panel
OS Support	Microsoft® WES7 (32/64-bit), Windows 7, Windows 10 Enterprise LTSB
Power Consumption	43.2 W (Typical)
Power Input	24 V_{DC} +/- 20%
Watchdog Timer	1 ~ 255 sec (system)
Weight (Net)	4 kg (8.81 lb)

System Hardware

CPU	Intel® Atom™ E3827 1.75 GHz dual-core/Celeron® J1900 2 GHz quad-core processor
Memory	1 x SODIMM with 4 GB DDR3L SDRAM (supports up to 8 GB)
LAN	2 x 10/100/1000BASE-T
Expansion Slots	1 x Full-size mini PCIe
Storage	1 x CFast 1 x 2.5" SATA SSD (optional)
I/O	1 x RS-232 1 x RS-232/422/485 1 x USB 3.0 1 x USB 2.0

LCD Display

Display Type	SXGA TFT LED LCD
Display Size	17"
Max. Resolution	1280 x 1024
Max. Colors	16.7M
Luminance cd/m²	350
Viewing Angle (H/V°)	160/140
Backlight Life	50,000 hr
Contrast Ratio	800:1

Touchscreen

Lifespan	36 million touches at a single point
Light Transmission	Above 75%
Resolution	Linearity
Type	5-wire analog resistive

Environment

Humidity	10 ~ 95% RH @ 40 °C, non-condensing
Ingress Protection	Front panel: IP66
Operating Temperature	-20 ~ 60 °C (-4 ~ 140 °F)
Storage Temperature	-30 ~ 70 °C (-22 ~ 158 °F)
Vibration Protection	With CFast: 2 Grms (5~500 Hz) With HDD: 1 Grms (5 ~ 500 Hz) (Operating, random vibration)

Rear View
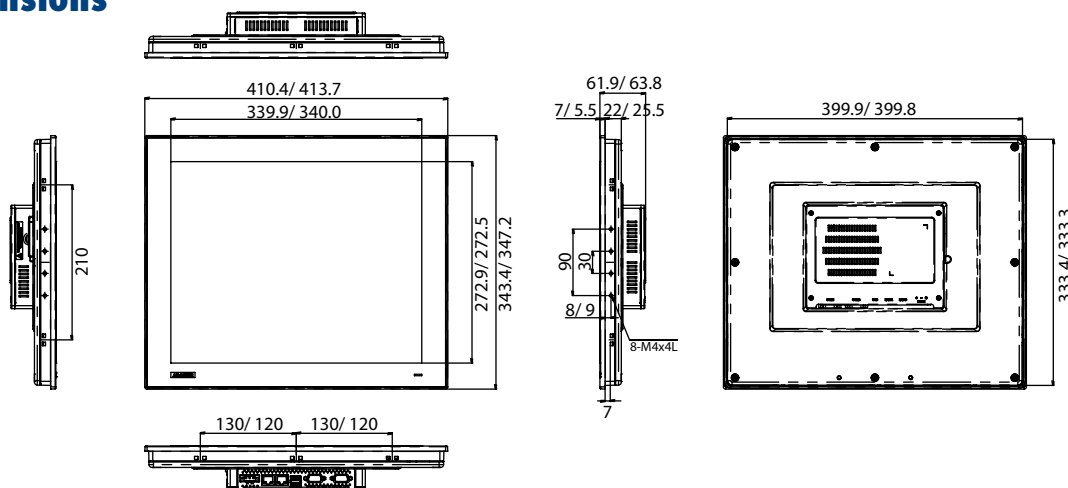
A. External HDD/SSD/iDoor kit (TPC-1251T-EHKE) (optional)
B. CFast
C. RS-232
D. RS-232/422/485
E. USB 3.0 & 2.0
F. LAN (10/100/1000)
G. Power receptor

All product specifications are subject to change without notice.   ▲ Back to Top   Last updated: 31-Aug-2018

Dimensions

Unit: mm

410.4/ 413.7
339.9/ 340.0
272.9/ 272.5
343.4/ 347.2
210
61.9/ 63.8
7/ 5.5 22/ 25.5
90
30
8/ 9
7
8-M4x4L
399.9/ 399.8
333.4/ 333.3
130/ 120   130/ 120

TPC-1751T Panel Cutout Dimensions: 401.3 x 334.8 mm (15.80 x 13.18 in)

Ordering Information

- **TPC-1751T-E3AE** — 17" SXGA Panel PC, Intel® Atom™ E3827 1.75 GHz Dual-core Processor, 4GB (True-flat touchscreen)
- **TPC-1751H-E3AE** — 17" SXGA Panel PC, Intel® Atom™ E3827 1.75 GHz Dual-core Processor, 4GB (Non-flat touchscreen IP65 certified traditional TPC front panel)
- **TPC-1751T-J3AE** — 17" SXGA Panel PC, Intel® Celeron J1900 2 GHz Quad-core Processor, 4GB (True-flat touchscreen, 0~50 operating temperature support)

Optional Accessories

- **PWR-247-CE** — 60W DC 24V/2.5A Output Power Supply
- **TPC-1251T-EHKE** — HDD/SSD and iDoor extension kit
- **1702002600** — Power Cable US Plug 1.8 M
- **1702002605** — Power Cable EU Plug 1.8 M
- **1702031801** — Power Cable UK Plug 1.8 M
- **1700000596-11** — Power Cable China/Australia Plug 1.8 M
- **TPC-1000H-WMKE** — TPC VESA Mounting Kit from 10" to 17" TPC
- **TPC-1000H-SMKE** — TPC Stand kit from 10" to 17" TPC

Embedded OS

- **20703WE7PS0004** — TPC-xx51T/H WS7P x64 MUI Image V4.18
- **20703WE7PS0005** — TPC-xx51T/H WS7P x86 MUI Image V4.18
- **2070014677** — TPC-1251T/H WEC7 x64 MUI Image V4.01
- **2070015041** — TPC-xx51T-(6)xxAE Win10 2016LTSB v6.01 image
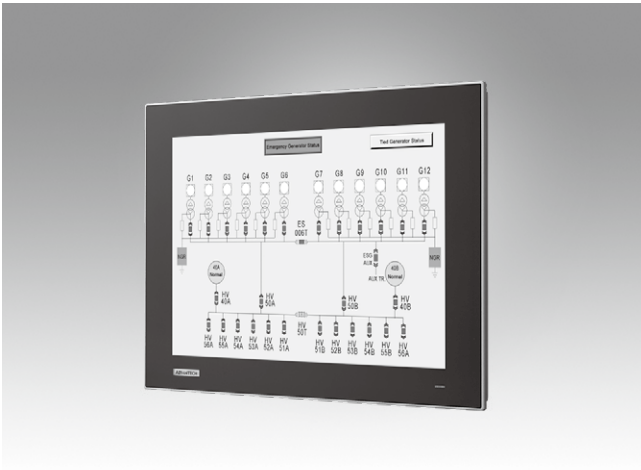
S/W Bundle Offering

- **WA-HT1751T-E15H1AE** — TPC-1751T-E3AE, HMI Runtime 1500 tags, 32G CFast, WES7P
- **WA-ST1751T-E15H4AE** — TPC-1751T-E3AE, SCADA Runtime 1500 tags, 1TB HDD, WES7P

iDoor Modules (TPC-1251T-EHKE is required for iDoor modules)

- **PCM-26D2CA-AE** — SJA1000 CANBus, CANOpen, DB9 x 2
- **PCM-26D1DB-MAE** — Hilscher netX100 FieldBus, ProfiBus, DB9 x 1
- **PCM-27D24DI-AE** — Digital I/O, 16 DI / 8 DO, Isolation, DB37 x 1
- **PCM-24D2R4-AE** — OXPCIe-952 UART, Isolated RS-422/485, DB9 x 2
- **PCM-24D2R2-AE** — OXPCIe-952 UART, Isolated RS-232, DB9 x 2
- **PCM-24R2GL-AE** — 2 Port Giga LAN Intel i350 PCIe mini card
- **PCM-24R1TP-AE** — Intel 82574L, GbE, IEEE 1588 PTP, RJ45 x 1
- **PCM-24S2WF-AE** — 802.11 a/b/g/n 2T2R w/ BT4.0, Atheros AR9462

Application Software

WebAccess/SCADA	Advantech WebAccess/SCADA is a 100% browser-based IIoT software platform aimed at supervisory control and data acquisition (SCADA) operations. WebAccess/SCADA provides open interfaces that allow our customers and partners to develop unique IoT applications for different vertical markets. In addition to supporting traditional SCADA functions, the platform features an HTML5-based user interface and intelligent dashboard to facilitate cross-platform, cross-browser data analysis. Moreover, WebAccess/SCADA not only offers built-in widgets, but is also equipped with an innovative Widget Builder that enables customers to build their own widgets.
WebAccess/HMI	Advantech WebAccess/HMI is human-machine interface (HMI) software based on Microsoft's Windows operating system. This software features excellent communication and monitoring capabilities, supports more than 350 PLC communication protocols, and offers a wide choice of screen design objects to satisfy diverse integrations of factory automation and HMI operation and monitoring requirements.

TPC-1551T

15" XGA TFT LED LCD Thin-Client Terminal with Intel® Atom™ Processor

1 Software and Industry Solutions
2 Industrial Server
3 Intelligent System
4 Intelligent HMI and Monitors
5 Automation Computers and Controllers
6 Industrial Communication
7 Remote I/O Modules
8 Industrial I/O and Video Solutions

Features

- Industrial-grade 15" XGA TFT LCD with 50K lifetime and LED backlight
- Intel® Atom™ E3827 1.75 GHz dual-core processor with 4 GB DDR3L SDRAM
- Wide operating temperature range -20 ~ 60 °C (-4 ~ 140 °F)
- True-flat touchscreen with IP66-rated front panel/non-flat touchscreen with IP65-rated front panel
- Front-facing LED indicators to show operating status
- Durable touchscreen with 5-wire resistive touch control
- Supports Advantech's iDoor technology for integrating optional accessories
- Compact, fanless embedded system with aluminum alloy front bezel and chassis grounding protection
- Supports Advantech's SNMP Subagent software
- Supports Advantech's WISE-PaaS/RMM remote management software

Introduction

The TPC-1551T thin-client terminal is equipped with a 15" XGA TFT LCD, low-power Intel® Atom™ E3827 1.75 GHz dual-core processor, and 4 GB DDR3L SDRAM to deliver high-performance computing in a compact, fanless system. For enhanced durability, TPC-1551T features a true-flat touchscreen with IP66-rated front panel, die cast aluminum alloy front bezel, and 5-wire resistive touch control. In addition to supporting a wide operating temperature range (-20 ~ 60 °C/-4 ~ 140 °F), TPC-1551T includes a full-size mini PCIe slot for extending the system functionalities to satisfy diverse automation application needs. Moreover, Advantech's iDoor technology can be integrated via the mini PCIe slot in order to provide additional I/O connectors, isolated digital I/O, fieldbus protocols, 3G/GPS/GPRS/Wi-Fi communication, and MRAM.

Specifications

General

- **BIOS** — AMI UEFI
- **Certification** — BSMI, CCC, CE, FCC Class A, UL
- **Cooling System** — Fanless design
- **Dimensions (W x H x D)** — 383.20 x 307.30 x 61.10 mm (15.09 x 12.10 x 2.41 in)
- **Enclosure** — Front bezel: Die cast aluminum alloy / Back housing: SECC
- **Mounting** — Desktop, Wall or Panel Mount
- **OS Support** — Microsoft® WES7 (32/64-bit), Windows 7 (32/64-bit), Windows 10 Enterprise LTSB
- **Power Consumption** — 40.8 W (typical)
- **Power Input** — 24 V_{DC} +/- 20%
- **Watchdog Timer** — 1 ~ 255 sec (system)
- **Weight (Net)** — 3.9 kg (8.59 lb)

System Hardware

- **CPU** — Intel® Atom™ E3827 1.75 GHz dual-core processor
- **Memory** — 1 x SODIMM with 4 GB DDR3L SDRAM (supports up to 8 GB)
- **LAN** — 10/100/1000BASE-T x 2
- **Expansion Slots** — Full-size mini PCIe
- **Storage** — 1 x CFast / 1 x 2.5" SATA SSD (optional)
- **I/O** — 1 x RS-232 / 1 x RS-232/422/485 / 1 x USB 3.0 / 1 x USB 2.0

LCD Display

- **Display Type** — XGA TFT LED LCD
- **Display Size** — 15"
- **Max. Resolution** — 1024 x 768
- **Max. Colors** — 16.7M
- **Luminance cd/m²** — 400
- **Viewing Angle (H/V°)** — 160/140
- **Backlight Life** — 50,000 hr
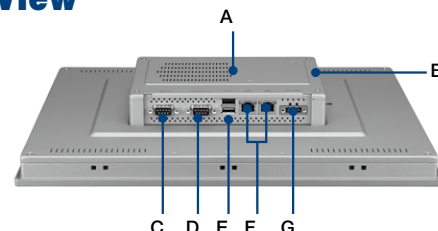- **Contrast Ratio** — 700:1

Touchscreen

- **Lifespan** — 36 million touches at a single point
- **Light Transmission** — Above 75%
- **Resolution** — Linearity
- **Type** — 5-wire analog resistive

Environment

- **Humidity** — 10 ~ 95% RH @ 40°C, non-condensing
- **Ingress Protection** — Front panel: IP66
- **Operating Temperature** — -20 ~ 60 °C (-4 ~ 140 °F)
- **Storage Temperature** — -30 ~ 70 °C (-22 ~ 158 °F)
- **Vibration Protection** — With CFast: 2 Grms (5~500 Hz) / With HDD: 1 Grms (5 ~ 500 Hz) (Operating, random vibration)

Rear View
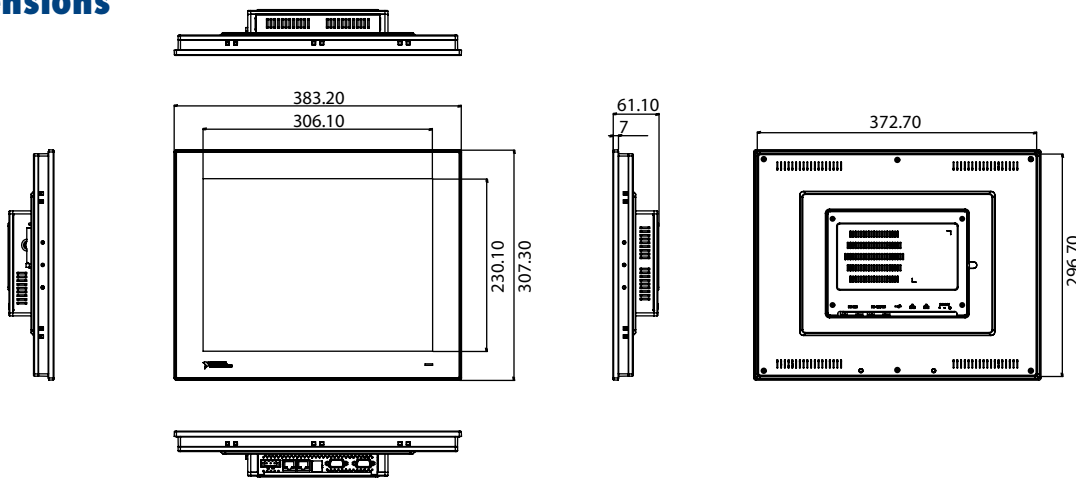

A. External HDD/SSD/iDoor kit (TPC-1251T-EHKE) (Optional)
B. CFast
C. RS-232
D. RS-232/422/485
E. USB 3.0 & 2.0
F. LAN (10/100/1000)
G. Power Receptor

TPC-1551T

Dimensions

Unit: mm

383.20
306.10
230.10
307.30
61.10
7
372.70
296.70

TPC-1551T Panel Cutout Dimensions: 374.5 x 298.5 mm (14.74 x 11.75 in)

Ordering Information

- **TPC-1551T-E3AE**   15" XGA Panel PC, Intel® Atom™ E3827 1.75 GHz Dual-core Processor, 4GB (True-flat touchscreen)
- **TPC-1551H-E3AE**   15" XGA Panel PC, Intel® Atom™ E3827 1.75 GHz Dual-core Processor, 4GB (Non-flat touchscreen IP65 certified traditional TPC front panel)

Optional Accessories

- **PWR-247-CE**   60W DC 24V/2.5A Output Power Supply
- **TPC-1251T-EHKE**   HDD/SSD and iDoor extension kit
- **1702002600**   Power Cable US Plug 1.8 M
- **1702002605**   Power Cable EU Plug 1.8 M
- **1702031801**   Power Cable UK Plug 1.8 M
- **1700000596-11**   Power Cable China/Australia Plug 1.8 M
- **TPC-1000H-WMKE**   TPC VESA Mounting Kit from 10" to 17" TPC
- **TPC-1000H-SMKE**   TPC Stand kit from 10" to 17" TPC

Embedded OS

- **20703WE7PS0004**   TPC-xx51T/H WS7P x64 MUI Image V4.18
- **20703WE7PS0005**   TPC-xx51T/H WS7P x86 MUI Image V4.18
- **2070015041**   TPC-xx51T-(6)xxAE Win10 2016LTSB V6.01 image
- **2070014677**   TPC-1251T/H WEC7 x64 MUI Image V4.01

S/W Bundle Offering

- **WA-HT1551T-E15H1AE**   TPC-1551T-E3AE, HMI Runtime 1500 tags, 32G CFast, WES7P
- **WA-ST1551T-E15H4AE**   TPC-1551T-E3AE, SCADA Runtime 1500 tags, 1TB HDD, WES7P

iDoor Modules (TPC-1251T-EHKE is required for iDoor modules)

- **PCM-26D2CA-AE**   SJA1000 CANBus, CANOpen, DB9 x 2
- **PCM-26D1DB-MAE**   Hilscher netX100 FieldBus, ProfiBus, DB9 x 1
- **PCM-27D24DI-AE**   Digital I/O, 16 DI / 8 DO, Isolation, DB37 x 1
- **PCM-24D2R4-AE**   OXPCIe-952 UART, Isolated RS-422/485, DB9 x 2
- **PCM-24D2R2-AE**   OXPCIe-952 UART, Isolated RS-232, DB9 x 2
- **PCM-24R2GL-AE**   2 Port Giga LAN Intel i350 PCIe mini card
- **PCM-24R1TP-AE**   Intel 82574L, GbE, IEEE 1588 PTP, RJ45 x 1
- **PCM-24S2WF-BE**   802.11 a/b/g/n/ac 2T2R w/BT4.1, Atheros QCA6174A

Application Software

WebAccess/SCADA	Advantech WebAccess/SCADA is a 100% browser-based IIoT software platform aimed at supervisory control and data acquisition (SCADA) operations. WebAccess/SCADA provides open interfaces that allow our customers and partners to develop unique IoT applications for different vertical markets. In addition to supporting traditional SCADA functions, the platform features an HTML5-based user interface and intelligent dashboard to facilitate cross-platform, cross-browser data analysis. Moreover, WebAccess/SCADA not only offers built-in widgets, but is also equipped with an innovative Widget Builder that enables customers to build their own widgets.
WebAccess/HMI	Advantech WebAccess/HMI is human-machine interface (HMI) software based on Microsoft's Windows operating system. This software features excellent communication and monitoring capabilities, supports more than 350 PLC communication protocols, and offers a wide choice of screen design objects to satisfy diverse integrations of factory automation and HMI operation and monitoring requirements.

TPC-1251T

12.1" TFT LED LCD Thin-Client Terminal with Intel® Atom™ Processor

1
Software and Industry Solutions

2
Industrial Server

3
Intelligent System

4
Intelligent HMI and Monitors

5
Automation Computers and Controllers

6
Industrial Communication

7
Remote I/O Modules

8
Industrial I/O and Video Solutions

Features

- Industrial-grade 12.1" XGA TFT LCD with 50K lifetime and LED backlight
- Intel® Atom™ E3827 1.75 GHz dual-core processor with 4 GB DDR3L SDRAM
- Wide operating temperature range -20 ~ 60 °C (-4 ~ 140 °F)
- True-flat touchscreen with IP66-rated front panel/non-flat touchscreen with IP65-rated front panel
- Front-facing LED indicators to show operating status
- Durable touchscreen with 5-wire resistive touch control
- Supports Advantech's iDoor technology for integrating optional accessories
- Compact, fanless embedded system with aluminum alloy front bezel and chassis grounding protection
- Supports Advantech's SNMP Subagent software
- Supports Advantech's WISE-PaaS/RMM remote management software

Introduction

The TPC-1251T thin-client terminal is equipped with a 12.1" XGA TFT LCD, low-power Intel® Atom™ E3827 1.75 GHz dual-core processor, and 4 GB (8 GB optional) DDR3L SDRAM to deliver high-performance computing in a compact, fanless system. For enhanced durability, TPC-1251T features a true-flat touchscreen with IP66-rated front panel, die cast aluminum alloy front bezel, and 5-wire resistive touch control. In addition to supporting a wide operating temperature range (-20 ~ 60 °C/-4 ~ 140 °F), TPC-1251T includes a full-size mini PCIe slot for extending the system functionalities to satisfy diverse automation application needs. Moreover, Advantech's iDoor technology can be integrated via the mini PCIe slot in order to provide additional I/O connectors, isolated digital I/O, fieldbus protocols, 3G/GPS/GPRS/Wi-Fi communication, and MRAM.

Specifications

General

BIOS	AMI UEFI
Certification	BSMI, CCC, CE, FCC Class A, UL
Cooling System	Fanless design
Dimensions (W x H x D)	311.80 x 238 x 57.2 mm (12.28 x 9.37 x 2.25 in)
Enclosure	Front bezel: Die cast aluminum alloy Back housing: SECC
Mounting	Desktop, Wall or Panel Mount
OS Support	Microsoft® WES7 (32/64-bit), Windows 7 (32/64-bit), Windows 10 Enterprise LTSB
Power Consumption	45.6 W (Typical)
Power Input	24 V_{DC} +/- 20%
(Net)	2.5 kg (5.51 lb)

System Hardware

CPU	Intel® Atom™ E3827 1.75 GHz dual-core processor
Memory	4 GB (8 GB optional) DDR3L 1600 MHz SODIMM SDRAM
LAN	10/100/1000BASE-T x 2
Expansion Slots	Full-size mini PCIe
Storage	1 x CFast 1 x 2.5" SATA SSD (optional)
I/O	1 x RS-232 1 x RS-232/422/485 1 x USB 3.0 1 x USB 2.0

LCD Display

Display Type	XGA TFT LED LCD
Display Size	12.1"
Max. Resolution	1024 x 768
Max. Colors	16.2M
Luminance cd/m²	600
Viewing Angle (H/V°)	160/140
Backlight Life	50,000 hr
Contrast Ratio	700:1

Touchscreen

Lifespan	36 million touches at a single point
Light Transmission	Above 75%
Resolution	Linearity
Type	5-wire analog resistive

Environment

Humidity	10 ~ 95% RH @ 40°C, non-condensing
Ingress Protection	Front panel: IP66
Operating Temperature	-20 ~ 60 °C (-4 ~ 140 °F)
Storage Temperature	-30 ~ 70 °C (-22 ~ 158 °F)
Vibration Protection	With CFast: 2 Grms (5~500 Hz) With HDD: 1 Grms (5 ~ 500 Hz) (Operating, random vibration)

Rear View
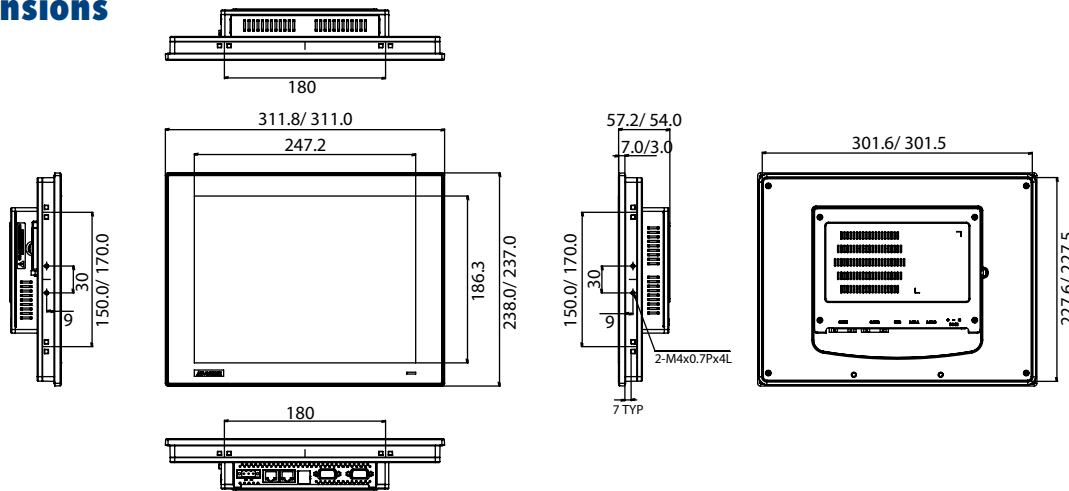
A. External HDD/SSD/iDoor kit (TPC-1251T-EHKE) (optional)
B. CFast
C. RS-232
D. RS-232/422/485
E. USB 3.0 & 2.0
F. LAN (10/100/1000)
G. Power receptor

TPC-1251T

Dimensions

Unit: mm

180

311.8/ 311.0
247.2
186.3
238.0/ 237.0

150.0/ 170.0
30
9

180

57.2/ 54.0
7.0/3.0
150.0/ 170.0
30
9
2-M4x0.7Px4L
7 TYP

301.6/ 301.5
227.6/ 227.5

TPC-1251T Panel Cutout Dimensions: 303 x 229 mm (11.93 x 9.02 in)

Ordering Information

- **TPC-1251T-E3AE** 12" XGA Panel PC, Intel® Atom™ E3827 1.75 GHz Dual-core Processor, 4GB (True-flat touchscreen)
- **TPC-1251H-E3AE** 12" XGA Panel PC, Intel® Atom™ E3827 1.75 GHz Dual-core Processor, 4GB (Non-flat touchscreen IP65 certified traditional TPC front panel)

Optional Accessories

- **PWR-247-CE** 60W DC 24V/2.5A Output Power Supply
- **TPC-1251T-EHKE** HDD/SSD and iDoor extension kit
- **1702002600** Power Cable US Plug 1.8 M
- **1702002605** Power Cable EU Plug 1.8 M
- **1702031801** Power Cable UK Plug 1.8 M
- **1700000596-11** Power Cable China/Australia Plug 1.8 M
- **TPC-1000H-WMKE** TPC VESA Mounting Kit from 10" to 17" TPC
- **TPC-1000H-SMKE** TPC Stand kit from 10" to 17" TPC

Embedded OS

- **20703WE7PS0004** TPC-xx51T/H WS7P x64 MUI Image V4.18
- **20703WE7PS0005** TPC-xx51T/H WS7P x86 MUI Image V4.18
- **2070015041** TPC-xx51T-(6)xxAE Win10 2016LTSB v6.01 image
- **2070014677** TPC-xx51T/H WEC7 x64 MUI Image V4.01

S/W Bundle Offering

- **WA-HT1251T-E15H1AE** TPC-1251T-E3AE, HMI Runtime 1500 tags, 32G CFast, WES7P
- **WA-ST1251T-E15H4AE** TPC-1251T-E3AE, SCADA Runtime 1500 tags, 1TB HDD, WES7P

iDoor Modules (TPC-1251T-EHKE is required for iDoor modules)

- **PCM-26D2CA-AE** SJA1000 CANBus, CANOpen, DB9 x 2
- **PCM-26D1DB-MAE** Hilscher netX100 FieldBus, ProfiBus, DB9 x 1
- **PCM-27D24DI-AE** Digital I/O, 16 DI / 8 DO, Isolation, DB37 x 1
- **PCM-24D2R4-AE** OXPCIe-952 UART, Isolated RS-422/485, DB9 x 2
- **PCM-24D2R2-AE** OXPCIe-952 UART, Isolated RS-232, DB9 x 2
- **PCM-24R2GL-AE** 2 Port Giga LAN Intel i350 PCIe mini card
- **PCM-24R1TP-AE** Intel 82574L, GbE, IEEE 1588 PTP, RJ45 x 1
- **PCM-24S2WF-AE** 802.11 a/b/g/n 2T2R w/ BT4.0, Atheros AR9462

Application Software

WebAccess/SCADA	Advantech WebAccess/SCADA is a 100% browser-based IIoT software platform aimed at supervisory control and data acquisition (SCADA) operations. WebAccess/SCADA provides open interfaces that allow our customers and partners to develop unique IoT applications for different vertical markets. In addition to supporting traditional SCADA functions, the platform features an HTML5-based user interface and intelligent dashboard to facilitate cross-platform, cross-browser data analysis. Moreover, WebAccess/SCADA not only offers built-in widgets, but is also equipped with an innovative Widget Builder that enables customers to build their own widgets.
WebAccess/HMI	Advantech WebAccess/HMI is human-machine interface (HMI) software based on Microsoft's Windows operating system. This software features excellent communication and monitoring capabilities, supports more than 350 PLC communication protocols, and offers a wide choice of screen design objects to satisfy diverse integrations of factory automation and HMI operation and monitoring requirements.

TPC-651T

5.7"/6.5" VGA TFT LED LCD Thin-Client Terminal with Intel® Atom™ Processor

Features

- Industrial-grade 5.7/6.5" VGA TFT LCD with 50K lifetime and LED backlight
- Intel® Atom™ E3827 1.75 GHz dual-core processor with 4 GB DDR3L SDRAM
- Compact, fanless embedded system with aluminum alloy front bezel
- Wide operating temperature range -20 ~ 60 °C (-4 ~ 140 °F)
- True-flat, IP65-rated front panel
- Front-facing LED indicators to show operating status
- Durable touchscreen with 5-wire resistive touch control
- Supports Advantech's iDoor technology for integrating optional accessories
- Supports AC/DC input with optional power adapter
- Chassis grounding protection
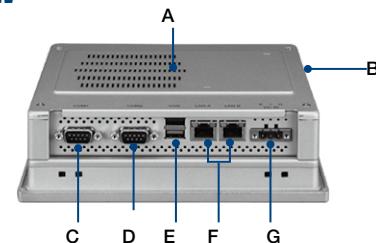- Supports Advantech's WISE-PaaS/RMM remote management software

Introduction

The TPC-651T thin-client terminal is equipped with a 5.7"/6.5" VGA TFT LCD, low-power Intel® Atom™ E3827 1.75 GHz dual-core processor, and 4 GB DDR3L SDRAM to deliver high-performance computing in a compact, fanless system. To enhance the system's durability, TPC-651T features a true-flat touchscreen with IP66-rated front panel, die-cast aluminum alloy front bezel, and 5-wire resistive touch control. In addition to supporting a wide operating temperature range (-20 ~ 60 °C/-4 ~ 140 °F), TPC-651T includes a full-size mini PCIe slot for extending the system functionalities to satisfy diverse automation application needs. Moreover, Advantech's iDoor technology can be integrated via the mini PCIe slot in order to provide additional I/O connectors, isolated digital I/O, fieldbus protocols, 3G/GPS/GPRS/Wi-Fi communication, and MRAM.

Specifications

General

- **BIOS** — AMI UEFI
- **Certification** — BSMI, CCC, CE, FCC Class A, UL
- **Cooling System** — Fanless design
- **Dimensions (W x H x D)** — 199 x 152 x 58.9 mm (7.83 x 5.98 x 2.32 in)
- **Enclosure** — Front bezel: Die cast aluminum alloy
  Back housing: SECC
- **Mounting** — Desktop, Wall or Panel Mount
- **OS Support** — Microsoft® WES7 (32/64-bit), WE8S (64-bit), Windows 7 (32/64-bit), Windows 8.1 (32/64-bit), Windows 10 Enterprise LTSB
- **Power Consumption** — 19.2 W (typical)
- **Power Input** — 24 V_{DC} +/- 20%
- **Watchdog Timer** — 1 ~ 255 sec (system)
- **Weight (Net)** — 1.5 kg (3.3 lb)

System Hardware

- **CPU** — Intel® Atom™ E3827 1.75 GHz dual-core processor
- **Memory** — 1 x SODIMM with 4 GB DDR3L SDRAM (supports up to 8 GB)
- **LAN** — 10/100/1000BASE-T x 2
- **Expansion Slots** — Full-size mini PCIe
- **Storage** — 1 x CFast
  1 x RS-232
  1 x RS-232/422/485
  1 x USB 3.0
  1 x USB 2.0

LCD Display

- **Display Type** — VGA TFT LED LCD
- **Display Size** — 5.7"/6.5"
- **Max. Resolution** — 640 x 480
- **Max. Colors** — 262K
- **Luminance cd/m²** — 550/800
- **Viewing Angle (H/V°)** — 160/140
- **Backlight Life** — 50,000 hr
- **Contrast Ratio** — 800:1/600:1

Touchscreen

- **Lifespan** — 36 million touches at a single point
- **Light Transmission** — Above 75%
- **Resolution** — Linearity
- **Type** — 5-wire analog resistive

Environment

- **Humidity** — 10 ~ 95% RH @ 40 °C, non-condensing
- **Ingress Protection** — Front panel: IP66
- **Operating Temperature** — -20 ~ 60 °C (-4 ~ 140 °F)
- **Storage Temperature** — -30 ~ 70 °C (-22 ~ 158 °F)
- **Vibration Protection** — With CFast: 2 Grms (5~500 Hz)
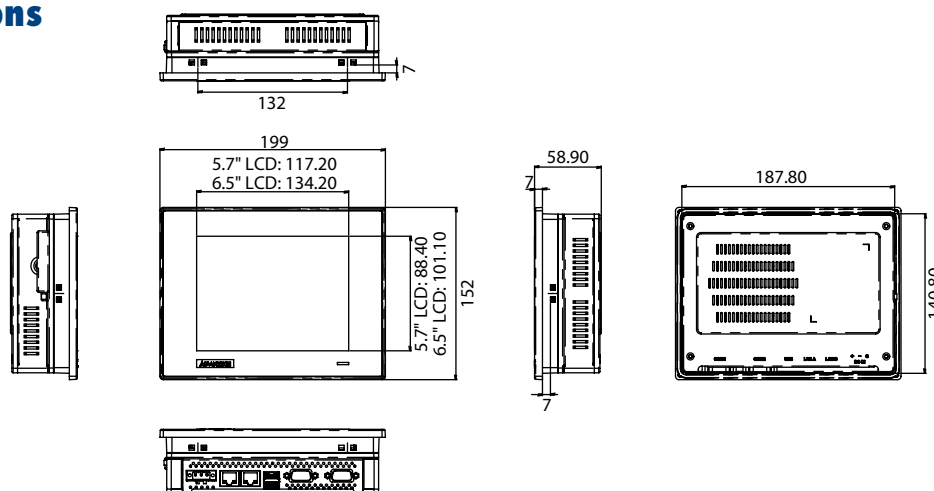 With HDD: 1 Grms (5 ~ 500 Hz)
  (Operating, random vibration)

Rear View

A. External HDD/SSD/iDoor kit (TPC-1251T-EHKE) (optional)
B. CFast
C. RS-232
D. RS-232/422/485
E. USB 3.0 & 2.0
F. LAN (10/100/1000)
G. Power receptor

All product specifications are subject to change without notice.

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Dimensions

Unit: mm

132

7

199

5.7" LCD: 117.20
6.5" LCD: 134.20

5.7" LCD: 88.40
6.5" LCD: 101.10

152

58.90

7

7

187.80

140.80

Panel Cutout Dimensions: 189.1 x 142.1 mm (7.44 x 5.59 in)

Ordering Information

- **TPC-651T-E3AE** — 5.7" VGA Panel PC, Intel® Atom™ E3827 1.75 GHz Dual-core Processor, 4GB (True-flat touchscreen)
- **TPC-651H-E3AE** — 5.7" VGA Panel PC, Intel® Atom™ E3827 1.75 GHz Dual-core Processor, 4GB (Non-flat touchscreen IP65 certified traditional TPC front panel)
- **TPC-651T-6E3AE** — 6.5" VGA Panel PC, Intel® Atom™ E3827 1.75 GHz Dual-core Processor, 4GB (True-flat touchscreen)

Optional Accessories

- **PWR-247-CE** — 60W DC 24V/2.5A Output Power Supply
- **TPC-1251T-EHKE** — HDD/SSD and iDoor extension kit
- **1702002600** — Power Cable US Plug 1.8 M
- **1702002605** — Power Cable EU Plug 1.8 M
- **1702031801** — Power Cable UK Plug 1.8 M
- **1700000596-11** — Power Cable China/Australia Plug 1.8 M

Embedded OS

- **20703WE7PS0004** — TPC-xx51T/H WS7P x64 MUI Image V4.18
- **20703WE7PS0005** — TPC-xx51T/H WS7P x86 MUI Image V4.18
- **2070015041** — TPC-xx51T-(6)xxAE Win10 2016LTSB v6.01 image
- **2070014677** — TPC-xx51T/H WEC7 x64 MUI Image V4.01

S/W Bundle Offering

- **WA-HT651T-E15H1AE** — TPC-651T-6E3AE, HMI Runtime 1500 tags, 32G CFast, WES7P

iDoor Modules (TPC-1251T-EHKE is required for iDoor modules)

- **PCM-26D2CA-AE** — SJA1000 CANBus, CANOpen, DB9 x 2
- **PCM-26D1DB-MAE** — Hilscher netX100 FieldBus, ProfiBus, DB9 x 1
- **PCM-27D24DI-AE** — Digital I/O, 16 DI / 8 DO, Isolation, DB37 x 1
- **PCM-24D2R4-AE** — OXPCIe-952 UART, Isolated RS-422/485, DB9 x 2
- **PCM-24D2R2-AE** — OXPCIe-952 UART, Isolated RS-232, DB9 x 2
- **PCM-24R2GL-AE** — 2 Port Giga LAN Intel i350 PCIe mini card
- **PCM-24R1TP-AE** — Intel 82574L, GbE, IEEE 1588 PTP, RJ45 x 1
- **PCM-24S2WF-AE** — 802.11 a/b/g/n 2T2R w/ BT4.0, Atheros AR9462

Application Software

WebAccess/SCADA	Advantech WebAccess/SCADA is a 100% browser-based IIoT software platform aimed at supervisory control and data acquisition (SCADA) operations. WebAccess/SCADA provides open interfaces that allow our customers and partners to develop unique IoT applications for different vertical markets. In addition to supporting traditional SCADA functions, the platform features an HTML5-based user interface and intelligent dashboard to facilitate cross-platform, cross-browser data analysis. Moreover, WebAccess/SCADA not only offers built-in widgets, but is also equipped with an innovative Widget Builder that enables customers to build their own widgets.
WebAccess/HMI	Advantech WebAccess/HMI is human-machine interface (HMI) software based on Microsoft's Windows operating system. This software features excellent communication and monitoring capabilities, supports more than 350 PLC communication protocols, and offers a wide choice of screen design objects to satisfy diverse integrations of factory automation and HMI operation and monitoring requirements.

TPC-2140WP

21.5" Full HD TFT LCD Touch Panel Computer with AMD Dual-Core Processor

iF product design award
2013

Features

- 21.5" Full HD TFT LED LCD display with 16:9 widescreen aspect ratio
- AMD dual-core T56E 1.65 GHz processor with independent GPU for advanced graphics performance
- IP66-rated, true-flat touchscreen with PCAP multi-touch control
- Built-in function key and home key for intuitive operation
- Anti-scratch surface with 7H hardness
- Easy-access CFast, HDD, and mini PCIe slots
- Supports expansion via mini PCIe slot
- Supports HDMI for secondary display
- Supports HD audio for alarm applications
- Front-facing LED indicators for showing operating status
- Compact design with die cast magnesium alloy front bezel
- Fanless cooling system
- Winner of the 2013 iF product design award

Introduction

The TPC-2140WP touch panel computer features a 21.5" Full HD TFT LED LCD with a 16:9 widescreen aspect ratio and PCAP multi-touch control. Powered by an AMD T56E 1.65 GHz processor with independent GPU, TPC-2140WP can support advanced graphics performance for complex applications. The built-in function key and home key offer enhanced usability and intuitive operation. The side I/O cover provides easy access to the CFast, HDD, and mini PCIe slots. With the inclusion of a mini PCIe slot, the TPC-2140WP's functionalities can be easily expanded to support diverse applications.

Specifications

General

- **BIOS** — AMI 32Mbit
- **Certification** — BSMI, CCC, CE, FCC Class A, UL
- **Cooling System** — Fanless design
- **Dimensions (W x H x D)** — 558.4 x 349.8 x 56.7 (21.98 x 13.77 x 2.23 in)
- **Enclosure** — Front panel: Die cast magnesium alloy / Rear cover: PC/ABS resin
- **Mount Options** — Panel
- **OS Support** — Microsoft® Win8/WES7P/XP/WES2009
- **Power Consumption** — 35 W Typical
- **Power Input** — 18 ~ 32 V_{DC}
- **Watchdog Timer** — 1 ~ 255 sec (system)
- **Weight (Net)** — 8.5 kg (18.74 lb)

System Hardware

- **CPU** — AMD G-series T56E 1.65GHz
- **Chipset** — AMD A50M FCH
- **Memory** — 4 GB SODIMM DDR3 SDRAM
- **LAN** — 2 x 10/100/1000BASE-T
- **Expansion Slots** — 1 x Full-size mini PCIe
- **Storage** — 1 x CFast / 1 x 2.5" SATA SSD (optional)
- **I/O** — 3 x RS-232 / 1 x RS-422/485 / 2 x USB 2.0 (Host) / 1 x HDMI / 1 x Audio mic in, 1 x line out

LCD Display

- **Display Type** — Full HD TFT LED LCD
- **Display Size** — 21.5"
- **Max. Resolution** — 1920 x 1080
- **Max. Colors** — 16.7M
- **Luminance cd/m²** — 300
- **Viewing Angle (H/V°)** — 178/178
- **Backlight Life** — 50,000 hr
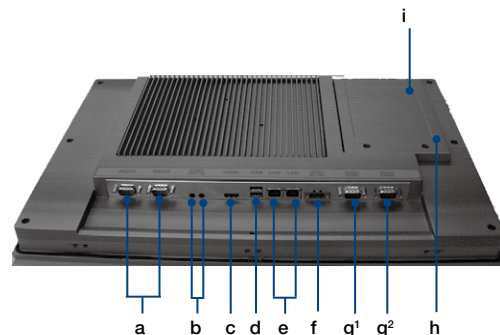
Touchscreen

- **Light Transmission** — ≥88%
- **Resolution** — 4096*4096 dot
- **Type** — Projected capacitive

Environment

- **Humidity** — 10 ~ 95% RH @ 40 °C, non-condensing. **Note**: Tested for 48 hr
- **Ingress Protection** — Front panel: IP66
- **Operating Temperature** — 0 ~ 55 °C (32 ~ 131 °F)
- **Storage Temperature** — -20 ~ 60 °C (-4 ~ 140 °F)
- **Vibration Protection** — With HDD: 1 Grms (5 ~ 500 Hz) (Operating, random vibration)

Rear View

a. COM 1 & 2 (RS-232)
b. Audio (line out, mic in)
c. HDMI
d. USB 2.0
e. LAN (10/100/1000)
f. Power receptor
g¹. COM3 (RS-232)
g². COM4 (RS-422/485)
h. Mini PCIe Slot
i. 2.5" SATA HDD

All product specifications are subject to change without notice.   Back to Top   Last updated: 31-Aug-2018

TPC-2140WP

Unit: mm [inch]

558.40 [21.98]

349.80 [13.77]

558.40 [21.98]

478.20 [18.83]

349.80 [13.77]

269.70 [10.62]

21.5"

56.7 [2.23]

37.1 [1.46]

7 [0.28]

550.30 [21.67]

341.80 [13.46]

2 [0.08]
Wall thickness

Panel Cutout Dimensions

R5 [0.20]

Panel Cutout Dimensions: 550.3mm x 341.8 mm (21.67 x 13.46 in)

Ordering Information

- **TPC-2140WP-T3AE**   21.5" full-HD Multi-Touch Panel PC, AMD T56E, 4GB

Optional Accessory

- **PWR-247-CE**   60W DC 24V/2.5A Output Power Supply
- **1702002600**   Power Cord 3P UL/CSA 125V 10A 1.83M
- **1702002605**   Power cable EU Plug 1.8M
- **1702031801**   Power cable UK Plug 1.8M
- **1700000596-11**   Power cable China/Australia Plug 1.8M

Embedded OS

- **2070012384**   TPC-xx40WP WS7P x86 MUI Image v4.12

S/W Bundle Offering

- **WA-HT2140W-G15H1AE** TPC-2140WP-T3AE, HMI Runtime 1500 tags, 32G CFast, WES7P
- **WA-ST2140W-G15H4AE** TPC-2140WP-T3AE, SCADA Runtime 1500 tags, 1TB HDD, WES7P

Application Software

WebAccess/SCADA	Advantech WebAccess/SCADA is a 100% browser-based IIoT software platform aimed at supervisory control and data acquisition (SCADA) operations. WebAccess/SCADA provides open interfaces that allow our customers and partners to develop unique IoT applications for different vertical markets. In addition to supporting traditional SCADA functions, the platform features an HTML5-based user interface and intelligent dashboard to facilitate cross-platform, cross-browser data analysis. Moreover, WebAccess/SCADA not only offers built-in widgets, but is also equipped with an innovative Widget Builder that enables customers to build their own widgets.
WebAccess/HMI	Advantech WebAccess/HMI is human-machine interface (HMI) software based on Microsoft's Windows operating system. This software features excellent communication and monitoring capabilities, supports more than 350 PLC communication protocols, and offers a wide choice of screen design objects to satisfy diverse integrations of factory automation and HMI operation and monitoring requirements.

TPC-1840WP

18.5" WXGA TFT LCD Multi-Touch Panel Computer with AMD Dual-Core Processor

iF product design award
2013

Features

- 18.5" WXGA TFT LED LCD display with 16:9 widescreen aspect ratio
- AMD dual-core T56E 1.65 GHz processor with independent GPU for advanced graphics performance
- IP66-rated, true-flat touchscreen with PCAP multi-touch control
- Built-in function key and home key for intuitive operation
- Anti-scratch surface with 7H hardness
- Easy-access CFast, HDD, and mini PCIe slots
- Supports expansion via mini PCIe slot
- Supports HDMI for secondary display
- Supports HD audio for alarm applications
- Front-facing LED indicators for showing operating status
- Compact design with die cast magnesium alloy front bezel
- Fanless cooling system
- Winner of the 2013 iF product design award

R33138   CCC   CE   FCC   c UL us LISTED E180881 I.T.E.

Introduction

The TPC-1840WP multi-touch panel computer features an 18.5" WXGA TFT LED LCD with a 16:9 widescreen aspect ratio and PCAP multi-touch control. Powered by an AMD T56E 1.65 GHz processor with independent GPU, TPC-1840WP can support advanced graphics performance for complex applications. The built-in function key and home key offer enhanced usability and intuitive operation. The side I/O cover provides easy access to the CFast, HDD, and mini PCIe slots. With the inclusion of a mini PCIe slot, the TPC-1840WP's functionalities can be easily expanded to support diverse applications.

Specifications

General

- **BIOS**   AMI 32Mbit
- **Certification**   BSMI, CCC, CE, FCC Class A, UL
- **Cooling System**   Fanless design
- **Dimensions (W x H x D)**   488 x 309 x 56.7 (19.21 x 12.17 x 2.23 in)
- **Enclosure**   Front panel: Die cast magnesium alloy
                                   Rear cover: PC/ABS resin
- **Mount Options**   Panel
- **OS Support**   Microsoft® WES7P, WES2009
- **Power Consumption**   35 W Typical
- **Power Input**   18 ~ 32 V$_{DC}$
- **Watchdog Timer**   1 ~ 255 sec (system)
- **Weight (Net)**   7 kg (15.44 lbs)

System Hardware

- **CPU**   AMD G-series T56E 1.65GHz
- **Chipset**   AMD A50M FCH
- **Memory**   4 GB SO_DIMM DDR3 SDRAM
- **LAN**   2 x 10/100/1000BASE-T
- **Expansion Slots**   1 x Full-size mini PCIe
- **Storage**   1 x CFast
                                   1 x 2.5" SATA SSD (optional)
- **I/O**   3 x RS-232
                                   1 x RS-422/485
                                   2 x USB 2.0 (Host)
                                   1 x HDMI
                                   1 x Audio mic in, 1 x line out

LCD Display

- **Display Type**   WXGA TFT LED LCD
- **Display Size**   18.5"
- **Max. Resolution**   1366 x 768
- **Max. Colors**   16.7M
- **Luminance cd/m²**   300
- **Viewing Angle (H/V°)**   170/160
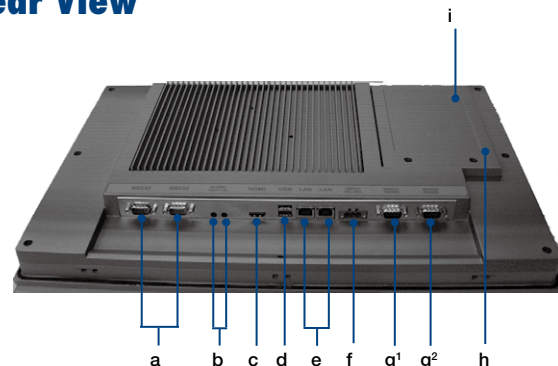- **Backlight Life**   50,000 hr

Touchscreen

- **Light Transmission**   ≥88%
- **Resolution**   4096*4096 dot
- **Type**   Projected capacitive

Environment

- **Humidity**   10 ~ 95% RH @ 40 °C, non-condensing
                                   Note: Tested for 48 hr
- **Ingress Protection**   Front panel: IP66
- **Operating Temperature**   0 ~ 55 °C (32 ~ 131 °F)
- **Storage Temperature**   -20 ~ 60 °C (-4 ~ 140 °F)
- **Vibration Protection**   With HDD: 1 Grms (5 ~ 500 Hz)
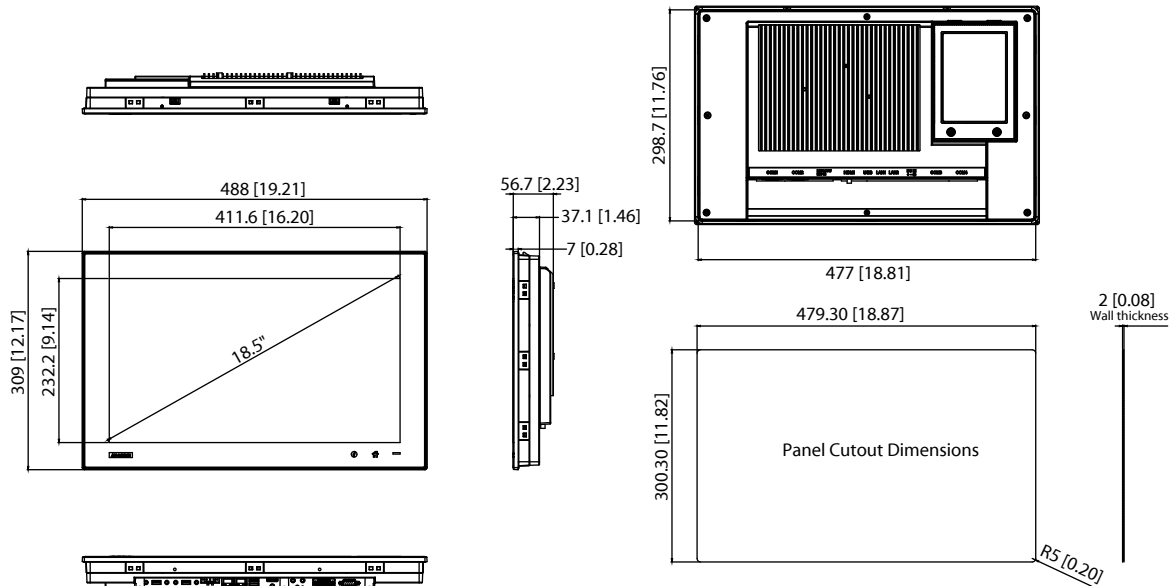   (Operating, random vibration)

Rear View

a. COM 1 & 2 (RS-232)
b. Audio (line out, mic in)
c. HDMI
d. USB 2.0
e. LAN (10/100/1000)
f. Power receptor
g¹. COM3 (RS-232)
g². COM4 (RS-422/485)
h. Mini PCIe slot
i. 2.5" SATA HDD

All product specifications are subject to change without notice.   ▲ Back to Top   Last updated: 31-Aug-2018

Dimensions

Unit: mm [inch]

488 [19.21]
411.6 [16.20]
309 [12.17]
232.2 [9.14]
18.5"

56.7 [2.23]
37.1 [1.46]
7 [0.28]

298.7 [11.76]
477 [18.81]

2 [0.08]
Wall thickness
479.30 [18.87]
300.30 [11.82]

Panel Cutout Dimensions

R5 [0.20]

Panel Cutout Dimensions: 479.3 x 300.3 mm (18.87 x 11.82 in)

Ordering Information

- **TPC-1840WP-T3AE** 18.5" WXGA Multi-Touch Panel PC, AMD T56E, 4GB

Optional Accessories

- **PWR-247-CE** 60W DC 24V/2.5A Output Power Supply
- **1702002600** Power Cord 3P UL/CSA 125V 10A 1.83M
- **1702002605** Power cable EU Plug 1.8M
- **1702031801** Power cable UK Plug 1.8M
- **1700000596-11** Power cable China/Australia Plug 1.8M

Embedded OS

- **2070012816** TPC-1840WP WES7P X64 MUI V4.12 B002
- **2070012811** TPC-2140WP WES7P X64 MUI V4.12 B001
- **2070012820** TPC-1840WP WES7P X86 MUI V4.12 B001
- **2070014386** TPC-2140WP WS7P x86 MUI v4.12 B001

Application Software

WebAccess/SCADA	Advantech WebAccess/SCADA is a 100% browser-based IIoT software platform aimed at supervisory control and data acquisition (SCADA) operations. WebAccess/SCADA provides open interfaces that allow our customers and partners to develop unique IoT applications for different vertical markets. In addition to supporting traditional SCADA functions, the platform features an HTML5-based user interface and intelligent dashboard to facilitate cross-platform, cross-browser data analysis. Moreover, WebAccess/SCADA not only offers built-in widgets, but is also equipped with an innovative Widget Builder that enables customers to build their own widgets.
WebAccess/HMI	Advantech WebAccess/HMI is human-machine interface (HMI) software based on Microsoft's Windows operating system. This software features excellent communication and monitoring capabilities, supports more than 350 PLC communication protocols, and offers a wide choice of screen design objects to satisfy diverse integrations of factory automation and HMI operation and monitoring requirements.

TPC-1551WP

15.6" WXGA TFT LED LCD Thin-Client Terminal with Intel® Atom™ Processor

1 Software and Industry Solutions
2 Industrial Server
3 Intelligent System
4 Intelligent HMI and Monitors
5 Automation Computers and Controllers
6 Industrial Communication
7 Remote I/O Modules
8 Industrial I/O and Video Solutions

Features

- Industrial-grade 15.6" WXGA TFT LCD with 50K lifetime and LED backlight
- Intel® Atom™ E3827 1.75 GHz dual-core processor with 4 GB DDR3L SDRAM
- 16:9 widescreen display with PCAP multi-touch control
- IP66-rated front panel and panel mount
- Built-in intelligent home key and iKey for intuitive operation
- Front-facing LED indicators to show operating status
- Supports Advantech's iDoor technology for integrating optional accessories
- Chassis grounding protection
- Anti-scratch surface with 7H hardness
- Supports AC/DC input with optional power adapter
- Supports Advantech's SNMP Subagent software
- Supports Advantech's WISE-PaaS/RMM remote management software

Introduction

The TPC-1551WP thin-client terminal is equipped with a 15.6" SXGA TFT LCD, low-power Intel® Atom™ E3827 1.75 GHz dual-core processor, and 4 GB DDR3L SDRAM to deliver sufficient computing performance in a compact, fanless system. For enhanced durability, TPC-1551WP features a true-flat touchscreen with IP66-rated front panel, die cast aluminum alloy front bezel, and projected capacitive touch control. Because of the system's compact but robust design, it can be easily deployed into existing infrastructure. Moreover, Advantech's iDoor technology can be integrated via the mini PCIe slot in order to provide additional I/O connectors, isolated digital I/O, fieldbus protocols, 3G/GPS/GPRS/Wi-Fi communication, and MRAM to support diverse industrial automation applications.

Specifications

General

- **BIOS** — AMI UEFI
- **Certification** — BSMI, CCC, CE, FCC Class A, UL
- **Cooling System** — Fanless design
- **Dimensions (W x H x D)** — 419.7 x 269 x 61.9 mm (16.52 x 10.59 x 2.44 in)
- **Enclosure** — Front bezel: Die cast aluminum alloy / Back housing: SECC
- **Mount Options** — Desktop, wall, panel, and VESA (with optional kit)
- **OS Support** — Microsoft® WES7 (32/64-bit), Windows 7 (32/64-bit), Windows 10 Enterprise LTSB
- **Power Input** — 24 V_{DC} ± 20%
- **Power Consumption** — 48 W (Typical)
- **Watchdog Timer** — 1 ~ 255 sec (system)
- **Weight (Net)** — 5 Kg (11.02 lbs)

System Hardware

- **CPU** — Intel® Atom™ E3827 1.75 GHz Processor
- **Memory** — 4 GB (Optional 8 GB) DDR3L 1600 MHz SODIMM SDRAM
- **LAN** — 2 x 10/100/1000BASE-T
- **Expansion Slots** — 1 x Full-size mini PCIe
- **Storage** — 1 x CFast / 1 x 2.5" SATA SSD (optional)
- **I/O** — 1 x RS-232 / 1 x RS-232/422/485 / 1 x USB 3.0 / 1 x USB 2.0

LCD Display

- **Display Type** — WXGA TFT LED LCD
- **Display Size** — 15.6"
- **Max. Resolution** — 1366 x 768
- **Max. Colors** — 16.7M
- **Luminance cd/m2** — 400
- **Viewing Angle (H/V°)** — 170/160
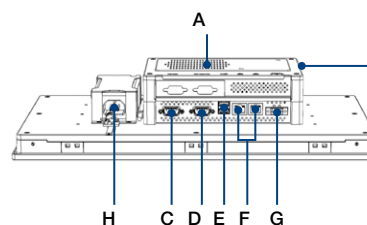- **Backlight Life** — 50,000 hr
- **Contrast Ratio** — 500:1

Touchscreen

- **Light Transmission** — 90% ± 3%
- **Resolution** — 2048 x 2048 dot
- **Type** — Projected capacitive

Environment

- **Humidity** — 10 ~ 95% RH @ 40 °C, non-condensing
- **Ingress Protection** — Front panel: IP66
- **Operating Temperature** — 0 ~ 55 °C (32 ~ 131 °F)
- **Storage Temperature** — -20 ~ 60 °C (-4 ~ 140 °F)
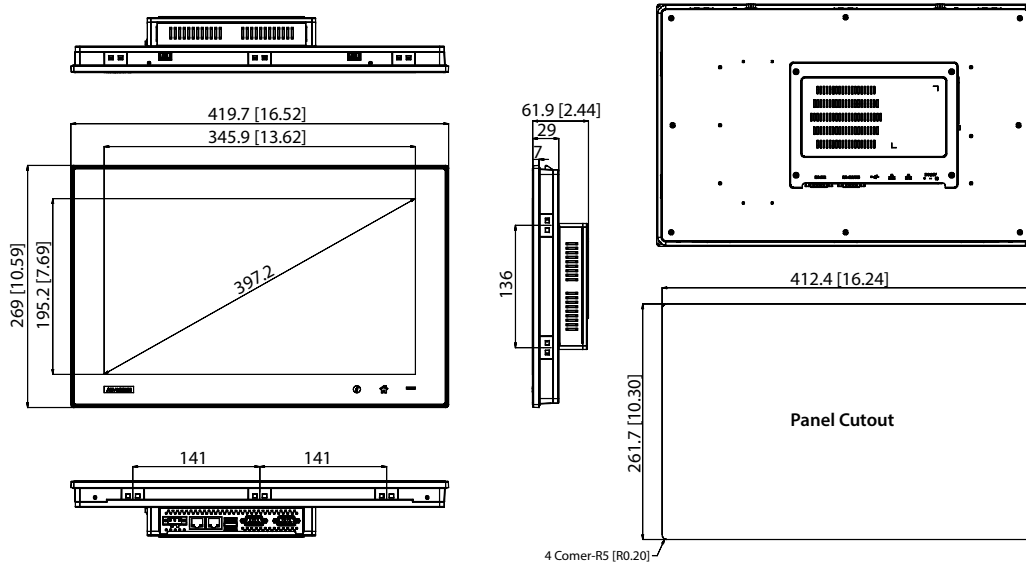- **Vibration Protection** — With HDD: 1 Grms (5 ~ 500 Hz) (Operating, random vibration)

Rear View

A. External HDD/iDoor kit (TPC-1251T-EHKE) (optional)
B. CFast slot
C. RS-232
D RS-232/422/485
E. USB 3.0 & 2.0
F. LAN (10/100/1000)
G. Power receptor
H. Power adapter and bracket (optional)

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Dimensions

Unit: mm [inch]

419.7 [16.52]
345.9 [13.62]
269 [10.59]
195.2 [7.69]
397.2
61.9 [2.44]
29
7
136
141 141

412.4 [16.24]
261.7 [10.30]

Panel Cutout

4 Corner-R5 [R0.20]

TPC-1551WP Panel Cutout Dimensions: 412.4 x 261.7 mm (16.23 x 10.30 in)

Ordering Information

- **TPC-1551WP-E3AE** 15.6" Multi-Touch Panel PC, Intel Atom E3827, 4GB DDR3L pre-installed

Optional Accessories

- **TPC-1000H-ADKE** 63W DC 24V/2.62A Power supply & bracket for TPC-xx51WP series
- **TPC-1251T-EHKE** HDD and iDoor extension kit
- **1702002600** Power Cable US Plug 1.8 M
- **1702002605** Power Cable EU Plug 1.8 M
- **1702031801** Power Cable UK Plug 1.8 M
- **1700000596-11** Power Cable China/Australia Plug 1.8 M

Embedded OS

- **2070013484** TPC-xx51WP WS7P x64 MUI V4.13
- **2070014387** TPC-xx51WP WS7P X86 MUI. V4.14
- **2070014871** TPC-xx51WP Win10 Enterprise LTSB x64 MUI image V6.01
- **2070013911** TPC-1551WP WEC7 X64 MUI V4.00

iDoor Modules (TPC-1251T-EHKE is required for iDoor modules)

- **PCM-26D2CA-AE** SJA1000 CANBus, CANOpen, DB9 x 2
- **PCM-26D1DB-MAE** Hilscher netX100 FieldBus, ProfiBus, DB9 x 1
- **PCM-27D24DI-AE** Digital I/O, 16 DI / 8 DO, Isolation, DB37 x 1
- **PCM-24D2R4-AE** OXPCIe-952 UART, Isolated RS-422/485, DB9 x 2
- **PCM-24D2R2-AE** OXPCIe-952 UART, Isolated RS-232, DB9 x 2
- **PCM-24R2GL-AE** 2 Port Giga LAN Intel i350 PCIe mini card
- **PCM-24R1TP-AE** Intel 82574L, GbE, IEEE 1588 PTP, RJ45 x 1
- **PCM-24S2WF-BE** 802.11 a/b/g/n/ac 2T2R w/BT4.1, Atheros QCA6174A

Application Software

WebAccess/SCADA	Advantech WebAccess/SCADA is a 100% browser-based IIoT software platform aimed at supervisory control and data acquisition (SCADA) operations. WebAccess/SCADA provides open interfaces that allow our customers and partners to develop unique IoT applications for different vertical markets. In addition to supporting traditional SCADA functions, the platform features an HTML5-based user interface and intelligent dashboard to facilitate cross-platform, cross-browser data analysis. Moreover, WebAccess/SCADA not only offers built-in widgets, but is also equipped with an innovative Widget Builder that enables customers to build their own widgets.
WebAccess/HMI	Advantech WebAccess/HMI is human-machine interface (HMI) software based on Microsoft's Windows operating system. This software features excellent communication and monitoring capabilities, supports more than 350 PLC communication protocols, and offers a wide choice of screen design objects to satisfy diverse integrations of factory automation and HMI operation and monitoring requirements.

