

Open-X™ 8M SOM (System on Module)

Based on the NXP® i.MX 8M™ processor

Intrinsyc's Open-X™ 8M SOM is an ultra-compact (55mm x35mm) production-ready SOM ideal for powering anything from consumer home video/audio to industrial building automation products. The feature-rich SOM, with industry-leading video/audio features and high speed Wi-Fi, is ideal for streaming devices, voice control applications, and human-machine interface solutions.

It offers high quality video playback with full 4K UHD and HDR along with the highest level of pro-audio fidelity. The wide range of interfaces, including HDMI 2.0a, two USB 3.0, one PCIe, Gigabit Ethernet, and pre-certified dual-band 2x2 MU-MIMO WLAN make the SOM suitable for a wide range of embedded and IoT products.

Key Features

- NXP® i.MX 8M™ Processor
- 3GB LPDDR4 and 16GB eMMC Flash
- Powerful Video Processing
- Two high-def display outputs
- FCC/IC Pre-certified Wi-Fi/BT Module
- Android™ 8, Linux®

Applications

- Video/audio streaming devices
- Human—machine interface products
- Industrial building automation
- Consumer home audio/video products
- Voice control applications

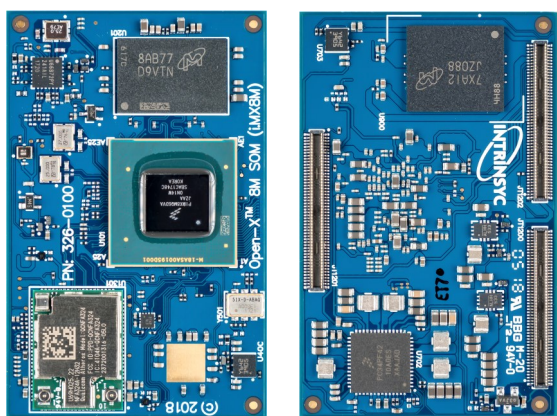


Hardware Specifications

Processor	Quad-core ARM Cortex-A53 MPCore platform: Quad symmetric Cortex-A53 processors: 32 KB L1 Instruction Cache, 32 KB L1 Data Cache Support of 64-bit ARMv8-A architecture: 1 MB unified L2 cache, Frequency of 1.5 GHz ARM Cortex-M4 core — 16 KB L1 Instruction Cache, 16 KB L1 Data Cache, 256 KB tightly coupled memory (TCM)
Memory/Storage	3GB LPDDR4 RAM, 16GB eMMC Flash
Wireless	WLAN 802.11a/b/g/n/ac 2.4/5.0 GHz 2x2 MU-MIMO + Bluetooth 4.2 Pre-certified module (QCA6174A-1)
Display Interfaces	HDMI 2.0a supporting resolution up to 4096 x 2160 at 60 Hz 4-lane MIPI DSI interface supporting display resolution up to 1920x1080 at 60 Hz
Camera Interface	2x 4-lane MIPI CSI2 camera inputs
Graphic Processing Unit	4 shader, 267 million triangles/sec, 1.6 Giga pixel/sec 32 GFLOPs 32-bit or 64 GFLOPs 16-bit Supports OpenGL ES 1.1, 2.0, 3.0, 3.1, Open CL 1.2, and Vulkan
Video Processing Unit	4Kp60 HEVC/H.265 main, and main 10 decoder 4Kp60 VP9 decoder 4Kp30 AVC/H.264 decoder 1080p60 MPEG-2, MPEG-4p2, VC-1, VP8, RV9, AVS, MJPEG, H.263 decoder
Audio Interfaces	S/PDIF input and output 1x 16 channel bi-directional SAI digital audio interface supporting I2S, AC97, TDM, DSP 1x 8 channel receive SAI digital audio interface (I2S, AC97, TDM, DSP) 2x 2 channel bi-directional SAI digital audio interface (I2S, AC97, TDM, DSP)
Power Mgmt	Power management IC: NXP PF4210
I/O	2x USB 3.0, 1x PCIe Gen2, Gigabit Ethernet, 4-bit SDIO, 2x debug UART, JTAG
Operating Environment	Input supply voltage: 3.3V nominal Operating Temperature: 0°C to +70°C* * for other temperature range options contact sales@intrinsyc.com
Form Factor	3x 100 pin board to board connectors 50mm x 35mm

Software

OS Support	Android™ 8, Linux® *Note that all hardware features may not be supported by all SW — see latest SW release notes for details
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Purchasing Information

Open-X™ 8M SOM | Part number: QC-DB-Q0004 [Store Link](#)

Alternate SOM configurations available by special order (minimum order quantities apply) - e.g. different memory size, etc. Contact sales to discuss your specific needs today:

sales@intrinsyc.com



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