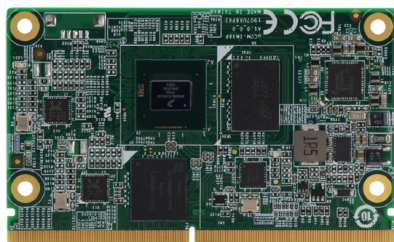


# uCOM-IMX8P

SMARC CPU Module with NXP ARM i.MX8M Plus Quad-Core Cortex-A53 1.6GHz Processor



## Features

- ARM NXP i.MX 8M Plus - Arm® Cortex®-A53, Cortex-M7, up to 1.6GHz per core
- Onboard LPDDR4, Up to 4GB
- HDMI2.0a x 1, LVDS x 1, MIPI-DSI 4 Lane x 1 (By request)
- GbE x 2
- USB 3.0 Gen1 x 2, USB 2.0 x 3 (support OTG x 1)
- PCIe Gen3 x 1
- UART x 4, GPIO x 14, CAN FD x 2, TPM 2.0



## Specifications

System	
Form Factor	SMARC 2.1 Compliant
CPU	NXP i.MX 8M Plus – Quad-Core Arm® Cortex®-A53 Processor, 1.6GHz (Default w/ NPU, optional w/o NPU)
Chipset	—
Memory	Onboard LPDDR4 up to 4GB
Storage	eMMC 5.1, 16/32GB (Optional: 64/128 GB)
BIOS	—
MTBF (Hours)	3,780,780
Wake On LAN	—
Watchdog Timer	Yes
Real Time Clock	RTC x 1
Boot Select	Carrier SD Card Module eMMC Flash
Security	TPM 2.0 (optional)
Display	
Graphics Controller	2D: Vivante GC520L 3D: Vivante GC7000UL
Video Output	HDMI 2.0a x 1 LVDS (2 CH, 4 Lane) x 1 MIPI-DSI 4 Lane x 1 (By request)
I/O Interfaces	
Ethernet	Gigabit Ethernet x 2 (TSN x 1)
USB	USB 3.0 Gen 1 + USB 2.0 x 2 (Host) USB 2.0 x 2 (Host) USB 2.0 x 1 (OTG)
Serial Port	UART x 4 (2-wire x 2, one for debug port, 4-wire x 2)
Audio	I2S x 1
PCIe	PCIe Gen 3.0 x 1
CANBus	CAN 2.0 FD x 2 (1.8V)
MIPI-CSI	MIPI CSI 2 Lane x 1 MIPI CSI 4 Lane x 1
GPIO	14 bits (one for PWM)
Other Interfaces	SPI x 2 (SPI x 1, QSPI x 1) I2C x 5 (Power Management x 1, Camera x 2, LCD Display x 1, General Purpose x 1)
Power	
Power Requirement	DC 3.3 V ~ 5.25 V
Power Consumption	3.45 W (Full loading)

### Environmental And Mechanical

Dimensions	3.23" x 1.97" (82mm x 50mm)
Weight	0.03 lb. (0.013kg)
Operating Temperature	-40°F ~ 185°F (-40°C ~ 85°C) Optional: 32°F ~ 140°F (0°C ~ 60°C)
Storage Temperature	-40°F ~ 185°F (-40°C ~ 85°C)
Operating Humidity	0% ~ 90% relative humidity, non-condensing
Certification	CE/FCC Class A
OS Support	Debian 12 (default) Win 10 IoT (by request) Yocto (by request)
Support Protocol	Modbus, MQTT, OPCUA (by request)