TPC-1051WP

10.1" WXGA TFT LED LCD Thin-Client Terminal with Intel® Atom™ Processor

1 Software and Industry Solutions
2 Industrial Server
3 Intelligent System
4 Intelligent HMI and Monitors
5 Automation Computers and Controllers
6 Industrial Communication
7 Remote I/O Modules
8 Industrial I/O and Video Solutions

Features

- Industrial-grade 10.1" WXGA TFT LCD with 50K lifetime and LED backlight
- Intel® Atom™ E3827 1.75 GHz dual-core processor with 4 GB DDR3L SDRAM
- 16:9 widescreen display with PCAP multi-touch control
- IP66-rated front panel and panel mount
- Built-in intelligent home key and iKey for intuitive operation
- Front-facing LED indicators to show operating status
- Supports Advantech's iDoor technology for integrating optional accessories
- Chassis grounding protection
- Anti-scratch surface with 7H hardness
- Supports AC/DC input with optional power adapter
- Supports Advantech's SNMP Subagent software
- Supports Advantech's WISE-PaaS/RMM remote management software

Introduction

The TPC-1051WP thin-client terminal is equipped with a 10.1" WXGA TFT LCD, low-power Intel® Atom™ E3827 1.75 GHz dual-core processor, and 4 GB DDR3L SDRAM to deliver sufficient computing performance in a compact, fanless system. For enhanced durability, TPC-1051WP features a true-flat touchscreen with IP66-rated front panel, die cast aluminum alloy front bezel, and projected capacitive touch control. Because of the system's compact but robust design, it can be easily deployed into existing infrastructure. Moreover, Advantech's iDoor technology can be integrated via the mini PCIe slot in order to provide additional I/O connectors, isolated digital I/O, fieldbus protocols, 3G/GPS/GPRS/Wi-Fi communication, and MRAM to support diverse industrial automation applications.

Specifications

General

- **BIOS**   AMI UEFI
- **Certification**   BSMI, CCC, CE, FCC Class A, UL
- **Cooling System**   Fanless design
- **Dimensions (W x H x D)** 283.1 x 202.3 x 61.4 mm (11.15 x 7.96 x 2.42 in)
- **Enclosure**   Front bezel: Die cast aluminum alloy
                        Back housing: SECC
- **Mounting**   Desktop, Wall, Panel Mount, and VESA mount (with optional kit)
- **OS Support**   Microsoft® WES7 (32/64-bit), Windows 7 (32/64-bit), Windows 10 Enterprise LTSB
- **Power Input**   24 V_{DC} ± 20%
- **Power Consumption** 36 W (Typical)
- **Watchdog Timer**   1 ~ 255 sec (system)
- **Weight (Net)**   2.56 kg (5.64 lbs)

System Hardware

- **CPU**   Intel® Atom™ E3827 1.75 GHz processor
- **Memory**   4 GB (8 GB optional) DDR3L 1600 MHz SODIMM SDRAM
- **LAN**   2 x 10/100/1000BASE-T
- **Expansion Slots**   1 x Full-size mini PCIe
- **Storage**   1 x CFast
                        1 x 2.5" SATA SSD (optional)
- **I/O**   1 x RS-232
                        1 x RS-232/422/485
                        1 x USB 3.0
                        1 x USB 2.0

LCD Display

- **Display Type**   WXGA TFT LED LCD
- **Display Size**   10.1"
- **Max. Resolution**   1280 x 800
- **Max. Colors**   262k
- **Luminance cd/m²**   300
- **Viewing Angle (H/V°)** 170/170
- **Backlight Life**   25,000 hr
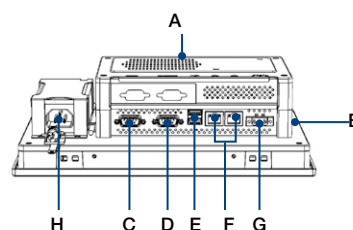- **Contrast Ratio**   1300:1

Touchscreen

- **Light Transmission** 90% ± 3%
- **Resolution**   2048 x 2048 dot
- **Type**   Projected capacitive

Environment

- **Humidity**   10 ~ 95% RH @ 40 °C, non-condensing
- **Ingress Protection** Front panel: IP66
- **Operating Temperature** -20 ~ 55 °C (-4 ~ 131 °F)
- **Storage Temperature** -30 ~ 70 °C (-22 ~ 158 °F)
- **Vibration Protection** With HDD: 1 Grms (5 ~ 500 Hz), (Operating, random vibration)
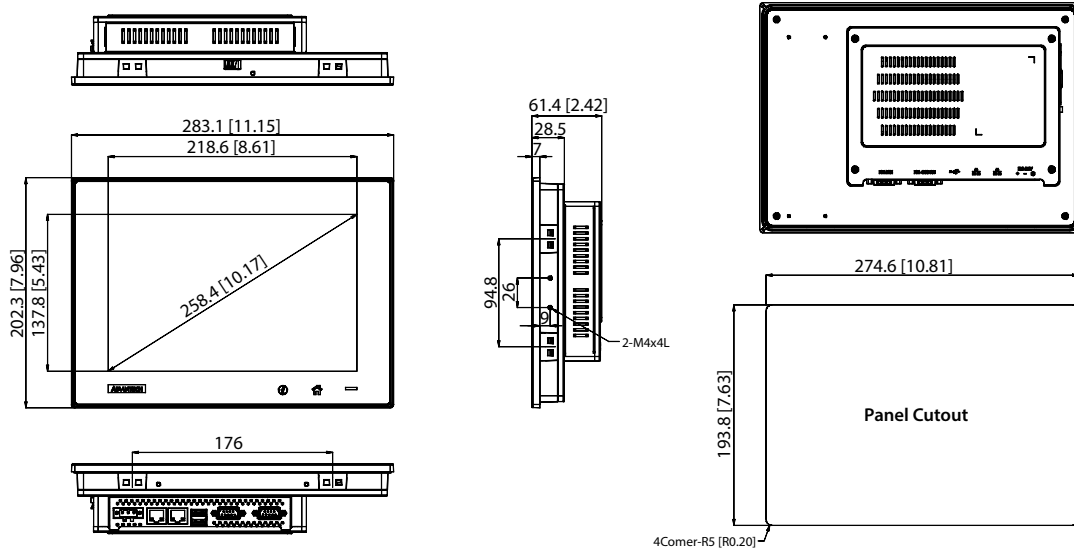
Rear View

A. External HDD/iDoor kit (TPC-1251T-EHKE) (optional)
B. CFast
C. RS-232
D. RS-232/422/485
E. USB 3.0 & 2.0
F. LAN (10/100/1000)
G. Power receptor
H. Power adapter and bracket (optional)

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Dimensions

Unit: mm [inch]

283.1 [11.15]
218.6 [8.61]
202.3 [7.96]
137.8 [5.43]
258.4 [10.17]
176

61.4 [2.42]
28.5
7
94.8
26
9
2-M4x4L

274.6 [10.81]
193.8 [7.63]

Panel Cutout

4Corner-R5 [R0.20]

TPC-1051WP Panel Cutout Dimensions: 274.6 x 193.8 mm (10.81 x 7.62 in)

Ordering Information

- **TPC-1051WP-E3AE**　　10.1" Multi-Touch Panel PC, Intel Atom E3827, 4GB DDR3L pre-installed

Optional Accessories

- **TPC-1000H-ADKE**　　63W DC 24V/2.62A Power supply & bracket for TPC-xx51WP series
- **TPC-1251T-EHKE**　　HDD and iDoor extension kit
- **1702002600**　　Power Cable US Plug 1.8 M
- **1702002605**　　Power Cable EU Plug 1.8 M
- **1702031801**　　Power Cable UK Plug 1.8 M
- **1700000596-11**　　Power Cable China/Australia Plug 1.8 M

Embedded OS

- **2070013484**　　TPC-xx51WP WS7P x64 MUI V4.13
- **2070014387**　　TPC-xx51WP WS7P X86 MUI. V4.14
- **2070014871**　　TPC-xx51WP Win10 2016 LTSB V6.01
- **2070013911**　　TPC-1551WP WEC7 X64 MUI V4.00

S/W Bundle Offering

- **WA-HT1051W-E15H1AE** TPC-1051WP-E3AE, HMI Runtime 1500 tags, 32G CFast, WES7P

iDoor Modules (TPC-1251T-EHKE is required for iDoor modules)

- **PCM-26D2CA-AE**　　SJA1000 CANBus, CANOpen, DB9 x 2
- **PCM-26D1DB-MAE**　　Hilscher netX100 FieldBus, ProfiBus, DB9 x 1
- **PCM-27D24DI-AE**　　Digital I/O, 16 DI / 8 DO, Isolation, DB37 x 1
- **PCM-24D2R4-AE**　　OXPCIe-952 UART, Isolated RS-422/485, DB9 x 2
- **PCM-24D2R2-AE**　　OXPCIe-952 UART, Isolated RS-232, DB9 x 2
- **PCM-24R2GL-AE**　　2 Port Giga LAN Intel i350 PCIe mini card
- **PCM-24R1TP-AE**　　Intel 82574L, GbE, IEEE 1588 PTP, RJ45 x 1
- **PCM-24S2WF-AE**　　802.11 a/b/g/n 2T2R w/ BT4.0, Atheros AR9462

Application Software

|	
WebAccess/SCADA	Advantech WebAccess/SCADA is a 100% browser-based IIoT software platform aimed at supervisory control and data acquisition (SCADA) operations. WebAccess/SCADA provides open interfaces that allow our customers and partners to develop unique IoT applications for different vertical markets. In addition to supporting traditional SCADA functions, the platform features an HTML5-based user interface and intelligent dashboard to facilitate cross-platform, cross-browser data analysis. Moreover, WebAccess/SCADA not only offers built-in widgets, but is also equipped with an innovative Widget Builder that enables customers to build their own widgets.
WebAccess/HMI	Advantech WebAccess/HMI is human-machine interface (HMI) software based on Microsoft's Windows operating system. This software features excellent communication and monitoring capabilities, supports more than 350 PLC communication protocols, and offers a wide choice of screen design objects to satisfy diverse integrations of factory automation and HMI operation and monitoring requirements.

Domain-Focused

Model	IPPC-5211WS	SPC-2140WP/1840WP	SPC-1881WP	FPM-8151H	TPC-8151WM	TPC-8191WM
CPU	Intel Celeron J1900	AMD T56N	Intel® Core™ i7/ i5 / i3 Processor	-	Intel Celeron CPU G3900TE @ 2.30 GHz	Intel Celeron CPU G3900TE @ 2.30 GHz
Memory	4 GB DDR3L SDRAM	4 GB DDR3L SDRAM	4 GB DDR3L SDRAM	-	4 GB DDR3L SDRAM	4 GB DDR3L SDRAM
Display — Display Type	TFT LED LCD	TFT LED LCD	TFT LED LCD	TFT LED LCD	TFT LED LCD	TFT LED LCD
Display — Display Size	21.5"	21.5" / 18.5"	18.5"	15"	15.6"	19.5"
Display — Max. Resolution	1920 x 1080	21.5": 1920 x 1080 18.5": 1366 x 768	1366 x 768	1024 x 768	1366 x 768	1600 x 900
Display — Max. Colors	16.7M	16.7M	16.7M	16.2M	16.7M	16.7M
Display — Luminance cd/m²	300 nits	300 nits	300 nits	350 nits	300 nits	250 nits
Display — VieWINg Angle (H/V°)	178/178	21.5": 178/178 18.5": 170/160	170/160	160/140	80 (left), 80 (right), 80 (up), 80 (down)	85 (left), 85 (right), 80 (up), 80 (down)
Display — Backlight MTBF	50,000 hr	50,000 hr	50,000 hr	50,000 hr	70,000 hr	30,000 hr
Display — Touchscreen	Projected capacitive touch	Projected capacitive touch	Projected capacitive touch	Resistive	Projected capacitive touch	Projected capacitive touch
Network (LAN)	10/100/1000BASE-T x 2	10/100/1000BASE-T x 2	10/100/1000BASE-T x 2	-	10/100/1000BASE-T x 1	10/100/1000BASE-T x 1
I/O Ports	RS-232/422/485 x 1 RS-232 x 1 USB 3.0 x 1	RS-232 x1 (connection:M12 A-coded, 8-pin male) USB 2.0 x1 (connection:M12 A-coded, 8-pin female) 24 V_{DC} power input (connection:M12 A-coded, 5-pin male)	RS-232 x1 (connection:M12 A-coded, 8-pin male) USB 2.0 x1 (connection:M12 A-coded, 8-pin female) 24 V_{DC} power input (connection:M12 A-coded, 5-pin male)	VGA DVI-D	USB 3.0 x 3 (rear) USB 2.0 x 1 (rear) USB 3.0 x 1 (front)	USB 3.0 x 3 (rear) USB 2.0 x 1 (rear) USB 3.0 x 1 (front)
HDD (Optional)	2.5" SATA HDD	2.5" SATA HDD	2.5" SATA HDD	-	2.5" SATA HDD	2.5" SATA HDD
Expansion Slots	Full-size mini PCIe x1	Full-size mini PCIe x1	Full-size mini PCIe x1	-	-	-
Digital	-	-	-	-	-	-
Input/Output	-	-	-	-	-	-
Ingress Protection	All-Around IP69k	All-Around IP66	All-Around IP66	Front IP66	-	-
DC Power Input (Voltage)	24 V_{DC} ± 20%	24 V_{DC} ± 20%	24 V_{DC} ± 20%	24 V_{DC} ± 20% / 12 V_{DC}/4.75A	19 V_{DC}	19 V_{DC}
Enclosure	Front bezel: Stainless steel Back housing: Aluminum/stainless steel	Front bezel: Die cast aluminum alloy Back housing: Die cast aluminum alloy	Front bezel: Die cast aluminum alloy Back housing: Die cast aluminum alloy	Front bezel: 316L stainless steel Back housing: Stainless steel	Front bezel: Die cast aluminum alloy Back housing: PC/ABS resin	Front bezel: Die cast aluminum alloy Back housing: PC/ABS resin
Mounting	VESA and flange adapter for arm and foot mount	VESA	VESA	VESA / Panel Mount	Desktop, Wall or VESA Mount	Desktop, Wall or VESA Mount
Weight	16 kg	9 kg	9 kg	8.5 kg	4.4 kg	5.5 kg
Operating Temperature	0 ~ 50°C (32 ~ 122°F)	0 ~ 55°C (32 ~ 131°F)	0 ~ 55°C (32 ~ 131°F)	-20 ~60°C (-4 ~ 140°F)	0 ~ 40°C (32 ~ 130°F)	0 ~ 40°C (32 ~ 130°F)
Dimensions	555 x 346.5 x 81 mm	21.5": 558.4 x 349.8 x 65 mm 18.5": 488 x 309 x 65 mm	488 x 309 x 65 mm	414 x 347.5 x 84 mm	400.74 x 241 x 78.5 mm	510 x 291 x 66 mm
Certification	BSMI, CCC, CE, FCC Class A, UL	BSMI, CCC, CE, FCC Class A, UL	BSMI, CCC, CE, FCC Class A, UL	BSMI, CCC, CE, FCC Class A, UL	CCC, CE, FCC Class A, UL	CCC, CE, FCC Class A, UL
Operating System	Windows 7/8, WES7, WEC7, Linux, Windows 10 Enterprise LTSB	Windows 7/8, WES7, WEC7, Linux	Windows 7/8, WES7, WEC7, Linux, Windows 10 Enterprise LTSB	Windows 7/8, WES7, WEC7, Linux, Windows 10 Enterprise LTSB	WIN 10 Enterprise LTSB	WIN 10 Enterprise LTSB

1 Software and Industry Solutions
2 Industrial Server
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5 Automation Computers and Controllers
6 Industrial Communication
7 Remote I/O Modules
8 Industrial I/O and Video Solutions

IPPC-5211WS

21.5" Full HD TFT LED LCD Industrial Multi-Touch Panel PC with Stainless Steel Chassis and IP69K Rating
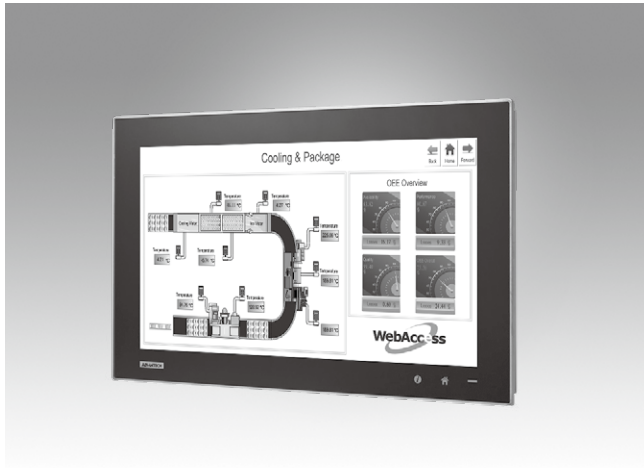
Features

- Stainless steel chassis with IP69K rating for dust and water ingress
- Full range of configurable accessories for diverse applications
- Intel® Celeron® J1900 processor
- 21.5" Full HD TFT LED LCD
- Wide operating temperature range (0 ~ 50 °C/32 ~ 122 °F)
- 16:9 widescreen aspect ratio with PCAP multi-touch control
- Supports iDoor or external antenna integration
- Built-in function key and home key for intuitive operation
- True-flat glass front panel with 7H hardness
- Fanless cooling system
- Front-facing LED indicators to show operating status
- Supports Advantech's SNMP Subagent software

iKey iDoor CCC CE FCC c(UL)us LISTED E180881 I.T.E.

Introduction

The IPPC-5211WS 21.5" fully sealed stainless steel multi-touch panel PC is IP69K rated and has a full range of modular accessories aimed at OEM and process manufacturing. With the inclusion of iDoor technology, iKey, and an external antenna, IPPC-5211WS supports special functions and can provide the superior performance and functionality required for machine-to-machine (M2M) and Internet of Things (IoT) applications. To ensure reliable operation in harsh environments, IPPC-5211WS is IP69K rated for protection from water and dust ingress. Moreover, the IPPC-5211WS system also supports one-touch shutdown to prevent unauthorized operation for improved security.

Specifications

General

- **BIOS** — AMI UEFI
- **Certification** — IP69k, CE, FCC Class A, UL, CCC, BSMI
- **Cooling System** — Fanless design
- **Dimensions (W x H x D)** — 555 x 346.5 x 81 mm (21.85 x 13.64 x 3.19 in)
- **Enclosure** — Front: Stainless steel
  Back: Aluminum/stainless steel (optional)
- **Mounting** — VESA and flange adapter for arm and foot system
- **Power Consumption** — 40.8 W
- **Power Input** — 21~27 V$_{DC}$
- **Weight** — 15.8 kg (34.83 lb)
- **OS Support** — Microsoft® WES7 (32/64-bit), Windows 7 (32/64-bit), Windows Embedded 8.1 Industry Pro (64-bit)

System Hardware

- **CPU** — Intel® Celeron Processor J1900
- **Memory** — 4 GB DDR3L SODIMM (up to 8 GB)
- **LAN** — RTL8111E-VL-CG
- **Expansion Slots** — 1 x Full-size mini PCIe x1
- **Storage** — 1 x CFast
  1 x 2.5" SATA (default) or CFast (optional)
- **I/O** — 2 x 10/100/1000 Mbps RJ45
  1 x RS-232
  1 x RS-232/RS-485/RS-422
  1 x USB 2.0
  1 x USB 3.0
  1 x Waterproof wireless antenna (optional)

LCD

- **Display Type** — Full HD TFT LED LCD
- **Display Size** — 21.5"
- **Max. Resolution** — 1920 x 1080
- **Max. Colors** — 16.7M
- **Luminance (cd/m²)** — 300
- **Viewing Angle(H/V)** — 178 / 178
- **Backlight Life** — 50,000 hr

Touchscreen

- **Light Transmission** — ≧88%
- **Resolution** — 4096 x 4096 dpi
- **Type** — Projected capacitive

Environment

- **Humidity** — 10 ~ 95% RH @ 40 °C, non-condensing
  Note: Tested for 48 hr
- **Operating Temperature** — 0 ~ 50 °C (32 ~ 122 °F)
- **Storage Temperature** — -20 ~ 60 °C (-4 ~ 140 °F)
- **Vibration Protection** — With HDD: 1 Grms (5~500Hz) (Operating, random vibration)

Ordering Information

- **IPPC-5211WS-J3AE** — 21.5" Full HD 1080 TFT LCD with PCT touch, Intel® Celeron Processor & IP69K rating
- **IPPC5211WSJ1501E-T** — IPPC-5211WS-J3AE with complete stainless steel housing
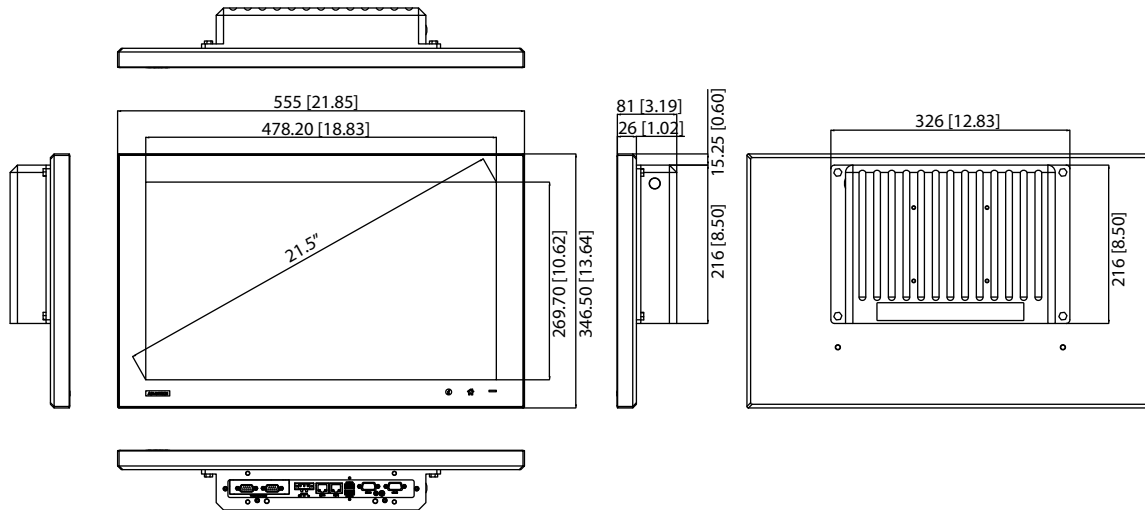
iDoor Modules

- **PCM-24D2R4-AE** — 2-Port Isolated RS-422/485 mPCIe, DB9
- **PCM-24D2R2-AE** — 2-Port Isolated RS-232 mPCIe, DB9
- **PCM-27D24DI-AE** — 24-Channel Isolated Digital I/O w/ counter mPCIe, DB37
- **PCM-26R2PN-MAE** — 2-Port Hilscher netX100 FieldBus mPCIe, PROFINET, RJ45, Master
- **PCM-26R2PN-SAE** — 2-Port Hilscher netX100 FieldBus mPCIe, PROFINET, RJ45, Slave
- **PCM-26D1DB-MAE** — 1-Port Hilscher netX100 FieldBus mPCIe, PROFIBUS, DB9, Master
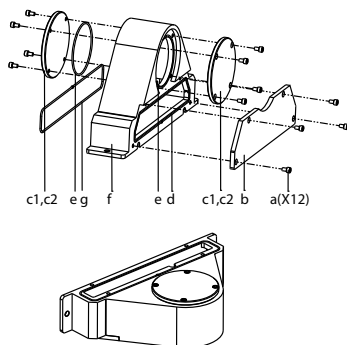- **PCM-26D1DB-SAE** — 1-Port Hilscher netX100 FieldBus mPCIe, PROFIBUS, DB9, Slave

ADVANTECH Domain-Focused Products

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IPPC-5211WS

1
Software and Industry Solutions

2
Industrial Server

3
Intelligent System

4
Intelligent HMI and Monitors

5
Automation Computers and Controllers

6
Industrial Communication

7
Remote I/O Modules

8
Industrial I/O and Video Solutions

Dimensions

Unit: mm [inch]

555 [21.85]
478.20 [18.83]
21.5"
269.70 [10.62]
346.50 [13.64]

81 [3.19]
26 [1.02]
15.25 [0.60]
216 [8.50]

326 [12.83]
216 [8.50]

Optional Accessories

- **PWR-247-CE** — 100-240V 60W 24V 2.5A Power Supply
- **2070013799** — Image WS7P x64 MUI. v4.12 B001 for IPPC-5211WS
- **IPPC-5211WS-EMKE** — The flange adaptor to connect the front panel with the arm or foot system, and for rear side IP69K protection
- **IPPC-5000-FLAE** — All Stainless steel flange adaptor to connect the front panel with the arm or foot system, and for rear side IP69K protection
- **EWM-W151H01E** — 802.11bgn RTL8188EE 1T1R, Half-size Mini-PCIe (also need 9656EWMG00E)
- **1750007668-01** — Waterproof Wireless Antenna R/P SMA.M2dB L=86.7
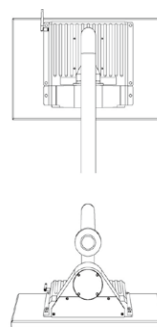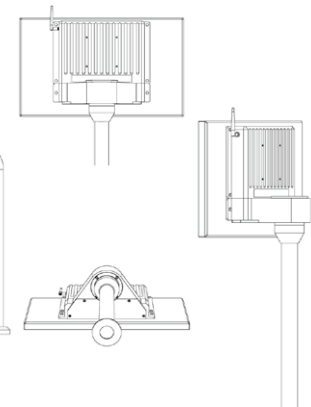
IPPC-5211WS-EMKE

c1,c2   e g   f   e d   c1,c2 b   a(X12)

Rear View

a   b   c   d   e   f

a. COM1 (RS-232)
b. COM2 (RS232/RS485/RS422)
c. 2 x USB (1 x USB 3.0, 1 x USB 2.0)
d. 2 x LAN (10/100/1000 Mbps)
e. Power input
f. iDoor
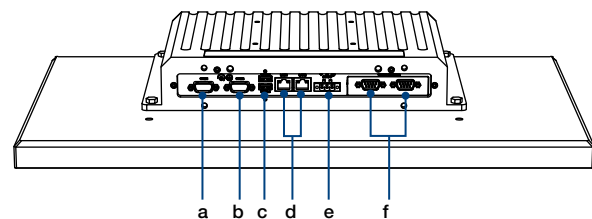
Product Type with IPPC-5211WS-EMKE

Arm System

Foot System

SPC-1840WP
SPC-2140WP

18.5" WXGA TFT/21.5" Full HD LED LCD Stationary Multi-Touch Panel Computer

iF product design award
2013

Features

- 21.5" Full HD TFT LED LCD/18.5" WXGA TFT LED LCD
- AMD dual-core T56E 1.65 GHz processor with independent GPU for advanced graphics performance
- 16:9 widescreen with PCAP multi-touch control
- Built-in function key and home key for intuitive operation
- Anti-scratch surface with 7H hardness
- IP65 rating for entire unit with waterproof M12 connector
- Supports expansion via mini PCIe slot
- Front-facing LED indicators for showing operating status
- Fanless cooling system
- Winner of the 2013 iF product design award

Introduction

The SPC-1840WP/2140WP series of multi-touch panel computers feature an 18.5" WXGA/21.5" Full HD TFT LED LCD with a 16:9 widescreen aspect ratio and PCAP multi-touch control. Powered by an AMD T56E 1.65 GHz processor with independent GPU, SPC-1840WP/2140WP can support advanced graphics performance for complex applications. The built-in function key and home key offer enhanced usability and intuitive operation. The SPC-1840WP/2140WP also includes a full-size mini PCIe slot for extending the system functionalities to satisfy diverse application needs. Moreover, to ensure reliable operation in harsh environments, SPC-1840WP/2140W is IP65 rated for protection from water and dust ingress and features waterproof M12 connectors. Finally, with the provision of vertical I/O connectors, cable routing is convenient and easy to complete regardless of mount variation.

Specifications

General

Certification	BSMI, CCC, CE, FCC Class A, UL
Cooling System	Fanless design
Dimensions (W x H x D)	21.5": 558.4 x 349.8 x 65 mm (21.98 x 13.77 x 2.56 in)
	18.5": 488 x 309 x 65 mm (19.21 x 12.17 x 2.56 in)
Enclosure	Front bezel: Die cast aluminum alloy
	Back housing: Die cast aluminum alloy
Mounting	VESA Arm
OS Support	Microsoft® Windows 7/8, WES7P, Windows XP, WES2009
Power Consumption	35 W Typical
Power Input	24 V_{DC}
Weight (Net)	9 kg (19.8 lbs)

System Hardware

CPU	AMD G-series T56N 1.6GHz
Chipset	AMD A50M FCH
Memory	4 GB SODIMM DDR3 SDRAM
LAN	10/100/1000BASE-T x 2 (connection:M12 A-coded, 8-pin female)
Expansion Slots	1 x Full-sized mini PCIe slot (optional)
Storage	1 x 2.5" SATA HDD bracket
I/O	1 x RS-232 (connection: M12 A-coded, 8-pin male)
	1 x USB 2.0 (connection: M12 A-coded, 8-pin female)
	1 x 24 V_{DC} power input (connection: M12 A-coded, 5-pin male)

LCD Display

Display Type	21.5": Full HD TFT LED LCD
	18.5": WXGA TFT LED LCD
Display Size	21.5" / 18.5"
Max. Resolution	21.5": 1920 x 1080
	18.5": 1366 x 768
Max. Colors	16.7M
Luminance cd/m²	300
Viewing Angle (H/V°)	21.5": 178/178
	18.5": 170/160
Backlight Life	50,000 hr

Touchscreen

Light Transmission	≥88%
Resolution	4096*4096 dot
Type	Projected capacitive

Environment

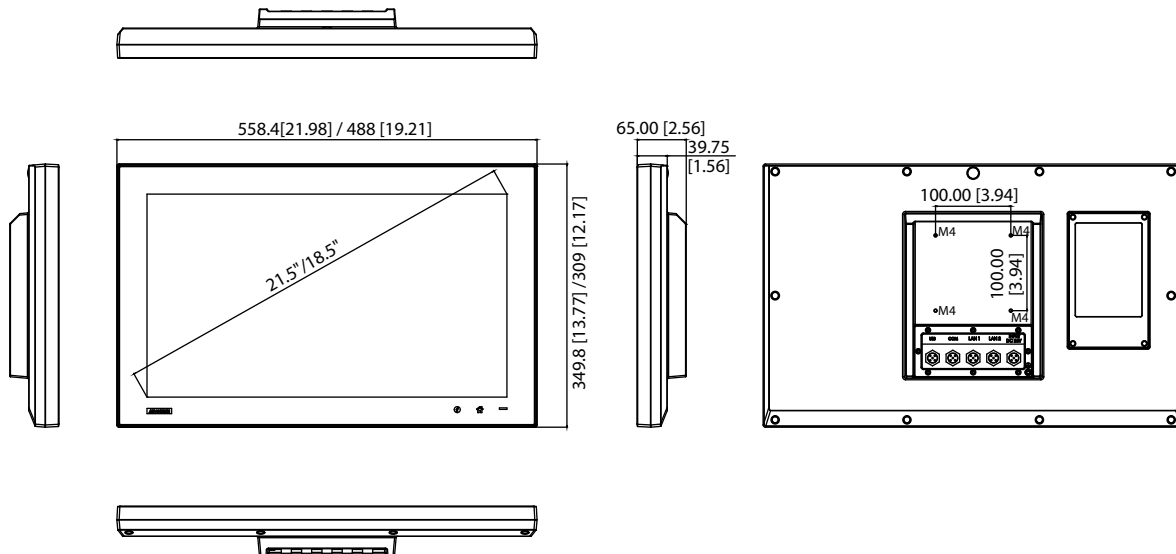|	
Humidity	10 ~ 95% RH @ 40 °C, non-condensing
	Note: Tested for 48 hr
Ingress Protection	IP65 rating for entire system
Operating Temperature	0 ~ 55 °C (32 ~ 131 °F)
Storage Temperature	-20 ~ 60 °C (-4 ~ 140 °F)
Vibration Protection	With HDD: 1 Grms (5 ~ 500 Hz) (Operating, random vibration)

Rear View

a. USB 2.0 with M12 connector
b. COM (RS-232) with M12 connector
c. LAN 1 with M12 connector
d. LAN 2 with M12 connector
e. 24 V_{DC} input with M12 connector

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Dimensions

Unit: mm [inch]

558.4[21.98] / 488 [19.21]

65.00 [2.56]
39.75 [1.56]

21.5"/18.5"

349.8 [13.77] /309 [12.17]

100.00 [3.94]
M4 M4
100.00 [3.94]
M4 M4

Ordering Information

- **SPC-2140WP-T3AE**   21.5" full-HD stationary Multi-Touch Panel PC, 4GB
- **SPC-1840WP-T3AE**   18.5" WXGA stationary Multi-Touch Panel PC, 4GB

Optional Accessories

- **1702002600**   Power Cable US Plug 1.8 M
- **1702002605**   Power Cable EU Plug 1.8 M
- **1702031801**   Power Cable UK Plug 1.8 M
- **1700000596-11**   Power Cable China/Australia Plug 1.8 M
- **EWM-W151H01E**   802.11bgn RTL8188EE 1T1R, Half-size Mini-PCIe (also need 9656EWMG00E)
- **9656EWMG00E**   Half-size miniPCIe to Full-size miniPCIe bracket set
- **1750007668-01**   Waterproof Wireless Antenna R/P SMA.M2dB L=86.7
- **1750003418**   Wireless Antenna AN2400-5901RS R/P SMA.M9dB
- **SPC-1840WP-MCKE**   M12 cable accessory kit for SPC series
- **SPC-1840WP-MOKE**   M12 Connector accessory kit for SPC series

Application Software

WebAccess/SCADA	Advantech WebAccess/SCADA is a 100% browser-based IIoT software platform aimed at supervisory control and data acquisition (SCADA) operations. WebAccess/SCADA provides open interfaces that allow our customers and partners to develop unique IoT applications for different vertical markets. In addition to supporting traditional SCADA functions, the platform features an HTML5-based user interface and intelligent dashboard to facilitate cross-platform, cross-browser data analysis. Moreover, WebAccess/SCADA not only offers built-in widgets, but is also equipped with an innovative Widget Builder that enables customers to build their own widgets.
WebAccess/HMI	Advantech WebAccess/HMI is human-machine interface (HMI) software based on Microsoft's Windows operating system. This software features excellent communication and monitoring capabilities, supports more than 350 PLC communication protocols, and offers a wide choice of screen design objects to satisfy diverse integrations of factory automation and HMI operation and monitoring requirements.

SPC-1881WP

18.5" WXGA TFT LED LCD Stationary Multi-Touch Panel Computer with Intel® Core™ i3 Processor

iF product design award

2013

Features

- 18.5" WXGA TFT LED LCD
- Intel® Core™ i3-4010U 1.70 GHz processor
- 16:9 widescreen with PCAP multi-touch control
- Built-in function key and home key for intuitive operation
- Anti-scratch surface with 7H hardness
- IP65 rating for entire unit with waterproof M12 connector
- Supports expansion via mini PCIe slot
- Front-facing LED indicators for showing operating status
- Fanless cooling system
- Winner of the 2013 iF product design award

Introduction

The SPC-1881WP series of multi-touch panel computers feature an 18.5" WXGA TFT LED LCD with a 16:9 widescreen aspect ratio and PCAP multi-touch control. Powered by an Intel® Core™ i3-4010U 1.70 GHz processor, SPC-1881WP can support advanced graphics performance for complex applications. The built-in function key and home key offer enhanced usability and intuitive operation. The SPC-1881WP also includes a full-size mini PCIe slot for extending the system functionalities to satisfy diverse application needs. Moreover, to ensure reliable operation in harsh environments, SPC-1881WP is IP65 rated for protection from water and dust ingress and features waterproof M12 connectors. Finally, with the provision of vertical I/O connectors, cable routing is convenient and easy to complete regardless of mount variation.

Specifications

General

- **Certification** — BSMI, CCC, CE, FCC Class A, UL
- **Cooling System** — Fanless design
- **Dimensions (W x H x D)** — 488 x 309 x 65mm (19.21 x 12.17 x 2.56 in)
- **Enclosure** — Front bezel: Die cast aluminum alloy / Back housing: Die cast aluminum alloy
- **Mount Options** — VESA Arm
- **OS Support** — Microsoft® WES7 (32/64-bit), Windows 7 (32/64-bit), Windows Embedded 8.1 Industry Pro, Windows 10 IoT Enterprise
- **Power Consumption** — 35 W Typical
- **Power Input** — 24 V_{DC}
- **Weight (Net)** — 8 kg (17.64 lbs)

System Hardware

- **CPU** — Intel® Core™ i3-4010U 1.70 GHz
- **Chipset** — Integrated Intel 8 Series Chipset
- **Memory** — 4 GB SODIMM DDR3 SDRAM
- **LAN** — 10/100/1000BASE-T x 2 (connection:M12 A-coding, 8-pin female)
- **Expansion Slots** — 1 x Full-size mini PCIe (optional)
- **Storage** — 1 x 2.5" SATA HDD
- **I/O** — 1 x RS-232 (connection: M12 A-coded, 8-pin male) / 1 x USB 2.0 (connection: M12 A-coded, 8-pin female) / 1 x 24 V_{DC} power input (connection: M12 A-coded, 5-pin male)

LCD Display

- **Display Type** — WXGA TFT LED LCD
- **Display Size** — 18.5"
- **Max. Resolution** — 1366 x 768
- **Max. Colors** — 16.7M
- **Luminance cd/m²** — 300
- **Viewing Angle (H/V°)** — 170/160
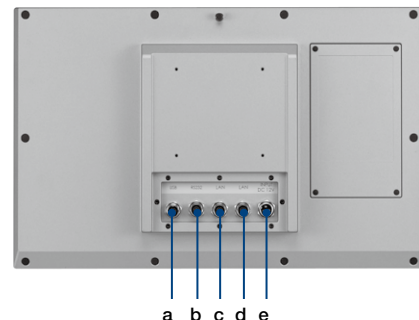- **Backlight Life** — 50,000 hr

Touchscreen

- **Light Transmission** — ≥88%
- **Resolution** — 4096*4096 dot
- **Type** — Projected capacitive

Environment

- **Humidity** — 10 ~ 95% RH @ 40 °C, non-condensing / **Note**: Tested for 48 hr
- **Ingress Protection** — IP65 rating for entire system
- **Operating Temperature** — 0 ~ 55 °C (32 ~ 131 °F)
- **Storage Temperature** — -20 ~ 60 °C (-4 ~ 140 °F)
- **Vibration Protection** — With HDD: 1 Grms (5 ~ 500 Hz) (Operating, random vibration)

Rear View
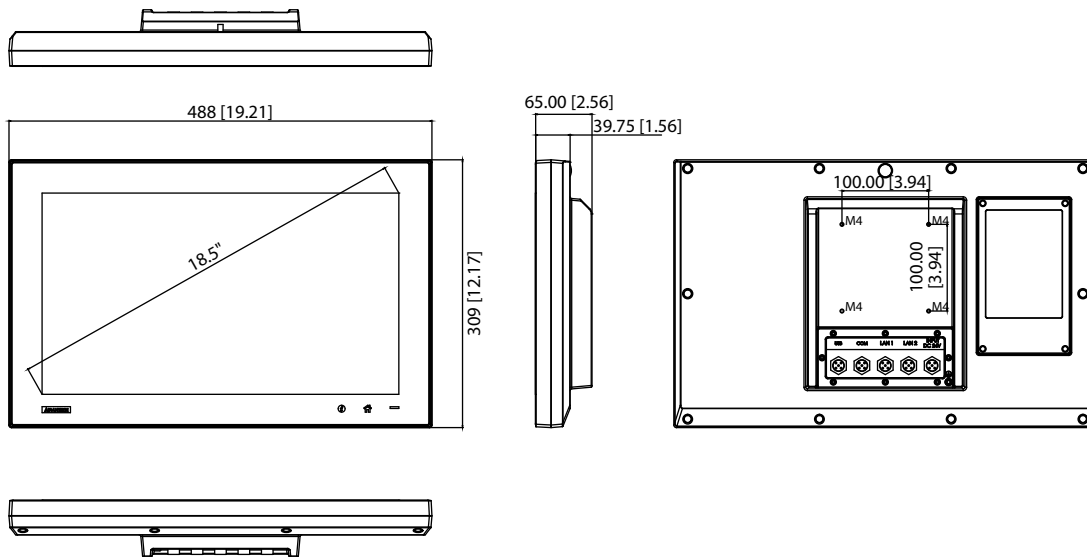
a. USB 2.0 with M12 connector
b. COM (RS-232) with M12 connector
c. LAN 1 with M12 connector
d. LAN 2 with M12 connector
e. 24 V_{DC} input with M12 connector

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SPC-1881WP

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4 Intelligent HMI and Monitors
5 Automation Computers and Controllers
6 Industrial Communication
7 Remote I/O Modules
8 Industrial I/O and Video Solutions

Dimensions

Unit: mm [inch]

488 [19.21]
309 [12.17]
18.5"
65.00 [2.56]
39.75 [1.56]
100.00 [3.94]
100.00 [3.94]
M4

Ordering Information

- **SPC-1881WP-433AE**   18.5" WXGA stationary Multi-Touch Panel PC, 4GB

Embedded OS

- **2070014320**   Image WES7P X64 MUI V4.14 B001 for SPC-1881WP

Optional Accessories

- **1702002600**   Power Cable US Plug 1.8 M
- **1702002605**   Power Cable EU Plug 1.8 M
- **1702031801**   Power Cable UK Plug 1.8 M
- **1700000596-11**   Power Cable China/Australia Plug 1.8 M
- **EWM-W151H01E**   802.11bgn RTL8188EE 1T1R, Half-size Mini-PCIe (also need 9656EWMG00E)
- **9656EWMG00E**   Half-size miniPCIe to Full-size miniPCIe bracket set
- **1750007668-01**   Waterproof Wireless Antenna R/P SMA.M2dB L=86.7
- **1750003418**   Wireless Antenna AN2400-5901RS R/P SMA.M9dB
- **SPC-1840WP-MCKE**   M12 cable accessory kit for SPC series
- **SPC-1840WP-MOKE**   M12 Connector accessory kit for SPC series

Application Software

WebAccess/SCADA	Advantech WebAccess/SCADA is a 100% browser-based IIoT software platform aimed at supervisory control and data acquisition (SCADA) operations. WebAccess/SCADA provides open interfaces that allow our customers and partners to develop unique IoT applications for different vertical markets. In addition to supporting traditional SCADA functions, the platform features an HTML5-based user interface and intelligent dashboard to facilitate cross-platform, cross-browser data analysis. Moreover, WebAccess/SCADA not only offers built-in widgets, but is also equipped with an innovative Widget Builder that enables customers to build their own widgets.
WebAccess/HMI	Advantech WebAccess/HMI is human-machine interface (HMI) software based on Microsoft's Windows operating system. This software features excellent communication and monitoring capabilities, supports more than 350 PLC communication protocols, and offers a wide choice of screen design objects to satisfy diverse integrations of factory automation and HMI operation and monitoring requirements.

FPM-8151H

15" XGA Industrial Monitor with 316L Stainless Steel Front Panel for Hazardous Environments

Features

- 15" XGA TFT LCD with LED backlight
- Stainless steel 316L front panel
- IP65 compliant front panel
- -20 ~ 60°C (-4 ~ 140°F) wide operating temperature range
- Enhanced 5-wire resistive touch panel
- Direct VGA & DVI-D video input interface
- Combo RS-232 & USB interface for touchscreen function
- Supports 24 V_{DC} input and 100~240 V_{AC} input (optional AC adapter)
- OSD control pad with lockable function on front panel
- UL CID2 certified for hazardous environments

Introduction

The FPM-8151H is a rugged and reliable 15" XGA, wide-temperature industrial monitor aimed at diverse applications. With support for a wide operating temperature range (-20 ~ 60°C/-4 ~ 140°F) and UL Class I, Division 2, certification for hazardous environments, FPM-8151H is built to withstand operation in harsh industrial environments. The FPM-8151H monitor also features enhanced 5-wire resistive touch control and system isolation for enhanced reliability.

Specifications

General

- **Button Controls** — OSD control pad on front panel with lockable function 2 user-defined contrast/brightness settings
- **Certification** — CE, FCC Class A, UL C1D2, CB, BSMI, CCC
- **Dimensions (W x H x D)** — 422 x 338 x 68 mm (16.61 x 13.31 x 2.68 in)
- **Enclosure** — Front panel: 316L Stainless steel
  Rear cover: Stainless steel with ground isolation protection
- **Mount Options** — Panel, wall, desktop, VESA arm
- **Power Input** — Phoenix Jack: 24 V_{DC} input
  DC Jack: external 60 W power adapter, with 100 ~ 240 V_{AC} input and 12 V_{DC} @ 5A output (Optional)
- **Power Consumption** — 12W
- **Video Port** — VGA & DVI-D Port
- **Weight (Net)** — 8.5 kg (18.74 lbs)

LCD Display

- **Display Type** — XGA TFT LCD
- **Backlight Type** — LED
- **Display Size** — 15"
- **Max. Resolution** — 1024 x 768
- **Max. Color** — 16.2M (RGB 8-bits)
- **Viewing Angle (H/V°)** — 160/140
- **Luminance (cd/m²)** — 350
- **Backlight Life** — 50,000 hr
- **Contrast Ratio** — 700:1

Touchscreen

- **Sensor** — AMT
- **Driver** — Penmount 6000
- **Type** — 5-wire resistive with enhanced ITO film
- **Interface** — USB & RS-232 (Combo)
- **Lifespan** — 36 million with a silicone rubber R8 finger, writing rate is by 250g at 2 times/s
- **Light Transmission** — > 80%
- **OS Support** — Windows 2000, XP, Vista, 7, XPe, CE and Linux
- **Power Consumption** — +5 V @ 100 mA
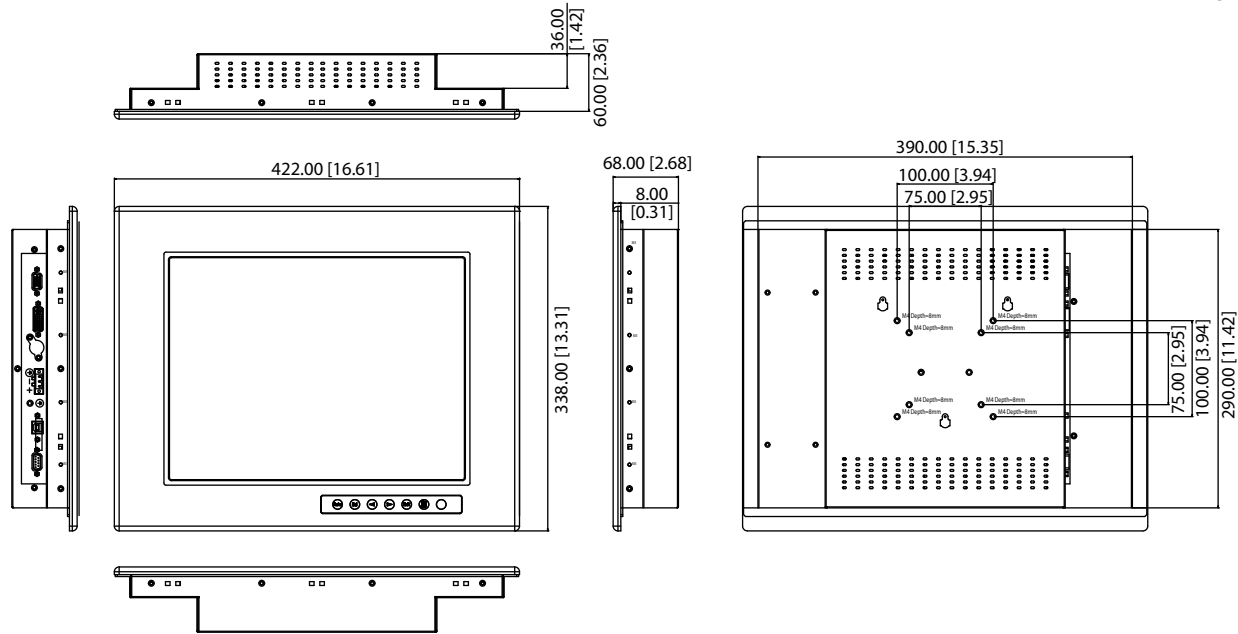- **Touch Resolution** — Linearity

Environment

- **Operating Temperature** — -20 ~ 60 °C (-4 ~ 140 °F)
- **Storage Temperature** — -30 ~ 80 °C (-22 ~ 176 °F)
- **Humidity (Storage)** — 10 ~ 95% non-condensing
- **Waterproof** — Front panel is IP65 compliant
- **Shock** — 11ms, 10G (Non Operating, Half Sine Wave)
- **Vibration** — 5 ~ 500 Hz, 1 Grms (Operating, Random)

ADVANTECH   **Domain-Focused Products**

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Dimensions

Unit: mm [inch]

36.00 [1.42]
60.00 [2.36]
422.00 [16.61]
68.00 [2.68]
8.00 [0.31]
338.00 [13.31]
390.00 [15.35]
100.00 [3.94]
75.00 [2.95]
75.00 [2.95]
100.00 [3.94]
290.00 [11.42]

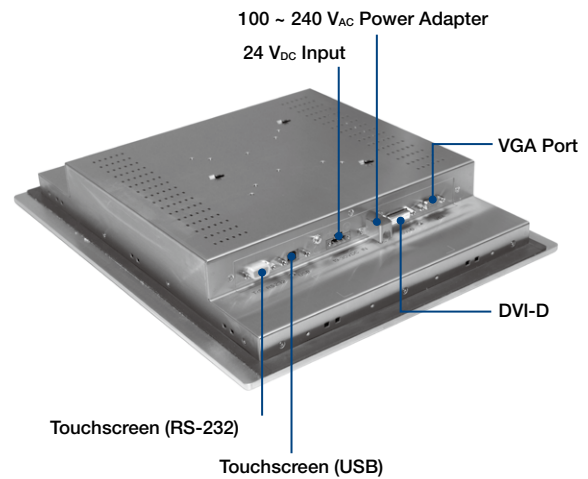**Panel Cutout Dimensions: 396 x 296 mm (15.59 x 11.65 in)**

Ordering Information

- **FPM-8151H-R3BE**   15" XGA Ind. Monitor VGA, DVI, Wide Temp

Optional Accessories

- **1702002600**   Power Cable US Plug 1.8 M
- **1702002605**   Power Cable EU Plug 1.8 M
- **1702031801**   Power Cable UK Plug 1.8 M
- **1702031836**   Power Cable China/Australia Plug 1.8 M
- **96PSA-A60W12V1-1**   ADP A/D 100-240V 60W 12V C14 DC PLUG 180°
- **FPM-1000T-SMKE**   Desktop/Wall Mounting kit for FPM series
- **FPM-3151G-RMKE**   Rack-Mount Kit

I/O View

100 ~ 240 V$_{AC}$ Power Adapter
24 V$_{DC}$ Input
VGA Port
DVI-D
Touchscreen (RS-232)
Touchscreen (USB)

1 Software and Industry Solutions
2 Industrial Server
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4 Intelligent HMI and Monitors
5 Automation Computers and Controllers
6 Industrial Communication
7 Remote I/O Modules
8 Industrial I/O and Video Solutions

TPC-8151WM

15.6" Widescreen Panel PC with Intel® Celeron® G3900TE Processor

Preliminary

Features

- 15.6" TFT LCD
- Intel® Celeron™ G3900TE 2.30 GHz processor
- 4 GB SO-DDR4-2133 512X8 1.2V SAM
- Dual Gigabit Ethernet
- 3 x USB 3.0 (rear), 1 x USB 2.0 (rear), 1 x USB 3.0 (front)

Windows 10

Introduction

The TPC-8151WM panel PC is equipped with a 15.6" color TFT LCD and Intel® Celeron® G3900TE 2.30 GHz processor. The provision of a USB port at the front offers a convenient, easy-access interface for copying data or installing applications via USB. Aimed at the machine builder and industrial process monitoring markets, TPC-8151WM offers a low-profile, industrial-grade solution for diverse applications.

