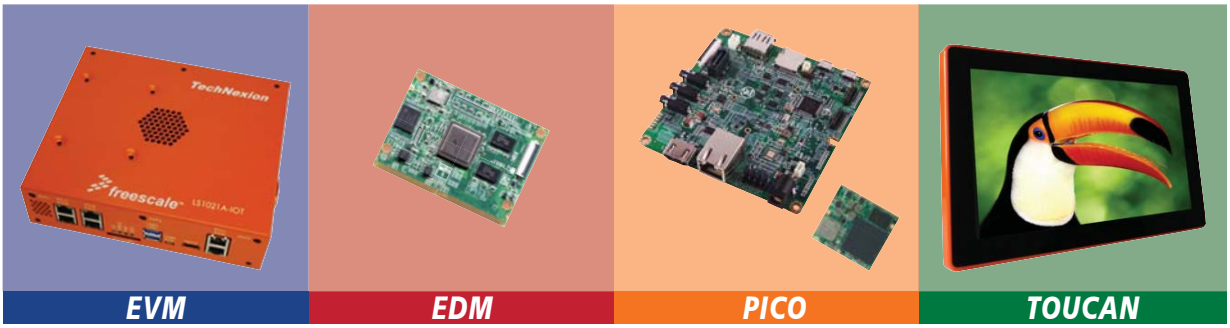
TechNexion

Innovators of Technology



2015-2016

ABOUT US

TechNexion

Established in 1999 TechNexion is an ISO9001 and ISO14001 certified industrial computer manufacturer of CPU Modules and embedded systems featuring RISC/ARM architecture. TechNexion's commitment to provide reliable and high quality manufactured products has given it the reputation to be one of the best companies to work with.

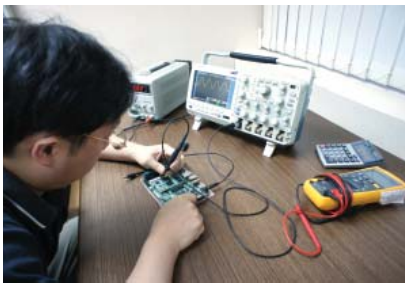
To make TechNexion's solutions accessible to our customers we are continuously training and providing integration guidelines to our global and well established distribution channel. This gives TechNexion the capability to provide direct local service and effectively provide our customers with the latest solution and innovation updates.

Our commitment

We at TechNexion believe that the only way for our customers to put trust in our products is to be as transparent as possible.

Our philosophy is that no matter if your firm is a small engineering design house with few engineers on staff or a large Multinational Corporation, you will require having all product hardware information, documentation and software source code available at your fingertips to make your project successful.

To achieve this, all TechNexion products are backed up with very detailed hardware documentation handbooks, design guides and all source code software which is freely accessible online.



Quality Control and Assurance

TechNexion is proud to have the best people on the job who understand what quality means to our customers and partners.

From the initial design TechNexion engineers choose only high crafted reliable components that are backed up by renowned brands to ensure product stability and continuous quality. TechNexion ISO9001 and ISO14001 quality assurance systems trace every component being used in our products and guarantees components are kept under optimal conditions.

All products manufactured and assembled by TechNexion are 100% functional tested prior dispatch to our customers to assure all products are conform all specifications.

Customer support

TechNexion products come standard with a smart software loader menu which gives you a variety of software and configuration possibilities. The comprehensive user guides and documentation will assist in further customization and provide valuable information to tailor our modules towards your project needs.

Besides this TechNexion customer support consists of a team of highly professional application engineers who can provide customers with real-time custom project support and assistance.

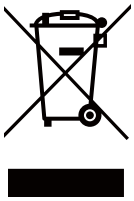
Research and Development

With a strong world class engineering team and around 50% of TechNexion staff involved in active product research, development, quality assurance and testing, we can assure our customers to work with the latest innovations and guarantee longevity and product availability for up-to 10 years if needed.

Green Computing

As a global citizen TechNexion undertakes an active role in protecting the environment through its compliance with industry and legislation regarding the restriction on use of lead and other hazardous substances.

It's TechNexion aim to deliver not only the highest grade products but also reduce impact on the environment to an absolute minimum. Not only is this achieved by following the European Union RoHS regulations and Waste Electrical and Electronic Equipment (WEEE) directives but further enforced by a strict ISO14001 system that enforces our suppliers to share the same commitments to protect our environment.



Customization Services

TechNexion offers complete ODM engineering services starting from the brand on a standard product to a complete finished product design. For this we have a well experienced team on staff that can work jointly with customer's unique specifications and requirements.

TechNexion also provides customization services by modifying existing standard products to fit your application requirements such as custom, Software preloading, PCB population modification, enclosure cosmetic branding, packing instructions etc.

Your Truly Global Information Resource

www.technexion.com is your one-stop platform for the latest information on all TechNexion products and services. The rejuvenated website not only contains product relevant information and data, solutions/ products demo, up-to-date news, but incorporates online downloads, publications, and technical service supports.

LS1021A-IOT

Main Features

- The LS1021A-IoT gateway reference design based on the Freescale Layerscape LS1021A processor is a purpose-built, small footprint hardware platform equipped with a wide array of high-speed connectivity and low-speed serial interfaces engineered to support the secure delivery of IoT services to end users in a home, business or other commercial location. The affordable reference design combines standards-based, open source software together with a feature-rich IoT gateway design, to establish a common, open framework for secure IoT service delivery and management.

- This reference design provides a wide assortment of high speed and serial based connectivity in a compact, highly secure design, delivering an impressive level of versatility. High efficiency is achieved through the use of the ARM-based Layerscape LS1021A embedded processor, which delivers over 5,000 Coremarks of performance at a typical power of under 3 Watts. In addition to its outstanding performance efficiency and high level of integration, the LS1021A-IoT gateway design offers HDMI, SATA3 and USB3 connectors as well as a complete Linux software developers package.

Specifications

System

Processor	Freescale LS1021A
Technology	ARM Cortex-A7 Dual core
PMIC	Freescale VR500 PMIC
Memory	1GB **ECC** protected DDR3
Storage	1 Gb QSPI NOR Flash
Removable Storage	SHDC upto 32GB (8GB SD card included)
Operation System	Linux 3.x, Yocto

Connectors

Debug Interface	JTAG Interface by thruhole

I/O Interface Signalling

Storage	1x SATA III
	1x SDIO / MMC
Expansion	2x PCIe 2.0
Display	24 bit LVDS
USB	USB OTG 3.0
	USB Host 2.0
CAN Bus	2x Flex CAN version 2.0B Compliant
Serial Port	2x UART
Other	SPI, I^2C, GPIO

Network

Network RGMII	Atheros AR8033 Gigabit LAN PHY
Network SGMII	Atheros AR8033 Gigabit LAN PHY
Network Switch	4 port gigabit switch

Video

Display chipset	Silicon Image SiI9022
Display interface	HDMI connector

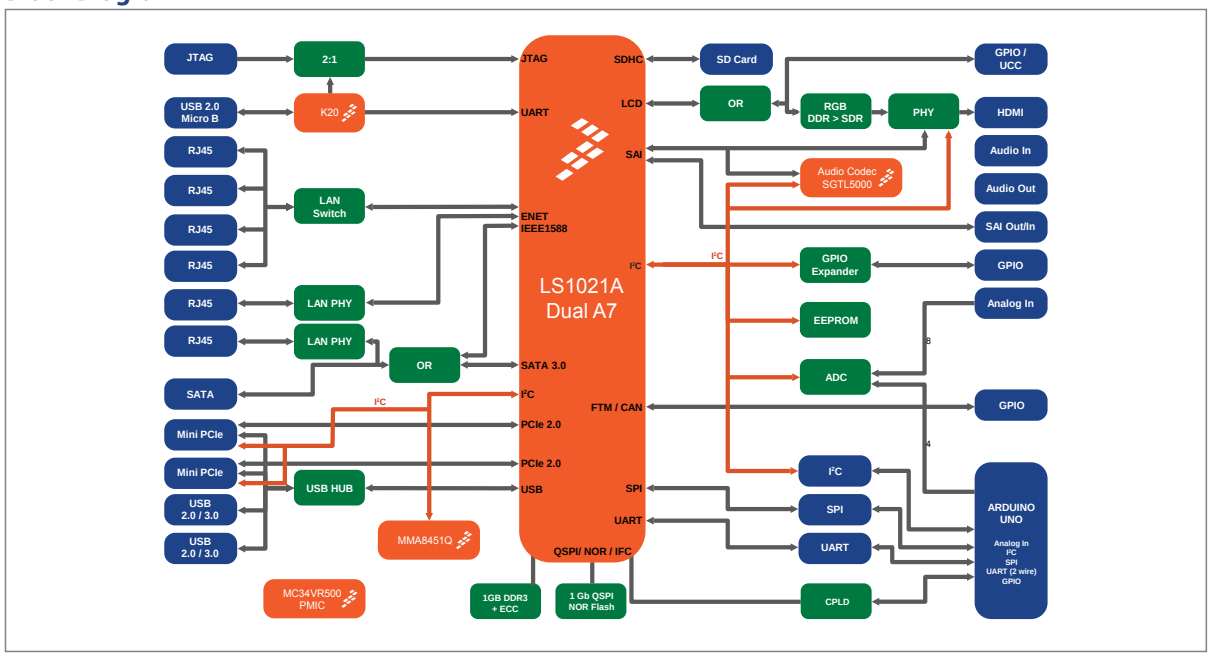
Audio

Audio Codec	Freescale SGTL5000
Audio connectors	Audio In / Out

Power Specifications

Input Power	12VDC

Block Diagram



Environmental and Mechanical

Temperature	Commercial : 0° to 40° C
Humidity	10 to 90%
Dimensions	200 x 170 x 58 mm 7⅞ x 6⅝ x 2¼ inch
Weight	1200 grams
Certification	Compliant with CE, FCC, RoHS, REACh directives

Ordering Information

LS1021A-IOT

LS1021A-IOT Gateway Reference design. Including power adaptor, HDMI and USB debug cable and 8GB SDHC card

* Feel free to contact us for custom tailored Carrier Board request for your projects.

EDM STANDARD

How EDM can benefit you

EDM is an open standard under the Creative Commons Share Alike license and is the first true x86/ARM Cross platform pin-to-pin compatible standard covering a wide spectrum of CPU architectures ranging from low power efficient ARM Cortex A7 SoC's all the way up to 64 bit multicore processor modules.

EDM System on Modules (SoM's) are a versatile small form factor computer module providing a flexible solution to OEM's that require a scalable low power modular computing solution.

Why should you choose EDM Modules?

EDM modules provide complete building blocks including memory, boot flash, power sequencing, CPU power supplies, Ethernet, wireless communication interfaces and graphic engine cores on the module.

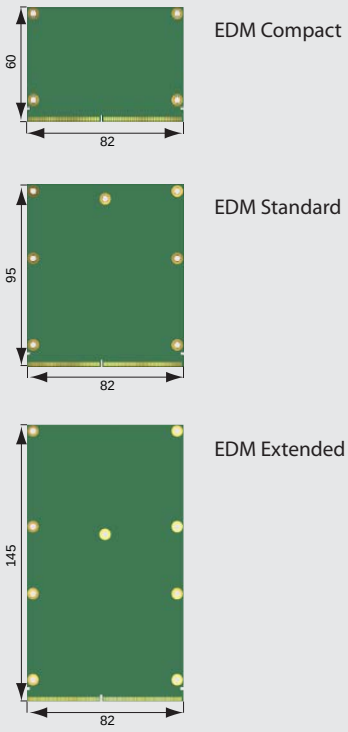
EDM modules are used in conjunction with carrier boards that implement application specific features such as audio codecs, display and touch solutions and communication and control interfaces to external devices.

The EDM specifications and design guides for carrier boards as well as the schematics for the Evalution boards are completely open-source.

edm

For more information about the EDM Standard.
Visit **www.edm-standard.org**

EDM Form Factors



Longevity

TechNexion EDM Modules incorporate only components from embedded roadmaps of strategic suppliers and are backed up with value added technical services such as life cycle management, revision control and end-of-life support.

TechNexion and Open Source

TechNexion EDM modules come standard with source code and binary demo images for the following Operating Systems.

Android binary demo images, instructions to make your own as well as complete source code available.

Linux binary demo images and full source code u-boot, kernel and support packages available.

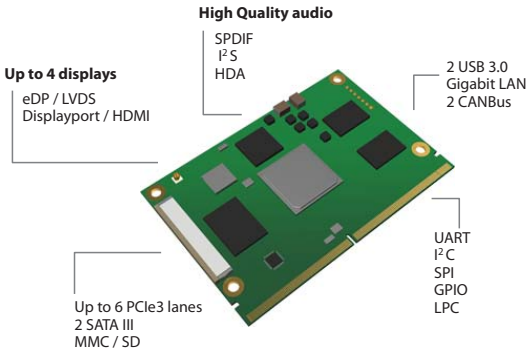
yocto binary demo images and full source code u-boot, kernel and support packages available.

ubuntu binary demo images available.

Development Startkits

Kickstart your project development cycle with our plug and play development startkits that come pre-loaded with working software and all tools to assist you to validate performance and explore additional possibilities without the need to invest a huge amount of time and resources upfront.

EDM interfaces overview



Custom Carrier board Design

Customers can design their own carrier board using the freely available schematic design files and leverage on the available software source code that comes standard with every EDM Module and therefore bringing a custom designed solution to market using a very short design cycle and reduced engineering risks.

TechNexion offers custom tailored carrier board design and manufacturing services where our expertise as co-founder of the EDM standard will assist you to ensure your design is fully compatible and future upgrade proof while moving to next generation EDM modules.

EDM Type 1

Power 5 VDC	LAN	TTL		GPMC			I²S 2nd	SPDIF	CANBus x2	SD	SPI x2	UART x2	Buttons + GPIO	RSVD
		LVDS/ eDP 1st	HDMI/ DP 1st	PCIe x2	SATA 1st	USB OTG	USB Host	I²S 1st				I²C x2		RTC

EDM Type 2

Power 5 VDC	LAN	LVDS/ eDP 2nd	HDMI/ DP 2nd	PCIe x4	SATA 2nd	LPC	HDA	SPDIF	CANBus x2	SD	SPI x2	UART x2	Buttons + GPIO	RSVD
		LVDS/ eDP 1st	HDMI/ DP 1st	PCIe x2	SATA 1st	USB OTG	USB Host	I²S 1st				I²C x2		RTC

OVERVIEW

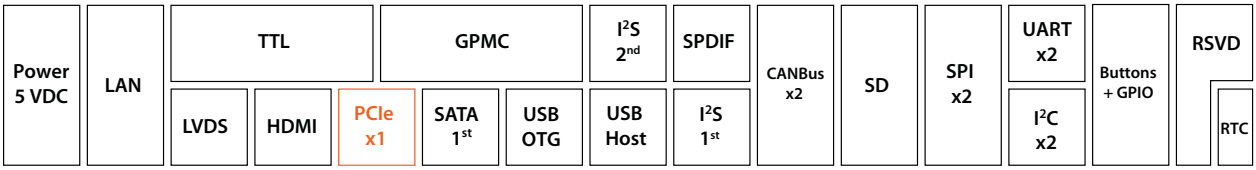

Model Name	EDM1-CF-iMX6	EDM1-CF-iMX6SX	EDM1-CF-LS1021A	EDM1-CF-iMX6UL	EDM2-CF-iMX6
Signalling	EDM1				EDM2
Technology	ARM Cortex A9	ARM Cortex A9 + M4	ARM Cortex A7	ARM Cortex A7	ARM Cortex A9
Processor	1-2-4 Core	Single Core	Dual Core	Single Core	1-2-4 Core
System Memory	up to 2GB DDR3	up to 2GB DDR3	up to 2GB DDR3 + **ECC**	up to 1GB DDR3	up to 2 GB DDR3
Storage	eMMC	eMMC	NAND	QSPI	eMMC
FPC Connector	MIPI CSI / DSI	ADC Signals			MIPI CSI / DSI
JTAG Interface	✓	✓	✓	✓	✓
Bluetooth	BT v. 4.0	BT v. 4.0		BT v. 4.0	BT v. 4.0
Wireless LAN	2.4Ghz 802.11bgn	2.4Ghz 802.11bgn		2.4Ghz 802.11ac	2.4Ghz 802.11bgn
Network	Gigabit LAN	2 Gigabit LAN	2 Gigabit LAN	2 LAN	Gigabit LAN
HDMI	✓		EDM1-CF-LS1021A-H		✓
LVDS	1 channel LVDS	1 channel LVDS	EDM1-CF-LS1021A-L	1 channel LVDS	2 channel LVDS
TTL	✓	✓		✓	
I^2S	✓	✓	✓	✓	✓
PCIe	1 x PCIe 2.0	1 x PCIe 2.0	2 x PCIe 2.0		1 x PCIe 2.0
SATA	1x SATA 2.0		1x SATA 3.0		1x SATA 2.0
USB Host	✓	✓	✓	✓	✓
USB OTG	✓	✓	✓	✓	✓
SDIO	1	1	1	1	1
CAN Bus	2	2	2	2	2
UART	2	2	2	2	2
SPI	✓	✓	✓	✓	✓
I^2C	✓	✓	✓	✓	✓
GPIO	✓	✓	✓	✓	✓
Dimensions	82 x 60mm 3⅝ x 2⅜ inch	82 x 60mm 3⅝ x 2⅜ inch	82 x 60mm 3⅝ x 2⅜ inch	82 x 60mm 3⅝ x 2⅜ inch	82 x 60mm 3⅝ x 2⅜ inch

Model Name	EDM1-FAIRY	EDM1-GOBLIN	EDM2-ELF	EDM2-WIZARD
System on Module	EDM Type 1 compact	EDM Type 1 compact	EDM Type 2 compact	EDM Type 2
Mini PCIe	2	2	2	2
HDMI	1	1	1	2
LVDS	1 channel	1 channel	2 channel	2 channel
TTL	✓	✓		
SATA	1	1	1	2
SD cardslot	µ SD	µ SD	µ SD	SD
Gigabit LAN	1	2	1	1
USB Host	2	2	2	2
USB OTG	1	1	1	1
UART	2	2	2	2
CAN Bus	2	2	2	2
SPI	2	2	2	2
GPIO	8	8	8	8
I^2C	2	2	2	2
I^2S	2	2	2	2
Audio Connector	✓	✓	✓	✓
Speaker	2W	2W	2W	2W
Touch Controller	4 wire touch	4 wire touch	4 wire touch	4 / 5 wire touch
3-axis Movement	✓	✓	✓	
Light Sensor	✓	✓	✓	
Compass	✓	✓	✓	
Real Time Clock	✓	✓	✓	
Input Power	12 VDC	12 VDC	12 VDC	10~30 VDC
Form Factor	3.5"	3.5"	3.5"	Micro ATX
Dimensions	147 x 102 mm 5¾ x 4 inch	147 x 102 mm 5¾ x 4 inch	147 x 102 mm 5¾ x 4 inch	244 x 244 mm 9⅝ x 9⅝ inch

EDM1-CF-IMX6

Main Features

- ARM Cortex-A9 Freescale i.MX6 scalable single/dual/quad core EDM type 1 compact System-on-Module
- Gigabit LAN, WiFi 802.11 b/g/n and Bluetooth v. 4.0 communication interface
- Targeting multimedia applications with LVDS, TTL, HDMI, S/PDIF, I²S, MIPI camera and display



Specifications

Core System

Signalling	EDM Type 1 compliant
CPU	Freescale i.MX6Quad @ 1Ghz Freescale i.MX6Dual @ 1Ghz Freescale i.MX6DualLite @ 1Ghz Freescale i.MX6Solo @ 1Ghz
System Memory	up to 2GB DDR3
Storage	eMMC (default 4GB) optional NAND Flash (MOQ apply)
Debug Interface	JTAG Interface by thruhole
FPC Connector	MIPI Interface Camera MIPI Interface Display

Connectivity

Network	Atheros AR8031 Gigabit LAN
WiFi	Broadcom BCM4330 802.11bgn
Bluetooth	Broadcom BCM4330 BT 4.0

I/O Interfaces

Storage	1x SATA 2.0 (Dual /Quad only) 1x SDIO / MMC
Expansion	1x PCIe 2.0
Display	HDMI v1.4 1 channel LVDS 18/24 bit 24 bit RGB TTL
USB	USB Host 2.0 USB OTG 2.0
CAN Bus	2x Flex CAN version 2.0B compliant
Serial Port	2x UART
Other	SPI, I²C, I²S, GPIO, Local Bus (GPMC)

Video

	Solo / Duallite	Dual / Quad
GPU 3D	Vivante GC880 35Mtri/s 266Mpxl/s Open GL ES 2.0	Vivante GC2000 200Mtri/s 1000Mpxl/s OpenGL ES 2.0 & Halti, CL EP
GPU 2D (Vector Graphics)	emulated on GPU 3D	Vivante GC355 300Mpxl/s OpenVG 1.1
GPU 2D (Composition)	Vivante GC320 600Mpxl/s, BLIT	Vivante GC320 600Mpxl/s, BLIT
Video Decode	1080p30 + D1	1080p60 H.264
Video Encode	1080p30 H.264 BP / Dual 720p	1080p30 H.264 BP / Dual 720p