## Packing List

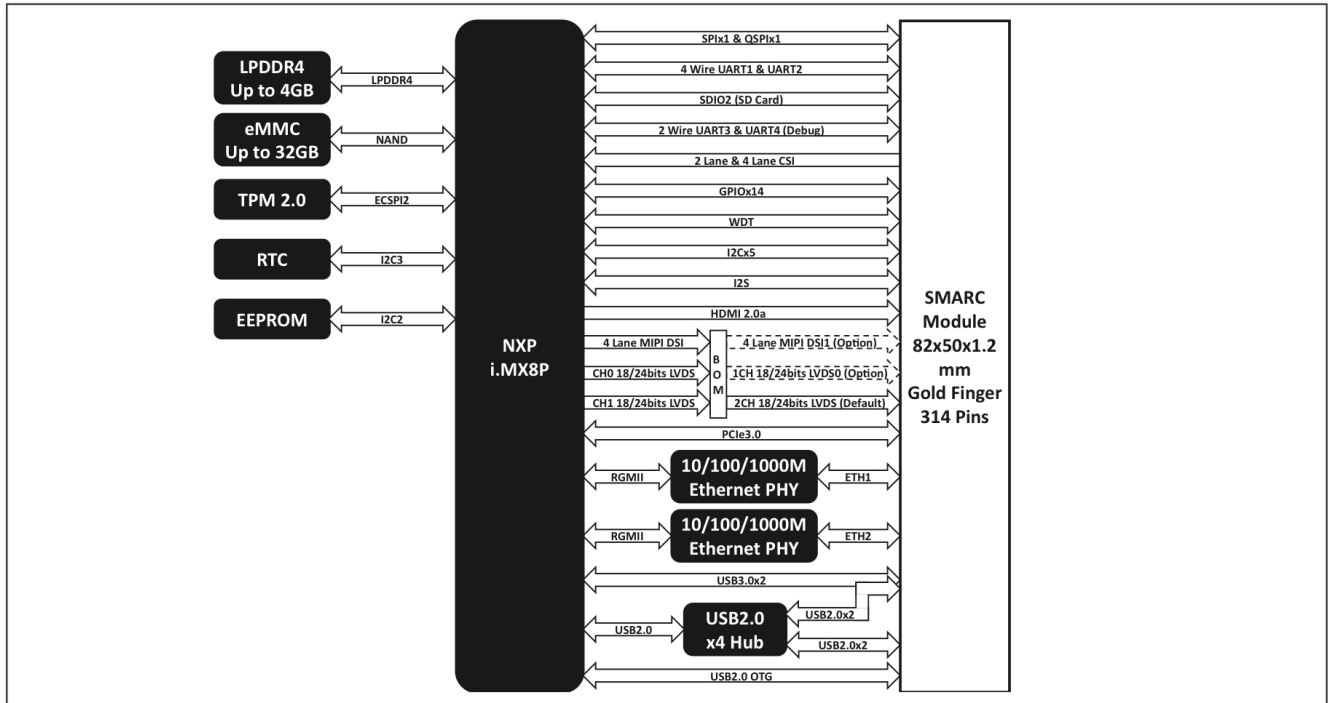
- uCOM-IMX8P

## Optional Accessories

Part Number	Description
uCOM-IMX8P-HSK01	HeatSink.82*42*21.5mm.for uCOM-IMX8P
ECB-960T-A15-0002	Carrier board for uCOM-IMX8P

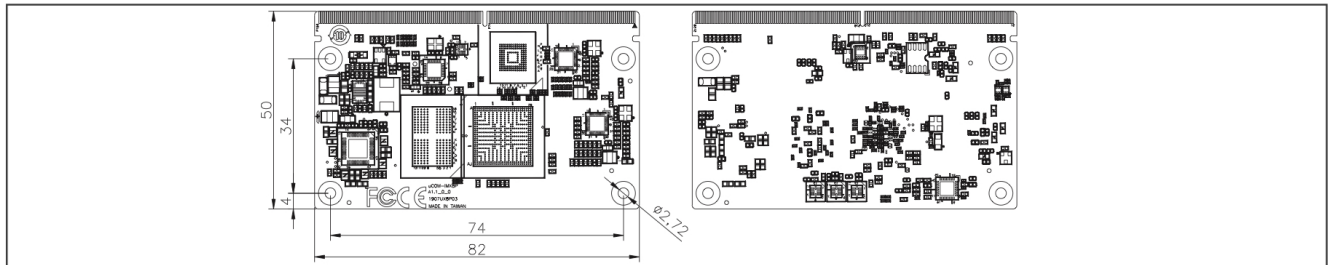
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## Block Diagram



## Dimension

Unit: mm



## Ordering Information

Part Number	Form Factor	CPU	Memory	ECC Support	Display	Storage	LAN	USB	UART	Expansion	Power	Temperature	Others
uCOM-IMX8P-A11-0001	SMARC	ARM NXP i.MX8M Plus Quad-Core Cortex-A53 1.6GHz Processor (2.3 TOPs)	Onboard LPDDR4 2GB	—	HDMI 2.0a x 1 LVDS x 1 (2 CH, 18/24bit)	16GB eMMC	GbE x 2	USB3.0 Gen1 + USB 2.0 x 2 (Host) USB 2.0 x 2 (Host) USB 2.0 x 1 (OTG)	4-wire 1.8V UART x 2 2-wire 1.8V UART x 2 (one for debug port)	PCIe Gen 3.0 x 1	+5V	-40°C ~ 85°C	CAN-FD x 2 SPI x 2 I2C x 1 (General purpose) GPIO 14 bits (one for PWM) MIPI-CSI x 2
uCOM-IMX8P-A11-0002	SMARC	ARM NXP i.MX8M Plus Quad-Core Cortex-A53 1.6GHz Processor (2.3 TOPs)	Onboard LPDDR4 4GB	—	HDMI 2.0a x 1 LVDS x 1 (2 CH, 18/24bit)	32GB eMMC	GbE x 2	USB3.0 Gen1 + USB 2.0 x 2 (Host) USB 2.0 x 2 (Host) USB 2.0 x 1 (OTG)	4-wire 1.8V UART x 2 2-wire 1.8V UART x 2 (one for debug port)	PCIe Gen 3.0 x 1	+5V	-40°C ~ 85°C	CAN-FD x 2 SPI x 2 I2C x 1 (General purpose) GPIO 14 bits (one for PWM) MIPI-CSI x 2 TPM 2.0