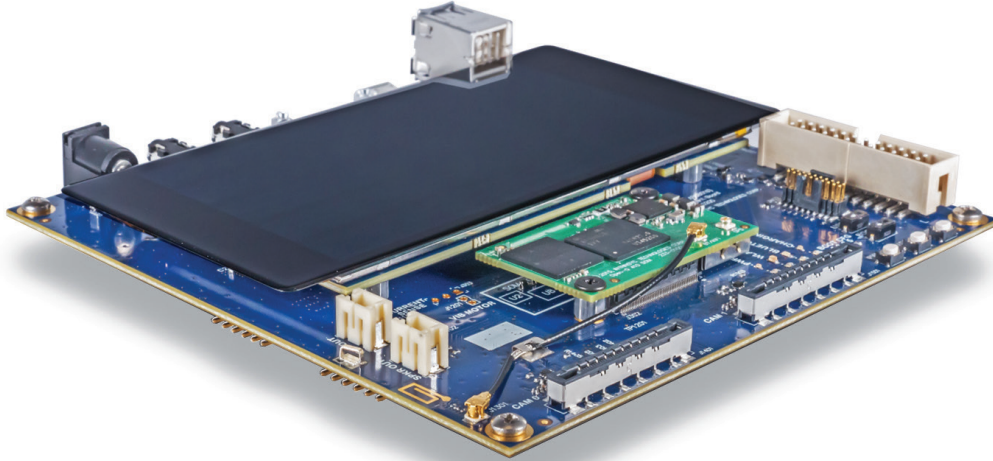# LANTRONIX®

Open-Q™ 410 Development Kit
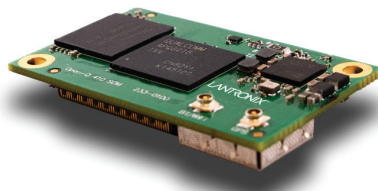## Based on the Qualcomm® APQ8016E SoC

Lantronix's Open-Q™ 410 Development Kit is a versatile, easy-to-use, exposed board platform based on our production ready, pre-certified, Open-Q™ 410 SOM, providing the ideal starting point for next generation embedded and IoT devices. The platform features the Open-Q™ 410 SOM, a carrier board exposing all the available IO, and a range of accessories to fast track your embedded and IoT product development.

The Development Kit is ideal for evaluation of the Open-Q™ 410 SOM and supports our optional LCD or 720p HDMI out (via HDMI adapter module), 1080p Full HD H.264 encode and decode, up to 13MP cameras, mic inputs and stereo outputs.

Key Features

- Qualcomm® APQ8016E SoC
- Powered by micro-sized (44x26.5mm) Open-Q 410 SOM
- Small form-factor Carrier Board (130x130mm)
- HDMI output, 2 camera connectors
- Exposed I/O for evaluation and proof of concept work
- Android™ 7, Android™ 5, Linux®, Microsoft Azure Certified

Open-Q™ 410 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
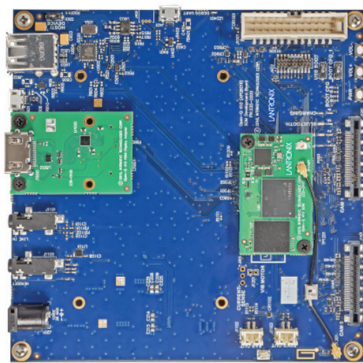- Thermal & power optimization

IoT Product Development made easy

Qualcomm

Microsoft Azure Certified

LANTRONIX®

Lantronix Open-Q™ 410 Development Kit

Hardware Specifications:

Open-Q™ 410 SOM

*See the Open-Q 410 SOM product brief for complete details

• **Processor**	Qualcomm® APQ8016E SoC • Quad-Core 64-bit ARM® Cortex™ A53 1.2GHz, Qualcomm® Adreno™ 305 GPU, Qualcomm® Hexagon™ v5 DSP
• **Memory/Storage**	1GB LPDDR3 RAM, 8GB eMMC 5.0 Flash
• **Wireless**	FCC/IC Pre-certified Wi-Fi 802.11b/g/n 2.4GHz (WCN3620), Bluetooth 4.1 + BLE
• **Location Services**	GPS, GLONASS and Compass Receiver (WGR7640) with U.FL antenna connector

Open-Q™ 410 Carrier Board

• **Display Interfaces**	HDMI Output via HDMI adapter module (included) or optional LCD / Touch Panel • Up to 720p 60fps LCD • Up to Full HD + 720p external wireless display
• **Camera Interfaces**	2x camera connectors for optional camera accessories: 1x 4-lane MIPI CSI, 1x 2-lane MIPI CSI
• **Audio Interfaces**	Integrated audio codec (PM8916) with: 3.5mm headset jack, 3.5mm stereo line-in jack 2x speaker output connectors, 1x digital mic input header
• **I/O Interfaces**	• 1x UART debug over micro-B USB, 1x USB 2.0 device, micro-B, 2x USB 2.0 host, type-A, 1x µSD Socket • 24pin Expansion header I2C, SPI, UART, GPIO • Wi-Fi/BT PCB antenna
• **Operating Environment**	Power input: 12V/3A (power adapter included) or single-cell Li-Ion battery (not included) Operating Temperature: 0°C to +50°C
• **Form Factor**	Carrier Board 130mm x 130mm, SOM 44mm x 26.5mm

Software:

• **OS Support**	Android™ 7 Nougat, Android™ 5 Lollipop, Linux®, Microsoft Azure Certified Note that all hardware features may not be supported by all SW — see latest SW release notes for details.

Optional Display and Camera

Development Kit includes: Carrier board, SOM, 12V power supply, HDMI adapter module, HDMI cable, Quick Start Guide, access to full documentation, SW updates, and basic development kit support.

Purchasing Information:

• **Open-Q™ 410 Dev Kit**	PN: QC-DB-H00003
• **Open-Q™ 410 SOM**	PN: QC-DB-H00004
• **Open-Q™ 410 LCD**	PN: QC-DB-H00005
• **Open-Q™ 13MP Camera**	PN: QC-DB-I10006

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