

i.MX8M Plus SoM Comparison Chart

CPU Name	<u>NXP i.MX8M Plus Quad</u>	<u>NXP i.MX8M Mini Quad</u>	<u>Renesas RZ/G2L</u>	<u>Renesas RZ/V2L</u>
CPU Type	4 x Cortex A53 1 x Cortex M7 1 x NPU up to 2.3 TOPS	4 x Cortex A53 1 x Cortex M4	2 x Cortex A55 1 x Cortex M33	2 x Cortex A55 1 x Cortex M33 DRP-AI Accelerator
RAM	4 GB LPDDR4 default, optional: 1 GB LPDDR4, 2 GB LPDDR4, 3 GB LPDDR4, 8 GB LPDDR4	2 GB LPDDR4 default, optional: 1 GB LPDDR4, 3 GB LPDDR4, 4 GB LPDDR4	1 GB DDR4 default, optional: 2 GB DDR4	2 GB DDR4 default, optional: 1 GB DDR4
Internal Storage	8 GB eMMC default, optional: Up to 64 GB eMMC	8 GB eMMC default, optional: Up to 64 GB eMMC	8 GB eMMC default, optional: Up to 64 GB eMMC	16 GB eMMC default, optional: Up to 64 GB eMMC
Ethernet	2 x 10/100/1000 Mbps 1 x with TSN	10/100/1000 Mbps	Up to 2 x 10/100/1000 Mbps phy on board	Up to 2 x 10/100/1000 Mbps phy on board
Wireless	802.11 ac/a/b/g/n + BT 5.0	802.11 ac/a/b/g/n + BT 5.0	802.11 b/g/n/ac + BT 5.0	802.11 b/g/n/ac + BT 5.0
GPU	Vivante GC 7000UL	GC NanoUltra 3D + GC320 2D	Arm Mali-G31 - 500 MHz	Arm Mali-G31 - 500 MHz
3D GPU Support	OpenGL ES 3.1/ 3.0, Vulkan, Open CL 1.2 FP, OpenVG 1.1	OpenGL ES 2.0	OpenGL ES 1.1/ 2.0/ 3.0/ 3.1 and 3.2 Supported OpenCL 2.0 Full Profile Supported	OpenGL ES 1.1/ 2.0/ 3.0/ 3.1/ and 3.2 Supported OpenCL 2.0 Full Profile Supported
AI Accelerator	-	-	-	DRP-AI
Video Decoder	1080p60	1080p60	H.264 1920x1080 @ 30 fps	H.264 1920x1080 @ 30 fps
Video Encoder	1080p60	1080p60	H.264 1920x1080 @ 30 fps	H.264 1920x1080 @ 30 fps
Display Interfaces	HDMI 2.0, MIPI-DSI, LVDS	MIPI-DSI	1 x MIPI-DSI, RGB	1 x MIPI-DSI, RGB
Camera Interface	1 x MIPI-CSI2 (4 Lanes), 2 x ISP	1 x MIPI-CSI2 (4 Lanes)	1 x MIPI-CSI-2 supported 5MP, 30 fps	1 x MIPI-CSI-2 supported 5MP, 30 fps
USB 2.0	-	2	2	2
USB 3.0	2	-	-	-
PCIe	1 (Gen 3.0)	1 (Gen 2.0)	-	-
I2C	3	2	3	3
SPI	1	1	2	2
UART	2 x (RTS/CTS/RX/TX) +1 (TX/RX)	2 x (RTS/CTS/RX/TX) +1 (TX/RX)	3	3
GPIO	75	75	✓	✓
PWM	4	4	✓	✓
CAN-FD	2 x CAN-FD	1 x CAN-FD	2 x CAN-FD	2 x CAN-FD
Size	47 x 30 mm	47 x 30 mm	47 x 30 mm	47 x 30 mm