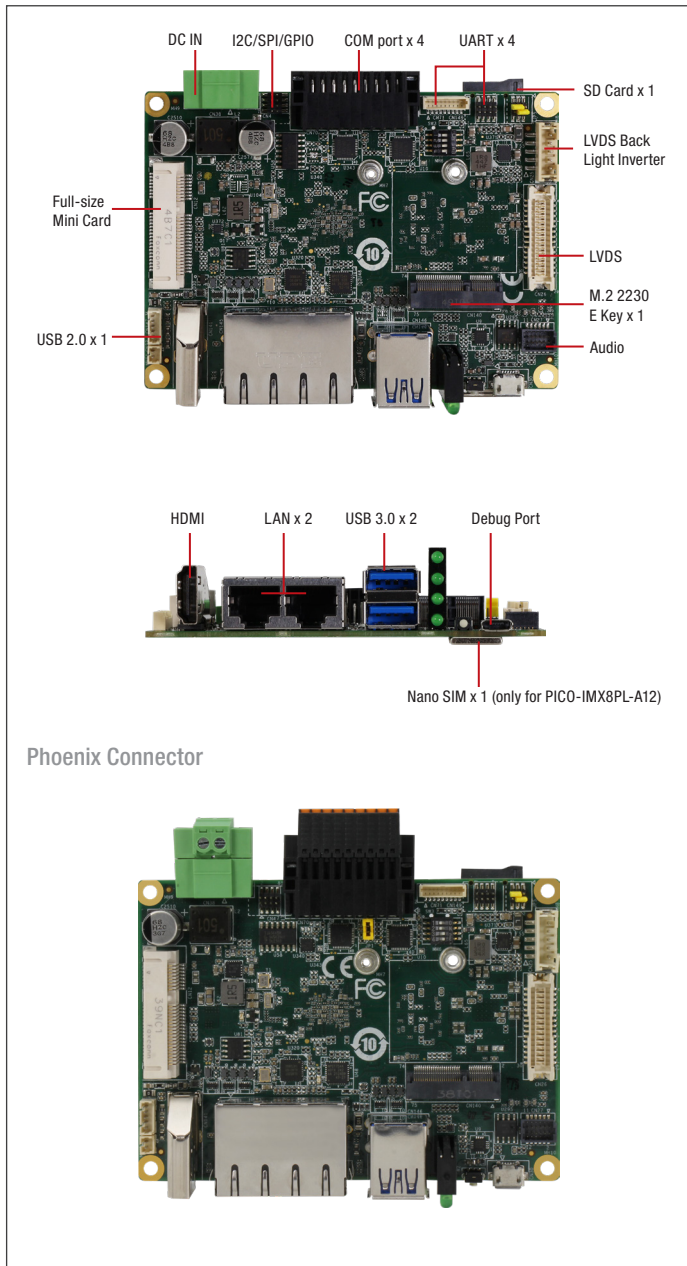


PICO-IMX8PL

Pico-ITX Board with ARM i.MX8M Plus Quad-Core Cortex-A53 1.6GHz Processor



Phoenix Connector

Specifications

System	
Form Factor	PICO-ITX, 2.5" SBC
Processor	ARM NXP i.MX8M Plus Quad-Core Cortex-A53 1.6GHz Processor (Default w/NPU, optional w/o NPU)
Memory	Onboard LPDDR4 up to 4GB
Storage	eMMC 5.1 16/32GB (Optional 64/128 GB) Micro SD Card slot x1
Real Time Clock	RTC x 1, with 3V CR2032H Lithium battery
Security	TPM 2.0 (optional)
Indicators	Programmable LED control x 3
Cellular	Full Size Mini Card x 1 (USB signal)
Wireless Lan	M.2 2230 E-key x 1 (USB, PCIe)
Operating System	Debian 11(Default, GUI is optional) Android 13 Yocto
Support Protocol	Modbus, MQTT, OPCUA
I/O Interfaces	
Serial Port	RS-232/422/485 switchable x 2, Phoenix Connector

Features

- ARM NXP i.MX8M Plus Quad-Core, Cortex-A53 1.6GHz
- LPDDR4, up to 4 GB (8GB by customer request)
- eMMC 5.1 x 1
- HDMI 2.0 x 1, LVDS x 1
- GbE x 2
- USB 3.0 Gen 1 x 2, USB 2.0 x 1
- M.2 2230 E Key x 1, Full-sized minicard x 1
- COM x 2, CAN x 2, TPM 2.0, GPIO x 8
- Support Hailo-8™ AI Accelerator



