

# System-on-Modules (SOMs)

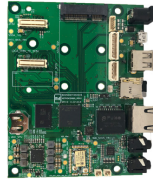
Laird Connectivity and Boundary Devices' embedded system-on-module (SOM) development platforms deliver highly scalable embedded processing solutions with 802.11a/b/g/n/ac and Bluetooth wireless. Built on the latest processors and wireless, and utilizing our long term software support, our SOM solutions give developers a secure, smart, connected IoT platform for deployment in the most demanding applications.



	Summit SOM 8M Plus	Nitrogen8M Plus SOM	Nitrogen8M Mini SOM	Nitrogen8M SOM	Nitrogen6 SOM V2	60 Series SOM
<b>Processor</b>	i.MX 8M Plus	i.MX 8M Plus	i.MX 8M Mini	i.MX 8M	i.MX 6	SAMA5D36
<b>MPU</b>	4x Cortex®-A53 @ 1.6 GHz	4x Cortex®-A53 @ up to 1.8 GHz	4x Cortex®-A53 @ up to 1.8 GHz	4x Cortex®-A53 @ up to 1.5 GHz	Up to 4x Cortex®-A9 @ up to 1 GHz	1x Cortex®-A5 @ 536 MHz
<b>MCU</b>	1x Cortex®-M7 @ 800 MHz	1x Cortex®-M7 @ 800 MHz	1x Cortex®-M4 @ 400 MHz	Cortex®-M4F @ 266 MHz	N/A	N/A
<b>Wireless Onboard</b>	Wi-Fi 5, BT 5.3 (NXP 88W8997)	Wi-Fi 5, BT 5	N/A	N/A	N/A	Wi-Fi 5, BT 5.1 (NXP 88W8997)
<b>RAM</b>	512MB, 1GB, 2GB, 4GB	2GB or 4GB LPDDR4	2GB or 4GB LPDDR4	2GB or 4GB LPDDR4	1GB or 2GB DDR3	128 MB or 256 MB LPDDR2
<b>Storage</b>	8GB, 16GB, or 32GB	16GB, 32GB, or 128GB	16GB, 32GB, or 128GB	16GB, 32GB, or 128GB	16GB, 32GB, or 128GB	256 MB or 512 MB NAND Flash
<b>Multimedia</b>	MIPI-DSI, HDMI, LVDS 1080p60 encode/decode	MIPI-DSI, HDMI, LVDS 1080p60 encode/decode	1x MIPI-DSI, 1080p60 encode/decode	MIPI-DSI, HDMI 4Kp60 decode	2x 4XGA, 1080p30 encode/ 1080p60 decode	1x 24-bit TTL RGB LCD interface
<b>Camera</b>	2x MIPI-CSI+ISP	2x MIPI-CSI+ISP	1x MIPI-CSI	2x MIPI-CSI	1xMIPI-CSI	12-bit Parallel
<b>Audio</b>	SPDIF in/out, 6x SAI, 8 channel PDM	SPDIF in/out, 6x SAI, 8 channel PDM	5x SAI, 8 channel PDM	SPDIF in/out, 6x SAI	SPDIF in/out, SAI	2x SSC
<b>NPU</b>	2.3 TOPS	2.3 TOPS	N/A	N/A	N/A	N/A
<b>Form Factor</b>	SMT	Board to Board	Edge connector	Edge connector	Edge connector	SMT
<b>Additional Interfaces</b>	2x USB3, 2x GbE 2x CAN/CAN FD, 1x SDIO/eMMC 12C, SPI, UART	2x USB3, 2x GbE, 2x CAN/CAN FD 1x PCIe, 1x SDIO/eMMC 12C, SPI, UART	2x USB2, 1x GbE, 1x PCIe, 2x SDIO/eMMC 12C, SPI, UART	2x USB3, 1x GbE, 2x PCIe 12C, SPI, UART	1x USB2, 1x GbE, 1x CAN, 1x SATA 12C, SPI, UART	3x USB2 2x Ethernet, 1x CAN, 1x SD/MMC 12C, SPI, UART
<b>Size</b>	40 x 47 mm	48 x 38 mm	69.6 x 40 mm	67.6 x 48.4 mm	57 x 63.5 mm	30 x 30 mm
<b>Operating Temperature</b>	-30 to +85 °C	0 to +70 °C OR -40 to +85 °C	0 to +70 °C OR -40 to +85 °C	0 to +70 °C OR -40 to +85 °C	0 to +70 °C OR -40 to +85 °C	-30 to +85 °C
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# Single Board Computers (SBCs)

Single Board Computers from Laird Connectivity and Boundary Devices provide the host platform for your device. Providing many external interfaces, including data, audio/video, camera, wired and wireless networking, power supply connectors and more, SBCs provide the complete platform for your embedded design.



	Nitrogen 8M Mini SBC	Nitrogen 8M SBC	Nitrogen6 MAX
<b>Chipset</b>	NXP i.MX 8M Mini	NXP i.MX 8M Quad Core	NXP i.MX 6
<b>MPU</b>	4x Cortex®-A53 @ up to 1.8 GHz	4x Cortex®-A53 @ up to 1.5 GHz	Up to 4x Cortex®-A9 @ up to 1 GHz
<b>MCU</b>	1x Cortex®-M4 @ 400 MHz	Cortex®-M4F @ 266 MHz	N/A
<b>Wireless Protocol</b>	Wi-Fi 5 / Bluetooth 5.0	Wi-Fi 5 / Bluetooth 5.0	Wi-Fi 5 / Bluetooth 5.0
<b>Interfaces</b>	4-lane MIPI display, 4-lane MIPI camera, 1GB Ethernet, Optional PoE, PCIe, USB 2.0, Stereo audio (headphone/speaker), 12C, SPI, GPIO	4-lane MIPI display, 2x 4-lane MIPI camera, HDMI 2.0, 1GB Ethernet, 2x PCIe, 4x USB 3.0, Stereo audio (headphone/speaker), 12C, SPI, GPIO	MIPI camera, 4x display (PRGB, 2x LVDS, HDMI), 1GB Ethernet, 1x PCIe, 3x USB 2.0, Stereo audio (headphone/speaker), 12C, SPI, GPIO, 2x RS232
<b>Size (mm)</b>	114.3 x 88.9 mm	87 x 136.7 mm	136.7 x 87 mm
<b>Operating Temperature</b>	0 to +70 °C (-40 to +85 optional)	0 to +70 °C (-40 to +85 optional)	0 to +70 °C
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## Not quite the right fit? Consider the custom route.

Laird Connectivity and Boundary Devices have broad capabilities in design and manufacturing, and can custom-design a board to your exact specifications and price targets. Most customers are amazed at how quickly we can move a project from design to production within their target budget. On average, customers take 9-15 months to get to production; we can complete it in as little as 12 weeks. By starting with our core layout, we produce custom designs faster and more affordably.

Learn more at:

<https://www.boundarydevices.com/custom-solutions/>