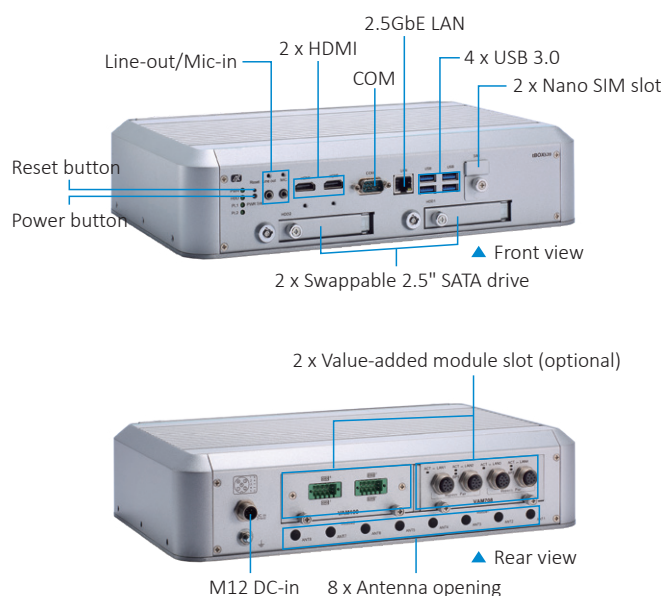


tBOX520 NEW

Fanless Embedded System with 12th Gen Intel® Core™ i7/i5/i3 Processor for Railway



Features

- CE, LVD, FCC, EN 50155, EN 45545-2 certified
- 12th gen Intel® Core™ i7/i5/i3 or Celeron® processor (Alder Lake P)
- 24 to 110 VDC for railway applications
- Value-added modules available for various I/O requirements (COM/LAN/DIO/PoE/CAN/BNC)
- Intelligent solution of power management (Smart Ignition)
- 2 swappable 2.5" SATA drives



Fanless



Wide Temperature



DDR5



EN 50155



EN 45545-2



AXView

Specifications

Standard Color	Silver	
Construction	Aluminum extrusion and heavy-duty steel, IP30	
CPU	12th gen Intel® Core™ i7/i5/i3 or Celeron® processor	
Chipset	SoC integrated	
System Memory	2 x DDR5-4800 SO-DIMM (non-ECC: dual channel up to 32GB; single channel up to 16GB)	
BIOS	AMI	
TPM	TPM 2.0	
System I/O Outlets	Serial	1 x DB9 serial console or RS-232/422/485
	Display	2 x Type A HDMI 1.4b (4K)
	Audio	1 x Mic-in & 1 x Line-out
	Ethernet	1 x RJ-45 2.5GbE LAN (Intel® I226-IT)
	USB	4 x USB 3.0
	Others	1 x Reset button 8 x Antenna opening 1 x Power button
Expansion Interface	1 x M.2 Key M 2280 NVMe SSD (PCIe x4)	
	1 x M.2 Key B 3052/3042 for 5G/Wi-Fi 6/Bluetooth (PCIe/USB)	
	1 x Full-size Rev.1.2 PCIe Mini Card slot for LTE/Wi-Fi/Bluetooth (PCIe/USB)	
	2 x Nano SIM slot	
	1 x M.2 Key A+E for Wi-Fi 6/Bluetooth (PCIe/USB)	
Storage	SATA Drive	2 x Swappable 2.5" SATA drive (9.5 mm height), Intel® RAID 0/1 supported
Watchdog Timer	255 levels, 1 to 255 sec.	
Power	Power Supply	Railway: 1 x M12, 24 to 110 VDC

Specifications

PoE (PSE, Power Sourcing Equipment)	PoE Performance	Internal PoE SKUs equipped with VAM701/703/705/707 can support up to 8 configurable M12/RJ45 PoE ports • PoE (802.3af 15.4W per port) • PoE+ (802.3at 30W per port)
System Indicator	1 x LED indicator for power 1 x LED indicator for SATA drive activity 2 x Programmable	
Operating Temperature	tBOX520 non-PoE series: -40°C to +70°C (-40°F to +158°F) with W.T. peripheral*	
Humidity	0% to 95%, non-condensing	
Dimensions	321 mm (12.64") (W) x 210.2 mm (8.28") (D) x 73.3 mm (2.89") (H) (without wall mount)	
Mounting	Wall mount	
Weight (net/gross)	3.9kg (8.6lb)/ 6.0kg (13.2lb)	
Certifications	CE (Class A), LVD, FCC (Class A), EN 50155, EN 45545-2	
EMC	CE/FCC	EN 61000-6-4 (Class A), EN 61000-6-2, FCC part 15 B (Class A)
	EN 50155	EN 50121-3-2, IEC 62236-3-2
LVD	EN 60950-1	
Vibration Endurance	3 Grms with SSD (5 to 500Hz, X/Y/Z direction; random, operating) 1 Grms with HDD (5 to 500Hz, X/Y/Z direction; random, operating) MIL-STD-810G, Method 514.6C-VI Category 4 compliant	
	EN 50155	EN 61373 category 1 class B
Shock	EN 50155	EN(IEC) 61373 category 1 class B, half-sine pulse, 5g, 30ms (longitudinal direction), 3g, 30ms (vertical/transverse direction)
EOS Support	Ubuntu 22.04, Windows® 11 64-bit	
Software Support	AXView	