Ethernet	Gigabit Ethernet x 2, RJ-45 support IEEE 1588, TSN, integrated RGMII
Audio	Line in / Line Out / Mic x 1 (optional)
USB	USB 3.0 Gen1 x 2 (rear I/O) USB 2.0 x 1 (pin header)
ADC	—
DI/DO	—
CAN Bus	CAN-FD x 2 CH, Phoenix Connector
Display	HDMI 2.0 x 1 LVDS x 1, dual channel, 18/24bit
Power Connector	2 Pin 3.81mm Pitch Phoenix Connector
Debug Port	Micro USB x 1
Expansion Slot	M.2 2230 E-key x 1, support Wifi/BT module, etc Full Size Mini Card x 1, support 4G module, etc Power control available by software Nano SIM card slot x 1 (for PICO-IMX8PL-A12 only)
Other Interface	GPIO x 8 (w/o TPM: include SPI x1, I2C x1, GPIO x2, w/TPM: I2C x1, GPIO x2) UART x 1 (optional w/o debug port)
Power Supply	
Power Requirement	DC 9-36V (Optional: 12V)
Power Consumption	14.8W (Full Loading)
MTBF (Hours)	1,699,754 Hours
Environmental and Mechanical	
Dimension	3.94" x 2.84"(100mm x 72mm)
Weight	0.18 lbs (0.08 kg)
Mount Options	—
Operation Temperature	-40 °F ~ 176 °F (-40 °C ~ 80 °C) (Option: 0°C ~ 60°C)
Storage Temperature	-40 °F ~ 176 °F (-40 °C ~ 80 °C)
Operation Humidity	0% ~ 90% relative humidity, non-condensing
Certification	CE/FCC Class A

Packing List

- PICO-IMX8PL x 1
- 2pin 3.81mm Power Terminal block w/lock AWG 28~14 x 1
- 18pin 2.54mm Phoenix plug in Connector/lock AWG 30~20 x 1
- Nano SIM Card Tray x 1(Only for PICO-IMX8PL-A12)