Audio

Interface	I²S (2 channel), S/PDIF
Audio Codec	on EDM Carrier Board

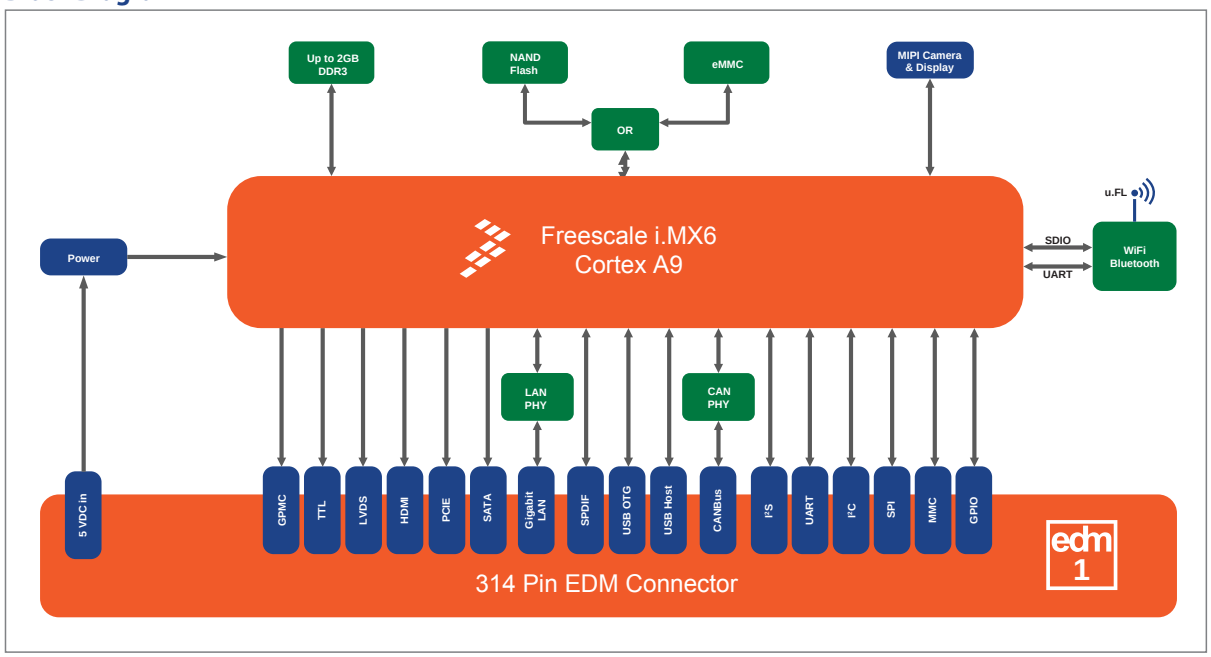
Power Specifications

Input power	5 VDC +/- 5%

Operation Systems

Standard Support	Linux Android
Extended Support	Commercial Linux Windows Embedded Compact Real Time OS

Block Diagram

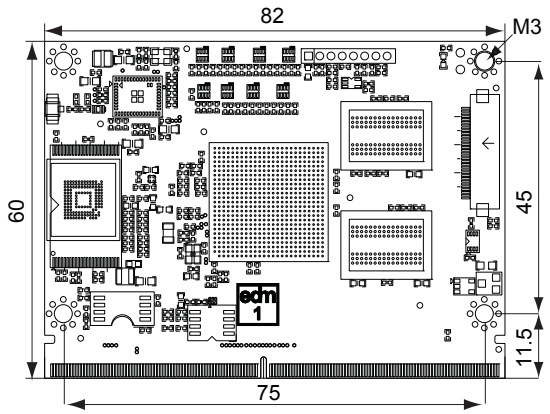


Environmental and Mechanical

Temperature	Commercial : 0° to 60° C Extended : -20° to 70° C Industrial : -40° to 85° C (no WiFi)
Humidity	10 to 90%
Module Connector	314 pins MXM3
Form Factor	EDM Compact Form Factor
Dimensions	82 x 60 mm (3⅝ x 2⅜ inch)
MTBF	>100,000 hours
Weight	20 grams
Shock	50G / 25ms
Vibration	20G / 0-600 Hz

Dimensions

(units in mm)



Ordering Information

EDM1-CF-IMX6S10-R512-NI4G-L-2C
EDM Compact Type 1 Freescale i.MX6 Solo 1Ghz + 512MB RAM + 4GB eMMC+ Gigabit LAN + 2 CAN

EDM1-CF-IMX6U10-R1GB-NI4G-L-2C
EDM Compact Type 1 Freescale i.MX6 Duallite 1Ghz + 1GB RAM + 4GB eMMC + Gigabit LAN + 2 CAN

EDM1-CF-IMX6D10-R1GB-NI4G-L-S-2C
EDM Compact Type 1 Freescale i.MX6 Dual 1Ghz + 1GB RAM + 4GB eMMC + Gigabit LAN + 2 CAN + SATA

EDM1-CF-IMX6Q10-R2GB-NI4G-L-S-2C
EDM Compact Type 1 Freescale i.MX6 Quad 1Ghz + 2GB RAM + 4GB eMMC + Gigabit LAN + 2 CAN + SATA

EDM1-CF-IMX6S10-R512-NI4G-BW-L-2C
EDM Compact Type 1 Freescale i.MX6 Solo 1Ghz + 512MB RAM + 4GB eMMC + Gigabit LAN + 2 CAN + 802.11bgn + Bluetooth 4.0

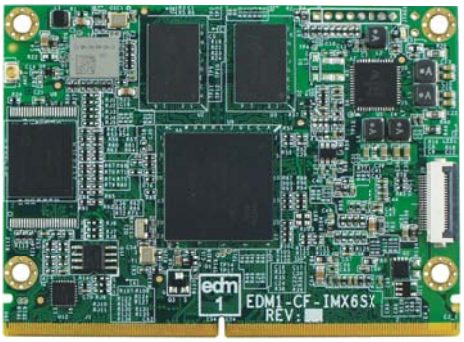
EDM1-CF-IMX6U10-R1GB-NI4G-BW-L-2C
EDM Compact Type 1 Freescale i.MX6 Duallite 1Ghz + 1GB RAM + 4GB eMMC + Gigabit LAN + 2 CAN + 802.11bgn + Bluetooth 4.0

EDM1-CF-IMX6D10-R1GB-NI4G-BW-L-S-2C
EDM Compact Type 1 Freescale i.MX6 Dual 1Ghz + 1GB RAM + 4GB eMMC + Gigabit LAN + 2 CAN + SATA + 802.11bgn + Bluetooth 4.0

EDM1-CF-IMX6Q10-R2GB-NI4G-BW-L-S-2C
EDM Compact Type 1 Freescale i.MX6 Quad 1Ghz + 2GB RAM + 4GB eMMC + Gigabit LAN + 2 CAN + SATA + 802.11bgn + Bluetooth 4.0

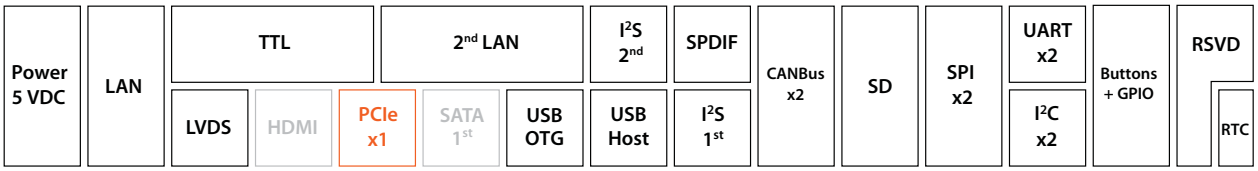
* Feel free to contact us for custom tailored Carrier Board request for your projects.

EDM1-CF-IMX6SX



Main Features

- ARM Cortex-A9 Single core + ARM Cortex M4 Freescale i.MX6 SoloX EDM Type 1 compact System-on-Module.
- Dual gigabit LAN and optional WiFi/BT connectivity.
- Support for Android, Linux, Yocto and MQX realtime OS



Specifications

Core System

Signalling	EDM Type 1 compliant
CPU	Freescale i.MX6SoloX @ 1Ghz
Technology	ARM Cortex-A9 single core + ARM Cortex M4
PMIC	Freescale MMPF0100
System Memory	up to 2GB DDR3
Storage	eMMC (default 4GB) QSPI (default 256MB) optional NAND Flash (MOQ apply)
Debug Interface	JTAG Interface by thruhole
FPC Connector	ADC Signals

Connectivity

Network	Two (2) Atheros AR8031 Gigabit LAN
WiFi	Broadcom BCM4330 802.11bgn
Bluetooth	Broadcom BCM4330 BT 4.0

I/O Interfaces

Storage	1x SDIO / MMC
Expansion	1x PCIe 2.0
Display	1 channel LVDS 18/24 bit 24 bit RGB TTL
USB	USB Host 2.0 USB OTG 2.0
CAN Bus	2x Flex CAN version 2.0B compliant
Serial Port	2x UART
Other	SPI, I²C, I²S, GPIO

Video

GPU 3D	Vivante GC400T 17Mtri/s 133Mpxl/s Open GL ES 2.0
PXP	Image re-sizing, rotation, overlay and CSC Pixel Processing Pipeline

Audio

Interface	I²S (2 channel), S/P DIF
Audio Codec	on EDM Carrier Board

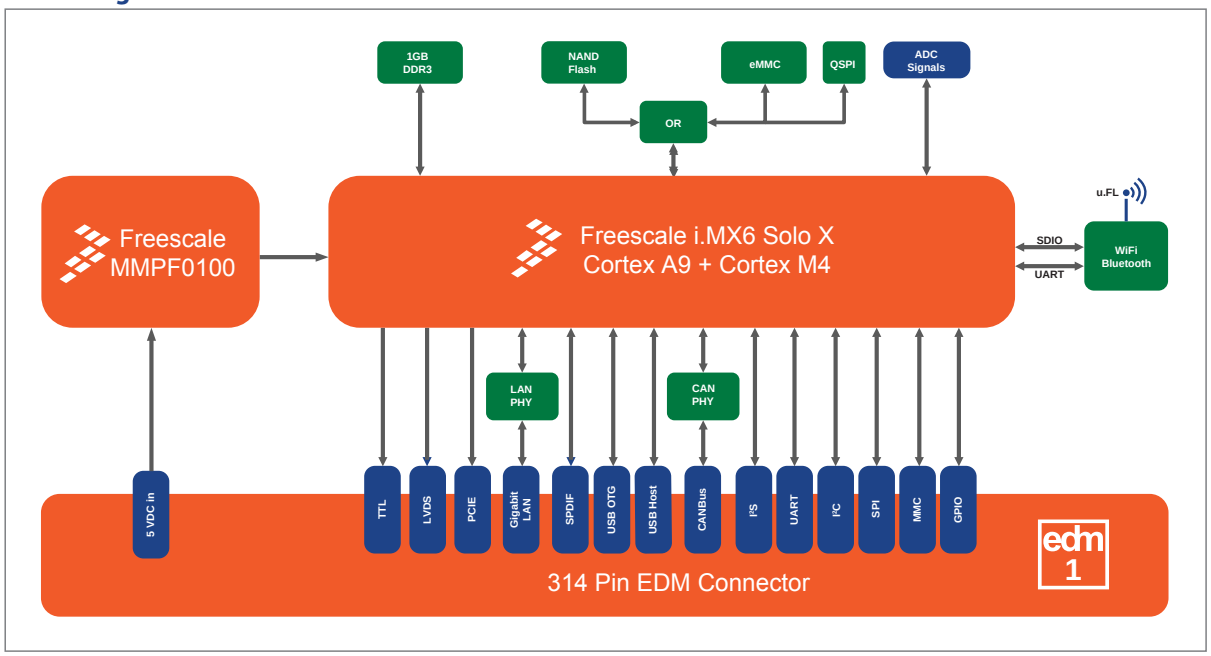
Power Specifications

Input power	5 VDC +/- 5%

Operation Systems

Standard Support	Linux Yocto Android
Extended Support	Commercial Linux Windows Embedded Compact Real Time OS

Block Diagram



Environmental and Mechanical

Temperature	Commercial : 0° to 60° C Extended : -20° to 70° C Industrial : -40° to 85° C (no WiFi)
Humidity	10 to 90%
Module Connector	314 pins MXM3
Form Factor	EDM Compact Form Factor
Dimensions	82 x 60 mm (3⅝ x 2⅜ inch)
MTBF	>100,000 hours
Weight	20 grams
Shock	50G / 25ms
Vibration	20G / 0-600 Hz

Ordering Information

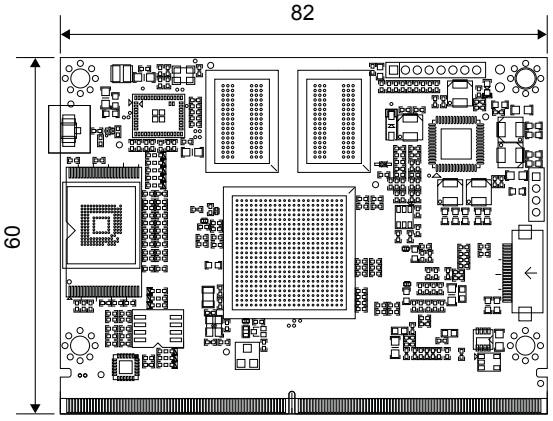
EDM1-CF-IMX6X10-R1GB-NI4G-2L-2C
EDM Compact Type 1 Freescale i.MX6 SoloX 1Ghz + 1GB DDR3 + 4GB eMMC + 2 Gigabit LAN + 2 CAN

EDM1-CF-IMX6X10-R1GB-NI4G-BW-2L-2C
EDM Compact Type 1 Freescale i.MX6 SoloX 1Ghz + 1GB DDR3 + 4GB eMMC + Gigabit LAN + 2 CAN + 802.11bgn + Bluetooth 4.0

* Feel free to contact us for custom tailored Carrier Board request for your projects.

Dimensions

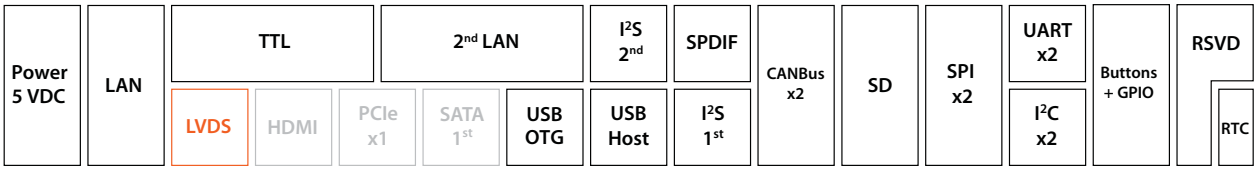
(units in mm)



EDM1-CF-IMX6UL

Main Features

- ARM Cortex-A7 Single core Freescale i.MX6UL EDM Type 1 compact System-on-Module
- Optional WiFi/BT connectivity.
- Support for Android, Linux, Yocto and realtime OS



Specifications

Core System

Signalling	EDM Type 1 compliant
CPU	Freescale i.MX6UL @ 528MHz
Technology	ARM Cortex-A7 single core
PMIC	Freescale MMPF3000
System Memory	up to 1GB DDR3
Storage	QSPI (default 256MB) optional NAND Flash (MOQ apply)
Debug Interface	JTAG Interface by thruhole

Connectivity

Network	2x Fast Ethernet
WiFi	Broadcom BCM4335 802.11ac
Bluetooth	Broadcom BCM4335 BT 4.0

I/O Interfaces

Storage	1x SDIO / MMC
Display	1 channel LVDS 18/24 bit 24 bit RGB TTL
USB	USB Host 2.0 USB OTG 2.0
CAN Bus	2x Flex CAN version 2.0B compliant
Serial Port	2x UART
Other	SPI, I²C, I²S, GPIO

Video

PXP	Image re-sizing, rotation, overlay and CSC Pixel Processing Pipeline

Audio

Interface	I²S (2 channel), S/P DIF
Audio Codec	on EDM Carrier Board

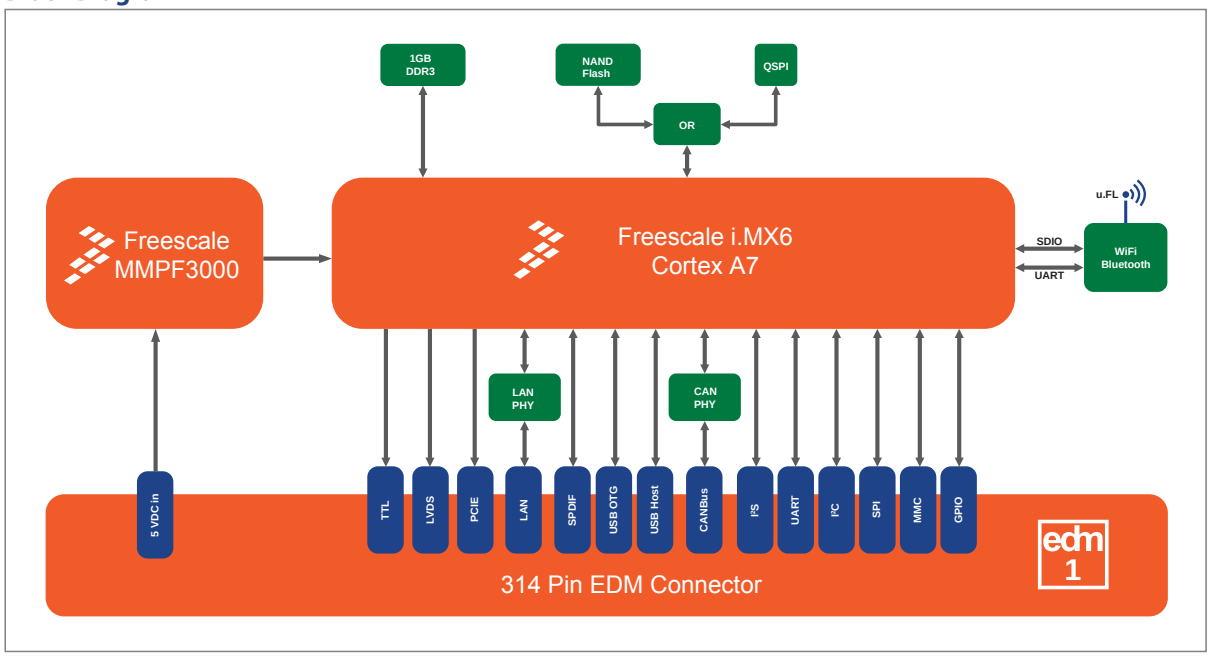
Power Specifications

Input power	5 VDC +/- 5%

Operation Systems

Standard Support	Linux Yocto
Extended Support	Commercial Linux Windows Embedded Compact Real Time OS

Block Diagram



Environmental and Mechanical

Temperature	Commercial : 0° to 60° C Extended : -20° to 70° C Industrial : -40° to 85° C (no WiFi)
Humidity	10 to 90%
Module Connector	314 pins MXM3
Form Factor	EDM Compact Form Factor
Dimensions	82 x 60 mm (3⅝ x 2⅜ inch)
MTBF	>100,000 hours
Weight	20 grams
Shock	50G / 25ms
Vibration	20G / 0-600 Hz

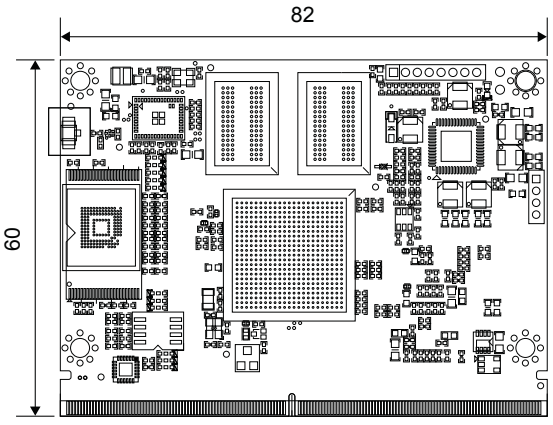
Ordering Information

TBD.

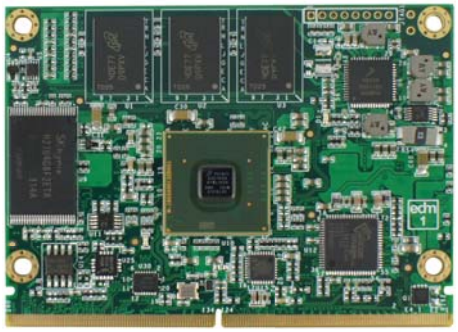
* Feel free to contact us for custom tailored Carrier Board request for your projects.