Specifications

System	CPU	Intel Celeron CPU G3900TE @ 2.30GHz
	Memory	4 GB SODIMM DDR4-2133 512X8
	Chipset	Intel H110, Intel HD Graphics 510
	HDD	1 x 2.5" SATA (Internal)
	I/O	3 x USB 3.0 (rear), 1 x USB 2.0 (rear), 1 x USB 3.0 (front)
	Network (LAN)	1 x 10/100/1000 Mbps Ethernet
	Speaker	NA
	Dimensions	425.74 x 247.96 x 66 mm (16.76 x 9.76 x 2.59 in)
	Weight	4.4 kg (9.7 lb)
OS Support	OS Support	Windows 10 Enterprise 2016 LTSB
Power Supply	Input Voltage	19 V_{DC}
LCD	Display Type	15.6" TFT LCD
	Max. Resolution	1366 x 768
	Colors	262K/16.7M
	Viewing Angle	80 (left), 80 (right), 80 (up), 80 (down)
	Luminance	300 cd/m²
	Operating Temperature	0 ~ 40 °C (32 ~ 130 °F)
	Backlight Lifetime	50, 000 hr (typ.)
Touchscreen	Touch Type	Projected capacitive 10-point multi-touch
	Resolution	4096 x 4096
	Light Transmission	≥88 %
	Controller	USB interface
	Software Driver Supports	Windows 10 Enterprise 2016 LTSB
Environment	Operating Temperature	0 ~ 40 °C (32 ~ 130 °F)
	Storage Temperature	-20 ~ 60 °C (-4 ~ 140 °F)
	Relative Humidity	10 ~ 95% @ 40 °C (Non-condensing)
	Shock	Operating 10 G peak acceleration (11 ms duration), follow IEC 60068-2
	Vibration	Operating Random Vibration Test 5~500Hz, 1Grms, follow IEC 60068-2

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Dimensions

Unit: mm [inch]

Ordering Information

Part Number	Description
*TPC-8151WM-6C2AE	15" wide screen panel PC with Celeron G3900

*Please check with your local PSM for updated and more detail ordering information

TPC-8191WM

19.5" Widescreen Panel PC with Intel® Celeron® G3900TE Processor

Preliminary

Features

- 19.5" a-Si TFT LCD
- Intel® Celeron™ G3900TE 2.30 GHz processor
- 4 GB SO-DDR4-2133 512X8 1.2V SAM
- Dual Gigabit Ethernet
- 3 x USB 3.0 (rear), 1 x USB 2.0 (rear), 1 x USB 3.0 (front)

Windows 10   c(UL)us LISTED E180381 I.T.E.   CE   FC   CCC   RoHS COMPLIANT 2002/95/EC

Introduction

The TPC-8191WM panel PC is equipped with a 19.5" color TFT LCD and Intel® Celeron® G3900TE 2.30 GHz processor. The provision of a USB port at the front offers a convenient, easy-access interface for copying data or installing applications via USB. Aimed at the machine builder and industrial process monitoring markets, TPC-8191WM offers a low-profile, industrial-grade solution for diverse applications.
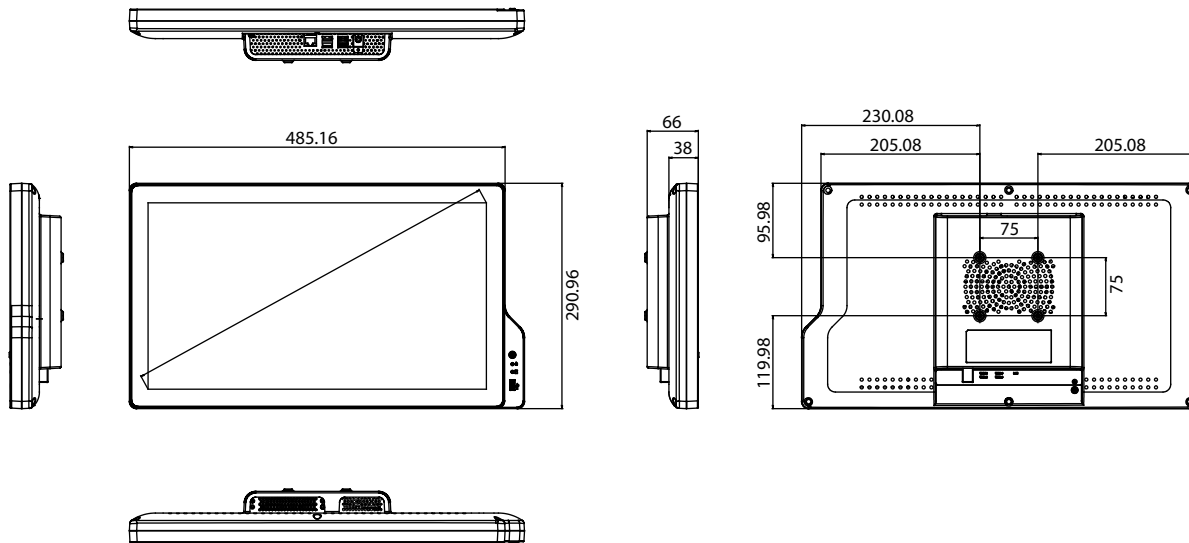
Specifications

System	CPU	Intel Celeron CPU G3900TE @ 2.30GHz
	Memory	4 GB SODIMM DDR4-2133 512X8
	Chipset	Intel H110, Intel HD Graphics 510
	HDD	1 x 2.5" SATA (Internal)
	I/O	3 x USB 3.0 (rear), 1 x USB 2.0 (rear), 1 x USB 3.0 (front)
	Network (LAN)	1 x 10/100/1000 Mbps Ethernet
	Speaker	NA
	Dimensions	510 x 291 x 66 mm (20.07 x 11.45 x 2.59 in)
	Weight	5.5 kg (12.12 lb)
OS Support	OS Support	Windows 10 Enterprise 2016 LTSB
Power Supply	Input Voltage	24 V_{DC}
LCD	Display Type	19.5" TFT LCD (LED Backlight)
	Max. Resolution	1600 x 900
	Colors	16.7M
	Viewing Angle	85 (left), 85 (right), 80 (up), 80 (down)
	Luminance	250 cd/m²
	Operating Temperature	0 ~ 40 °C (32 ~ 130 °F)
	Backlight Lifetime	30,000 hr (typ.)
Touchscreen	Touch Type	Projected capacitive 10-point multi-touch
	Resolution	4096 x 4096
	Light Transmission	≥88%
	Controller	USB interface
	Software Driver Supports	Windows 10 Enterprise 2016 LTSB
Environment	Operating Temperature	0 ~ 40 °C (32 ~ 130 °F)
	Storage Temperature	-20 ~ 60 °C (-4 ~ 140 °F)
	Relative Humidity	10 ~ 95% @ 40 °C (Non-condensing)
	Shock	Operating 10 G peak acceleration (11 ms duration), follow IEC 60068-2
	Vibration	Operating Random Vibration Test 5~500Hz, 1Grms, follow IEC 60068-2

ADVANTECH   **Domain-Focused Products**

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Dimensions

Unit: mm [inch]

485.16

290.96

66

38

230.08

205.08

205.08

95.98

119.98

75

75

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8
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Ordering Information

Part Number	Description
*TPC-8151WM-6C3AE	19" wide screen panel PC with Celeron G3900

*Please check with your local PSM for updated and more detail ordering information

TPC Installation Accessories

TPC VESA Mount Kit

TPC-1000H-WMKE

Features
- Support VESA 75/100
- Adjustable design for 10" ~ 17" TPC
- Support any mounting with VESA

Ordering Information
- TPC-1000H-WMKE

Supported Models
- TPC-1251T, TPC-1551T, TPC-1751T
- TPC-1282T, TPC-1582H, TPC-1782H
- TPC-1071H, TPC-1271H, TPC-1571H, TPC-1771H

TPC-1000H-WMKE
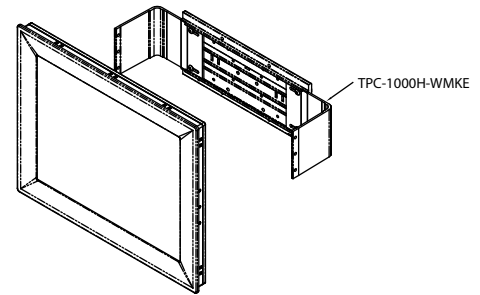
TPC Stand Kit

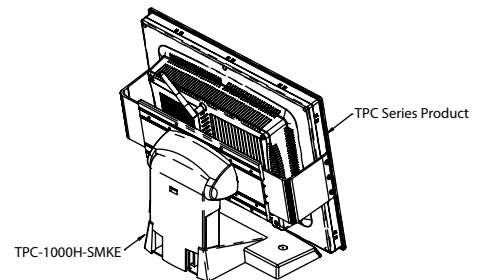### TPC-1000H-SMKE

Features
- Adjustable design for 10" ~ 17" TPC
- Adjustable view angle from 10° ~ 30°
- Can be fixed stood on the horizontal plane

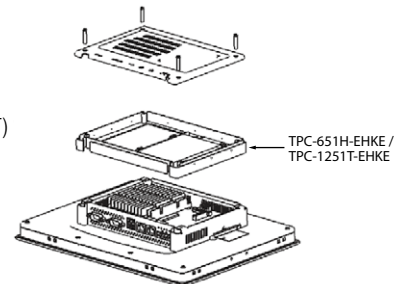**Ordering Information**
- TPC-1000H-SMKE

Supported Models
- TPC-1251T, TPC-1551T, TPC-1751T
- TPC-1282T, TPC-1582H, TPC-1782H
- TPC-1071H, TPC-1271H, TPC-1571H, TPC-1771H

TPC Series Product

TPC-1000H-SMKE

TPC HDD Extension Kit

Ordering Information & Supported Models
- TPC-651H-EHKE (HDD extension kit for TPC-1250H, TPC-1550H, TPC-1750H, TPC-1251H, TPC-1551H)
- TPC-1251T-EHKE (HDD and iDoor extension kit for TPC-1051WP, TPC-1251T, TPC-1551T, TPC-1551WP, TPC-1751T)

TPC-651H-EHKE / TPC-1251T-EHKE

SPC M12 Connector Kit

Ordering Information & Supported Models
- SPC-1840WP-MOKE (5 x M12 Connectors for SPC-1881WP/1840WP/2140WP)
- SPC-1840WP-MCKE (5 x M12 Cables supporting standard I/O connector for SPC-1881WP/1840WP/2140WP)
- TPC-8100TR-MOKE (9 x M12 Connectors for TPC-8100TR)
- TPC-8100TR-MCKE (9 x M12 Cables supporting standard I/O connector for TPC-8100TR)

M12 Connectors

M12 Cables supporting standard I/O connector

AC-to-DC Power Adapter

Features
- Input Voltage: 100-240V_{AC}, 47Hz~63Hz
- Output Voltage: 24V_{DC}/2.5A, 60W

Supported Models
- TPC-51T-E & TPC-51H-E series
- TPC-2000 series

Ordering Information
- PWR-247-CE

Features
- Input Voltage: 100-240V_{AC}, 47Hz~63Hz
- Output Voltage: 24V_{DC}/6.25A, 150W

Supported Models
- TPC-1282T/1582H/1782H
- TPC-1581WP/TPC-1881WP
- TPC-5000 series

Ordering Information
- PWR-248-AE

Cable

Model Name		Part Number	Description
		1702002600	Power Cable US Plug 1.8 M
		1702002605	Power Cable EU Plug 1.8 M
		1702031801	Power Cable UK Plug 1.8 M
		1700000596-11	Power Cable China/Australia Plug 1.8 M

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6 Industrial Communication
7 Remote I/O Modules
8 Industrial I/O and Video Solutions

Model		WOP-3070T	WOP-3100T	WOP-3120T	WOP-2040T		WOP-2070T		WOP-2100T	
Ordering Information		WOP-3070T-C4BE	WOP-3100T-C4BE	WOP-3120T-C4AE	WOP-2040T-S1AE	WOP-2040T-N1AE	WOP-2070T-S2AE	WOP-2070T-N2AE	WOP-2100T-S2AE	WOP-2100T-N2AE
CPU		RISC 32 bits, 600 MHz (ARM® Cortex™-A8)	ARM Cortex A8 600Mhz	ARM Cortex A8 600Mhz	RISC (32-bit, 200 MHz)		RISC (32-bit, 200 MHz)			
Backup Memory		128 KB	128 KB	FRAM 1M bit (=128K Byte, 64 word)	128 KB		128 KB			
Working Memory		DDR2 256M Bytes	DDR2 256 MB on board	DDR2 256 MB on board	32 MB SDRAM		64 MB SDRAM		64 MB SDRAM	
Storage		512MB on board SLC type	512MB on board SLC type	512MB on board SLC type	8MB NOR Flash		8 MB NOR Flash			
		-	-	-	-	128M NAND Flash	-	128M NAND Flash	-	128M NAND Flash
Operating System		Microsoft® Windows CE 6.0	Microsoft® Windows CE 6.0	Microsoft® Windows CE 6.0	HMI RTOS, WebOP Designer 2.0		HMI RTOS, WebOP Designer 2.0			
Display	Type	WVGA (16:9) TFT LCD	WSGA (17:10) TFT LCD	XGA (16:9) TFT LCD	WQVGA (16:9) TFT LCD		WVGA (16:9) TFT LCD		WSVGA (16:9) TFT LCD	
	Size	7"	10.1"	12"	4.3"		7"		10.1"	
	Max. Resolution	800 x 480	1024 x 600	1024 x 768	480 x 272		800 x 480		1024 x 600	
	Max. Colors	65,536 colors	64K	64K	65,536		65,536		65,536	
	Luminance (cd/m²)	500	550 nits	500 nits	400		300		250	
	Viewing Angle (H/V°)	140/120	140/110	160/140	100/95		140/130		140/110	
	Backlight Life (hr)	50,000	50,000	50,000	LED, 20,000		LED, 20,000		LED, 20,000	
	Dimming	Adjustable	-	-	-		-		-	
Touchscreen		5 wire Analog Resistive	5 wires Analog resistive	5 wires Analog resistive	4-wire analog resistive		4-wire analog resistive		4-wire analog resistive	
Power-On LED		✓	✓	✓	✓		✓		✓	
Communication	COM1	RS-232/422485 (DB9)	RS-232/422/485 (DB9 Male)	RS-232/RS-422,RS-485 (DB9), 300~115.2 kbps	RS-232/422/485 (DB9)		RS-232/422/485 (DB9)		RS-232/422/485 (DB9)	
Interface	COM2	RS-422/485 (Terminal 4pin+Ground)	RS-422/485 (Terminal Plug 4-Pin)	RS-422/RS-485 (Terminal 4 pin+Ground), 300~115.2 kbps	RS-422/485 (5-pin terminal)		RS-422/485 (5-pin terminal)		RS-422/485 (5-pin terminal)	
	COM3	RS-485 (Termianl 2pin)	RS-485 (Terminal Plug 2-Pin)	RS-485 (Terminal 2 pin), 300~115.2 kbps	RS-232 (COM1: 5/7/8-pin)		RS-232 (COM1: 5/7/8-pin)		RS-232 (COM1: 5/7/8-pin)	
	CAN	Termianl 2pin	Terminal Plug 2-Pin	Terminal Plug 2-Pin	-		-		-	
	Ethernet (RJ45)	10/100-BaseT	10/100-BaseT	10/100-BaseT	-	10/100 BASE-T	-	10/100 BASE-T	-	10/100 BASE-T
I/Os	USB Client	USB 2.0 Client x 1	USB 2.0 Client x 1	USB 2.0 Client x 1	✓		✓		✓	
	USB Host	USB 2.0 Host x 1 (Top)	USB 2.0 Host x 1	USB 2.0 Host x 1 (Top)	✓		✓		✓	
	Micro-SD Slot	✓	✓	✓	-	✓	-	✓	-	✓
	SD Slot	-	-	-	-		-		-	
	Audio	1 Lin out / 1 Mic in	1 Line-out / 1 Mic-in	1 Line-out / 1 Mic-in	-		-		-	
	Power Isolation	✓	✓	✓	-		-		-	
	I/O Isolation	✓	✓	✓	-		-		-	
Power Supply Voltage		24 VDC ± 10%	24 VDC ± 10%	24 VDC ± 10%	24 VDC ± 10%		24 VDC ± 10%		24 VDC ± 10%	
Power Consumption		7W Typical	20 W		5 W		10 W		10 W	
Dimensions W x H x D (mm)		203.4 x 150 x 43.7 mm (8.01" x 5.91" x 1.72")	271.5 x 213.5 x 43.2 mm (10.69" x 8.41" x 1.7")	311.8 x 238 x 54.5 mm (12.28" x 9.37" x 2.15")	130 x 106.2 x 36.4 mm (5.11" x 4.18" x 1.43")		188 x 143.3 x 30 mm (7.4" x 5.64" x 1.18")		269.8 x 212 x 37.4 mm (10.62" x 8.35" x1.47")	
Cut-out Dimensions W x H (mm)		192 x 138.5 mm (7.56" x 5.45")	260 x 201.5 mm (10.24" x 7.93")	302.5 x 228.5 mm (12.1" x 9.14")	118.5 x 92.5 mm (4.66" x 3.64")		175 x 132.5 mm (6.89" x 5.21")		259.5 x 201.5 mm (10.22" x 7.93")	
Enclosure		Die-cast aluminum alloy front bezel	PC + ABS	PC + ABS	PC + ABS		PC + ABS		PC + ABS	
Net Weight		1 kg (2.20 lbs)	1.2 kg (2.65 lbs)	2.5 kg (5.51 lb)	0.3 kg (0.66 lb)		0.6 kg (1.32 lb)		1.2 kg (2.64 lb)	
Operating Temperature		-20 ~ 60°C (-4 ~ 140°F)	-20 ~ 60°C (-4 ~ 140°F)	-20 ~ 60°C (-4 ~ 140°F)	0 ~ 50°C (32 ~ 122°F)		0 ~ 50°C (32 ~ 122°F)		0 ~ 50°C (32 ~ 122°F)	
Storage Temperature		-30 ~ 70°C (-22 ~ 158°F)	-30 ~ 70°C (-22 ~ 158°F)	-30 ~ 70°C (-22 ~ 158°F)	-20 ~ 60°C (-4 ~ 140°F)		-20 ~ 60°C (-4 ~ 140°F)		-20 ~ 60°C (-4 ~ 140°F)	
Humidity		10% ~ 90% RH @ 40°C, non-condensing	10 ~ 90% RH @ 40°C, non-condensing	10 ~ 90% RH @ 40°C, non-condensing	10 ~ 90% RH @ 40°C, non-condensing		10 ~ 90% RH @ 40°C, non-condensing		10 ~ 90% RH @ 40°C, non-condensing	
Ingress Protection		IP66	Front panel: IP66	Front panel: IP66	Front panel: IP66		Front panel: IP66		Front panel: IP66	
Certification		CE, FCC, BSMI, CCC, UL-508	CE, BSMI, CCC, UL, FCC Class A	CE, BSMI, CCC, UL, FCC Class A	CE, FCC, BSMI, CCC, UL		CE, FCC, BSMI, CCC, UL		CE, FCC, BSMI, CCC, UL	

WebOP-3070T

7" WVGA Operator Panel with ARM® Cortex™-A8 RISC Processor and Wide Operating Temperature

Features

- ARM® Cortex™-A8 32-bit, 600 MHz, RISC processor
- Available with a variety of LCD sizes (7/10.1/12")
- TFT LCD with 50K lifetime and LED backlight
- Embedded Microsoft® WinCE 6.0 OS
- Supports Advantech's WebOP Designer HMI Runtime development tool
- 128 KB (64 words) Backup memory FRAM without battery concerns
- Isolation protection for power and terminal I/O ports
- Wide operating temperature range -20 ~ 60 °C (-4 ~ 140 °F)
- Supports the CANopen library defined by the CiA 301 V4.02 specification
- RS-422, RS-485, CAN terminal I/O ports support terminating resistor value of 120Ω
- IP66-rated front panel
- Die cast aluminum alloy front bezel
- Level 4 ESD protection (Air: 15KV/Contact: 8KV)
- UL 508 certification for industrial control equipment

Introduction

The WebOP-3070T operator panel is powered by an ARM® Cortex™-A8 32-bit, 600 MHz, RISC processor that consumes minimal power without sacrificing performance and satisfies the stringent standards set for the automation market. Additionally, the WebOP-3070T system can be equipped with a variety of LCD sizes, ranging from 7 to 12", for diverse applications that involve PLCs, motion/thermal controllers, inverters, and sensors. Furthermore, the WebOP-3070T system supports a wide operating temperature range (-20 ~ 60 °C/-4 ~ 140 °F) to ensure reliable operation in harsh industrial environments.

Specifications

General

- **Certification** — CE, BSMI, CCC, UL, FCC Class A
- **Dimensions (W x H x D)** — 203.4 x 150 x 43.7 mm (8.01 x 5.91 x 1.72 in)
- **Cutout Dimensions** — 192 x 138.5 mm (7.56 x 5.45 in)
- **OS Support** — Microsoft® Windows CE 6.0
- **Power Input** — $24V_{DC}$ ±10%
- **Power Consumption** — 7W (Typical)
- **Enclosure Housing** — PC + ABS
- **Mounting** — Panel
- **Weight (Net)** — 1 kg (2.20 lbs)

System Hardware

- **CPU** — ARM® Cortex™-A8 32-bit, 600 MHz, RISC processor
- **Backup Memory** — FRAM 128KB
- **Memory** — DDR2 256MB on board
- **Storage** — 512MB on board SLC type
- **Power-On LED** — Yes

Communication Interface

- **COM1** — RS-232/422/485 (DB9 Male)
- **COM2** — RS-422/485 (Terminal Plug 4-Pin)
- **COM3** — RS-485 (Terminal Plug 2-Pin)
- **CAN** — Terminal Plug 2-Pin
- **Ethernet (RJ45)** — 10/100BASE-T
- **I/Os** — 1 x USB 2.0 (Client)
  1 x USB 2.0 (Host)
  1 x micro SD slot
  1 x Audio line out, 1 x mic in

LCD Display

- **Display Type** — WVGA TFT LCD
- **Display Size** — 7"
- **Max. Resolution** — 800 x 480
- **Max. Colors** — 64K
- **Luminance (cd/m²)** — 500

- **Viewing Angle (H/V)** — 140/120
- **Backlight Life** — LED, 50,000 hr
- **Dimming** — Adjustable by touch panel
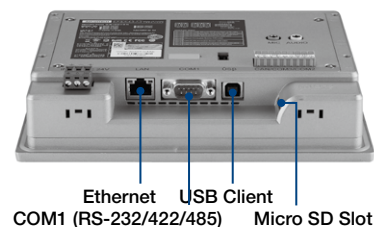- **Contrast Ratio** — 700:1

Touchscreen

- **Lifespan** — 36 million touches of 8 mm in diameter through silicone rubber with at least 250 g load
- **Light** — Transmission above 80%
- **Resolution** — Linearity
- **Type** — 5-wire, analog resistive

Environment

- **Operating Temperature** — -20 ~ 60 °C (-4 ~ 140 °F)
- **Storage Temperature** — -30 ~ 70 °C (-22 ~ 158 °F)
- **Humidity** — 10 ~ 90% RH @ 40 °C, non-condensing
- **Ingress Protection** — Front panel: IP66
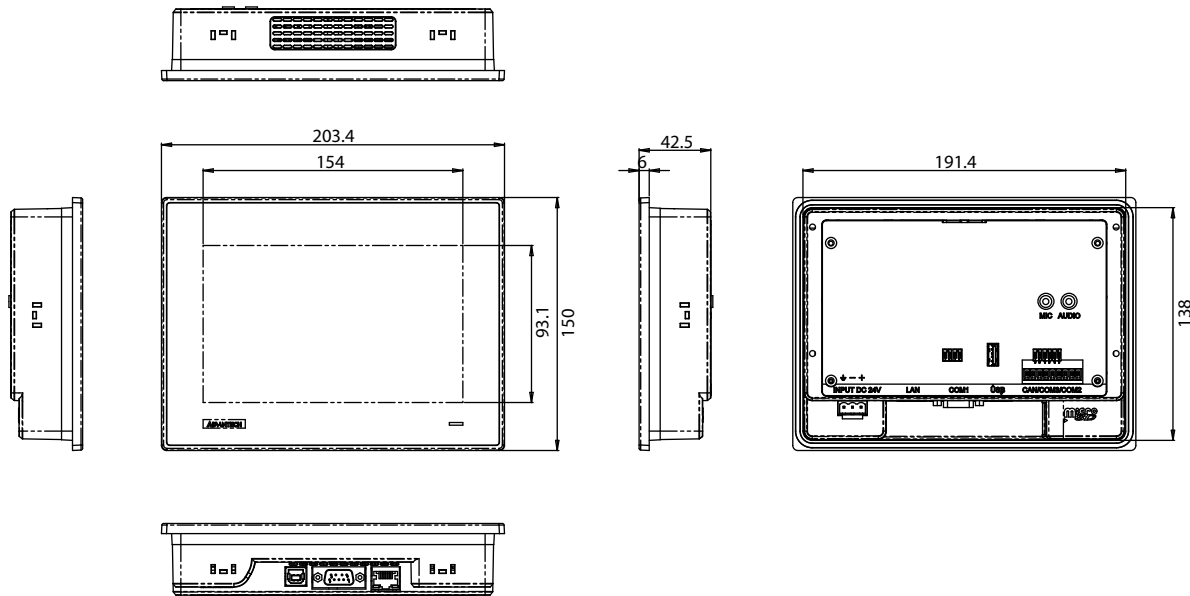- **Vibration Protection** — Operating, random vibration 1 Grms (5 ~ 500 Hz)

Base View

Ethernet USB Client
COM1 (RS-232/422/485) Micro SD Slot

ADVANTECH **Industrial Operator Panels**

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Dimensions

Unit: mm

203.4
154
42.5
6
191.4
93.1
150
138

Panel Cutout Dimensions: 192 x 138.5 mm (7.56 x 5.45 in)

INPUT DC 24V   LAN   COM1   USB   CAN/COM3/COM2

1 Software and Industry Solutions

2 Industrial Server

3 Intelligent System

4 Intelligent HMI and Monitors

5 Automation Computers and Controllers

6 Industrial Communication

7 Remote I/O Modules

8 Industrial I/O and Video Solutions

Ordering Information

- **WOP-3070T-C4BE**   7" WVGA, Cortex™-A8, 256MB DDR, WinCE 6.0

Optional Accessories

- **PWR-247-CE**   24 V 60 W AC-DC Power Adapter
- **1702002600**   Power Cable US Plug 1.8 M
- **1702002605**   Power Cable EU Plug 1.8 M
- **1702031801**   Power Cable UK Plug 1.8 M
- **1702031836**   Power Cable China/Australia Plug 1.8 M
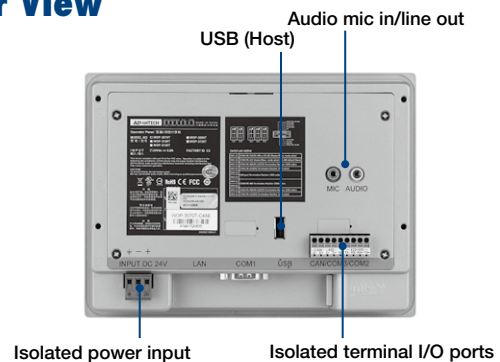
S/W Bundle Offering

- **WA-HT3070T-R15H0AE**   WOP-3070T-C4BE with WebAccess/HMI Runtime

Application Software

WebAccess/HMI	Advantech WebAccess/HMI is human-machine interface (HMI) software based on Microsoft's Windows operating system. This software features excellent communication and monitoring capabilities, supports more than 350 PLC communication protocols, and offers a wide choice of screen design objects to satisfy diverse integrations of factory automation and HMI operation and monitoring requirements.

Rear View

USB (Host)

Audio mic in/line out

Isolated power input

Isolated terminal I/O ports

CAN- 485 422/485
D- D+ D- D+ SG TX- RX- RX+ TX+

CAN/COM3/COM2

Isolated terminal I/O ports

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WebOP-3100T

10.1" WSVGA Operator Panel with ARM® Cortex™-A8 RISC Processor and Wide Operating Temperature

Features

- ARM® Cortex™-A8 32-bit, 600 MHz, RISC processor
- Available with a variety of LCD sizes (7/10.1/12/15")
- TFT LCD with 50K lifetime and LED backlight
- Embedded Microsoft® WinCE 6.0 OS
- Supports Advantech's WebOP Designer HMI Runtime development tool
- 128 KB (64 words) Backup memory FRAM without battery concerns
- Isolation protection for power and terminal I/O ports
- Wide operating temperature range -20 ~ 60 °C (-4 ~ 140 °F)
- Supports the CANopen library defined by the CiA 301 V4.02 specification
- RS-422, RS-485, CAN terminal I/O ports support terminating resistor value of 120Ω
- IP66-rated front panel
- Die cast aluminum alloy front bezel
- Level 4 ESD protection (Air: 15KV/Contact: 8KV)
- UL 508 certification for industrial control equipment

Introduction

The WebOP-3100T operator panel is powered by an ARM® Cortex™-A8 32-bit, 600 MHz, RISC processor that consumes minimal power without sacrificing performance and satisfies the stringent standards set for the automation market. Additionally, the WebOP-3100T system can be equipped with a variety of LCD sizes, ranging from 7 to 15", for diverse applications that involve PLCs, motion/thermal controllers, inverters, and sensors. Furthermore, the WebOP-3100T system supports a wide operating temperature range (-20 ~ 60 °C/-4 ~ 140 °F) to ensure reliable operation in harsh industrial environments.

Specifications

General

- **Certification** — CE, BSMI, CCC, UL, FCC Class A
- **Dimensions (W x H x D)** — 271.5 x 213.5 x 43.2 mm (10.69 x 8.41 x 1.7 in)
- **Cutout Dimensions** — 260 x 201.5 mm (10.24 x 7.93 in)
- **OS Support** — Microsoft® Windows CE 6.0
- **Power Input** — 24V$_{DC}$ ±10%
- **Power Consumption** — 9W (Typical)
- **Enclosure Housing** — PC + ABS
- **Mounting** — Panel
- **Weight (Net)** — 1.2 kg (2.65 lbs)

System Hardware

- **CPU** — ARM® Cortex™-A8 32-bit, 600 MHz, RISC processor
- **Backup Memory** — FRAM 128KB
- **Memory** — DDR2 256MB on board
- **Storage** — 512MB on board SLC type
- **Power-On LED** — Yes

Communication Interface

- **COM1** — RS-232/422/485 (DB9 Male)
- **COM2** — RS-422/485 (Terminal Plug 4-Pin)
- **COM3** — RS-485 (Terminal Plug 2-Pin)
- **CAN** — Terminal Plug 2-Pin
- **Ethernet (RJ45)** — 10/100BASE-T
- **I/Os** — 1 x USB 2.0 (Client)
  1 x USB 2.0 (Host)
  1 x micro SD slot
  1 x Audio line out, 1 x mic in

LCD Display

- **Display Type** — WSVGA TFT LCD
- **Display Size** — 10.1"
- **Max. Resolution** — 1024 x 600
- **Max. Colors** — 64K
- **Luminance (cd/m²)** — 550
- **Viewing Angle (H/V)** — 140/110
- **Backlight Life** — LED, 50,000 hr
- **Dimming** — Adjustable by touch panel
- **Contrast Ratio** — 500:1

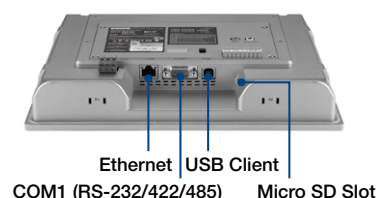### Touchscreen

- **Lifespan** — 36 million touches of 8 mm in diameter through silicone rubber, with at least 250 g load, twice per second
- **Light** — Transmission above 80%
- **Resolution** — Linearity
- **Type** — 5-wire analog resistive

Environment

- **Operating Temperature** — -20 ~ 60 °C (-4 ~ 140 °F)
- **Storage Temperature** — -30 ~ 70 °C (-22 ~ 158 °F)
- **Humidity** — 10 ~ 90% RH @ 40 °C, non-condensing
- **Ingress Protection** — Front panel: IP66
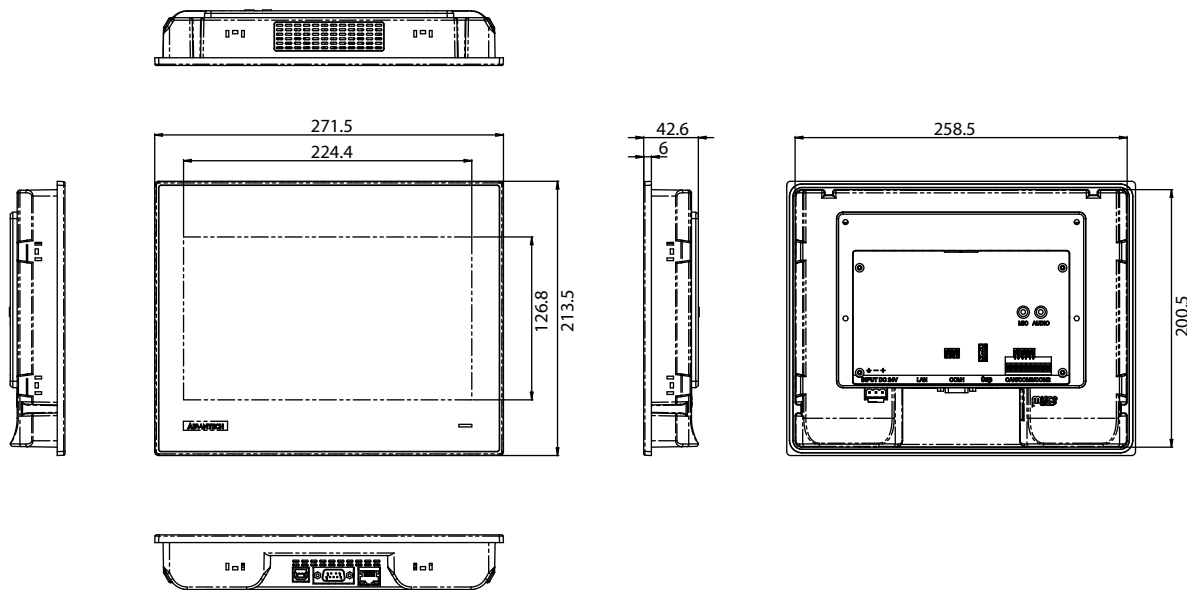- **Vibration Protection** — Operating, random vibration 1 Grms (5 ~ 500 Hz)

Base View

Ethernet   USB Client
COM1 (RS-232/422/485)   Micro SD Slot

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ADVANTECH   Industrial Operator Panels

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Remote I/O Modules

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Industrial I/O and Video Solutions

Dimensions

Unit: mm

Panel Cutout Dimensions: 260 x 201.5 mm (10.24 x 7.93 in)

271.5
224.4
42.6
6
258.5
126.8
213.5
200.5

Ordering Information

- **WOP-3100T-C4BE**   10.1" WSVGA, Cortex™-A8, 256MB DDR, WinCE 6.0

Optional Accessories

- **PWR-247-AE**   24 V 50 W AC-DC Power Adapter
- **1702002600**   Power Cable US Plug 1.8 M
- **1702002605**   Power Cable EU Plug 1.8 M
- **1702031801**   Power Cable UK Plug 1.8 M
- **1702031836**   Power Cable China/Australia Plug 1.8 M

S/W Bundle Offering

- **WA-HT3100T-R15H0AE** WOP-3100T-C4BE with WebAccess/HMI Runtime

Application Software

WebAccess/HMI	Advantech WebAccess/HMI is human-machine interface (HMI) software based on Microsoft's Windows operating system. This software features excellent communication and monitoring capabilities, supports more than 350 PLC communication protocols, and offers a wide choice of screen design objects to satisfy diverse integrations of factory automation and HMI operation and monitoring requirements.

Rear View

USB (Host)   Audio mic in/line out

Isolated power input   Isolated terminal I/O ports

CAN/COM3/COM2

Isolated terminal I/O ports

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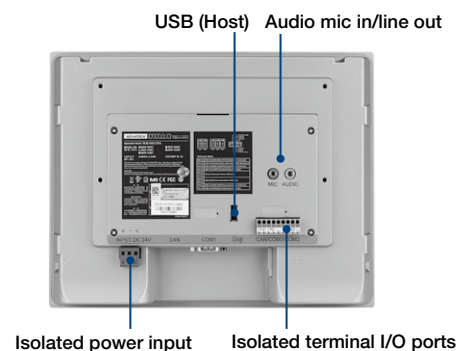
WebOP-3120T

12" XGA Operator Panel with ARM® Cortex™-A8 RISC Processor and Wide Operating Temperature

Features

- ARM® Cortex™-A8 32-bit, 600 MHz, RISC processor
- Available with a variety of LCD sizes (7/10.1/12")
- TFT LCD with 50K lifetime and LED backlight
- Embedded Microsoft® WinCE 6.0 OS
- Supports Advantech's WebOP Designer HMI Runtime development tool
- 128 KB (64 words) Backup memory FRAM without battery concerns
- Isolation protection for power and terminal I/O ports
- Wide operating temperature range -20 ~ 60 °C (-4 ~ 140 °F)
- Supports the CANopen library defined by the CiA 301 V4.02 specification
- RS-422, RS-485, CAN terminal I/O ports support terminating resistor value of 120Ω
- IP66-rated front panel
- Die cast aluminum alloy front bezel
- Level 4 ESD protection (Air: 15KV/Contact: 8KV)
- UL 508 certification for industrial control equipment

Introduction

The WebOP-3120T operator panel is powered by an ARM® Cortex™-A8 32-bit, 600 MHz, RISC processor that consumes minimal power without sacrificing performance and satisfies the stringent standards set for the automation market. Additionally, the WebOP-3120T system can be equipped with a variety of LCD sizes, ranging from 7 to 12", for diverse applications that involve PLCs, motion/thermal controllers, inverters, and sensors. Furthermore, the WebOP-3120T system supports a wide operating temperature range (-20 ~ 60 °C/-4 ~ 140 °F) to ensure reliable operation in harsh industrial environments.

Specifications

General

- **Certification** — CE, BSMI, CCC, UL 61010, FCC Class A
- **Dimensions (W x H x D)** — 311.8 x 238 x 54.5 mm (12.28 x 9.37 x 2.15 in)
- **Cutout Dimensions** — 302.5 x 228.5 mm (12.1 x 9.14 in)
- **OS Support** — Microsoft® Windows CE 6.0
- **Power Input** — 24 V$_{DC}$ ±10%
- **Power Consumption** — 20 W
- **Enclosure Housing** — PC + ABS
- **Mounting** — Panel
- **Weight (Net)** — 2.5 kg (5.51 lb)

System Hardware

- **CPU** — ARM® Cortex™-A8 32-bit, 600 MHz, RISC processor
- **Backup Memory** — FRAM 1M bit (128 KB, 64 words)
- **Memory** — DDR2 256 MB
- **Storage** — 512MB on board SLC type
- **Power-On LED** — Yes

Communication Interface

- **COM1** — RS-232/RS-422,RS-485 (DB9), 300~115.2 kbps
- **COM2** — RS-422/RS-485 (Terminal 4 pin+Ground), 300~115.2 kbps
- **COM3** — RS-485 (Terminal 2 pin), 300~115.2 kbps
- **CAN** — Terminal 2 pin
- **Ethernet (RJ45)** — 10/100BASE-T
- **I/Os** — 1 x USB 2.0 (Client)
  - 1 x USB 2.0 (Host)
  - 1 x micro SD slot
  - 1 x Audio line out, 1 x mic in

LCD Display

- **Display Type** — XGA TFT LCD
- **Display Size** — 12"
- **Max. Resolution** — 1024 x 768
- **Max. Colors** — 64K

- **Luminance (cd/m²)** — 500
- **Viewing Angle (H/V)** — 160/140
- **Backlight Life** — LED, 50,000 hr
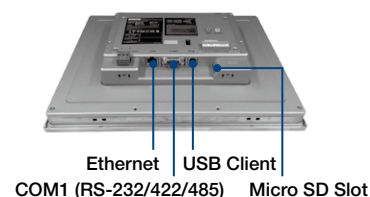- **Dimming** — Adjustable by touch panel
- **Contrast Ratio** — 500:1

Touchscreen

- **Lifespan** — 36 million touches of 8 mm in diameter through silicone rubber, with at least 250 g load, twice per second
- **Light** — Transmission above 80%
- **Resolution** — Linearity
- **Type** — 5-wire analog resistive

Environment

- **Operating Temperature** — -20 ~ 60 °C (-4 ~ 140 °F)
- **Storage Temperature** — -30 ~ 70 °C (-22 ~ 158 °F)
- **Humidity** — 10% ~ 90% RH @ 40 °C, non-condensing
- **Ingress Protection** — Front panel: IP66
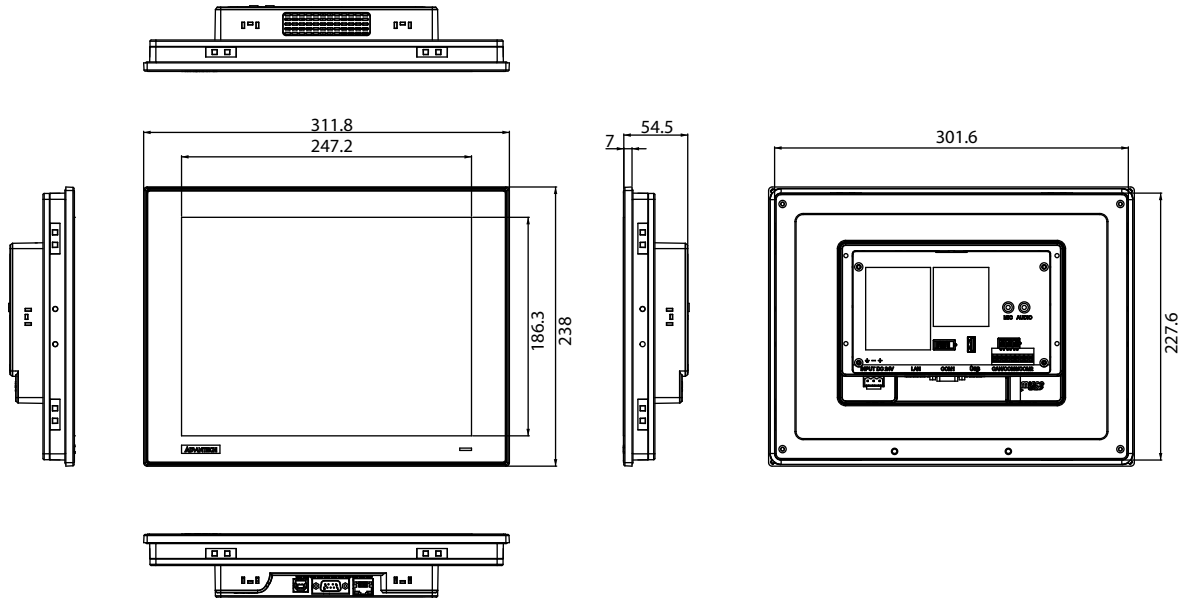- **Vibration Protection** — Operating, random vibration 1 Grms (5 ~ 500 Hz)

Base View

Ethernet   USB Client
COM1 (RS-232/422/485)   Micro SD Slot

WebOP-3120T

1 Software and Industry Solutions
2 Industrial Server
3 Intelligent System
4 Intelligent HMI and Monitors
5 Automation Computers and Controllers
6 Industrial Communication
7 Remote I/O Modules
8 Industrial I/O and Video Solutions

Dimensions

Unit: mm

311.8
247.2
7
54.5
301.6
186.3
238
227.6

Panel Cutout Dimensions: 302.5 x 228.5 mm (12.1 x 9.14 in)

Ordering Information

- **WOP-3120T-C4AE**　　12" XGA, Cortex™-A8, 256MB DDR, WinCE 6.0

Optional Accessories

- **PWR-247-BE**　　　　63W DC 24V/2.62A Output Power Supply
- **WOP-3000T-WMKE**　WOP-3000T Series Wallmount Kits
- **1702002600**　　　　Power Cable US Plug 1.8 M
- **1702002605**　　　　Power Cable EU Plug 1.8 M
- **1702031801**　　　　Power Cable UK Plug 1.8 M
- **1700000596-11**　　Power Cable China/Australia Plug 1.8 M

S/W Bundle Offering

- **WA-HT3120T-R15H001**　WOP-3120T-C4AE, WebAccess/HMI Runtime 1500 tags, 512MB SD, WinCE6.0

Application Software

	Advantech WebAccess/HMI is human-machine interface (HMI) software based on Microsoft's Windows operating system. This software features excellent communication and monitoring capabilities, supports more than 350 PLC communication protocols, and offers a wide choice of screen design objects to satisfy diverse integrations of factory automation and HMI operation and monitoring requirements.
WebAccess/HMI	

Rear View

USB (Host)　Audio mic in/line out

Isolated power input　Isolated terminal I/O ports

CAN/COM3/COM2

Isolated terminal I/O ports
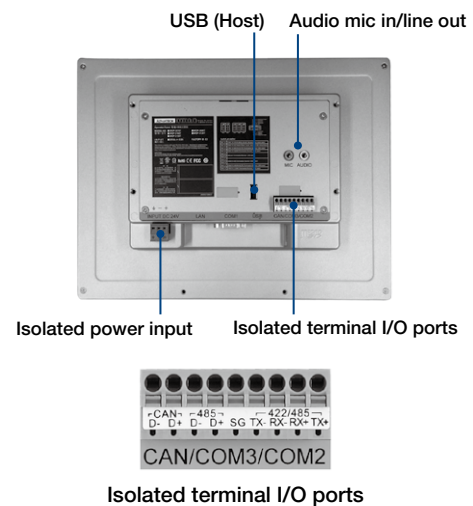
WebOP-2040T
4.3" WQVGA Operator Panel Installed with WebAccess/HMI Software

Features

- ARM9™ 32-bit, 200 MHz RISC processor with 128 MB flash memory
- Includes a RTC, battery backup RAM, and Ethernet-based operator panels
- Supports runtime data downloads through serial, Ethernet, and USB interfaces
- Supports brightness controls via touch panel
- Reliable firmware for 24/7 operation
- Supports the WebAccess/HMI Designer development tool on Windows XP/Vista/7
- Easy to run applications on screens of any screen
- Supports operation in both landscape and portrait mode
- Supports over 450 PLC industrial communication protocols
- Can communicate with up to four device types
- Panel mount design ensures easy installation
- IP66-rated front panel

Introduction

To fulfill the stringent standards of the automation market, especially for packaging, label slitting, and robot dispensing applications, Advantech developed the WebOP-2000T series for diverse operations that involve PLCs, motion/thermal controllers, inverters, and sensors. Powered by an ARM9™ 32-bit, 200 MHz RISC processor with 128 MB flash memory, the WebOP-2000T series systems are available with LCDs of varying size (from 4.3 to 10.1"). Additionally, WebOP-2000T systems are bundled with Advantech's WebAccess/HMI software – a web browser-based human-machine interface designed for HMI applications to reduce labor and improve manufacturing efficiency through visualization.

Specifications

General

- **Certification**   CE, BSMI, CCC, UL, FCC Class A
- **Dimensions (W x H x D)**   130 x 106.2 x 36.4 mm (5.11 x 4.18 x 1.43 in)
- **Cutout Dimensions**   118.5 x 92.5 mm (4.66 x 3.64 in)
- **Front Panel Thickness**   5 mm (0.19 in)
- **Operating System**   HMI RTOS, WebOP Designer
- **Power Supply Voltage**   24V$_{DC}$ ±10%
- **Power Consumption**   5W
- **Enclosure Housing**   Plastic
- **Mount Options**   Panel
- **Weight (Net)**   0.3 kg (0.66 lbs)

System Hardware

- **CPU**   ARM9™ 32-bit, 200 MHz RISC processor
- **Battery Backup Memory**   128KB
- **Flash Memory**   8MB/ 8MB + 128M NAND flash
- **Power-On LED**   Yes
- **Communication LED**   No
- **Front USB Access**   No

Communication Interface

- **COM1**   RS-232/422/485 (DB9 Female)
- **COM2**   RS-422/485 (5-Pin plug connector)
- **COM3**   RS-232 (COM1: Pin 5, 7, 8)
- **Ethernet (RJ45)**   10/100BASE-T (for N1AE model)
- **I/O**   1 x USB (Client)
  1 x USB (Host)
  1 x Micro SD Slot (for N1AE model)

LCD and Touchscreen

- **Display Type**   WQVGA TFT LCD
- **Display Size**   4.3"
- **Max. Resolution**   480 x 272
- **Max. Colors**   65,536 colors
- **Luminance (cd/m²)**   400
- **Backlight Life**   LED, 20,000 hr
- **Dimming**   Adjustable by touch panel
- **Touchscreen**   4 wires analog resistive

Environment

- **Operating Temperature**   0 ~ 50 °C (32 ~ 122 °F)
- **Storage Temperature**   -20 ~ 60 °C (-4 ~ 140 °F)
- **Humidity**   10 ~ 90% RH @ 40°C, non-condensing
- **Ingress Protection**   Front panel: IP66
- **Vibration Protection**   Operating, radom vibration 1 Grms (5 ~ 500 Hz)
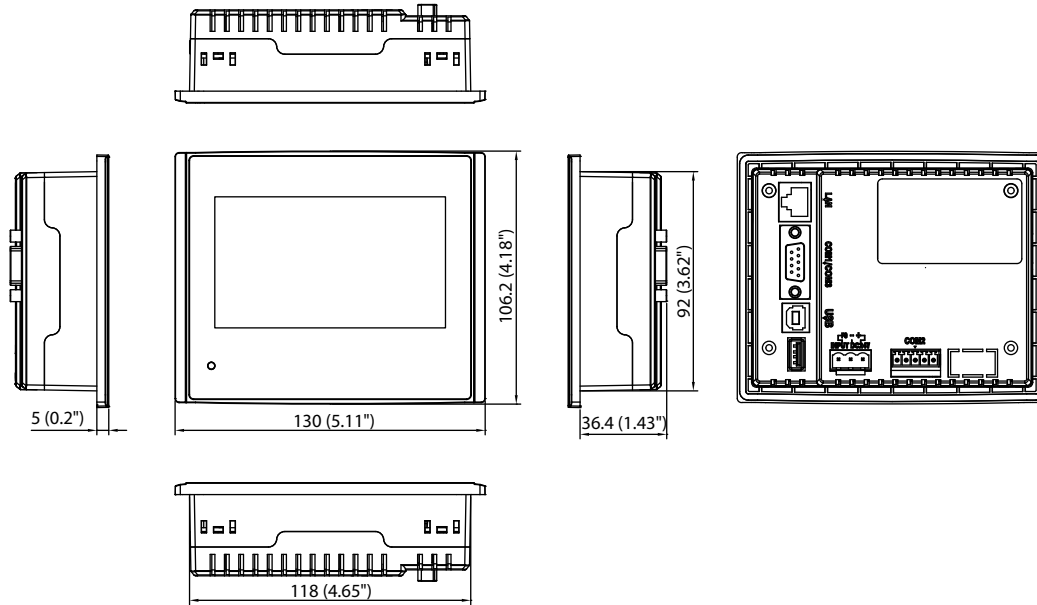
Ordering Information

- **WOP-2040T-S1AE**   4.3" WQVGA, 32MB (SDRAM), 8MB (NOR)
- **WOP-2040T-N1AE**   4.3" WQVGA, 32MB (SDRAM), 8MB (NOR) & 128MB (NAND)

WebOP-2040T

Dimensions

Unit: mm

106.2 (4.18")
92 (3.62")
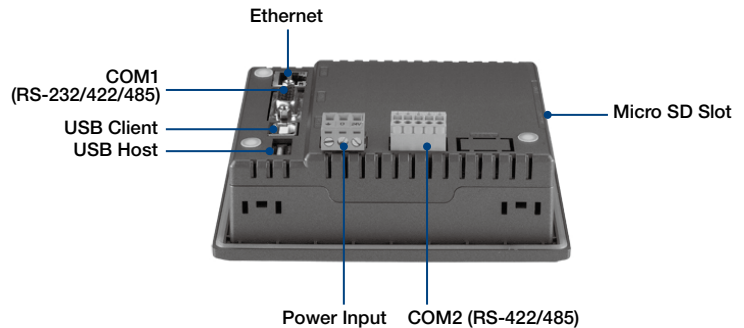5 (0.2")
130 (5.11")
36.4 (1.43")
118 (4.65")

Panel Cutout Dimensions: 118.5 x 92.5 mm (4.66 x 3.64 in)

Optional Accessories

- **PWR-247-CE**   100-240V 60W 24V 2.5A Power Supply
- **1702002600**   Power Cable US Plug 1.8 M
- **1702002605**   Power Cable EU Plug 1.8 M
- **1702031801**   Power Cable UK Plug 1.8 M
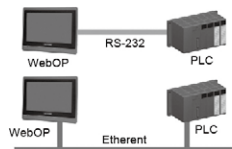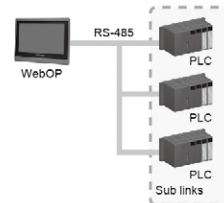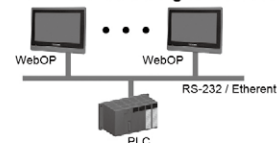- **1700000596**   Power Cable China/Australia Plug 1.8 M

Rear View

Ethernet
COM1 (RS-232/422/485)
USB Client
USB Host
Micro SD Slot
Power Input
COM2 (RS-422/485)

Communication Links

Direct Link
1-to-1 Connection
WebOP — RS-232 — PLC
WebOP — Etherent — PLC

1-to-N Connection
WebOP — RS-485 — PLC / PLC / PLC — Sub links

N-to-1 Data Sharing Connection
WebOP — WebOP — RS-232 / Etherent — PLC

In-Direct Link
2-to-1 Connection
WebOP — Indirect link via 2-to-1 connection — WebOP — Direct link — PLC — 2-to-1 server

N-to-1 Connection
Etherent — WebOP — WebOP — Indirect Link via N-to-1 connection (Etherent) — N-to-1 master — Direct link — WebOP — PLC

2-to-1 Transparent Connection
WebOP — WebOP — 2-to-1 Transparent Server — PLC
PC — WebOP — 2-to-1 Transparent Server — PLC
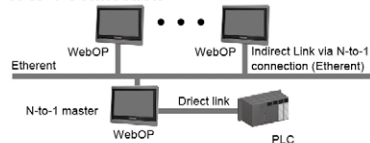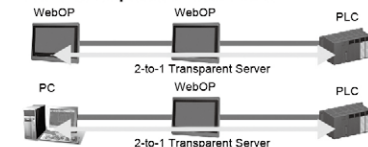
WebOP-2070T

7" WVGA Operator Panel Installed with WebAccess/HMI Software

Features

- ARM9™ 32-bit, 200 MHz RISC processor with 128 MB flash memory
- Includes a RTC, battery backup RAM, and Ethernet-based operator panels
- Supports runtime data downloads through serial, Ethernet, and USB interfaces
- Supports brightness controls via touch panel
- Reliable firmware for 24/7 operation
- Supports the WebAccess/HMI Designer development tool on Windows XP/Vista/7
- Easy to run applications on screens of any screen
- Supports operation in both landscape and portrait mode
- Supports over 450 PLC industrial communication protocols
- Can communicate with up to four device types
- Panel mount design ensures easy installation
- IP66-rated front panel

R33138 CE FCC c(UL)us LISTED E180881 I.T.E. CCC

Introduction

To fulfill the stringent standards of the automation market, especially for packaging, label slitting, and robot dispensing applications, Advantech developed the WebOP-2000T series for diverse operations that involve PLCs, motion/thermal controllers, inverters, and sensors. Powered by an ARM9™ 32-bit, 200 MHz RISC processor with 128 MB flash memory, the WebOP-2000T series systems are available with LCDs of varying size (from 4.3 to 10.1"). Additionally, WebOP-2000T systems are bundled with Advantech's WebAccess/HMI software – a web browser-based human-machine interface designed for HMI applications to reduce labor and improve manufacturing efficiency through visualization.

Specifications

General

- **Certification** CE, BSMI, CCC, UL, FCC Class A
- **Dimensions (W x H x D)** 188 x 143.3 x 30 mm (7.4 x 5.64 x 1.18 in)
- **Cutout Dimensions** 175 x 132.5 mm (6.89 x 5.21 in)
- **Front Panel Thickness** 6 mm (0.23 in)
- **Operating System** HMI RTOS, WebOP Designer
- **Power Supply Voltage** 24V_{DC} ±10%
- **Power Consumption** 10W
- **Enclosure Housing** Plastic
- **Mount Options** Panel
- **Weight (Net)** 0.6 kg (1.32 lbs)

System Hardware

- **CPU** ARM9™ 32-bit, 200 MHz RISC processor
- **Battery Backup Memory** 128KB
- **Flash Memory** 8MB/ 8MB + 128M NAND flash
- **Power-On LED** Yes
- **Communication LED** No
- **Front USB Access** No

Communication Interface

- **COM1** RS-232/422/485 (DB9 Female)
- **COM2** RS-422/485 (5-Pin plug connector)
- **COM3** RS-232 (COM1: Pin 5, 7, 8)
- **Ethernet (RJ45)** 10/100BASE-T (for N2AE model)
- **I/O** 1 x USB (Client)
  1 x USB (Host)
  1 x Micro SD Slot (for N1AE model)

LCD and Touchscreen

- **Display Type** WVGA TFT LCD
- **Display Size** 7"
- **Max. Resolution** 800 x 480
- **Max. Colors** 65,536 colors
- **Luminance (cd/m²)** 300
- **Backlight Life** LED, 20,000 hr
- **Dimming** Adjustable by touch panel
- **Touchscreen** 4 wires analog resistive

Environment

- **Operating Temperature** 0 ~ 50 °C (32 ~ 122 °F)
- **Storage Temperature** -20 ~ 60 °C (-4 ~ 140 °F)
- **Humidity** 10 ~ 90% RH @ 40 °C, non-condensing
- **Ingress Protection** Front panel: IP66
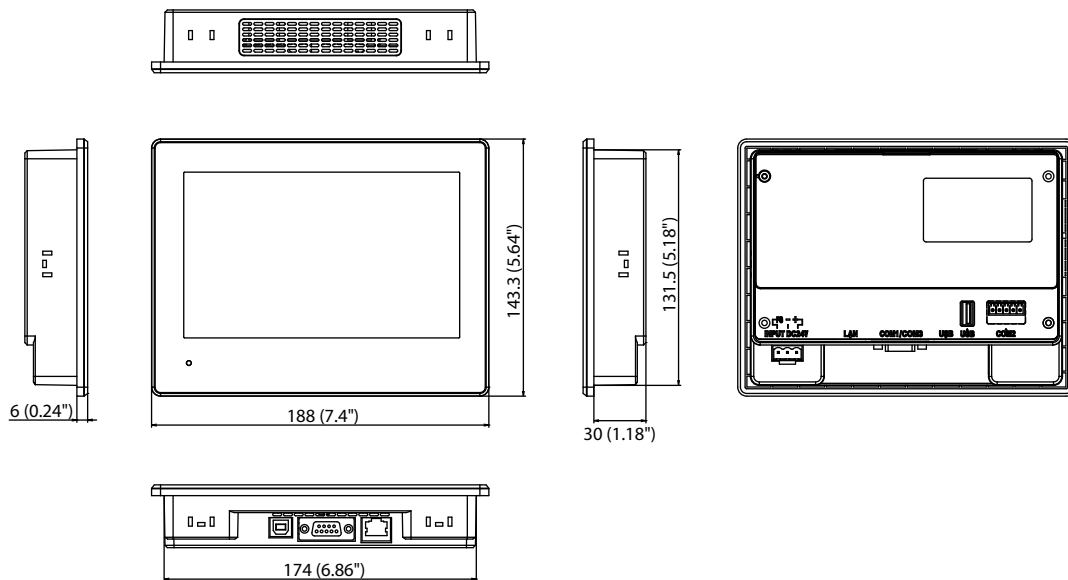- **Vibration Protection** Operating, radom vibration 1 Grms (5 ~ 500 Hz)

Ordering Information

- **WOP-2070T-S2AE** 7" WVGA, 64MB (SDRAM), 8MB (NOR)
- **WOP-2070T-N2AE** 7" WVGA, 64MB (SDRAM), 8MB (NOR) & 128MB (NAND)

ADVANTECH   Industrial Operator Panels

All product specifications are subject to change without notice.   Back to Top   Last updated: 31-Aug-2018

WebOP-2070T

Dimensions

Unit: mm

143.3 (5.64")

131.5 (5.18")

6 (0.24")

188 (7.4")

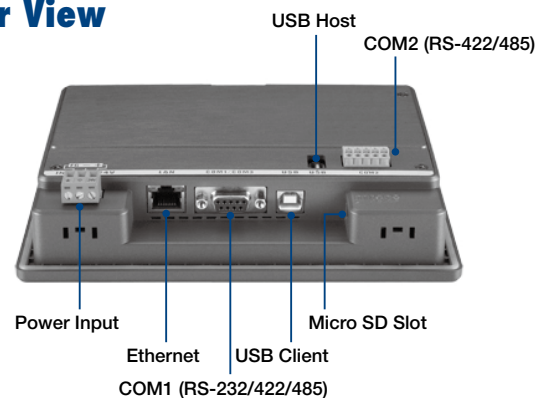30 (1.18")

174 (6.86")

Panel Cutout Dimensions: 175 x 132.5mm (6.89 x 5.21 in)

Optional Accessories

- **PWR-247-CE**   100-240V 60W 24V 2.5A Power Supply
- **1702002600**   Power Cable US Plug 1.8 M
- **1702002605**   Power Cable EU Plug 1.8 M
- **1702031801**   Power Cable UK Plug 1.8 M
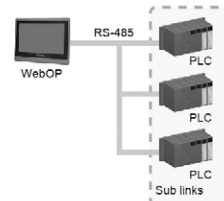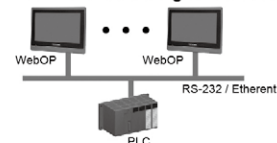- **1700000596**   Power Cable China/Australia Plug 1.8 M

Rear View

USB Host

COM2 (RS-422/485)

Power Input

Ethernet   USB Client

COM1 (RS-232/422/485)

Micro SD Slot

Communication Links

Direct Link

1-to-1 Connection

RS-232
WebOP   PLC

WebOP   Etherent   PLC

1-to-N Connection

RS-485
WebOP   PLC
PLC
PLC
Sub links

N-to-1 Data Sharing Connection

WebOP   WebOP
RS-232 / Etherent
PLC

In-Direct Link

2-to-1 Connection

WebOP   WebOP   PLC
Indirect link via 2-to-1 connection   2-to-1 server   Direct link

N-to-1 Connection

WebOP   WebOP
Etherent   Indirect Link via N-to-1 connection (Etherent)
N-to-1 master   Direct link
WebOP   PLC

2-to-1 Transparent Connection

WebOP   WebOP   PLC
2-to-1 Transparent Server
PC   WebOP   PLC
2-to-1 Transparent Server
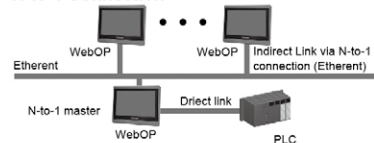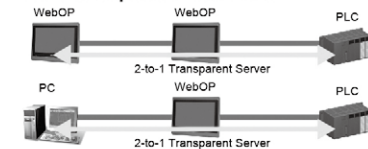
WebOP-2100T

10.1" WSVGA Operator Panel Installed with WebAccess/HMI Software

Features

- ARM9™ 32-bit, 200 MHz RISC processor with 128 MB flash memory
- Includes a RTC, battery backup RAM, and Ethernet-based operator panels
- Supports runtime data downloads through serial, Ethernet, and USB interfaces
- Supports brightness controls via touch panel
- Reliable firmware for 24/7 operation
- Supports the WebAccess/HMI Designer development tool on Windows XP/Vista/7
- Easy to run applications on screens of any screen
- Supports operation in both landscape and portrait mode
- Supports over 450 PLC industrial communication protocols
- Can communicate with up to four device types
- Panel mount design ensures easy installation
- IP66-rated front panel

Introduction

To fulfill the stringent standards of the automation market, especially for packaging, label slitting, and robot dispensing applications, Advantech developed the WebOP-2000T series for diverse operations that involve PLCs, motion/thermal controllers, inverters, and sensors. Powered by an ARM9™ 32-bit, 200 MHz RISC processor with 128 MB flash memory, the WebOP-2000T series systems are available with LCDs of varying size (from 4.3 to 10.1"). Additionally, WebOP-2000T systems are bundled with Advantech's WebAccess/HMI software – a web browser-based human-machine interface designed for HMI applications to reduce labor and improve manufacturing efficiency through visualization.