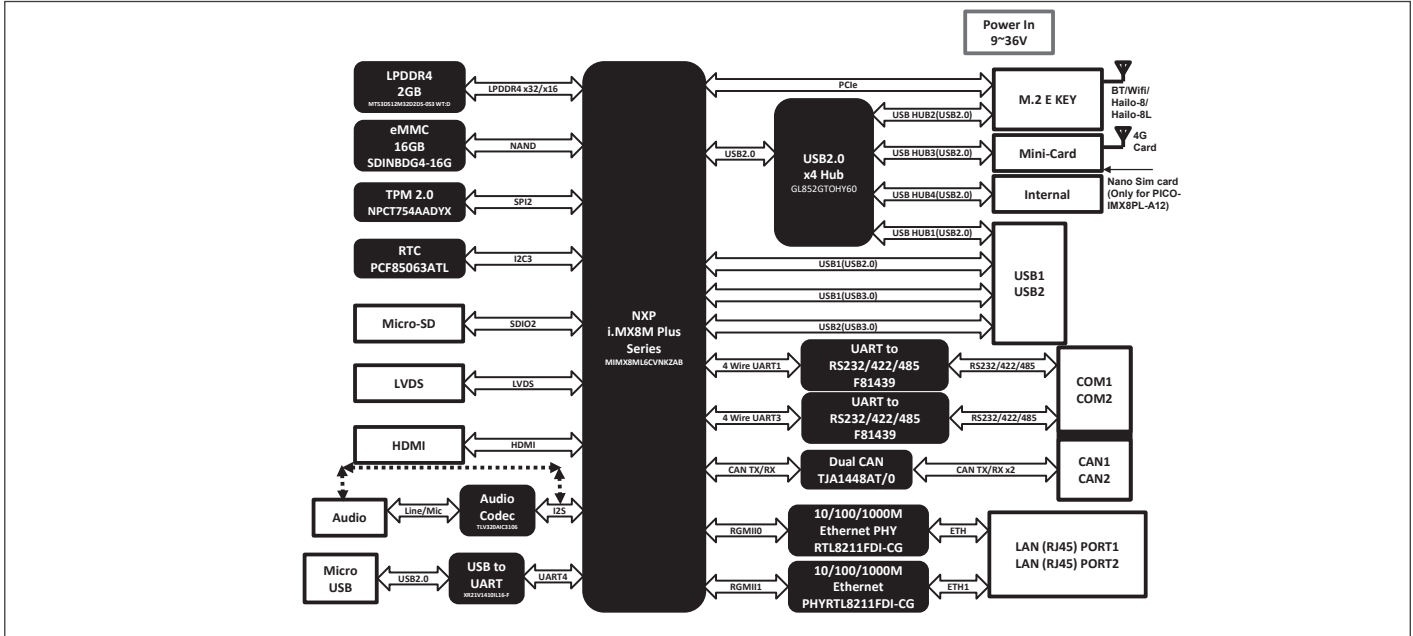
Optional Accessories

Part Number	Description
9741EG25G0	PCIe mini card. 4G LTE. module kit. Global Band W/ SIM holder. W/Cable & antenna. Quectel. EG25-G
9651882200	M.2 2230 E key Wireless Kit.802.11 ac/a/b/g/n + BT 5.0.2T2R,Enli RTL-8822CE.w/2 sets of cable and antenna
9651276000	M.2 2230 E Key Wireless Kit.802.11a/b/g/n/ac.W/2 sets of antenna and cable.Chipset:NXP 88W8997.Azurewave.CM-276MA-PUR for Android
1700050207	USB2.0 cable. 20cm
170X000156	Audio cable. 25cm
9651PX8L00	AC/DC Adapter.100V-240V.12VDC.60W. (for sample order), w/packaging box, DHAN3/9NA0608085
1255300611	(TF)Power Adapter.DC.100/240V.12V.5A.60W.2p phoenix P=3.81mm.FSP.FSP060-DHAN3/9NA0608085
170203180J	POWER CORD.3P-250V 13A.1.8M.UK
170X000799	POWER CORD.3P-125V 10A.1.8M.USA
170X000800	POWER CORD.3P-250V 10A.1.8M.EU
170X000806	POWER CORD.3P-125V 7A.1.8M.TWN
170X000803	POWER CORD.3P-125V 7A.1.8M.JPN
AP-OT9686Y00404	Hailo-8™ M.2 2230 A+E key Starter Kit HM218B1C2YAE
PICO-IMX8PL-HSK01	PICO-IMX8PL Heat Sink.100*72*15.5mm.Silver.
PICO-IMX8PL-HSP01	HeatSpreader.100*72*7.5mm.for PICO-IMX8PL

Note: All specifications are subject to change without notice.

