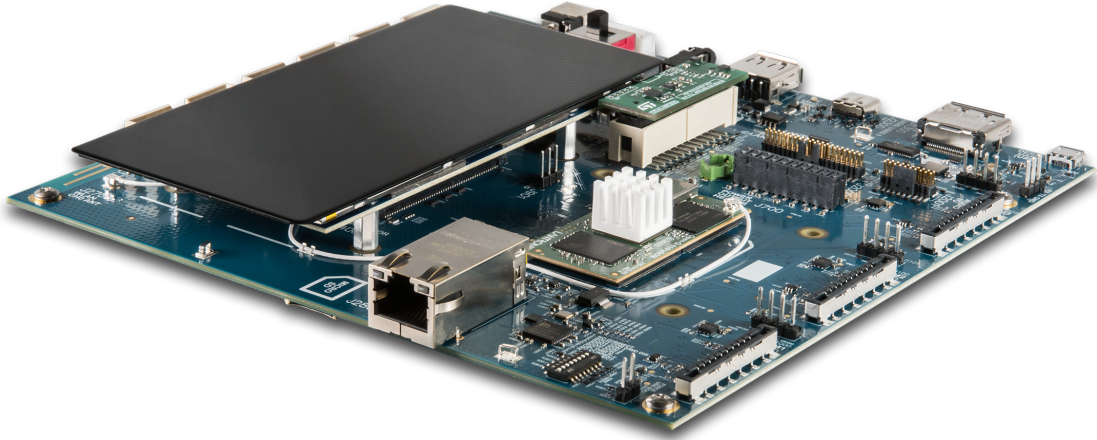# LANTRONIX®

Open-Q™ 610 µSOM Development Kit
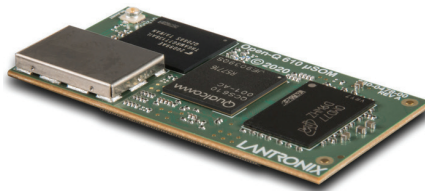## Based on the Qualcomm® QCS610 processor

The Open-Q™ 610 µSOM Development Kit is a versatile, easy-to-use, exposed board platform, powered by our ultra-compact, production-ready, Open-Q™ 610 µSOM. The µSOM 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 µSOM or initial development of next generation embedded and IoT devices. The platform consists of Lantronix's Open-Q™ 610 µSOM, 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 µSOM
- Open-frame Mini-ITX Form-factor carrier board for evaluation and development
- Ethernet, 2x USB, µSD socket, GPIO, sensor board
- Optional LCD/touchscreen and cameras
- Wi-Fi / Bluetooth antenna on carrier board
- Yocto Linux™

Open-Q™ 610 µSOM

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.

Qualcomm

LANTRONIX®

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.

Purchasing Information:

• **Open-Q™ 610 µSOM Dev Kit**	PN: QC-DB-V00003 (Includes 1 QC-DB-V10004)
• **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.

Planned Certifications

Learn more at lantronix.com/open-q-610-dev-kit

LANTRONIX®

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Lantronix](#):

   [LOQ-610-EVK](#)