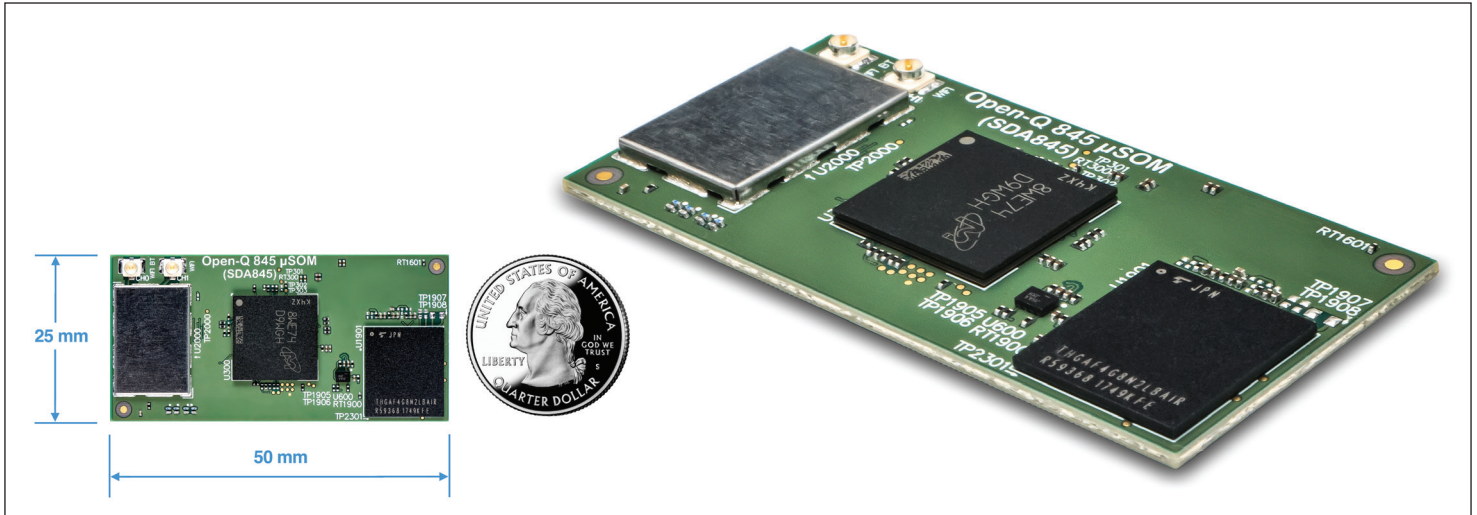


Open-Q™ 845 μ SOM (micro System on Module)

Based on the Qualcomm® SDA845 SoC



Lantronix's Open-Q™ 845 μ SOM is an ultra-compact (50mm x 25mm) production-ready SOM based on the powerful Qualcomm® SDA845 SoC, one of their most powerful IoT chipsets. With the 3rd-Gen Qualcomm® AI Platform, Spectra™ ISP, Kryo™ Octa-core CPU, Hexagon™ DSP, and a new dedicated secure processor, the 845 μ SOM is ideal for powering the most advanced robotics, drones, cameras, and embedded IoT devices. In addition to the 845's impressive processing capabilities and on-device AI powers, it also includes new and improved I/O interfaces compared to previous generations — four camera ports, two USB3.1 ports (including 4K60 DisplayPort + concurrent SS data), and a Gen3 PCIe interface.

This powerful hardware platform is supported by your choice of full-featured Android or flexible Yocto Linux software.

Key Features

- Qualcomm® SDA845 SoC
- Built on 2nd-Gen 10nm LPP technology
- 4GB or 6GB LPDDR4X + 32GB or 64GB UFS
- 4 MIPI CSI camera ports
- Vault-like security features built-in
- 802.11ac 2x2 MU-MIMO Wi-Fi / BT 5.x
- Ultra-compact 50mm x 25mm

Applications

- VR/XR platforms with 6DoF and SLAM
- Robotics and Drone products
- Premium camera platforms with cinema-grade video
- On-device artificial intelligence & machine learning
- Advanced graphics and 3D gaming
- Multi-camera systems
- 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



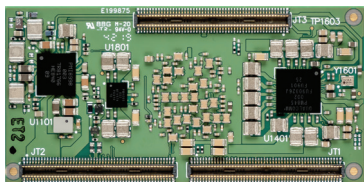
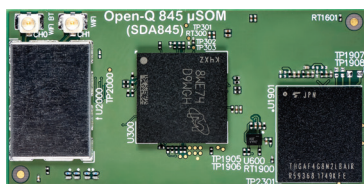
Lantronix Open-Q™ 845 μSOM

Hardware Specifications:

Open-Q™ 845 μSOM	
• Processors	Qualcomm® SDA845 built on 2nd-Gen 10nm technology: Qualcomm® Kryo™ 385 CPU: 4 Kryo Gold 2.649GHz cores + 4 Kryo Silver low-power 1.766GHz cores Qualcomm® Hexagon™ 685 DSP with Hexagon Vector eExtensions (dual-HVX512) Qualcomm® Adreno™ 630 GPU with OpenGL RD 3.2 + AEP, DX next, Vulkan 2, OpenCL 2.0 full profile
• Memory/Storage	4GB or 6GB dual-channel high-speed LPDDR4X SDRAM at 1866MHz + 32GB or 64GB UFS Flash Storage
• 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
• Display Interfaces	2x 4-lane MIPI DSI D-PHY 1.2, up to 3840 × 2400 10-bit 60 fps VESA DisplayPort v1.4 on USB Type-C, up to 4K60 with USB data concurrency
• Camera Interfaces	3x 4-lane MIPI CSI + 1x 2-lane MIPI CSI Qualcomm® Spectra™ 280 ISP: 16 +16 + 2 MP sensor resolution 32MP 30fps ZSL with dual ISP; 16 MP 30 ZSL with a single ISP
• Video Performance	Encode: 4K60 for H.264/H.265, 4K30 for VP8 Support for HDR 10-bit capture (HLG) Decode: 4K60 H.264/H.265/VP9 Support for HDR 10-bit video playback (HLG, HDR10)
• Audio Interfaces	Dedicated audio DSP integrated with support for external WCD9340 codec and WSA8810/WSA8815 speaker amps 1x SLIMBus interface for external Qualcomm® Codecs 1x 4-lane MI2S interface + 2x 2-lane MI2S interfaces (muxed with SLIMBus) for other external audio devices
• I/O Interfaces	2 USB ports: 1x USB3.1 with support for Type-C + DisplayPort v1.4 with USB data concurrency, 1x USB 3.1 1x PCIe Gen3 1-lane, 4-bit SD 3.0, UART, I2C, SPI, configurable GPIOs
• Sensor Core Interface	SPI, I2C, GPIO connections to sensor core DSP
• Power/Battery Management	Power management and battery charging solution on SOM Qualcomm® PM845 + PM8998 + PM8005
• Operating Environment	Input voltage: 3.5V to 4.7V 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™ 10, Linux OS based on Yocto Rocko, kernel v4.9 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 845 μSOM 4GB DDR + 32GB UFS	PN: QC-DB-P10004
• Open-Q 845 μSOM 6GB DDR + 64GB UFS	PN: QC-DB-P10004A

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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Planned Certifications



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