Specifications

General

- **Certification** CE, BSMI, CCC, UL, FCC Class A
- **Dimensions (W x H x D)** 269.8 x 212 x 37.4 mm (10.62 x 8.35 x1.47 in)
- **Cutout Dimensions** 259.5 x 201.5 mm 10.22 x 7.93 in)
- **Front Panel Thickness** 6 mm (0.23 in)
- **Operating System** HMI RTOS, WebOP Designer
- **Power Supply Voltage** $24V_{DC}$ ±10%
- **Power Consumption** 10W
- **Enclosure Housing** Plastic
- **Mount Options** Panel
- **Weight (Net)** 1.2 kg (2.64 lbs)

System Hardware

- **CPU** ARM9™ 32-bit, 200 MHz RISC processor
- **Battery Backup Memory** 128KB
- **Flash Memory** 8MB/ 8MB + 128M NAND flash
- **Power-On LED** Yes
- **Communication LED** No
- **Front USB Access** No

Communication Interface

- **COM1** RS-232/422/485 (DB9 Female)
- **COM2** RS-422/485 (5-pin plug connector)
- **COM3** RS-232 (COM1: Pin 5, 7, 8)
- **Ethernet (RJ45)** 10/100BASE-T (for N2AE model)
- **I/Os** 1 x USB (Client)
  1 x USB (Host)
  1 x Micro SD Slot (for N1AE model)

LCD and Touchscreen

- **Display Type** WSVGA TFT LCD
- **Display Size** 10.1"
- **Max. Resolution** 1024 x 600
- **Max. Colors** 65,536 colors
- **Luminance (cd/m²)** 250
- **Backlight Life** LED, 20,000 hr
- **Dimming** Adjustable by touch panel
- **Touchscreen** 4 wires analog resistive

Environment

- **Operating Temperature** 0 ~ 50 °C (32 ~ 122 °F)
- **Storage Temperature** -20 ~ 60 °C (-4 ~ 140 °F)
- **Humidity** 10 ~ 90% RH @ 40 °C, non-condensing
- **Ingress Protection** Front panel: IP66
- **Vibration Protection** Operating, radom vibration 1 Grms (5 ~ 500 Hz)
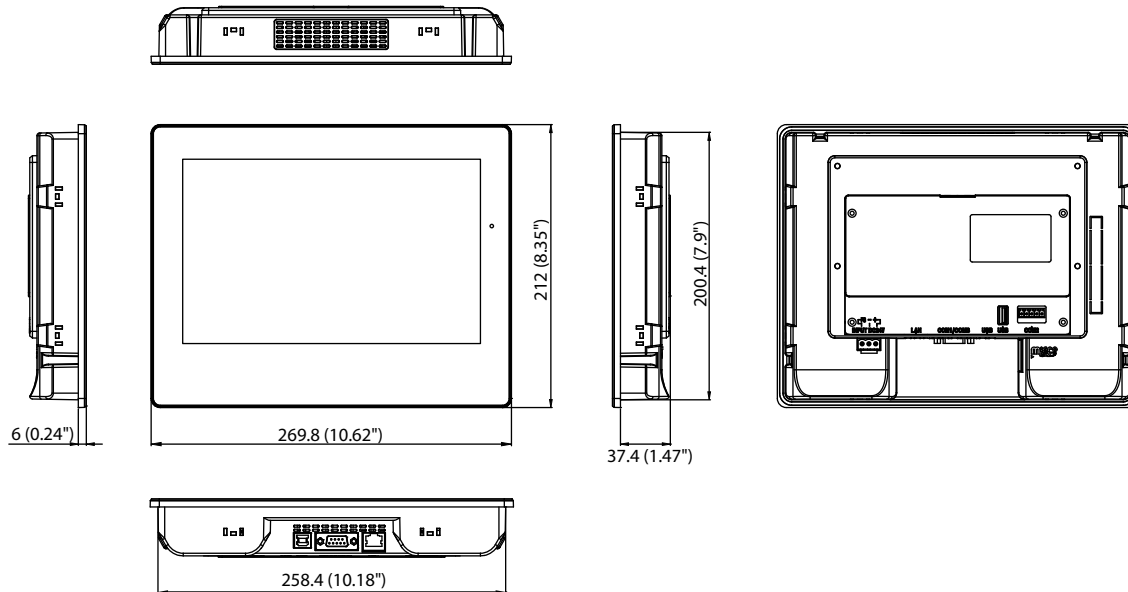
Ordering Information

- **WOP-2100T-S2AE** 10.1" WSVGA, 64MB (SDRAM), 8MB (NOR)
- **WOP-2100T-N2AE** 10.1" WSVGA, 64MB (SDRAM), 8MB (NOR) & 128MB (NAND)
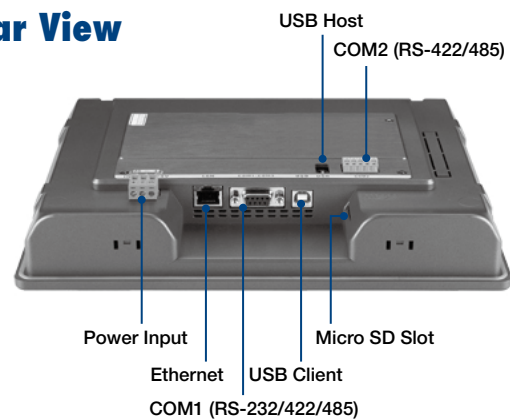
WebOP-2100T

Dimensions
Unit: mm

212 (8.35")
200.4 (7.9")
6 (0.24")
269.8 (10.62")
37.4 (1.47")
258.4 (10.18")

Panel Cutout Dimensions: 259.5 x 201.5 mm (10.22 x 7.93 in)

Optional Accessories

- **PWR-247-CE** — 100-240V 60W 24V 2.5A Power Supply
- **1702002600** — Power Cable US Plug 1.8 M
- **1702002605** — Power Cable EU Plug 1.8 M
- **1702031801** — Power Cable UK Plug 1.8 M
- **1700000596** — Power Cable China/Australia Plug 1.8 M

Rear View

USB Host
COM2 (RS-422/485)
Micro SD Slot
Power Input
Ethernet
USB Client
COM1 (RS-232/422/485)

Communication Links

Direct Link
1-to-1 Connection — RS-232, WebOP, PLC, Etherent
1-to-N Connection — RS-485, WebOP, PLC, Sub links
N-to-1 Data Sharing Connection — WebOP, RS-232 / Etherent, PLC
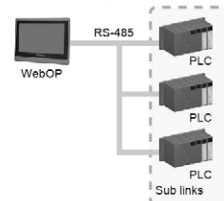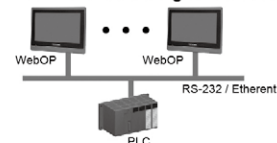
In-Direct Link
2-to-1 Connection — Indirect link via 2-to-1 connection, Direct link, 2-to-1 server
N-to-1 Connection — Etherent, Indirect Link via N-to-1 connection (Etherent), N-to-1 master, Direct link, WebOP, PLC
2-to-1 Transparent Connection — 2-to-1 Transparent Server, PC, WebOP, PLC
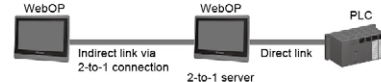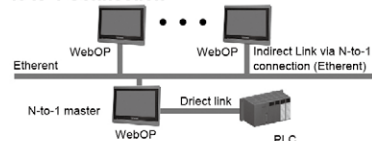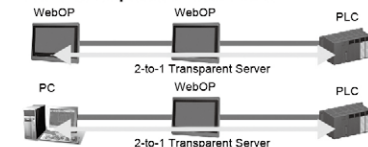
Industrial monitors

Model	FPM-7211W	FPM-7181W	FPM-7151W	FPM-7151T	FPM-7121T	FPM-7061T
Display Display Type	Full HD	WXGA	WXGA	XGA	XGA	VGA
Display Size	21.5"	18.5"	15.6"	15"	12.1"	6.5"
Max. Resolution	1920 x 1080	1366 x 768	1366 x 768	1024 x 768	1024 x 768	640 x 480
Max.Colors	16.7M	16.7M	16.7M	16.7M	16.2M	16.2M
Luminance cd/m^2	300	300	300	400	600	800
Viewing Angle (H/V°)	178/178	170/160	170/160	160/140	160/140	160/140
Backlight MTBF	50,000 hr	50,000 hr	50,000 hr	50,000 hr	50,000 hr	50,000 hr
Video Port	VGA/DVI-D	VGA/DVI-D	VGA/DVI-D	VGA/DP	VGA/DP	VGA/DP
Touchscreen	Combo	Combo	Combo	Combo	Combo	USB
OSD (onscreen display)	Rear panel control buttons, lockable	Rear panel control buttons, lockable	Rear panel control buttons, lockable	Rear panel control buttons, lockable	Rear panel control buttons, lockable	Rear panel control buttons, lockable
Power Input Voltage	100 ~ 240 V (Optional adapter)	100 ~ 240 V (Optional adapter)	100 ~ 240 V (Optional adapter)	100 ~ 240 V (Optional adapter)	100 ~ 240 V (Optional adapter)	100 ~ 240 V (Optional adapter)
DC Power Input(voltage)	24 V	24 V	24 V	24 V	24 V	24 V
Operating Temperature	0 ~ 55°C	0 ~ 55°C	0 ~ 55°C	-20 ~ 60°C	-20 ~ 60°C	-20 ~ 60°C
Storage Temperature	-20 ~ 60°C	-20 ~ 60°C	-20 ~ 60°C	-30 ~ 70°C	-30 ~ 70°C	-30 ~ 70°C
Dimensions	558.4 x 349.8 x 47.7 mm	488 x 309 x 47.7 mm	419.7 x 269 x 47.7 mm	383.2 x 307.3 x 48.2 mm	311.8 x 238 x 44.5 mm	199 x 152 x 46.1 mm
Cut-out Dimensions	550.3 x 341.8 mm	479.3 x 300.3 mm	412.4 x 261.7 mm	374.5 x 298.5 mm	303 x 229 mm	189.1 x 142.1 mm
Weight	8 kg	6 kg	5 kg	4.2 kg	2.6 kg	1.2 kg
Certifications	BSMI, CCC, CE, FCC Class A, UL	BSMI, CCC, CE, FCC Class A, UL	BSMI, CCC, CE, FCC Class A, UL	BSMI, CCC, CE, FCC Class A, UL	BSMI, CCC, CE, FCC Class A, UL	BSMI, CCC, CE, FCC Class A, UL
Operating System	Windows XP/ Vista/7/8/10/XPE, Linux	Windows XP/ Vista/7/8/10/XPE, Linux	Windows XP/ Vista/7/8/10/XPE, Linux	Windows XP/ Vista/7/8/10/XPE, Linux	Windows XP/ Vista/7/8/10/XPE, Linux	Windows XP/ Vista/7/8/10/XPE, Linux

Industrial monitors

Model		FPM-5191G	FPM-5171G	FPM-5151G	FPM-2170G	FPM-2150G	FPM-2120G
Display	Display Type	SXGA	SXGA	XGA	SXGA	XGA	SVGA
	Display Size	19"	17"	15"	17"	15"	12"
	Max. Resolution	1280 x 1024	1280 x 1024	1024 x 768	1280 x 1024	1024 x 768	800 x 600
	Max.Colors	16.7M	16.7M	16.2M	16.7M	16.2M	16.2M
	Luminance cd/m^2	350	350	400	350	400	450
	Viewing Angle (H/V°)	170/160	160/140	160/140	160/140	160/140	160/140
	Backlight MTBF	50,000 hr	50,000 hr	50,000 hr	50,000 hr	50,000 hr	50,000 hr
Video Port		VGA/DVI	VGA/DVI	VGA/DVI	VGA	VGA	VGA
Touchscreen		Combo	Combo	Combo	Combo	Combo	Combo
OSD (onscreen display)		Rear panel control buttons, lockable	Rear panel control buttons, lockable	Rear panel control buttons, lockable	Rear panel control buttons, lockable	Rear panel control buttons, lockable	Rear panel control buttons, lockable
Power Input Voltage		100 ~ 240 V (Optional adapter)	100 ~ 240 V (Optional adapter)	100 ~ 240 V (Optional adapter)	100 ~ 240 V (Adapter)	100 ~ 240 V (Adapter)	100 ~ 240 V (Adapter)
DC Power Input		10 ~ 30 V	10 ~ 30 V	10 ~ 30 V	12 V	12 V	12 V
Operating Temperature		0 ~ 50°C	0 ~ 50°C	0 ~ 50°C	0 ~ 50°C	0 ~ 50°C	0 ~ 50°C
Storage Temperature		-20 ~ 60°C	-20 ~ 60°C	-20 ~ 60°C	-20 ~ 60°C	-20 ~ 60°C	-20 ~ 60°C
Dimensions		481.93 x 384.6 x 59 mm	481.9 x 355.9 x 55 mm	449.92 x 315.63 x 50.5 mm	413.72 x 347.22 x 52.13 mm	383 x 307 x 48.13 mm	311 x 237 x 40.63 mm
Cut-out Dimensions		454 x 338 mm	454 x 338 mm	424 x 293 mm	400.92 x 334.42 mm	374.5 x 298.5 mm	303 x 229 mm
Weight		8.5 kg	7 kg	6 kg	5.6 kg	4.5 kg	4 kg
Certifications		BSMI, CCC, CE, FCC Class A, UL	BSMI, CCC, CE, FCC Class A, UL	BSMI, CCC, CE, FCC Class A, UL	BSMI, CCC, CE, FCC, UL	BSMI, CCC, CE, FCC, UL	BSMI, CCC, CE, FCC, UL
Operating System		Windows XP/Vista/7/8/10/XPE, Linux	Windows XP/Vista/7/8/10/XPE, Linux	Windows XP/Vista/7/8/10/XPE, Linux	Windows XP/Vista/7/8/10/XPE, Linux	Windows XP/Vista/7/8/10/XPE, Linux	Windows XP/Vista/7/8/10/XPE, Linux

Industrial monitors

Model	FPM-3191G	FPM-3171G	FPM-3151G	FPM-3121G
Display Display Type	SXGA	SXGA	XGA	XGA
Display Size	19"	17"	15"	12.1"
Max. Resolution	1280 x 1024	1280 x 1024	1024 x 768	1024 x 768
Max.Colors	16.7M	16.7M	16.2M	16.2M
Luminance cd/m²	350	350	350	600
Viewing Angle (H/V°)	170/160	160/140	160/140	160/140
Backlight MTBF	50,000 hr	50,000 hr	50,000 hr	50,000 hr
Video Port	VGA/DVI	VGA/DVI	VGA/DVI	VGA/DVI
Touchscreen	Combo	Combo	Combo	Combo
OSD (onscreen display)	Front panel control buttons	Front panel control buttons	Front panel control buttons	Front panel control buttons
Power Input Voltage	100 ~ 240 V (Optional adapter)	100 ~ 240 V (Optional adapter)	100 ~ 240 V (Optional adapter)	100 ~ 240 V (Optional adapter)
DC Power Input	10 ~ 30 V	10 ~ 30 V	10 ~ 30 V	10 ~ 30 V
Operating Temperature	-20 ~ 60°C	-20 ~ 60°C	-20 ~ 60°C	-20 ~ 60°C
Storage Temperature	-30 ~ 80°C	-30 ~ 80°C	-30 ~ 80°C	-30 ~ 80°C
Dimensions	482 x 399.2 x 67 mm	482 x 354.8 x 63.5 mm	312 x 224 x 60 mm	312 x 224 x 60 mm
Cut-out Dimensions	441 x 376.4 mm	447.2 x 329.2 mm	303.5 x 229.5 mm	303.5 x 229.5 mm
Weight	10.65 kg	9.25 kg	7.73 kg	4.07 kg
Certifications	CE, FCC Class A, BSMI, CCC, UL	CE, FCC Class A, BSMI, CCC, UL	CE, FCC Class A, BSMI, CCC, UL	CE, FCC Class A, BSMI, CCC, UL
Operating System	Windows XP/Vista/7/8/10/XPE, Linux	Windows XP/Vista/7/8/10/XPE, Linux	Windows XP/Vista/7/8/10/XPE, Linux	Windows XP/Vista/7/8/10/XPE, Linux

FPM-7211W

21.5" Full HD Industrial Monitor with PCAP Touch Control, Direct VGA, and DVI Ports

Features

- 21.5" Full HD TFT LED LCD
- 16:9 widescreen aspect ratio, increases viewing area by 40%
- Supports 10-point multi-touch control via USB interface in Windows 7/8 OS
- Slim design enables easy installation
- Supports various mount options: panel, wall, desktop, and VESA arm
- Touchscreen with reliable glass surface and PCAP touch control
- Robust system with SECC chassis and IP66-rated magnesium alloy front panel
- OSD control buttons on rear panel
- Lockable I/O connectors

Introduction

The FPM-7211W is an industrial-grade, widescreen monitor with sleek, simple lines and a true-flat touchscreen. Equipped with PCAP 10-point multi-touch control and an IP66-rated front bezel, FPM-7211W is designed for intuitive operation in harsh industrial environments. Moreover, FPM-7211W supports a range of mount options to ensure easy, single-person installation.

Specifications

General

- **OSD Controls**   OSD control buttons on rear panel
- **Certification**   BSMI, CCC, CE, FCC Class A, UL
- **Dimensions (W x H x D)**   558.4 x 349.8 x 47.7 mm (21.98 x 13.77 x 1.88 in)
- **Enclosure**   Front panel: Die cast magnesium alloy
  Rear cover: SECC
- **Mount Options**   Panel, wall, desktop, VESA (MIS,100,C)
- **Power Input**   Phoenix Jack: 24 V_{DC} input
- **Power Consumption**   25 W + 20%
- **Video Port**   VGA & DVI-D port
- **Weight (Net)**   8 kg (17.6 lb)

LCD Display

- **Display Type**   Full HD TFT LED LCD
- **Display Size**   21.5"
- **Max. Resolution**   1920 x 1080
- **Max. Color**   16.7M
- **Viewing Angle (H/V °)**   178/178
- **Luminance (cd/m²)**   300
- **Backlight Life**   50,000 hr
- **Contrast Ratio**   5000:1

Touchscreen

- **Type**   Projected capacitive touch
- **Interface**   RS-232 and USB
- **Light Transmission**   Above 75%
- **OS Support**   Windows XP, Vista,7, 8,10,XPe and Linux
- **Multi Touch**   10 points, USB interface in Win 7/8.
- **Hardness**   >6H

Environment

- **Operating Temperature**   0 ~ 55 °C (32 ~ 131 °F)
- **Storage Temperature**   -20 ~ 60 °C (-4 ~ 140 °F)
- **Humidity (Storage)**   10 ~ 90% non-condensing
- **IP Rating**   Front panel is IP66 compliant
- **Vibration**   5 ~ 500 Hz, 1 Grms (Operating, Random)

Ordering Information

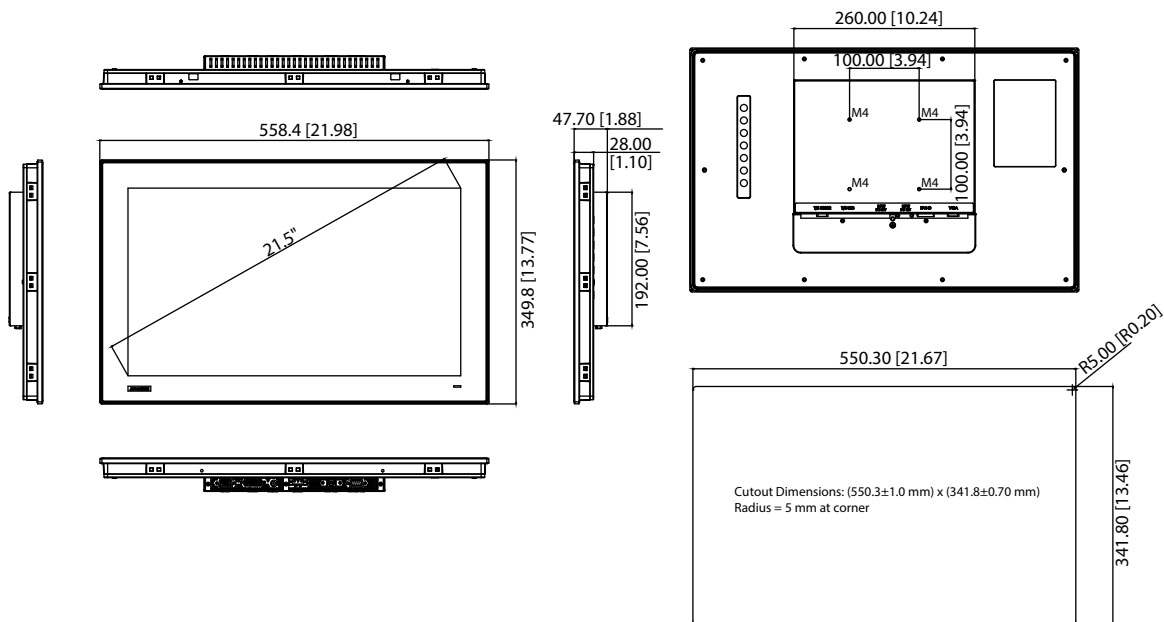- **FPM-7211W-P3AE**   21.5" Full HD Ind Monitor w/PCT TS (RS-232, USB)

Optional Accessories

- **1702002600**   Power Cable US Plug 1.8 M
- **1702002605**   Power Cable EU Plug 1.8 M
- **1702031801**   Power Cable UK Plug 1.8 M
- **1700000596-11**   Power Cable China/Australia Plug 1.8 M
- **FPM-1000T-SMKE**   Desktop/Wall Mounting kit for FPM series
- **96PSA-A60W24T2**   Adapter 100-240V 60W 24V 2.5A

Dimensions

Unit: mm [inch]

260.00 [10.24]
100.00 [3.94]
M4 M4
M4 M4
100.00 [3.94]

558.4 [21.98]
21.5"
349.8 [13.77]

47.70 [1.88]
28.00 [1.10]
192.00 [7.56]

R5.00 [R0.20]
550.30 [21.67]
341.80 [13.46]

Cutout Dimensions: (550.3±1.0 mm) x (341.8±0.70 mm)
Radius = 5 mm at corner

Panel Cutout Dimensions: 550.30 x 341.8 mm (21.67 x 13.46 in)

Easy Installation

Snap hook in rear cover

Stopper screw in rear cover

Rear View

Easy Installation: Snap hook x2

Easy Installation: Snap hook
TS Interface - RS232 Port
TS Interface - USB Port
$24V_{DC}$ Power Input with Phoenix Jack
$12V_{DC}$ Power Input with DC Jack
DVI Port
VGA Port
Easy Installation: Snap hook

ADVANTECH | Industrial Monitors
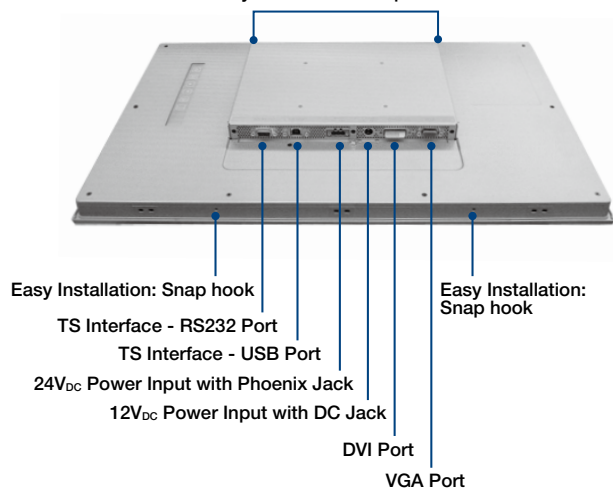
FPM-7181W

18.5" WXGA Industrial Monitor with PCAP Touch Control, Direct VGA, and DVI Ports

1
Software and Industry Solutions

2
Industrial Server

3
Intelligent System

4
Intelligent HMI and Monitors

5
Automation Computers and Controllers

6
Industrial Communication

7
Remote I/O Modules

8
Industrial I/O and Video Solutions

Features

- 18.5" WXGA TFT LED LCD
- 16:9 widescreen aspect ratio, increases viewing area by 40%
- Supports 10-point multi-touch control via USB interface in Windows 7/8 OS
- Slim design enables easy installation
- Supports various mount options: panel, wall, desktop, and VESA arm
- Touchscreen with reliable glass surface and PCAP touch control
- Robust system with SECC chassis and IP66-rated magnesium alloy front panel
- OSD control buttons on rear panel
- Lockable I/O connectors

Introduction

The FPM-7181W is an industrial-grade, widescreen monitor with sleek, simple lines and a true-flat touchscreen. Equipped with PCAP 10-point multi-touch control and an IP66-rated front bezel, FPM-7181W is designed for intuitive operation in harsh industrial environments. Moreover, FPM-7181W supports a range of mount options to ensure easy, single-person installation.

Specifications

General

- **OSD Controls** — OSD control buttons on rear panel
- **Certification** — BSMI, CCC, CE, FCC Class A, UL
- **Dimensions (W x H x D)** — 488 x 309 x 47.7 mm (19.21 x 12.17 x 1.88 in)
- **Enclosure** — Front panel: Die cast magnesium alloy / Rear cover: SECC
- **Mount Options** — Panel, wall, desktop, VESA (MIS,100,C)
- **Power Input** — Phoenix Jack: 24 V_{DC} input
- **Power Consumption** — 20 W + 20%
- **Video Port** — VGA & DVI-D port
- **Weight (Net)** — 6 kg (13.2 lb)

LCD Display

- **Display Type** — WXGA TFT LED LCD
- **Display Size** — 18.5"
- **Max. Resolution** — 1366 x 768
- **Max. Color** — 16.7M
- **Viewing Angle (H/V °)** — 170/160
- **Luminance (cd/m²)** — 300
- **Backlight Life** — 50,000 hr
- **Contrast Ratio** — 1000:1

Touchscreen

- **Type** — Projected capacitive touch
- **Interface** — RS-232 and USB
- **Light Transmission** — Above 75%
- **OS Support** — Windows XP, Vista,7, 8,10,XPe and Linux
- **Multi Touch** — 10 points, USB interface in Win 7/8.
- **Hardness** — 7H

Environment

- **Operating Temperature** — 0 ~ 55 °C (32 ~ 131 °F)
- **Storage Temperature** — -20 ~ 60 °C (-4 ~ 140 °F)
- **Humidity (Storage)** — 10 ~ 90% non-condensing
- **IP Rating** — Front panel is IP66 compliant
- **Vibration** — 5 ~ 500 Hz, 1 Grms (Operating, Random)

Ordering Information

- **FPM-7181W-P3AE** — 18.5" WXGA Ind Monitor w/PCT TS (RS-232, USB)

Optional Accessories

- **1702002600** — Power Cable US Plug 1.8 M
- **1702002605** — Power Cable EU Plug 1.8 M
- **1702031801** — Power Cable UK Plug 1.8 M
- **1700000596-11** — Power Cable China/Australia Plug 1.8 M
- **FPM-1000T-SMKE** — Desktop/Wall Mounting kit for FPM series
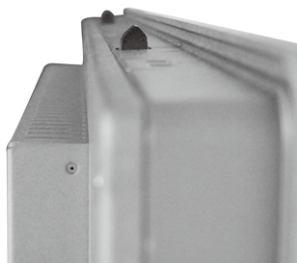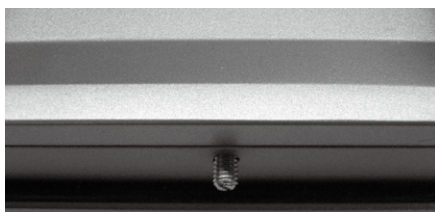- **96PSA-A60W24T2** — Adapter 100-240V 60W 24V 2.5A

All product specifications are subject to change without notice.   ▲ Back to Top   Last updated: 31-Aug-2018

Dimensions

Unit: mm [inch]

260.00 [10.24]

100.00 [3.94]

M4   M4

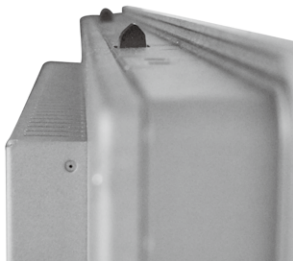100.00 [3.94]

M4   M4

488.00 [19.21]

47.70 [1.88]

28.00 [1.10]

18.5"

309.00 [12.17]

192.00 [7.56]

479.30 [18.87]

R5.00 [R0.20]

Cutout Dimensions: (479.3±1.0 mm) x (300.3±0.70 mm)
Radius = 5 mm at corner

300.30 [11.82]
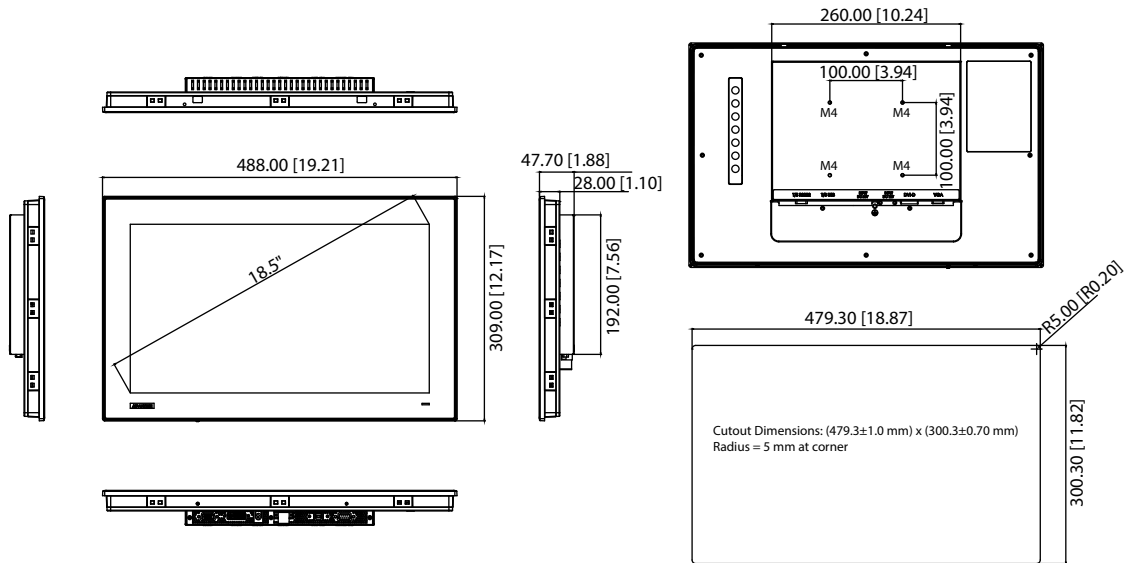
Panel Cutout Dimensions: 479.30 x 300.30 mm (18.87 x 11.82 in)

Easy Installation

Snap hook in rear cover

Stopper screw in rear cover

Rear View

Easy Installation: 2 x Snap hooks

Easy Installation: Snap hook

TS Interface - RS232 Port

TS Interface - USB Port

24V_{DC} Power Input with Phoenix Jack

12V_{DC} Power Input with DC Jack

DVI Port

VGA Port

Easy Installation: Snap hook

ADVANTECH   **Industrial Monitors**
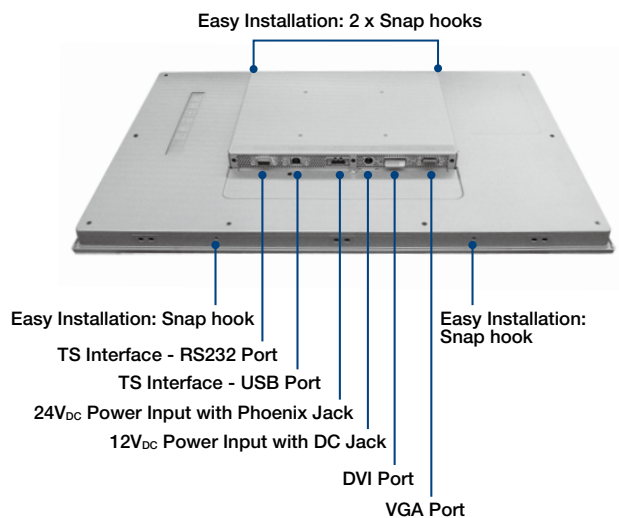
FPM-7151W

15.6" WXGA Industrial Monitor with PCAP Touch Control, Direct VGA, and DVI Ports

Features

- 15.6" WXGA TFT LED LCD with true-flat touchscreen
- 16:9 widescreen aspect ratio, increases viewing area by 40%
- Supports 10-point multi-touch control via USB interface in Windows 7/8 OS
- Slim design enables easy installation
- Supports various mount options: panel, wall, desktop, and VESA arm
- Touchscreen with reliable glass surface and PCAP touch control
- Robust system with SECC chassis and IP66-rated magnesium alloy front panel
- OSD control buttons on rear panel
- Lockable I/O connectors

Introduction

The FPM-7151W is an industrial-grade, widescreen monitor with sleek, simple lines and a true-flat touchscreen. Equipped with PCAP 10-point multi-touch control and an IP66-rated front bezel, FPM-7151W is designed for intuitive operation in harsh industrial environments. Moreover, FPM-7151W supports a range of mount options to ensure easy, single-person installation.

Specifications

General

- **OSD Controls**   OSD control buttons on rear panel
- **Certification**   BSMI, CCC, CE, FCC Class A, UL
- **Dimensions (W x H x D)** 419.7 x 269 x 47.7 mm (16.52 x 10.59 x 1.88 in)
- **Enclosure**   Front panel: Die cast magnesium alloy
                            Rear cover: SECC
- **Mount Options**   Panel, wall, desktop, VESA (MIS,100,C)
- **Power Input**   Phoenix Jack: 24 V_{DC} input
- **Power Consumption**   20 W + 20%
- **Video Port**   VGA & DVI-D or VGA & HDMI
- **Weight (Net)**   5 kg (11 lb)

LCD Display

- **Display Type**   WXGA TFT LED LCD
- **Display Size**   15.6"
- **Max. Resolution**   1366 x 768
- **Max. Color**   16.7M
- **Viewing Angle (H/V °)**   170/160
- **Luminance (cd/m²)**   300
- **Backlight Life**   50,000 hr
- **Contrast Ratio**   500:1

Touchscreen

- **Type**   Projected capacitive touch
- **Interface**   RS-232 and USB
- **Light Transmission**   Above 75%
- **OS Support**   Windows XP, Vista,7, 8,10,XPe and Linux
- **Multi Touch**   10 points, USB interface in Win 7/8.
- **Hardness**   7H

Environment

- **Operating Temperature** 0 ~ 55 °C (32 ~ 131 °F)
- **Storage Temperature** -20 ~ 60 °C (-4 ~ 140 °F)
- **Humidity (Storage)** 10 ~ 90% non-condensing
- **IP Rating**   Front panel is IP66 compliant
- **Vibration**   5 ~ 500 Hz, 1 Grms (Operating, Random)
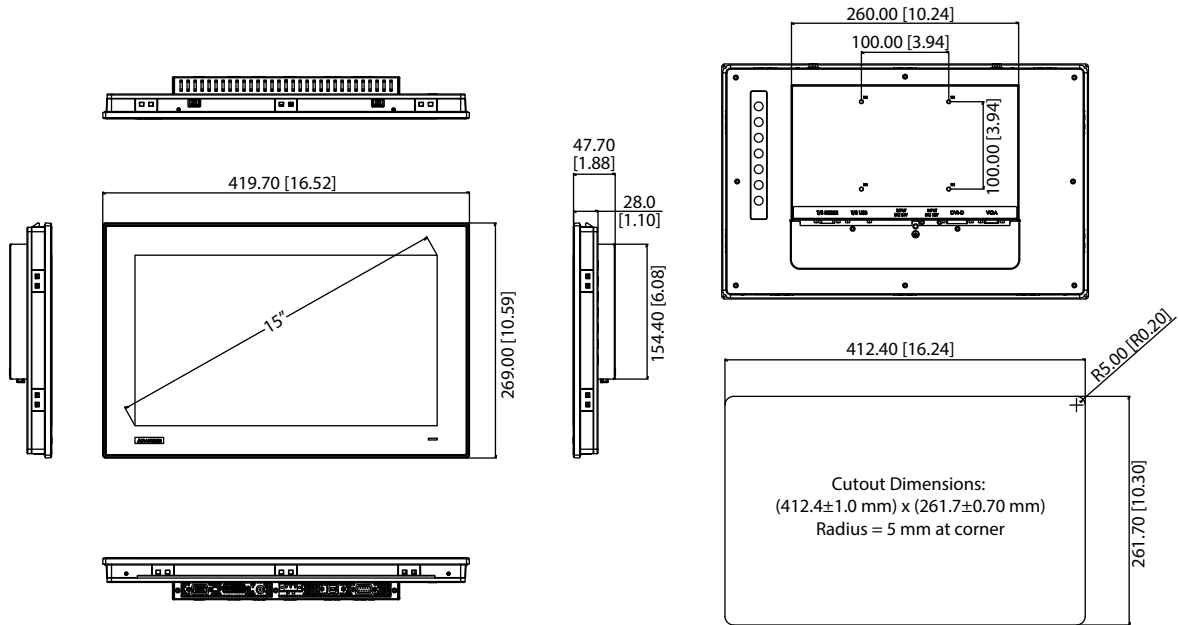
Ordering Information

- **FPM-7151W-P3AE**   15.6" WXGA Ind Monitor w/PCT TS (VGA/DVI)

Optional Accessories

- **1702002600**   Power Cable US Plug 1.8 M
- **1702002605**   Power Cable EU Plug 1.8 M
- **1702031801**   Power Cable UK Plug 1.8 M
- **1700000596-11**   Power Cable China/Australia Plug 1.8 M
- **FPM-1000T-SMKE**   Desktop/Wall Mounting kit for FPM series
- **96PSA-A60W24T2**   Adapter 100-240V 60W 24V 2.5A
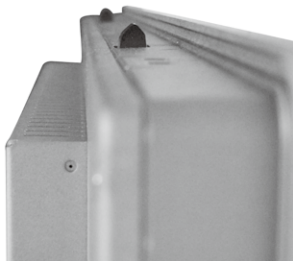
All product specifications are subject to change without notice.   ▲ Back to Top   Last updated: 31-Aug-2018

Dimensions

Unit: mm [inch]

260.00 [10.24]
100.00 [3.94]
100.00 [3.94]

419.70 [16.52]
269.00 [10.59]
15"

47.70 [1.88]
28.0 [1.10]
154.40 [6.08]

412.40 [16.24]
R5.00 [R0.20]
261.70 [10.30]

Cutout Dimensions:
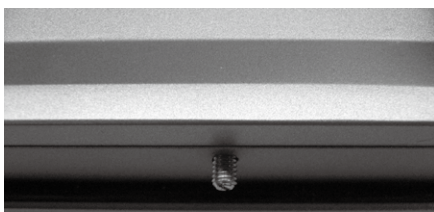(412.4±1.0 mm) x (261.7±0.70 mm)
Radius = 5 mm at corner

Panel Cutout Dimensions: 412.40 x 261.70 mm (16.24 x 10.30 in)

Easy Installation

Snap hook in rear cover

Stopper screw in rear cover

Rear View

Easy Installation: 2 x Snap hook

Easy Installation: Snap hook

TS Interface - RS232 Port

TS Interface - USB Port

$24V_{DC}$ Power Input with Phoenix Connector

$12V_{DC}$ Power Input with DC Jack

DVI or HDMI port

VGA Port

Easy Installation: Snap hook

ADVANTECH   Industrial Monitors
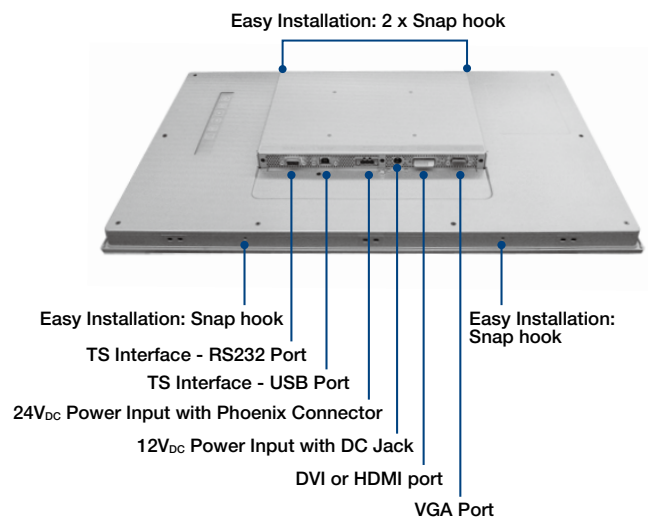
FPM-7151T

15" XGA Industrial Monitor with Resistive Touch Control, Direct VGA/DP, and Wide Operating Temperature Range

Features

- 15" XGA TFT LED LCD with 50K backlight lifetime
- Robust system with IP66-rated aluminum front panel
- Wide operating temperature range (-20 ~ 60 °C/-4 ~ 140 °F)
- Anti-glare touchscreen with tempered glass
- Supports various mount options: panel, wall, desktop, and VESA arm
- Combo RS-232+USB interface for touchscreen functionality
- OSD control buttons on rear panel
- Lockable I/O connectors

Introduction

FPM-7000T series monitors are the first, true-flat, 4:3, industrial-grade monitors. The 5-wire resistive touchscreen is enclosed in a highly durable, die cast aluminum alloy front bezel that provides IP66-rated protection from water and dust ingress. Additionally, the FPM-7000T series monitors support a wide operating temperature range (-20 ~ 60 °C/-4 ~ 140 °F) and various mount options to ensure easy installation and support for diverse environments.

Specifications

General

- **OSD Controls**   OSD control buttons on rear panel
- **Certification**   BSMI, CCC, CE, FCC Class A, UL
- **Dimensions (W x H x D)**   383.2 x 307.3 x 48.2 mm (15.09 x 12.10 x 1.90 in)
- **Enclosure**   Front panel: Die cast magnesium alloy / Rear cover: SECC
- **Mount Options**   Stand, Wall, Panel and VESA 75 x 75 & 100 x 100mm
- **Power Input**   Phoenix Jack: 24 V$_{DC}$ input
- **Power Consumption**   15 W + 20%
- **Video Port**   VGA & DP
- **Weight (Net)**   4.2 kg (9.26 lb)

LCD Display

- **Display Type**   XGA TFT LED LCD
- **Display Size**   15"
- **Max. Resolution**   1024 x 768
- **Max. Color**   16.7M
- **Viewing Angle (H/V °)**   160/140
- **Luminance (cd/m²)**   400
- **Backlight Life**   50,000 hr
- **Contrast Ratio**   700 :1

Touchscreen

- **Type**   5-wire analog resistive
- **Interface**   RS-232 and USB
- **Light Transmission**   Above 75%
- **OS Support**   Windows XP, Vista,7, 8,10,XPe and Linux
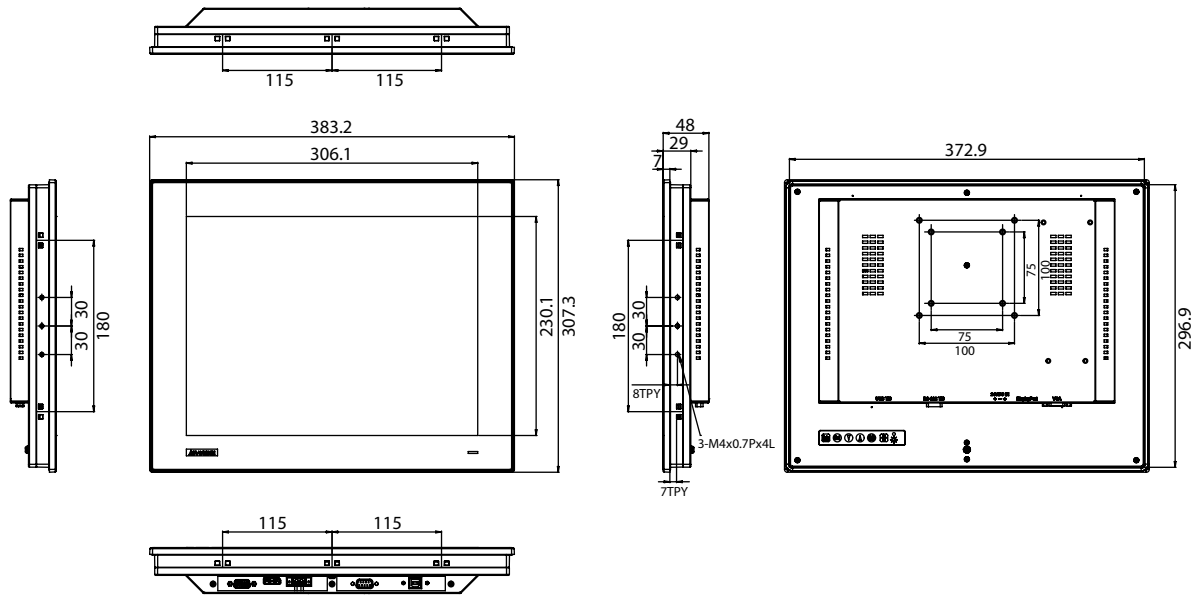
Environment

- **Operating Temperature**   -20 ~ 60 °C (-4 ~ 140 °F)
- **Storage Temperature**   -30 ~ 70 °C (-22 ~ 158 °F)
- **Humidity (Storage)**   10 ~ 90% non-condensing
- **IP Rating**   Front panel is IP66 compliant
- **Vibration**   5 ~ 500 Hz, 1 Grms (Operating, Random)

Dimensions

Unit: mm

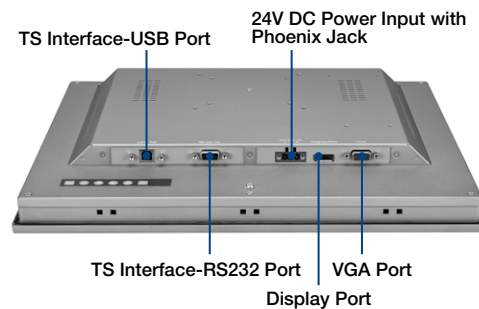**Panel Cutout Dimensions: 374.5 x 298.5 mm (14.74 x 11.75 in)**

Ordering Information

- **FPM-7151T-R3AE**   15" XGA Ind Monitor w/Resistive TS (VGA/DP)

Optional Accessories

- **1702002600**   Power Cable US Plug 1.8 M
- **1702002605**   Power Cable EU Plug 1.8 M
- **1702031801**   Power Cable UK Plug 1.8 M
- **1700000596-11**   Power Cable China/Australia Plug 1.8 M
- **96PSA-A60W24T2**   Adapter 100-240V 60W 24V 2.5A
- **FPM-7000G-ADKE**   Mounting bracket of adapter for FPM-7000
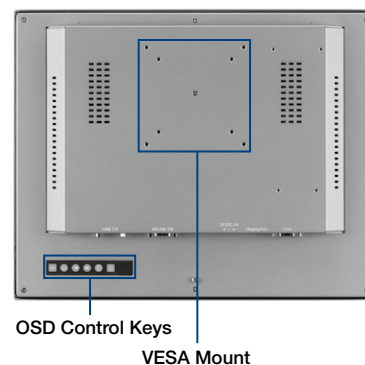- **FPM-1000T-SMKE**   Stand/Wall Mount Kit

I/O View

TS Interface-USB Port

24V DC Power Input with Phoenix Jack

TS Interface-RS232 Port

VGA Port

Display Port

Front View

Rear View

OSD Control Keys

VESA Mount

FPM-7121T

12.1" XGA Industrial Monitor with Resistive Touch Control, Direct VGA/DP, and Wide Operating Temperature Range

Features

- 12.1" XGA TFT LED LCD with 50K backlight lifetime
- Robust system with IP66-rated aluminum front panel
- Wide operating temperature range (-20 ~ 60 °C/-4 ~ 140 °F)
- Anti-glare touchscreen with tempered glass
- Supports various mount options: panel, wall, desktop, and VESA arm
- Combo RS-232+USB interface for touchscreen functionality
- OSD control buttons on rear panel
- Lockable I/O connectors

LISTED E180BB1 LTE.   R33138   CE   FCC

Introduction

FPM-7000T series monitors are the first, true-flat, 4:3, industrial-grade monitors. The 5-wire resistive touchscreen is enclosed in a highly durable, die cast aluminum alloy front bezel that provides IP66-rated protection from water and dust ingress. Additionally, the FPM-7000T series monitors support a wide operating temperature range (-20 ~ 60 °C/-4 ~ 140 °F) and various mount options to ensure easy installation and support for diverse environments.

Specifications

General

- **OSD Controls** — OSD control buttons on rear panel
- **Certification** — BSMI, CCC, CE, FCC Class A, UL
- **Dimensions (W x H x D)** — 311.8 x 238 x 44.5 mm (12.28 x 9.37 x 1.76 in)
- **Enclosure** — Front panel: Die cast magnesium alloy / Rear cover: SECC
- **Mount Options** — Stand, Wall, Panel and VESA 75x75 & 100x100mm
- **Power Input** — Phoenix Jack: 24 V_{DC} input
- **Power Consumption** — 15 W + 20%
- **Video Port** — VGA & DP
- **Weight (Net)** — 2.6 kg (5.73 lb)

LCD Display

- **Display Type** — XGA TFT LED LCD
- **Display Size** — 12.1"
- **Max. Resolution** — 1024 x 768
- **Max. Color** — 16.2M
- **Viewing Angle (H/V °)** — 160/140
- **Luminance (cd/m²)** — 600
- **Backlight Life** — 50,000 hr
- **Contrast Ratio** — 700 :1

Touchscreen

- **Type** — 5-wire, analog resistive
- **Interface** — RS-232 and USB
- **Light Transmission** — Above 75%
- **OS Support** — Windows XP, Vista,7, 8,10,XPe and Linux
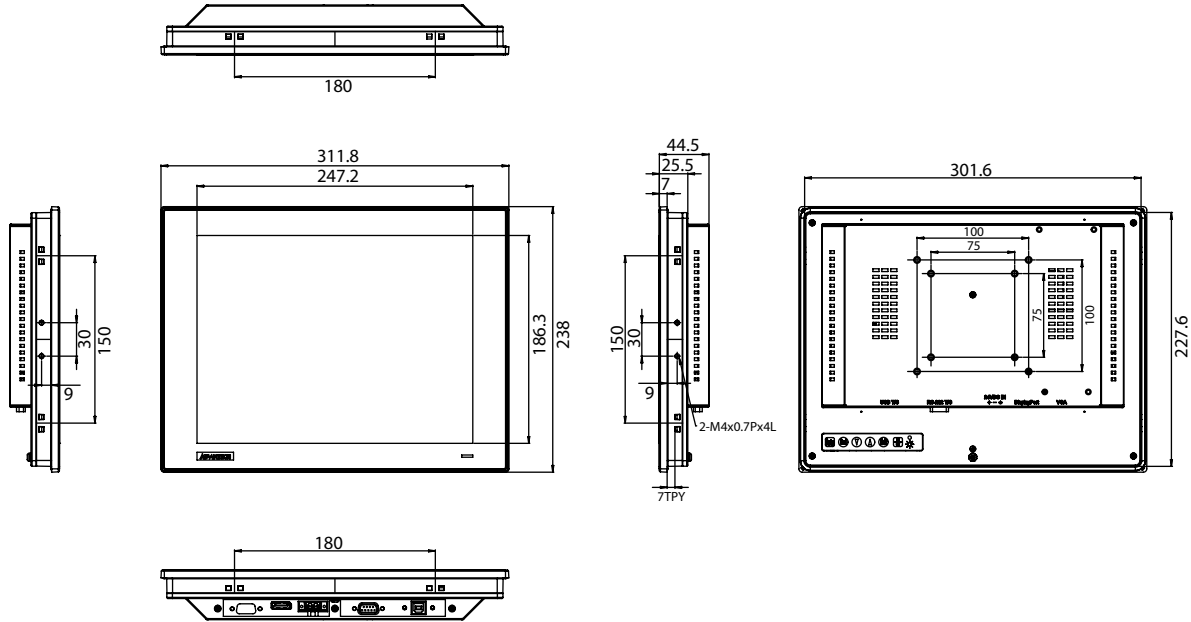
Environment

- **Operating Temperature** — -20 ~ 60 °C (-4 ~ 140 °F)
- **Storage Temperature** — -30 ~ 70 °C (-22 ~ 158 °F)
- **Humidity (Storage)** — 10 ~ 90% non-condensing
- **IP Rating** — Front panel is IP66 compliant
- **Vibration** — 5 ~ 500 Hz, 1 Grms (Operating, Random)

FPM-7121T

Dimensions
Unit: mm

180

311.8
247.2

186.3
238

150
30
9

44.5
25.5
7

150
30
9

2-M4x0.7Px4L

7TPY

301.6

100
75

75
100

227.6

180

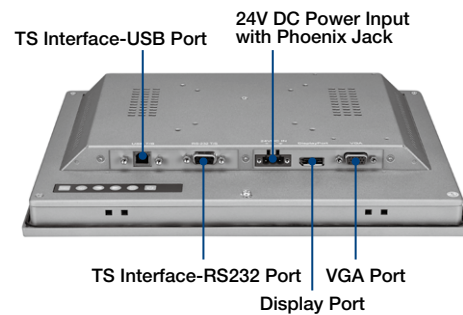**Panel Cutout Dimensions: 303 x 229 mm (11.93 x 9.02 in)**

Ordering Information
- **FPM-7121T-R3AE**   12.1" XGA Ind Monitor w/Resistive TS (VGA/DP)

Optional Accessories
- **1702002600**   Power Cable US Plug 1.8 M
- **1702002605**   Power Cable EU Plug 1.8 M
- **1702031801**   Power Cable UK Plug 1.8 M
- **1700000596-11**   Power Cable China/Australia Plug 1.8 M
- **96PSA-A60W24T2**   Adapter 100-240V 60W 24V 2.5A
- **FPM-7000G-ADKE**   Mounting bracket of adapter for FPM-7000
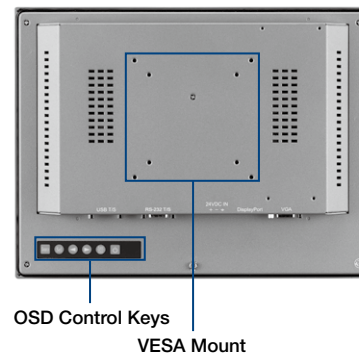- **FPM-1000T-SMKE**   Stand/Wall Mount Kit

I/O View

TS Interface-USB Port

24V DC Power Input with Phoenix Jack

TS Interface-RS232 Port   VGA Port

Display Port

Front View

Rear View

OSD Control Keys

VESA Mount

FPM-7061T

6.5" VGA Industrial Monitor with Resistive Touch Control, Direct VGA/DP, and Wide Operating Temperature

Features

- 6.5" VGA TFT LED LCD with 50K backlight lifetime
- Robust system with IP66-rated aluminum front panel
- Wide operating temperature range (-20 ~ 60 °C/-4 ~ 140 °F)
- Anti-glare touchscreen with tempered glass
- Supports various mount options: panel, wall, desktop, and VESA arm
- USB interface for touchscreen functionality
- OSD control buttons on rear panel
- Lockable I/O connectors

Introduction

FPM-7000T series monitors are the first, true-flat, 4:3, industrial-grade monitors. The 5-wire resistive touchscreen is enclosed in a highly durable, die cast aluminum alloy front bezel that provides IP66-rated protection from water and dust ingress. Additionally, the FPM-7000T series monitors support a wide operating temperature range (-20 ~ 60 °C/-4 ~ 140 °F) and various mount options to ensure easy installation and support for diverse environments.

Specifications

General

- **OSD Controls**   OSD control buttons on rear panel
- **Certification**   BSMI, CCC, CE, FCC Class A, UL
- **Dimensions (W x H x D)**   199x151x46.1mm
- **Enclosure**   Front panel: Die cast magnesium alloy
  Rear cover: SECC
- **Mount Options**   Stand, Wall, Panel mount or VESA 75 x 75 mm
- **Power Input**   Phoenix Jack: 24 V_{DC} input
- **Power Consumption**   10 W + 20%
- **Video Port**   VGA & DP
- **Weight (Net)**   1.2 kg (2.64 lb)

LCD Display

- **Display Type**   VGA TFT LED LCD
- **Display Size**   6.5"
- **Max. Resolution**   640 x 480
- **Max. Color**   16.2M
- **Viewing Angle (H/V °)**   160/140
- **Luminance (cd/m²)**   800
- **Backlight Life**   50,000 hr
- **Contrast Ratio**   600 :1

Touchscreen

- **Type**   5-wire analog resistive
- **Interface**   USB
- **Light Transmission**   Above 75%
- **OS Support**   Windows XP, Vista,7, 8,10,XPe and Linux

Environment

- **Operating Temperature**   -20 ~ 60 °C (-4 ~ 140 °F)
- **Storage Temperature**   -30 ~ 70 °C (-22 ~ 158 °F)
- **Humidity (Storage)**   10 ~ 90% non-condensing
- **IP Rating**   Front panel is IP66 compliant
- **Vibration**   5 ~ 500 Hz, 1 Grms (Operating, Random)

Dimensions

Unit: mm

199.00

152.00

6.5"

46.10
27.00
7.00

175.45
75.00

102.50
75.00

USB T/S   24VDC IN   DisplayPort   VGA
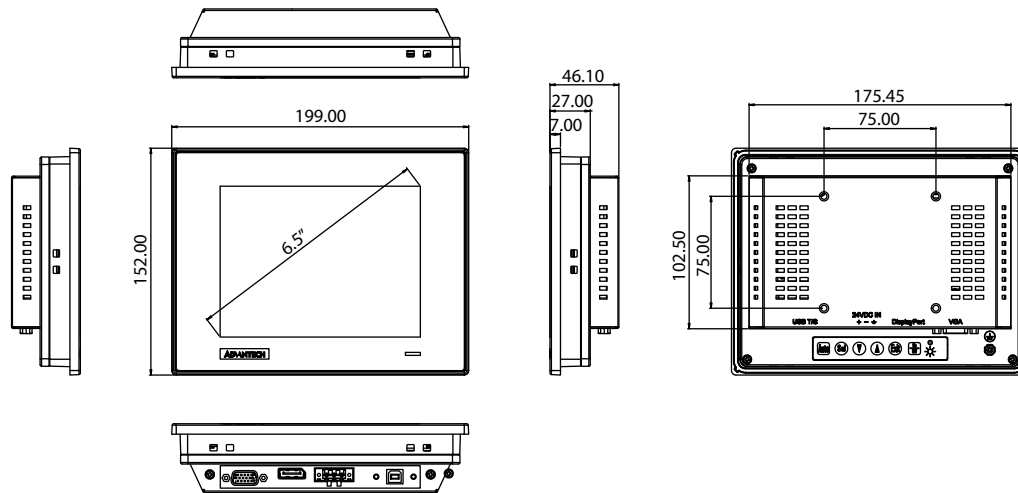
Panel Cutout Dimensions: 189.1 x 142.1 mm (7.44 x 5.59 in)

Ordering Information

- **FPM-7061T-R3AE**   6.5" VGA Ind Monitor w/Resistive TS (VGA/DP)

Optional Accessories

- **1702002600**   Power Cable US Plug 1.8 M
- **1702002605**   Power Cable EU Plug 1.8 M
- **1702031801**   Power Cable UK Plug 1.8 M
- **1700000596-11**   Power Cable China/Australia Plug 1.8 M
- **96PSA-A60W24T2**   Adapter 100-240V 60W 24V 2.5A
- **FPM-1000T-SMKE**   Desktop/Wall Mounting kit for FPM series

Front View

I/O View

TS Interface-USB Port   Display Port

24V DC Power Input   VGA Port
with Phoenix Jack

Rear View

VESA Mount

USB T/S   24VDC IN   DisplayPort   VGA

OSD Control Keys

ADVANTECH   Industrial Monitors
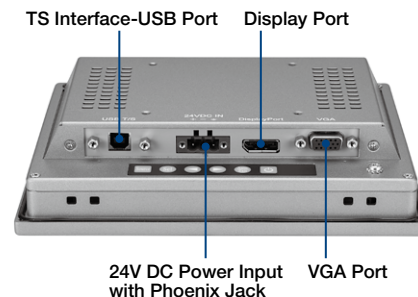
FPM-5191G
FPM-5171G
FPM-5151G

15" XGA/17" SXGA/19" SXGA Industrial Monitors with Resistive Touch Control, Direct VGA, and DVI Ports

Features

- 15" XGA/17"/19" SXGA TFT LED LCD with 50,000 backlight lifetime
- Direct VGA and DVI-D input interfaces
- Lockable OSD keys with 2 user-defined contrast/brightness controls
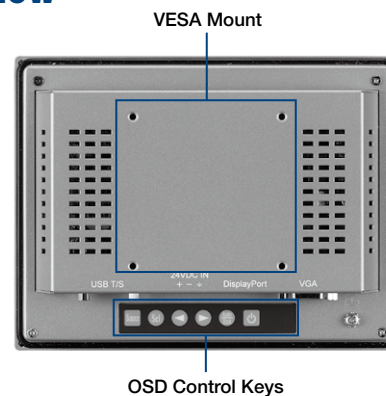- Flat, sealed, IP65-rated front panel
- Robust design with anti-rust chassis and aluminum die cast front panel
- Front-accessible USB connector
- Combo RS-232 & USB interface for touchscreen functionality (switchable)
- Supports 10 ~ 30 V_{DC} power input with Phoenix jack
- Supports panel, wall, desktop, rack or VESA arm mounting

Introduction

The FPM-5000G series comprises 15", 17", and 19" flat-panel color monitors with LED backlights that provide an ample display area and sharp, vivid images. Specifically designed for industrial applications, these monitors support Direct VGA and DVI-D signal transmissions, which allow VGA control cards to be integrated in the system. The onscreen display output can be adjusted using two user-defined function keys. The front-accessible USB connector provides easy access to the controller, while the wide-range (10 ~ 30 V_{DC}) power support makes these monitors ideal for factory and machine automation display applications.

