

# Open-Q™ 865XR SOM (System on Module)

Based on the Qualcomm® SXR2130P processor



## Horsepower at the Edge

- The 865XR SOM offers the perfect computing core for a variety of leading edge IoT applications
- The ideal solution to accelerate your “time to revenue” on product development
- The Qualcomm® AI Engine provides 2x the performance of the previous generation with up to 15 TOPS

The Open-Q™ 865XR SOM is an ultra-compact (50mm x 29mm) production-ready SOM based on the powerful Qualcomm SXR2130P SoC. The 865XR utilizes Qualcomm® Technologies’ heterogenous compute expertise to offer a System-on-Chip with multiple specialized processing cores:

- 5th generation Qualcomm® AI Engine
- Qualcomm Spectra™ ISP, Qualcomm® Adreno™ GPU, and Qualcomm® Hexagon™ DSP
- Power, processing and professional quality imaging
- Coupled with the latest Wi-Fi 6 connectivity, advanced camera features, and many high-speed interfaces

### Key Features

- Qualcomm SXR2130P processor
- 6GB LPDDR5 RAM + 64GB UFS 3.1 Flash
- 3x MIPI CSI camera ports
- 2x MIPI DSI display ports
- 1x 2-lane PCIe Gen3 interface
- USB Type-C with DisplayPort v1.4
- Wi-Fi 6 - 802.11ax 2x2 MU-MIMO Wi-Fi / BT 5.1

### Applications

- AI box—multi-stream encode/decode/AI processing
- Video conference systems
- Multi-camera systems
- Machine vision platforms
- Advanced high resolution multi-display systems
- Medical imaging
- Handheld data collectors

### Engineering Services:

We provide a full solution – our unparalleled engineering expertise and product development skills deliver innovative products that are cost-effective and can jumpstart your Go-to-Market timeline.

Our business model offers turnkey product development services, or we can augment your team in specific areas of development. The choice is yours.

### Key development expertise in:

- Camera development and tuning
- Voice control
- Machine learning
- Mechanical & RF design
- Thermal & power optimization

IoT Product Development made easy

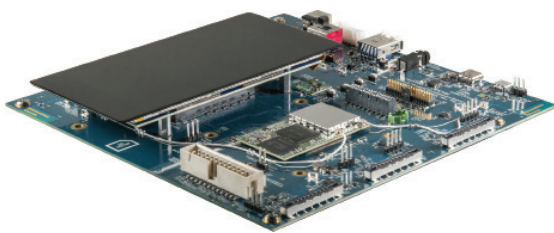


## Hardware Specifications:

• <b>Processors</b>	Qualcomm® SXR2130P SoC built on 7nm technology: Kryo™ 585 Octa-core CPU: 1Kryo Gold prime @ 2.84 GHz + 3 Kryo Gold @ 2.42 GHz + 4 Kryo Silver @ 1.81 GHz Hexagon DSP with quad Hexagon Vector eXTensions	
	Adreno 650 GPU @ Fmax = 587 MHz Qualcomm Spectra 480 Image Signal Processor Adreno 665 Video Processing unit	Adreno 995 Display Processing unit NPU230 Neural Processing unit SPU240 Secure Processing unit
• <b>Memory/Storage</b>	6GB LPDDR5 @ 2750MHz, 64GB UFS 2.1	
• <b>Wireless</b>	802.11ax 2x2 MU-MIMO + Bluetooth 5.1, Bluetooth Milan ready	
• <b>Display Interfaces</b>	Up to three 4K displays (1 internal display through DSI and 2 external displays through DisplayPort) 2x 4-lane MIPI DSI D-PHY 1.2, up to 5040 × 2160 @ 60 fps (or 120 Hz in VR mode) + touchscreen support DisplayPort v1.4 on USB Type-C, at 8.1 Gbps/lane, with USB3 and USB2 data concurrency	
• <b>Camera Interfaces</b>	3x 4-lane MIPI CSI camera ports + CCI I2C control	Qualcomm Spectra 480 ISP supporting multiple concurrent cameras 64 MP 30 fps ZSL with a dual ISP
• <b>Video Performance</b>	Video decode up to 4K240/8K60 Video encode up to 4K120/8K30	Concurrent 4K60 decode & 4K30 encode for wireless display
• <b>Audio</b>	Supports WCD938x high fidelity audio codec and WSA881x speaker amp on carrier board Dedicated Hexagon audio DSP SoundWire, MI2S, DMIC, TDM/PCM interfaces for audio devices on carrier board	
• <b>High Speed Connectivity</b>	1x PCIe Gen3 2-lane 1x USB 3.1 with support for Type-C + DisplayPort v1.4 with USB SS data concurrency 1x USB 3.1 Type-A	
• <b>I/O Interfaces</b>	4-bit SD 3.0, UART, I2C, I3C, SPI, configurable GPIOs, sensor I/O to dedicated Hexagon sensor DSP	
• <b>Power/Battery</b>	Power management and battery charging solution on SOM	
• <b>Operating Environment</b>	Input voltage: 3.7V nominal Operating Temperature: TBD	
• <b>Form Factor</b>	50mm x 29mm with 2x 100-pin + 1x 120-pin board to board connectors	

## Software:

• <b>OS Support</b>	Android™ 10 — Note that all hardware features may not be supported by SW
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Companion Development Kit Available Separately

## Planned Certifications



## Purchasing Information:

• <b>Open-Q™ 865XR SOM (6+64GB)</b>	PN: QC-DB-U10004
• <b>Open-Q™ 865XR SOM (8+128GB)</b>	PN: QC-DB-U10004A

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.

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