

# Core Modules Comparison Guide

	SOM-iMX8X	UCM-iMX8M-Mini	SOM-iMX8	SOM-iMX7	SOM-iMX6	SOM-AM57
						
<b>CPU</b>						
CPU Architecture	ARM Cortex A35	ARM Cortex A53	ARM Cortex A53	ARM Cortex A7	ARM Cortex A9	ARM Cortex A15
CPU Model	i.MX 8QuadXPlus Quad-core	i.MX8M Mini DualLite / Mini Dual / Mini Quad Core	i.MX 8QuadXPlus Dual-core	i.MX7 Dual Core / Single Core	i.MX6 Single-core / Dual-core / Quad-core / Plus quad-core	AM5728 Dual Core / AM5718 Single Core
CPU Frequency	Up to 1.2 GHz	Up to 1.8 GHz	Up to 1.5 GHz	Up to 1 GHz	1 GHz	1.5 GHz
Real Time Co-Processor	Yes	Yes	Yes	Yes	No	No
<b>MEMORY &amp; STORAGE</b>						
Memory	Up to 4GB LPDDR4	Up to 4GB LPDDR4	Up to 4GB LPDDR4	Up to 2GB DDR3	Up to 4GB DDR3	Up to 4GB DDR3
Onboard Storage	Up to 64GB eMMC	Up to 64GB eMMC	Up to 64GB eMMC	Up to 32GB eMMC/NAND	Up to 32GB eMMC	Up to 32GB eMMC/NAND
<b>DISPLAY</b>						
Display Interface	2x MIPI-DSI 2x LVDS	MIPI-DSI	LVDS MIPI-DSI HDMI	LVDS MIPI-DSI Parallel RGB	MIPI 2 x LVDS Parallel RGB, HDMI	Parallel RGB HDMI LVDS
Display Resolution (Max)	1080p60	1920x1080	4096 x 2160	1920 x 1080	1920 x 1080	1920 x 1080
<b>NETWORK</b>						
Ethernet Ports	2	1	1	Up to 2	1	Up to 2
WiFi	Certified 802.11ac Intel 8265 chipset	Certified 802.11ac	Certified 802.11ac Intel 8265 chipset	802.11a/b/g/n*	802.11b/g/n Broadcom BCM4343W chipset 802.11a/b/g/n/ac Broadcom BCM4339 chipset	802.11a/b/g/n*
Bluetooth	V4.2 BLE	V4.2 BLE	V4.2 BLE * mutually exclusive with 2nd USB port	V4.1*	V4.1	V4.1*
USB 2.0 Ports Host	1	2		Up to 4	4	Up to 4
MMC/SD/SDIO	Up to 1	Up to 1	Up to 1	Up to 2	Up to 3	Up to 3
PCIe	1x PCIe Gen. 3.0 * mutually exclusive with WiFi	Up to 2 (Gen 2.1)	Up to 2 (Gen 2.1)	Up to 1 (Gen 2.1)	1	2 (Gen 2)
UART/Serial	Up to 4	Up to 4	Up to 4	Up to 7	Up to 5	Up to 9
GPIO	Up to 96	Up to 85	Up to 90	Up to 124	Up to 112	Up to 87
I2C	Up to 3	Up to 3	Up to 3	Up to 3	Up to 3	Up to 3
SPI	Up to 4	Up to 3	Up to 2	Up to 3	Up to 4	Up to 3
<b>ELECTRICAL &amp; MECHANICAL</b>						
PS Voltage	4.0V – 4.5V	3.45V – 4.4V	3.35V – 4.2V	3.2V – 4.5V	3.3V – 4.5V	4.2V – 5V
Dimensions	38 x 68 x 5 mm	28 x 38 x 4 mm	42 x 68 x 5 mm	42 x 68 x 5 mm	75 x 65 x 6 mm	65 x 68 x 5 mm
OS Support	Linux Yocto Project File	Linux Android Yocto Project File	Linux Android Yocto Project File	Linux Yocto Project File	Linux Yocto Project File	Linux Yocto Project File
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\* Optional feature available on this product