

Open-Q™ 610 μ SOM Development Kit

Based on the Qualcomm® QCS610 processor

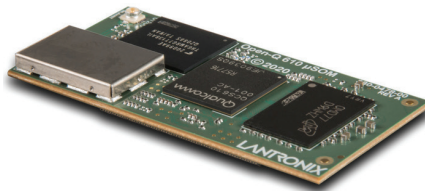


The Open-Q™ 610 μ SOM Development Kit is a versatile, easy-to-use, exposed board platform, powered by our ultra-compact, production-ready, Open-Q™ 610 μ SOM. The μ SOM is based on the advanced Qualcomm QCS610 SoC, with built-in Neural Processing Engine for on-device edge AI capabilities and is aimed at visual intelligence applications such as AI connected cameras, machine vision systems, or companion robots.

The development kit provides the ideal starting point for evaluating the Open-Q™ 610 μ SOM or initial development of next generation embedded and IoT devices. The platform consists of Lantronix's Open-Q™ 610 μ SOM, the open frame carrier board exposing all the available I/O, and a range of accessories to fast track your product development.

Key Features

- Powered by ultra-compact (50x25mm) Open-Q 610 μ SOM
- Open-frame Mini-ITX Form-factor carrier board for evaluation and development
- Ethernet, 2x USB, μ SD socket, GPIO, sensor board
- Optional LCD/touchscreen and cameras
- Wi-Fi / Bluetooth antenna on carrier board
- Yocto Linux™



Open-Q™ 610 μ SOM

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:

Open-Q™ 610 μSOM	
*See the Open-Q 610 μSOM product brief for complete details	
• Processors	Qualcomm® QCS610 built on 11nm technology: Kryo™ 460 Octa-core CPU, Hexagon™ DSP, Adreno™ 612 GPU
• Memory/Storage	2GB LPDDR4X SDRAM, 16GB eMMC Flash Storage
• Wireless	Wi-Fi 802.11ac 1x1, 2.4/5Ghz (WCN3980) + Bluetooth 5.x
• Power Management	Qualcomm® power management and battery charging on SOM
Open-Q™ 610 μSOM Carrier Board	
• Display Interfaces	1x 4 lane MIPI DSI connector for optional LCD / Touch panel accessory or custom display adapters DisplayPort v1.4 on dedicated DisplayPort connector (not supported in Linux OS)
• Camera Interfaces	3x 4-lane MIPI CSI with connectors to mate to optional camera accessories
• Audio Interfaces	Qualcomm® WCD9340 Hi-Fi audio codec module on carrier board, with 3.5mm headset jack (stereo out + mic in) Additional audio expansion: Analog out header, Analog in header, digital I/O header (SoundWire/DMIC/MI2S/PDM)
• I/O Interfaces	2 USB ports: 1x USB3.1 Type-C, 1x USB 2.0 Type-A host Gigabit Ethernet, microSD card socket Debug UART with serial USB I/O expansion headers for sensor board, UART, I2C, SPI, configurable GPIOs
• Wireless	Wi-Fi/BT PCB antenna on carrier board
• Power Input	Input: 12V/3A (adapter included) or single-cell Li-Ion battery (not included)
• Form Factor	SOM: 50mm x 25mm, Carrier Board: Mini-ITX 170mm x 170mm
Software:	
• OS Support	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



Optional Display and Camera

Development Kit includes: Carrier board, 610 μSOM (2+16GB), ST Micro sensor board, 12V power supply, Quick Start Guide, access to full documentation, SW updates, and basic development kit support.

Planned Certifications



Purchasing Information:

• Open-Q™ 610 μSOM Dev Kit	PN: QC-DB-V00003
• Open-Q™ 610 μSOM (2+16GB)	PN: QC-DB-V10004
• Open-Q™ 610 μSOM (2+32GB)	PN: QC-DB-V10004A
• Open-Q™ LCD	PN: QC-DB-G00005
• Open-Q™ IMX258 Camera	PN: QC-DB-U10006

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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