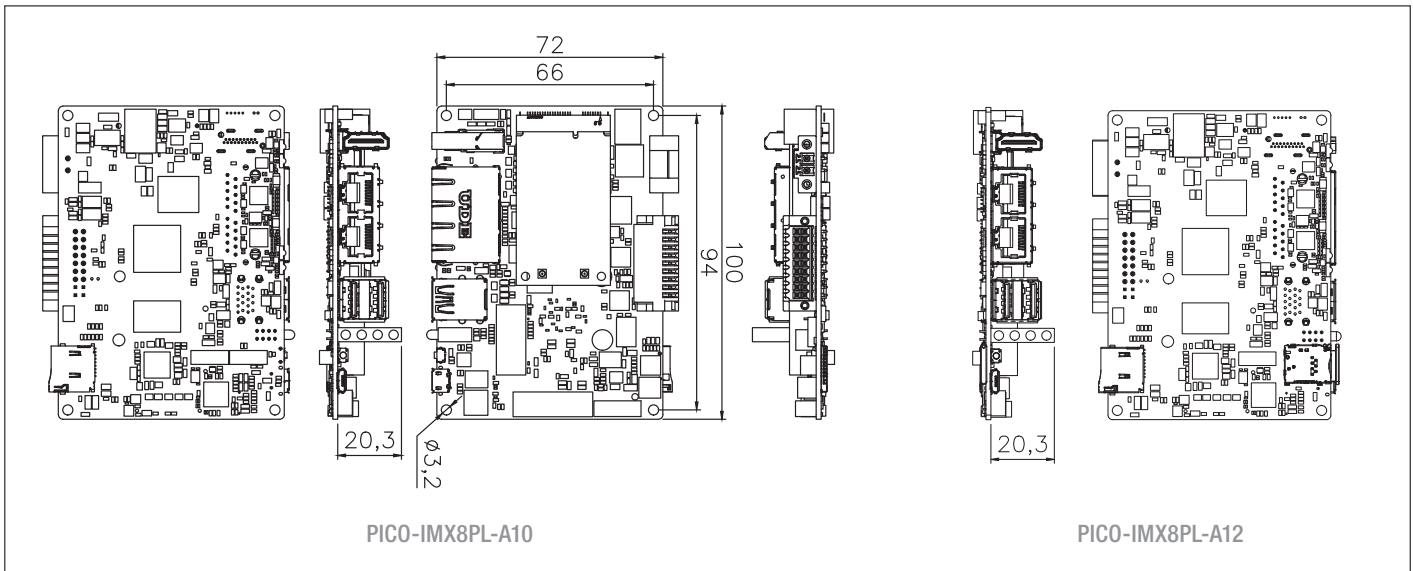


Block Diagram



Dimension

Unit: mm



Ordering Information

Part Number	CPU	NPU	Memory	Display	Storage	LAN	USB	COM	Expansion slot	Power	Operation Temp.	Audio	Others	OS
PICO-IMX8PL-A10-0001	ARM NXP i.MX8M Plus Quad-Core Cortex-A53 1.6GHz Processor	2.3 TOPs	Onboard LPDDR4 2GB	HDMI x 1 (rear I/O) LVDS x 1	eMMC 16GB, MicroSD x 1	GbE x 2	USB 3.0 Gen1 x 2 (rear I/O) USB 2.0 x 1 (pin header)	RS232(4-wire)/422/485 x 2 (rear I/O)	M.2 2230 E-key x 1 miniCard (Full) x 1	+12V (Lockable terminal block)	-40°C ~ 80°C	—	SPI x 1, I2C x 1, GPIO x 2 CAN 2.0 FD x 2 (rear I/O)	Debian 11
PICO-IMX8PL-A10-0002	ARM NXP i.MX8M Plus Quad-Core Cortex-A53 1.6GHz Processor	2.3 TOPs	Onboard LPDDR4 4GB	HDMI x 1 (rear I/O) LVDS x 1	eMMC 32GB, MicroSD x 1	GbE x 2	USB 3.0 Gen1 x 2 (rear I/O) USB 2.0 x 1 (pin header)	RS232(4-wire)/422/485 x 2 (rear I/O)	M.2 2230 E-key x 1 miniCard (Full) x 1	+ 9 ~ 36 V (Lockable terminal block)	-40°C ~ 80°C	Line in / Line Out / Mic x 1	I2C x 1, GPIO x 2, TPM x 1 CAN 2.0 FD x 2 (rear I/O)	Debian 11
PICO-IMX8PL-A12-0001	ARM NXP i.MX8M Plus Quad-Core Cortex-A53 1.6GHz Processor	2.3 TOPs	Onboard LPDDR4 2GB	HDMI x 1 (rear I/O) LVDS x 1	eMMC 16GB, MicroSD x 1	GbE x 2	USB 3.0 Gen1 x 2 (rear I/O) USB 2.0 x 1 (pin header)	RS232(4-wire)/422/485 x 2 (rear I/O)	M.2 2230 E-key x 1 miniCard (Full) x 1 Nano SIM card slot x 1	+12V (Lockable terminal block)	-40°C ~ 80°C	—	SPI x 1, I2C x 1, GPIO x 2 CAN 2.0 FD x 2 (rear I/O)	Debian 11
PICO-IMX8PL-A12-0002	ARM NXP i.MX8M Plus Quad-Core Cortex-A53 1.6GHz Processor	2.3 TOPs	Onboard LPDDR4 4GB	HDMI x 1 (rear I/O) LVDS x 1	eMMC 32GB, MicroSD x 1	GbE x 2	USB 3.0 Gen1 x 2 (rear I/O) USB 2.0 x 1 (pin header)	RS232(4-wire)/422/485 x 2 (rear I/O)	M.2 2230 E-key x 1 miniCard (Full) x 1 Nano SIM card slot x 1	+ 9 ~ 36 V (Lockable terminal block)	-40°C ~ 80°C	Line in / Line Out / Mic x 1	I2C x 1, GPIO x 2, TPM x 1 CAN 2.0 FD x 2 (rear I/O)	Debian 11

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