Dimensions

(units in mm)

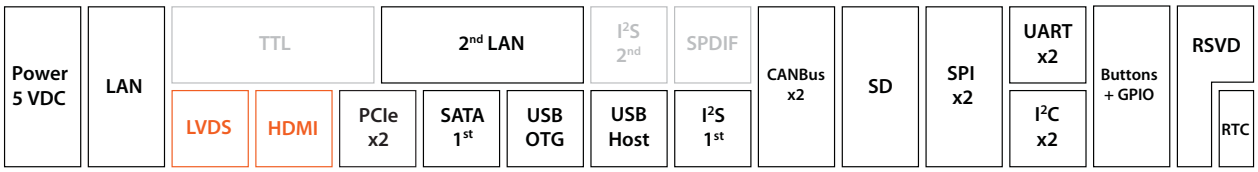


EDM1-CF-LS1021A



Main Features

- Freescale QorIQ LS1021A EDM Type 1 System on Module for network and security applications.
- Dual gigabit LAN, 2 PCI Express, SATA III and USB 3.0 connectivity.
- Harsh environment friendly with DDR3 **ECC** protection.



Specifications

Core System

Signalling	EDM Type 1 compliant
CPU	Freescale QorIQ LS1021A @ 1Ghz
Technology	ARM Cortex-A7 dual core
System Memory	up to 2GB DDR3 with **ECC** protection
PMIC	Freescale VR500
Storage	NAND Flash
Debug Interface	JTAG Interface by thruhole

Connectivity

Network	RGMII Atheros AR8033 Gigabit LAN
	SGMII Atheros AR8033 Gigabit LAN

I/O Interfaces

Storage	1x SATA 3.0
	1x SDIO / MMC
Expansion	2x PCIe 2.0
Display	HDMI (EDM1-CF-LS1021A-H only)
	1 channel LVDS (EDM1-CF-LS1021A-L only)
USB	USB Host 2.0
	USB OTG 3.0
CAN Bus	2x Flex CAN version 2.0B compliant
Serial Port	2x UART
Other	SPI, I²C, I²S, GPIO

Video

LVDS Transmitter	DS90C387 (EDM1-CF-LS1021A-L only)
HDMI Transmitter	SiI9022(EDM1-CF-LS1021A-H only)

Audio

Interface	I²S (1 channel)
Audio Codec	On EDM Carrier Board

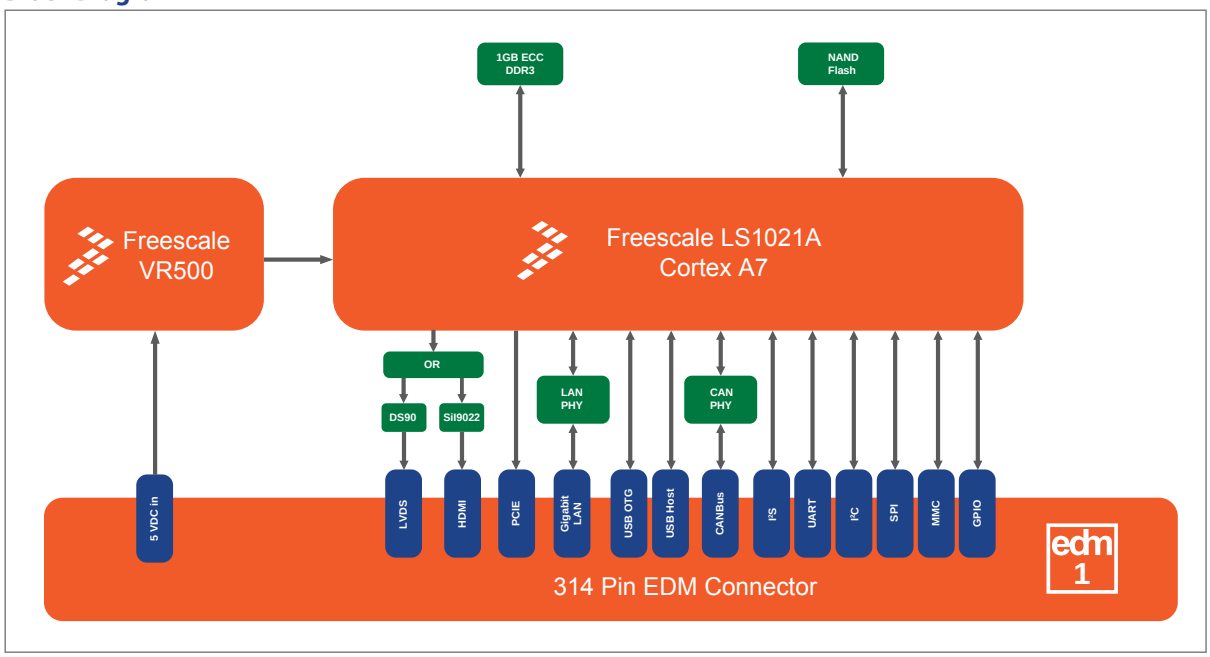
Power Specifications

Input Power	5 VDC +/- 5%

Operation Systems

Standard Support	Linux
	Yocto
Extended Support	Windows Embedded Compact
	Real Time OS

Block Diagram



Environmental and Mechanical

Temperature	Commercial : 0° to 60° C Extended : -20° to 70° C Industrial : -40° to 85° C
Humidity	10 to 90%
Module Connector	314 pins MXM3
Form Factor	EDM Compact Form Factor
Dimensions	82 x 60 mm (3⅝ x 2⅜ inch)
MTBF	>100,000 hours
Weight	20 grams
Shock	50G / 25ms
Vibration	20G / 0-600 Hz

Ordering Information

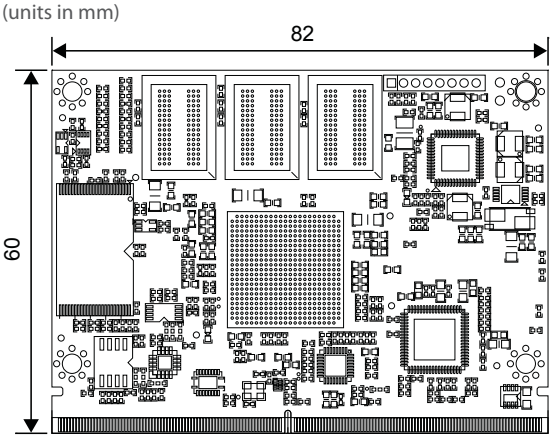
EDM1-CF-LS1021A-L-R1GE-N512-2L-2C
EDM Compact Type 1 Freescale QorIQ LS1021A 1Ghz + LVDS Display + 1GB ECC Protected DDR3 + 512MB NAND Flash + 2 Gigabit LAN + 2 CAN

EDM1-CF-LS1021A-H-R1GE-N512-2L-2C
EDM Compact Type 1 Freescale QorIQ LS1021A 1Ghz + HDMI Display + 1GB ECC Protected DDR3 + 512MB NAND Flash + 2 Gigabit LAN + 2 CAN

* Feel free to contact us for custom tailored Carrier Board request for your projects.

Dimensions

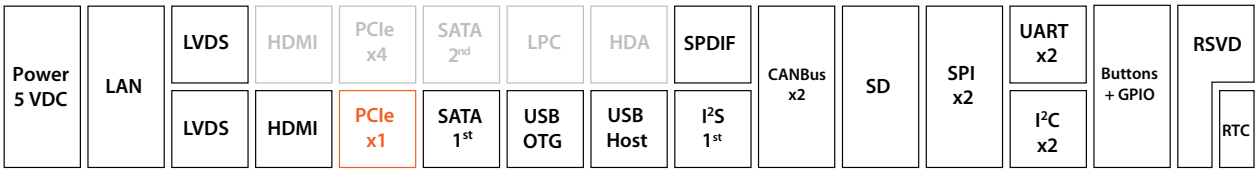
(units in mm)



EDM2-CF-IMX6

Main Features

- ARM Cortex-A9 Freescale i.MX6 scalable single/dual/quad core EDM type 2 compact System-on-Module
- Gigabit LAN, WiFi 802.11 b/g/n and Bluetooth v. 4.0 communication interface
- Targeting multimedia applications with LVDS, HDMI, S/PDIF, I²S, MIPI camera and display



Specifications

Core System

Signalling	EDM Type 2 compliant
CPU	Freescale i.MX6Quad @ 1Ghz Freescale i.MX6Dual @ 1Ghz Freescale i.MX6DualLite @ 1Ghz Freescale i.MX6Solo @ 1Ghz
System Memory	up to 2GB DDR3
Storage	eMMC (default 4GB) optional NAND Flash (MOQ apply)
Debug Interface	JTAG Interface by thruhole
FPC Connector	MIPI Interface Camera MIPI Interface Display

Connectivity

Network	Atheros AR8031 Gigabit LAN
WiFi	Broadcom BCM4330 802.11bgn
Bluetooth	Broadcom BCM4330 BT 4.0

I/O Interfaces

Storage	1x SATA 2.0 (Dual /Quad only) 1x SDIO / MMC
Expansion	1x PCIe 2.0
Display	HDMI v1.4 2 channel LVDS 18/24 bit
USB	USB Host 2.0 USB OTG 2.0
CAN Bus	2x Flex CAN version 2.0B compliant
Serial Port	2x UART
Other	SPI, I²C, GPIO

Video

	Solo / Duallite	Dual / Quad
GPU 3D	Vivante GC880 35Mtri/s 266Mpxl/s Open GL ES 2.0	Vivante GC2000 200Mtri/s 1000Mpxl/s OpenGL ES 2.0 & Halti, CL EP
GPU 2D (Vector Graphics)	emulated on GPU 3D	Vivante GC355 300Mpxl/s OpenVG 1.1
GPU 2D (Composition)	Vivante GC320 600Mpxl/s, BLIT	Vivante GC320 600Mpxl/s, BLIT
Video Decode Video Encode	1080p30 + D1 1080p30 H.264 BP / Dual 720p	1080p60 H.264 1080p30 H.264 BP / Dual 720p

Audio

Interface	I²S (2 channel), S/PDIF
Audio Codec	on EDM Carrier Board

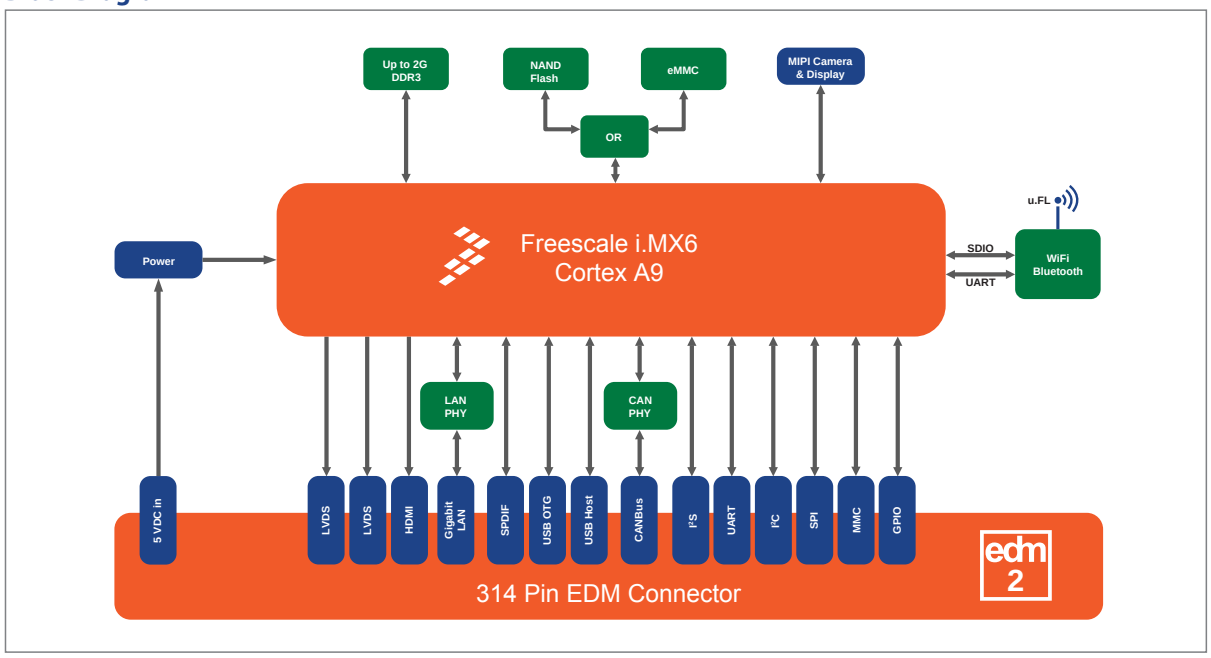
Power Specifications

Input power	5 VDC +/- 5%

Operation Systems

Standard Support	Linux Android
Extended Support	Commercial Linux Windows Embedded Compact Real Time OS

Block Diagram

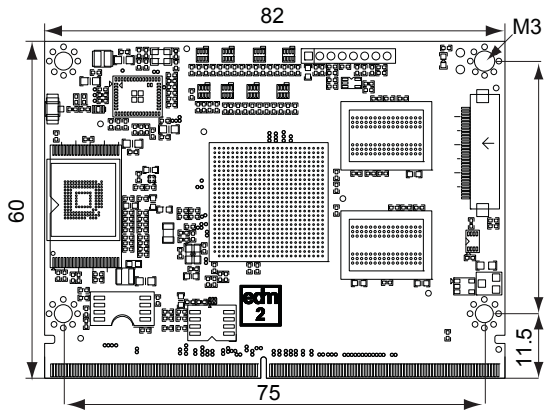


Environmental and Mechanical

Temperature	Commercial : 0° to 60° C Extended : -20° to 70° C Industrial : -40° to 85° C (no WiFi)
Humidity	10 to 90%
Module Connector	314 pins MXM3
Form Factor	EDM Compact Form Factor
Dimensions	82 x 60 mm (3⅝ x 2⅜ inch)
MTBF	>100,000 hours
Weight	20 grams
Shock	50G / 25ms
Vibration	20G / 0-600 Hz

Dimensions

(units in mm)



Ordering Information

EDM2-CF-IMX6S10-R512-NI4G-L-2C
EDM Compact Type 2 Freescale i.MX6 Solo 1Ghz + 512MB RAM + 4GB eMMC+ Gigabit LAN + 2 CAN

EDM2-CF-IMX6U10-R1GB-NI4G-L-2C
EDM Compact Type 2 Freescale i.MX6 Duallite 1Ghz + 1GB RAM + 4GB eMMC + Gigabit LAN + 2 CAN

EDM2-CF-IMX6D10-R1GB-NI4G-L-S-2C
EDM Compact Type 2 Freescale i.MX6 Dual 1Ghz + 1GB RAM + 4GB eMMC + Gigabit LAN + 2 CAN + SATA

EDM2-CF-IMX6Q10-R2GB-NI4G-L-S-2C
EDM Compact Type 2 Freescale i.MX6 Quad 1Ghz + 2GB RAM + 4GB eMMC + Gigabit LAN + 2 CAN + SATA

EDM2-CF-IMX6S10-R512-NI4G-BW-L-2C
EDM Compact Type 2 Freescale i.MX6 Solo 1Ghz + 512MB RAM + 4GB eMMC + Gigabit LAN + 2 CAN + 802.11bgn + Bluetooth 4.0

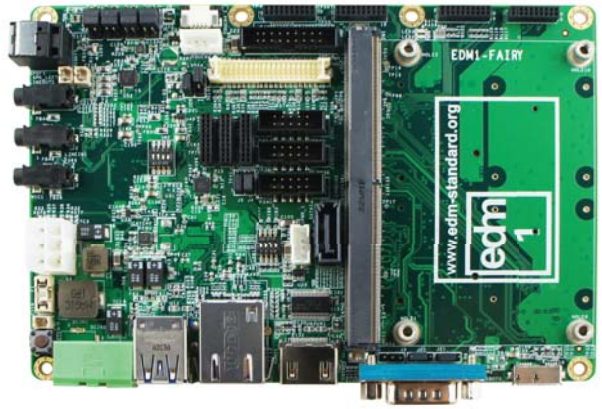
EDM2-CF-IMX6U10-R1GB-NI4G-BW-L-2C
EDM Compact Type 2 Freescale i.MX6 Duallite 1Ghz + 1GB RAM + 4GB eMMC + Gigabit LAN + 2 CAN + 802.11bgn + Bluetooth 4.0

EDM2-CF-IMX6D10-R1GB-NI4G-BW-L-S-2C
EDM Compact Type 2 Freescale i.MX6 Dual 1Ghz + 1GB RAM + 4GB eMMC + Gigabit LAN + 2 CAN + SATA + 802.11bgn + Bluetooth 4.0

EDM2-CF-IMX6Q10-R2GB-NI4G-BW-L-S-2C
EDM Compact Type 2 Freescale i.MX6 Quad 1Ghz + 2GB RAM + 4GB eMMC + Gigabit LAN + 2 CAN + SATA + 802.11bgn + Bluetooth 4.0

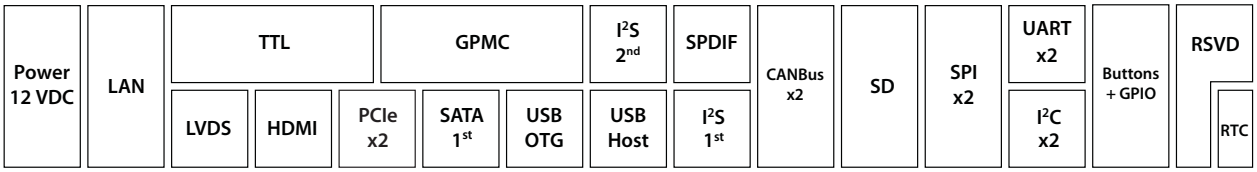
* Feel free to contact us for custom tailored Carrier Board request for your projects.

EDM1-FAIRY



Main Features

- Develop your mobile embedded device quickly with the Fairy EDM Carrier Board which features a variety of sensors and interconnects.
- HDMI, TTL and LVDS display interfaces.
- Communication by dual PCI Express (with SIM cardslots).
- Dual CAN Bus, Dual UART, USB and 8 GPIO's for Industrial control.



Specifications

Core System

System on Module	EDM Type 1 compact form factor

Expansion

Expansion Slots	2x mini-PCIe + SIM cardslot (for 3G communication)

I/O Interfaces

Connector	1x SATA 1x micro SD cardslot (SDIO) 1x Gigabit LAN 2x USB 3.0 Host 1x micro USB 3.0 / 2.0 OTG 1x UART (RS-232/422/485)
Header	2x CAN Bus 1x UART (RS-232) 2x SPI 8x GPIO 2x I²C GPMC Header Manufacturing pins

Video

Connector	1x HDMI 1 channel LVDS 18/24 bit RGB TTL 24 bit

Audio

Codec	Jumper selectable: Freescale SGTL5000 (I²S), TI TLV320AIC23B (I²S)
Connector	1x 3.5 mm jack Stereo Audio in 1x 3.5 mm jack Stereo Audio out 1x 3.5 mm jack Microphone S/PDIF
Speaker	2W amplified speaker connectors

Touch

Controller	TSC2046 (4 wire by SPI)
Connector	4 wire touch panel

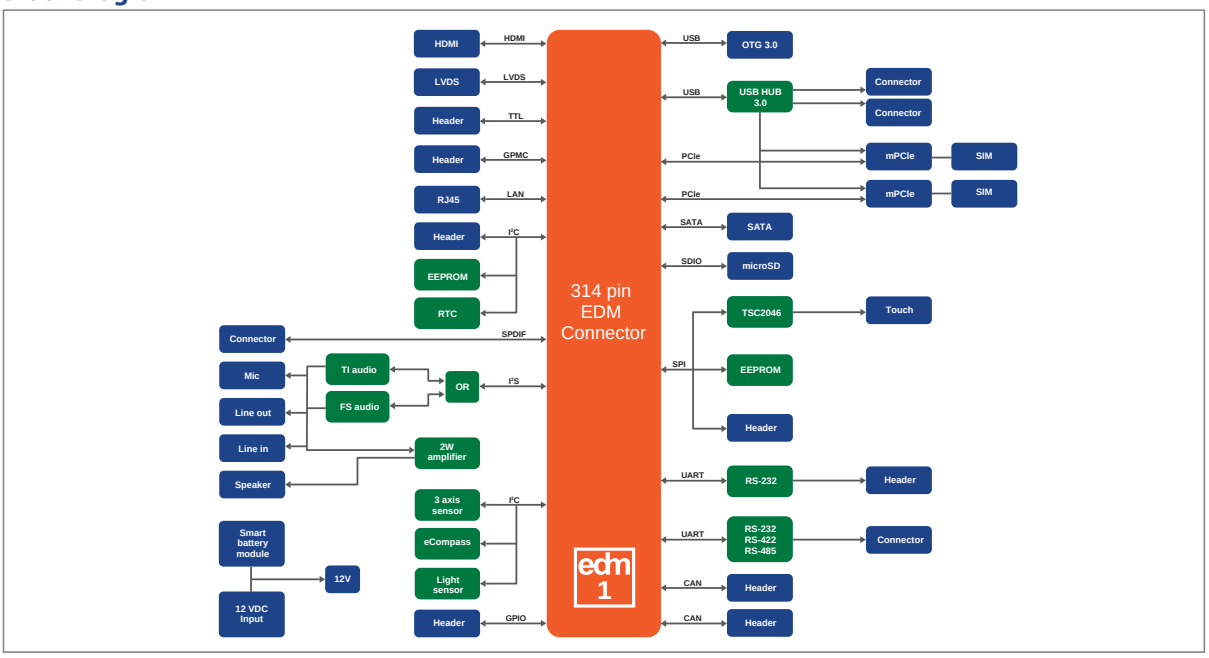
Sensors

3-axis Movement	ST Microelectronics LIS331DLH
Light Sensor	Intersil ISL29023IROZ-T7
Compass	Freescale MAG3110FCR1
Real Time Clock	Maxim integrated DS1337+

Power Specifications

Input power	12 VDC
Battery	Smart battery connector

Block Diagram



Environmental and Mechanical

Temperature	Commercial : 0° to 60° C Extended : -20° to 70° C Industrial : -40° to 85° C
Humidity	10 to 90%
Module Connector	314 pins MXM3
Form Factor	3.5" Form Factor
Dimensions	147 x 102 mm (5¾ x 4 inch)
MTBF	>100,000 hours
Weight	115 grams
Shock	50G / 25ms
Vibration	20G / 0-600 Hz

Ordering Information

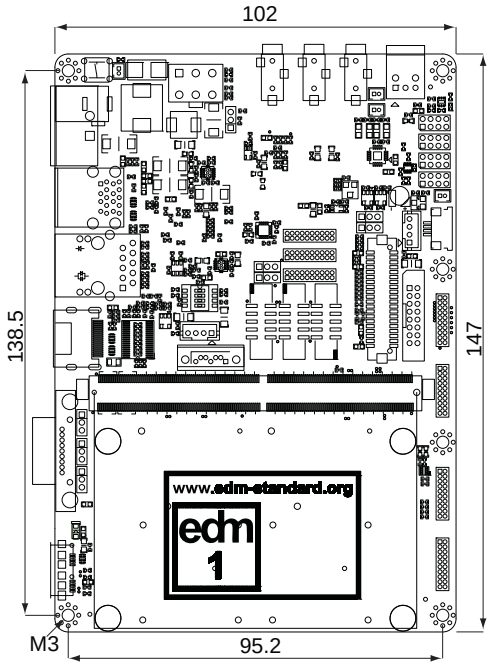
EDM1-FAIRY
3.5 inch form factor Fairy carrier board for EDM type 1 system-on-modules

EDM1-FAIRY-START
Fairy EDM type 1 evaluation board including cablekit and adaptor

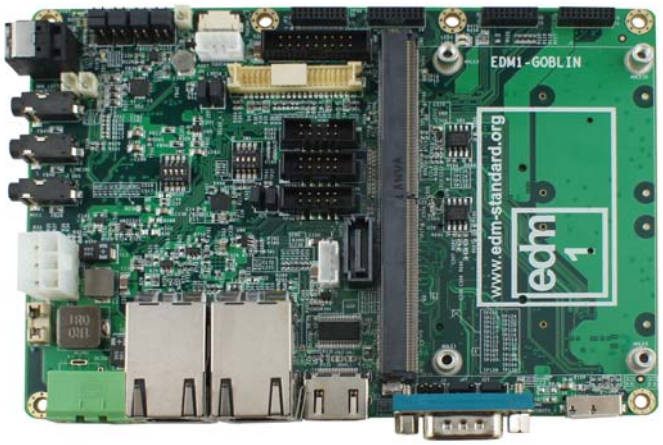
* Feel free to contact us for custom tailored Carrier Board request for your projects.