Specifications

General

OSD Controls	Lockable OSD control buttons on rear panel
Certification	BSMI, CCC, CE, FCC Class A, UL
Dimensions (W x H x D)	5151G: 449.92 x 315.63 x 50.5 mm (17.71 x 12.43 x 1.99 in)
	5171G: 481.93 x 355.87 x 55 mm (18.97 x 14.01 x 2.17 in)
	5191G: 481.93 x 384.6 x 59 mm (18.97 x 15.14 x 2.32 in)
Enclosure	Front panel: Aluminum and flat-sealed
	Rear cover: Anti-rust coating
Mount Options	Panel, wall, desktop, VESA arm, or 19" rackmount
Power Input	Phoenix Jack: 10 ~ 30 V_{DC} input
	Optional external 57 W power adapter, with AC 100 V ~ 240 V input and DC +12 V @ 4.7A output
Power Consumption	18 W + 20%/31 W + 20%/32 W + 20%
USB	Front-facing USB for easy access
Video Port	VGA & DVI-D
Weight (Net)	6 kg (13.22 lb)/7 kg (17.63 lb)/9 kg (22.04 lb)

LCD Display

Display Type	XGA/SXGA/SXGA TFT LCDs
Display Size	15"/17"/19"
Max. Resolution	1024 x 768/1280 x 1024/1280 x 1024
Max. Color	16.2M/16.7M/16.7M
Viewing Angle (H/V °)	160/140, 160/140, 170/160
Luminance (cd/m²)	400/350/350
Backlight Life	50,000 hr
Contrast Ratio	700:1/800:1/1000:1

Touchscreen

Sensor	AMT
Driver	Penmount 6000
Type	5-wire resistive
Interface	RS-232 & USB
Lifespan	10/10/36 million with R8 silicone rubber finger, 2 x 250g presses per second
Light Transmission	> 80%
OS Support	Windows XP, Vista,7, 8,10,XPe and Linux
Power Consumption	+5 V @ 100 mA
Touch Resolution	Linearity

Environment

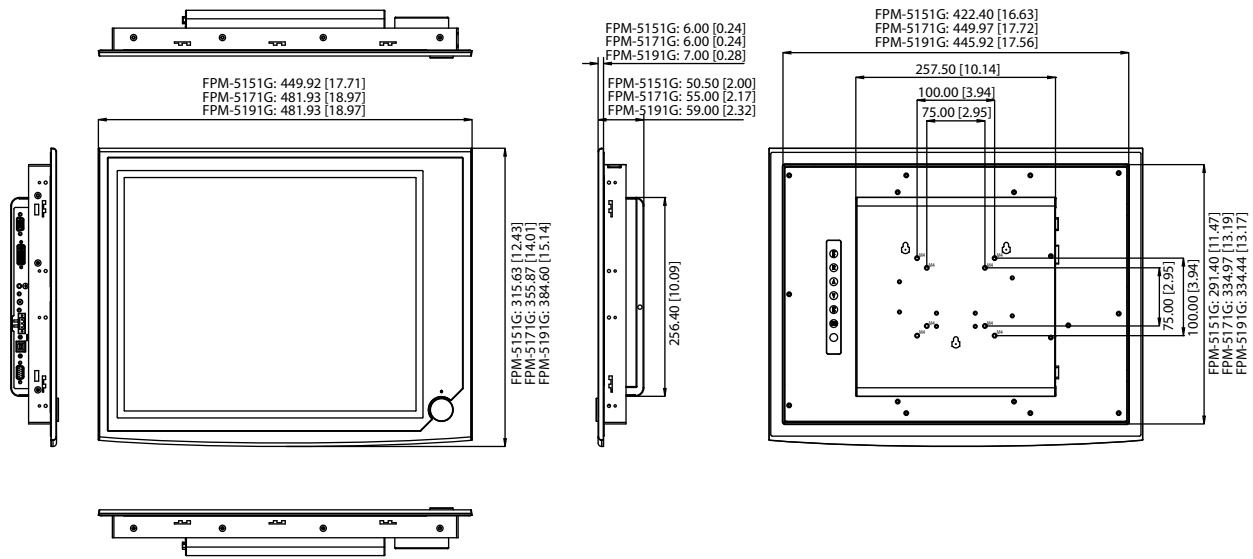|	
Operating Temperature	0 ~ 50 °C (32 ~ 122 °F)
Storage Temperature	-20 ~ 60 °C (-4 ~ 140 °F)
Humidity (Storage)	10 ~ 90% non-condensing
IP Rating	Front panel is compliant with IP65
Vibration	5 ~ 500 Hz, 1 Grms (Operating, Random)

Ordering Information

- **FPM-5191G-R3BE** 19"SXGA Ind. Monitor w/Resistive TS(RS-232,USB)
- **FPM-5171G-R3BE** 17"SXGA Ind. Monitor w/Resistive TS(RS-232,USB)
- **FPM-5151G-R3BE** 15"XGA Ind. Monitor w/Resistive TS(RS-232,USB)

All product specifications are subject to change without notice.   ▲ Back to Top   Last updated: 31-Aug-2018

FPM-5191G
FPM-5171G
FPM-5151G

Dimensions

Unit: mm [inch]

FPM-5151G: 449.92 [17.71]
FPM-5171G: 481.93 [18.97]
FPM-5191G: 481.93 [18.97]

FPM-5151G: 6.00 [0.24]
FPM-5171G: 6.00 [0.24]
FPM-5191G: 7.00 [0.28]

FPM-5151G: 50.50 [2.00]
FPM-5171G: 55.00 [2.17]
FPM-5191G: 59.00 [2.32]

FPM-5151G: 422.40 [16.63]
FPM-5171G: 449.97 [17.72]
FPM-5191G: 445.92 [17.56]

257.50 [10.14]

100.00 [3.94]

75.00 [2.95]

FPM-5151G: 315.63 [12.43]
FPM-5171G: 355.87 [14.01]
FPM-5191G: 384.60 [15.14]

256.40 [10.09]

75.00 [2.95]

100.00 [3.94]

FPM-5151G: 291.40 [11.47]
FPM-5171G: 334.97 [13.19]
FPM-5191G: 334.44 [13.17]

Panel Cutout Dimensions: FPM-5151G: 424 x 293 mm (16.69 x 11.54 in)
FPM-5171G: 454 x 338 mm (17.87 x 13.31 in)
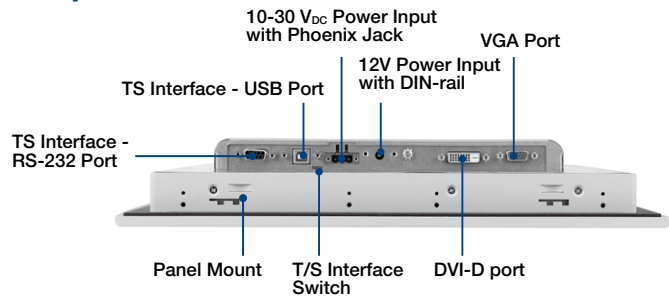FPM-5191G: 454 x 338 mm (17.87 x 13.31 in)

Optional Accessories

- **FPM-1000T-SMKE**   Desktop/Wall Mounting kit for FPM series
- **98R3615210E**   IPPC-6152A/FPM-5151G Rack Mount Kit
- **98R3617200E**   IPPC-6172A/FPM-5171G Rack Mount Kit
- **98R3619200E**   IPPC-6192A/FPM-5191G Rack Mount Kit
- **1702002600**   Power Cable US Plug 1.8 M
- **1702002605**   Power Cable EU Plug 1.8 M
- **1702031801**   Power Cable UK Plug 1.8 M
- **1700000596-11**   Power Cable China/Australia Plug 1.8 M
- **96PSA-A60W12V1-1**   ADP A/D 100-240V 60W 12V C14 DC PLUG 180 °
- **FPM-5000G-ADKE**   Mounting bracket of adapter for FPM-5000

Note: VESA mounting screw length: M4 x 6 mm

I/O View

10-30 V$_{DC}$ Power Input with Phoenix Jack

VGA Port

TS Interface - USB Port

12V Power Input with DIN-rail

TS Interface - RS-232 Port

Panel Mount

T/S Interface Switch

DVI-D port

Front-Facing USB Port

Rear View

VESA Mount

LCD OSD Control Keys   Wallmount
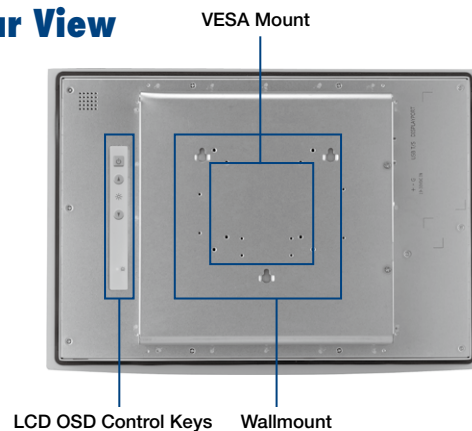
FPM-3191G

9U Rackmount, 19" SXGA Industrial Monitor with Resistive Touch Control, Direct VGA, and DVI Ports

1
Software and Industry Solutions

2
Industrial Server

3
Intelligent System

4
Intelligent HMI and Monitors

5
Automation Computers and Controllers

6
Industrial Communication

7
Remote I/O Modules

8
Industrial I/O and Video Solutions

Features

- 19" SXGA TFT LED LCD with 50K backlight lifetime
- Robust design with stainless steel chassis and aluminum front panel
- Anti-glare screen with tempered glass and IP65-certified front panel
- Lockable OSD control pad on rear cover
- Supports 24 V_{DC} power input
- Supports panel, wall, desktop, rack, or VESA arm mounting
- Supports 9U pre-drilled rackmount mounting holes

Introduction

FPM-3191G is a 19" color TFT LCD flat panel monitor specifically designed for industrial applications. With a display size of 19", FPM-3191G provides an adequate display area with sharp and vivid images. The monitor also supports direct VGA signal transmissions, allowing users to upgrade the displays without altering the existing infrastructure. The provision of OSD function keys makes it easy to adjust the onscreen display. Furthermore, the stainless steel chassis and IP65-rated aluminum front panel ensure suitability for industrial applications.

Specifications

General

- **OSD Controls** — OSD control pad on front panel
- **Certification** — BSMI, CCC, CE, FCC Class A, UL
- **Dimensions (W x H x D)** — 482 x 399.2 x 67 mm (18.98 x 15.71 x 2.64 in)
- **Enclosure** — Front panel: Aluminum with coating
  Rear cover: Stainless steel chassis
- **Mount Options** — Panel, wall, desktop, VESA arm, and 19" rackmount
- **Power Input** — Phoenix Jack: 24 V_{DC} input
- **Power Consumption** — 18 W + 20%
- **Video Port** — VGA & DVI-D port
- **Weight (Net)** — 10.65 kg (23.46 lbs)

LCD Display

- **Display Type** — SXGA TFT LCD with LED backlight
- **Display Size** — 19"
- **Max. Resolution** — 1280 x 1024
- **Max. Color** — 16.7M
- **Viewing Angle (H/V °)** — 170/160
- **Luminance (cd/m²)** — 350
- **Backlight Life** — 50,000 hr
- **Contrast Ratio** — 1000:1

Touchscreen

- **Driver** — Penmount 6000
- **Interface** — RS-232 and USB
- **Lifespan** — 35 million touches at a single point
- **Light Transmission** — > 80%
- **OS Support** — Windows XP,2000,Vista,7,8/8.1,10 , XP/7/8/10 Embedded,CE,Linux
- **Power Consumption** — +5 V @ 100 mA
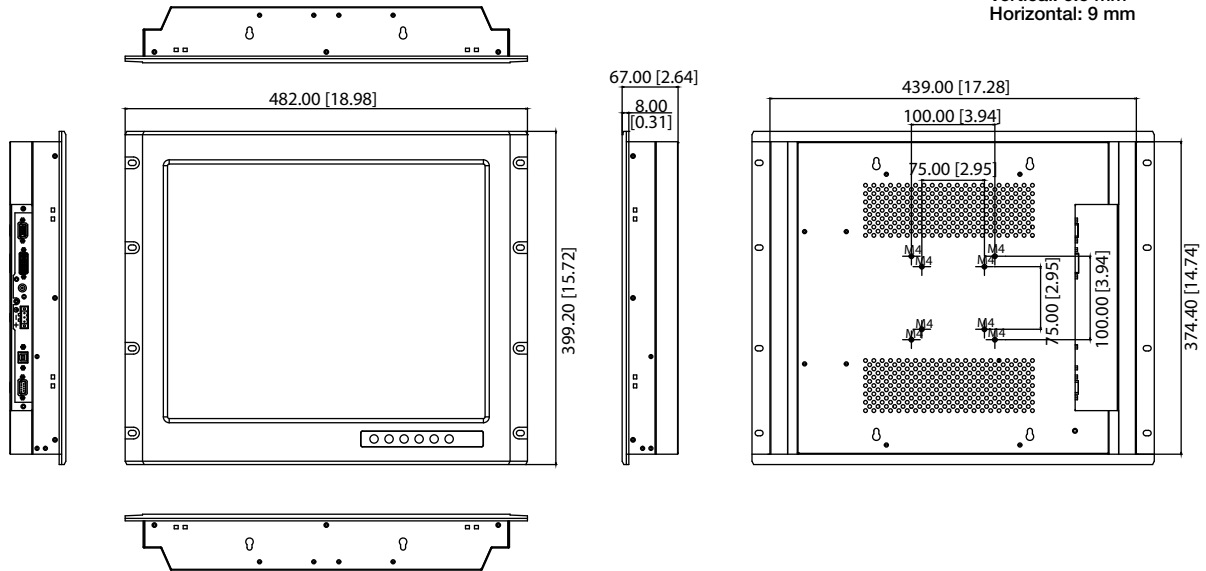- **Touch Resolution** — Linearity

Environment

- **Operating Temperature** — -20 ~ 60 °C (-4 ~ 140 °F)
- **Storage Temperature** — -30 ~ 80 °C (-22 ~ 176 °F)
- **Humidity (Storage)** — 90% @ 50 °C non-condensing
- **IP Rating** — Front panel is IP65 compliant
- **Vibration** — 5 ~ 500 Hz, 1 Grms (Operating, Random)

FPM-3191G

Dimensions

Unit: mm [inch]

Rackmount hole diameter
Vertical: 6.5 mm
Horizontal: 9 mm

482.00 [18.98]

399.20 [15.72]

67.00 [2.64]

8.00 [0.31]

439.00 [17.28]

100.00 [3.94]

75.00 [2.95]

M4

75.00 [2.95]

100.00 [3.94]

M4

374.40 [14.74]

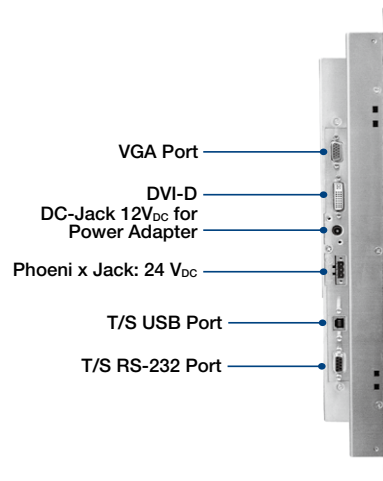**Panel Cutout Dimensions: 441 x 376.4 mm (17.36 x 14.81 in)**

Ordering Information

- **FPM-3191G-R3BE**   19" SXGA Ind. Monitor w/ Resistive TS (Combo)

Optional Accessories

- **1702002600**   Power Cable US Plug 1.8 M
- **1702002605**   Power Cable EU Plug 1.8 M
- **1702031801**   Power Cable UK Plug 1.8 M
- **1700000596-11**   Power Cable China/Australia Plug 1.8 M
                        (Direct rack mounting, no need accessory)
- **96PSA-A60W12V1-1** Adapter 100-240V 60W 12V 5A
- **96PSA-A60W24T2**   Adapter 100-240V 60W 24V 2.5A
- **FPM-3001G-ADKE**   Adapter bracket for FPM-3000 15"/17"/19"

I/O View

VGA Port

DVI-D

DC-Jack 12V$_{DC}$ for
Power Adapter

Phoeni x Jack: 24 V$_{DC}$

T/S USB Port

T/S RS-232 Port

FPM-3171G

8U Rackmount, 17" SXGA Industrial Monitor with Resistive Touch Control, Direct VGA, DVI Ports, and a Wide Operating Temperature Range

Features

- 17" SXGA TFT LED LCD with 50K backlight lifetime
- Robust design with stainless steel chassis and aluminum front panel
- Anti-glare screen with tempered glass and IP65-certified front panel
- Lockable OSD control pad on rear cover
- Supports 24 V$_{DC}$ power input
- Supports panel, wall, desktop, rack, or VESA arm mounting
- Supports 8U pre-drilled rackmount mounting holes

Introduction

FPM-3171G is a 17" color TFT LCD flat panel monitor specifically designed for industrial applications. With a display size of 17", FPM-3171G provides an adequate display area with sharp and vivid images. The monitor also supports direct VGA signal transmissions, allowing users to upgrade the displays without altering the existing infrastructure. The provision of OSD function keys makes it easy to adjust the onscreen display. Furthermore, the stainless steel chassis and IP65-rated aluminum front panel ensure suitability for industrial applications.

Specifications

General

- **OSD Controls**   OSD control pad on front panel
- **Certification**   BSMI, CCC, CE, FCC Class A, UL
- **Dimensions (W x H x D)** 482 x 354.8 x 63.5 mm (18.98 x 13.97 x 2.52 in)
- **Enclosure**   Front panel: Aluminum with coating
                          Rear cover: Stainless steel chassis
- **Mount Options**   Panel, wall, desktop, VESA arm, and 19" rackmount
- **Power Input**   Phoenix Jack: 24 V$_{DC}$ input
                          DC Jack: 12 V$_{DC}$ Input
- **Power Consumption**   23W +20%
- **Video Port**   VGA & DVI-D port
- **Weight (Net)**   9.25 kg (20.39 lb)

LCD Display

- **Display Type**   'SXGA TFT LCD with LED backlight
- **Display Size**   17"
- **Max. Resolution**   1280 x 1024
- **Max. Color**   16.7M
- **Viewing Angle (H/V °)** 160/140
- **Luminance (cd/m²)**   350
- **Backlight Life**   50,000 hr
- **Contrast Ratio**   1000:1

Touchscreen

- **Driver**   Penmount 6000
- **Interface**   RS-232 and USB
- **Lifespan**   35 million touches at a single point
- **Light Transmission** > 80%
- **OS Support**   Windows XP,2000,Vista,7,8/8.1,10 , XP/7/8/10
                          Embedded,CE,Linux
- **Power Consumption**   +5 V @ 100 mA
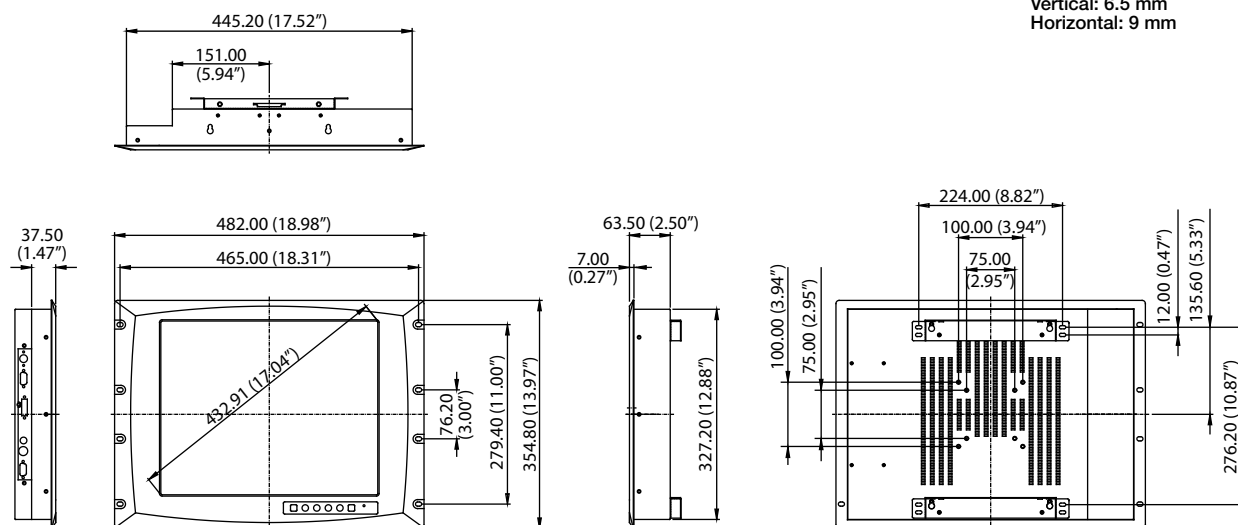- **Touch Resolution**   Linearity

Environment

- **Operating Temperature** -20 ~ 60 °C (-4 ~ 140 °F)
- **Storage Temperature**   -30 ~ 80 °C (-22 ~ 176 °F)
- **Humidity (Storage)**   90% @ 50 °C non-condensing
- **IP Rating**   Front panel is IP65 compliant
- **Vibration**   5 ~ 500 Hz, 1 Grms (Operating, Random)

FPM-3171G

Dimensions

Unit: mm [inch]

Rackmount hole diameter
Vertical: 6.5 mm
Horizontal: 9 mm

445.20 (17.52")
151.00 (5.94")

37.50 (1.47")
482.00 (18.98")
465.00 (18.31")
432.91 (17.04")
76.20 (3.00")
279.40 (11.00")
354.80 (13.97")

63.50 (2.50")
7.00 (0.27")
327.20 (12.88")

224.00 (8.82")
100.00 (3.94")
75.00 (2.95")
100.00 (3.94")
75.00 (2.95")
12.00 (0.47")
135.60 (5.33")
276.20 (10.87")

Panel Cutout Dimensions: 447.2 x 329.2 mm (17.6 x 12.96 in)
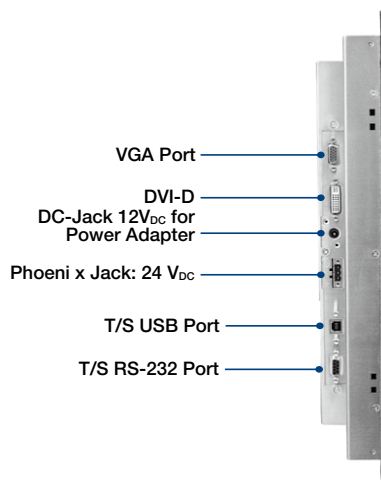
Ordering Information

- **FPM-3171G-R3BE** 17"SVGA WT Ind. Monitor w/Resistive TS (Combo)

Optional Accessories

- **1702002600** Power Cable US Plug 1.8 M
- **1702002605** Power Cable EU Plug 1.8 M
- **1702031801** Power Cable UK Plug 1.8 M
- **1700000596-11** Power Cable China/Australia Plug 1.8 M (Direct rack mounting, no need accessory)
- **96PSA-A60W12V1-1** Adapter 100-240V 60W 12V 5A
- **96PSA-A60W24T2** Adapter 100-240V 60W 24V 2.5A
- **FPM-3001G-ADKE** Adapter bracket for FPM-3000 15"/17"/19"

I/O View

VGA Port
DVI-D
DC-Jack 12V_{DC} for Power Adapter
Phoeni x Jack: 24 V_{DC}
T/S USB Port
T/S RS-232 Port

FPM-3151G

15" XGA Industrial Monitor with Resistive Touch Control, Direct VGA, DVI Ports, and Wide Operating Temperature

1
Software and Industry Solutions

2
Industrial Server

3
Intelligent System

4
Intelligent HMI and Monitors

5
Automation Computers and Controllers

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Industrial Communication

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Remote I/O Modules

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Industrial I/O and Video Solutions

Features

- 15" XGA TFT LED LCD with 50K backlight lifetime
- Robust anodized aluminum-coated front bezel and stainless steel rear cover
- Wide operating temperature range (-20 ~ 60 °C/-4 ~ 140 °F)
- Increased reliability with enhanced 5-wire resistive touch sensor
- Anti-glare screen with tempered glass and IP65-certified front panel
- Ground isolation protection for entire system
- Supports VGA/DVI input, dual touch interfaces, and two power inputs
- Front-lockable OSD keys with user-defined functions
- IP65-rated front panel
- Supports panel, VESA, wall, desktop, and stand mounting

Introduction

The FPM-3151G is an extremely rugged and reliable 15" XGA industrial monitor aimed at diverse industrial applications. Equipped with a hard anodized-aluminum coating, stainless steel chassis, and wide operating temperature range (-20 ~ 60 °C/-4 ~ 140 °F), FPM-3151G can withstand operation in a wide range of harsh industrial environments. This monitor also features enhanced 5-wire resistive touch control and overall ground isolation protection to enhance the system's reliability. Additionally, the FPM-3151G is equipped with lockable OSD keys on the front panel that control two user-defined function settings.

Specifications

General

- **OSD Controls** — OSD control pad on front panel with lockable function. Two user-defined contrast/brightness settings
- **Certification** — CE, FCC Class A, BSMI, CCC, UL, Energy Star
- **Dimensions (W x H x D)** — 422 x 310 x 70 mm (16.61 x 12.2 x 2.76 in)
- **Enclosure** — Front panel: Aluminum with hard anodizing coating. Rear cover: Stainless steel with ground isolation protection
- **Mount Options** — Panel, wall, desktop, VESA arm
- **Power Input** — Phoenix Jack: 24 V_{DC} input. DC Jack: 12 V_{DC} input
- **Power Consumption** — 12W +20%
- **Video Port** — VGA & DVI-D Port
- **Weight (Net)** — 7.73 kg (17.04 lbs)

LCD Display

- **Display Type** — XGA TFT LCD
- **Backlight Type** — LED
- **Display Size** — 15"
- **Max. Resolution** — 1024 x 768
- **Max. Color** — 16.2M (RGB 8-bit)
- **Viewing Angle (H/V °)** — 160/140
- **Luminance (cd/m²)** — 350
- **Backlight Life** — 50,000 hr
- **Contrast Ratio** — 700:1

Touchscreen

- **Driver** — Penmount 6000
- **Type** — 5-wire resistive with enhanced ITO film
- **Interface** — USB & RS-232 (Combo)
- **Lifespan** — 36 million with a silicone rubber R8 finger, writing rate is by 250g at 2 times/s
- **Light Transmission** — > 80%
- **OS Support** — Windows XP,2000,Vista,7,8/8.1,10 , XP/7/8/10 Embedded,CE,Linux
- **Power Consumption** — +5 V @ 100 mA
- **Touch Resolution** — Linearity

Environment

- **Operating Temperature** — -20 ~ 60 °C (-4 ~ 140 °F)
- **Storage Temperature** — -30 ~ 80 °C (-22 ~ 176 °F)
- **Humidity (Storage)** — 90% @ 50 °C non-condensing
- **IP Rating** — Front panel is IP65 compliant
- **Shock** — 11ms, 10G (Non Operating, Half Sine Wave)
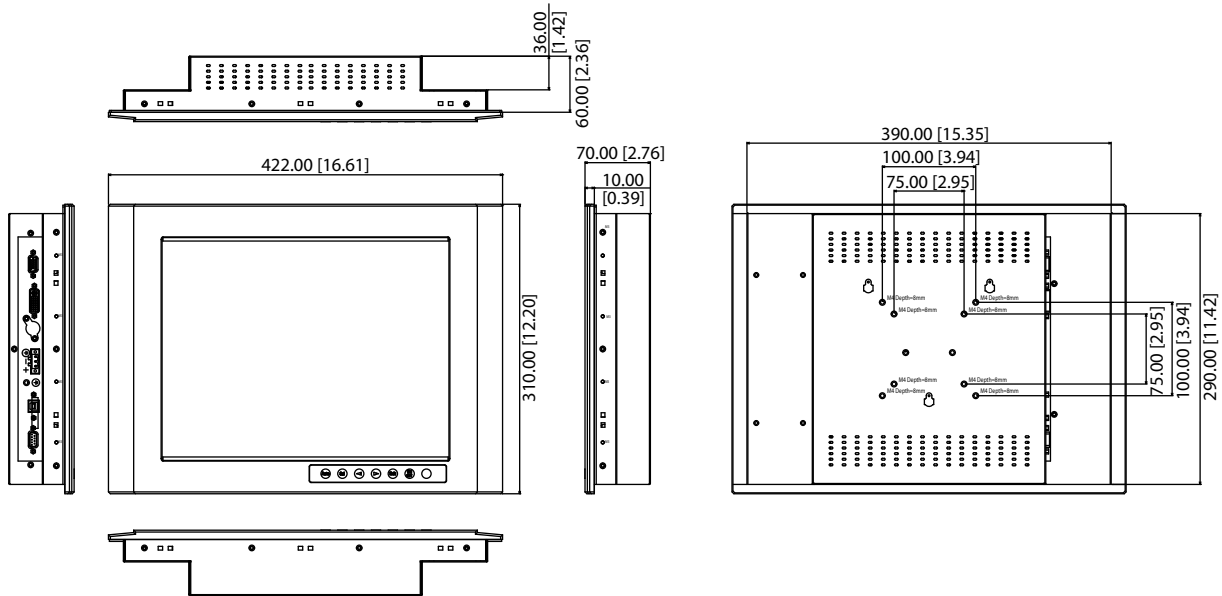- **Vibration** — 5 ~ 500 Hz, 1 Grms (Operating, Random)

Ordering Information

- **FPM-3151G-R3BE** — 15" XGA Ind. Monitor w/ Wide Temp, Resistive TS

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Last updated: 31-Aug-2018

FPM-3151G

Dimensions

Unit: mm [inch]

Panel Cutout Dimensions: 392 x 292 mm (15.43 x 11.49 in)
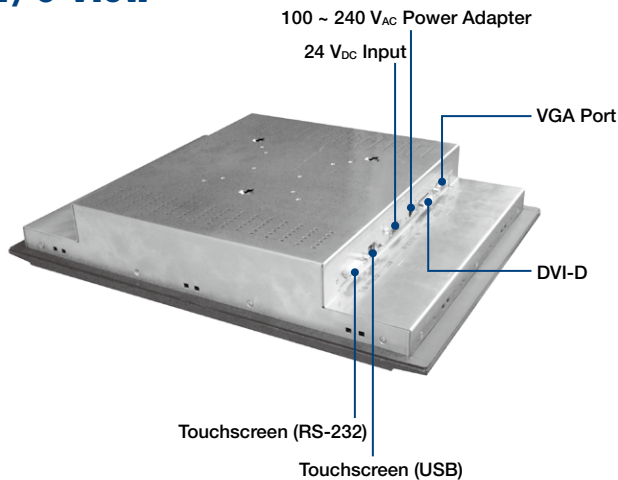
Optional Accessories

- **1702002600**   Power Cable US Plug 1.8 M
- **1702002605**   Power Cable EU Plug 1.8 M
- **1702031801**   Power Cable UK Plug 1.8 M
- **1700000596-11**   Power Cable China/Australia Plug 1.8 M
- **FPM-1000T-SMKE**   Desktop/Wall Mounting kit for FPM series
- **96PSA-A60W12V1-1** Adapter 100-240V 60W 12V 5A
- **96PSA-A60W24T2**   Adapter 100-240V 60W 24V 2.5A
- **FPM-3001G-ADKE**   Adapter bracket for FPM-3000 15"/17"/19"

I/O View

100 ~ 240 V_{AC} Power Adapter
24 V_{DC} Input
VGA Port
DVI-D
Touchscreen (RS-232)
Touchscreen (USB)

Rackmount (FPM-3151G-RMKE)

FPM-3121G

12.1" SVGA Industrial Monitor with Resistive Touch Control, Direct VGA, DVI Ports, and Wide Operating Temperature

Features

- 12.1" SVGA TFT LED LCD with 50K backlight lifetime
- Robust anodized aluminum-coated front bezel and stainless steel rear cover
- Wide operating temperature range (-20 ~ 60 °C/-4 ~ 140 °F)
- Increased reliability with enhanced 5-wire resistive touch sensor
- Anti-glare screen with tempered glass and IP65-certified front panel
- Ground isolation protection for entire system
- Supports VGA/DVI input, dual touch interfaces, and two power inputs
- Front-lockable OSD keys with user-defined functions
- IP65-rated front panel
- Supports panel, VESA, wall, desktop, and stand mounting

Introduction

The FPM-3121G is an extremely rugged and reliable 12.1" SVGA industrial monitor aimed at diverse industrial applications. Equipped with a hard anodized-aluminum coating, stainless steel chassis, and wide operating temperature range (-20 ~ 60 °C/-4 ~ 140 °F), FPM-3151G can withstand operation in a wide range of harsh industrial environments. This monitor also features enhanced 5-wire resistive touch control and overall ground isolation protection to enhance the system's reliability. Additionally, the FPM-3121G is equipped with lockable OSD keys on the front panel that control two user-defined function settings.

Specifications

General

- **OSD Controls** — OSD control pad on front side with lockable function Two user-defined contrast/brightness settings
- **Certification** — CE, FCC Class A, BSMI, CCC, UL, Energy Star
- **Dimensions (W x H x D)** — 312 x 224 x 60 mm (12.28 x 8.82 x 2.36 in)
- **Enclosure** — Front panel: Aluminum with hard anodized coating Rear cover: Stainless steel chassis with ground isolation protection
- **Mount Options** — Panel, VESA arm, wall, or desktop with optional mounting kit
- **Power Input** — Phoenix Jack: 24 V_{DC} input DC Jack: 12 V_{DC} input
- **Power Consumption** — 13W +20%
- **Video Port** — VGA & DVI-D Port
- **Weight (Net)** — 4.07 kg (8.975 lbs)

LCD Display

- **Display Type** — XGA TFT LCD
- **Backlight Type** — LED
- **Display Size** — 12.1"
- **Max. Resolution** — 1024 x 768
- **Max. Color** — 16.2M (RGB 8-bit)
- **Viewing Angle (H/V °)** — 160 / 140
- **Luminance (cd/m²)** — 600
- **Operation Life** — 50,000 hr
- **Contrast Ratio** — 700:1

Touchscreen

- **Driver** — Penmount 6000
- **Type** — 5-wire resistive with enhanced ITO film
- **Interface** — USB & RS-232 (Combo)
- **Lifespan** — 36 million with a silicone rubber of R8 finger, writing rate is by 250g at 2 times/s
- **Light Transmission** — > 80%
- **OS Support** — Windows XP,2000,Vista,7,8/8.1,10 , XP/7/8/10 Embedded,CE,Linux
- **Power Consumption** — +5 V @ 100 mA
- **Touch Resolution** — Linearity

Environment

- **Operating Temperature** — -20 ~ 60 °C (-4 ~ 140 °F)
- **Storage Temperature** — -30 ~ 80 °C (-22 ~ 176 °F)
- **Humidity (Storage)** — 90%@50 °C non-condensing
- **IP Rating** — Front panel is IP65 compliant
- **Shock** — 11ms, 10G (Non Operating, Half Sine Wave)
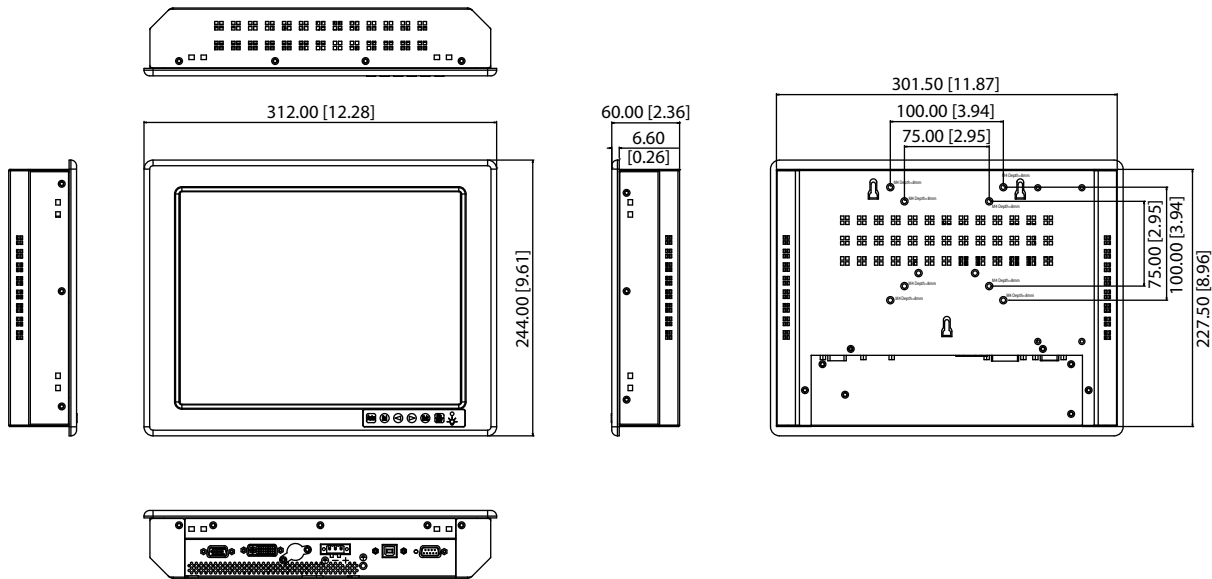- **Vibration** — 5 ~ 500 Hz, 1 Grms (Operating, Random)

Ordering Information

- **FPM-3121-R3BE** — 12.1" SVGA Ind. Monitor w/ Wide Temp, Resistive TS

FPM-3121G

Dimensions

Unit: mm [inch]

312.00 [12.28]

244.00 [9.61]

60.00 [2.36]

6.60 [0.26]

301.50 [11.87]
100.00 [3.94]
75.00 [2.95]

75.00 [2.95]
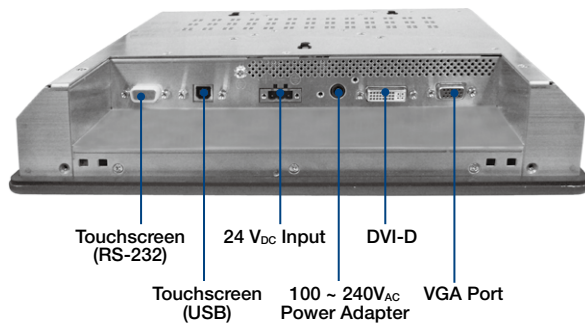100.00 [3.94]
227.50 [8.96]

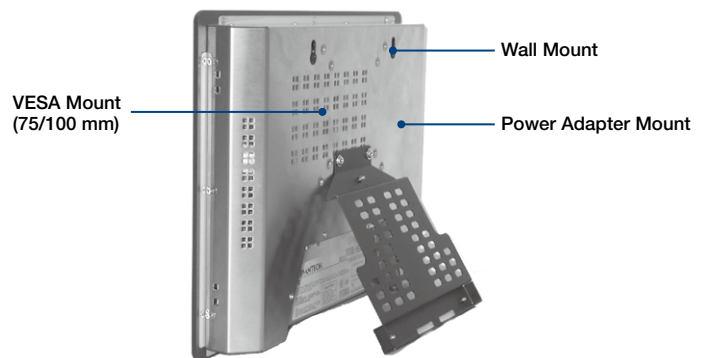**Panel Cutout Dimensions: 303.5 x 229.5 mm (11.95 x 9.04 in)**

Optional Accessories

- **FPM-1000T-SMKE** — Desktop/Wall Mounting kit for FPM series
- **1702002600** — Power Cable US Plug 1.8 M
- **1702031801** — Power Cable UK Plug 1.8 M
- **1702002605** — Power Cable EU Plug 1.8 M
- **1700000596-11** — Power Cable China/Australia Plug 1.8 M
- **96PSA-A60W12V1-1** — Adapter 100-240V 60W 12V 5A
- **96PSA-A60W24T2** — Adapter 100-240V 60W 24V 2.5
- **FPM-3000G-ADKE** — Adapter bracket for FPM-3000 12"

I/O View

Touchscreen (RS-232)
Touchscreen (USB)
24 V_{DC} Input
100 ~ 240V_{AC} Power Adapter
DVI-D
VGA Port

Mounting Method

Wall Mount
VESA Mount (75/100 mm)
Power Adapter Mount

FPM-2170G

17" SXGA Industrial Monitor with Resistive Touch Control and Direct VGA Port

Features

- 17" SXGA TFT LED LCD with 50K backlight lifetime
- Robust design with aluminum front panel
- Anti-glare screen with tempered glass
- Supports panel, wall, desktop, and VESA arm mounting
- Combo RS-232+USB interface for touchscreen functionality

LISTED E180881 I.T.E.   R33138   CCC   CE   FCC

Introduction

The FPM-2170G is a competitively priced industrial-grade, 17" TFT LCD flat panel monitor equipped with an LED backlight, aluminum-magnesium front panel, and sleek, low-profile design. The FPM-2170G monitor is extremely lightweight and thin, and offers many industrial-grade features including a stainless steel chassis and flexible VESA mounting. Moreover, the FPM-2170G monitor is especially suitable for integration with industrial PCs, such as Advantech's IPC-610 or IPC-6806 systems. These combinations provide extremely tough, reliable solutions that can support a wide range of industrial applications.

Specifications

General

- **OSD Controls**   OSD control buttons on rear panel
- **Certification**   BSMI, CCC, CE, FCC, UL
- **Dimensions (W x H x D)** 413.72 x 347.22 x 52.13 mm (16.29 x 13.67 x 2.05 in)
- **Enclosure**   Front panel: Aluminum, Rear cover: SECC chassis
- **Mount Options**   Panel, wall, desktop, VESA arm
- **Power Input External**   60 W power adapter, with AC 100 V ~ 240 V input and DC +12 V @ 5 A output (included)
- **Video Port**   VGA
- **Weight (Net)**   5.60 kg (12.34 lb)

LCD Display

- **Display Type**   SXGA TFT LCD with LED backlight
- **Display Size**   17"
- **Max. Resolution**   1280 x 1024
- **Max. Color**   16.7M
- **Viewing Angle (H/V) °** 160 °(V),140 °(H)
- **Luminance (cd/m²)**   350
- **Backlight Life**   50,000 hr
- **Contrast Ratio**   800:1

Touchscreen

- **Interface Combo**   RS-232 & USB interface
- **Lifespan**   36 million times with R8 silicone rubber finger, @ 2 x 250g presses per second
- **OS Support**   Windows® XP, Vista, 7, 8, 10, XPe, CE and Linux

Environment

- **Operating Temperature** 0 ~ 50 °C (32 ~ 122 °F)
- **Storage Temperature**   -20 ~ 60 °C (-4 ~ 140 °F)
- **Humidity (Storage)**   10 ~ 95% non-condensing
- **IP Rating**   Front panel is IP65 compliant
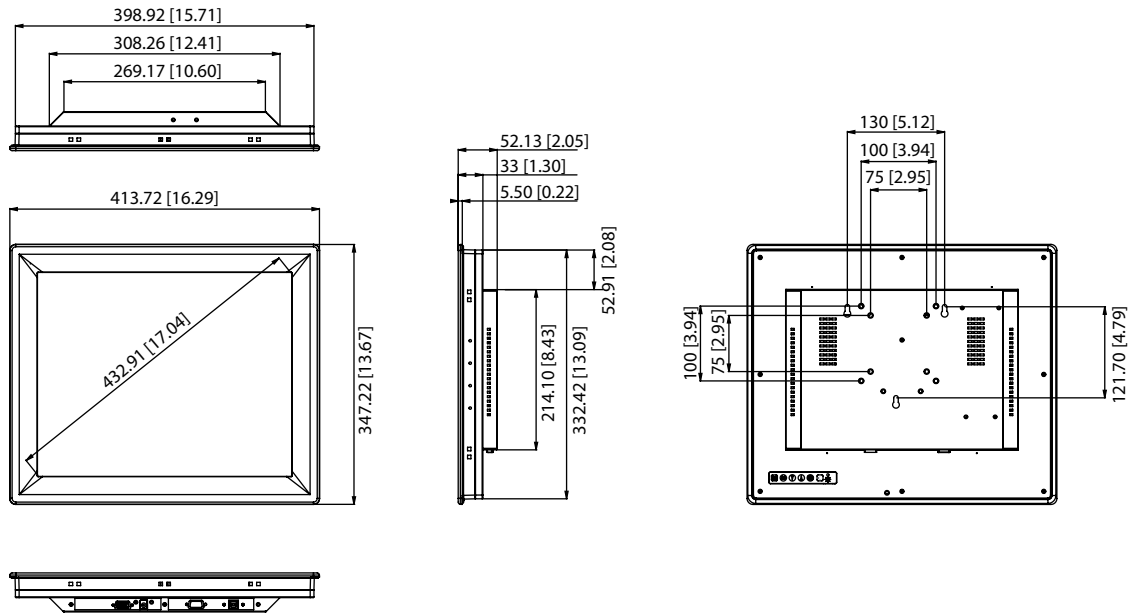- **Vibration**   5 ~ 500 Hz, 1 Grms (Operating, Random)

Ordering Information

- **FPM-2170G-R3BE**   17" SXGA Industrial LED Monitor w/Resistive TS (RS-232 and USB interfaces)

FPM-2170G

Dimensions

Unit: mm [inch]

398.92 [15.71]
308.26 [12.41]
269.17 [10.60]

413.72 [16.29]

432.91 [17.04]

347.22 [13.67]

52.13 [2.05]
33 [1.30]
5.50 [0.22]

52.91 [2.08]
214.10 [8.43]
332.42 [13.09]

130 [5.12]
100 [3.94]
75 [2.95]

100 [3.94]
75 [2.95]

121.70 [4.79]

Panel Cutout Dimensions: 400.92 x 334.42 mm (15.78 x 13.17 in)

Optional Accessories

- **FPM-1000T-SMKE**   Desktop/Wall Mounting kit for FPM series
- **1702002600**   Power Cable US Plug 1.8 M
- **1702002605**   Power Cable EU Plug 1.8 M
- **1702031801**   Power Cable UK Plug 1.8 M
- **1700000596-11**   Power Cable China/Australia Plug 1.8 M
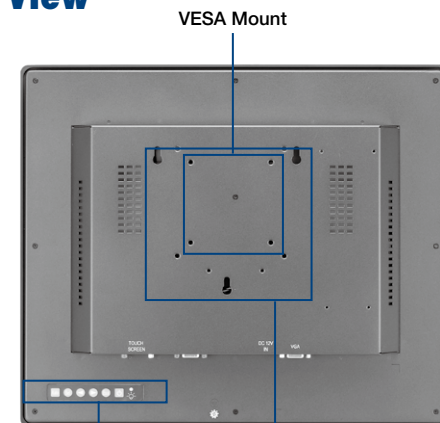
I/O View

Touchscreen (USB)   VGA Port
Touchscreen (RS-232)   DC Jack 12V$_{DC}$
(100 ~ 240V$_{AC}$ adapter included)

Front View

Rear View

VESA Mount

OSD Control Keys   Wallmount

FPM-2150G

15" XGA Industrial Monitor with Resistive Touch Control and Direct VGA Port

Features

- 15" XGA TFT LED LCD with 50K backlight lifetime
- Robust design with IP65-certified aluminum front panel
- Lockable OSD control buttons on rear panel
- Anti-glare screen with tempered glass
- Supports panel, wall, desktop, rack, and VESA arm mounting
- Combo RS-232+USB interface for touchscreen functionality

Introduction

The FPM-2150G is a competitively priced industrial-grade, 15" TFT LCD flat panel monitor equipped with an LED backlight, aluminum-magnesium front panel, and sleek, low-profile design. The FPM-2150G monitor is extremely lightweight and thin, and offers many industrial-grade features including a stainless steel chassis and flexible VESA mounting. Moreover, the FPM-2150G monitor is especially suitable for integration with industrial PCs, such as Advantech's IPC-610 or IPC-6806 systems. These combinations provide extremely tough, reliable solutions that can support a wide range of industrial applications.

Specifications

General

- **OSD Controls** — OSD control buttons on rear panel
- **Certification** — BSMI, CCC, CE, FCC, UL
- **Dimensions (W x H x D)** — 383 x 307 x 48.13 mm (15.08 x 12.09 x 1.89 in)
- **Enclosure** — Front panel: Aluminum with coating, Rear cover: SECC coating chassis
- **Mount Options** — Panel, wall, desktop, VESA arm, or rackmount with optional mounting kit
- **Power Input** — External 60 W power adapter, with AC 100 V ~ 240 V input and DC +12 V @ 5 A output (included)
- **Video Port** — VGA
- **Weight (Net)** — 4.5 kg (9.9 lb)

LCD Display

- **Display Type** — XGA TFT LCD with LED backlight
- **Display Size** — 15"
- **Max. Resolution** — 1024 x 768
- **Max. Color** — 16.2M
- **Viewing Angle (H/V) °** — 160, 140
- **Luminance (cd/m²)** — 400
- **Backlight Life** — 50,000 hr
- **Contrast Ratio** — 700: 1

Touchscreen

- **Interface Combo** — RS-232 & USB interface
- **Lifespan** — 36 million times with R8 silicone rubber finger, @ 2 x 250g presses per second
- **OS Support** — Windows® XP, Vista, 7, 8, 10, XPe, CE and Linux

Environment

- **Operating Temperature** — 0 ~ 50 °C (32 ~ 122 °F)
- **Storage Temperature** — -20 ~ 60 °C (-4 ~ 140 °F)
- **Humidity (Storage)** — 10 ~ 95% non-condensing
- **IP Rating** — Front panel is IP65 compliant
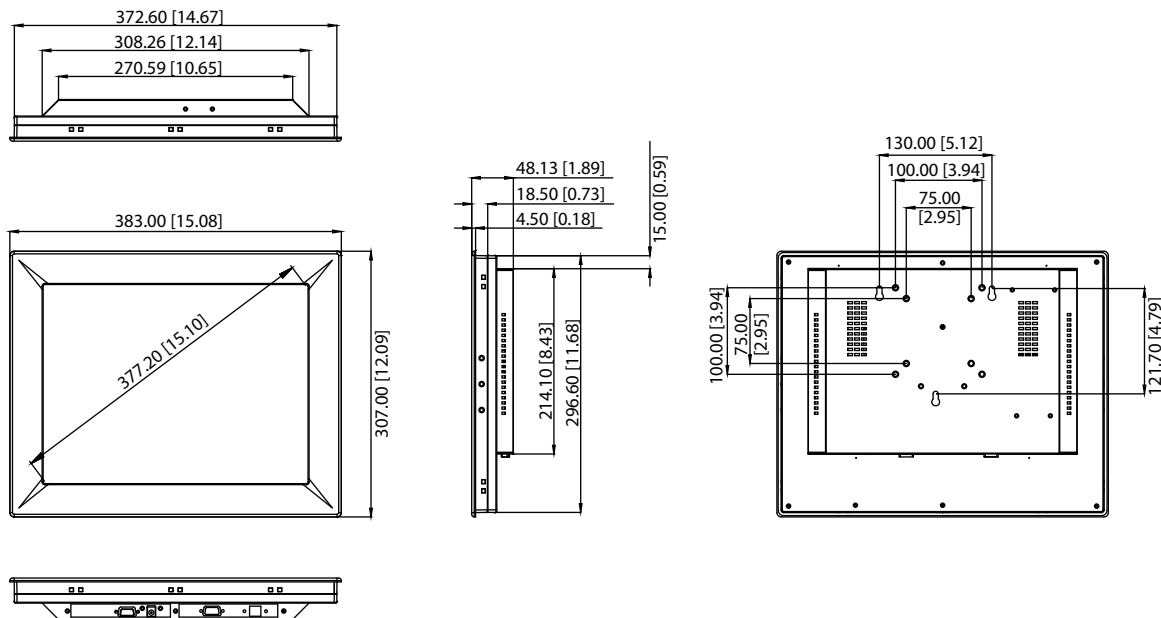- **Vibration** — 5 ~ 500 Hz, 1 Grms (Operating, Random)

Ordering Information

- **FPM-2150G-R3BE** — 15" XGA Industrial LED Backlight Monitor w/Resistive TS (RS- 232 and USB interfaces)

FPM-2150G

Dimensions

Unit: mm [inch]

372.60 [14.67]
308.26 [12.14]
270.59 [10.65]

48.13 [1.89]
18.50 [0.73]
4.50 [0.18]
15.00 [0.59]

130.00 [5.12]
100.00 [3.94]
75.00 [2.95]

383.00 [15.08]

377.20 [15.10]

307.00 [12.09]

214.10 [8.43]
296.60 [11.68]
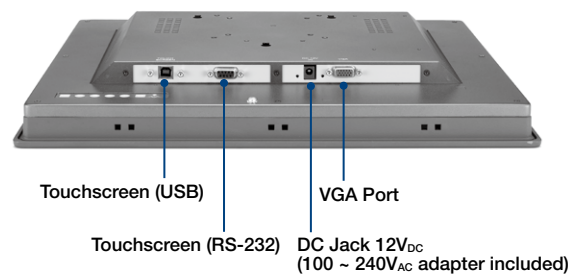
100.00 [3.94]
75.00 [2.95]

121.70 [4.79]

Panel Cutout Dimensions: 374.5 x 298.5 mm (14.74 x 11.75 in)

Optional Accessories

- **FPM-2150G-R1MKE**   FPM-2150G Rack-Mount Kit
- **FPM-1000T-SMKE**   Desktop/Wall Mounting kit for FPM series
- **1702002600**   Power Cable US Plug 1.8 M
- **1702002605**   Power Cable EU Plug 1.8 M
- **1702031801**   Power Cable UK Plug 1.8 M
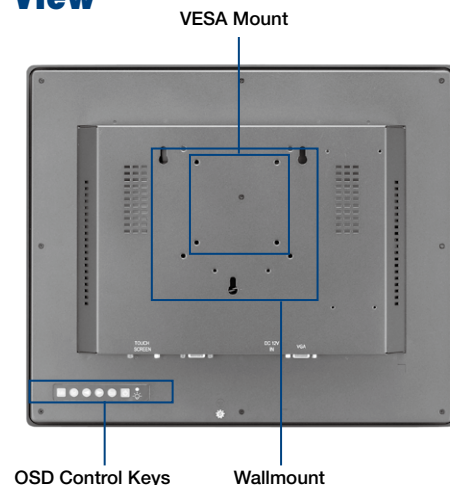- **1700000596-11**   Power Cable China/Australia Plug 1.8

I/O View

Touchscreen (USB)   VGA Port

Touchscreen (RS-232)   DC Jack 12V$_{DC}$
(100 ~ 240V$_{AC}$ adapter included)

Front View

Rear View

VESA Mount

OSD Control Keys   Wallmount

FPM-2120G

12" XGA Industrial Monitor with Resistive Touch Control and Direct VGA Port

1
Software and Industry Solutions

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Industrial Server

3
Intelligent System

4
Intelligent HMI and Monitors

5
Automation Computers and Controllers

6
Industrial Communication

7
Remote I/O Modules

8
Industrial I/O and Video Solutions

Features

- 12" XGA TFT LED LCD with 50K backlight lifetime
- Robust design with aluminum front panel
- Anti-glare screen with tempered glass
- Supports panel, wall, desktop, rack, and VESA arm mounting
- Combo RS-232+USB interface for touchscreen functionality

Introduction

The FPM-2120G is a competitively priced industrial-grade, 12" TFT LCD flat panel monitor equipped with an LED backlight, aluminum-magnesium front panel, and sleek, low-profile design. The FPM-2120G monitor is extremely lightweight and thin, and offers many industrial-grade features including a stainless steel chassis and flexible VESA mounting. Moreover, the FPM-2120G monitor is especially suitable for integration with industrial PCs, such as Advantech's IPC-610 or IPC-6806 systems. These combinations provide extremely tough, reliable solutions that can support a wide range of industrial applications.

Specifications

General

- **OSD Controls**   OSD control buttons on rear panel
- **Certification**   BSMI, CCC, CE, FCC, UL
- **Dimensions (W x H x D)** 311 x 237 x 40.63 mm (12.24 x 9.33 x 1.60 in)
- **Enclosure**   Front panel: Aluminum,
                           Rear cover: SECC chassis
- **Mount Options**   Panel, wall, desktop, VESA arm
- **Power Input**   External 60 W power adapter, with AC 100 V ~ 240 V
                           input and DC +12 V @ 5 A output (included)
- **Video Port**   VGA
- **Weight (Net)**   4 kg (8.82 lb)

LCD Display

- **Display Type**   XGA TFT LCD with LED backlight
- **Display Size**   12.1"
- **Max. Resolution**   1024 x 768
- **Max. Color**   16.2M
- **Viewing Angle (H/V) °** 160 °(V),140 °(H)
- **Luminance (cd/m²)**   600
- **Backlight Life**   50,000 hr
- **Contrast Ratio**   700:1

Touchscreen

- **Interface Combo**   RS-232 & USB interface
- **Lifespan**   36 million times with R8 silicone rubber finger,
                           @ 2 x 250g presses per second
- **OS Support**   Windows® XP, Vista, 7, 8, 10, XPe, CE and Linux

Environment

- **Operating Temperature** 0 ~ 50 °C (32 ~ 122 °F)
- **Storage Temperature**   -20 ~ 60 °C (-4 ~ 140 °F)
- **Humidity (Storage)**   10 ~ 95% non-condensing
- **IP Rating**   Front panel is IP65 compliant
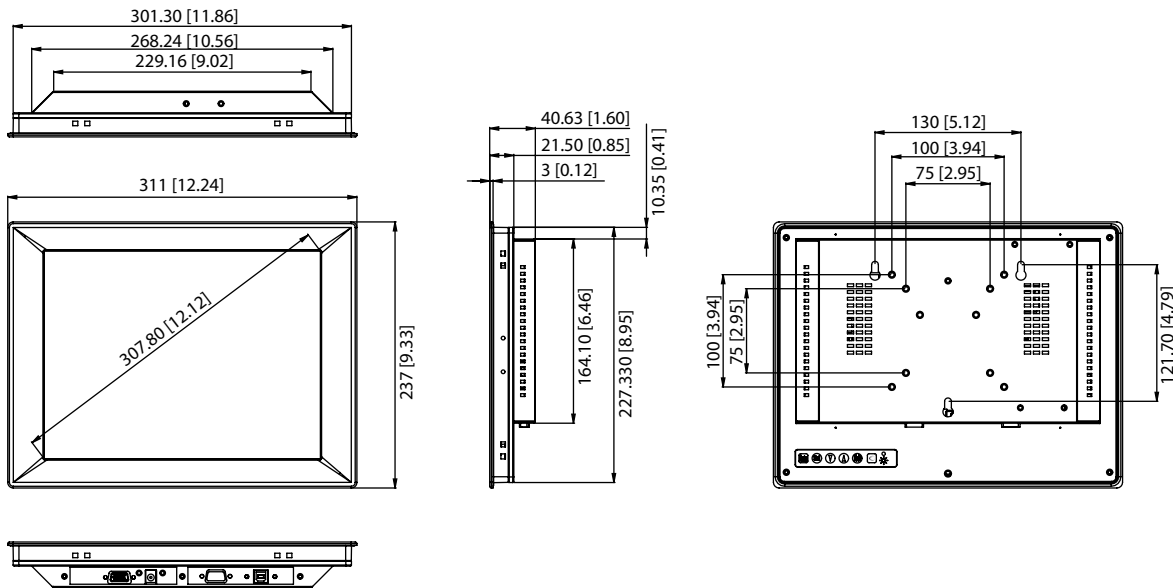- **Vibration**   5 ~ 500 Hz, 1 Grms (Operating, Random)

Ordering Information

- **FPM-2120G-R3BE**   12.1" XGA Industrial LED Monitor w/Resistive TS
                           (RS-232 and USB interfaces)

All product specifications are subject to change without notice.   ▲ Back to Top   Last updated: 31-Aug-2018

FPM-2120G

Dimensions

Unit: mm [inch]

301.30 [11.86]
268.24 [10.56]
229.16 [9.02]

311 [12.24]

307.80 [12.12]

237 [9.33]

40.63 [1.60]
21.50 [0.85]
3 [0.12]
10.35 [0.41]

164.10 [6.46]
227.330 [8.95]

130 [5.12]
100 [3.94]
75 [2.95]

100 [3.94]
75 [2.95]

121.70 [4.79]

Panel Cutout Dimensions: 303 x 229 mm (11.93 x 9.02 in)

Optional Accessories

- **FPM-1000T-SMKE**   Desktop/Wall Mounting kit for FPM series
- **1702002605**   Power Cable EU Plug 1.8 M
- **1702031801**   Power Cable UK Plug 1.8 M
- **1700000596-11**   Power Cable China/Australia Plug 1.8 M
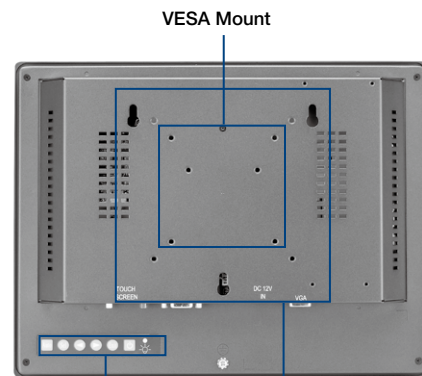- **1702002600**   Power Cable US Plug 1.8 M

I/O View

Touchscreen (USB)
Touchscreen (RS-232)
VGA Port
DC Jack 12V$_{DC}$
(100 ~ 240V$_{AC}$ adapter included)

Front View

Rear View

VESA Mount

OSD Control Keys   Wallmount

FPM Accessories

Panel Mount   Arm Mount   Rack Mount   VESA Mount

Panel Mount (* Included in accessory box)

Model Name	Part Number	Description
All FPM series	1962055040*	Clamper PPC-55 M1632611 A2
	1935042520	Screw M4*25L R/S D=8.3 H=2.5 + ST BZn

Stand/Wall Mount

Model Name	Part Number	Description
FPM-3121G	FPM-1000T-SMKE	Mounting kit for desktop, stand, and wall
FPM-3151G		
FPM-5000 series		
FPM-7000 series		

Adapter (* Included in accessory box)

Model Name	Part Number	Description
FPM-2000 series	96PSA-A60W12V1-1*	ADP A/D 100-240V 60W 12V C14 DC plug 180 °
FPM-3000 series	96PSA-A60W24T2	ADP A/D 100-240V 60W 24V C14 cord end terminal
FPM-5000 series		
FPM-7000 series		

Cable

Model Name	Part Number	Description
	1702002600	Power Cable US Plug 1.8 M
	1702002605	Power Cable EU Plug 1.8 M
	1702031801	Power Cable UK Plug 1.8 M
	1700000596-11	Power Cable China/Australia Plug 1.8 M
	1700000243	DVI cable 200cm
	1700019762	M cable DVI 24+1P(M)/DVI 24+1P(M) 300cm FPM-3121
	1700020273-01	M cable DisplayPort 20P(M)/ DisplayPort 20P(M)