*Wide Temperature. All W.T. supported products have to be sorted by Axiomtek.

Ordering Information

System

tBOX520-ADL7-MR (P/N: E26N520100)	Fanless railway embedded system, Intel® Core™ i7-1265UE processor, 4 USB 3.0, 2 HDMI, LAN, serial console or RS-232/422/485, Mic-in/Line-out, two 2.5" SATA trays, M12 A-code DC-in, and 24 to 110 VDC
tBOX520-ADL5-MR (P/N: E26N520101)	Fanless railway embedded system, Intel® Core™ i5-1245UE processor, 4 USB 3.0, 2 HDMI, LAN, serial console or RS-232/422/485, Mic-in/Line-out, two 2.5" SATA trays, M12 A-code DC-in, and 24 to 110 VDC
tBOX520-ADL3-MR (P/N: E26N520102)	Fanless railway embedded system, Intel® Core™ i3-1215UE processor, 4 USB 3.0, 2 HDMI, LAN, serial console or RS-232/422/485, Mic-in/Line-out, two 2.5" SATA trays, M12 A-code DC-in, and 24 to 110 VDC
tBOX520-ADLC-MR (P/N: E26N520103)	Fanless railway embedded system, Intel® Celeron® 7305E processor, 4 USB 3.0, 2 HDMI, LAN, serial console or RS-232/422/485, Mic-in/Line-out, two 2.5" SATA trays, M12 A-code DC-in, and 24 to 110 VDC

Ordering Information

Value-Added Modules (VAMs)

VAM100 (P/N: E277100100)	4 x Terminal block 4-wire isolated RS-232/422/485 COM Isolation voltage: 2 kV	
VAM102 (P/N: E277102100)	4 x Terminal block isolated CANBus 2.0A/B Isolation voltage: 2 kV	
VAM200 (P/N: E277200100)	1 x Terminal block isolated DIO 8-in/8-out Isolation voltage: 2 kV	
VAM400 (P/N: E277400100)	4 x BNC video-in & 1 x BNC audio-in • Supports FPS: NTSC/PAL (up to 120fps @960/720 x 480 / 100fps @960/720 x 576), H.264 video recording 2 x Full size Rev. 1.2 PCIe Mini Card slot • 1 x USB with SIM socket • 1 x USB/PCIe with SIM socket (occupied by 1 x Capture Card)	
VAM600 (P/N: E277600100)	2 x Full size Rev. 1.2 PCIe Mini Card slot • 1 x USB/PCIe with SIM socket • 1 x USB with SIM socket 4 x Antenna opening	
VAM700/VAM701 (P/N: E277700100/E277701100) VAM702/VAM703 (P/N: E277702100/E277703100) VAM704/VAM705 (P/N: E277704100/E277705100) VAM706/VAM707 (P/N: E277706100/E277707100) VAM708 (P/N: E277708101)	VAM700/701(PoE): 4 x M12 A-code GbE (PoE optional*) VAM702/703(PoE): 4 x RJ-45 GbE (PoE optional*) VAM704/705(PoE): 4 x M12 D-code 10/100 Mbps Ethernet (PoE optional*) VAM706/707(PoE): 4 x M12 X-code GbE (PoE optional*) VAM708 : 4 x M12 A-code with LAN Bypass	 
VAM900 (P/N: E277900100)	2 x Full-size Rev.1.2 PCIe Mini Card slot • 2 x USB with SIM socket 1 x Half-size Rev.1.2 PCIe Mini Card slot • 1 x PCIe 1 x Terminal block 4-wire isolated RS-232/422/485 COM (isolation Voltage: 2 kV) 1 x Terminal block isolated CANBus 2.0A/B (isolation Voltage: 2 kV) 1 x Terminal block isolated DIO 8-in/8-out (isolation Voltage: 1.5 kV)	