Dimensions

(units in mm)

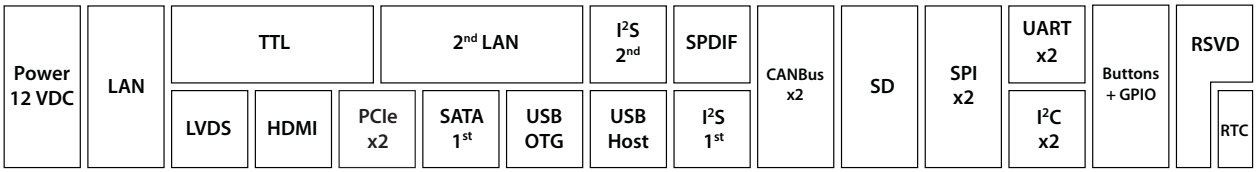


EDM1-GOBLIN



Main Features

- Develop your mobile embedded device quickly with the Goblin EDM Carrier Board which features a variety of sensors and interconnects.
- HDMI, TTL and LVDS display interfaces.
- Communication by dual PCI Express (with SIM cardslots).
- Dual CAN Bus, Dual UART, USB and 8 GPIO's for Industrial control.



Specifications

Core System

System on Module	EDM Type 1 compact form factor

Expansion

Expansion Slots	2x mini-PCIe + SIM cardslot (for 3G communication)

I/O Interfaces

Connector	1x SATA 1x micro SD cardslot (SDIO) 2x Gigabit LAN 2x USB 3.0 Host 1x micro USB 3.0 / 2.0 OTG 1x UART (RS-232/422/485)
Header	2x CAN Bus 1x UART (RS-232) 2x SPI 8x GPIO 2x I²C GPMC Header Manufacturing pins

Video

Connector	1x HDMI 1 channel LVDS 18/24 bit RGB TTL 24 bit

Audio

Codec	Jumper selectable: Freescale SGTL5000 (I²S), TI TLV320AIC23B (I²S)
Connector	1x 3.5 mm jack Stereo Audio in 1x 3.5 mm jack Stereo Audio out 1x 3.5 mm jack Microphone S/PDIF
Speaker	2W amplified speaker connectors

Touch

Controller	TSC2046 (4 wire by SPI)
Connector	4 wire touch panel

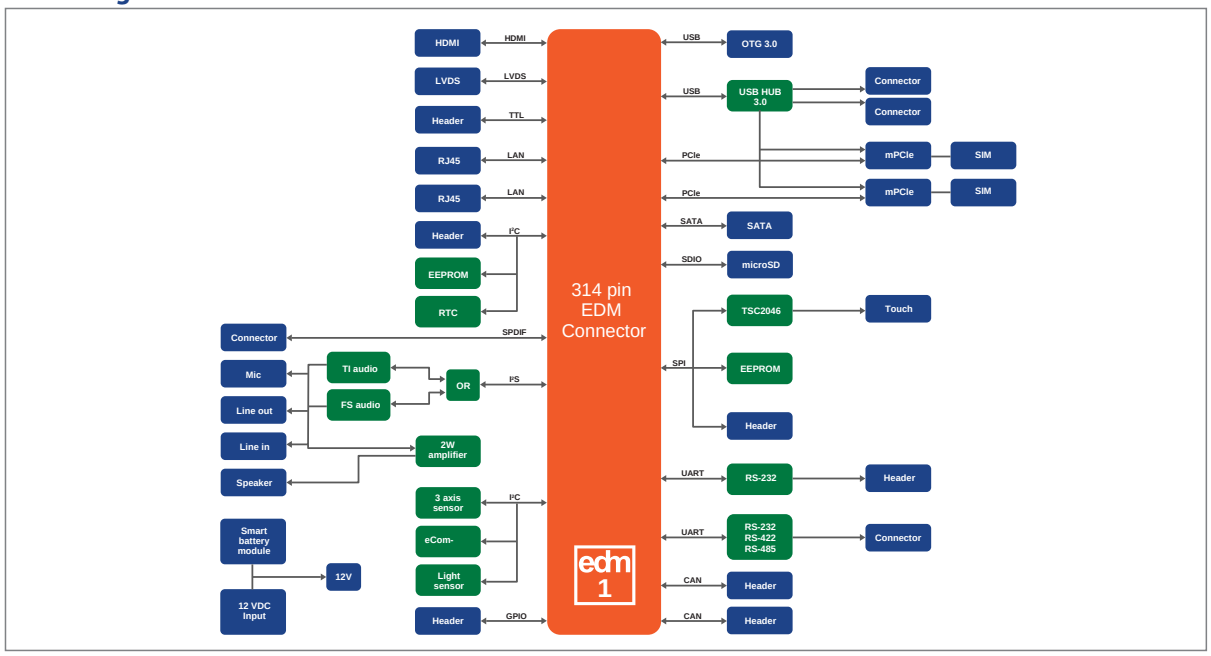
Sensors

3-axis Movement	ST Microelectronics LIS331DLH
Light Sensor	Intersil ISL29023IROZ-T7
Compass	Freescale MAG3110FCR1
Real Time Clock	Maxim integrated DS1337+

Power Specifications

Input power	12 VDC
Battery	Smart battery connector

Block Diagram

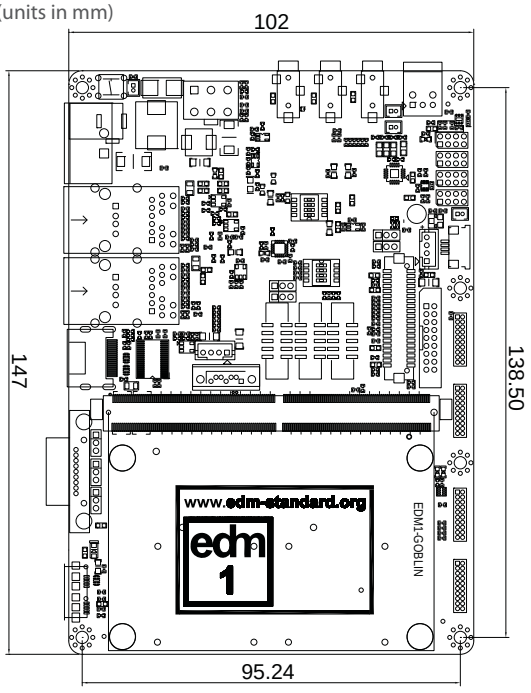


Environmental and Mechanical

Temperature	Commercial : 0° to 60° C Extended : -20° to 70° C Industrial : -40° to 85° C
Humidity	10 to 90%
Module Connector	314 pins MXM3
Form Factor	3.5" Form Factor
Dimensions	147 x 102 mm (5¾ x 4 inch)
MTBF	>100,000 hours
Weight	115 grams
Shock	50G / 25ms
Vibration	20G / 0-600 Hz

Dimensions

(units in mm)



Ordering Information

EDM1-GOBLIN
3.5 inch form factor Goblin carrier board for EDM type 1 system-on-modules

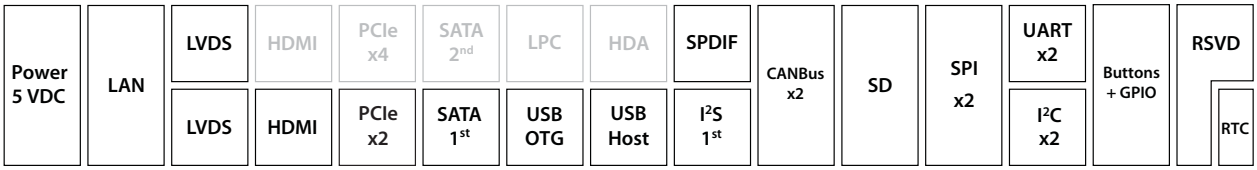
EDM1-GOBLIN-START
Goblin EDM type 1 evaluation board including cablekit and adaptor

* Feel free to contact us for custom tailored Carrier Board request for your projects.

EDM2-ELF

Main Features

- Develop your mobile embedded device quickly with the Elf EDM Carrier Board which features a variety of sensors and interconnects.
- HDMI, TTL and LVDS display interfaces.
- Communication by dual PCI Express (with SIM cardslots).
- Dual CAN Bus, Dual UART, USB and 8 GPIO's for Industrial control.



Specifications

Core System

System on Module	EDM Type 2 compact form factor

Expansion

Expansion Slots	2x mini-PCIe + SIM cardslot (for 3G communication)

I/O Interfaces

Connector	1x SATA 1x micro SD cardslot (SDIO) 1x Gigabit LAN 2x USB 3.0 Host 1x micro USB 3.0 / 2.0 OTG 1x UART (RS-232/422/485)
Header	2x CAN Bus 1x UART (RS-232) 2x SPI 8x GPIO 2x I²C Manufacturing pins

Video

Connector	1x HDMI 2 channel LVDS 18/24 bit

Audio

Codec	Jumper selectable: Freescale SGTL5000 (I²S), TI TLV320AIC23B (I²S)
Connector	1x 3.5 mm jack Stereo Audio in 1x 3.5 mm jack Stereo Audio out 1x 3.5 mm jack Microphone S/PDIF
Speaker	2W amplified speaker connectors

Touch

Controller	TSC2046 (4 wire by SPI)
Connector	4 wire touch panel

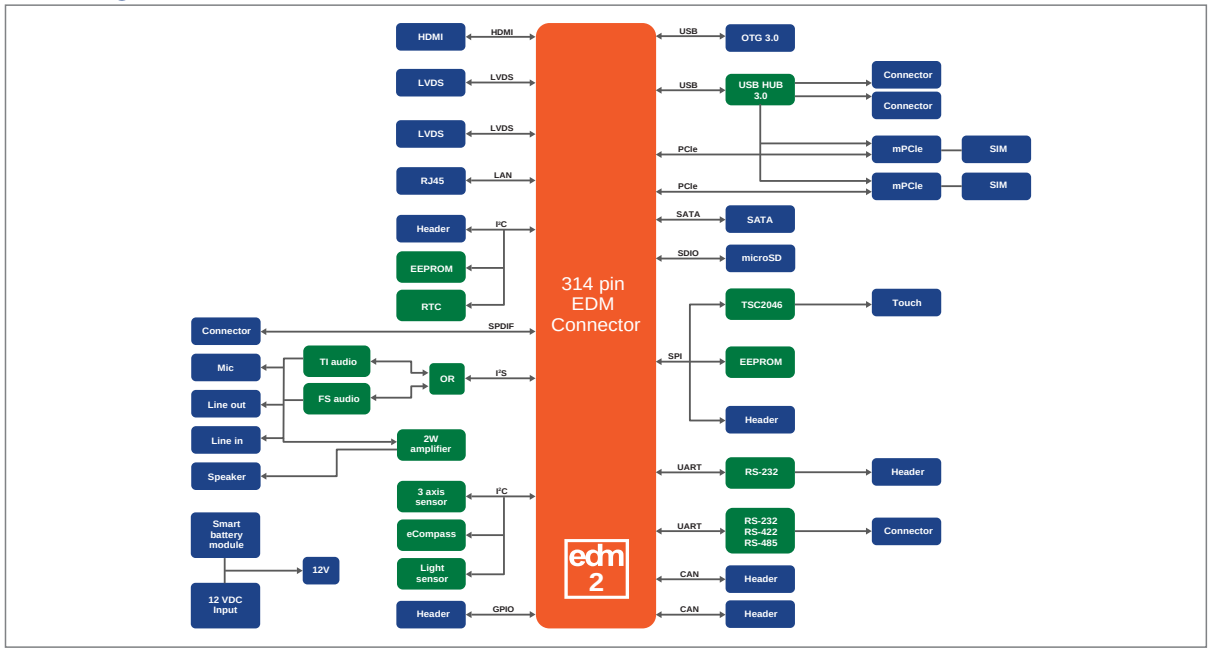
Sensors

3-axis Movement	ST Microelectronics LIS331DLH
Light Sensor	Intersil ISL29023IROZ-T7
Compass	Freescale MAG3110FCR1
Real Time Clock	Maxim integrated DS1337+

Power Specifications

Input power	12 VDC
Battery	Smart battery connector

Block Diagram

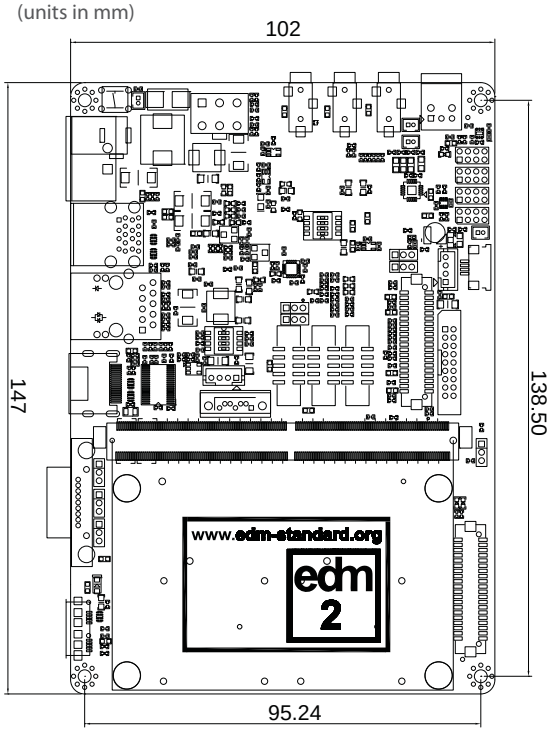


Environmental and Mechanical

Temperature	Commercial : 0° to 60° C Extended : -20° to 70° C Industrial : -40° to 85° C
Humidity	10 to 90%
Module Connector	314 pins MXM3
Form Factor	3.5" Form Factor
Dimensions	147 x 102 mm (5¾ x 4 inch)
MTBF	>100,000 hours
Weight	115 grams
Shock	50G / 25ms
Vibration	20G / 0-600 Hz

Dimensions

(units in mm)



Ordering Information

EDM2-ELF
3.5 inch form factor Elf carrier board for EDM type 2 system-on-modules

EDM2-ELF-START
Elf EDM type 2 evaluation board including cablekit and adaptor

* Feel free to contact us for custom tailored Carrier Board request for your projects.

EDM2-WIZARD

Main Features

- The official EDM type 2 Evaluation Carrier Board brings you a rich variety of interfaces and options at your fingertips.
- Wide range of jumper selectable audio, video and touch interfaces.
- Optional smart battery pack implementation.

Power 5 VDC	LAN	LVDS	HDMI	PCIe x4	SATA 2nd	LPC	HDA	SPDIF	CANBus x2	SD	SPI x2	UART x2	Buttons + GPIO	RSVD
		LVDS	HDMI	PCIe x2	SATA 1st	USB OTG	USB Host	I²S 1st				I²C x2		RTC

Specifications

Core System

System on Module	EDM Type 2 compliant

Expansion

Expansion Slots	2x mini-PCIe + SIM cardslot (for 3G communication) 1x PCIe x1 expansion slot (shared with mini-PCIe) 1x PCIe x4 expansion slot

I/O Interfaces

Connector	2x SATA 1x SD cardslot (SDIO) 1x Gigabit LAN 2x USB 3.0 Host 1x micro USB 3.0 / 2.0 OTG 1x UART (RS-232/422/485)
Header	2x CAN Bus 1x UART (RS-232/422/485) 2x SPI 8x GPIO (shared with buttons) 2x I²C Manufacturing pins

Video

Connector	2x HDMI 2 channel LVDS 18/24 bit

Audio

Codec	Jumper selectable: Freescale SGTL5000 (I2S), TI TLV320AIC23B (I2S) Realtek ALC892-CG (HDA)
Connector	5x 3.5 mm jack Surround audio S/PDIF
Speaker	2W amplified speaker connectors

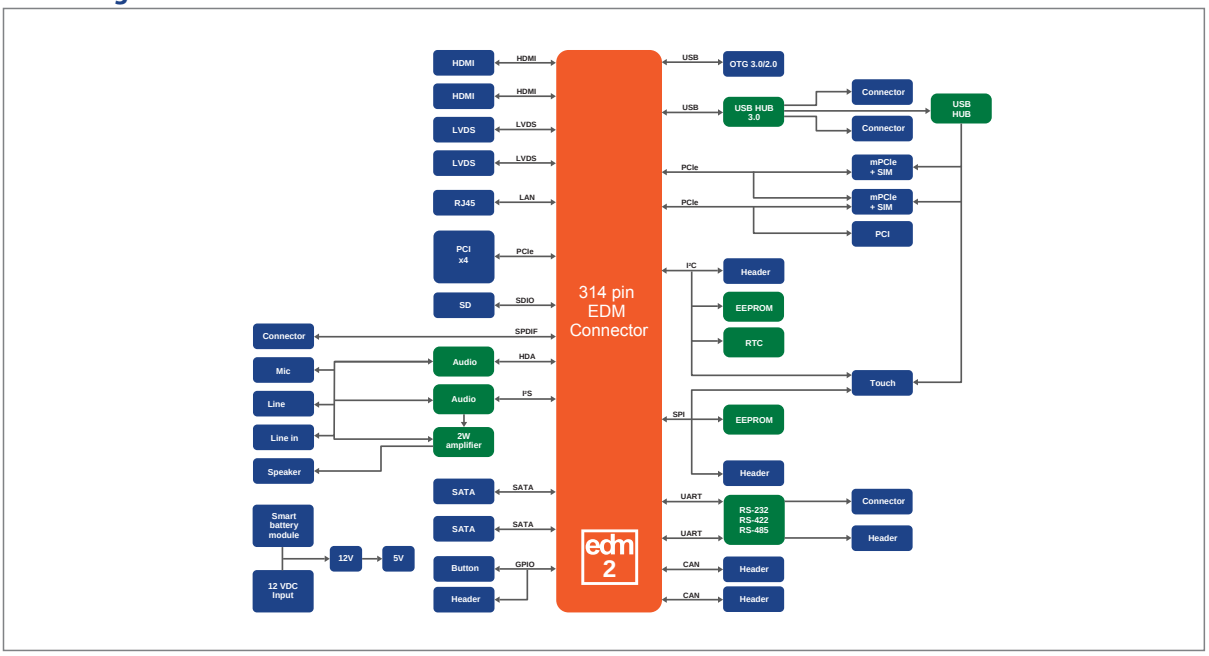
Touch

Controller	Jumper selectable: TSC2046 (4 wire by SPI) TSC2004 (4 wire by I2C) ADS7845 (5 wire by SPI) USB 4/5 wire touch controller
Connector	4 wire touchpanel (USB/I2C/SPI) 5 wire touchpanel (USB/SPI)

Power Specifications

Input Power	10~30 VDC
Battery	Smart battery connector

Block Diagram

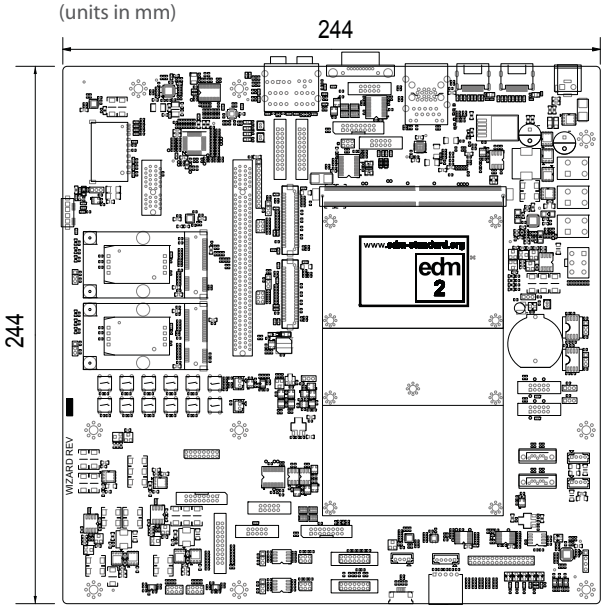


Environmental and Mechanical

Temperature	Commercial : 0° to 60° C
Humidity	10 to 90%
Module Connector	314 pins MXM3
Form Factor	MicroATX Form Factor
Dimensions	244 x 244 mm
	9⅝ x 9⅝ inch
MTBF	>100,000 hours
Weight	380 grams
Shock	50G / 25ms
Vibration	20G / 0-600 Hz

Dimensions

(units in mm)



Ordering Information

EDM2-WIZARD
MicroATX Form Factor Wizard Carrier Board for EDM Type 2 System on Modules

EDM2-WIZARD-START
MicroATX Form Factor Wizard Carrier Board for EDM Type 2 System on Modules including cablekit and adaptor

* Feel free to contact us for custom tailored Carrier Board request for your projects.