General Panel PC

NEW

New Generation

Model	PPC-3060S	PPC-3100S/3120S/3150S			PPC-3150SW/3180SW/3210SW			PPC-3100/3120	
CPU	Intel® Celeron® 1.58 GHz Processor (Dual Core)	Intel® Celeron® 1.83 GHz Processor (Quad Core)			Intel® Pentium® 1.1 GHz Processor (Quad Core)		Intel® Celeron® 1.83 GHz Processor (Quad Core)	Intel® Atom™ 1.6GHz Processor (Quad Core)	
Memory	1 x SO-DIMM DDR3L 1333 MHz (max. 4 GB)	1 x SO-DIMM DDR3L 1333 MHz (max. 8 GB)			1 x SO-DIMM DDR3L 1333 MHz (max. 8 GB)		1 x SO-DIMM DDR3L 1333 MHz (max. 8 GB)	1 x SO-DIMM DDR3L 1333 MHz (max. 8 GB)	
Display Type	TFT LED LCD	TFT LED LCD	TFT LED LCD	TFT LED LCD	TFT LED LCD	TFT LED LCD	TFT LED LCD	TFT LED LCD	
Display Size	6.5	10.4	12.1	15	15.6	18.5	21.5	10.4	12.1
Screen Ratio	4:3	4:3			16:9		16:9	4:3	
Max. Resolution	640 x 480	800 x 600 / 1024 x 768	1024 x 768	1024 x 768	1366 x 768	1366 x 768	1920 x 1080	800 x 600	1024 x 768
Luminance cd/m²	800	400 / 350	500	400	400	300	300	400	600
Viewing Angle (H/V°)	160,140	160,140 / 176,176	160,140		170,160	170,160	178,178	160,140	
Backlight MTBF	50,000 hr	30,000 hr	30,000 hr	50,000 hr	50,000 hr	50,000 hr	50,000 hr	30,000 hr	50,000 hr
Touchscreen	5-wire resistive	Projected capacitive multi-touch/5-wire resistive			Projected capacitive multi-touch/5-wire resistive			5-wire resistive	
Network (LAN)	2 x GbE (Intel I211-AT)	2 x GbE (Intel I211-AT)			2 x GbE (Intel I211-AT,Intel I219LM)		2 x GbE (Intel I211-AT)	2 x GbE	
IO Ports	2 x serial ports: 1 x RS-232, 1 x RS-232/422/485 (adjustable via BIOS) 2 x USB 2.0, 1 x USB 3.0	2 x serial ports: 1 x RS-232, 1x RS-232/422/485 (adjustable via BIOS) 2 x USB 2.0, 1 x USB 3.0 (for PPC-3100S-RAE) 1 x USB 2.0, 1 x USB 3.0 (for PPC-3100S-PBE)			2 x serial ports: 1 x RS-232, 1 x RS-232/422/485 (adjustable via BIOS) 1 x USB 2.0, 2 x USB 3.0 1 x line out		2 x serial ports: 1 x RS-232, 1 x RS-232/422/485 (adjustable via BIOS) 1 x USB 2.0, 1 x USB 3.0	5 x serial ports: 4 x RS-232, 1 x isolated RS-422/485 4 x USB 3.0 1 x DB15 VGA 1 x HDMI 1 x line out, 1 x mic in	
Storage	1 x 2.5" SATA bay 1 x mSATA bay	1 x 2.5" SATA bay 1 x mSATA bay			1 x 2.5" SATA bay 1 x mSATA bay		1 x 2.5" SATA bay 1 x mSATA bay	1 x 2.5" SATA bay 1 x mSATA bay	
Expansion	1 x full-size mini PCIe	1 x full-size mini PCIe			1 x full-size mini PCIe		1 x full-size mini PCIe	1 x PCIe x1; 1 x PCI (only PPC-3120) 1 x full-size mini PCIe	
Power Input (Voltage)	12 ~ 24 V$_{DC}$	12 ~ 24 V$_{DC}$			12 ~ 24 V$_{DC}$		12 ~ 24 V$_{DC}$	9 ~ 32 V$_{DC}$	
Enclosure	Front: Aluminum alloy Back: SECC	Aluminum alloy			Aluminum alloy		Aluminum alloy	Front: Aluminum alloy Back: Plastic + SECC	
Ingress Protection	Front panel: IP65	Front panel: IP65			Front panel: IP65		Front panel: IP65	Front panel: IP65	
Mounting	Panel, VESA 75, wall, stand, ARM	Panel, VESA 75, wall, stand, ARM			Panel, VESA 75, wall, stand, ARM		Panel, VESA 75, wall, stand, ARM	Panel, VESA 75, wall, stand, ARM	
Operating Temperature	0 ~ 50°C (32 ~ 122°F) with SSD 0 ~ 40°C (32 ~ 104°F) with HDD	0 ~ 50°C (32 ~ 122°F) with SSD 0 ~ 40°C (32 ~ 104°F) with HDD			0 ~ 50°C (32 ~ 122°F) with SSD 0 ~ 40°C (32 ~ 104°F) with HDD		0 ~ 50°C (32 ~ 122°F) with SSD 0 ~ 40°C (32 ~ 104°F) with HDD	0 ~ 50°C (32 ~ 122°F) with 2.5" SATA SSD -20 ~ 60°C (-4 ~ 140°F) with -40 ~ 85°C mSATA or 2.5" SATA SSD	
Storage Temperature	-30 ~ 60°C (-22 ~ 140°F)	-40 ~ 60°C (-40 ~ 140°F)			-20 ~ 60°C (-4 ~ 140°F)		-20 ~ 60°C (-4 ~ 140°F)	-40 ~ 60°C (-40 ~ 140°F)	
Dimensions	197.6 x 150.6 x 41 mm (7.8" x 5.9" x 1.6")	272 x 217 x 46 mm (10.7" x 8.5" x 1.8")	317 x 246 x 49 mm (12.5" x 9.7" x 1.9")	391.3 x 312.4 x 51.5 mm (15.4" x 12.3" x 2.0")	419.7 x 269 x 54 mm (16.52" x 10.59" x 2.16")	488 x 309 x 55 mm (19.21" x 12.17" x 2.16")	558.4 x 349.8 x 56.2 mm (22" x 13.8" x 2.2")	271.8 x 216.8 x 57.5 mm (10.7" x 8.53" x 2.26")	317 x 217 x 60.5 mm (12.5" x 9.7" x 2.4")
Weight	1.5 kg	1.9 kg	2.1 kg	4 kg	5.4 kg	7 kg	7.5 kg	2.5 kg	3.3 kg
Certification	BSMI, CCC, CB, UL, CE, FCC Class B	BSMI, CCC, CB, UL, CE, FCC Class B			BSMI, CCC, CB, UL, CE, FCC Class B		BSMI, CCC, CB, UL, CE, FCC Class B	BSMI, CCC, CB, UL, CE, FCC Class B	
Operating System	Windows 7/8.1/10, WES7, WEC7, Linux, Android 4.4	Windows 7/8.1/10, WES7, WEC7, Linux, Android 4.4			Windows 10, Linux, Android		Windows 7/8.1/10, WES7, WEC7, Linux, Android 4.4	Windows 10, Linux, Android	

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General Panel PC

NEW

| Model	PPC-3150/3170/3190			PPC-3151	PPC-4151W/4211W		PPC-3181SW/3211SW	
CPU	Intel® Atom™ 1.91 GHz Processor (Quad Core)			6th Gen Intel® Core™ i5 processor (Dual Core)	4th Gen. Intel® Core™ i5/ i3 Processor (Dual Core)		6th Gen Intel® Core™ i5 processor (Dual Core)	
Memory	1 x SO-DIMM DDR3L 1333 MHz (max. 8 GB)			1 x SO-DIMM DDR4 1866/2133 MHz (max. 16 GB) (1.2 V)	1 x SO-DIMM DDR3L 1333/1600 MHz (max. 8 GB)		1 x SO-DIMM DDR4 1866/2133 MHz (max. 16 GB)	
Display Type	TFT LED LCD	TFT LED LCD	TFT LED LCD	TFT LED LCD	TFT LED LCD		TFT LED LCD	
Display Size	15	17	19	15	15.6	21.5	18.5	21.5
Screen Ratio	4:3			4:3	16:9		16:9	
Max. Resolution	1024 x 768	1280 x 1024	1280 x 1024	1024 x 768	1366 x 768	1920 x 1080	1366 x 768	1920 x 1080
Luminance cd/m²	400	350	350	400	400	300	300	300
Viewing Angle (H/V°)	160,140	160,140	170,160	160,140	170,160	178,178	170,160	178,178
Backlight MTBF	50,000 hr	50,000 hr	50,000 hr	50,000 hr	50,000 hr	50,000 hr	50,000 hr	50,000 hr
Touchscreen	5-wire resistive			Projected capacitive multi-touch	Projected capacitive multi-touch/5-wire resistive		Projected capacitive multi-touch	
Network (LAN)	2 x GbE (Intel I210)			2 x GbE (Intel® I211-AT, I219LM)	2 x GbE (Intel I211-AT,Intel I218LM)		2 x GbE (Intel I211-AT,Intel I219LM)	
IO Ports	5 x serial ports: 4 x RS-232 (2 x external and 2 x via internal pin header, requires optional module), 1 x USB 3.0, 3 x USB 2.0 1 x VGA 1 x DP1.1a 1 x GPIO (8 channels, TTL level) via internal pin header (requires optional module) 1 x line out, 1 x mic in			5 x serial ports: 4 x RS-232 (2 x via internal pin header, requires additional optional module), 1 x isolated RS-422/485, 4 x USB 3.0 1 x VGA 1 x DP1.2 1 x GPIO (8 channels, TTL level) via internal pin header 1 x line out, 1 x mic in	5 x serial ports: 4 x RS-232, 1 x isolated RS-422/485, 4 x USB 3.0 (rear), 1 x USB 2.0 (right side) 1 x DB15 VGA 1 x display port (1.2) 1 x line out, 1 x mic in		2 x serial ports: 1 x RS-232, 1 x RS-232/422/485 (adjustable via BIOS) 2 x USB 3.0, 2 x USB 2.0 (right side) 1 x HDMI	
Storage	1 x 2.5" SATA bay 1 x mSATA bay			1 x 2.5" SATA bay 1 x M.2 bay (22 x 42 mm)	1 x 2.5" SATA bay 1 x mSATA bay	2 x 2.5" SATA bay (Intel RAID) 1 x mSATA bay	1 x 2.5" SATA bay 1 x mSATA bay	
Expansion	1 x PCI (standard); 1 x PCIe x1 (in the accessory box) 1 x Full-size mini PCIe Optional: 1 x Cfast; 1 x CF card; 1 x Internal USB dongle; 2 x RS-232 or 1 x RS-232 + 1 x GPIO			1 x PCIe x4 (standard); 1 x PCI (in the accessory box) 1 x Full-size mini PCIe Optional: 1 x CFast; 1 x CF card; 1 x Internal USB dongle; 2 x RS-232 or 1 x RS-232 + 1 x GPIO	1 x PCIe x4 (standard); 1 x PCI (in the accessory box) 1 x Full-size mini PCIe		1 x Full-size mini PCIe	
Power Input (Voltage)	9 ~ 32 V_DC			9 ~ 32 V_DC	9 ~ 32 V_DC	12 ~ 32 V_DC	12 ~ 24 V_DC	
Enclosure	Plastic			Front: Aluminum alloy Back: Plastic	Front: Aluminum alloy Back: Plastic		Aluminum alloy	
Ingress Protection	Front panel: IP65			Front panel: IP65	Front panel: IP65		Front panel: IP65	
Mounting	Panel, VESA 75, wall, stand, ARM			Panel, VESA 75, wall, stand, ARM	Panel, VESA 75/100, wall, stand, ARM		Panel, VESA 100, wall, stand, ARM	
Operating Temperature	0 ~ 50°C (32 ~ 122°F) with 2.5 SATA HDD -20 ~ 60°C (-4 ~ 140°F) with -40 ~ 85°C mSATA or 2.5 SATA SSD			0 ~ 50°C (32 ~ 122°F) with SSD 0 ~ 45°C (32 ~ 104°F) with HDD	0 ~ 50°C (32 ~ 122°F) with SSD 0 ~ 45°C (32 ~ 104°F) with HDD	0 ~ 50°C (32 ~ 122°F)	0 ~ 50°C (32 ~ 122°F) with SSD 0 ~ 45°C (32 ~ 104°F) with HDD	
Storage Temperature	-40 ~ 60°C (-40 ~ 140°F)		-30 ~ 60°C (-22 ~ 140°F)	-40 ~ 60°C (-40 ~ 140°F)	-20 ~ 60°C (-4 ~ 140°F)		-20 ~ 60°C (-4 ~ 140°F)	
Dimensions	396.5 x 317.6 x 65.3 mm (15.6" x 12.5" x 2.57")	442.0 x 362.0 x 69.5 mm (17.4" x 14.3" x2.74")	458.2 x 384 x 67.3 mm (18" x 15" x 2.6")	391.4 x 312.5 x 55.35 mm (15.41" x 12.3" x 2.18")	419.7 x 269 x 59 mm (16.52" x 10.59" x 2.32")	558.4 x 349.8 x 63.6 mm (22" x 13.8" x 2.5")	488 x 309 x 61 mm (19.21" x 12.17" x 2.4")	558.4 x 349.8 x 62.3 mm (22" x 13.8" x 2.45")
Weight	5.3 kg	6.3 kg	7.9 kg	5.4 kg	5.69 kg	7.8 kg	7.6 kg	8.1 kg
Certification	BSMI, CCC, CB, UL, CE, FCC Class A			BSMI, CCC, CB, UL, CE, FCC Class B	BSMI, CCC, CB, UL, CE, FCC Class B		BSMI, CCC, CB, UL, CE, FCC Class B	
Operating System	Windows 7/8.1/10, WES7, WEC7, Linux			Windows 7/8.1/10, Linux	Windows 7/8.1/10, WES7, Linux		Windows 7/8.1/10, WEC7, Linux	

General Panel PC

Model	PPC-6151C/6171C/6191C-RTAE PPC-MB-8260AE			PPC-6151C/6171C/6191C-RMAE Support certified mini-ITX motherboards			PPC-6120
CPU	6th Gen. Intel® Core™ i3/i5/i7/Celeron® Processor			Support processor up to 45W TDP depending on the Mini-ITX motherboard			4th Gen. Intel® Core™ i3/i5/i7/ Celeron® Processor
Memory	1 x SO-DIMM DDR4 2133 MHz (max. 16 GB)			Subject to mini-ITX motherboard specifications			2 x SO-DIMM DDR3/DDR3L 1066/1333 MHz (max. 16/8 GB per SO-DIMM)
Display Type	TFT LED LCD			TFT LED LCD			TFT LED LCD
Display Size	15	17	19	15	17	19	12.1
Screen Ratio	4:3			4:3			4:3
Max. Resolution	1024 x 768	1280 x 1024	1280 x 1024	1024 x 768	1280 x 1024	1280 x 1024	1024 x 768
Luminance cd/m²	400	350	350	400	350	350	600
Viewing Angle (H/V°)	160,140	160,140	170,160	160,140	160,140	170,160	160,140
Backlight MTBF	50,000 hr			50,000 hr			50,000 hr
Touchscreen	Projected capacitive multi-touch/5-wire resistive			Projected capacitive multi-touch/5-wire resistive			5-wire resistive
Network (LAN)	2 x GbE (Intel I211)			Subject to mini-ITX motherboard specifications			2 x GbE(Intel I211, Intel I217LM)
IO Ports	5 x serial ports: 3 x RS-232 (by cabling), 1 x RS-232/422/485, 1 x RS-232, 4 x USB3.0 (ext.), 2 x USB2.0 (int. pin head) 1 x DP 1.3, 1 x VGA 1 x line out, 1 x mic in 1 x GPIO (8-bit) (by cabling)			4 x Reserved ports 2 x WLAN antenna ports Subject to mini-ITX motherboard specifications			5 x serial ports: 4 x RS-232, 1 x isolated RS-422/485 4 x USB 3.0 (Ext.), 2 x USB 2.0 (int. pin head) 1 x display port 1.2 1 x VGA 1 x line out, 1 x mic in
Storage	1 x 2.5" SATA bay 1 x mSATA bay			2 x 2.5" SATA bay			1 x 2.5" SATA bay 1 x mSATA bay
Expansion	1 x PCIe x4 (standard); 2 x PCI (in the accessory box) Optional: 2 x PCIe x1 1 x PCIe x1 + 1 x PCI 1 x Full-size mini PCIe or 1 x mSATA Bay			Subject to mini-ITX motherboard specifications			1 x PCIe x4 or 1 x PCI (Optional) 1 x Full-size mini PCIe
Power Input (Voltage)	100 ~ 240 V$_{AC}$			100 ~ 240 V$_{AC}$			12 ~ 30 V$_{DC}$
Enclosure	Front: Aluminum alloy Back: Plastic			Front: Aluminum alloy Back: Plastic			Plastic
Ingress Protection	Front panel: IP65			Front panel: IP65			Front panel: IP65
Mounting	Panel, VESA 75/100, wall, stand, ARM			Panel, VESA 75/100, wall, stand, ARM			Panel, VESA 75, wall, stand, ARM
Operating Temperature	0 ~ 50°C (32 ~ 122°F)			0 ~ 50°C (32 ~ 122°F)			0 ~ 50°C (32 ~ 122°F)
Storage Temperature	-30 ~ 60°C (-22 ~ 140°F)			-30 ~ 60°C (-22 ~ 140°F)			-40 ~ 60°C (-40 ~ 140°F)
Dimensions	391.4 x 312.5 x 103.6 mm (15.4" x 12.3" x 4.08")	437 x 357 x 107.6 mm (17.2" x 14.06" x 4.2")	454 x 379.8 x 107.5 mm (17.9" x 15" x 4.2")	391.4 x 312.5 x 103.6 mm (15.4" x 12.3" x 4.08")	437 x 357 x 107.6 mm (17.2" x 14.06" x 4.2")	454 x 379.8 x 107.5 mm (17.9" x 15" x 4.2")	325 x 253.8 x 73.8 mm (12.80" x 9.99" x 2.91")
Weight	5.03 kg	5.4 kg	5.8 kg	5.03 kg	5.4 kg	5.8 kg	3.8 kg
Certification	BSMI, CCC, CB, UL, CE, FCC Class A			CB, UL, CE, FCC classA			BSMI, CCC, CB, UL, CE, FCC Class A
Operating System	Windows 7/8.1/10, Linux			Subject to mini-ITX motherboard specifications			Windows 7/8.1/10, Linux, WEC7, WES7P

PPC-3060S

6.5" Fanless Panel PC with Intel® Celeron® N2807 Processor
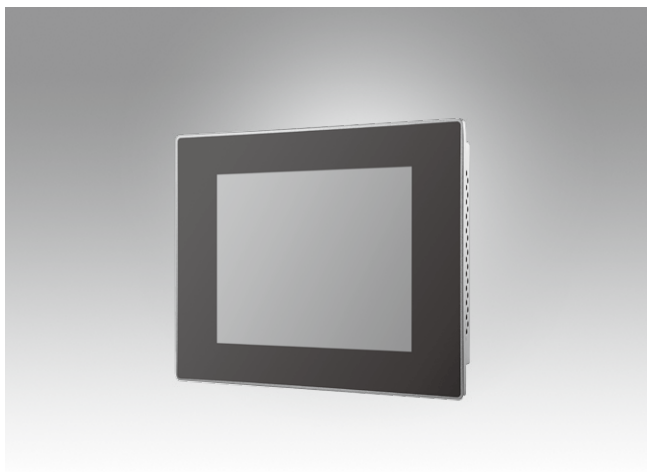
Features

- Industrial-grade 6.5" VGA TFT LCD with LED backlight
- Durable true-flat touchscreen with 5-wire resistive touch control
- Intel® Celeron® N2807 dual-core, 1.58 GHz, processor
- Up to 4 GB DDR3L SDRAM
- Compact, fanless design with IP65-rated front panel
- Supports expansion via full-size mini PCIe
- Supports Windows Embedded and Android OS
- Supports VESA 75 x 75 mounting holes

SUSIAccess   Windows Embedded   VCCI   CCC   EHC   C E   FCC   RoHS   UL LISTED E190681 I.T.E.

Introduction

The PPC-3060S is a high-value, ultra-slim panel PC equipped with a 6.5" VGA TFT LCD, and low-power Intel® Celeron® N2807, 1.58 GHz, processor to provide high-performance computing in a compact and fanless system. For high durability and functionality, the PPC-3060S features an IP65-rated front panel, true-flat 5-wire resistive touchscreen, two serial ports, three USB ports, and two GbE LAN ports, making it suitable for diverse industrial applications.
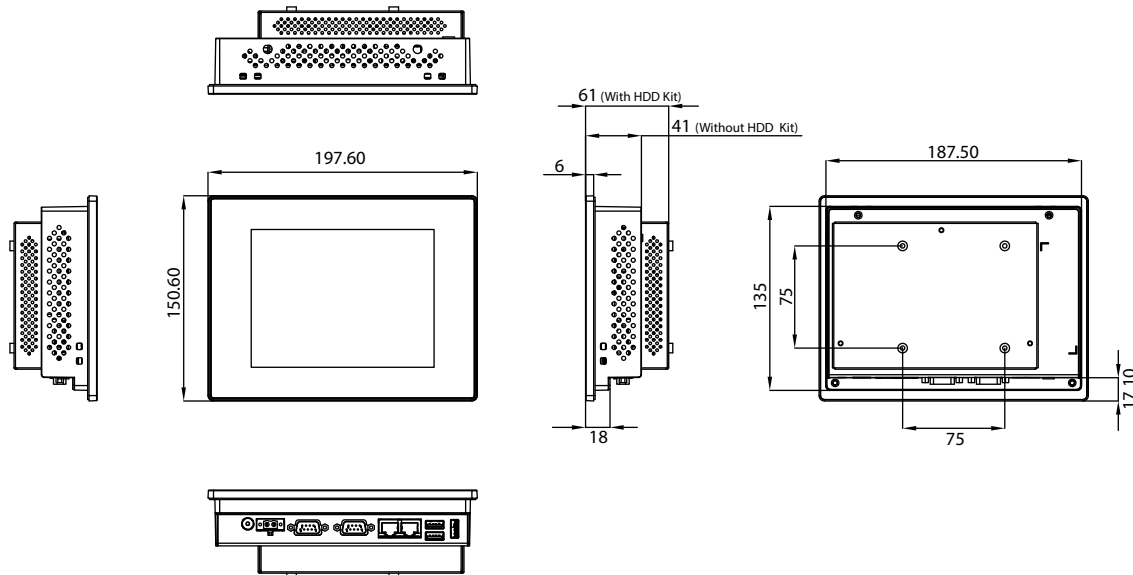
Specifications

System	CPU	Intel® Celeron® N2807 dual core
	Frequency	1.58 GHz
	L2 Cache	1 MB
	Memory	1 x SODIMM DDR3L 1333 MHz (max. 4 GB)
	Storage	1 x 2.5" SATA bay (optional; requires a bracket module for installation) 1 x mSATA Bay (default)
	Network (LAN)	2 x 10/100/1000 Mbps Ethernet (Intel 211)
	I/O	2 x Serial ports: 1 x RS-232, 1x RS-232/422/485 (Adjustable through BIOS) 2 x USB 2.0, 1 x USB 3.0
	Expansion	1 x Full-size mini PCIe slot
	Watchdog Timer	255 timer levels, set up by software
Physical Characteristics	Dimensions	197.6 x 150.6 x 41 mm (7.8 x 5.9 x 1.6 in)
	Weight	1.5 kg (3.30 lb)
OS Support	OS Support	Microsoft® Windows 7/8.1/10 (32/64-bit), WES7, WEC7, Linux, Android
Power Consumption	Input Voltage	12 ~ 24 V$_{DC}$
	Power Consumption	11 W (Burn-in test 7.0 in Windows 7, 32-bit)
LCD	Display Type	6.5" TFT LCD (LED backlight)
	Resolution	640 x 480
	Viewing Angle	80 (left), 80 (right), 70 (up), 70 (down)
	Luminance (cd/m²)	800
	Contrast Ratio	600
	Backlight Lifetime	50,000 hr (typical)
Touchscreen	Touch Type	ELO 5-wire resistive touch
	Light Transmission	80±5% at 550 nm wavelength
	Controller	RS232 interface
	Durability (Touches)	Greater than 35 million touches in one location without failure
Environment	Operating Temperature	0 ~ 50 °C (32 ~ 122 °F) with SSD 0 ~ 40 °C (32 ~ 104 °F) with HDD
	Storage Temperature	-30 ~ 60 °C (-22 ~ 140 °F)
	Relative Humidity	10 ~ 95% @ 40 °C (non-condensing)
	Shock	Operating 10 G peak acceleration (11 ms duration), follow IEC 60068-2-27
	Vibration	Operating Random Vibration Test 5 ~ 500Hz, 1Grms @with HDD; 2Grms @with SSD, follow IEC 60068-2-64
	EMC	CE, FCC Class B, BSMI
	Safety	CB, CCC, BSMI, UL
	Front Panel Protection	IP65 compliant

Dimensions

Unit: mm

61 (With HDD Kit)

41 (Without HDD Kit)

6

197.60

150.60

18

187.50

135

75

75

17.10

Panel Cutout Dimensions: 189 x 136.5 mm (7.44 x 5.37 in)

Ordering Information

Part Number	Description
PPC-3060S-N80AE	Intel Celeron N2807 Fanless Panel PC with 6.5" LCD LED backlight
98R3P30600E	Bracket module for 2.5" SSD/HDD installation
PPC-WLAN-B1E	Wi-Fi Module with Antenna Cable 40cm for PPC
PPC-ARM-A03	ARM VESA Standard (A-CLEVER) for PPC series
PPC-174T-WL-MTE	Wall mount kit for PPC series
PPC-Stand-A1E	Stand for PPC series
96PSA-A90W19OT-1	ADP A/D 100-240V 90W 19V W/PFC
1700001524	Power cord 3P UL 10A 125V 1.8M
170203183C	Power cord 3P Europe (WS-010+083) 183cm
1700008921	Power cord 3P/3P 1.8M PSE
96CB-POWER-B-1.8M	Power code 3P CCC(China) 1.8M

I/O View

A. Power Switch
B. DC-In
C. RS-232
D. RS-232/422/485

E. 2 x RJ45 LAN
F. 1 x USB 2.0, 1 x USB 3.0
G. USB 2.0

ADVANTECH

General Panel PCs
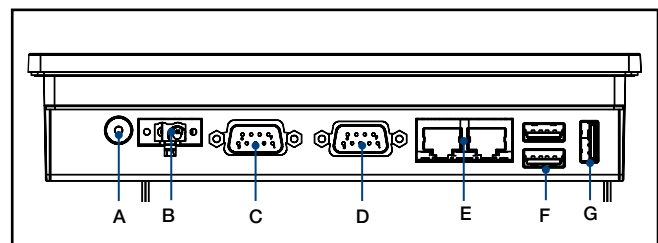
PPC-3100S

10.4" Fanless Panel PC with Intel® Celeron® N2930 Processor

Features

- Industrial-grade 10.4" SVGA/XGA TFT LCD with 30K backlight lifetime
- Durable true-flat touchscreen with 5-wire resistive/projected capacitive touch control
- Intel® Celeron® N2930 quad-core, 1.83 GHz, processor
- Up to 8 GB DDR3L SDRAM
- 1 x RS-232, 1 x RS-232/422/485, 2 x USB 2.0, and 1 x USB 3.0
- Compact, fanless design with solid aluminum alloy enclosure and IP65-rated front panel
- Supports E-Eye monitoring and protection
- Supports expansion via full-size mini PCIe
- Supports Windows Embedded and Android OS
- Supports VESA 75 x 75 mounting holes

Introduction

The PPC-3100S is a high-value, ultra-slim panel PC equipped with a 10.4" SVGA/XGA TFT LCD, and low-power Intel® Celeron® N2930, 1.83 GHz, processor to provide high-performance computing in a compact and fanless system. For high durability and functionality, the PPC-3100S features an IP65-rated front panel, true-flat touchscreen with 5-wire resistive/projected capacitive touch, two serial ports, three USB ports, and two GbE LAN ports, making it suitable for diverse industrial applications. To provide further system monitoring and protection capabilities, e-Eye technology is provided at the rear of the panel PC for indicating the system operating status to facilitate detection and analysis.
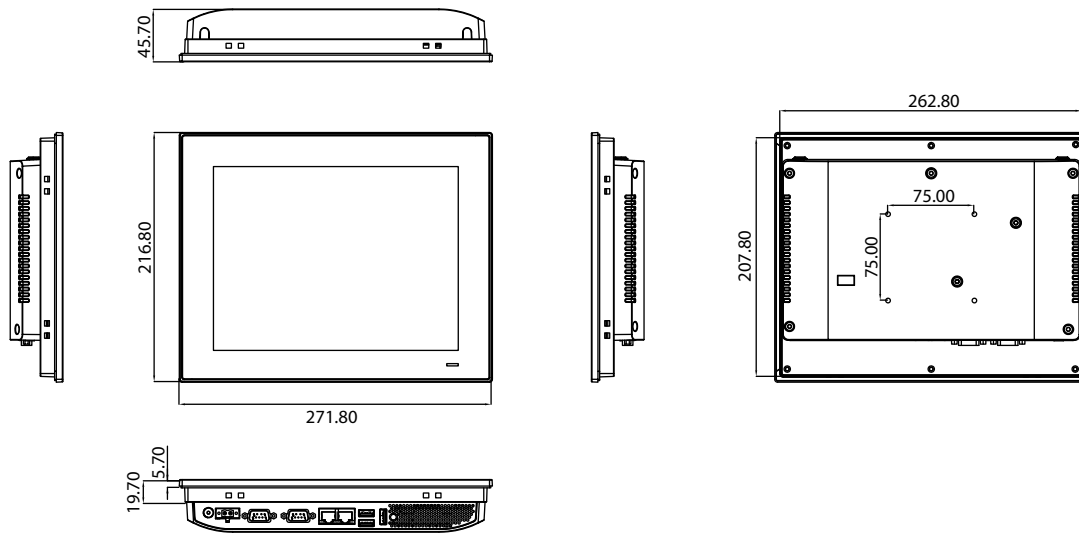
Specifications

		PPC-3100S-RAE	PPC-3100S-PBE
System	CPU	Intel® Celeron® N2930 quad core	
	Frequency	1.83 GHz	
	L2 Cache	2 MB	
	Memory	1 x SODIMM DDR3L 1333 MHz (max. 8 GB)	
	Storage	1 x 2.5" SATA Bay bay (optional; requires a bracket module for installation) 1 x mSATA Bay (default)	
	Network (LAN)	2 x 10/100/1000 Mbps Ethernet (Intel 211)	
	I/O	2 x Serial ports: 1 x RS-232, 1x RS-232/422/485 (Adjustable through BIOS) 2 x USB 2.0, 1 x USB 3.0 (for PPC-3100S-RAE) 1 x USB 2.0, 1 x USB 3.0 (for PPC-3100S-PBE)	
	Expansion	1 x Full-size mini PCIe slot	
	Watchdog Timer	255 timer levels, set up by software	
Physical Characteristics	Dimensions	272 x 217 x 46 mm (10.7 x 8.5 x 1.8 in)	
	Weight	1.9 kg (4.18 lb)	
OS Support	OS Support	Microsoft® Windows 7/8.1/10 (32/64-bit), WES7, WEC7, Linux, Android 4.4	
Power Consumption	Input Voltage	12 ~ 24 V_{DC}	
	Power Consumption	16W (Burn-in test 7.0 in Windows 7, 32-bit)	
LCD	Display Type	10.4" TFT LCD (LED backlight)	10.4" TFT LCD (LED backlight)
	Resolution	800 x 600	1024 x 768
	Viewing Angle	80 (left), 80 (right), 70 (up), 70 (down)	88 (left), 88 (right), 88 (up), 88 (down)
	Luminance (cd/m²)	400	350
	Contrast Ratio	700	1200
	Backlight Lifetime	30,000 hr (min.)	30,000 hr (min.)
Touchscreen	Touch Type	ELO 5-wire resistive	5-point multi-touch projected capacitive
	Light Transmission	80±5% at 550nm wavelength	88±2%
	Controller	RS232 interface	USB interface
	Durability/Surface Hardness	Greater than 35million touches in one location without failure	Cover glass > 7H
Environment	Operating Temperature	0 ~ 50 °C (32 ~ 122 °F) with SSD 0 ~ 40 °C (32 ~ 104 °F) with HDD	
	Storage Temperature	-40 ~ 60 °C (-40 ~ 140 °F)	
	Relative Humidity	10 ~ 95% @ 40 °C (non-condensing)	
	Shock	Operating 10 G peak acceleration (11 ms duration), follow IEC 60068-2-27	
	Vibration	Operating Random Vibration Test 5 ~ 500Hz, 1Grms @with HDD; 2Grms @with SSD, follow IEC 60068-2-64	
	EMC	CE, FCC Class B, BSMI	
	Safety	CB, CCC, BSMI, UL	
	Front Panel Protection	IP65 compliant	

All product specifications are subject to change without notice.   ▲ Back to Top   Last updated: 31-Aug-2018

Dimensions

Unit: mm

45.70

216.80

271.80

262.80

75.00
75.00

207.80

5.70
19.70

Panel Cutout Dimensions: 265 x 210 mm (10.43 x 8.26 in)

Ordering Information

Part Number	Description
PPC-3100S-RAE	Intel Celeron N2930 Fanless Panel PC with 10.4" SVGA LED backlight, Resistive 5 wire touch screen
PPC-3100S-PBE	Intel Celeron N2930 Fanless Panel PC with 10.4" XGA LED backlight, Projected Capacitive Multi-touch screen
PPC-3100S-HDDE	Bracket module for 2.5' SSD/HDD installation
96PSA-A90W19OT-1	ADP A/D 100-240V 90W 19V W/PFC
PPC-WLAN-B1E	Wi-Fi Module with Antenna Cable 40cm for PPC
PPC-ARM-A03	ARM VESA Standard (A-CLEVER) for PPC series
PPC-174T-WL-MTE	Wall mount kit for PPC series
PPC-Stand-A1E	Stand for PPC series
1700001524	Power cord 3P UL 10A 125V 1.8M
170203183C	Power cord 3P Europe (WS-010+083) 183cm
1700008921	Power cord 3P/3P 1.8M PSE
96CB-POWER-B-1.8M	Power code 3P CCC(China) 1.8M

I/O View

A   B   C   D   E   F   G

PPC-3100S-RAE

A   B   C   D   E   F

PPC-3100S-PBE

A. Power Switch
B. DC-In
C. RS-232
D. RS-232/422/485
E. 2 x RJ45 LAN
F. 1 x USB 2.0, 1 x USB 3.0
G. USB 2.0

PPC-3120S

12.1" Fanless Panel PC with Intel® Celeron® N2930 Processor

1
Software and Industry Solutions

2
Industrial Server

3
Intelligent System

4
Intelligent HMI and Monitors

5
Automation Computers and Controllers

6
Industrial Communication

7
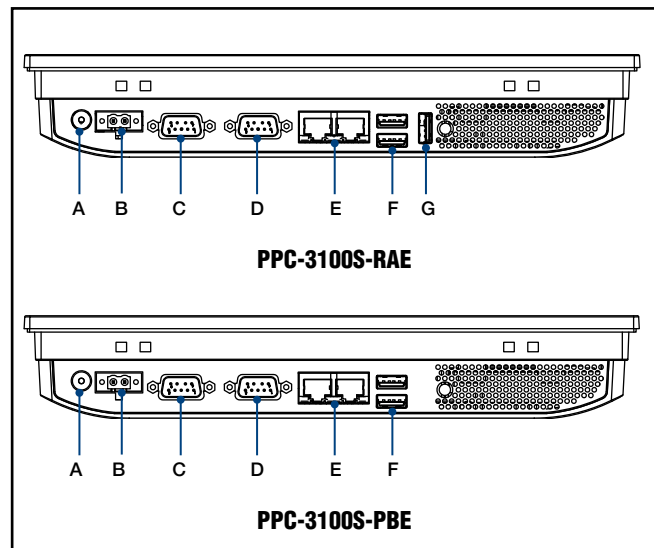Remote I/O Modules

8
Industrial I/O and Video Solutions

Features

- Industrial-grade 12.1" XGA TFT LCD with 30K backlight lifetime
- Durable true-flat touchscreen with 5-wire resistive touch control
- Intel® Celeron® N2930 quad-core, 1.83 GHz, processor
- Up to 8 GB DDR3L SDRAM
- 1 x RS-232, 1 x RS-232/422/485, 2 x USB 2.0, and 1 x USB 3.0
- Compact, fanless design with solid aluminum alloy enclosure and IP65-rated front panel
- Supports E-Eye monitoring and protection
- Supports expansion via full-size mini PCIe
- Supports Windows Embedded and Android OS
- Supports VESA 75 x 75 mounting holes

SUSIAccess   Windows Embedded   VCI   CCC   EHC   CE   FCC   R33138 RoHS   LISTED E190881 I.T.E. c UL us

Introduction

The PPC-3120S is a high-value, ultra-slim panel PC equipped with a 12.1" XGA TFT LCD, and low-power Intel® Celeron® N2930, 1.83 GHz, processor to provide high-performance computing in a compact and fanless system. For high durability and functionality, the PPC-3120S features an IP65-rated front panel, true-flat 5-wire resistive touchscreen, two serial ports, three USB ports, and two GbE LAN ports, making it suitable for diverse industrial applications. To provide further system monitoring and protection capabilities, e-Eye technology is provided at the rear of the panel PC for indicating the system operating status to facilitate detection and analysis.
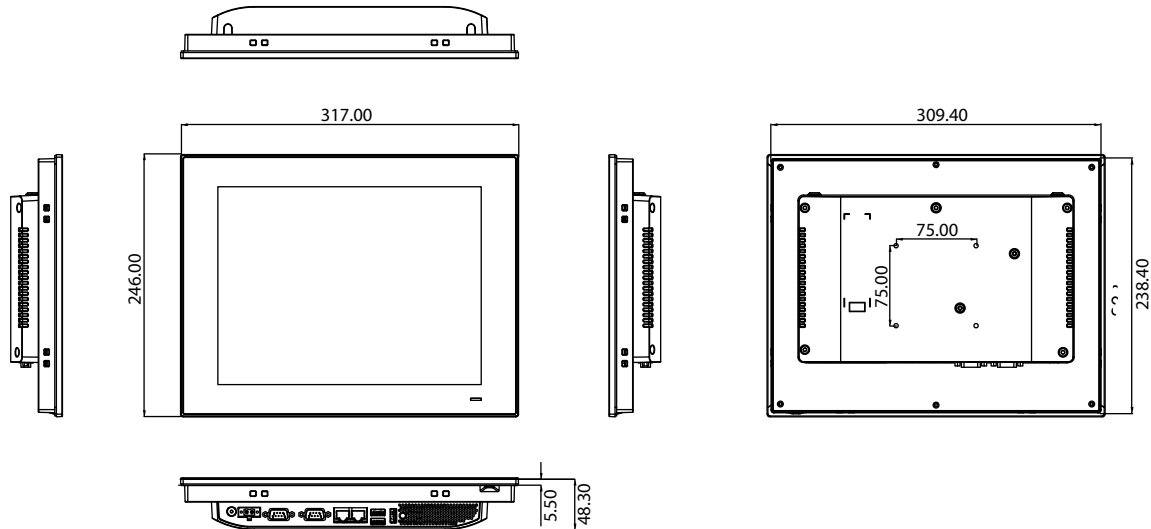
Specifications

System	CPU	Intel® Celeron® N2930 quad core
	Frequency	1.83 GHz
	L2 Cache	2 MB
	Memory	1 x SODIMM DDR3L 1333 MHz (max. 8 GB)
	Storage	1 x 2.5" SATA bay (optional; requires a bracket module for installation) 1 x mSATA bay (default)
	Network (LAN)	2 x 10/100/1000 Mbps Ethernet (Intel I211-AT)
	I/O	2 x Serial ports: 1 x RS-232, 1x RS-232/422/485 (Adjustable through BIOS) 2 x USB 2.0, 1 x USB 3.0
	Expansion	1 x Full-size mini PCIe slot
	Watchdog Timer	255 timer levels, set up by software
Physical Characteristics	Dimensions	317 x 246 x 49 mm (12.5 x 9.7 x 1.9 in)
	Weight	2.1 kg (4.63 lb)
OS Support	OS Support	Microsoft® Windows 7/8.1/10 (32/64-bit), WES7, WEC7, Linux, Android 4.4
Power Consumption	Input Voltage	12 ~ 24 V_{DC}
	Power Consumption	18W (Burn-in test 7.0 in Windows 7, 32-bit)
LCD	Display Type	12.1" TFT LCD (LED backlight)
	Resolution	1024 x 768
	Viewing Angle	80 (left), 80 (right), 70 (up), 70 (down)
	Luminance (cd/m²)	500
	Contrast Ratio	700
	Backlight Lifetime	30,000 hr (min.)
Touchscreen	Touch Type	ELO 5-wire resistive touch
	Light Transmission	80±5% at 550 nm wavelength
	Controller	RS232 interface
	Durability (Touches)	Greater than 35 million touches in one location without failure
Environment	Operating Temperature	0 ~ 50 °C (32 ~ 122 °F) with SSD 0 ~ 40 °C (32 ~ 104 °F) with HDD
	Storage Temperature	-40 ~ 60 °C (-40 ~ 140 °F)
	Relative Humidity	10 ~ 95% @ 40 °C (non-condensing)
	Shock	Operating 10 G peak acceleration (11 ms duration), follow IEC 60068-2-27
	Vibration	Operating Random Vibration Test 5 ~ 500Hz, 1Grms @with HDD; 2Grms @with SSD, follow IEC 60068-2-64
	EMC	CE, FCC Class B, BSMI
	Safety	CB, CCC, BSMI, UL
	Front Panel Protection	IP65 compliant

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All product specifications are subject to change without notice.   ▲ Back to Top   Last updated: 31-Aug-2018

Dimensions

Unit: mm

317.00

246.00

309.40

75.00

75.00

238.40

5.50

48.30

Panel Cutout Dimensions: 311 x 240 mm (12.24 x 9.44 in)

Ordering Information

Part Number	Description
PPC-3120S-RAE	Intel Celeron N2930 Fanless Panel PC with 12.1" XGA LED backlight
PPC-3100S-HDDE	Bracket module for 2.5" SSD/HDD installation
96PSA-A90W19OT-1	ADP A/D 100-240V 90W 19V W/PFC
PPC-WLAN-B1E	Wi-Fi Module with Antenna Cable 40cm for PPC
PPC-ARM-A03	ARM VESA Standard (A-CLEVER) for PPC series
PPC-174T-WL-MTE	Wall mount kit for PPC series
PPC-Stand-A1E	Stand for PPC series
1700001524	Power cord 3P UL 10A 125V 1.8M
170203183C	Power cord 3P Europe (WS-010+083) 183cm
1700008921	Power cord 3P/3P 1.8M PSE
96CB-POWER-B-1.8M	Power code 3P CCC(China) 1.8M

I/O View

A. Power Switch
B. DC-In
C. RS-232
D. RS-232/422/485

E. 2 x RJ45 LAN
F. 1 x USB 2.0, 1 x USB 3.0
G. USB 2.0

PPC-3150S

15" Fanless Panel PC with Intel® Celeron® N2930 Processor

Features

- Industrial-grade 15" XGA TFT LCD with 30K backlight lifetime
- Durable true-flat touchscreen with 5-wire resistive touch control
- Intel® Celeron® N2930 quad-core, 1.83 GHz, processor
- Up to 8 GB DDR3L SDRAM
- 1 x RS-232, 1 x RS-232/422/485, 2 x USB 2.0, and 1 x USB 3.0
- Compact, fanless design with solid aluminum alloy enclosure and IP65-rated front panel
- Supports E-Eye monitoring and protection
- Supports expansion via full-size mini PCIe
- Supports Windows Embedded and Android OS
- Supports VESA 75 x 75 mounting holes

SUSIAccess   Windows Embedded   VCI   CCC   EHC   C   CE   FCC   R33138 RoHS   c UL us LISTED E190881 I.T.E.

Introduction

The PPC-3150S is a high-value, ultra-slim panel PC equipped with a 15" XGA TFT LCD, and low-power Intel® Celeron® N2930, 1.83 GHz, processor to provide high-performance computing in a compact and fanless system. For high durability and functionality, the PPC-3150S features an IP65-rated front panel, true-flat 5-wire resistive touchscreen, two serial ports, three USB ports, and two GbE LAN ports, making it suitable for diverse industrial applications. To provide further system monitoring and protection capabilities, e-Eye technology is provided at the rear of the panel PC for indicating the system operating status to facilitate detection and analysis.
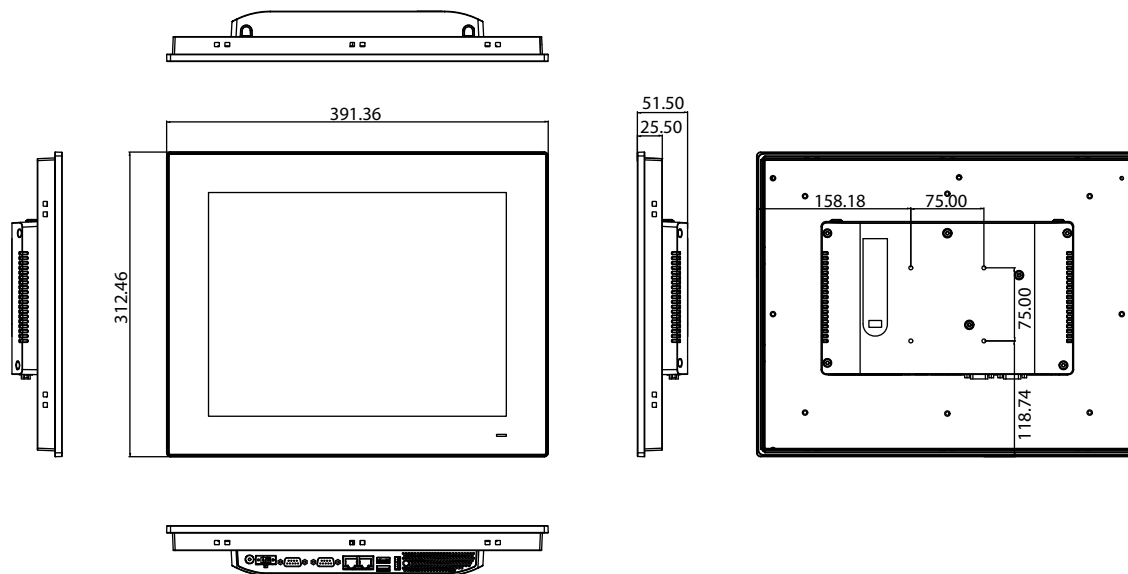
Specifications

System	CPU	Intel® Celeron® N2930 quad core
	Frequency	1.83 GHz
	L2 Cache	2 MB
	Memory	1 x SODIMM DDR3L 1333 MHz (max. 8 GB)
	Storage	1 x 2.5" SATA bay (optional; requires a bracket module for installation) 1 x mSATA bay (default)
	Network (LAN)	2 x 10/100/1000 Mbps Ethernet (Intel I211-AT)
	I/O	2 x Serial ports: 1 x RS-232, 1x RS-232/422/485 (Adjustable through BIOS) 2 x USB 2.0, 1 x USB 3.0
	Expansion	1 x Full-size mini PCIe slot
	Watchdog Timer	255 timer levels, set up by software
Physical Characteristics	Dimensions	391.36 x 312.46 x 51.5 mm (15.4 x 12.3 x 2.0 in)
	Weight	4 kg (8.8lb)
OS Support	OS Support	Microsoft® Windows 7/8.1/10 (32/64-bit), WES7, WEC7, Linux, Android 4.4
Power Consumption	Input Voltage	12 ~ 24 V_{DC}
	Power Consumption	20W (Burn-in test 7.0 in Windows 7, 32-bit)
LCD	Display Type	15" TFT LCD (LED backlight)
	Resolution	1024 x 768
	Viewing Angle	80 (left), 80 (right), 70 (up), 70 (down)
	Luminance (cd/m²)	400
	Contrast Ratio	700
	Backlight Lifetime	50,000 hr
Touchscreen	Touch Type	5-wire resistive touch
	Light Transmission	80±5% at 550 nm wavelength
	Controller	RS232 interface
	Durability (Touches)	36 million
Environment	Operating Temperature	0 ~ 50 °C (32 ~ 122 °F) with SSD 0 ~ 40 °C (32 ~ 104 °F) with HDD (with the HDD temperature more than or equal to 65 °C)
	Storage Temperature	-40 ~ 60 °C (-40 ~ 140 °F)
	Relative Humidity	10 ~ 95% @ 40 °C (non-condensing)
	Shock	Operating 10 G peak acceleration (11 ms duration), follow IEC 60068-2-27
	Vibration	Operating Random Vibration Test 5 ~ 500Hz, 1Grms @with HDD; 2Grms @with SSD, follow IEC 60068-2-64
	EMC	CE, FCC Class B, BSMI
	Safety	CB, CCC, BSMI, UL
	Front Panel Protection	IP65 compliant

All product specifications are subject to change without notice.   ▲ Back to Top   Last updated: 31-Aug-2018

Dimensions

Unit: mm

391.36

312.46

51.50
25.50

158.18   75.00

75.00

118.74

Panel Cutout Dimensions: 382 x 303 mm (15.03 x 11.92 in)

Ordering Information

Part Number	Description
PPC-3150S-RAE	Intel Celeron N2930 Fanless Panel PC with 15" XGA LED backlight
PPC-3100S-HDDE	Bracket module for 2.5" SSD/HDD installation
96PSA-A90W19OT-1	ADP A/D 100-240V 90W 19V W/PFC
PPC-WLAN-B1E	Wi-Fi Module with Antenna Cable 40cm for PPC
PPC-ARM-A03	ARM VESA Standard (A-CLEVER) for PPC series
PPC-174T-WL-MTE	Wall mount kit for PPC series
PPC-Stand-A1E	Stand for PPC series
1700001524	Power cord 3P UL 10A 125V 1.8M
170203183C	Power cord 3P Europe (WS-010+083) 183cm
1700008921	Power cord 3P/3P 1.8M PSE
96CB-POWER-B-1.8M	Power code 3P CCC(China) 1.8M
2070014862	Image WIN10ENT LTSB 64-bit PPC-3150S Multi V6.01
2070014419	Image WS7P 64-bit PPC-3150S Multi V4.14
2070014473	Image WEC7 PPC-3120S MUI v4.01

I/O View

A   B   C   D   E   F G

A. Power Switch
B. DC-In
C. RS-232
D. RS-232/422/485

E. 2 x RJ45 LAN
F. 1 x USB 2.0, 1 x USB 3.0
G. USB 2.0

ADVANTECH   **General Panel PCs**

PPC-3150SW

15.6" Fanless Widescreen Panel PC with Intel® Pentium® N4200 Quad-Core Processor

1 Software and Industry Solutions
2 Industrial Server
3 Intelligent System
4 Intelligent HMI and Monitors
5 Automation Computers and Controllers
6 Industrial Communication
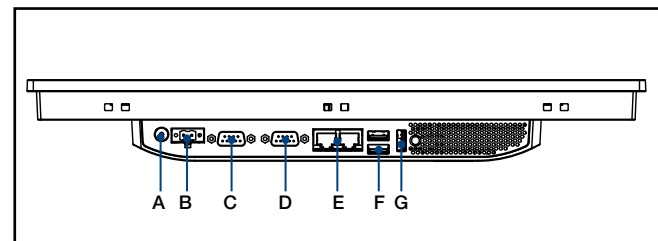7 Remote I/O Modules
8 Industrial I/O and Video Solutions

Preliminary

Features

- 15.6" true-flat WXGA TFT LCD with projected capacitive touch control
- Fanless design with low power consumption
- Supports 1 x internal 2.5" SATA HDD and 1 x mSATA
- Configurable RS-232/422/485 ports via BIOS
- Automatic data flow control over RS-485
- Wide range DC support (12 ~ 24 V$_{DC}$)
- Supports dual displays
- IP65-rated front panel

SUSIAccess Windows Embedded VCCI CCC EHC C E FCC RoHS cULus LISTED E188881 I.T.E.

Introduction

The PPC-3150SW is a high-value, ultra-slim panel PC equipped with a 15.6" WXGA TFT LCD, and low-power Intel® Pentium® N4200 quad-core, 1.1 GHz, processor to provide high-performance computing in a compact and fanless system. For high durability and functionality, the PPC-3150SW features an IP65-rated front panel, true-flat 5-wire resistive touchscreen, die cast aluminum alloy enclosure, two serial ports, four USB ports, and two GbE LAN ports, making it suitable for diverse industrial applications.
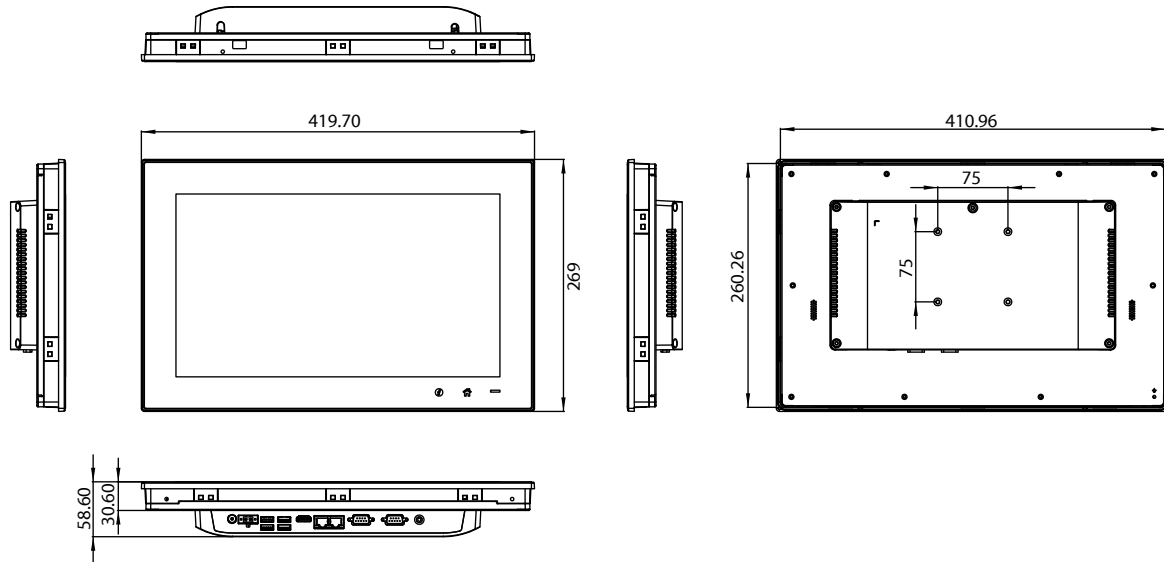
Specifications

System	CPU	Intel® Pentium® N4200 quad core
	Frequency	1.1 GHz
	L2 Cache	3 MB
	Memory	1 x SODIMM, DDR3L 1866, max. 8 GB
	Storage	1 x 2.5" SATA bay 1 x mSATA bay
	Network (LAN)	2 x 10/100/1000 Mbps Ethernet (Intel I211-AT)
	I/O	2 x Serial ports: 1 x RS-232, 1 x RS-232/422/485 2 x USB 3.0, 2 x USB 2.0 1 x Line-out 1 x HDMI
	Expansion	1 x Mini PCIe
	Watchdog Timer	255 timer levels, set up by software
	Speaker	2 x 1W
Physical Characteristics	Dimensions	419.7 x 269 x 58.3 mm (16.52 x 10.59 x 2.29 in)
	Weight	4.7 kg (10.36 lb)
OS Support	OS Support	Microsoft® Windows 10 (64-bit), Linux, Android 6.0
Power Comsumption	Input Voltage	12 ~ 24 V$_{DC}$
	Power Consumption	33W
LCD	Display Type	15.6" TFT LCD (LED backlight)
	Max. Resolution	1366 x 768
	Viewing Angle	85 (Left), 85 (Right), 80 (Up), 80 (Down)
	Luminance (cd/m²)	400
	Contrast Ratio	500
	Backlight Lifetime	50,000 hr (min.)
Touchscreen	Touch Type	10-point multi-touch projected capacitive
	Light Transmission	85% ± 3%
	Controller	USB Interface
Environment	Operating Temperature	0 ~ 50 °C (32 ~ 122 °F) with SSD 0 ~ 40 °C (32 ~ 104 °F) with HDD
	Storage Temperature	-20 ~ 60 °C (-4 ~ 140 °F)
	Relative Humidity	10 ~ 95% @ 40 °C (Non-Condensing)
	Shock	Operating 10 G Peak Acceleration (11 ms Duration), Follows IEC 60068-2-27
	Vibration	Operating Random Vibration Test 5~500Hz, 1Grms @with HDD; 2Grms @with SSD, Follows IEC 60068-2-64
	EMC	CE, FCC Class B, BSMI
	Safety	CE, UL, CCC, BSMI
	Front Panel Protection	IP65 compliant

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4-117

Dimensions

Unit: mm

419.70

269

410.96

75

75

260.26

58.60
30.60

Panel Cutout Dimensions: 413 x 262 mm (16.25 x 10.31 in)

Ordering Information

| Part Number	Description
PPC-3150SW-PN4A	15.6 Wide screen PPC with PCT Multi-touch, Intel Pentium® N4200 Quad-Core
96PSA-A90W19OT-1	Adapter AC100-240V 90W 19V
1700001524	POWER Cord 3P UL 10A 125V 180cm
170203183C	POWER Code 3P Europe (WS-010+083)183 cm
1700008921	POWER CORD 3P/3P POWER SUPPLY 1.8 M PSE
96CB-POWER-B-1.8M	Power code 3P CCC(China) 1.8M
PPC-174T-WL-MTE	Wall mount kit for PPC series
PPC-STAND-A1E	Stand for PPC series
PPC-ARM-A03	ARM VESA Standard (A-CLEVER) for PPC series
PPC-WLAN-B1E	Wi-Fi Module with Antenna Cable 40cm for PPC

I/O View

A B C D E F G H I

A. Line out
B. COM1: RS-232
C. COM2: RS-232/422/485
D. 2 x LAN
E. HDMI

F. 2 x USB 2.0
G. 2 x USB 3.0
H. DC-In
I. Power Switch

PPC-3180SW

18.5" Fanless Widescreen Panel PC with Intel® Pentium® N4200 Quad-Core Processor

Preliminary
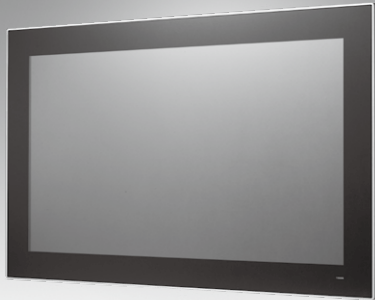
Features

- 18.5" true-flat TFT LCD with projected capacitive touch control
- Fanless design with low power consumption
- Supports 1 x internal 2.5" SATA HDD and 1 x mSATA
- Configurable RS-232/422/485 ports via BIOS
- Automatic data flow control over RS-485
- Wide range DC support (12 ~ 24 V_{DC})
- Supports dual displays
- IP65-rated front panel

SUSIAccess Windows Embedded VCCI CCC EHC C-tick CE FCC RoHS c UL us LISTED E189881 I.T.E.

Introduction

The PPC-3180SW is a high-value, ultra-slim panel PC equipped with a 15.6" WXGA TFT LCD, and low-power Intel® Pentium® N4200 quad-core, 1.1 GHz, processor to provide high-performance computing in a compact and fanless system. For high durability and functionality, the PPC-3180SW features an IP65-rated front panel, true-flat 5-wire resistive touchscreen, die cast aluminum alloy enclosure, two serial ports, four USB ports, and two GbE LAN ports, making it suitable for diverse industrial applications.
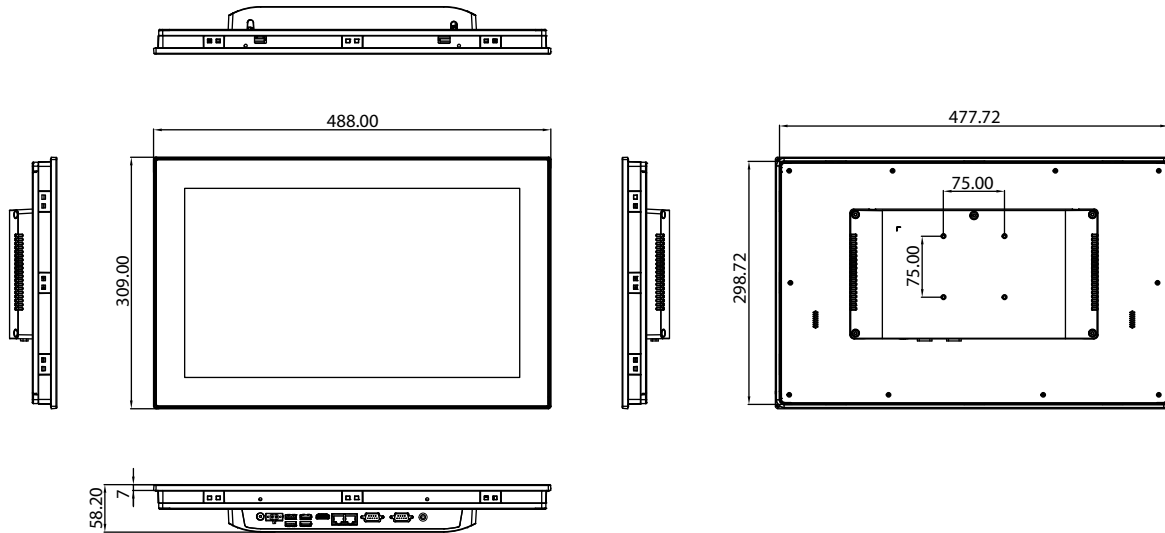
Specifications

System	CPU	Intel Pentium® N4200 quad Core
	Frequency	1.1 GHz
	L2 Cache	3 MB
	Memory	1 x SODIMM, DDR3L 1866, max. 8 GB
	Storage	1 x 2.5" SATA bay 1 x mSATA bay
	Network (LAN)	2 x 10/100/1000 Mbps Ethernet (Intel I211-AT)
	I/O	2 x Serial ports: 1 x RS-232, 1 x RS-232/422/485 2 x USB 3.0, 2 x USB 2.0 1 x Line-out 1 x HDMI
	Expansion	1 x Mini PCIe
	Watchdog Timer	255 timer levels, set up by software
	Speaker	2 x 1W
Physical Characteristics	Dimensions	488 x 309 x 58.2 mm (19.21 x 12.16 x 2.29 in)
	Weight	5.4 kg (11.90 lb)
OS Support	OS Support	Microsoft® Windows 10 (64-bit), Linux, Android 6.0
Power Comsumption	Input Voltage	12 ~ 24 V_{DC}
	Power Consumption	35 W
LCD	Display Type	18.5" TFT LCD (LED backlight)
	Max. Resolution	1366 x 768
	Viewing Angle	85 (Left), 85 (Right), 80 (Up), 80 (Down)
	Luminance (cd/m²)	450
	Contrast Ratio	1000
	Backlight Lifetime	50,000 hr (min.)
Touchscreen	Touch Type	10-point multi-touch projected capacitive
	Light Transmission	85% ± 3%
	Controller	USB Interface
Environment	Operating Temperature	0 ~ 50 °C (32 ~ 122 °F) with SSD 0 ~ 40 °C (32 ~ 104 °F) with HDD
	Storage Temperature	-20 ~ 60 °C (-4 ~ 140 °F)
	Relative Humidity	10 ~ 95% @ 40 °C (Non-Condensing)
	Shock	Operating 10 G Peak Acceleration (11 ms Duration), Follows IEC 60068-2-27
	Vibration	Operating Random Vibration Test 5~500Hz, 1Grms @with HDD; 2Grms @with SSD, Follows IEC 60068-2-64
	EMC	CE, FCC Class B, BSMI
	Safety	CE, UL, CCC, BSMI
	Front Panel Protection	IP65 compliant

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Dimensions

Unit: mm

488.00

309.00

477.72

298.72

75.00

75.00

58.20

7

Panel Cutout Dimensions: 479.3 x 300.3 mm (18.87 x 11.82 in)

Ordering Information

Part Number	Description
PPC-3180SW-PN4A	18.5 Wide screen PPC with PCT Multi-touch, Intel Pentium® N4200 Quad-Core
96PSA-A90W19OT-1	Adapter AC100-240V 90W 19V
1700001524	POWER Cord 3P UL 10A 125V 180cm
170203183C	POWER Code 3P Europe (WS-010+083)183 cm
1700008921	POWER CORD 3P/3P POWER SUPPLY 1.8 M PSE
96CB-POWER-B-1.8M	Power code 3P CCC(China) 1.8M
PPC-174T-WL-MTE	Wall mount kit for PPC series
PPC-STAND-A1E	Stand for PPC series
PPC-ARM-A03	ARM VESA Standard (A-CLEVER) for PPC series
PPC-WLAN-B1E	Wi-Fi Module with Antenna Cable 40cm for PPC

I/O View

A   B   C   D   E   F   G   H   I

A. Line out
B. COM1: RS-232
C. COM2: RS-232/422/485
D. 2 x LAN
E. HDMI

F. 2 x USB 3.0
G. 2 x USB 2.0
H. DC-In
I. Power Button

ADVANTECH

General Panel PCs

PPC-3210SW

21.5" Fanless Panel PC with Intel® Celeron® N2930 Processor

Features

- Industrial-grade 21.5" Full HD TFT LCD with 50K backlight lifetime
- True-flat touchscreen with projected capacitive multi-touch control
- Intel® Celeron® N2930 quad-core, 1.83 GHz, processor
- Up to 8 GB DDR3L SDRAM
- 1 x RS-232, 1 x RS-232/422/485, 1 x USB 2.0, and 1 x USB 3.0
- Compact, fanless design with solid aluminum alloy enclosure and IP65-rated front panel
- Supports E-Eye monitoring and protection
- Supports expansion via full-size mini PCIe
- Supports Windows Embedded and Android OS
- Supports VESA 75 x 75 mounting holes

SUSIAccess   Windows Embedded   VCCI   CCC   EHC   CE   FCC   RoHS   c UL us LISTED E190881 I.T.E.