Optional

Communication Modules	TBC TBC	Wi-Fi M.2 2230 AX210.NG WGII.NV PCIe 6E WT 4G EM12-G M.2 3042 WT
AC to DC Adapter	509000002200	PWS 9NA0908344 FSP 90W
Cable/Power Cord	594B8120B30E 59412042700E 594N3202730E 594B8152710E 599000001100 59906000010E 59903000000E 59904010000E	DC-in cable M12 female 5P 180CM without ACC LAN cable M12 D-code 4P to RJ45 8P L=180cm LAN cable M12 A code male 8P to RJ-45 LAN cable M12 X-code to RJ45 plug CAT6 180cm Power cord YP12/YC12_CY-U0032 YUNG_LI 1830mm Power cord YP-12/YC-12 (Japan) Power cord YP-22/YC-12 (Europe) Power cord YP-61A/YC-12 (UK) L=1830mm
Anti-vibration Kit	8816N5008A0E	For in-vehicle/rolling stock which improves HDD stability in NVR applications *For more information, please search for "Anti-vibration Kit" on the Axiomtek website.



*Specifications and certifications may vary based on different requirements.

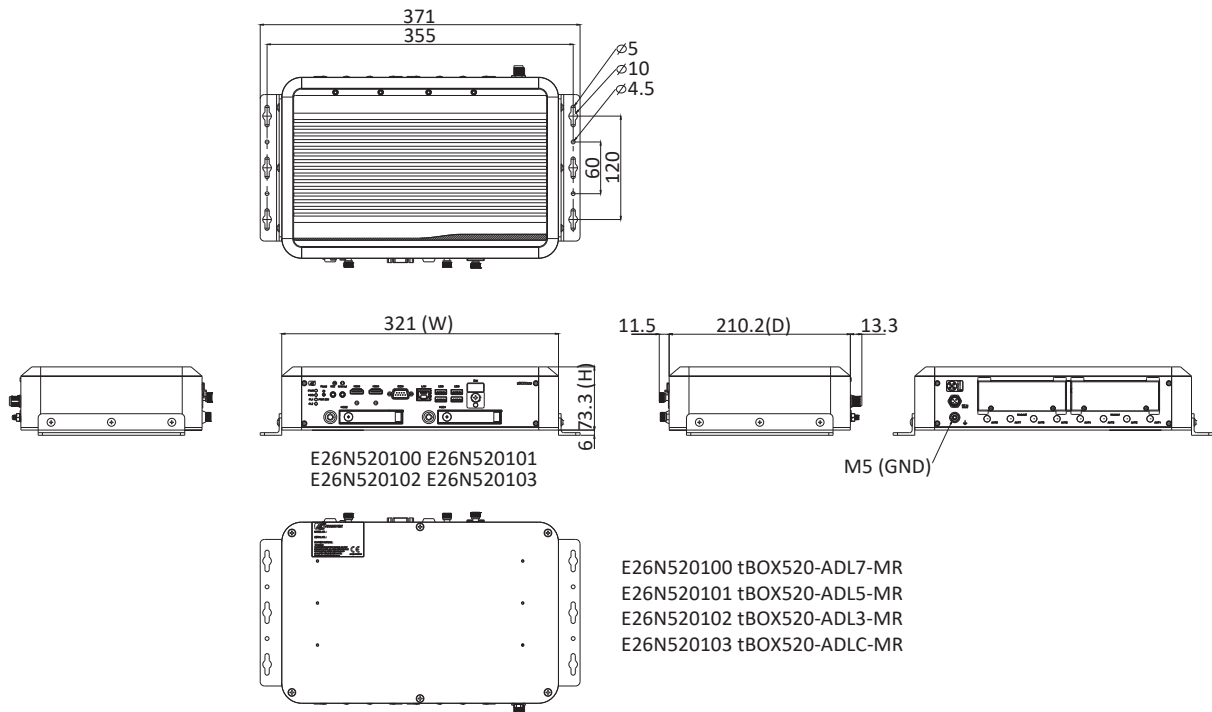
Packing List

Thermal pads for memory and NVMe
4 x Foot pad
4 x Mylar for HDD or SSD
1 x Wall mount kit
2 x Keys for HDD/SSD tray lock

Power Protection

OCP (over current protection)
OVP (over voltage protection)
UVP (under voltage protection)
RPP (reverse polarity protection)

Dimensions



Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

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