EDM ACCESSORIES

TDHJ070NA4RESKIT

- 7 inch touchscreen evaluation startkit

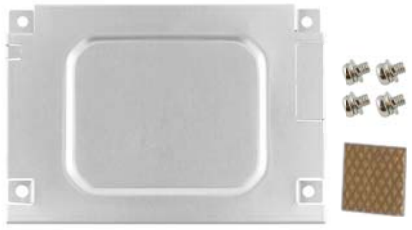
Pack content:
- LVDS-cable
- 4-wire touch cable
- 7″ LCD display
  * 1024x600 resolution
  * 250 nits brightness
  * 4 wire resistive touchscreen
  * dimensions 165.75 x 105.39 x 3.65 mm
- Adaptor PCB board

TDZJ070NAPCAPKIT

- 7 inch PCAP multi-touchscreen

Pack content:
- LVDS-cable
- USB interface cable
- 7″ LCD display
  * 1024x600 resolution
  * 500 nits brightness
  * PCAP touchscreen
  * dimensions 178 x 116 x 6.5 mm
- Adaptor PCB board

Heatspreaders



- **EDMSPSC200501**

- EDM Compact heat spreader
- 4 screws
- 20*20 mm thermopad 0.5 mm thickness

Passive heatsinks

- **EDMHSCP12200501**

- EDM Compact 12 mm passive heatsink + mylar
- 4 screws
- 4 washers
- 20*20 mm thermopad 0.5 mm thickness

Antenna kit

- **EDMANTP150A138045D2450BK**

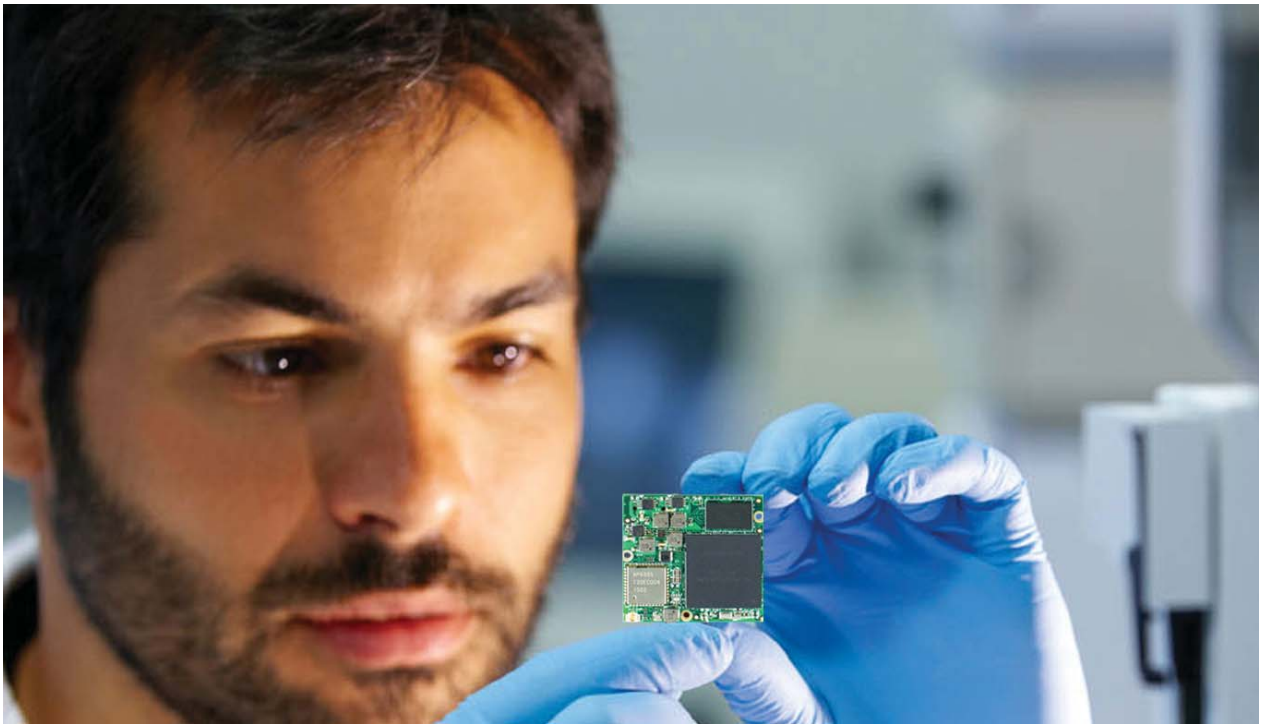
- 4.5 dB, 2.4/5 GHz, black color antenna
- 15cm u.FL to SMA patch cable

EDM Connector kit

- **EDMCONNECTORKIT**

- 10 EDM Connectors (AS0B821-S78B-7H)
- 40 M3 6mm mounting screws
- 40 mounting poses

PICO SERIES



About DWARF Platform

PICO System-on-Modules are Ubiquitous computing very compact high performance SoM's that are highly optimized for mobile Internet of Things applications using a pin-compatible scalable platform that not only utilize the "Edison" connector connectivity for sensors and low-speed I/O but also adds additional expansion possibilities for multimedia and connectivity.

> " Putting huge things in tiny spaces "

Additionally the "DWARF" platform eases proto-typing and accelerate time to market by offering a complete platform introducing a large number of ready to use sensors and available I/O's to take advantage of todays' technology and communication challenges, giving our customers' cutting edge technology that can easily be expanded and implemented into Industry 4.0 applications.

DRONES Compact and lightweight.

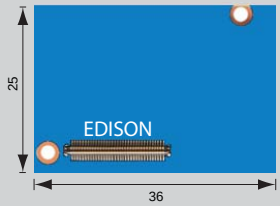
WEARABLES Low power, small and easily expandable.

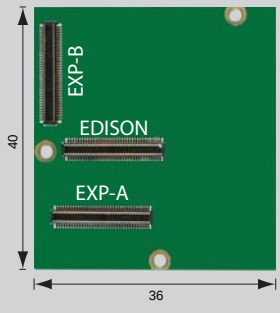
APPLIANCES Multimedia options and control I/O.

ROBOTICS Camera and sensors. Battery powered.

FUN Opensource software....enough said.

Form Factors





Longevity

TechNexion PICO Modules incorporate only components from embedded roadmaps of strategic suppliers and are backed up with value added technical services such as life cycle management, revision control and end-of-life support.

TechNexion and Open Source

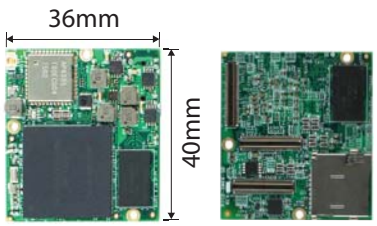
TechNexion PICO modules come standard with source code and binary demo images for the following Operating Systems.

Android binary demo images, instructions to make your own as well as complete source code available.

Linux binary demo images and full source code u-boot, kernel and support packages available.

yocto binary demo images and full source code u-boot, kernel and support packages available.

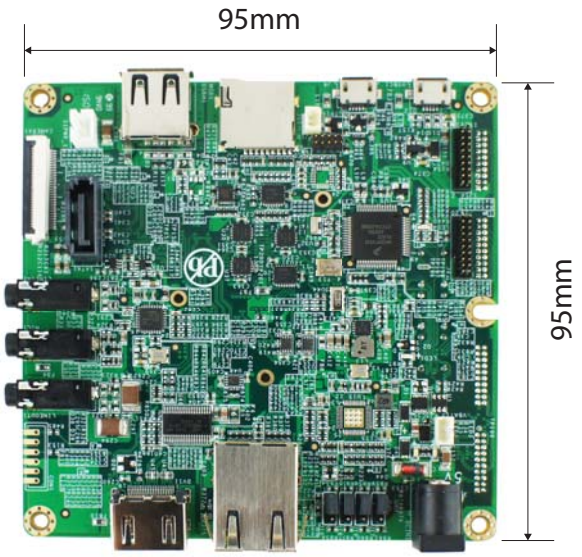
ubuntu binary demo images available.



Custom Carrier board Design

Customers can design their own carrier board using the freely available schematic design files and leverage on the available software source code that comes standard with every PICO Module and therefore bringing a custom designed solution to market using a very short design cycle and reduced engineering risks.

TechNexion offers custom tailored carrier board design and manufacturing services where our expertise will assist you to ensure your design is fully compatible and future upgrade proof while moving to next generation PICO modules.



Development Startkits

Kickstart your project development cycle with our plug and play development startkits that come pre-loaded with working software and all tools to assist you to validate performance and explore additional possibilities without the need to invest a huge amount of time and resources upfront.

EDISON

Power 3.3~4.5V	SDIO	I²S	SPI	PWM
	USB OTG	UART	I²C	GPIO

EXP-A

LVDS	RGMII
TTL	

EXP-B

CAN	PCIe	HDMI	SATA
I²C	USB HOST	MIPI	

OVERVIEW

Model Name	PICO-iMX6-SD	PICO-iMX6-EMMC	PICO-iMX6POP-SD	PICO-iMX6POP-EMMC
Processor	i.MX6 Solo / Dualite	i.MX6 Solo / Dualite	i.MX6 Dual / Quad	i.MX6 Dual / Quad
Technology	ARM Cortex-A9 single/ dual core @ 1Ghz	ARM Cortex-A9 single/ dual core @ 1Ghz	ARM Cortex-A9 dual / quad @ 1Ghz	ARM Cortex-A9 dual / quad @ 1Ghz
PMIC			Freescale MMPF0100	Freescale MMPF0100
Memory	up to 2GB DDR3	up to 2GB DDR3	up to 2GB LPDDR2	up to 2GB LPDDR2
Storage	µ SD cardslot	eMMC	µ SD cardslot	eMMC
Network	RGMII	RGMII	RGMII	RGMII
Wireless LAN	802.11ac	802.11ac	802.11ac	802.11ac
Bluetooth	BT v. 4.0	BT v. 4.0	BT v. 4.0	BT v. 4.0
HDMI	✓	✓	✓	✓
LVDS	✓	✓	✓	✓
TTL	✓	✓	✓	✓
I²S	✓	✓	✓	✓
PCIe	✓	✓	✓	✓
SATA			✓	✓
USB Host	✓	✓	✓	✓
USB OTG	✓	✓	✓	✓
SDIO	✓	✓	✓	✓
CAN Bus	✓	✓	✓	✓
SPI	✓	✓	✓	✓
I²C	✓	✓	✓	✓
GPIO	✓	✓	✓	✓
Edison Signals	✓	✓	✓	✓
Expansion Signals	✓	✓	✓	✓
Dimensions	36 x 40 mm 1⅜ x 1⅝ inch	36 x 40 mm 1⅜ x 1⅝ inch	36 x 40 mm 1⅜ x 1⅝ inch	36 x 40 mm 1⅜ x 1⅝ inch

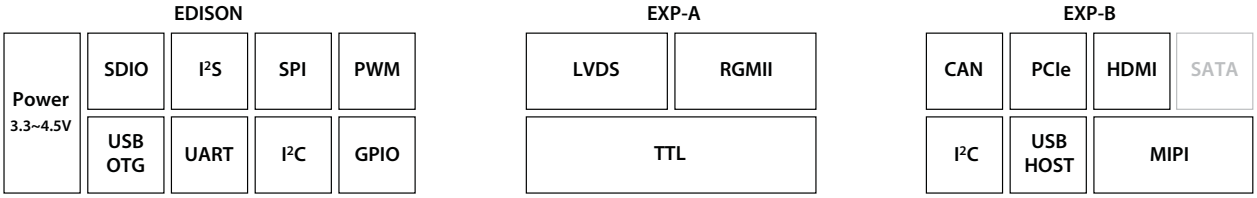
PICO-iMX6UL
i.MX6UL
ARM Cortex-A7 single core @ 528Mhz
Freescale MMPF3000
up to 1GB DDR3
QSPI
RMII
802.11ac
BT v. 4.0
✓
✓
✓
✓
✓
✓
✓
✓
✓
✓
36 x 40 mm 1⅜ x 1⅜ inch

PICO-DWARF	Model Name
All	PICO module
✓	HDMI
✓	LVDS
✓	TTL
✓	SATA
✓	MIPI DSI / CSI
✓	µ SD cardslot
✓	Gigabit LAN
✓	USB host
✓	USB OTG
✓	UART
✓	CAN Bus
✓	SPI
✓	GPIO
✓	I²C
✓	I²S
✓	Audio Codec
✓	Altimeter
✓	3D Accelerometer
✓	Gyroscope
✓	RTC
5 VDC +/- 5%	Power
✓	Battery Charging Circuit
✓	Edison Connector
✓	Expansion Connector
95 x 95 mm 3¾ x 3¾ inch	Dimensions

PICO-IMX6-SD

Main Features

- The PICO-IMX6-SD design based on the Freescale i.MX6 multimedia processor is a purpose-built, small footprint hardware platform compatible with Intel Edison baseboards and adds a number of additional high-speed signals such as PCIe, RGMII LAN, USB as well as 24 bit TTL Display, LVDS, HDMI and MIPI CSI Camera and MIPI DSI Display options.
- ARM Cortex-A9 Freescale i.MX6 scalable single/dual core System-on-Module
- WiFi 802.11ac and Bluetooth v. 4.0 communication interface



Specifications

Core System

CPU	Freescale i.MX6 Solo / Duallite
Technology	ARM Cortex-A9 single/dual core @ 1Ghz
System Memory	up to 2GB DDR3
Storage	Micro SD cardslot

Connectivity

Network RGMII	Signals routed to connector
WiFi	Broadcom BCM4335 802.11ac
Bluetooth	Broadcom BCM4335 BT 4.0

I/O Interface Signalling

Edison I/O @ 1.8V	9x GPIO
	4x PWM
	2x I²C
	1x I²S
	1x SPI
	2x UART
	USB-OTG
	SDIO (4-bit)
Additional I/O @ 3.3V	Single Channel LVDS
	24-bit TTL RGB
	HDMI 1.4
	MIPI CSI Camera
	MIPI DSI Display
	PCIe
	RGMII (gigabit LAN)
	CAN
	USB Host

Video

GPU 3D	Vivante GC880
	35Mtri/s 266Mpxl/s
	Open GL ES 2.0
GPU 2D (Vector Graphics)	Emulated on GPU 3D
GPU 2D (Composition)	Vivante GC320
	600Mpxl/s, BLIT
Video Decode	1080p30 + D1
Video Encode	1080p30 H.264
	BP / Dual 720p

Audio

Interface	I²S (1 channel)
Audio Codec	On Carrier Board

Power Specifications

Input Power	3.3 ~ 4.5 VDC

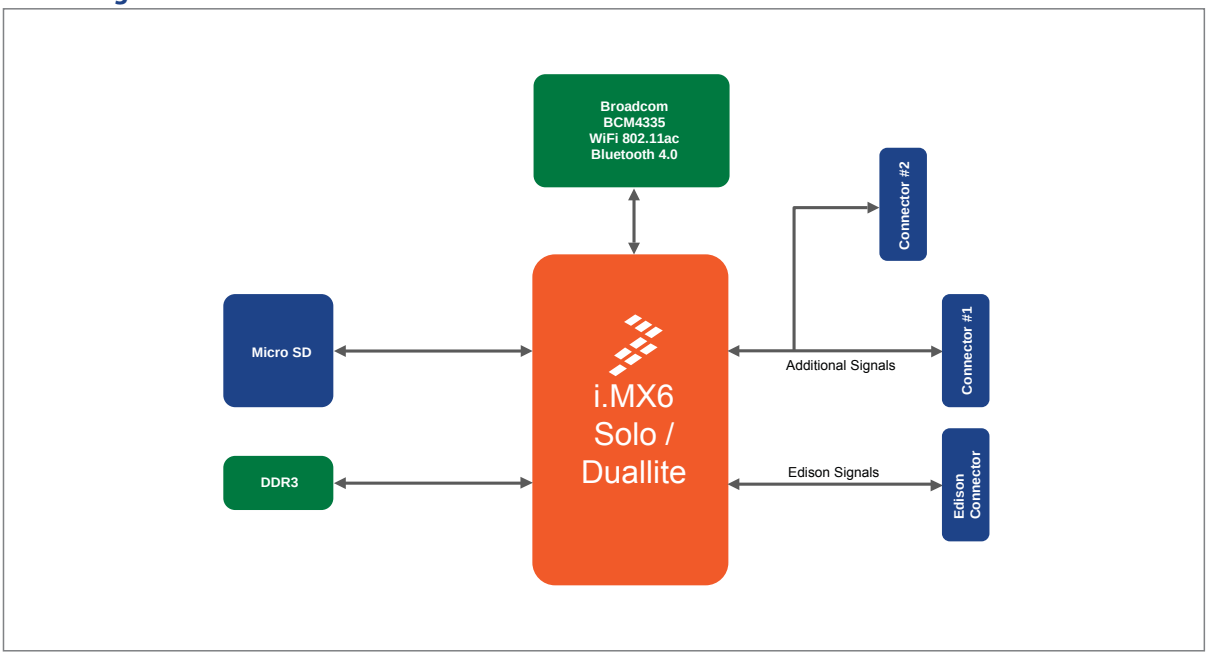
Connectors

Board-to-Board	1x Edison compatible connector (Hirose 70-pin)
	2x Hirose 70-pin connectors

Operation Systems

Standard Support	Linux 3.x, Yocto, Android 4.3, Android 4.4, Android 5.0, Ubuntu

Block Diagram



Environmental and Mechanical

Temperature	Commercial : 0° to 60° C Extended : -20° to 70° C Industrial : -40° to 85° C (no WiFi)
Humidity	10 to 90%
Dimensions	36 x 40 mm 1⅜ x 1⅝ inch
MTBF	>100,000 hours
Weight	8 grams
Shock	50G / 25ms
Vibration	20G / 0-600 Hz

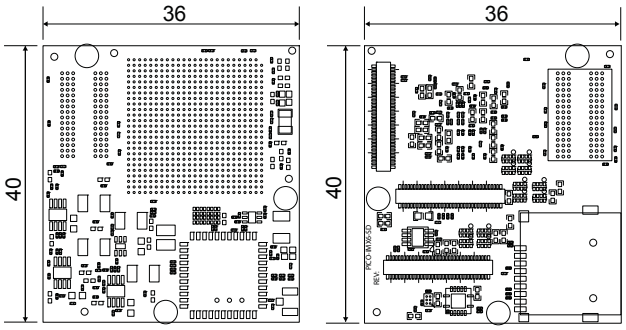
Ordering Information

PICOIMX6S10R512SD
Pico SoM Freescale i.MX6 Solo 1Ghz + 512MB RAM + SD Cardslot
PICOIMX6S10R512SDBW
Pico SoM Freescale i.MX6 Solo 1Ghz + 512MB RAM + SD Cardslot + 802.11AC + Bluetooth 4.0
PICOIMX6U10R1GBSD
Pico SoM Freescale i.MX6 Duallite 1Ghz + 1GB RAM + SD Cardslot
PICOIMX6U10R1GBSDBW
Pico SoM Freescale i.MX6 Duallite 1Ghz + 1GB RAM + SD Cardslot + 802.11AC + Bluetooth 4.0

* Feel free to contact us for custom tailored Carrier Board request for your projects.

