i.MX8 SOM – System On Module

	From SOM i.MX8 Dual	From SOM i.MX8 Quad Lite	From SOM i.MX8 Quad
System On Chip	i.MX8M D	i.MX8M L	i.MX8M Q
Processor core	Dual core ARM A53	Quad core ARM A53	Quad core ARM A53
General Purpose Processor	ARM Cortex M4	ARM Cortex M4	ARM Cortex M4
Processor speed	1.5GHz Commercial 1.3Ghz Industrial	1.5GHz Commercial 1.3Ghz Industrial	1.5GHz Commercial 1.3Ghz Industrial
Floating Point	VFPv4	VFPv4	VFPv4
SIMD	NEON	NEON	NEON
Graphics Processing Unit	Vivante GC7000 Lite	Vivante GC7000 Lite	Vivante GC7000 Lite
3D GPU Support	OpenGL ES1.1/2.0/3.0/3.1, OpenCL 1.2 & Vulkan	OpenGL ES1.1/2.0/3.0/3.1, OpenCL 1.2 & Vulkan	OpenGL ES1.1/2.0/3.0/3.1, OpenCL 1.2 & Vulkan
HW Video Dec/Enc	Multi Format	Multi Format	Multi Format
Memory	32 bit, up to 3GB LPDDR4-3200	32 bit, up to 4GB LPDDR4-3200	32 bit, up to 4GB LPDDR4-3200
Wired Network	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps
Wireless Network	802.11 ac/a/b/g/n (Optional)	802.11 ac/a/b/g/n (Optional)	802.11 ac/a/b/g/n (Optional)
Bluetooth	BT 5.0 (Optional)	BT 5.0 (Optional)	BT 5.0 (Optional)
Display Max resolution	4K @60	4K @60	4K @60
Display Interfaces	HDMI 2.0, MIPI-DSI	HDMI 2.0, MIPI-DSI	HDMI 2.0, MIPI-DSI
Dual display support	✔	✔	✔
Supported External Storage	NOR-Flash, SD/microSD, PCIe SSD	NOR-Flash, SD/microSD, PCIe SSD	NOR-Flash, SD/microSD, PCIe SSD
Supported Internal Storage	eMMC, QSPI-NOR (Optional)	eMMC, QSPI-NOR (Optional)	eMMC, QSPI-NOR (Optional)
SD/MMC	2	2	2
USB 3.0	1+2 (HUB)	1+2 (HUB)	1+2 (HUB)
USB OTG	1	1	1
Serial ports	2 (RTS/CTS/RX/TX) +1 (TX/RX)	2 (RTS/CTS/RX/TX) +1 (TX/RX)	2 (RTS/CTS/RX/TX) +1 (TX/RX)
Digital audio serial interface	20 channels 32bits @384khz DSD512	20 channels 32bits @384khz DSD512	20 channels 32bits @384khz DSD512

	SPDIF TX&RX HDMI ARC Dolby	SPDIF TX&RX HDMI ARC Dolby	SPDIF TX&RX HDMI ARC Dolby
Camera interface port	2x MIPI-CSI2 (4 Lane each)	2x MIPI-CSI2 (4 Lane each)	2x MIPI-CSI2 (4 Lane each)
PCI-Express 2.0	2	2	2
I2C	2	2	2
SPI	1	1	1
PWM	4	4	4
GPIO	75	75	75
JTAG	Test Point Header	Test Point Header	Test Point Header
S/PDIF Input	✔	✔	✔
S/PDIF Output	✔	✔	✔
RTC	✔	✔	✔
Linux Support	✔	✔	✔
Android Support	✔	✔	✔
Temperature range	Commercial, Industrial	Commercial, Industrial	Commercial, Industrial
Main Voltage	5V	5V	5V
IO Voltage	3.3V	3.3V	3.3V
SOM interface	Hirose DF40 connectors 1.5mm up to 4.0mm mating height	Hirose DF40 connectors 1.5mm up to 4.0mm mating height	Hirose DF40 connectors 1.5mm up to 4.0mm mating height
Dimensions (W x L)	47mm x 30mm	47mm x 30mm	47mm x 30mm
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