Introduction

The PPC-3210SW is a high-value, ultra-slim panel PC equipped with a 21.5" Full HD TFT LCD, and low-power Intel® Celeron® N2930 quad-core, 1.86 GHz, processor to provide high-performance computing in a compact and fanless system. For high durability and functionality, the PPC-3210SW features an IP65-rated front panel, true-flat projected capacitive touchscreen, die cast aluminum alloy enclosure, two serial ports, two USB ports, and two GbE LAN ports, making it suitable for diverse industrial applications. To provide further system monitoring and protection capabilities, e-Eye technology is provided at the rear of the panel PC for indicating the system operating status to facilitate detection and analysis.
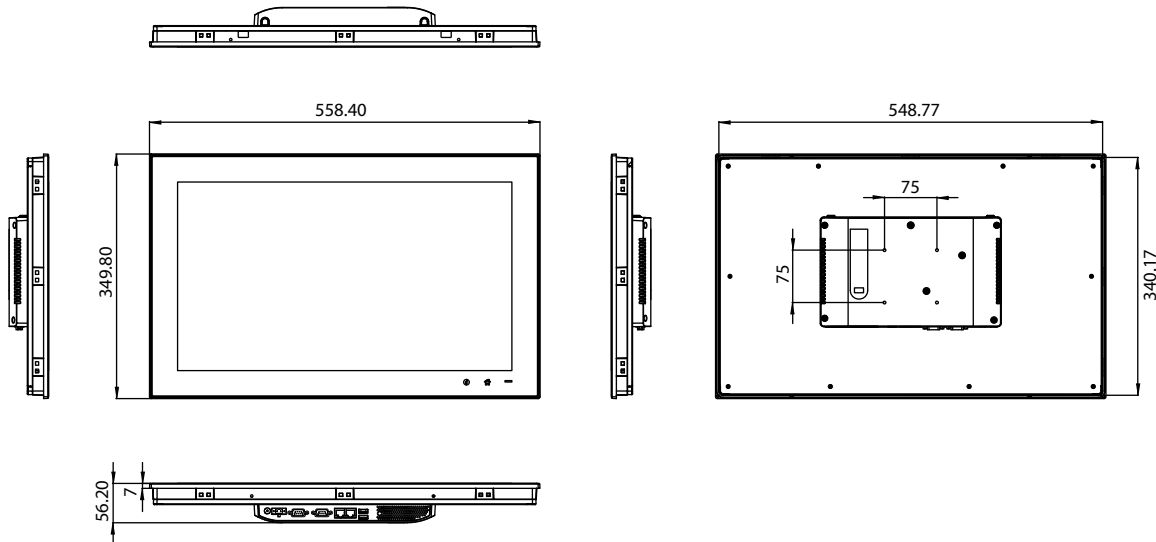
Specifications

System	CPU	Intel® Celeron® N2930 quad core
	Frequency	1.83 GHz
	L2 Cache	2 MB
	Memory	1 x SODIMM DDR3L 1333 MHz (max. 8 GB)
	Storage	1 x 2.5" SATA bay (optional; requires a bracket module for installation) 1 x mSATA bay (default)
	Network (LAN)	2 x 10/100/1000 Mbps Ethernet
	I/O	2 x Serial ports: 1 x RS-232, 1x RS-232/422/485 (Adjustable through BIOS) 1 x USB 2.0, 1 x USB 3.0
	Expansion	1 x Full-size mini PCIe slot
	Watchdog Timer	255 timer levels, set up by software
Physical Characteristics	Dimensions	558.4 x 349.8 x 56.2 mm (219.8 x 137.7 x 22.1 in)
	Weight	7.5 kg (16.5 lb)
OS Support	OS Support	Microsoft® Windows 7/8.1/10 (32/64-bit), Windows 10 LTSB, WES7, WEC7, Linux, Android 4.4
Power Consumption	Input Voltage	12 ~ 24 V_{DC}
	Power Consumption	25W (Burn-in test 7.0 in Windows 7, 32-bit)
LCD	Display Type	21.5" TFT LCD (LED backlight)
	Resolution	1920 x 1080
	Viewing Angle	89 (left), 89 (right), 89 (up), 89 (down)
	Luminance (cd/m²)	300
	Contrast Ratio	5000
	Backlight Lifetime	50,000 hr
Touchscreen	Touch Type	10-point multi-touch projected capacitive
	Light Transmission	90 % ± 3 %
	Controller	USB interface
Environment	Operating Temperature	0 ~ 50 °C (32 ~ 122 °F) with SSD 0 ~ 40 °C (32 ~ 104 °F) with HDD (with the HDD temperature more than or equal to 65 °C)
	Storage Temperature	-20 ~ 60 °C (-4 ~ 140 °F)
	Relative Humidity	10 ~ 95% @ 40 °C (non-condensing)
	Shock	Operating 10 G peak acceleration (11 ms duration), follow IEC 60068-2-27
	Vibration	Operating Random Vibration Test 5 ~ 500Hz, 1Grms @with HDD; 2Grms @with SSD, follow IEC 60068-2-64
	EMC	CE, FCC Class B, BSMI
	Safety	CB, CCC, BSMI, UL
	Front Panel Protection	IP65 compliant

Dimensions

Unit: mm

558.40

349.80

548.77

75

75

340.17

56.20
7

Panel Cutout Dimensions: 550.3 x 341.8 mm (21.66 x 13.45 in)

Ordering Information

Part Number	Description
PPC-3210SW-PAE	Intel Celeron N2930 Fanless Panel PC with 21.5" Full HD LED backlight
PPC-3100S-HDDE	Bracket module for 2.5" SSD/HDD installation
96PSA-A90W19OT-1	ADP A/D 100-240V 90W 19V W/PFC
PPC-WLAN-B1E	Wi-Fi Module with Antenna Cable 40cm for PPC
PPC-ARM-A03	ARM VESA Standard (A-CLEVER) for PPC series
PPC-174T-WL-MTE	Wall mount kit for PPC series
PPC-Stand-A1E	Stand for PPC series
1700001524	Power cord 3P UL 10A 125V 1.8M
170203183C	Power cord 3P Europe (WS-010+083) 183cm
1700008921	Power cord 3P/3P 1.8M PSE
96CB-POWER-B-1.8M	Power code 3P CCC(China) 1.8M

I/O View

A B C   D   E F

A. Power Switch
B. DC-In
C. RS-232
D. RS-232/422/485
E. 2 x RJ45 LAN
F. 1 x USB 2.0, 1 x USB 3.0

PPC-3100

10.4" Fanless Panel PC with Intel® Atom™ E3940 Processor

1
Software and Industry Solutions

2
Industrial Server

3
Intelligent System

4
Intelligent HMI and Monitors

5
Automation Computers and Controllers

6
Industrial Communication

7
Remote I/O Modules

8
Industrial I/O and Video Solutions

Features

- 10.4" SVGA TFT LCD with resistive touchscreen
- Intel® Atom™ E3940, 1.6 GHz, processor
- Up to 8 GB DDR3L 1866 SDRAM
- Supports 1 x internal 2.5" SATA HDD and 1 x mSATA
- Fanless design with low power consumption
- Wide operating temperature range (-20 ~ 60 °C/-4 ~ 140 °F)
- Wide range DC support (9 ~ 32 VDC)
- 1 x isolated RS-422/485 with automatic flow control and dual Intel GbE
- Optional GPIO (8 channels, TTL level)

SUSIAccess   Windows Embedded   VCI   CCC   EHC   C E   FCC   RoHS   c UL us LISTED
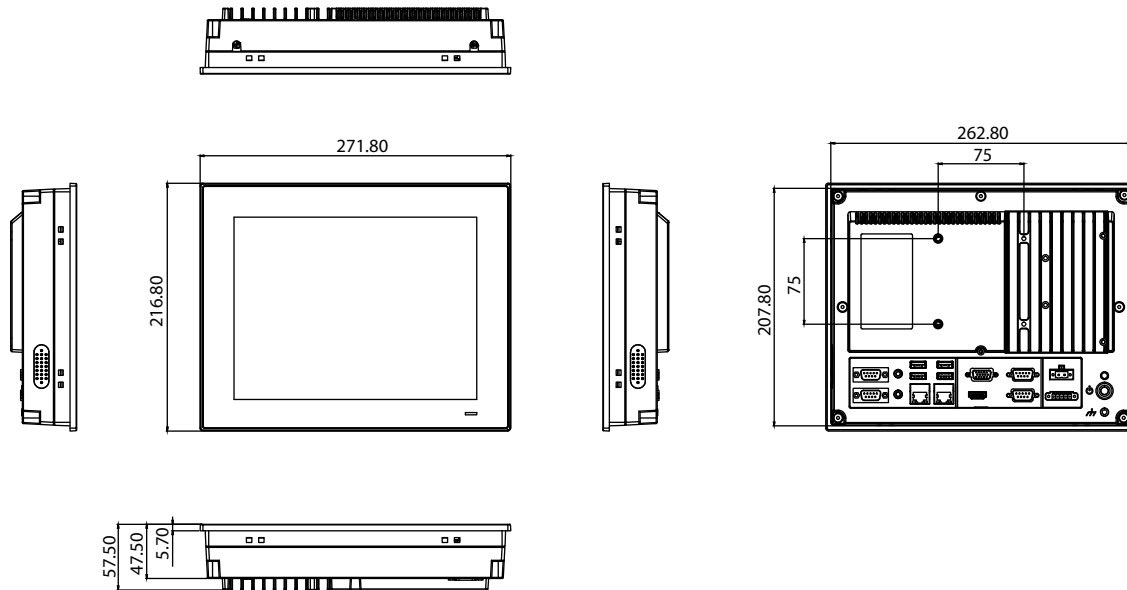
Introduction

The PPC-3100 is a 10.4" fanless panel PC equipped with a high-performance Intel® Atom™ E3940 quad-core processor that supports both a wide operating temperature range (-20 ~ 60 °C) and wide power input range (9 ~ 32 V$_{DC}$). The provision of multiple I/O, including 4 x COM, 4 x USB 3.0, 1 x isolated RS-422/485, and dual Intel® Gigabit Ethernet, ensures easy integration and connectivity.

Specifications

System	CPU	Intel® Atom™ E3940 quad core
	Frequency	1.6 GHz
	L2 Cache	2 MB
	Memory	1 x SODIMM DDR3L 1866 MHz (max. 8 GB)
	Storage	1 x 2.5" SATA bay 1 x mSATA bay
	Network (LAN)	2 x 10/100/1000 Mbps Ethernet (Intel i210)
	I/O	5 x Serial ports: 4 x RS-232, 1 x isolated RS-422/485 (Adjustable through BIOS) 4 x USB 3.0 1 x Line-out, 1 x Mic-in 1 x VGA 1 x HDMI 1 x GPIO (8 channels, TTL level, internal)
	Expansion	1 x Mini PCIe
	Watchdog Timer	255 timer levels, set up by software
	Speaker	2 x 1W
Physical Characteristics	Dimensions	271.8 x 216.8 x 57.5 mm (10.7 x 8.53 x 2.26 in)
	Weight	2.8 kg (6.17 lb)
OS Support	OS Support	Microsoft® Windows 10 IoT Enterprise, Linux, Android 6.0 Marshmallow
Power Consumption	Input Voltage	9 ~ 32 V$_{DC}$
	Power Consumption	25W
LCD	Display Type	10.4" TFT LED Panel (LED backlight)
	Max. Resolution	800 x 600
	Viewing Angle	80 (left), 80 (right), 70 (up), 70 (down)
	Luminance (cd/m²)	400
	Contrast Ratio	700
	Backlight Lifetime	30,000 hr (typical)
Touchscreen	Touch Type	5-wire resistive touch
	Light Transmission	80±5% at 550nm wavelength
	Controller	USB interface
	Durability (Touches)	Greater than 35 million touches in one location without failure
Environment	Operating Temperature	0 ~ 50 °C (32 ~ 122 °F) with 2.5" SATA SSD -20 ~ 60 °C (-4 ~ 140 °F) with -40 ~ 85 °C mSATA or 2.5" SATA SSD
	Storage Temperature	-30 ~ 60 °C (-22 ~ 140 °F)
	Relative Humidity	10 ~ 95% @ 40 °C (non-condensing)
	Shock	Operating 10 G peak acceleration (11 ms duration), follow IEC 60068-2-27
	Vibration	Operating Random Vibration Test 5~500Hz, 1Grms @with HDD; 2Grms @with SSD, follow IEC 60068-2-64
	EMC	CE, FCC Class B, BSMI
	Safety	CB, CCC, BSMI, UL
	Front Panel Protection	IP65 compliant

All product specifications are subject to change without notice.   ▲ Back to Top   Last updated: 31-Aug-2018

Dimensions

Unit: mm

271.80

216.80

262.80
75

207.80
75

57.50
47.50
5.70

Panel Cutout Dimensions: 265 x 210 mm (10.43 x 8.26 in)

Ordering Information

Part Number	Description
PPC-3100-RE9A	Atom E3940 Fanless Panel PC with 10.4" SVGA LED backlight, resistive touch
96PSA-A90W19OT-1	ADP A/D 100-240V 90W 19V W/PFC
1700001524	Power cord 3P UL 10A 125V 1.8m
170203183C	Power cord 3P Europe (WS-010+083)183cm
1700008921	Power cord 3P/3P Power supply 1.8M PSE
PPC-174T-WL-MTE	Wall mount kit for PPC series
PPC-ARM-A03	PPC ARM VESA Standard
96CB-POWER-B-1.8M	Power cable 3P CCC(China) 1.8M
PPC-STAND-A1E	Stand For PPC Series
98R3612000E	mSATA/CFast to USB card reader
98R3415010E	Front USB on cabinet module with Cable 100cm

I/O View
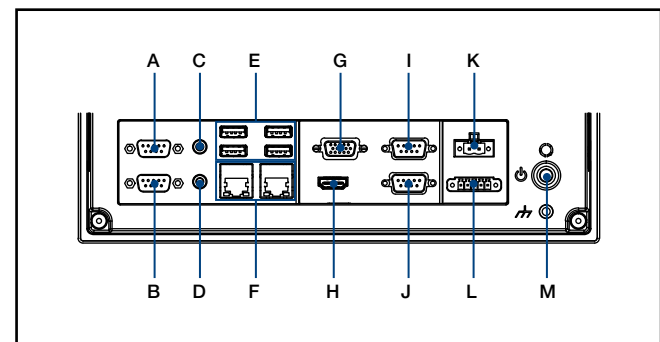
A. COM4: RS-232
B. COM5: RS-232
C. Line Out
D. Mic In
E. 4 x USB 3.0
F. 2 x LAN
G. VGA
H. HDMI
I. COM1: RS-232
J. COM2: RS-232
K. DC Inlet and AT/ATX switch
L. COM3: Isolated RS-422/485
M. Power Button

PPC-3120

12.1" Fanless Panel PC with Intel® Atom™ E3940 Processor

Features

- 12.1" XGA TFT LCD with resistive touchscreen
- Intel® Atom™ E3940, 1.6 GHz, processor
- Up to 8 GB DDR3L 1866 SDRAM
- Supports 1 x internal 2.5" SATA HDD and 1 x mSATA
- Fanless design with low power consumption
- Wide operating temperature range (-20 ~ 60 °C/-4 ~ 140 °F)
- Wide range DC support (9 ~ 32 V$_{DC}$)
- 1 x isolated RS-422/485 with automatic flow control and dual Intel GbE
- Optional GPIO (8 channels, TTL level)
- Optional PCI/PCIe x1 expansion kit

SUSIAccess Windows Embedded VCCI CCC EHC CE FCC RoHS LISTED

Introduction

The PPC-3120 is a 12.1" fanless panel PC equipped with a high-performance Intel® Atom™ E3940 quad-core processor that supports both a wide operating temperature range (-20 ~ 60 °C) and wide power input range (9 ~ 32 V$_{DC}$). The provision of multiple I/O, including 4 x COM, 4 x USB 3.0, 1 x isolated RS-422/485, and dual Intel® Gigabit Ethernet, ensures easy integration and connectivity.
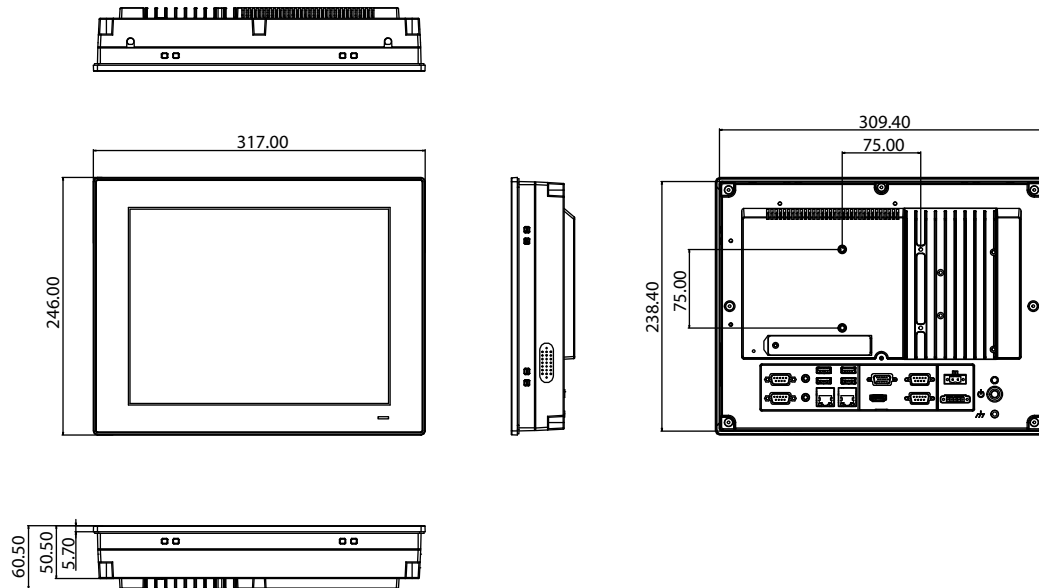
Specifications

System	CPU	Intel® Atom™ E3940 quad core
	Frequency	1.6 GHz
	L2 Cache	2 MB
	Memory	1 x SODIMM DDR3L 1866 MHz (max. 8 GB)
	Storage	1 x 2.5" SATA bay 1 x mSATA bay
	Network (LAN)	2 x 10/100/1000 Mbps Ethernet (Intel i210)
	I/O	5 x Serial ports: 4 x RS-232, 1 x isolated RS-422/485 (Adjustable through BIOS) 4 x USB 3.0 1 x Line-out, 1 x Mic-in 1 x VGA, 1 x HDMI 1 x GPIO (8 channels, TTL level, internal)
	Expansion	1 x Mini PCIe Optional: 1 x PCIe x1 or 1 x PCI
	Watchdog Timer	255 timer levels, set up by software
	Speaker	2 x 1W
Physical Characteristics	Dimensions	317 x 246 x 60.5 mm (12.4 x 9.7 x 2.4 in)
	Weight	3.4 kg (7.5 lb)
OS Support	OS Support	Microsoft® Windows 10 IoT Enterprise, Linux, Android 6.0 Marshmallow
Power Consumption	Input Voltage	9 ~ 32 V$_{DC}$
	Power Consumption	36W
LCD	Display Type	12.1" TFT LED panel with LED backlight
	Max. Resolution	1024 x 768
	Viewing Angle	80 (left), 80 (right), 70 (up), 70 (down)
	Luminance (cd/m^2)	600
	Contrast Ratio	700
	Backlight Lifetime	50,000 hr (typical)
Touchscreen	Touch Type	5-wire resistive touch
	Light Transmission	80±5% at 550nm wavelength
	Controller	USB interface
	Durability (Touches)	Greater than 35 million touches in one location without failure
Environment	Operating Temperature	0 ~ 50 °C (32 ~ 122 °F) with 2.5" SATA SSD -20 ~ 60 °C (-4 ~ 140 °F) with -40 ~ 85 °C mSATA or 2.5" SATA SSD
	Storage Temperature	-40 ~ 60 °C (-40 ~ 140 °F)
	Relative Humidity	10 ~ 95% @ 40 °C (non-condensing)
	Shock	Operating 10 G peak acceleration (11 ms duration), follow IEC 60068-2-27
	Vibration	Operating Random Vibration Test 5~500Hz, 1Grms @with HDD; 2Grms @with SSD, follow IEC 60068-2-64
	EMC	CE, FCC Class B, BSMI
	Safety	CB, CCC, BSMI, UL
	Front Panel Protection	IP65 compliant

All product specifications are subject to change without notice.   ▲ Back to Top   Last updated: 31-Aug-2018

Dimensions

Unit: mm

317.00

246.00

309.40

75.00

238.40

75.00

60.50
50.50
5.70

Panel Cutout Dimensions: 311 x 240 mm (12.24 x 9.44 in)

Ordering Information

Part Number	Description
PPC-3120-RE9A	Atom E3940 Fanless PPC with 12.1" XGA LED backlight, resistive touch
96PSA-A90W19OT-1	ADP A/D 100-240V 90W 19V W/PFC
1700001524	Power cord 3P UL 10A 125V 1.8m
170203183C	Power cord 3P Europe (WS-010+083)183cm
1700008921	Power cord 3P/3P Power supply 1.8M PSE
PPC-174T-WL-MTE	Wall mount kit for PPC series
PPC-ARM-A03	PPC ARM VESA Standard
PPC-STAND-A1E	Stand For PPC Series
PPC-WLAN-B1E	WiFi Module with Antenna Cable 40cm for PPC
96CB-POWER-B-1.8M	Power code 3P CCC(China) 1.8M
98R33120000	Add-on box for PCI or PCIe expansion (include PCI / PCIe riser card)

I/O

A. COM4: RS-232
B. COM5: RS-232
C. Line Out
D. Mic In
E. 4 x USB 3.0
F. 2 x LAN
G. VGA

H. HDMI
I. COM1: RS-232
J. COM2: RS-232
K. DC Inlet and AT/ATX switch
L. COM3: Isolated RS-422/485
M. Power Button

PPC-3150

Features

- 15" XGA TFT LCD with resistive touchscreen
- Intel® Atom™ E3845 quad-core, 1.91 GHz, processor
- Fanless, slim design
- Supports 1 x internal 2.5" SATA HDD and 1 x mSATA
- 1 x PCI/PCIe x1 expansion slot
- Wide operating temperature range (-20 ~ 60 °C/-4 ~ 140 °F)
- Wide range DC support (9 ~ 32 V_{DC})
- 1 x isolated RS-422/485 with automatic flow control and dual Intel GbE
- Optional GPIO (8 channels, TTL level)

Introduction

The PPC-3150 is a 15" fanless panel PC equipped with a high-performance Intel® Atom™ E3845 quad-core, 1.91 GHz, processor that supports both a wide operating temperature range (-20 ~ 60 °C) and wide power input range (9 ~ 32 V_{DC}). The provision of multiple I/O, including 4 x COM, 1 x USB 3.0, 1 x isolated RS-422/485, and dual Intel® Gigabit Ethernet, ensures easy integration and connectivity. With the inclusion of 1 x PCI/PCIe expansion slot, PPC-3150 can be integrated with fieldbus protocols or proprietary cards for increased application potential.
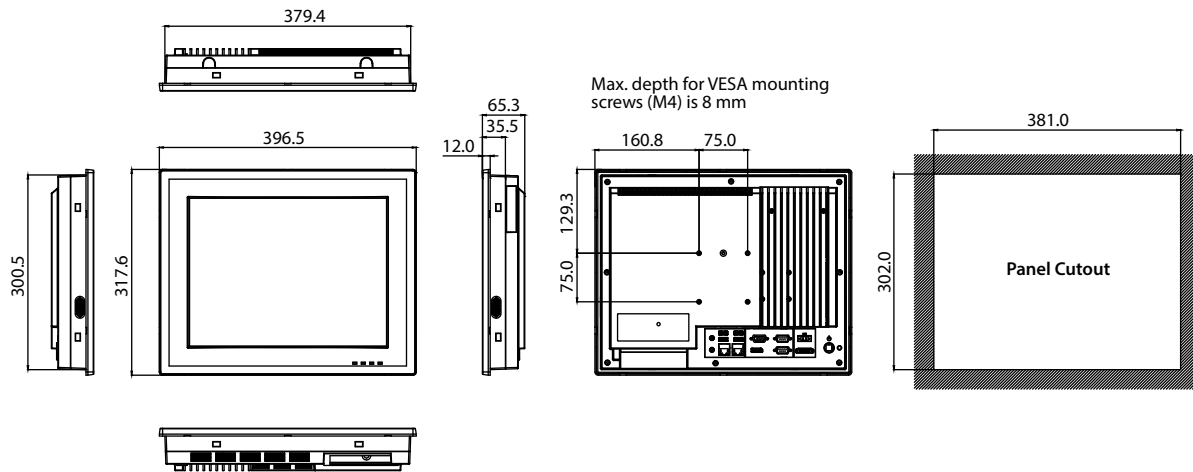
Specifications

System	CPU	Intel® Atom™ E3845 quad core
	Frequency	1.91 GHz
	L3 Cache	2 MB
	Memory	1 x SODIMM DDR3L 1333 MHz (max. 8 GB)
	Storage	1 x 2.5" SATA bay / 1 x mSATA bay
	Network (LAN)	2 x 10/100/1000 Mbps Ethernet (Intel I210)
	I/O	1 x isolated RS-422/485 (terminal block); 4 x RS-232, two external and two by internal pin header (need optional module); 1 x GPIO (8 channels, TTL level) by internal pin header (need optional module); 1 x USB 3.0, 3 x USB 2.0; 1 x VGA; 1 x DP1.1a; 1 x Line-out, 1 x Mic-in
	Expansion	1 x Mini PCIe; 1 x PCI (default);1 x PCIe x1 (in the accessory box); Optional: 1 x Cfast; 1 x CF card; 1 x Internal USB dongle; 2 x RS-232 or 1 x RS-232 + 1 x GPIO
	Watchdog Timer	255 timer levels, set up by software
	Speaker	2 x 1W
Physical Characteristics	Dimensions	396.5 x 317.6 x 65.3 mm (15.6 x 12.5 x 2.57 in)
	Weight	5.3 kg (11.68 lb)
OS Support	OS Support	Microsoft® Windows 7/8.1/10 (32/64-bit), WES7, WEC7, Linux
Power Consumption	Input Voltage	9 ~ 32 V_{DC}
	Power Consumption	30W (Burn-in test 7.0 in Windows 7 32 bit)
LCD	Display Type	15" TFT LED panel
	Max. Resolution	1024 x 768
	Viewing Angle	80 (left), 80 (right), 70 (up), 70 (down)
	Luminance (cd/m²)	400
	Contrast Ratio	700
	Backlight Lifetime	50, 000 hr (min.)
Touchscreen	Touch Type	5-wire analog resistive
	Light Transmission	80+/-3%
	Controller	USB interface
	Durability (Touches)	36 million

All product specifications are subject to change without notice.   Back to Top   Last updated: 31-Aug-2018

Dimensions

Unit: mm

379.4

396.5

65.3
35.5
12.0

300.5
317.6

Max. depth for VESA mounting screws (M4) is 8 mm

160.8 75.0

129.3
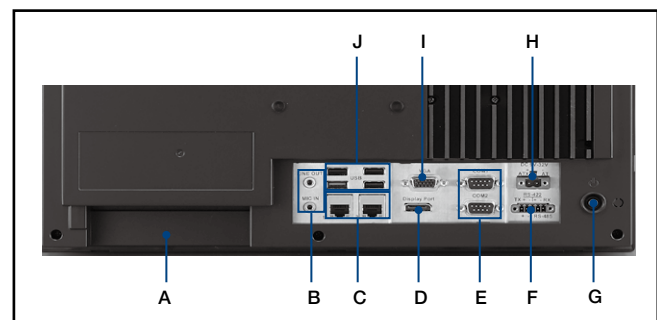75.0

302.0

381.0

Panel Cutout

Panel Cutout Dimensions: 381 x 302 mm (15 x 11.88 in)

Environment	Operating Temperature	0 ~ 50 °C (32 ~ 122 °F) with 2.5" SATA SSD -20 ~ 60 °C (-4 ~ 140 °F) with -40 ~ 85 °C mSATA or 2.5" SATA SSD
	Storage Temperature	-40 ~ 60 °C (-40 ~ 140 °F)
	Relative Humidity	10 ~ 95% @ 40 °C (non-condensing)
	Shock	Operating 10 G peak acceleration (11 ms duration), follow IEC 60068-2-27
	Vibration	Operating Random Vibration Test 5 ~ 500Hz, 1Grms @with HDD, follow IEC 60068-2-64
	EMC	BSMI, CE, FCC Class A
	Safety	CB, CCC, BSMI, UL
	Front Panel Protection	IP65 compliant

Ordering Information

Part Number	Description
PPC-3150-RE4AE	Intel Atom E3845 (1.91G) Panel PC with 15" XGA panel, 5-wire resistive T/S, w/o memory
PPC-WLAN-B1E	WiFi Module with Antenna Cable 40cm for PPC
PPC-174T-WL-MTE	Wall mount kit for PPC series
PPC-ARM-A03	PPC ARM VESA Standard
PPC-3150-COME	Module to install either two additional RS-232 port or one additional RS-232 and one GPIO for PPC-3150/PPC-3170
96PSA-A90W19OT-1	ADP A/D 100-240V 90W 19V W/PFC
1700001524	Power cord 3P UL 10A 125V 1.8M
170203183C	Power cord 3P Europe (WS-010+083) 183cm
1700008921	Power cord 3P/3P 1.8M PSE
96CB-POWER-B-1.8M	Power code 3P CCC(China) 1.8M
PPC-STAND-A1E	Stand For PPC Series
98R3C31500E	PPC-315/317/319 internal USB dongle kits
98R3C31510E	PPC-3150/3170 install CF card kits
98R3C31520E	PPC-3150/PPC-3170 CFast card kits

I/O View

A. 1 x Expansion slot (PCI or PCIe x1)
B. Mic-in/Line-out
C. 2 x Intel Gigabit Ethernet
D. 1 x DisplayPort
E. 2 x RS-232
F. 1 x Isolated RS-422/485
G. Power Button
H. DC inlet and AT/ATX switch
I. 1 x VGA
J. 1 x USB3.0, 3 x USB2.0

ADVANTECH   General Panel PCs

▲ Back to Top

PPC-3170

17" Fanless Panel PC with Intel® Atom™ Quad-Core Processor

1 Software and Industry Solutions
2 Industrial Server
3 Intelligent System
4 Intelligent HMI and Monitors
5 Automation Computers and Controllers
6 Industrial Communication
7 Remote I/O Modules
8 Industrial I/O and Video Solutions

Features

- 17" SXGA TFT LCD with resistive touchscreen
- Intel® Atom™ E3845 quad-core, 1.91 GHz, processor
- Fanless, slim design
- Supports 1 x internal 2.5" SATA HDD and 1 x mSATA
- 1 x PCI/PCIe x1 expansion slot
- Wide operating temperature range (-20 ~ 60 °C/-4 ~ 140 °F)
- Wide range DC support (9 ~ 32 V_{DC})
- 1 x isolated RS-422/485 with automatic flow control and dual Intel GbE
- Optional GPIO (8 channels, TTL level)

SUSIAccess · Windows Embedded · VCCI · CCC · EAC · C-Tick · CE · FCC · RoHS · c UL us LISTED E190081 I.T.E.

Introduction

The PPC-3170 is a 17" fanless panel PC equipped with a high-performance Intel® Atom™ E3845 quad-core, 1.91 GHz, processor that supports both a wide operating temperature range (-20 ~ 60 °C) and wide power input range (9 ~ 32 V_{DC}). The provision of multiple I/O, including 4 x COM, 1 x USB 3.0, 1 x isolated RS-422/485, and dual Intel® Gigabit Ethernet, ensures easy integration and connectivity. With the inclusion of 1 x PCI/PCIe expansion slot, the PPC-3170 can be integrated with fieldbus protocols or proprietary cards for increased application potential.
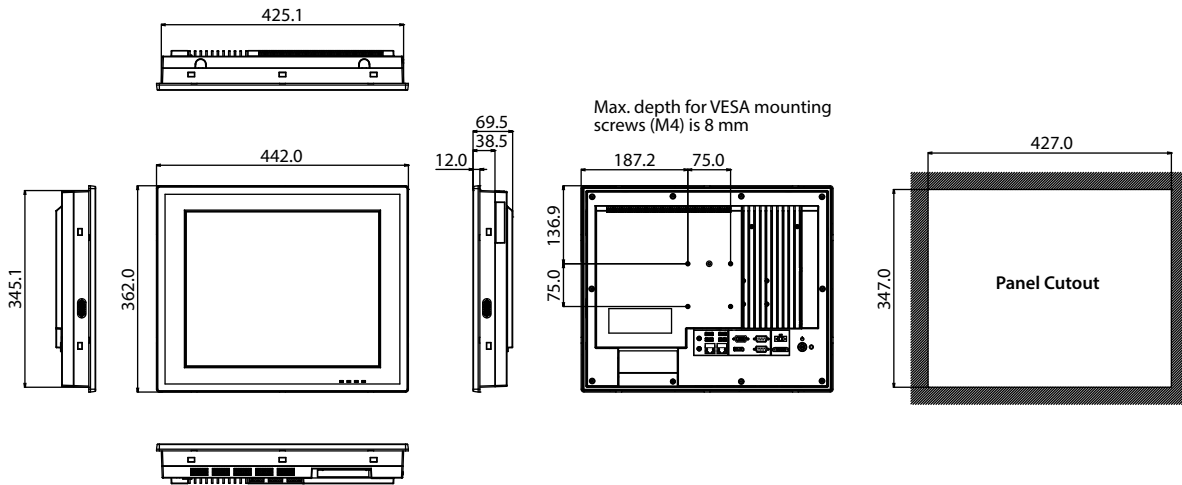
Specifications

System	CPU	Intel® Atom™ E3845 quad core
	Frequency	1.91 GHz
	L3 Cache	2 MB
	Memory	1 x SODIMM DDR3L 1333 MHz (max. 8 GB)
	Storage	1 x 2.5" SATA bay 1 x mSATA bay
	Network (LAN)	2 x 10/100/1000 Mbps Ethernet (Intel I210)
	I/O	1 x isolated RS-422/485 (terminal block) 4 x RS-232, two external and two by internal pin header (need optional module) 1 x GPIO (8 channels, TTL level) by internal pin header (need optional module) 1 x USB 3.0, 3 x USB 2.0 1 x VGA 1 x DP1.1a 1 x Line-out, 1 x Mic-in
	Expansion	1 x Mini PCIe 1 x PCI (default);1 x PCIe x1 (in the accessory box) Optional: 1 x Cfast; 1 x CF card; 1 x Internal USB dongle; 2 x RS-232 or 1 x RS-232 + 1 x GPIO
	Watchdog Timer	255 timer levels, set up by software
	Speaker	2 x 1W
Physical Characteristics	Dimensions	442.0 x 362.0 x 69.5 mm (17.4 x 14.3 x2.74 in)
	Weight	6.3 kg (13.89 lb)
OS Support	OS Support	Microsoft® Windows 7/8.1/10 (32/64-bit), WES7, WEC7, Linux
Power Consumption	Input Voltage	9 ~ 32 V_{DC}
	Power Consumption	34W (Burn-in test 7.0 in Windows 7 32 bit)
LCD	Display Type	17" TFT LED panel
	Max. Resolution	1280 x 1024
	Viewing Angle	80 (left), 80 (right),60 (up), 80 (down)
	Luminance (cd/m²)	350
	Contrast Ratio	800
	Backlight Lifetime	50, 000 hr (min.)
Touchscreen	Touch Type	5-wire analog resistive
	Light Transmission	81+/-3%
	Controller	USB interface
	Durability (Touches)	36 million

All product specifications are subject to change without notice.   Back to Top   Last updated: 31-Aug-2018

Dimensions

Unit: mm

425.1

442.0

69.5
38.5
12.0

345.1

362.0

Max. depth for VESA mounting screws (M4) is 8 mm

187.2   75.0

136.9

75.0

427.0

347.0

Panel Cutout

Panel Cutout Dimensions: 427 x 347 mm (16.81 x 13.66 in)

Environment	Operating Temperature	0 ~ 50 °C (32 ~ 122 °F) with 2.5" SATA SSD -20 ~ 60 °C (-4 ~ 140 °F) with -40 ~ 85 °C mSATA or 2.5" SATA SSD
	Storage Temperature	-40 ~ 60 °C (-40 ~ 140 °F)
	Relative Humidity	10 ~ 95% @ 40 °C (non-condensing)
	Shock	Operating 10 G peak acceleration (11 ms duration), follow IEC 60068-2-27
	Vibration	Operating Random Vibration Test 5 ~ 500Hz, 1Grms @with HDD, follow IEC 60068-2-64
	EMC	BSMI, CE, FCC Class A
	Safety	CB, CCC, BSMI, UL
	Front Panel Protection	IP65 compliant

Ordering Information

Part Number	Description
PPC-3170-RE4AE	Intel Atom E3845 (1.91G) Panel PC with 17" SXGA panel, 5-wire resistive T/S, w/o memory
PPC-WLAN-B1E	WiFi Module with Antenna Cable 40cm for PPC
PPC-174T-WL-MTE	Wall mount kit for PPC series
PPC-ARM-A03	PPC ARM VESA Standard
PPC-3150-COME	Module to install either two additional RS-232 port or one additional RS-232 and one GPIO for PPC-3150/PPC-3170
96PSA-A90W19OT-1	ADP A/D 100-240V 90W 19V W/PFC
1700001524	Power cord 3P UL 10A 125V 1.8M
170203183C	Power cord 3P Europe (WS-010+083) 183cm
1700008921	Power cord 3P/3P 1.8M PSE
96CB-POWER-B-1.8M	Power code 3P CCC(China) 1.8M
2070015120	Image WES 7P 32bit MUI v4.17 for PPC-3150/70/90
98R3175R00E	19" Rack Mounting kits for PPC
PPC-STAND-A1E	Stand For PPC Series
98R3C31500E	PPC-315/317/319 internal USB dongle kits
98R3C31510E	PPC-3150/3170 install CF card kits
98R3C31520E	PPC-3150/PPC-3170 CFast card kits

I/O View

J   I   H

A   B   C   D   E   F   G
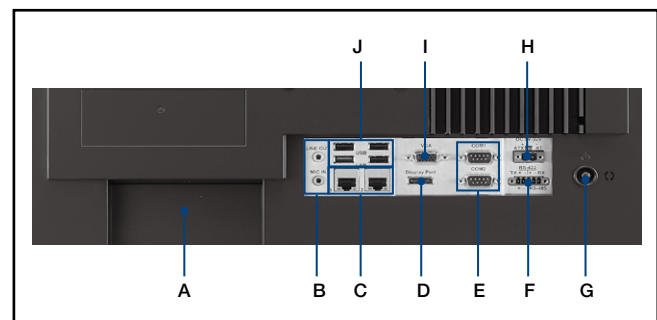
A. 1 x Expansion slot x 1 (PCI or PCIe x1)
B. Mic-in/Line-out
C. 2 x Intel Gigabit Ethernet
D. 1 x DisplayPort
E. 2 x RS-232
F. 1 x Isolated RS-422/485
G. Power Button
H. DC inlet and AT/ATX switch
I. 1 x VGA
J. 1 x USB 3.0, 3 x USB 2.0

PPC-3190

19" Fanless Panel PC with Intel® Atom™ Quad-Core Processor

Features

- 19" SXGA TFT LCD with resistive touchscreen
- Intel® Atom™ E3845 quad-core, 1.91 GHz, processor
- Fanless, slim design
- Supports 1 x internal 2.5" SATA HDD and 1 x mSATA
- 1 x PCI/PCIe x1 expansion slot
- Wide operating temperature range (-20 ~ 60 °C/-4 ~ 140 °F)
- Wide range DC support (9 ~ 32 V$_{DC}$)
- 1 x isolated RS-422/485 with automatic flow control and dual Intel GbE
- Optional GPIO (8 channels, TTL level)

SUSIAccess   Windows® Embedded   VCCI   CCC   EHC   CE   FCC   RoHS   c UL us LISTED E190881 I.T.E.

Introduction

The PPC-3190 is a 19" fanless panel PC equipped with a high-performance Intel® Atom™ E3845 quad-core, 1.91 GHz, processor that supports both a wide operating temperature range (-20 ~ 60 °C) and wide power input range (9 ~ 32 V$_{DC}$). The provision of multiple I/O, including 4 x COM, 1 x USB 3.0, 1 x isolated RS-422/485, and dual Intel® Gigabit Ethernet, ensures easy integration and connectivity. With the inclusion of 1 x PCI/PCIe expansion slot, the PPC-3190 can be integrated with fieldbus protocols or proprietary cards for increased application potential.
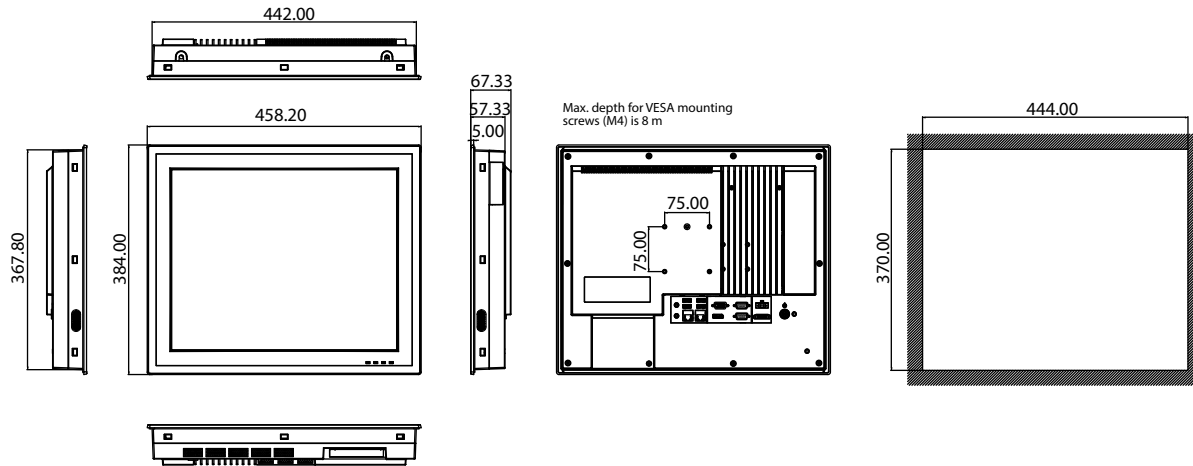
Specifications

System	CPU	Intel® Atom™ E3845 quad core
	Frequency	1.91 GHz
	L3 Cache	2 MB
	Memory	1 x SODIMM DDR3L 1333 MHz (max. 8 GB)
	Storage	1 x 2.5" SATA bay 1 x mSATA bay
	Network (LAN)	2 x 10/100/1000 Mbps Ethernet (Intel I210)
	I/O	1 x isolated RS-422/485 (terminal block) 4 x RS-232, two external and two by internal pin header (need optional module) 1 x GPIO (8 channels, TTL level) by internal pin header (need optional module) 1 x USB 3.0, 3 x USB 2.0 1 x VGA 1 x DP1.1a 1 x Line-out, 1 x Mic-in
	Expansion	1 x Mini PCIe 1 x PCI (default);1 x PCIe x1 (in the accessory box) Optional: 1 x Cfast; 1 x CF card; 1 x Internal USB dongle; 2 x RS-232 or 1 x RS-232 + 1 x GPIO
	Watchdog Timer	255 timer levels, set up by software
	Speaker	2 x 1W
Physical Characteristics	Dimensions	458.2 x 384 x 67.3 mm (18 x 15 x 2.6 in)
	Weight	7.9 kg (17.3 lb)
OS Support	OS Support	Microsoft® Windows 7/8.1/10 (32/64-bit), WES7, WEC7, Linux
Power Consumption	Input Voltage	9 ~ 32 V$_{DC}$
	Power Consumption	27W (Burn-in test 7.0 in Windows 7 32 bit)
LCD	Display Type	19" TFT LED panel
	Max. Resolution	1280 x 1024
	Viewing Angle	85 (left), 85 (right),80 (up), 80 (down)
	Luminance (cd/m²)	350
	Contrast Ratio	1000
	Backlight Lifetime	50, 000 hr (min.)
Touchscreen	Touch Type	5-wire analog resistive
	Light Transmission	81+/-3%
	Controller	USB interface
	Durability (Touches)	36 million

Dimensions

Unit: mm

442.00

458.20

367.80

384.00

67.33

57.33

5.00

Max. depth for VESA mounting screws (M4) is 8 m

75.00

75.00

444.00

370.00

Panel Cutout Dimensions: 444 x 370 mm (17.48 x 14.56 in)

Environment	Operating Temperature	0 ~ 50 °C (32 ~ 122 °F) with 2.5" SATA SSD -20 ~ 60 °C (-4 ~ 140 °F) with -40 ~ 85 °C mSATA or 2.5" SATA SSD
	Storage Temperature	-40 ~ 60 °C (-40 ~ 140 °F)
	Relative Humidity	10 ~ 95% @ 40 °C (non-condensing)
	Shock	Operating 10 G peak acceleration (11 ms duration), follow IEC 60068-2-27
	Vibration	Operating Random Vibration Test 5 ~ 500Hz, 1Grms @with HDD, follow IEC 60068-2-64
	EMC	BSMI, CE, FCC Class A
	Safety	CB, CCC, BSMI, UL
	Front Panel Protection	IP65 compliant

Ordering Information

Part Number	Description
PPC-3190-RE4AE	Intel Atom E3845 (1.91G),19" SXGA LED&T/S,W/O RAM
PPC-WLAN-B1E	Wi-Fi Module with Antenna Cable 40cm for PPC
PPC-174T-WL-MTE	Wall mount kit for PPC series
PPC-ARM-A03	PPC ARM VESA Standard
PPC-3150-COME	Kit to install extra COMx2/DIOx1 for PPC-3150/3190
96PSA-A90W19OT-1	ADP A/D 100-240V 90W 19V W/PFC
1700001524	Power cord 3P UL 10A 125V 1.8M
170203183C	Power cord 3P Europe (WS-010+083) 183cm
1700008921	Power cord 3P/3P 1.8M PSE
96CB-POWER-B-1.8M	Power code 3P CCC(China) 1.8M
PPC-STAND-A1E	Stand For PPC Series
98R3C31500E	PPC-315/317/319 internal USB dongle kits

I/O View
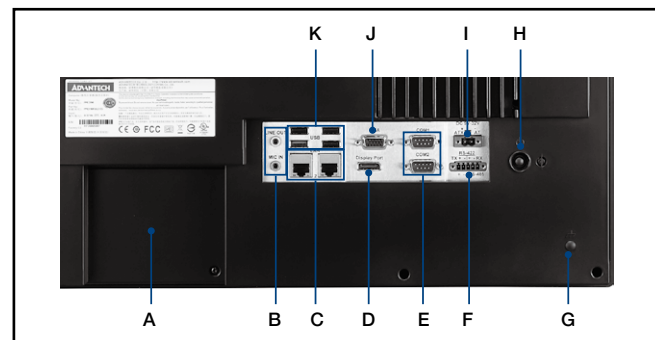
A. 1 x Expansion slot (PCI or PCIe x1)
B. Mic-in/Line-out
C. 2 x Intel Gigabit Ethernet
D. 1 x DisplayPort
E. 2 x RS-232
F. 1 x Isolated RS-422/485

G. Ground Line
H. Power Button
I. DC inlet and AT/ATX switch
J. VGA x1
K. 1 x USB 3.0, 3 x USB 2.0

PPC-3151

15" Fanless Panel PC with Intel® Core™ i5-6300U Processor

1
Software and Industry Solutions

2
Industrial Server

3
Intelligent System

4
Intelligent HMI and Monitors

5
Automation Computers and Controllers

6
Industrial Communication

7
Remote I/O Modules

8
Industrial I/O and Video Solutions

Features

- 15" XGA TFT LCD flat panel with projected capacitive (default) or resistive (optional) touchscreen
- Intel® Core™ i5-6300U (default)/i7/i3 (optional) processor with fanless system design
- Supports either 1 x PCIe x4 or PCI
- 1 x M.2 bay (2242) for storage only
- 1 x isolated RS-422/485 with auto flow
- Wide power input range (9 ~ 32 V$_{DC}$)
- Dual Gigabit Ethernet, IEEE1588 compliant
- 3 x Independent displays
- Supports VESA 75 mounting interface

SUSIAccess   Windows Embedded   VCI   CCC   EHC   CE   FCC   RoHS   c-UL-us LISTED E190881 I.T.E.

Introduction

The PPC-3151 is a next-generation panel PC featuring a 15" TFT XGA display with 1024 x 768 resolution. Powered by a high-performance Intel® Core™ i5-6300U processor, the system's high-efficiency fanless thermal design allows heat to dissipate rapidly. By combining high performance with reliability, PPC-3151 provides a superior human-machine interface. Rich I/O including 3 x COM, 4 x USB 3.0, and dual Gigabit Ethernet facilitate device connectivity and system integration. The inclusion of a PCIe/PCI slot for fieldbus or proprietary card expansion increases the system's suitability for diverse applications. Finally, the 5-point multi-touch screen ensures convenient and intuitive operation for the optimal user experience.
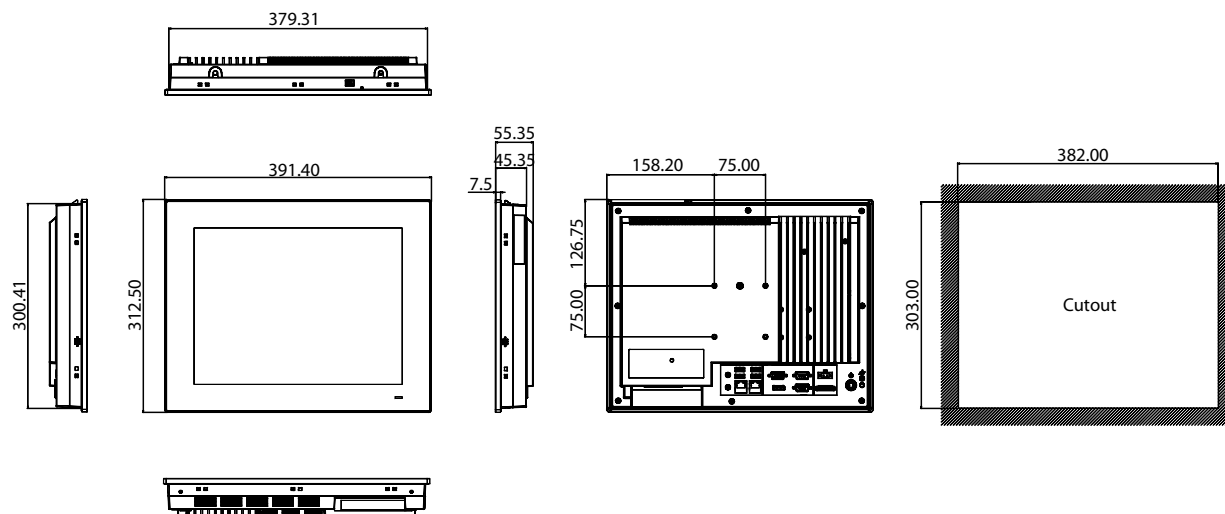
Specifications

Model		PPC-3151-650AE
Processor	CPU	Intel® Core™ i5-6300U (dual core)
	Frequency	2.4 GHz, turbo boost up to 3.0 GHz
	Smart Cache	3 MB
	Memory	1 x SODIMM, DDR4 1866/2133, max. 16 GB (1.2V)
	Storage	1 x 2.5" SATA bay 1 x M.2 bay (size: 22 x 42 mm, socket 2 B key, for storage only)
	Network (LAN)	2 x 10/100/1000 Mbps Ethernet (Intel® I211-AT; Intel® I219LM)
	I/O	3 x Serial ports (2 x RS-232, 1 x RS-422/485 with 1K V$_{DC}$ isolation) 4 x USB 3.0 ports at rear 1 x Line-Out, 1 x Mic-In 1 x DB15 VGA 1 x DisplayPort (1.2)
	Expansion	1 x Mini PCIe 1 x PCIe x 4 (Default); 1 x PCI (in the accessory box) Optional: 1 x Cfast, 1 x CF card, 1 x internal USB dongle, 2 x RS-232 or 1 x RS-232 + 1 x GPIO
	Watchdog Timer	255 timer levels, setup via software
	Speaker	2 x 1W
Physical Characteristics	Dimensions	391.4 x 312.5 x 55.35 mm (15.41 x 12.3 x 2.18 in)
	Weight	5.4 kg (11.90 lb)
OS Support	OS	Microsoft® Windows 7 (32/64-bit), Windows 8.1/10 (64-bit), Linux
Power Consumption	Input Voltage	9 ~ 32 V$_{DC}$
	Power Consumption	i5-6300U: 60W (Burn-in test 7.0 in Windows 7, 64 bit)
LCD Panel	Display Type	15" TFT LED panel
	Max. Resolution	1024 x 768
	Viewing Angle	80 ° (left), 80 ° (right), 70 ° (up), 70 ° (down)
	Luminance (cd/m²)	400
	Contrast Ratio	700
	Backlight Lifetime	50,000 hr
Touchscreen	Touch Type	Projected capacitive 5-point multi-touch
	Light Transmission	88% ± 5%
	Controller	USB interface
Environment	Operating Temperature	0 ~ 50 °C (32 ~ 122 °F) for SSD, 0 ~ 45 °C (32 ~ 113 °F) for HDD
	Storage Temperature	-40 ~ 60 °C (-40 ~ 140 °F)
	Relative Humidity	10 ~ 95% @ 40 °C (non-condensing)
	Shock	Operating 10 G peak acceleration (11 ms duration), IEC 60068-2-27 compliant
	Vibration	Operating random vibration test 5 ~ 500Hz, 1 Grms with HDD; 2 Grms with SSD, IEC 60068-2-64 compliant
	EMC	CE, FCC Class B, BSMI
	Safety	CB, UL, CCC, BSMI
	Front Panel Protection	IP65 compliant

Dimensions

Unit: mm

379.31

55.35
45.35
7.5

391.40

158.20   75.00

382.00

300.41

312.50

126.75

75.00

303.00

Cutout

Panel Cutout Dimensions: 382 x 303 mm (15.03 x 11.92 in)

Ordering Information

Part Number	Description
PPC-3151-650AE	15" Fanless panel PC with PCT multi-touch, Intel Core i5-6300U processor
96PSA-A90W19OT-1	Adapter AC100 ~ 240V, 90W, 19V
1700001524	Power cable 3P UL 10A 125V, 180 cm
170203183C	Power cable 3P Europe (WS-010+083) 183 cm
1700008921	Power cable 3P/3P power supply 1.8M PSE
96CB-POWER-B-1.8M	Power code 3P CCC(China) 1.8M
PPC-174T-WL-MTE	Wall mount kit for PPC series
PPC-STAND-A1E	Stand for PPC series
PPC-ARM-A03	ARM VESA standard (A-CLEVER) for PPC series
PPC-WLAN-B1E	Wi-Fi module with antenna and cable (40 cm) for PPC
PPC-3150-COME	Module that supports two additional ports (either two RS-232 or one RS-232 and one GPIO port) for PPC-3150/PPC-3170
98R3C31500E	PPC-315/317/319 internal USB dongle kits
98R3C31510E	PPC-3150/3170 install CF card kits
98R3C31520E	PPC-3150/PPC-3170 CFast card kits

I/O View

C E G H

L

A   B D   F   I   J

K

A. PCIe x 4/PCI expansion
B. Line-Out/Mic-In
C. 4 x USB 3.0
D. 2 x GigaLAN
E. VGA
F. DP
G. 2 x RS232
H. DC power input
I. 1 x RS422/485
J. Power button
K. Grounding screw
L. Optional modules
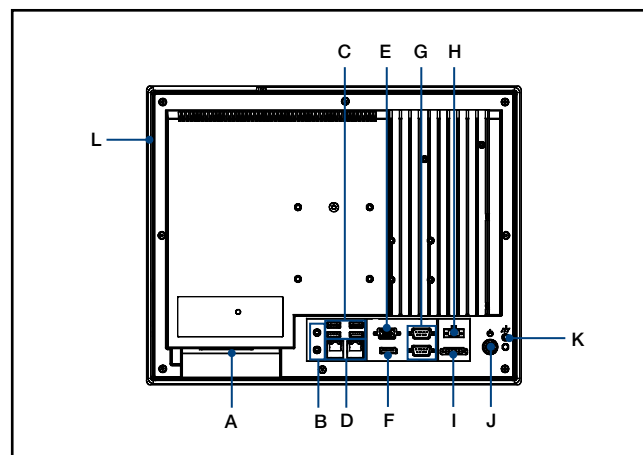
PPC-4151W

15.6" Fanless Widescreen Panel PC with Intel® Core™ i5-4300U/i3-4010U Processor

Features

- 15.6" true-flat WXGA TFT LCD with projected capacitive or resistive touch control
- High-performance, fanless Intel® Core™ i processer
- Supports PCIe x4 or PCI expansion
- RS-485 with automatic data flow control
- Wide input power range (12 ~ 24 V_{DC})
- Dual Gigabit Ethernet with IEEE1588 support
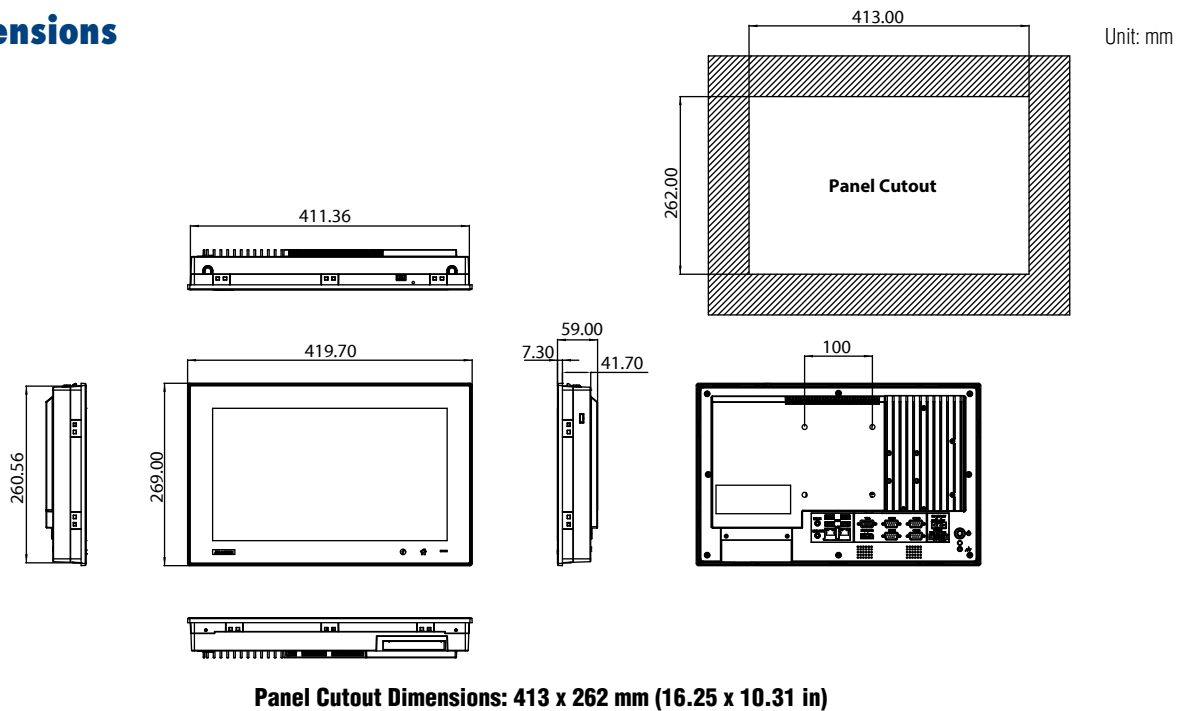- 3 x Independent displays

Introduction

The PPC-4151W is a new-generation panel PC equipped with a 15.6" WXGA TFT LCD with 1366 x 768 resolution. Powered by a high-performance Intel® Core™ i processor, the system's fanless thermal design ensures any heat is rapidly dissipated with high efficiency, consolidating performance and reliability in one system. The provision of multiple I/O, including 5 x COM, 5 x USB, and dual Intel® Gigabit Ethernet, ensures easy integration and connectivity. With the inclusion of 1 x PCI/PCIe expansion slot, the PPC-4151W can be integrated with fieldbus protocols or proprietary cards for increased application potential. Finally, the touchscreen with 5-point multi-touch control allows for more intuitive operation for an optimal usage experience.