Dimensions

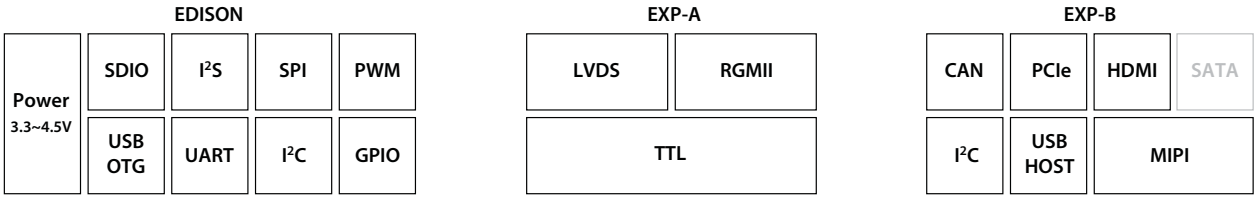
(units in mm)



PICO-IMX6-EMMC

Main Features

- The PICO-IMX6-EMMC design based on the Freescale i.MX6 multimedia processor is a purpose-built, small footprint hardware platform compatible with Intel Edison baseboards and adds a number of additional high-speed signals such as PCIe, RGMII LAN, USB as well as 24 bit TTL Display, LVDS, HDMI and MIPI CSI Camera and MIPI DSI Display options.
- ARM Cortex-A9 Freescale i.MX6 scalable single/dual core System-on-Module
- WiFi 802.11ac and Bluetooth v. 4.0 communication interface



Specifications

Core System

CPU	Freescale i.MX6 Solo / Duallite
Technology	ARM Cortex-A9 single/dual core @ 1Ghz
System Memory	up to 2GB DDR3
Storage	Onboard eMMC (default 4GB)

Connectivity

Network RGMII	Signals routed to connector
WiFi	Broadcom BCM4335 802.11ac
Bluetooth	Broadcom BCM4335 BT 4.0

I/O Interface Signalling

Edison I/O @ 1.8V	9x GPIO
	4x PWM
	2x I²C
	1x I²S
	1x SPI
	2x UART
	USB-OTG
	SDIO (4-bit)
Additional I/O @ 3.3V	Single Channel LVDS
	24-bit TTL RGB
	HDMI 1.4
	MIPI CSI Camera
	MIPI DSI Display
	PCIe
	RGMII (gigabit LAN)
	CAN
	USB Host

Video

GPU 3D	Vivante GC880
	35Mtri/s 266Mpxl/s
	Open GL ES 2.0
GPU 2D (Vector Graphics)	Emulated on GPU 3D
GPU 2D (Composition)	Vivante GC320
	600Mpxl/s, BLIT
Video Decode	1080p30 + D1
Video Encode	1080p30 H.264
	BP / Dual 720p

Audio

Interface	I²S (1 channel)
Audio Codec	On Carrier Board

Power Specifications

Input Power	3.3 ~ 4.5 VDC

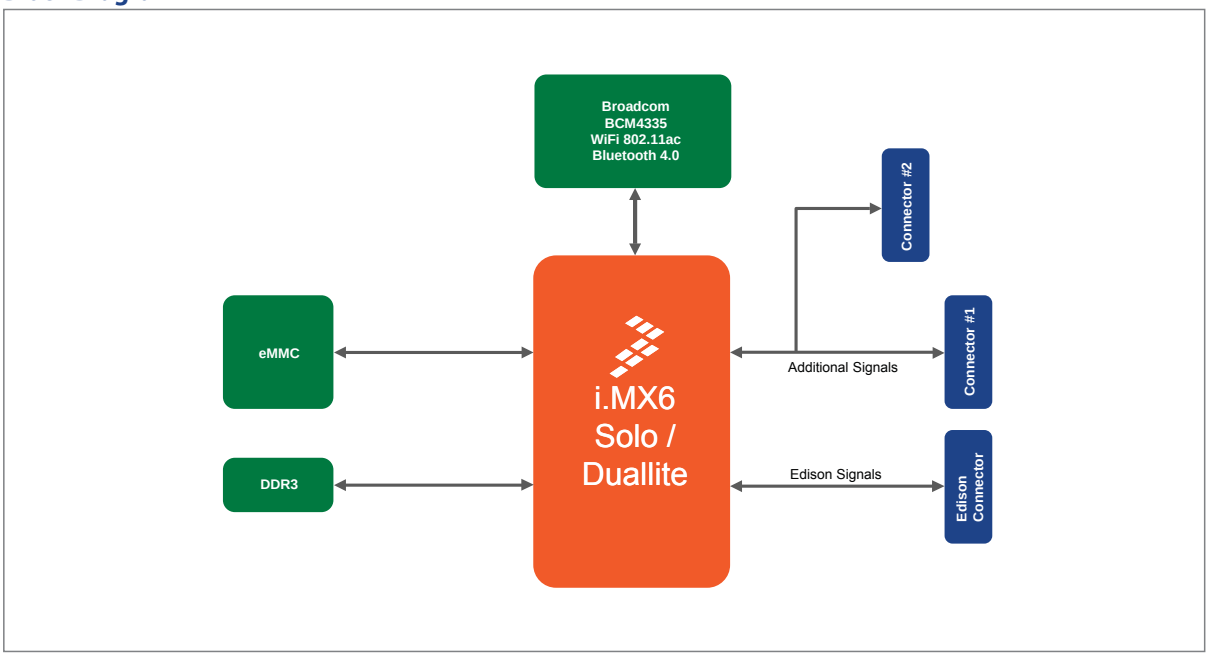
Connectors

Board-to-Board	1x Edison compatible connector (Hirose 70-pin)
	2x Hirose 70-pin connectors

Operation Systems

Standard Support	Linux 3.x, Yocto, Android 4.3, Android 4.4, Android 5.0, Ubuntu

Block Diagram



Environmental and Mechanical

Temperature	Commercial : 0° to 60° C
	Extended : -20° to 70° C
	Industrial : -40° to 85° C (no WiFi)
Humidity	10 to 90%
Dimensions	36 x 40 mm
	1⅜ x 1⅝ inch
MTBF	>100,000 hours
Weight	8 grams
Shock	50G / 25ms
Vibration	20G / 0-600 Hz

Ordering Information

PICOIMX6S10R512NI4G
Pico SoM Freescale i.MX6 Solo 1Ghz + 512MB RAM + 4GB EMMC

PICOIMX6S10R512NI4GBW
Pico SoM Freescale i.MX6 Solo 1Ghz + 512MB RAM + 4GB EMMC + 802.11AC + Bluetooth 4.0

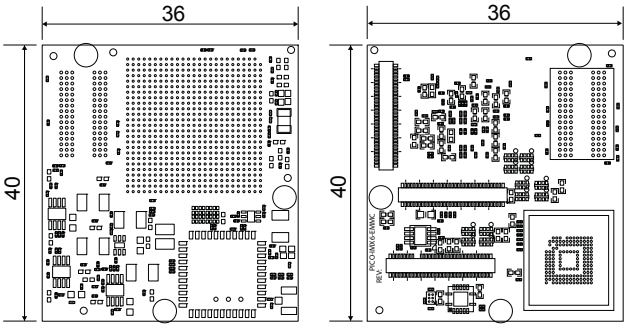
PICOIMX6U10R1GBNI4G
Pico SoM Freescale i.MX6 Duallite 1Ghz + 1GB RAM + 4GB EMMC

PICOIMX6U10R1GBNI4GBW
Pico SoM Freescale i.MX6 Duallite 1Ghz + 1GB RAM + 4GB EMMC + 802.11AC + Bluetooth 4.0

* Feel free to contact us for custom tailored Carrier Board request for your projects.

Dimensions

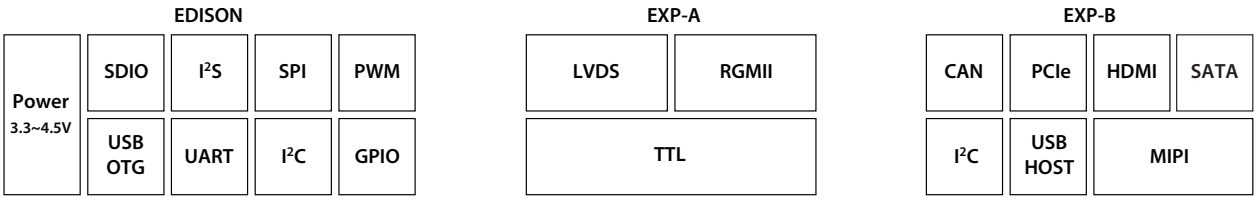
(units in mm)



PICO-IMX6POP-SD

Main Features

- The PICO-IMX6POP-SD design based on the Freescale i.MX6 multimedia processor is a purpose-built, small footprint hardware platform compatible with Intel Edison baseboards and adds a number of additional high-speed signals such as PCIe, RGMII LAN, USB as well as 24 bit TTL Display, LVDS, HDMI and MIPI CSI Camera and MIPI DSI Display options.
- ARM Cortex-A9 Freescale i.MX6 scalable dual / quad core System-on-Module
- WiFi 802.11ac and Bluetooth v. 4.0 communication interface



Specifications

Core System

CPU	Freescale i.MX6 Dual / Quad (PoP)
Technology	ARM Cortex-A9 dual/quad core @ 1Ghz
PMIC	Freescale MMPF0100
System Memory	up to 2GB LPDDR2
Storage	Micro SD cardslot

Connectivity

Gigabit Network RGMII	Signals routed to connector
WiFi	Broadcom BCM4335 802.11ac
Bluetooth	Broadcom BCM4335 BT 4.0

I/O Interface Signalling

Edison I/O @ 1.8V	9x GPIO
	4x PWM
	2x I²C
	1x I²S
	1x SPI
	2x UART
	USB-OTG
	SDIO (4-bit)
Additional I/O @ 3.3V	Single Channel LVDS
	24-bit TTL RGB
	HDMI 1.4
	MIPI CSI Camera
	MIPI DSI Display
	PCIe
	SATA II
	RGMII (gigabit LAN)
	Flex CAN version 2.0B Compliant
	USB Host

Video

GPU 3D	Vivante GC2000
	200Mtri/s 1000Mpxl/s
	Open GL ES 2.0
	& Halti, CL EP
GPU 2D	Vivante GC355
(Vector Graphics)	300Mpxl/s
	OpenVG 1.1
GPU 2D	Vivante GC320
(Composition)	600Mpxl/s, BLIT
Video Decode	1080p60 H.264
Video Encode	1080p30 H.264
	BP / Dual 720p

Audio

Interface	I²S (1 channel)
Audio Codec	On Carrier Board

Power Specifications

Input Power	3.3 ~ 4.5 VDC

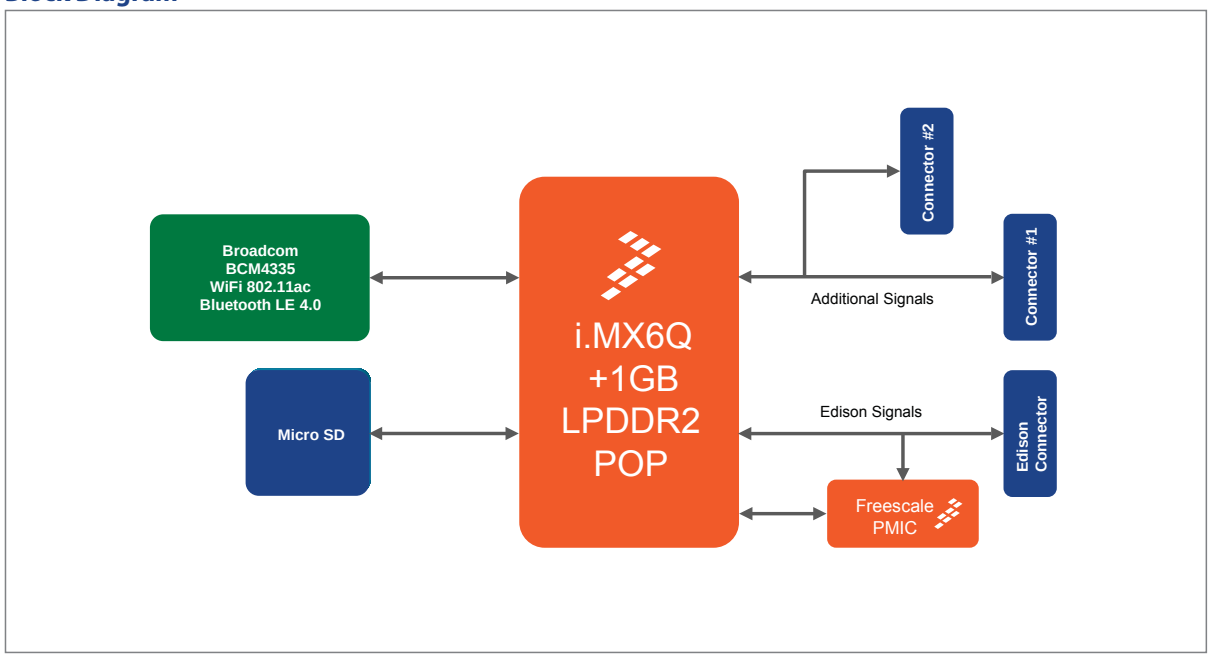
Connectors

Board-to-Board	1x Edison compatible connector (Hirose 70-pin)
	2x Hirose 70-pin connectors

Operation Systems

Standard Support	Linux 3.x, Yocto, Android 4.3, Android 4.4, Android 5.0, Ubuntu

Block Diagram



Environmental and Mechanical

Temperature	Commercial : 0° to 60° C Extended : -20° to 70° C Industrial : -40° to 85° C (no WiFi)
Humidity	10 to 90%
Dimensions	36 x 40 mm 1⅜ x 1⅝ inch
MTBF	>100,000 hours
Weight	8 grams
Shock	50G / 25ms
Vibration	20G / 0-600 Hz

Ordering Information

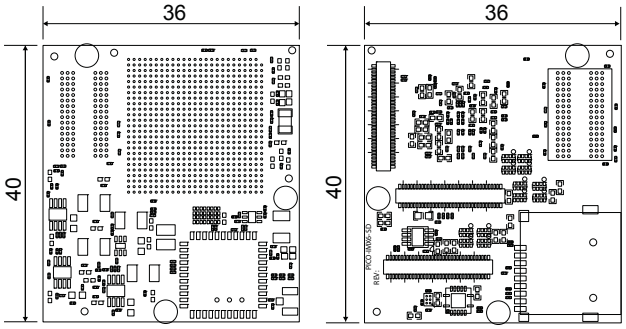
PICOIMX6QP10R1GBSDBW

Pico SoM Freescale with i.MX6 Quad PoP + 1GB LPDDR2 + SD Cardslot + 802.11AC + Bluetooth 4.0

* Feel free to contact us for custom tailored Carrier Board request for your projects.

Dimensions

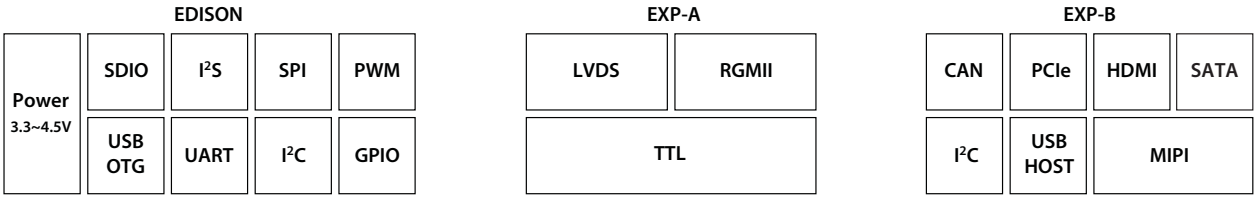
(units in mm)



PICO-IMX6POP-EMMC

Main Features

- The PICO-IMX6POP-EMMC design based on the Freescale i.MX6 multimedia processor is a purpose-built, small footprint hardware platform compatible with Intel Edison baseboards and adds a number of additional high-speed signals such as PCIe, RGMII LAN, USB as well as 24 bit TTL Display, LVDS, HDMI and MIPI CSI Camera and MIPI DSI Display options.
- ARM Cortex-A9 Freescale i.MX6 scalable dual / quad core System-on-Module
- WiFi 802.11ac and Bluetooth v. 4.0 communication interface



Specifications

Core System

CPU	Freescale i.MX6 Dual / Quad (PoP)
Technology	ARM Cortex-A9 dual/quad core @ 1Ghz
PMIC	Freescale MMPF0100
System Memory	up to 2GB LPDDR2
Storage	Onboard eMMC (default 4GB)

Connectivity

Gigabit Network RGMII	Signals routed to connector
WiFi	Broadcom BCM4335 802.11ac
Bluetooth	Broadcom BCM4335 BT 4.0

I/O Interface Signalling

Edison I/O @ 1.8V	9x GPIO
	4x PWM
	2x I²C
	1x I²S
	1x SPI
	2x UART
	USB-OTG
	SDIO (4-bit)
Additional I/O @ 3.3V	Single Channel LVDS
	24-bit TTL RGB
	HDMI 1.4
	MIPI CSI Camera
	MIPI DSI Display
	PCIe
	SATA II
	RGMII (gigabit LAN)
	Flex CAN version 2.0B Compliant
	USB Host

Video

GPU 3D	Vivante GC2000
	200Mtri/s 1000Mpxl/s
	Open GL ES 2.0
	& Halti, CL EP
GPU 2D	Vivante GC355
(Vector Graphics)	300Mpxl/s
	OpenVG 1.1
GPU 2D	Vivante GC320
(Composition)	600Mpxl/s, BLIT
Video Decode	1080p60 H.264
Video Encode	1080p30 H.264
	BP / Dual 720p

Audio

Interface	I²S (1 channel)
Audio Codec	On Carrier Board

Power Specifications

Input Power	3.3 ~ 4.5 VDC

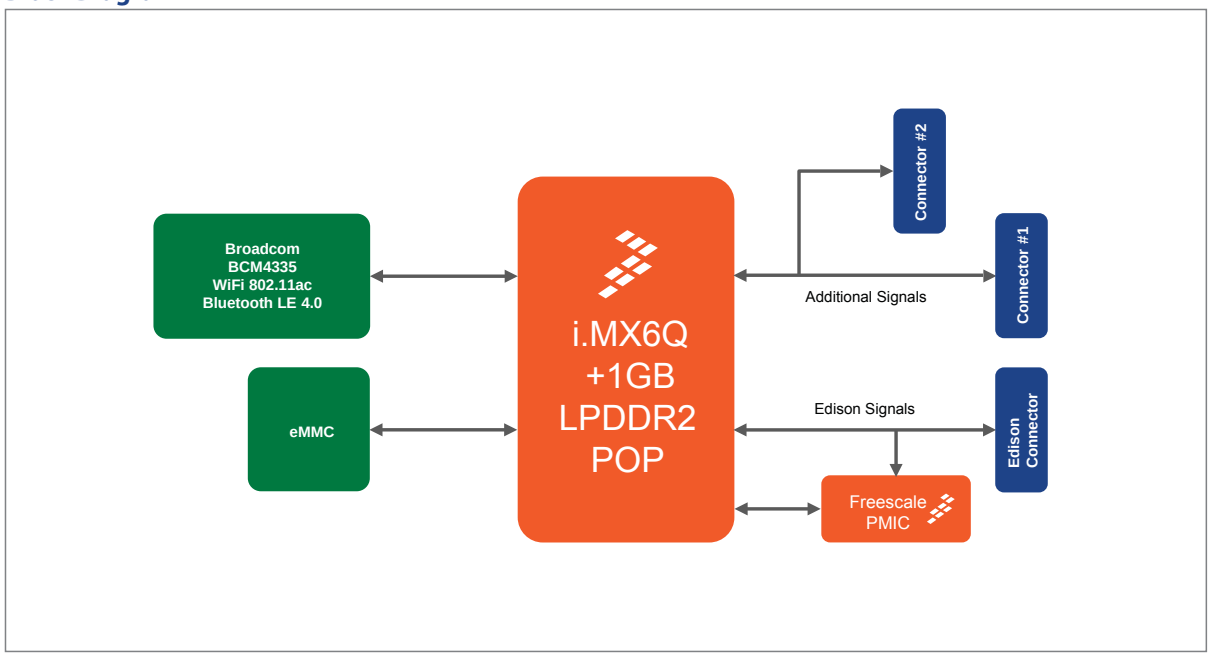
Connectors

Board-to-Board	1x Edison compatible connector (Hirose 70-pin)
	2x Hirose 70-pin connectors

Operation Systems

Standard Support	Linux 3.x, Yocto, Android 4.3, Android 4.4, Android 5.0, Ubuntu

Block Diagram



Environmental and Mechanical

Temperature	Commercial : 0° to 60° C Extended : -20° to 70° C Industrial : -40° to 85° C (no WiFi)
Humidity	10 to 90%
Dimensions	36 x 40 mm 1⅜ x 1⅝ inch
MTBF	>100,000 hours
Weight	8 grams
Shock	50G / 25ms
Vibration	20G / 0-600 Hz

Ordering Information

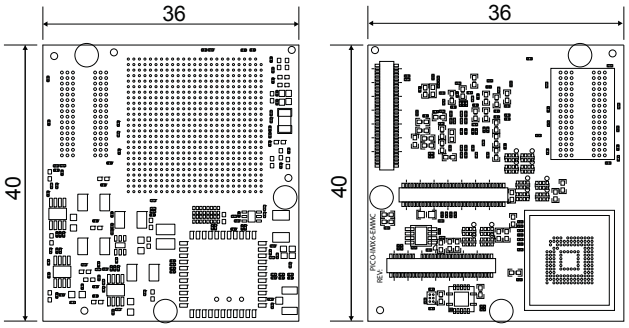
PICOIMX6QP10R1GBNI4GBW

Pico SoM Freescale with i.MX6 Quad PoP + 1GB LPDDR2 + 4GB EMMC + 802.11AC + Bluetooth 4.0

* Feel free to contact us for custom tailored Carrier Board request for your projects.

