

i.MX8M Plus SOM

Up to 4 x Arm Cortex-A53, 1 x Cortex-M7, Up to 1.8GHz

NXP i.MX 8M Plus Processor System on Module



- Integrated NPU (2.3 TOPs) for embedded AI/ML applications and edge inferencing
- Dual to Quad-core options with onboard WiFi/BT, eMMC, MIPI-CSI, LVDS
- Connect up to 2 MIPI cameras, 4K vision with HDR for detailed image processing



		i.MX8M Plus Dual	i.MX8M Plus Quad
CPU Details	CPU Name	NXP i.MX8M Plus Dual	NXP i.MX8M Plus Quad
	CPU Type	2 x Cortex A53 1 x Cortex M7 1 x NPU up to 2.3 TOPs	4 x Cortex A53 1 x Cortex M7 1 x NPU up to 2.3 TOPs
	CPU Speed	1.8GHz Commercial 1.6GHz Industrial	1.8GHz Commercial 1.6GHz Industrial
	Floating Point SIMD	VFPv4 NEON	VFPv4 NEON
RAM	Memory & Storage	1GB LPDDR4	1GB LPDDR4
	Internal Storage	8GB eMMC	8GB eMMC
	External Storage Support	NOR-Flash SD PCIe-SSD	NOR-Flash SD PCIe-SSD
Networking	Ethernet	2 x 10/100/1000 Mbps (By default only 1 PHY assembled) 1 x with TSN	2 x 10/100/1000 Mbps (By default only 1 PHY assembled) 1 x with TSN
	Wireless	802.11 ac/a/b/g/n + BT 5.0	802.11 ac/a/b/g/n + BT 5.0
Multimedia	GPU	Vivante GC7000UL	Vivante GC7000UL
	3D GPU Support	OpenGL ES 3.1/3.0 Vulkan OpenCL 1.2 FP OpenVG 1.1	OpenGL ES 3.1/3.0 Vulkan OpenCL 1.2 FP OpenVG 1.1
	Video Decoder	1080p60	1080p60
	Video Encoder	1080p60	1080p60
	Display Interfaces	HDMI 2.0, MIPI-DSI, LVDS	HDMI 2.0, MIPI-DSI, LVDS
	Camera Interface	1 x MIPI-CSI2 (4 Lane) 2 x ISP	1 x MIPI-CSI2 (4 Lane) 2 x ISP
	S/PDIF Input / Output	1	1
Connectivity	Digital Audio Serial Interface	18x I2S TDM, DSD512, 8-ch PDM Mic input, eARC, ASRC Low power voice accelerator: Cadence® Tensilica® HiFi 4 DSP @ 800 MHz	18x I2S TDM, DSD512, 8-ch PDM Mic input, eARC, ASRC Low power voice accelerator: Cadence® Tensilica® HiFi 4 DSP @ 800 MHz
	USB 3.0	2	2
	PCIe	1 (Gen 3.0)	1 (Gen 3.0)
	I2C	3	3
	SPI	1	1
	UART	2 (RTS/CTS/RX/TX) +1 (TX/RX)	2 (RTS/CTS/RX/TX) +1 (TX/RX)
	GPIO	75	75
	PWM	4	4
	CAN	2	2
	SD/MMC	1	1
OS Support	JTAG	Test point header	Test point header
	Embedded Linux	Linux	Linux
Physical	Size	47 x 30 mm	47 x 30 mm
	Interface	3 x Hirose DF40 connectors	3 x Hirose DF40 connectors
Power	Main Voltage	5V	5V
	I/O Voltage	3.3V/1.8V	3.3V/1.8V
Environment	Temperature	Commercial: 0°C to 70°C Industrial: -40°C to 85°C	Commercial: 0°C to 70°C Industrial: -40°C to 85°C
	Humidity	Humidity (non-condensing): 10% – 90%	Humidity (non-condensing): 10% – 90%

