EDGE COMPUTER
PRELIMINARY DATASHEET

PV100A

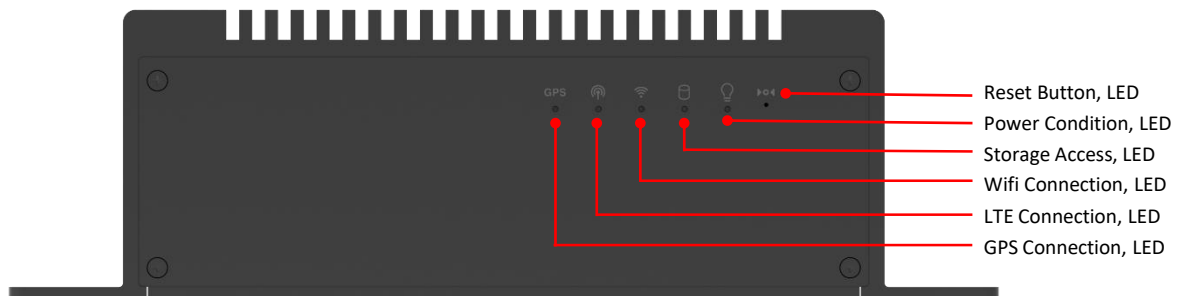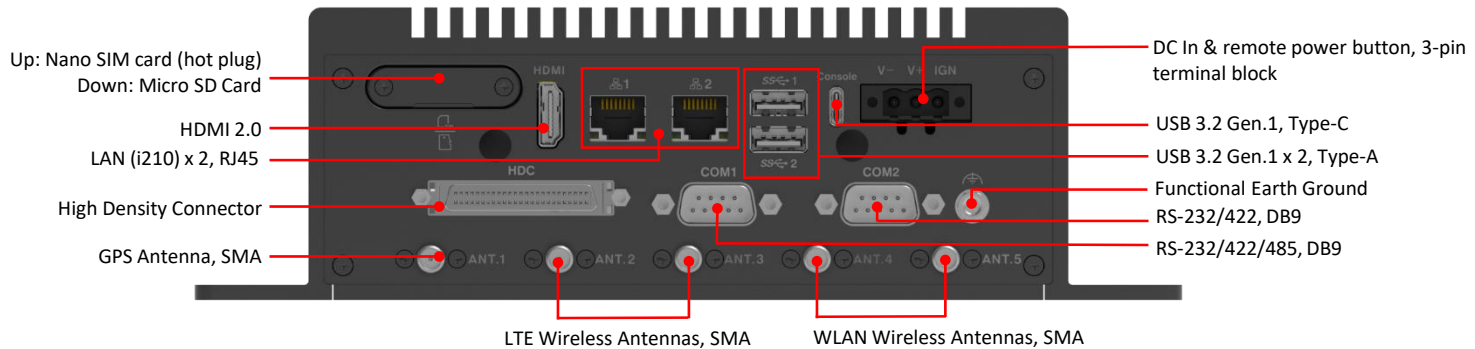NXP® i.MX 8M Arm Cortex-A53 Quad Core In-vehicle Fanless Embedded Computer