Dimensions

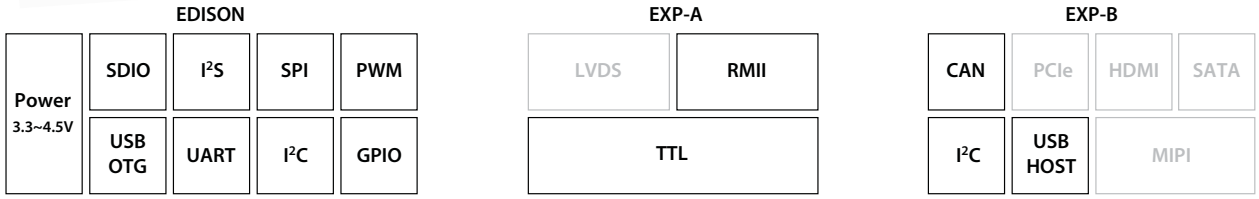
(units in mm)



PICO-IMX6UL

Main Features

- The PICO-IMX6UL design based on the Freescale i.MX6 multimedia processor is a purpose-built, small footprint hardware platform compatible with Intel Edison baseboards and adds a number of additional high-speed signals such as RMII LAN, USB and 24 bit TTL Display
- ARM Cortex-A7 Freescale i.MX6UL single core System-on-Module
- WiFi 802.11ac and Bluetooth v. 4.0 communication interface



Specifications

Core System

CPU	Freescale i.MX6UL @ 528MHz
Technology	ARM Cortex-A7 single core
System Memory	up to 1GB DDR3
Storage	QSPI (default 256MB)

Connectivity

Network RMII	Signals routed to connector
WiFi	Broadcom BCM4335 802.11ac
Bluetooth	Broadcom BCM4335 BT 4.0

I/O Interface Signalling

Edison I/O @ 1.8V	9x GPIO
	4x PWM
	2x I²C
	1x I²S
	1x SPI
	2x UART
	USB-OTG
	SDIO (4-bit)
Additional I/O @ 3.3V	24-bit TTL RGB
	RMII LAN
	CAN
	USB Host

Video

PXP	Image re-sizing, rotation, overlay and CSC Pixel Processing Pipeline

Audio

Interface	I²S (2 channel), S/P DIF
Audio Codec	on Carrier Board

Power Specifications

Input Power	3.3 ~ 4.5 VDC

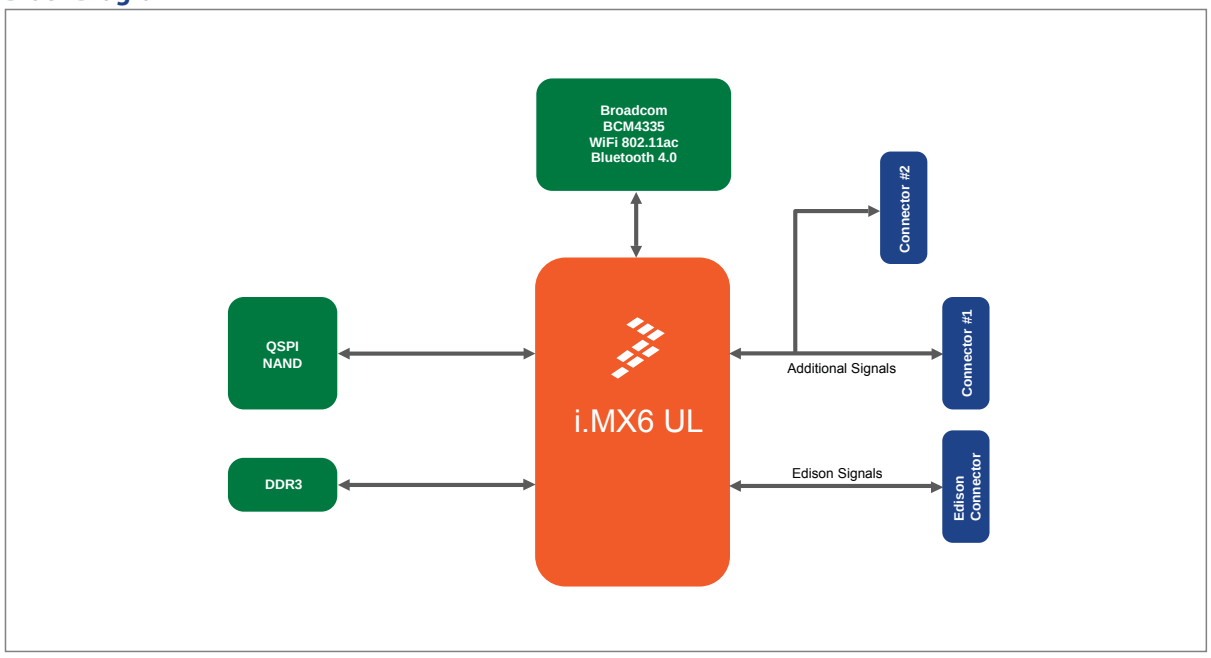
Connectors

Board-to-Board	1x Edison compatible connector (Hirose 70-pin)
	2x Hirose 70-pin connectors

Operation Systems

Standard Support	Linux 3.x, Yocto

Block Diagram



Environmental and Mechanical

Temperature	Commercial : 0° to 60° C Extended : -20° to 70° C Industrial : -40° to 85° C (no WiFi)
Humidity	10 to 90%
Dimensions	36 x 40 mm 1⅜ x 1⅝ inch
MTBF	>100,000 hours
Weight	8 grams
Shock	50G / 25ms
Vibration	20G / 0-600 Hz

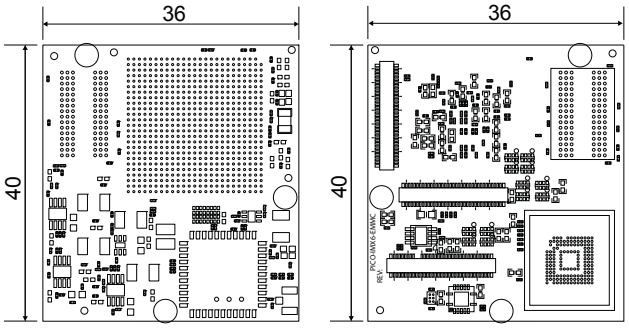
Ordering Information

TBD

* Feel free to contact us for custom tailored Carrier Board request for your projects.

Dimensions

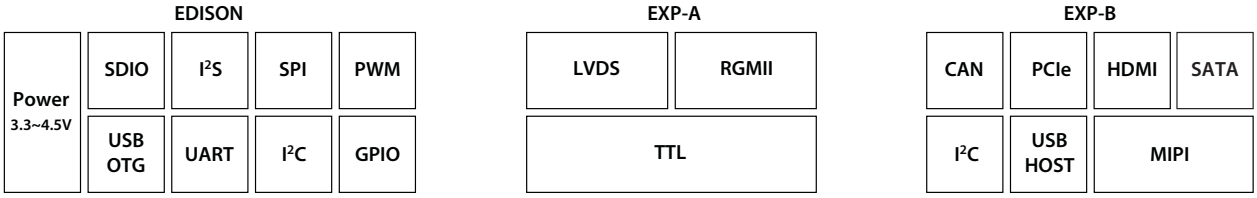
(units in mm)



PICO-DWARF

Main Features

- The PICO-DWARF reference design is compatible with Intel Edison and TechNexion Pico SoM modules and add a variety of sensors and connectivity to the Pico SoM making it the ideal candidate for IoT (Internet of Things) applications such as drones, wearables, appliances and robotics.
- The complete schematics, design files, board files and BOM lists of PICO-DWARF are available and can be downloaded from the TechNexion homepage.



Specifications

Core System

System-on-Module	Compatible with Intel Edison connector (1x 70-pin Hirose Connector) Compatible with TechNexion Pico connectors (3x 70-pin Hirose Connector)

Connectivity

Network	Atheros AR8031 Gigabit LAN
Connector	RJ-45 LAN Connector

Expansion

Storage	1x SATA data + power connector 1x micro SD cardslot
USB	1x USB 2.0 Host connector 1x USB 2.0 OTG connector
Expansion Pin Headers	Single Channel LVDS 24-bit TTL RGB PCIe CAN GPIO PWM I²C SPI UART

Video

External Display	HDMI connector
Internal Display	Single Channel LVDS (expansion header) 24-bit TTL RGB (expansion header) MIPI DSI Display on 33-pin FPC Connector
Camera	MIPI CSI signals on 33-pin FPC connector

Audio

Audio Codec	Freescale SGTL5000
Audio Connectors	1x 3.5 mm jack Stereo Audio in 1x 3.5 mm jack Stereo Audio out 1x 3.5 mm jack Microphone

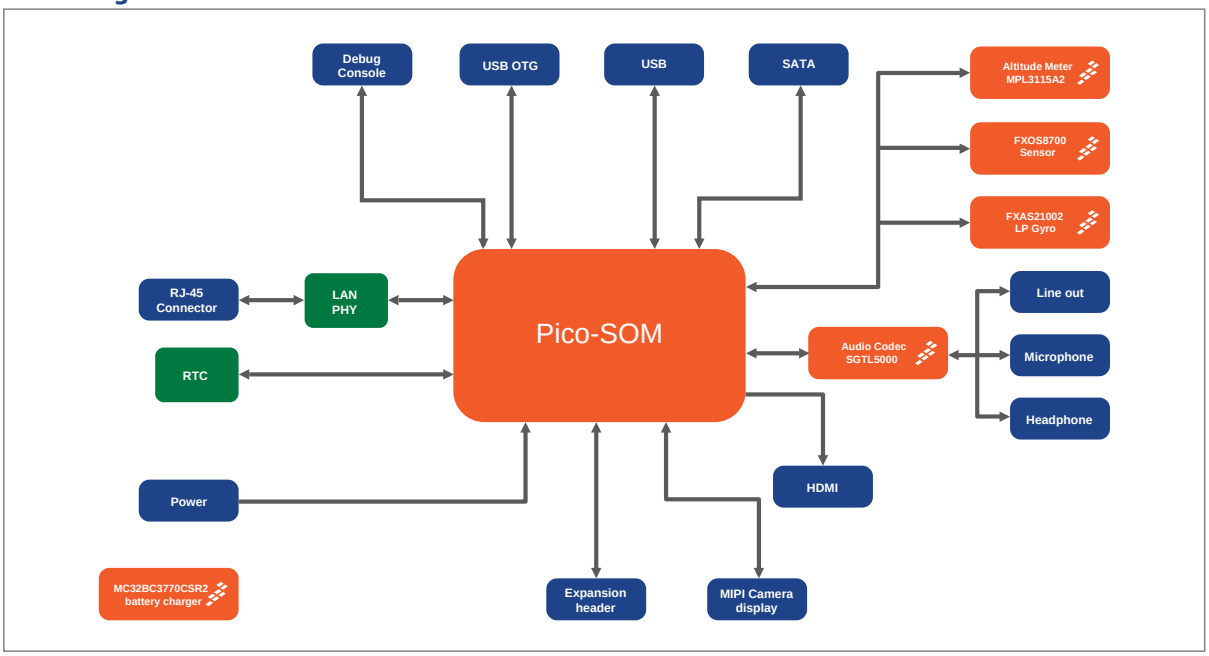
Power Specifications

Input Power	5 VDC +/- 5%
Power Connector	5.5 / 2.1mm barrel jack
Battery Charging Circuit	Freescale MC32BC3770CSR2 Single Cell Lipo Battery Charging Circuit
Battery Connector	2 pin header

Sensors

Altimeter	Freescale MPL3115A2
3D Accelerometer	Freescale FXOS8700CQ
Gyroscope	Freescale FXAS21002
RTC	DS1337+ with backup battery

Block Diagram



Environmental and Mechanical

Temperature	Commercial : 0° to 60° C
Humidity	10 to 90%
Dimensions	95 x 95 mm
	3¾ x 3¾ inch
MTBF	>100,000 hours
Weight	40 grams
Shock	50G / 25ms
Vibration	20G / 0-600 Hz

Ordering Information

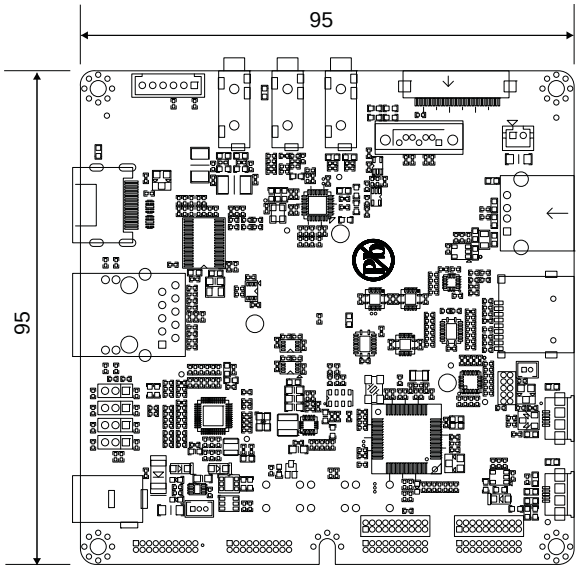
PICODWARF

PICO-DWARF Baseboard for PICO-SOM

* Feel free to contact us for custom tailored Carrier Board request for your projects.

Dimensions

(units in mm)



TOUCAN SERIES

About TOUCAN

The Toucan series is a highly crafted product that can be deployed in not only industrial harsh environments but also in cosmetic savvy domotica applications utilizing its' versatile arsenal of industrial high-speed communication and control interfaces and optional wireless communication interfaces.

Standard the Toucan Series comes with wide voltage power inputs and Power over Ethernet, making the product suitable to be embedded into OEM/ODM end equipment.

Operation systems

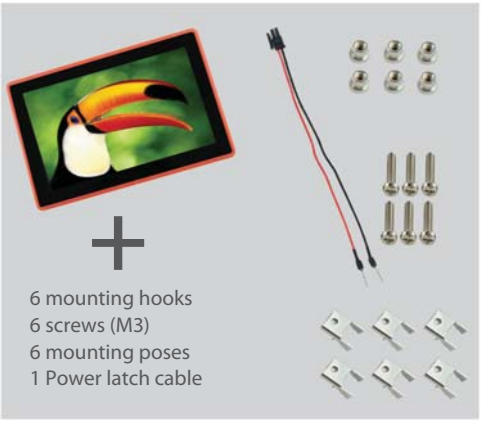
Android runtime images, instructions to make your own as well as complete source code available.

Linux runtime images and full source code u-boot, kernel and support packages available.

yocto runtime images and full source code u-boot, kernel and support packages available.

ubuntu runtime images available.

Package content



6 mounting hooks
6 screws (M3)
6 mounting poses
1 Power latch cable

Accessories

VESA35KIT
Mount Kit (VESA MIS-C 35*75mm)

Product Overview

Model Name	TC0700	TC0720	TC1000	TC1020
Screen size	7 inch	7 inch	10 inch	10 inch
Resolution	1024 x 600	1024 x 600	1280 x 800	1280 x 800
Luminance	500 cd/m²	500 cd/m²	350 cd/m²	350 cd/m²
CPU	i.MX6 Solo/Duallite	i.MX6 SoloX	i.MX6 Solo/Duallite/Dual/Quad	i.MX6 SoloX
Memory	Up to 2GB	Up to 2GB	Up to 2GB	Up to 2GB
storage	eMMC (4GB)	eMMC (4GB)	eMMC (4GB)	eMMC (4GB)
SD cardslot	μ SD	μ SD	μ SD	μ SD
1st LAN	802.3at POE	802.3at POE	802.3at POE	802.3at POE
2nd LAN		✓		✓
WiFi	802.11bgn	802.11bgn	802.11bgn	802.11bgn
Bluetooth	BT v. 4.0	BT v. 4.0	BT v. 4.0	BT v. 4.0
HDMI	✓		✓	
USB OTG	✓	✓	✓	✓
USB Host	✓	✓	✓	✓
Serial	2	2	2	2
CAN Bus	2	2	2	2
GPIO	4	4	4	4
Input power	10~30V DC	10~30V DC	10~30V DC	10~30V DC
Audio (optional)	2W Stereo	2W Stereo	10W Stereo	10W Stereo
Weight	595 grams	595 grams	850 grams	850 grams
Dimensions (mm)	184 (W) x 122 (H) x 30 (D)	184 (W) x 122 (H) x 30 (D)	249 (W) x 168 (H) x 40 (D)	249 (W) x 168 (H) x 40 (D)

TOUCAN-0700

1. Ethemet
2. Power
3. GPIO x 4
4. USB2.0
5. HDMI
6. CAN Bus
7. RS-XXX
8. micro SD cardslot
9. USB 3.0 OTG
10. S1 Boot Select Button
11. Reset Button

Main Features

- Based around Freescale i.MX6 ARM Cortex-A9 multicore technology.
- Projective Multi-touch bright (500 nits) high resolution (1024 x 600) 7 inch panel.
- Galvanic isolated CAN Bus and serial ports (RS-232/422/485).
- USB host, USB OTG, Micro-SD cardslot, 4 GPIO's and HDMI for secondary display.
- Gigabit POE function or 10~30VDC power input.
- Available with colorful bezels.

