

Open-Q™ 660 μ SOM (micro System on Module)

Based on the Qualcomm® Snapdragon™ SDA660 processor

Intrinsyc's Open-Q™ 660 μ SOM is an ultra-compact (50mm x 25mm) production-ready SOM based on the powerful Qualcomm® Snapdragon™ SDA660 SoC, with built-in Artificial Intelligence Engine, Spectra™ ISP, Kryo™ CPU, and Hexagon™ DSP. The feature-rich SOM will provide a leap in performance for applications requiring on-device artificial intelligence, advanced photography and image processing, or enhanced gaming. In addition to the advanced SoC features, the SOM includes advanced Wi-Fi with 802.11ac 2x2 MU-MIMO, support for USB Type-C with 4K DisplayPort video out, a wealth of other I/O interfaces, and on-SOM power management and battery charging.

Key Features

- Qualcomm® Snapdragon™ SDA660 processor
- 4GB LPDDR4X and 32GB eMMC
- High-end Camera Features
- High-performance 802.11ac 2x2 MU-MIMO Wi-Fi
- Bluetooth 5.x
- Ultra-compact 50mm x 25mm
- Android™ 9

Applications

- Advanced photography platforms
- Advanced graphics and 3D gaming
- On-device artificial intelligence
- Machine learning modeled devices
- Multi-camera systems
- Machine vision platforms



Hardware Specifications

Processors	Qualcomm® Snapdragon™ SDA660 built on 14nm FinFET technology Qualcomm® Kryo™ 260 CPU: 4 Kryo Gold High-performance 2.20GHz cores + 4 Kryo Silver low-power 1.84GHz cores Qualcomm® Hexagon™ 680 DSP with Hexagon Vector eXtensions (dual-HVX512) 787 MHz Qualcomm® Adreno™ 512 GPU @ 650MHz with OpenGL 3.0/3.2, Vulkan, DX12 FL 12, OpenCL 2.0 full profile	
Memory/Storage	4GB dual-channel high-speed LPDDR4X SDRAM at 1866MHz + 32GB eMMC Flash in combo eMCP chip	
Wireless	Wi-Fi 802.11a/b/g/n/ac 2.4/5Ghz 2x2 MU-MIMO (WCN3990) with 5 GHz external PA & U.FL antenna connector Bluetooth 5.x	
LCD/Touchscreen Interface	2x 4-lane MIPI DSI D-PHY 1.2, up to 2560 x 1600 VESA DisplayPort V1.4, up to 4K30 or 2K60	
Camera Interface	3x 4-lane MIPI CSI combo D-PHY1.2 Dedicated I2C controller for each camera port 2x camera flash control signals	Dual 14-bit Qualcomm® Spectra™ ISP: 16 +16 MP, 540 MHz each 24MP30 ZSL with dual ISP; 16 MP 30 ZSL with a single ISP
Video	Encode: 4K30 HEVC/H.264/VP8/MPEG4 Concurrent: 1080p60 Decode + 1080p30 Encode	Decode: 4K30 8-bit: H.264/VP8/VP9, 4K30 10-bit: HEVC
Audio	1x SLIMBus for external Qualcomm® Codecs 1x 4-lane, 1x 2-lane MI2S interfaces for external audio devices 2x digital microphone PDM interfaces 1x Soundwire interface for WSA8810/WSA8815 digital speaker amps	Qualcomm™ Flurience™ HD (optional)
Power/Battery Management	Power management and battery charging on SOM (PM660 and PM660L power management chips)	
I/O	1x USB3.1 Gen1 Type-C, 1x USB 2.0 Host 4-bit SD 3.0, 8x BLSP ports (UART, I2C, SPI), configurable GPIOs	
Operating Environment	Input voltage: 3.6V to 4.2V Operating Temperature: -25°C to +85°C Tc (based on component case temperature specifications)	
Form Factor	50mm x 25mm with 3x 100 pin board to board connectors	

Software

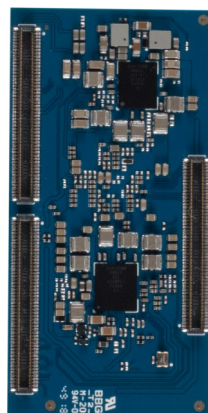
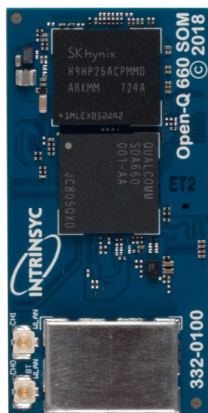
OS Support	Android™ 9— Note that all hardware features may not be supported by all SW — see latest SW release notes for details
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Purchasing Information

Open-Q 660 μSOM

Part number: QC-DB-N10004 [Store Link](#)

Alternate SOM configurations available by special order (minimum order quantities apply) - e.g. no GPS, different memory size, etc. Contact sales to discuss your specific needs today: sales@intrinsic.com



Planned Certifications



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