Features

- Integrated 4G LTE, Wi-Fi and GPS solution
- Intelligent Vehicle Power Management: ignition On/Off delay
- Vehicle diagnostic interface support: dual CAN (2.0 A/B, CANOpen, J1939, OBD-II)
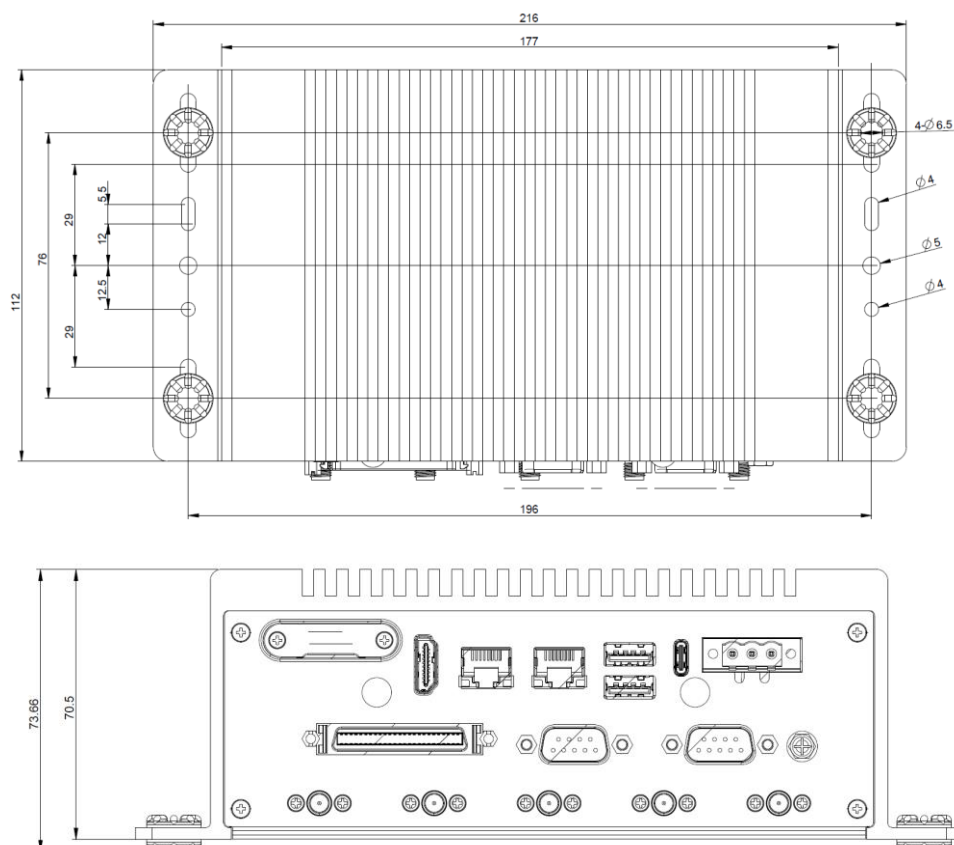- Wide-operating temperature with integrated 4G LTE + Wi-Fi + GPS solution: -20~60°C

Specifications

System	CPU	i.MX8M, 4 x Cortex-A53 Quad Core, 1.3 GHz
	Memory	2 GB DDR4 onboard
	OS Storage	16 GB eMMC onboard
External Interfaces	Video	1 x HDMI 2.0, supports up to 3840 x 2160 @60Hz
	Ethernet	2 x 10/100/1000 Mbps Ethernet ports, RJ45
	USB	2 x USB 3.2 Gen.1, Type-A 1 x USB 3.2 Gen.1, supports OTG, Type-C
	COM	1 x RS-232/422/485, DB9 1 x RS-232/422, DB9
	High Density Connector	4 x isolated DI, 4 x isolated DO 2 x RS-232/422/485 1 x Mic-in, 1 x Line-out 2 x CANbus (CAN2.0 A/B, CANOpen, J1939, OBDII) *all interfaces are integrated in one high density connector, please purchase high density cable from optional accessory list
Storage	Micro SD	1 x Micro SD Card slot (on-board)
	M.2 E Key	1 x mSATA slot (shared with Mini PCIe socket)

Expansion Slot	Mini PCIe	1 x Mini PCIe socket (supports SATA & PCIe & USB signal, supports mSATA
		  up to 512 GB)
		  * 2 signal configurations can be selected via SW: (1) PCIe & USB (2) SATA & USB

	M.2 B Key	1 x M.2 2242 B-key socket (supports UDR GPS module)
	M.2 E Key	1 x M.2 2230 E-key socket (supports BT/Wi-Fi module)
Power	Power	9 to 36 VDC, 3-pin terminal block *supports ignition ON/OFF control and remote power button
Mechanical	Mounting	Wallmount
	Dimensions	216(L) x 112(W) x 70.5(H) mm
	Weight	1.62 kg
Environment	Operating Temp.	-20~60°C w/ all module operating (industrial parts) 0~40° w/ all module operating (commercial module)
	Storage Temp.	-40~85°C
	Relative Humidity	5 to 95% (non-condensing)
	EMC	CE (ITE), FCC, VCCI, RCM, KCC, CCC
	RF Regulation	Wi-Fi: CE-RED, RCM 4G LTE: CE-RED, RCM
	Vehicle Regulation	E-Mark (12/24V), ISO-7637-2, SAE J1455, EN50155
	Military Standard	MIL-STD-810G
	Safety	UL, CE-LVD, CB, CCC, BSMI
	Shock	Operating: IEC 60068-2-64 (w/ SD card), MIL-STD-810G
	Vibration	Operating: IEC 60068-2-27 (w/ SD card), MIL-STD-810G
	Green	GA (RoHS)
Others	Watch dog timer	Yes. HW WDT Enable (WDT_EN)
	G-sensor	Triple-axis accelerometer (±2g/4g/8g)
	Operating System	Linux Yocto