Specifications

Core System

Processor	Freescale i.MX6 Solo/Duallite (i.MX6 Dual/Quad on project base)
Memory	up to 2GB
Storage	eMMC (4GB)

Connectivity

LAN	RJ-45 Gigabit Ethernet (POE function 802.3at)
WiFi	Broadcom BCM4330 802.11bgn
Bluetooth	Broadcom BCM4330 BT 4.0
External Display	HDMI 1.4
USB	1x USB Host 2.0 Connector 1x USB OTG 3.0 Connector
SD cardslot	micro SD cardslot
Serial	1x RS-232 (galvanic isolated) 1x RS-232/422/485 (galvanic isolated)
CAN Bus	2x Flex CAN version 2.0B Compliant (galvanic isolated)
GPIO	4x GPIO
Buttons	1x Reset button 1x Boot select button (force SD card boot)
Power	2 pin DC power terminal block (10~30VDC)

Internal Expansion Interfaces

USB	2x Internal pinheader
Audio	Optional

Video

GPU 3D	Vivante GC880 35Mtri/s 266Mpxl/s Open GL ES 2.0
GPU 2D(Vector Graphics)	emulated on GPU 3D
GPU 2D (Composition)	Vivante GC320 600Mpxl/s, BLIT
Video Decode	1080p30 + D1
Video Encode	1080p30 H.264 BP / Dual 720p

Display and Touch

Internal Screen	7 inch widescreen LCD display with LED backlight
Resolution	1024 x 600 pixels
Maximum Colors	16.7 million
Luminance	500 cd/m^2
Touchscreen	Projective Capacitive multitouch
External Display	HDMI 1.4 Connector

Power Specifications

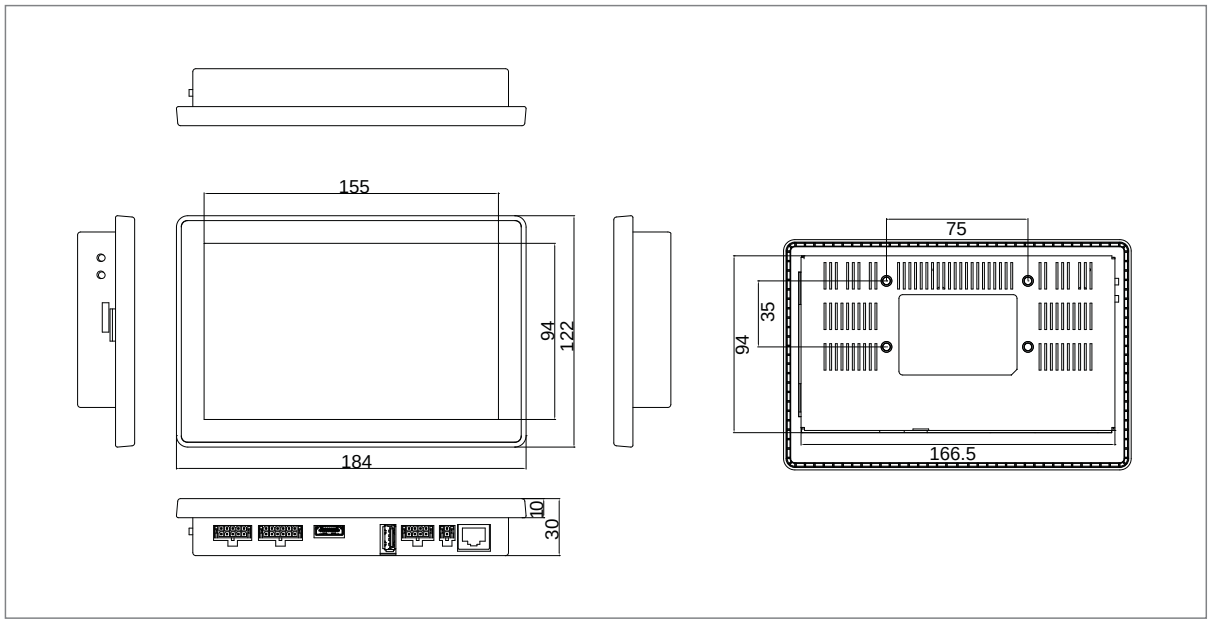
Input Power	10~30V DC +/- 5%
Power over Ethernet	802.3at POE implementation (36~57VDC)
Power Consumption	7 Watt

Operation Systems

Standard Support	Linux Android
Extended Support	Commercial Linux Windows Embedded Compact Real Time OS

Dimensions

(units in mm)



Environmental and Mechanical

Temperature	Commercial : 0° to 50° C Extended : -20° to 70° C
Humidity	10 to 90%
Dimensions	184 (W) x 122 (H) x 30 (D) mm
MTBF	50,000 hours
Weight	595 grams
Shock	50G / 25 ms
Vibration	20G / 0-600 Hz
Certification	Compliant with CE, FCC, RoHS, REACh directives

Mounting Options

Rear Mounting	6 mounting clips required (included)
VESA Mounting	35*75 VESA MIS C. Standard (seperate purchase)

Ordering Information

TC0700P6SR512NI4Gxx
7 inch POE HMI PCAP Touch with Freescale i.MX6 Solo

TC0700PIBW6SR512NI4Gxx
7 inch POE HMI PCAP Touch with Freescale i.MX6 Solo with BT/WIFI Internal Antenna

TC0700PEBW6SR512NI4Gxx
7 inch POE HMI PCAP Touch with Freescale i.MX6 Solo with BT/WIFI External Antenna

TC0700P6UR1GBNI4Gxx
7 inch POE HMI PCAP Touch with Freescale i.MX6 Duallite

TC0700PIBW6UR1GBNI4Gxx
7 inch POE HMI PCAP Touch with Freescale i.MX6 Duallite with BT/WIFI Internal Antenna

TC0700PEBW6UR1GBNI4Gxx
7 inch POE HMI PCAP Touch with Freescale i.MX6 Duallite with BT/WIFI External Antenna

* Replace xx with the desired color code below.

Color codes:

BL	Blue	**GN**	Green
BK	Black	**RD**	Red
YL	Yellow	**OR**	Orange
WT	Ivory White	**GY**	Gray

* Custom configurations possible.

TOUCAN-0720

1. PoE LAN
2. Power
3. GPIO x 4
4. USB2.0
5. 2nd LAN
6. CAN Bus
7. RS-XXX
8. micro SD cardslot
9. USB 3.0 OTG
10. S1 Boot Select Button
11. Reset Button

Main Features

- Based around Freescale i.MX6 SoloX Cortex-A9 Single core + ARM Cortex M4
- Projective Multi-touch bright (500 nits) high resolution (1024 x 600) 7 inch panel.
- Galvanic isolated CAN Bus and serial ports (RS-232/422/485).
- USB host, USB OTG, Micro-SD cardslot, 4 GPIO's
- Gigabit POE function or 10~30VDC power input.
- Available with colorful bezels.

freescale

Specifications

Core System

Processor	Freescale i.MX6 SoloX
Memory	up to 2GB
Storage	eMMC (4GB) QSPI (default 256MB) optional NAND Flash (MOQ apply)

Connectivity

LAN	RJ-45 Gigabit Ethernet (POE function 802.3at)
2nd LAN	Gigabit LAN
WiFi	Broadcom BCM4330 802.11bgn
Bluetooth	Broadcom BCM4330 BT 4.0
USB	1x USB Host 2.0 Connector 1x USB OTG 3.0 Connector
SD cardslot	micro SD cardslot
Serial	1x RS-232 (galvanic isolated) 1x RS-232/422/485 (galvanic isolated)
CAN Bus	2x Flex CAN version 2.0B Compliant (galvanic isolated)
GPIO	4x GPIO
Buttons	1x Reset button 1x Boot select button (force SD card boot)
Power	2 pin DC power terminal block (10~30VDC)

Internal Expansion Interfaces

USB	2x Internal pinheader
Audio	Optional

Video

GPU 3D	Vivante GC400T 17Mtri/s 133Mpxl/s
PXP	Open GL ES 2.0 Image re-sizing, rotation, overlay and CSC Pixel Processing Pipeline

Display and Touch

Internal Screen	7 inch widescreen LCD display with LED backlight
Resolution	1024 x 600 pixels
Maximum Colors	16.7 million
Luminance	500 cd/m^2
Touchscreen	Projective Capacitive multitouch

Power Specifications

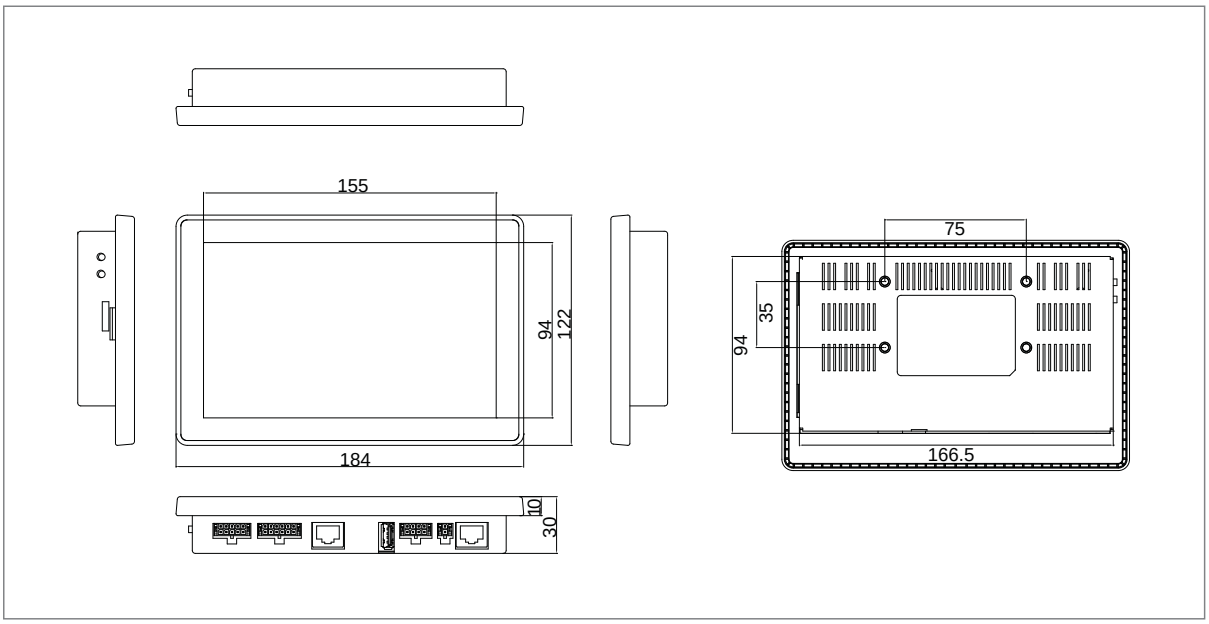
Input Power	10~30V DC +/- 5%
Power over Ethernet	802.3at POE implementation (36~57VDC)
Power Consumption	7 Watt

Operation Systems

Standard Support	Linux Android
Extended Support	Commercial Linux Windows Embedded Compact Real Time OS

Dimensions

(units in mm)



Environmental and Mechanical

Temperature	Commercial : 0° to 50° C Extended : -20° to 70° C
Humidity	10 to 90%
Dimensions	184 (W) x 122 (H) x 30 (D) mm
MTBF	50,000 hours
Weight	595 grams
Shock	50G / 25 ms
Vibration	20G / 0-600 Hz
Certification	Compliant with CE, FCC, RoHS, REACh directives

Mounting Options

Rear Mounting	6 mounting clips required (included)
VESA Mounting	35*75 VESA MIS C. Standard (seperate purchase)

Ordering Information

TC0720P6X1GBNI4Gxx
7 inch POE HMI PCAP Touch with Freescale i.MX6 SoloX

TC0720PIBW6X1GBNI4Gxx
7 inch POE HMI PCAP Touch with Freescale i.MX6 SoloX with BT/WIFI Internal Antenna

TC0720PEBW6X1GBNI4Gxx
7 inch POE HMI PCAP Touch with Freescale i.MX6 SoloX with BT/WIFI External Antenna

* Replace xx with the desired color code below.

Color codes:

BL	Blue	**GN**	Green
BK	Black	**RD**	Red
YL	Yellow	**OR**	Orange
WT	Ivory White	**GY**	Gray

* Custom configurations possible.

TOUCAN-1000

Main Features

- Based around Freescale i.MX6 ARM Cortex-A9 multicore technology.
- Projective Multi-touch bright (500 nits) high resolution (1280 x 800) 10 inch panel.
- Galvanic isolated CAN Bus and serial ports (RS-232/422/485).
- USB host, USB OTG, Micro-SD cardslot, 4 GPIO's and HDMI for secondary display.
- Gigabit POE function or 10~30VDC power input.
- Available with colorful bezels.

Specifications

Core System

Processor	Freescale i.MX6 Solo/Duallite/Dual/Quad
Memory	up to2GB DDR3
Storage	eMMC (4GB)

Connectivity

LAN	RJ-45 Gigabit Ethernet (POE function 802.3at)
WiFi	Broadcom BCM4330 802.11bgn
Bluetooth	Broadcom BCM4330 BT 4.0
External Display	HDMI 1.4
USB	1x USB Host 2.0 Connector 1x USB OTG 3.0 Connector
SD cardslot	micro SD cardslot
Serial	1x RS-232 (galvanic isolated) 1x RS-232/422/485 (galvanic isolated)
CAN Bus	2x Flex CAN version 2.0B Compliant (galvanic isolated)
GPIO	16 x GPIO
Buttons	1x Reset button 1x Boot select button (force SD card boot)
Power	2 pin DC power terminal block (10~30VDC)

Internal Expansion Interfaces

USB	2x Internal pinheader
Audio	Optional

Video

	Solo / Duallite	Dual / Quad
GPU 3D	Vivante GC880 35Mtri/s 266Mpxl/s Open GL ES 2.0	Vivante GC2000 200Mtri/s 1000Mpxl/s OpenGL ES 2.0 & Halti, CL EP
GPU 2D(Vector Graphics)	emulated on GPU 3D	Vivante GC355 300Mpxl/s OpenVG 1.1
GPU 2D (Composition)	Vivante GC320 600Mpxl/s, BLIT	Vivante GC320 600Mpxl/s, BLIT
Video Decode	1080p30 + D1	1080p60 H.264
Video Encode	1080p30 H.264 BP / Dual 720p	1080p30 H.264 BP / Dual 720p

Display and Touch

Internal Screen	10 inch widescreen LCD display with LED backlight
Resolution	1280 x 800 pixels
Maximum Colors	16.7 million
Luminance	350 cd/m^2
Touchscreen	Projective Capacitive multitouch

Power Specifications

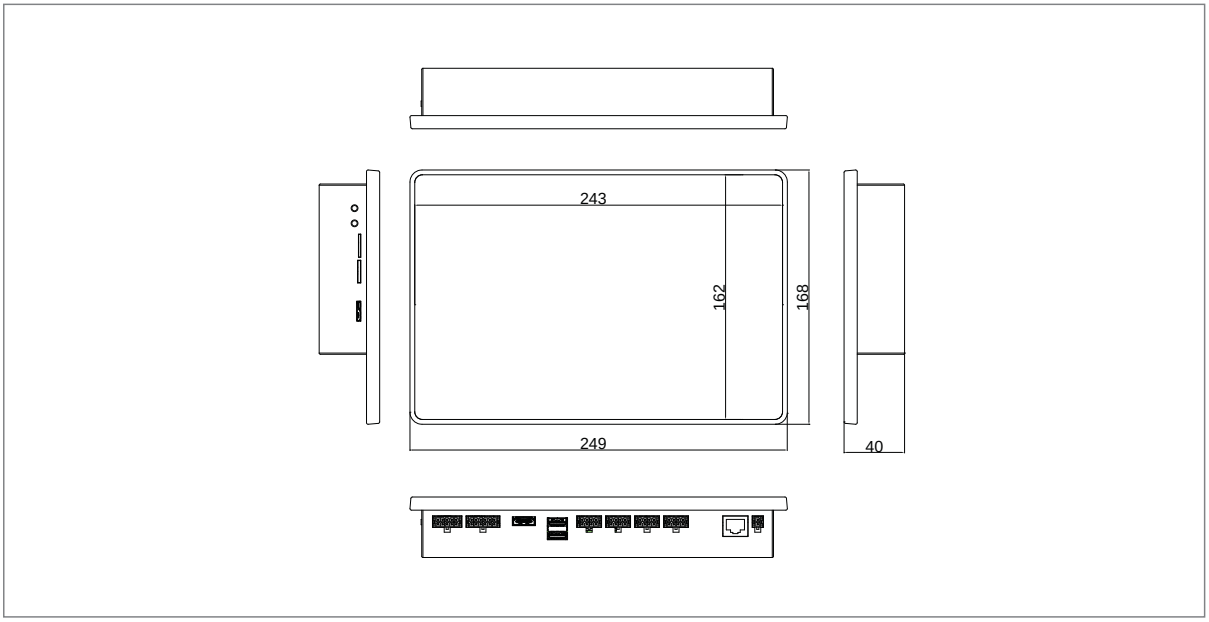
Input Power	10~30V DC +/- 5%
Power over Ethernet	802.3at POE implementation (36~57VDC)
Power Consumption	7 Watt

Operation Systems

Standard Support	Linux Android
Extended Support	Commercial Linux Windows Embedded Compact Real Time OS

Dimensions

(units in mm)



Environmental and Mechanical

Temperature	Commercial : 0° to 50° C Extended : -20° to 70° C
Humidity	10 to 90%
Dimensions	249 (W) x 168 (H) x 40 (D) mm
MTBF	50,000 hours
Weight	850 grams
Shock	50G / 25 ms
Vibration	20G / 0-600 Hz
Certification	Compliant with CE, FCC, RoHS, REACh directives

Mounting Options

Rear Mounting	6 mounting clips required (included)
VESA Mounting	35*75 VESA MIS C. Standard (seperate purchase)

Ordering Information

TBD

* Replace xx with the desired color code below.

Color codes:

BL	Blue	**GN**	Green
BK	Black	**RD**	Red
YL	Yellow	**OR**	Orange
WT	Ivory White	**GY**	Gray

* Custom configurations possible.

TOUCAN-1020

Main Features

- Based around Freescale i.MX6 SoloX Cortex-A9 Single core + ARM Cortex M4
- Projective Multi-touch bright (500 nits) high resolution (1280 x 800) 10 inch panel.
- Galvanic isolated CAN Bus and serial ports (RS-232/422/485).
- USB host, USB OTG, Micro-SD cardslot, 4 GPIO's
- Gigabit POE function or 10~30VDC power input.
- Available with colorful bezels.

Specifications

Core System

Processor	Freescale i.MX6 SoloX + M4
Memory	up to 2GB
Storage	eMMC (4GB) QSPI (default 256MB) optional NAND Flash (MOQ apply)

Connectivity

LAN	RJ-45 Gigabit Ethernet (POE function 802.3at)
2nd LAN	Gigabit LAN
WiFi	Broadcom BCM4330 802.11bgn
Bluetooth	Broadcom BCM4330 BT 4.0
USB	1x USB Host 2.0 Connector 1x USB OTG 3.0 Connector
SD cardslot	micro SD cardslot
Serial	1x RS-232 (galvanic isolated) 1x RS-232/422/485 (galvanic isolated)
CAN Bus	2x Flex CAN version 2.0B Compliant (galvanic isolated)
GPIO	16 x GPIO
Buttons	1x Reset button 1x Boot select button (force SD card boot)
Power	2 pin DC power terminal block (10~30VDC)

Internal Expansion Interfaces

USB	2x Internal pinheader
Audio	Optional

Video

GPU 3D	Vivante GC400T 17Mtri/s 133Mpxl/s
PXP	Open GL ES 2.0 Image re-sizing, rotation, overlay and CSC Pixel Processing Pipeline

Display and Touch

Internal Screen	10 inch widescreen LCD display with LED backlight
Resolution	1024 x 600 pixels
Maximum Colors	16.7 million
Luminance	350 cd/m^2
Touchscreen	Projective Capacitive multitouch

Power Specifications

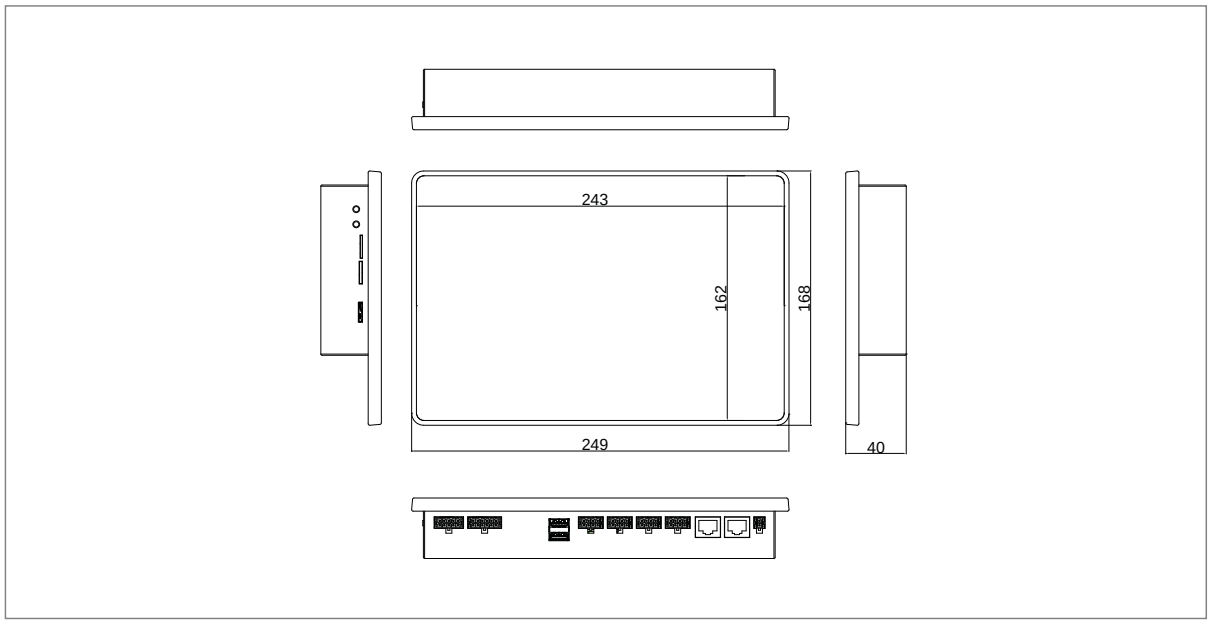
Input Power	10~30V DC +/- 5%
Power over Ethernet	802.3at POE implementation (36~57VDC)
Power Consumption	7 Watt

Operation Systems

Standard Support	Linux Android
Extended Support	Commercial Linux Windows Embedded Compact Real Time OS

Dimensions

(units in mm)



Environmental and Mechanical

Temperature	Commercial : 0° to 50° C Extended : -20° to 70° C
Humidity	10 to 90%
Dimensions	249 (W) x 168 (H) x 40 (D) mm
MTBF	50,000 hours
Weight	850 grams
Shock	50G / 25 ms
Vibration	20G / 0-600 Hz
Certification	Compliant with CE, FCC, RoHS, REACh directives

Mounting Options

Rear Mounting	6 mounting clips required (included)
VESA Mounting	35*75 VESA MIS C. Standard (seperate purchase)

Ordering Information

TBD

* Replace xx with the desired color code below.

Color codes:

BL	Blue	**GN**	Green
BK	Black	**RD**	Red
YL	Yellow	**OR**	Orange
WT	Ivory White	**GY**	Gray

* Custom configurations possible.

TechNexion Ltd.
16F-5, No.736,Zhongzheng Rd.,Zhonghe Dist.,
New Taipei City, 23511, Taiwan
Tel: +886-2-8227-3585 Fax: +886-2-8227-3590
E-mail: Sales@technexion.com
http:// www.technexion.com

TechNexion
Innovators of Technology

Mouser Electronics

Authorized Distributor

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

TechNexion:
EDMHSCP12200501