Specifications

Model		PPC-4151W-P5AE	PPC-4151W-R3AE
System	CPU	Intel® Core™ i5-4300U dual core	Intel® Core™ i3-4010U dual core
	Frequency	1.9 GHz; 2.9 GHz with turbo boost	1.7 GHz
	L2 Cache	3 MB	
	Memory	1 x SODIMM DDR3L 1333/1600 MHz (max. 8 GB) (1.35 V)	
	Storage	1 x 2.5" SATA bay 1 x mSATA bay	
	Network (LAN)	2 x 10/100/1000 Mbps Ethernet (Intel I211-AT; Intel I218LM)	
	I/O	5 x Serial ports: 4 x RS-232, 1 x RS-422/485 with isolation 1K V_{DC} 4 x USB 3.0 ports in rear side, 1 x USB 2.0 in right side 1 x Line-out, 1x MIC-in 1 x DB15 VGA 1 x Display Port (1.2)	
	Expansion	1 x Mini PCIe 1 x PCIe x 4 (default); 1 x PCI (in the accessory box)	
	Watchdog Timer	255 timer levels, set up by software	
	Speaker	2 x 1W	
Physical Characteristics	Dimensions	419.7 x 269 x 59 mm (16.5 x 10.6 x 2.3 in)	
	Weight	5.8 kg (12.79 lb)	
OS Support	OS Support	Microsoft® Windows 7/8.1/10 (32/64-bit), WES7, Linux	
Power Consumption	Input Voltage	9 ~ 32 V_{DC}	
	Power Consumption	i5-4300U/i3-4010U: 56W (Burn-in test 7.0 in Windows 7 64 bit)	
LCD	Display Type	15.6" TFT LCD (LED backlight)	
	Max. Resolution	1366 x 768	
	Viewing Angle	85 (Left), 85 (Right), 80 (Up), 80 (Down)	
	Luminance (cd/m²)	400	
	Contrast Ratio	500	
	Backlight Lifetime	50,000 hr (min.)	
Touchscreen	Touch Type	10-point multi-touch projected capacitive	5-wire analog resistive
	Light Transmission	88 % ± 2 %	80% ± 5%
	Controller	USB interface	
Environment	Operating Temperature	0 ~ 50 °C (32 ~ 122 °F) with SSD; 0 ~ 45 °C (32 ~ 113 ° F) with HDD	
	Storage Temperature	-20 ~ 60 °C (-4 ~ 140 °F)	
	Relative Humidity	10 ~ 95% @ 40 °C (Non-Condensing)	
	Shock	Operating 10 G Peak Acceleration (11 ms Duration), Follows IEC 60068-2-27	
	Vibration	Operating Random Vibration Test 5 ~ 500Hz, 1Grms @with HDD; 2Grms @with SSD, Follows IEC 60068-2-64	
	EMC	CE, FCC Class B, BSMI	
	Safety	CB, UL, CCC, BSMI	
	Front Panel Protection	IP65 compliant	

All product specifications are subject to change without notice.

▲ Back to Top

Last updated: 31-Aug-2018

Dimensions

Unit: mm

413.00

262.00

Panel Cutout

411.36

419.70

260.56

269.00

7.30   59.00   41.70

100

Panel Cutout Dimensions: 413 x 262 mm (16.25 x 10.31 in)

Ordering Information

Part Number	Description
PPC-4151W-P5AE	15.6" Wide screen PPC with PCT Multi-touch, Intel Core i5-4300U
PPC-4151W-R3AE	15.6" Wide screen PPC with resistive touch, Intel Core i3-4010U
96PSA-A90W19OT-1	Adapter AC100-240V 90W 19V
1700001524	POWER Cord 3P UL 10A 125V 180cm
170203183C	POWER Code 3P Europe (WS-010+083)183cm
1700008921	POWER CORD 3P/3P POWER SUPPLY 1.8M PSE
96CB-POWER-B-1.8M	Power code 3P CCC(China) 1.8M
PPC-174T-WL-MTE	Wall mount kit for PPC series
PPC-STAND-A1E	Stand for PPC series
PPC-ARM-A03	ARM VESA Standard (A-CLEVER) for PPC series
PPC-WLAN-B1E	Wi-Fi Module with Antenna Cable 40cm for PPC

I/O View

A B C D E

F

G

K J I H

A. Mic-in
B. 4 x USB 3.0
C. VGA Port
D. 4 x RS-232
E. DC Inlet
F. Power Button

G. Ground Line
H. 1 x RS-422/485
I. Display Port
J. 2 x 10/100/1000 Mbps Ethernet
K. Line Out

ADVANTECH   General Panel PCs

PPC-4211W

21.5" Fanless Widescreen Panel PC with Intel® Core™ i5-4300U/i3-4010U Processor

1
Software and Industry Solutions

2
Industrial Server

3
Intelligent System

4
Intelligent HMI and Monitors

5
Automation Computers and Controllers

6
Industrial Communication

7
Remote I/O Modules

8
Industrial I/O and Video Solutions

Features

- 21.5" true-flat Full HD TFT LCD with projected capacitive or resistive touch control

- High-performance, fanless Intel® Core™ i processer

- 2 x 2.5" HDD bays (with Intel RAID support)

- Supports PCIe x4 or PCI expansion

- RS-485 with automatic data flow control

- Wide input power range (12 ~ 24 V_{DC})

- Dual Gigabit Ethernet with IEEE1588 support

- 3 x Independent displays

SUSIAccess   Windows Embedded   VCCI   CCC   EHC   C   CE   FCC   RoHS   LISTED E190881 I.T.E.

Introduction

The PPC-4211W is a new-generation panel PC equipped with a 21.5" Full HD TFT LCD with 1920 x 1080 resolution. Powered by a high-performance Intel® Core™ i processor, the system's fanless thermal design ensures any heat is rapidly dissipated with high efficiency, consolidating performance and reliability in one system. The provision of multiple I/O, including 5 x COM, 5 x USB, and dual Intel® Gigabit Ethernet, ensures easy integration and connectivity. With the inclusion of 1 x PCI/PCIe expansion slot, the PPC-4211W can be integrated with fieldbus protocols or proprietary cards for increased application potential. Finally, the touchscreen with 5-point multi-touch control allows for more intuitive operation for an optimal usage experience.
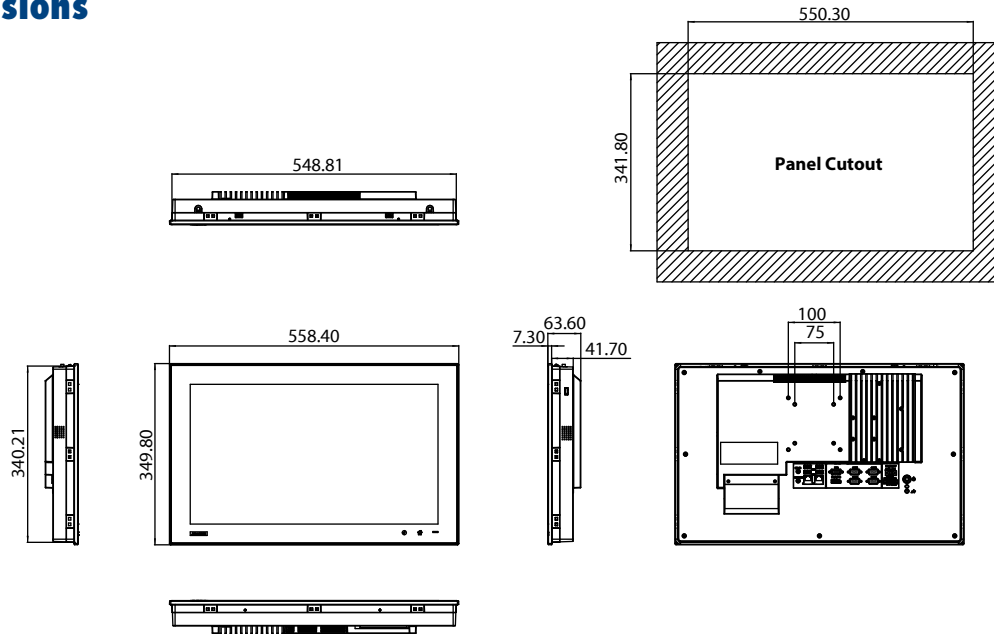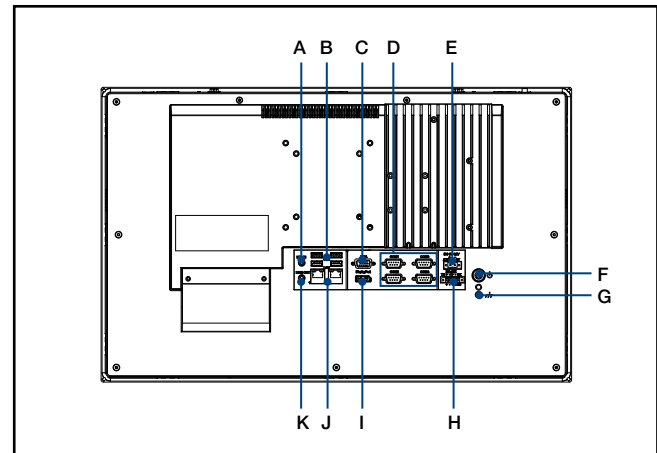
Specifications

Model		PPC-4211W-P5AE	PPC-4211W-R3AE
System	CPU	Intel® Core™ i5-4300U dual core	Intel® Core™ i3-4010U dual core
	Frequency	1.9 GHz; 2.9 GHz with turbo boost	1.7 GHz
	L2 Cache	3 MB	
	Memory	1 x SODIMM DDR3L 1333/1600 MHz (max. 8 GB) (1.35 V)	
	Storage	2 x 2.5" SATA bay (supports Intel RAID) 1 x mSATA bay	
	Network (LAN)	2 x 10/100/1000 Mbps Ethernet (Intel I211-AT; Intel I218LM)	
	I/O	5 x Serial ports: 4 x RS-232, 1 x RS-422/485 with isolation 1K VDC 4 x USB 3.0 ports in rear side, 1 x USB 2.0 in right side 1 x Line-out, 1x Mic-in 1 x DB15 VGA 1 x Display Port (1.2)	
	Expansion	1 x Mini PCIe 1 x PCIe x 4 (default); 1 x PCI (in the accessory box)	
	Watchdog Timer	255 timer levels, set up by software	
	Speaker	2 x 1W	
Physical Characteristics	Dimensions	557.77 x 349.17 x 63.6 mm (22.0 x 13.7 x 2.5 in)	
	Weight	7.8 kg (17.2 lb)	
OS Support	OS Support	Microsoft® Windows 7/8.1/10 (32/64-bit), WES7, Linux	
Power Consumption	Input Voltage	12 ~ 32 V_{DC}	
	Power Consumption	i5-4300U/i3-4010U: 66W (Burn-in test 7.0 in Windows 7 64 bit)	
LCD	Display Type	21.5" TFT LCD (LED backlight)	
	Max. Resolution	1920 x 1080	
	Viewing Angle	89 (Left),89 (Right),89 (Up),89 (Down)	
	Luminance (cd/m²)	300	
	Contrast Ratio	5000	
	Backlight Lifetime	50,000 hr (min.)	
Touchscreen	Touch Type	10-point multi-touch projected capacitive	5-wire analog resistive
	Light Transmission	88 % ± 2 %	80% ± 3%
	Controller	USB interface	
Environment	Operating Temperature	0 ~ 50 °C (32 ~ 122 °F)	
	Storage Temperature	-20 ~ 60 °C (-4 ~ 140 °F)	
	Relative Humidity	10 ~ 95% @ 40 °C (Non-Condensing)	
	Shock	Operating 10 G Peak Acceleration (11 ms Duration), Follows IEC 60068-2-27	
	Vibration	Operating Random Vibration Test 5 ~ 500Hz, 1Grms @with HDD; 2Grms @with SSD, Follows IEC 60068-2-64	
	EMC	CE, FCC Class B, BSMI	
	Safety	CB, UL, CCC, BSMI	
	Front Panel Protection	IP65 compliant	

Dimensions

Unit: mm

550.30

341.80

Panel Cutout

548.81

558.40

340.21

349.80

7.30 63.60 41.70

100
75

Panel Cutout Dimensions: 550.3 x 341.8 mm (21.66 x 13.45 in)

Ordering Information

Part Number	Description
PPC-4211W-P5AE	21.5" Wide screen PPC with PCT Multi-touch, Intel Core i5-4300U
PPC-4211W-R3AE	21.5" Wide screen PPC with resistive touch, Intel Core i3-4010U
1702002600	Power Cord 3P UL/CSA (USA) 125V 10A 1.83M 180D
1702002605	Power Cable 90D 220V EUROPEAN 250V/6A 1.8M
96CB-POWER-B-1.8M1	POWER CORD for China 1.8M
96PSA-A150W19P2-1	Adapter AC100-240V 150W 19V
PPC-174T-WL-MTE	Wall mount kit for PPC series
PPC-ARM-A03	ARM VESA Standard (A-CLEVER) for PPC series
PPC-WLAN-B1E	Wi-Fi Module with Antenna Cable 40cm for PPC
PPC-STAND-A1E	Stand for PPC Series

I/O View

A B C D E

F
G

K J I   H

A. Mic-in
B. 4 x USB 3.0
C. VGA Port
D. 4 x RS-232
E. DC Inlet
F. Power Button
G. Ground Line
H. 1 x RS-422/485
I. Display Port
J. 2 x 10/100/1000 Mbps Ethernet
K. Line-out

PPC-3181SW

18.5" Fanless Panel PC with Intel® Core™ i5-6300U Processor

Features

- Industrial-grade 18.5" LCD panel with 50k backlight lifetime
- True-flat touchscreen with multi-touch projected capacitive control
- High-performance, fanless 6th generation Intel® Core™ i processor
- Up to 16 GB DDR4 SDRAM
- Compact, fanless design with aluminum alloy enclosure
- IP65-rated front panel
- Supports dual displays (1 x external HDMI)
- Supports full-size mini PCIe expansion
- Supports USB 3.0
- Supports VESA 100

SUSIAccess Windows Embedded VCI CCC EHC C CE FCC R33138 RoHS LISTED E190881 I.T.E. c(UL)us

Introduction

The PPC-3181SW is an all-in-one light panel PC with a wide format 18.5" industrial-grade LCD. Powered by 6th generation Intel® Core™ i processor, PPC-3181SW provides excellent performance, memory, graphics, and peripheral I/O support in a compact, fanless, embedded system. With a high durability design, PPC-3181SW features a true-flat touchscreen with IP65-rated front panel, and die cast aluminum alloy enclosure, making it ideal for diverse applications.
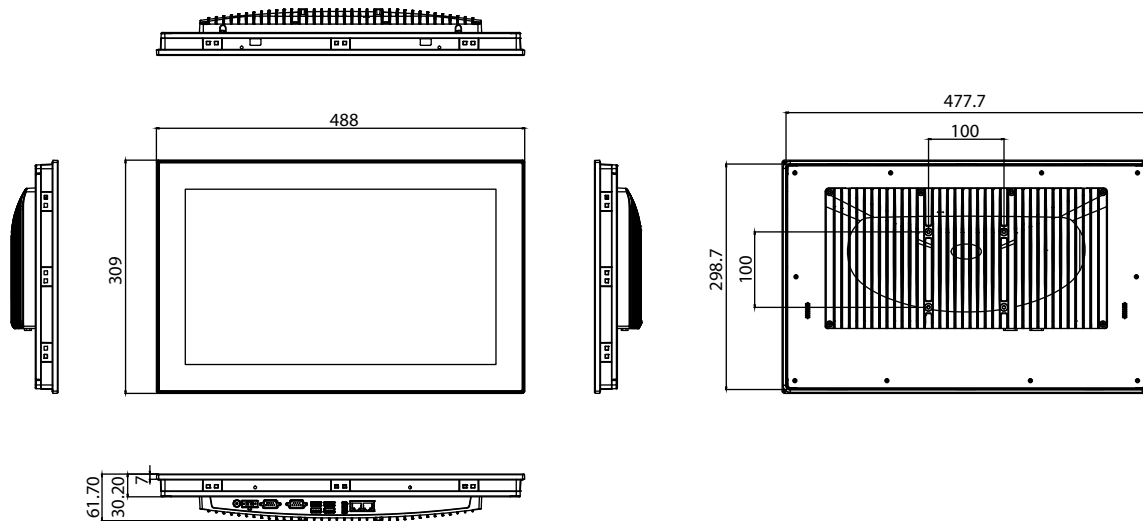
Specifications

System	CPU	6th gen Intel® Core™ i5-6300U dual core (i7-6500U/i3-6100U optional)
	Frequency	2.4 GHz; 3.0 GHz with turbo boost
	L2 Cache	3 MB
	Memory	1 x SODIMM DDR4 1866/2133 MHz (max. 16 GB) (1.2 V)
	Storage	1 x 2.5" SATA bay 1 x mSATA bay
	Network (LAN)	2 x 10/100/1000 Mbps Ethernet (Intel I211-AT; Intel I219LM)
	I/O	2 x Serial ports: 1 x RS-232, 1 x RS-232/422/485(Adjustable through BIOS) 2 x USB 3.0, 2 x USB 2.0 1 x HDMI
	Speaker	2 x 1W
	Expansion	1 x Full-size mini PCIe slot
	Watchdog Timer	255 timer levels, set up by software
Physical Characteristics	Dimensions	488 x 309 x 61.7 mm (19.2 x 12.1 x 2.4 in)
	Weight	5.7 kg (12.56 lb)
OS Support	OS Support	Microsoft® Windows 7/8.1/10 (32/64-bit), WES7, Linux
Power Consumption	Input Voltage	12 ~ 24 V$_{DC}$
	Power Consumption	65W
LCD	Display Type	18.5" TFT LCD (LED backlight)
	Resolution	1366 x 768
	Viewing Angle	85 (left), 85 (right), 80 (up), 80 (down)
	Luminance (cd/m²)	450
	Contrast Ratio	1000
	Backlight Lifetime	50,000 hr
Touchscreen	Touch Type	10-point multi-touch projected capacitive
	Light Transmission	90 % ± 3 %
	Controller	USB interface
Environment	Operating Temperature	0 ~ 50 °C (32 ~ 122 °F) for SSD 0 ~ 45 °C (32 ~ 113 °F) for HDD
	Storage Temperature	-20 ~ 60 °C (-4 ~ 140 °F)
	Relative Humidity	10 ~ 95% @ 40 °C (non-condensing)
	Shock	Operating 10 G peak acceleration (11 ms duration), follow IEC 60068-2-27
	Vibration	Operating Random Vibration Test 5 ~ 500Hz, 1Grms @with HDD; 2Grms @with SSD, follow IEC 60068-2-64
	EMC	CE, FCC Class B, BSMI
	Safety	CB, CCC, BSMI, UL
	Front Panel Protection	IP65 compliant

Dimensions

Unit: mm

488

309

477.7

100

298.7

100

61.70
30.20
7

Panel Cutout Dimensions: 479.3 x 300.3 mm (18.87 x 11.82 in)

Ordering Information

Part Number	Description
PPC-3181SW-P65A	Intel Core i5-6300U Fanless Panel PC with 18.5" Full HD LED backlight
96PSA-A90W19OT-1	ADP A/D 100-240V 90W 19V W/PFC
PPC-WLAN-B1E	Wi-Fi Module with Antenna Cable 40cm for PPC
PPC-ARM-A03	ARM VESA Standard (A-CLEVER) for PPC series
PPC-174T-WL-MTE	Wall mount kit for PPC series
PPC-Stand-A1E	Stand for PPC series
1700001524	Power cord 3P UL 10A 125V 1.8M
170203183C	Power cord 3P Europe (WS-010+083) 183cm
1700008921	Power cord 3P/3P 1.8M PSE
96CB-POWER-B-1.8M	Power code 3P CCC(China) 1.8M

I/O View

A B C D E   F   G H

A. 2 x LAN   E. COM2: RS-232/422/485
B. HDMI   F. COM1: RS-232
C. 2 x USB 3.0   G. DC-In
D. 2 x USB 2.0   H. Power Button

PPC-3211SW

21.5" Fanless Panel PC with Intel® Core™ i5-6300U Processor

Features

- Industrial-grade 21.5" LCD panel with 50k backlight lifetime
- True-flat touchscreen with multi-touch projected capacitive control
- High-performance, fanless 6th generation Intel® Core™ i processor
- Up to 16 GB DDR4 SDRAM
- Compact, fanless design with aluminum alloy enclosure
- IP65-rated front panel
- Supports dual displays (1 x external HDMI)
- Supports full-size mini PCIe expansion
- Supports USB 3.0
- Supports VESA 100

SUSIAccess Windows Embedded VCI CCC EHC CE FCC RoHS c(UL)us LISTED E190881 I.T.E.

Introduction

The PPC-3211SW is an all-in-one light panel PC with a wide format 21.5" industrial-grade LCD. Powered by 6th generation Intel® Core™ i processor, PPC-3211SW provides excellent performance, memory, graphics, and peripheral I/O support in a compact, fanless, embedded system. With a high durability design, PPC-3211SW features a true-flat touchscreen with IP65-rated front panel, and die cast aluminum alloy enclosure, making it ideal for diverse applications.
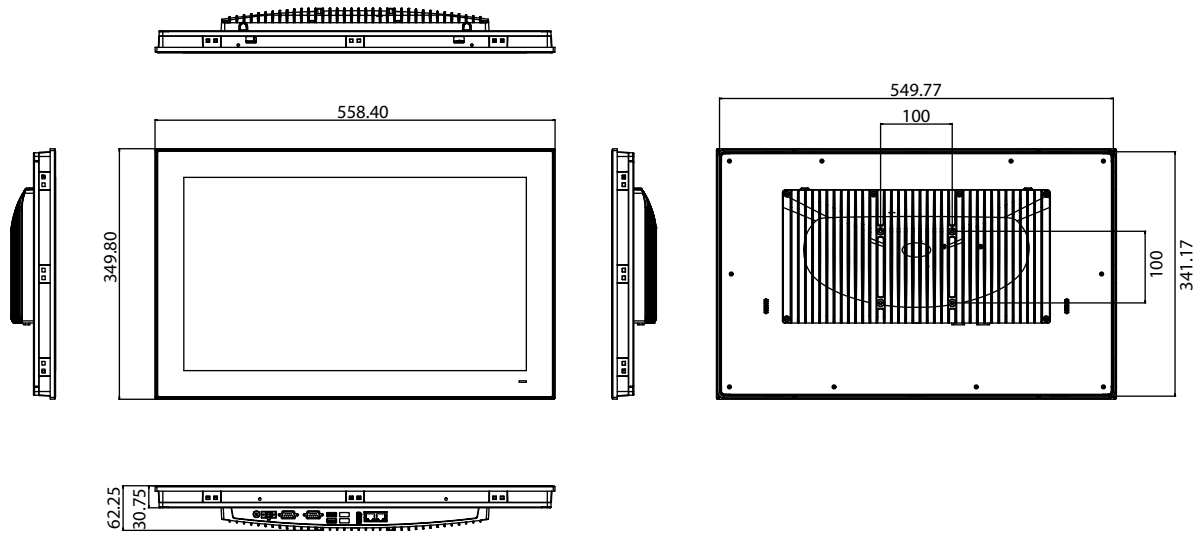
Specifications

System	CPU	6th gen Intel® Core™ i5-6300U dual core (i7-6500U/i3-6100U optional)
	Frequency	2.4 GHz; 3.0 GHz with turbo boost
	L2 Cache	3 MB
	Memory	1 x SODIMM DDR4 1866/2133 MHz (max. 16 GB) (1.2 V)
	Storage	1 x 2.5" SATA bay 1 x mSATA bay
	Network (LAN)	2 x 10/100/1000 Mbps Ethernet (Intel I211-AT; Intel I219LM)
	I/O	2 x Serial ports: 1 x RS-232, 1 x RS-232/422/485(Adjustable through BIOS) 2 x USB 3.0, 2 x USB 2.0 1 x HDMI
	Speaker	2 x 1W
	Expansion	1 x Full-size mini PCIe slot
	Watchdog Timer	255 timer levels, set up by software
Physical Characteristics	Dimensions	558.4 x 349.8 x 62.2 mm (21.9 x 13.7 x 2.4 in)
	Weight	6.8 kg (14.9 lb)
OS Support	OS Support	Microsoft® Windows 7/8.1/10 (32/64-bit), WES7, Linux
Power Consumption	Input Voltage	12 ~ 24 V_{DC}
	Power Consumption	75W
LCD	Display Type	21.5" TFT LCD (LED backlight)
	Resolution	1920 x 1080
	Viewing Angle	89 (left), 89 (right), 89 (up), 89 (down)
	Luminance (cd/m²)	300
	Contrast Ratio	5000
	Backlight Lifetime	50,000 hr
Touchscreen	Touch Type	10-point multi-touch projected capacitive
	Light Transmission	90 % ± 3 %
	Controller	USB interface
Environment	Operating Temperature	0 ~ 50 °C (32 ~ 122 °F) for SSD 0 ~ 45 °C (32 ~ 113 °F) for HDD
	Storage Temperature	-20 ~ 60 °C (-4 ~ 140 °F)
	Relative Humidity	10 ~ 95% @ 40 °C (non-condensing)
	Shock	Operating 10 G peak acceleration (11 ms duration), follow IEC 60068-2-27
	Vibration	Operating Random Vibration Test 5 ~ 500Hz, 1Grms @with HDD; 2Grms @with SSD, follow IEC 60068-2-64
	EMC	CE, FCC Class B, BSMI
	Safety	CB, CCC, BSMI, UL
	Front Panel Protection	IP65 compliant

Dimensions

Unit: mm

558.40

349.80

549.77

100

341.17

100

62.25
30.75

Panel Cutout Dimensions: 550.3 x 341.8 mm (21.66 x 13.45 in)

Ordering Information

Part Number	Description
PPC-3211SW-P65A	Intel Core i5-6300U Fanless Panel PC with 21.5" Full HD LED backlight
96PSA-A90W19OT-1	ADP A/D 100-240V 90W 19V W/PFC
PPC-WLAN-B1E	Wi-Fi Module with Antenna Cable 40cm for PPC
PPC-ARM-A03	ARM VESA Standard (A-CLEVER) for PPC series
PPC-174T-WL-MTE	Wall mount kit for PPC series
PPC-Stand-A1E	Stand for PPC series
1700001524	Power cord 3P UL 10A 125V 1.8M
170203183C	Power cord 3P Europe (WS-010+083) 183cm
1700008921	Power cord 3P/3P 1.8M PSE
96CB-POWER-B-1.8M	Power code 3P CCC(China) 1.8M

I/O View

A B C D E   F G H

A. 2 x LAN
B. HDMI
C. 2 x USB 3.0
D. 2 x USB 2.0

E. COM2: RS-232/422/485
F. COM1: RS-232
G. DC-In
H. Power Button

PPC-6191C

19" Configurable Panel PC Chassis for Selectable Mini-ITX Motherboards

Features

- 19" true-flat panel PC with resistive touch
- Supports certified mini-ITX motherboards (up to 45W TDP processor)
- PCI or PCIe expansion slots
- Front-facing power status LED indicators
- IP65-rated front panel
- Optional VESA mount module

SUSIAccess   Windows Embedded   VCCI   CCC   EHC   C E   FCC   RoHS R33138   c UL us LISTED E190881 I.T.E.

Specifications

Model		PPC-6191C-RTAE	PPC-6191C-RMAE
Supported Motherboard		PPC-MB-8260AE	▪ AIMB-275 ▪ AIMB-226
Chassis	Storage	1 x 2.5" SATA HDD bay	2 x 2.5" SATA HDD bay
	I/O	4 x Reserved ports (DB9) 2 x WLAN antenna holes 1 x AC inlet 1 x Power switch Reserved opening: According to the PPC-MB-8260AE motherboard specifications	1 x AC inlet 1 x Power switch 1 x DP (input, for connecting the motherboard and LVDS panel) 1 x USB 2.0 (input, for connecting the motherboard and touch controller) Reserved opening: According to the motherboard specifications
	Expansion	1 x PCIe x4 or 2 x PCI (in the accessory box) 2 x PCIe x1 (optional) 1 x PCIe x1 + 1 x PCI (optional)	1 x PCIe x4 or 1 x PCI (in the accessory box)
	Speaker	2 x 1 W	2 x 1 W (optional)
	Fan	2 x 12V; 60 x 60 x 15 mm (2.36 x 2.36 x 0.59 in)	
Physical Characteristics	Dimensions (W x H x D)	454 x 379.8 x 107.5 mm (17.9 x 15 x 4.2 in)	
	Weight	5.8 kg (12.8 lb)	
OS Support	OS Support	According to motherboard specifications	
Power Consumption	Input Voltage	100 ~ 240 V_{AC}, 250W	
LCD Display	Display Type	19" TFT LED panel	
	Max. Resolution	1280 x 1024	
	Viewing Angle	85 (left),85 (right),80 (up),80 (down)	
	Luminance (cd/m²)	350	
	Contrast Ratio	1000	
	Backlight Lifetime	50,000 hr	
Touchscreen	Touch Type	5-wire analog resistive, with optional projected capacitive touch	
	Light Transmission	80+/-5%	
	Controller	USB interface	
	Durability	35 million touches	
Environment	Operating Temperature	0 ~ 50 °C (32 ~ 122 °F) 0 ~ 45 °C (32 ~ 113 °F) with VESA mount module	
	Storage Temperature	-30 ~ 60 °C (-22 ~ 140 °F)	
	Relative Humidity	10 ~ 95% @ 40 °C (non-condensing)	
	Shock	Operating: 10 G peak acceleration (11 ms duration), IEC 60068-2-27 compliant	
	Vibration	Operating: Random vibration test 5 ~ 500 Hz, 1 Grms @ with HDD, IEC 60068-2-64 compliant	
	EMC	BSMI,CE,FCC,Class A	CE,FCC,Class A
	Safety	BSMI,CB,CCC,UL	CB,CCC,UL
	Front Panel Protection	IP65 compliant	

All product specifications are subject to change without notice.   ▲ Back to Top   Last updated: 31-Aug-2018

Motherboard Specifications

PPC-MB-8260AE (For PPC-6191C-RTAE only)

	i7-6700TE	i5-6500TE	i3-6100TE	Pentium G4400TE	Celeron G3900TE
CPU	Quad Core	Quad Core	Dual Core	Dual Core	Dual Core
	3.4 GHz	3.3 GHz	2.7 GHz	2.4 GHz	2.3 GHz
	8 MB	6 MB	4 MB	3 MB	2 MB
	35W	35W	35W	35W	35W
Chipset	H110				
Memory	1 x 260-pin SODIMM DDR4, 2133 MHz, up to 16 GB (non-ECC)				
Network (LAN)	2 x 10/100/1000 Mbps Ethernet and 2 x Intel® I211				
Rear I/O	1 x RS232/422/485, 1 x RS232, 1 x DP1.2, 1 x VGA, 4 x USB3.0, 1 x Line-out, 1 x Mic-in				
Internal Connector	3 x RS232, 1 x GPIO (8 channels), 1 x speaker, 1 x LED, 2 x USB 2.0, 1 x LVDS, 1 x touch control, 2 x SATA				
Watchdog Timer	255 timer intervals, configurable using software				
Expansion	1 x full-size mSATA or mini PCIe and 1 x PCIe x4 slot for riser card				
Dimensions (W x H)	170 x 170 mm (6.69 x 6.69")				
OS Support	Microsoft® Windows 7 (32/64-bit), Windows 8.1/10 (64-bit), Linux				

Ordering Information

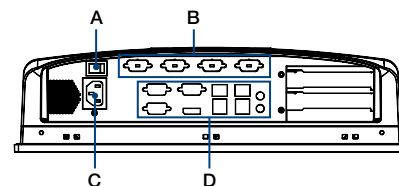| M/B Part Number	Chassis Part Number	Cooler Part Number
PPC-MB-8260AE	PPC-6191C-RTAE	1960053207N001
AIMB-275	PPC-6191C-RMAE	1960053207N001
AIMB-226	PPC-6191C-RMAE	1960061914N001

Note 1. The motherboard, chassis, and cooler should be ordered together to ensure easy configuration.
Note 2. The chassis is equipped with AC power supply and riser cards.

Optional Accessories

Part Number	Description
PPC-WLAN-B1E	Wi-Fi module with antenna cable (40 cm) for PPC
1702002605	Power cable (EU) 90D 220 ~ 250V/6A, 1.8 M
1702002600	Power cable (US) 180D 125V/10A, 1.83 M
1702031801	Power cable (UK), 1.8 M
96CB-POWER-B-1.8M1	Power cable (China), 1.8 M
PPC-6191C-VESAE	VESA module for PPC-6191C (operating temperature 0 ~ 45 °C)
9893BE0200E	PPC-61X1C-RTAE riser card with 2 x PCIe x1 slots
9893BE03000	PPC-61X1C-RTAE riser card with 1 x PCIe x1 and 1 x PCI slots
PPC-ARM-A03	ARM VESA Standard (A-CLEVER) for PPC series
PPC-174T-WL-MTE	Wall mount kit for PPC series
PPC-Stand-A1E	Stand for PPC series

Dimensions

Unit: mm

Optional kit for VESA mounting using M4 8-mm screws
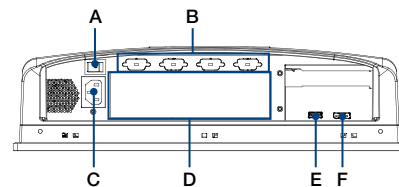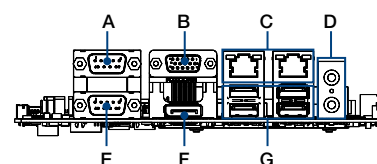**Panel Cutout Dimensions: 444 x 370 mm (17.48 x 14.56 in)**

I/O View

PPC-6191C-RTAE

A. Power switch
B. Reserved ports
C. AC inlet
D. PPC-MB-8260AE I/O port

PPC-6191C-RMAE

A. Power switch
B. Reserved ports
C. AC inlet
D. Mini-ITX motherboard I/O port
E. USB 2.0 (input, for connecting the motherboard and touch controller)
F. Display port (input, for connecting the motherboard and LVDS panel)

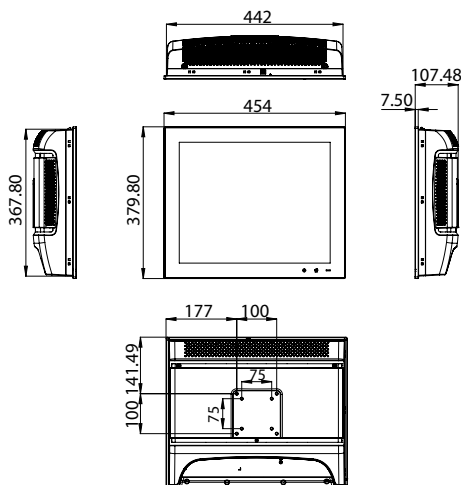**PPC-MB-8260AE**

A. RS232
B. VGA
C. 2 x Gigabit Ethernet
D. Line-out/Mic-in
E. RS232/422/485
F. Display Port
G. USB 3.0

PPC-6171C

17" Configurable Panel PC Chassis for Selectable Mini-ITX Motherboards

Features

- 17" true-flat panel PC with resistive touch
- Supports certified mini-ITX motherboards (up to 45W TDP processor)
- PCI or PCIe expansion slots
- Front-facing power status LED indicators
- IP65-rated front panel
- Optional VESA mount module

SUSIAccess Windows Embedded VCCI CCC EHC C-tick CE FCC RoHS c-UL-us LISTED E190881 I.T.E.

Specifications

Model		PPC-6171C-RTAE	PPC-6171C-RMAE
Supported Motherboard		PPC-MB-8260AE	▪ AIMB-275 ▪ AIMB-226 ▪ SIMB-382
Chassis	Storage	1 x 2.5" SATA HDD bay	2 x 2.5" SATA HDD bay
	I/O	4 x Reserved ports (DB9) 2 x WLAN antenna holes	
		1 x AC inlet 1 x Power switch Reserved opening: According to the PPC-MB-8260AE motherboard specifications	1 x AC inlet 1 x Power switch 1 x DP (input, for connecting the motherboard and LVDS panel) 1 x USB 2.0 (input, for connecting the motherboard and touch controller) Reserved opening: According to the motherboard specifications
	Expansion	1 x PCIe x4 or 2 x PCI (in the accessory box) 2 x PCIe x1 (optional) 1 x PCIe x1 + 1 x PCI (optional)	1 x PCIe x4 or 1 x PCI (in the accessory box)
	Speaker	2 x 1 W	2 x 1 W (optional)
	Fan	2 x 12V; 60 x 60 x 15 mm (2.36 x 2.36 x 0.59 in)	
Physical Characteristics	Dimensions (W x H x D)	437 x 357 x 107.6 mm (17.2 x 14.06 x 4.2 in)	
	Weight	5.4 kg (11.9 lb)	
OS Support	OS Support	According to motherboard specifications	
Power Consumption	Input Voltage	100 ~ 240 V_{AC}, 250W	
	Power Consumption	95W (Burn-in test 7.0 in Windows 7, 64 bit) (with PPC-MB-8260AE)	
LCD	Display Type	17" TFT LED panel	
	Max. Resolution	1280 x 1024	
	Viewing Angle	80 (left), 80 (right), 60 (up), 80 (down)	
	Luminance (cd/m²)	350	
	Contrast Ratio	800	
	Backlight Lifetime	50,000 hr	
Touchscreen	Touch Type	5-wire analog resistive, with optional projected capacitive touch	
	Light Transmission	80+/-5%	
	Controller	USB interface	
	Durability	35 million touches	
Environment	Operating Temperature	0 ~ 50 °C (32 ~ 122 °F) 0 ~ 45 °C (32 ~ 113 °F) with VESA mount module	
	Storage Temperature	-30 ~ 60 °C (-22 ~ 140 °F)	
	Relative Humidity	10 ~ 95% @ 40 °C (non-condensing)	
	Shock	Operating: 10 G peak acceleration (11 ms duration), IEC 60068-2-27 compliant	
	Vibration	Operating: Random vibration test 5 ~ 500 Hz, 1 Grms @ with HDD, IEC 60068-2-64 compliant	
	EMC	BSMI,CE,FCC,Class A	CE,FCC,Class A
	Safety	BSMI,CB,CCC,UL	CB,CCC,UL
	Front Panel Protection	IP65 compliant	

Motherboard Specifications

PPC-MB-8260AE (For PPC-6171C-RTAE only)

	i7-6700TE	i5-6500TE	i3-6100TE	Pentium G4400TE	Celeron G3900TE
CPU	Quad Core	Quad Core	Dual Core	Dual Core	Dual Core
	3.4 GHz	3.3 GHz	2.7 GHz	2.4 GHz	2.3 GHz
	8 MB	6 MB	4 MB	3 MB	2 MB
	35W	35W	35W	35W	35W
Chipset	H110				
Memory	1 x 260-pin SODIMM DDR4, 2133 MHz, up to 16 GB (non-ECC)				
Network (LAN)	2 x 10/100/1000 Mbps Ethernet and 2 x Intel® I211				
Rear I/O	1 x RS232/422/485, 1 x RS232, 1 x DP1.2, 1 x VGA, 4 x USB3.0, 1 x Line-out, 1 x Mic-in				
Internal Connector	3 x RS232, 1 x GPIO (8 channels), 1 x speaker, 1 x LED, 2 x USB 2.0, 1 x LVDS, 1 x touch control, 2 x SATA				
Watchdog Timer	255 timer intervals, configurable using software				
Expansion	1 x full-size mSATA or mini PCIe and 1 x PCIe x4 slot for riser card				
Dimensions (W x H)	170 x 170 mm (6.69 x 6.69")				
OS Support	Microsoft® Windows 7 (32/64-bit), Windows 8.1/10 (64-bit), Linux				

Ordering Information

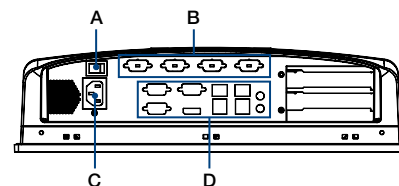| M/B Part Number	Chassis Part Number	Cooler Part Number
PPC-MB-8260AE	PPC-6171C-RTAE	1960053207N001
AIMB-275	PPC-6171C-RMAE	1960053207N001
AIMB-226	PPC-6171C-RMAE	1960061914N001

Note 1. The motherboard, chassis, and cooler should be ordered together to ensure easy configuration.
Note 2. The chassis is equipped with AC power supply and riser cards.

Optional Accessories

Part Number	Description
PPC-WLAN-B1E	Wi-Fi module with antenna cable (40 cm) for PPC
1702002605	Power cable (EU) 90D 220 ~ 250V/6A, 1.8 M
1702002600	Power cable (US) 180D 125V/10A, 1.83 M
1702031801	Power cable (UK), 1.8 M
96CB-POWER-B-1.8M1	Power cable (China), 1.8 M
PPC-6171C-VESAE	VESA module for PPC-6171C (operating temperature 0 ~ 45 °C)
9893BE0200E	PPC-61X1C-RTAE riser card with 2 x PCIe x1 slots
9893BE03000	PPC-61X1C-RTAE riser card with 1 x PCIe x1 and 1 x PCI slots
PPC-ARM-A03	ARM VESA Standard (A-CLEVER) for PPC series
PPC-174T-WL-MTE	Wall mount kit for PPC series
PPC-Stand-A1E	Stand for PPC series

Dimensions

Unit: mm

425
437
345
357
7.50
107.60
168.58 100
130.10
100
75
75

Optional kit for VESA mounting using M4 8-mm screws
Panel Cutout Dimensions: 427 x 347 mm (16.81 x 13.66 in)

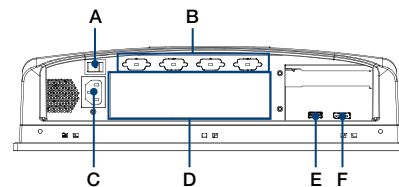# I/O View

PPC-6171C-RTAE
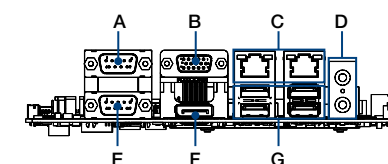

A. Power switch
B. Reserved ports
C. AC inlet
D. PPC-MB-8260AE I/O port

PPC-6171C-RMAE

A. Power switch
B. Reserved ports
C. AC inlet
D. Mini-ITX motherboard I/O port
E. USB 2.0 (input, for connecting the motherboard and touch controller)
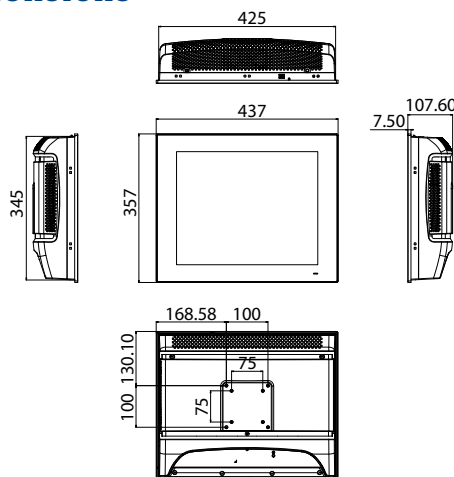F. Display port (input, for connecting the motherboard and LVDS panel)

PPC-MB-8260AE

A. RS232
B. VGA
C. 2 x Gigabit Ethernet
D. Line-out/Mic-in
E. RS232/422/485
F. Display Port
G. USB 3.0

ADVANTECH General Panel PCs

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PPC-6151C

15" Configurable Panel PC Chassis for Selectable Mini-ITX Motherboards

1 Software and Industry Solutions
2 Industrial Server
3 Intelligent System
4 Intelligent HMI and Monitors
5 Automation Computers and Controllers
6 Industrial Communication
7 Remote I/O Modules
8 Industrial I/O and Video Solutions

Features

- 15" true-flat panel PC with resistive touch
- Supports certified mini-ITX motherboards (up to 45W TDP processor)
- PCI or PCIe expansion slots
- Front-facing power status LED indicators
- IP65-rated front panel
- Optional VESA mount module

SUSIAccess   Windows Embedded   VCI   CCC   EAC   C   CE   FCC   R33138 RoHS   LISTED E190881 I.T.E. c UL us

Specifications

Model		PPC-6151C-RTAE	PPC-6151C-RMAE
Supported Motherboard		PPC-MB-8260AE	• AIMB-275 • AIMB-226 • SIMB-382
Chassis	Storage	1 x 2.5" SATA HDD bay	2 x 2.5" SATA HDD bay
	I/O	4 x Reserved ports (DB9) 2 x WLAN antenna holes	
		1 x AC inlet 1 x Power switch Reserved opening: According to the PPC-MB-8260AE motherboard specifications	1 x AC inlet 1 x Power switch 1 x DP (input, for connecting the motherboard and LVDS panel) 1 x USB 2.0 (input, for connecting the motherboard and touch controller) Reserved opening: According to the motherboard specifications
	Expansion	1 x PCIe x4 or 2 x PCI (in the accessory box), 2 x PCIe x1 (optional), 1 x PCIe x1 + 1 x PCI (optional)	1 x PCIe x4 or 1 x PCI (in the accessory box)
	Speaker	2 x 1 W	2 x 1 W (optional)
	Fan	2 x 12V; 60 x 60 x 15 mm (2.36 x 2.36 x 0.59 in)	
Physical Characteristics	Dimensions (W x H x D)	391.4 x 312.5 x 103.6 mm (15.4 x 12.3 x 4.08 in)	
	Weight	5.03 kg (11.08 lb)	
OS Support	OS Support	According to motherboard specifications	
Power Consumption	Input Voltage	100 ~ 240 V_{AC}, 250W	
	Power Consumption	90W (Burn-in test 7.0 in Windows 7, 64 bit) (with PPC-MB-8260AE)	
LCD	Display Type	15" TFT LED panel	
	Max. Resolution	1024 x 768	
	Viewing Angle	80 ° (left), 80 ° (right), 70 ° (up), 70 ° (down)	
	Luminance (cd/m²)	400	
	Contrast Ratio	700	
	Backlight Lifetime	50,000 hr	
Touchscreen	Touch Type	5-wire analog resistive, with optional projected capacitive touch	
	Light Transmission	80+/-5%	
	Controller	USB interface	
	Durability	35 million touches	
Environment	Operating Temperature	0 ~ 50 °C (32 ~ 122 °F) 0 ~ 45 °C (32 ~ 113 °F) with VESA mount module	
	Storage Temperature	-30 ~ 60 °C (-22 ~ 140 °F)	
	Relative Humidity	10 ~ 95% @ 40 °C (non-condensing)	
	Shock	Operating: 10 G peak acceleration (11 ms duration), IEC 60068-2-27 compliant	
	Vibration	Operating: Random vibration test 5 ~ 500 Hz, 1 Grms @ with HDD, IEC 60068-2-64 compliant	
	EMC	BSMI,CE,FCC,Class A	CE,FCC,Class A
	Safety	BSMI,CB,CCC,UL	CB,CCC,UL
	Front Panel Protection	IP65 compliant	

Motherboard Specifications

PPC-MB-8260AE (For PPC-6151C-RTAE only)

	i7-6700TE	i5-6500TE	i3-6100TE	Pentium G4400TE	Celeron G3900TE
CPU	Quad Core	Quad Core	Dual Core	Dual Core	Dual Core
	3.4 GHz	3.3 GHz	2.7 GHz	2.4 GHz	2.3 GHz
	8 MB	6 MB	4 MB	3 MB	2 MB
	35W	35W	35W	35W	35W
Chipset	H110				
Memory	1 x 260-pin SODIMM DDR4, 2133 MHz, up to 16 GB (non-ECC)				
Network (LAN)	2 x 10/100/1000 Mbps Ethernet and 2 x Intel® I211				
Rear I/O	1 x RS232/422/485, 1 x RS232, 1 x DP1.2, 1 x VGA, 4 x USB3.0, 1 x Line-out, 1 x Mic-in				
Internal Connector	3 x RS232, 1 x GPIO (8 channels), 1 x speaker, 1 x LED, 2 x USB 2.0, 1 x LVDS, 1 x touch control, 2 x SATA				
Watchdog Timer	255 timer intervals, configurable using software				
Expansion	1 x full-size mSATA or mini PCIe and 1 x PCIe x4 slot for riser card				
Dimensions (W x H)	170 x 170 mm (6.69 x 6.69")				
OS Support	Microsoft® Windows 7 (32/64-bit), Windows 8.1/10 (64-bit)				

Ordering Information

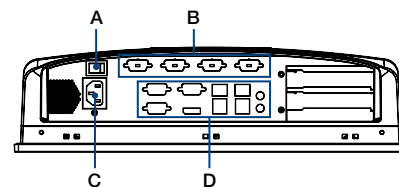| M/B Part Number	Chassis Part Number	Cooler Part Number
PPC-MB-8260AE	PPC-6151C-RTAE	1960053207N001
AIMB-275	PPC-6151C-RMAE	1960053207N001
AIMB-226	PPC-6151C-RMAE	1960061914N001

Note 1. The motherboard, chassis, and cooler should be ordered together to ensure easy configuration.
Note 2. The chassis is equipped with AC power supply and riser cards.

Optional Accessories

Part Number	Description
PPC-WLAN-B1E	Wi-Fi module with antenna cable (40 cm) for PPC
1702002605	Power cable (EU) 90D 220 ~ 250V/6A, 1.8 M
1702002600	Power cable (US) 180D 125V/10A, 1.83 M
1702031801	Power cable (UK), 1.8 M
96CB-POWER-B-1.8M1	Power cable (China), 1.8 M
PPC-6151C-VESAE	VESA module for PPC-6151C (operating temperature 0 ~ 45 °C)
9893BE0200E	PPC-61X1C-RTAE riser card with 2 x PCIe x1 slots
9893BE03000	PPC-61X1C-RTAE riser card with 1 x PCIe x1 and 1 x PCI slots
PPC-ARM-A03	ARM VESA Standard (A-CLEVER) for PPC series
PPC-174T-WL-MTE	Wall mount kit for PPC series
PPC-Stand-A1E	Stand for PPC series

Dimensions

Unit: mm

Optional kit for VESA mounting using M4 8-mm screws
Panel Cutout Dimensions: 382 x 303 mm (15.03 x 11.92 in)

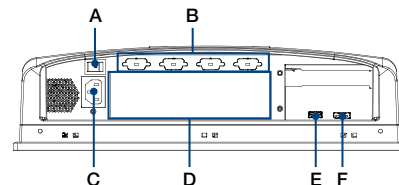# I/O View

PPC-6151C-RTAE
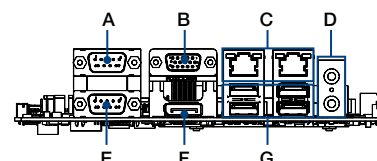

A. Power switch
B. Reserved ports
C. AC inlet
D. PPC-MB-8260AE I/O port

PPC-6151C-RMAE

A. Power switch
B. Reserved ports
C. AC inlet
D. Mini-ITX motherboard I/O port
E. USB 2.0 (input, for connecting the motherboard and touch controller)
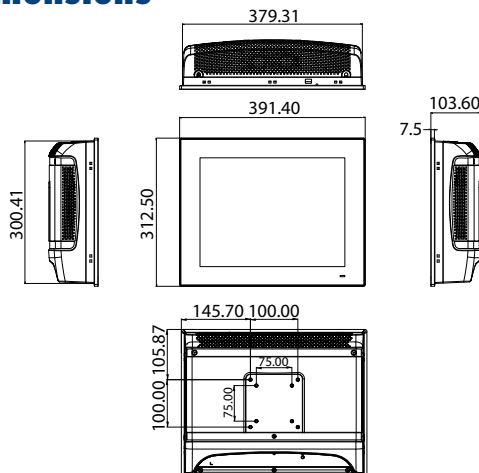F. Display port (input, for connecting the motherboard and LVDS panel)

PPC-MB-8260AE

A. RS232
B. VGA
C. 2 x Gigabit Ethernet
D. Line-out/Mic-in
E. RS232/422/485
F. Display Port
G. USB 3.0

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PPC-6120

12" Panel PC with 4th Generation Intel® Core™ i/Celeron® Processor

1 Software and Industry Solutions

2 Industrial Server

3 Intelligent System

4 Intelligent HMI and Monitors

5 Automation Computers and Controllers

6 Industrial Communication

7 Remote I/O Modules

8 Industrial I/O and Video Solutions

Features

- 12.1" TFT XGA LCD panel with resistive touch control
- 4th generation Intel® Core™ i/Celeron® processor (thermal power design: 35W/45W)
- 2 x 204-pin SODIMM DDR3/DDR3L (up to 16 GB)
- 2 x Mini PCIe sockets (1 x with mSATA support)
- 1 x Optional PCI/PCIe x4 expansion kit
- 1 x Isolated RS422/485 (terminal block)
- 1 x VGA and 1 x DisplayPort
- Dual GbE with Intel® AMT9.0 support

SUSIAccess Windows Embedded VCCI CCC EHC C-Tick CE FCC R33138 RoHS LISTED E190881 I.T.E. cULus

Introduction

The PPC-6120 is a 12" color TFT LCD panel PC that supports 4th generation Intel® Core™ i/Celeron® processors for high-performance computing. Featuring various connectors, PPC-6120 can be easily installed to support diverse application. Additionally, the system's user-friendly interface makes it ideal for information-based applications. The provision of 4 x RS-232, 1 x isolated RS422/485, and dual Intel® Gigabit Ethernet connectors with Intel® AMT support, as well as 1 x expansion slot, makes PPC-6120 a highly reliable and versatile display platform.
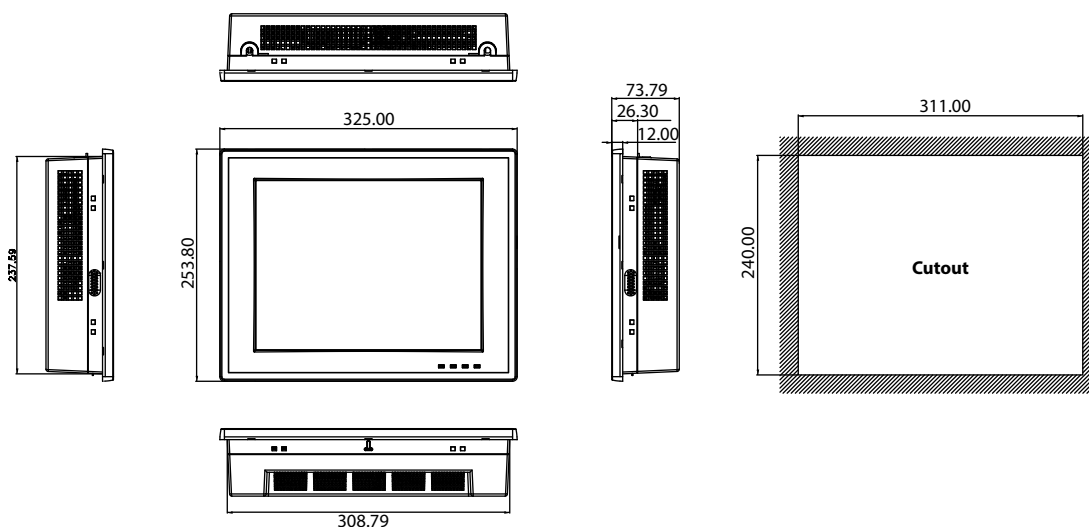
Specifications

		i7-4770TE	i5-4570TE	i5-4590T	i3-4330TE	i3-4350T	i3-4340TE	Pentium G3320TE	Celeron 1820TE
Processor System	CPU	i7-4770TE	i5-4570TE	i5-4590T	i3-4330TE	i3-4350T	i3-4340TE	Pentium G3320TE	Celeron 1820TE
	Cores	Quad Core	Dual Core	Quad Core	Dual Core	Dual Core	Dual Core	Dual Core	Dual Core
	Frequency	2.3 GHz	2.7 GHz	2.0 GHz	2.4 GHz	3.1 GHz	2.6 GHz	2.3 GHz	2.2 GHz
	L3 Cache	8 MB	4 MB	6 MB	4 MB	4 MB	4 MB	3 MB	2 MB
	TDP	45W	35W	35W	35W	35W	35W	35W	35W
	Chipset	Q87							
	Memory	2 x SODIMM DDR3/DDR3L 1066/1333 MHz (max. 16 GB)							
	Storage	1 x 2.5" SATA bay 1 x mSATA bay							
	Network (LAN)	2 x 10/100/1000 Mbps Ethernet, supports Intel AMT9.0 (Intel I211, Intel I217LM)							
	I/O ports	5 x Serial ports: 4 x RS-232, 1 x isolated RS422/485 (1KV$_{DC}$) 4 x USB 3.0 (Ext.), 2 x USB 2.0 (Int. pin head) 1 x Display Port 1.2 1 x VGA 1 x Line-out, 1 x Mic-in							
	Expansion	1 x Mini PCIe (default) 1 x PCIe x4 or 1 x PCI (optional)							
	Watchdog Timer	255 timer levels; setup by software							
	Speaker	2 x 1W							
	Fan	1; 80 x 80 x 15 mm (3.14 x 3.14 x 0.59 in)							
Physical Characteristics	Dimensions	325 x 253.8 x 73.8 mm (12.80 x 9.99 x 2.91 in)							
	Weight	3.8 kg (8.38 lb)							
OS Support	OS Support	Microsoft® Windows 7/8.1/10 (32/64-bit), WES7, WEC7, Linux							
Power Consumption	Input Voltage	12 ~ 30 V$_{DC}$							
	Power Consumption	84W with i7-4770TE 65W with i5-4590TE 56W with i3-4330TE 47W with Petium-G3320TE Burn-in test 7.0 Windows 7, 64 bit 83W with i7-4770TE 61W with i5-4590TE 54W with i3-4330TE 46W with Petium-G3320TE (Burn-in test 7.0 Windows 8, 64 bit)							
LCD Display	Display Type	12.1" TFT LCD panel							
	Max. Resolution	1024 x 768							
	Viewing Angle	80 (left), 80 (right), 70 (up), 70 (down)							
	Luminance (cd/m^2)	600							
	Contrast Ratio	700							
	Backlight Lifetime	50,000 hr (min.)							

Dimensions

Unit: mm

325.00

253.80

237.59

73.79
26.30
12.00

311.00

240.00

Cutout

308.79

Panel Cutout Dimensions: 311 x 240 mm (12.24 x 9.44 in)

Touchscreen	Touch Type	5-wire analog resistive
	Light Transmission	80+/-3%
	Controller	RS-232 interface
	Durability (Touches)	36 million
Environment	Operating Temperature	0 ~ 50 °C (32 ~ 122 °F)
	Storage Temperature	-40 ~ 60 °C (-40 ~ 140 °F)
	Relative Humidity	10 ~ 95% @ 40 °C (non-condensing)
	Shock	Operating 10 G peak acceleration (11 ms duration), follow IEC 60068-2-27
	Vibration	Operating Random Vibration Test 5 ~ 500Hz, 1Grms @with HDD, follow IEC 60068-2-64
	EMC	CE, FCC Class A, BSMI
	Safety	CB, UL,CCC, BSMI
	Front Panel Protection	IP65 compliant

Ordering Information

Part Number	Description
PPC-6120-RAE	12.1" 4th Gen Intel® Core™ i/Celeron® panel PC with resistive touchscreen
1702002600	Power Cable UL/CSA (USA) 180D 125V10A 1.83M
1702002605	Power Cable 90D 220V EUROPEAN 250V/6A 1.8M
96CB-POWER-B-1.8M1	POWER CORD for China 1.8M
PPC-174T-WL-MTE	Wall mount kit for PPC series
PPC-ARM-A03	PPC ARM VESA Standard
PPC-STAND-A1E	Stand For PPC Series
PPC-3100-VESAE	PPC-3100 VESA bracket module
PPC-WLAN-B1E	WiFi Module with Antenna Cable 40cm for PPC
98R3612003E	Add-on box for PCI or PCIe expansion (include PCI / PCIe riser card)
96PSA-A150W19P2-1	ADP A/D 100-240V 150W 19V C14 TERMINAL BLOCK 2P

* if you order Wall mount kit / ARM / Desktop stand, please also order PPC-3100-VESAE at the same time.

I/O View
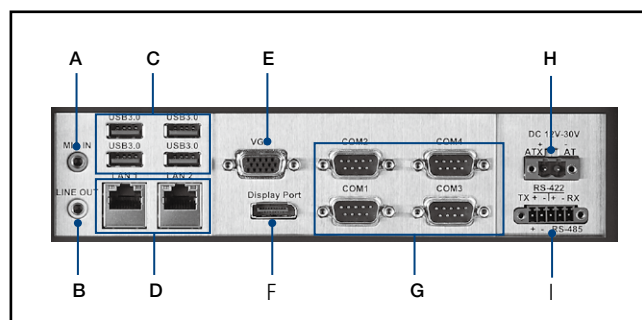
A. Mic-in
B. Line-out
C. 4 x USB 3.0
D. 12 x 0/100/1000 Mbps Ethernet
E. VGA Port
F. Display Port
G. 4 x RS-232
H. DC Inlet
I. RS-422/485

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