Intelligent Edge Computer
PRELIMINARY DATASHEET

Appearance:

Up: Nano SIM card (hot plug)
Down: Micro SD Card

HDMI 2.0

LAN (i210) x 2, RJ45

High Density Connector

GPS Antenna, SMA

LTE Wireless Antennas, SMA

WLAN Wireless Antennas, SMA

DC In & remote power button, 3-pin terminal block

USB 3.2 Gen.1, Type-C

USB 3.2 Gen.1 x 2, Type-A

Functional Earth Ground

RS-232/422, DB9

RS-232/422/485, DB9

Reset Button, LED

Power Condition, LED

Storage Access, LED

Wifi Connection, LED

LTE Connection, LED

GPS Connection, LED

Dimension (mm):

216
177
4-Ø6.5
Ø4
Ø5
Ø4
5.5
29
12
76
112
12.5
29
196

73.66
70.5

Packing List:

Description	Quantity
Adapter cable terminal block 3 pin to DC, 10cm (without switch)	1
PV100A cable tie	2
PV100A cable tie mounting	2
PV100A shock absorb rubber	2
Screw for internal module	4
Dust cover set (1 HDMI; 4 DB9; 3 USB; 2 LAN; 1 HDC; 5 SMA)	1

Optional Accessories:

Part Number	Description
ADAPTER	
0A001-01050000	Power adapter, input voltage 100 to 264VAC, output voltage 12VDC with 2A DC load, 0 to 40°C operating temperature (optional)
POWER CORD	
14009-00021400	Power cord with United States (US) plug, 180cm
14009-00021000	Power cord with Europe (EU) plug, 180cm
14009-00021100	Power cord with China (CN) plug, 180cm
14009-00020600	Power cord with Japan (JP) plug, 180cm
14009-00020800	Power cord with Australia (AU) plug, 180cm
14009-00020900	Power cord with United Kingdom (UK) plug, 180cm
14009-00021000	Power cord with Korea (KR) plug, 180cm
14009-00020700	Power cord with Swiss (CH) plug, 180cm
14009-00021200	Power cord with Taiwan (TW) plug, 180cm
ADAPTOR CABLE WITH SWITCH	
14017-00830000	Power jack to 3-pin terminal block adaptor with switch, 10cm
HIGH DENSITY CABLE	
14011-05240000	High density cable with 4*isolated DI/DO, 2*RS-232/422/485, 1*Mic-in, 1*Line-out, 2*CANbus, 2*open wires for ADR
14011-05240100	High density cable with 4*isolated DI/DO, 1*Mic-in, 1*Line-out, 2*open wires for ADR
WIRELESS EXTENSION CABLE	
14012-00880000	External wireless extension cable, RP-SMA to RP-SMA, 60cm
4G LTE ANTENNA	
14012-00041200	Omni-directional rubber duck GPRS/EDGE/UMTS/HSPA/LTE antenna, 704 to 960MHz & 1710 to 2690MHz, 3.5 dBi, RP-SMA, antenna length 10cm
WI-FI ANTENNA	
14012-00041300	Omni-directional rubber duck Wi-Fi antenna, 2.4/5GHz, 2dBi, RP-SMA, antenna length 8.6cm
EXTERNAL ANTENNA FOR GPS	
14012-00041400	Active type adhesive GPS antenna with extension cable, 1582MHz, 26dBi, SMA, antenna length 10cm, extension cable length 3m

* The part number might vary due to part number revision.