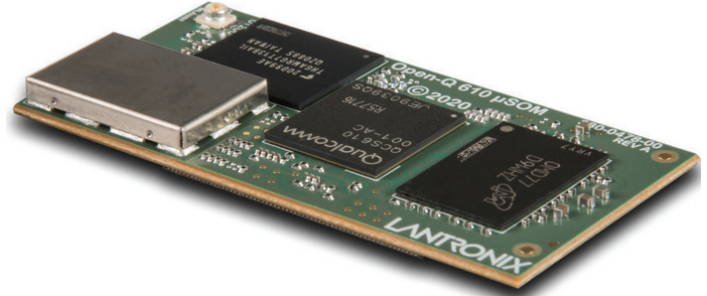
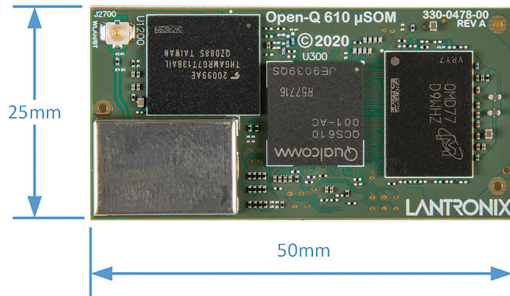


# Open-Q™ 610 $\mu$ SOM (micro System on Module)

Based on the Qualcomm® QCS610 processor



## Compact but Powerful

- Ideal for advanced visual intelligence applications
- It has the smarts and connectivity to power your latest AI camera product
- Ultra-compact size and excellent price-performance ratio

Lantronix's Open-Q™ 610  $\mu$ SOM is an ultra-compact (50mm x 25mm) production-ready SOM based on the advanced Qualcomm QCS610 SoC, with built-in Neural Processing Engine for on-device edge AI capabilities. Aimed at connected visual intelligence applications, with advanced built-in image sensor processing such as:

- Staggered HDR, lens de-warp
- Dual camera stitching
- Image de-fog

The 610  $\mu$ SOM is the ideal platform for your next smart camera product. Available with a full-featured development kit for ease of evaluation and POC development, the platform is supported by a Yocto Linux SDK with Qualcomm optimizations, GStreamer audio/video framework, and AI support for TensorFlow Lite and Qualcomm SNPE.

### Key Features

- SoC 11nm technology for high performance with low power
- On-device artificial intelligence & machine learning
- Native Ethernet interface for reliable high-speed connectivity
- Three camera ports for multi-camera systems
- Yocto Linux with connected camera SDK
- RTSP streaming support with GStreamer
- Multiple options for AI inference engines

### Applications

- AI connected cameras
- Video conference systems
- Edge AI computing platforms
- 360-degree pano cameras
- Companion robots
- Dash cameras
- Machine vision platforms

### 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® QCS610: Qualcomm® Kryo™ 460 CPU: 2 Kryo Gold 2.2 GHz cores + 6 Kryo Silver low-power 1.8GHz cores Qualcomm® Hexagon™ Compute DSP with Hexagon Vector eXtensions (HVX) Qualcomm® Adreno™ 612 GPU @ 845 MHz, with OpenGL ES 3.2, Vulkan® 1.1, OpenCL 2.0	
• <b>Memory/Storage</b>	Non-PoP Memory: 2GB LPDDR4X SDRAM, 16GB eMMC Flash Storage	
• <b>Wireless</b>	Wi-Fi 802.11a/b/g/n/ac 2.4/5Ghz (WCN3980) + Bluetooth 5.x	
• <b>Display Interfaces</b>	1x 4-lane MIPI DSI D-PHY 1.2, up to 1920 x 1080p at 60 fps DisplayPort v1.4 on USB Type-C or separate DisplayPort connector	
• <b>Camera Interfaces</b>	3x 4-lane MIPI CSI	Qualcomm® Spectra™ 230 Image Signal Processor
• <b>Video Performance</b>	Encode: 4K30 8-bit HEVC	Decode: 4K30 10-bit: HEVC/VP9
• <b>Audio Interfaces</b>	Supports Qualcomm® WCD9340 advanced audio codec on carrier board SLIMBus, SoundWire, and MI2S interfaces for a variety of audio solutions	
• <b>I/O Interfaces</b>	2 USB ports: 1x USB3.1 with support for Type-C + DisplayPort v1.4 + 1x USB2.0 Ethernet RGMII interface, 4-bit SD 3.0, UART, I2C, SPI, configurable GPIOs	
• <b>Sensor Core Interface</b>	SPI, I2C, GPIO connections to sensor core DSP	
• <b>Power/Battery Management</b>	Power management and battery charging solution on SOM Qualcomm® PM6150 + PM6150L	
• <b>Operating Environment</b>	Input voltage: 3.7V nominal Operating Temperature: TBD	
• <b>Form Factor</b>	50mm x 25mm with 1x 120-pin + 2x 100-pin board to board connectors	

## Software:

• <b>OS Support</b>	Linux OS based on Yocto Thud, kernel v4.14, Android 10 coming later Note that all hardware features may not be supported by all SW
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Companion Development Kit available separately

## Purchasing Information:

• <b>Open-Q 610 μSOM</b>	P/N: QC-DB-V10004P
• <b>Open-Q 610 Dev Kit</b>	P/N: QC-DB-V10003

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: [IES-Sales@Lantronix.com](mailto:IES-Sales@Lantronix.com)

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## Planned Certifications

