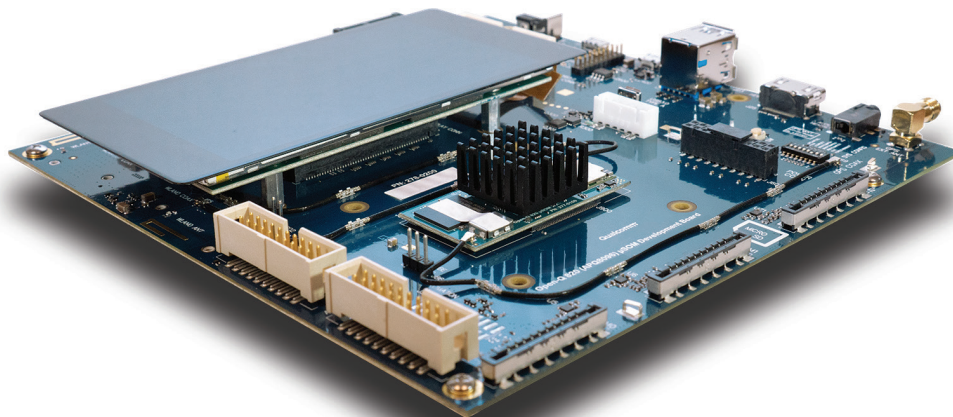


Open-Q™ 820Pro μSOM Development Kit

Based on the Qualcomm® APQ8096SG Long-Life, Second-Gen, SoC

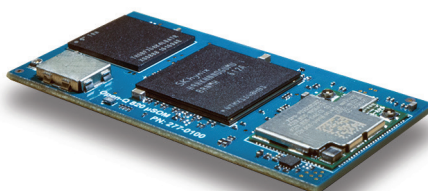


Lantronix's Open-Q™ 820Pro μSOM Development Kit is a versatile, easy-to-use, exposed board platform, powered by our pre-certified, ultra-compact, production-ready, Open-Q™ 820Pro μSOM, based on the Qualcomm® 820E SoC (APQ8096SG). The 820Pro μSOM is a pin compatible, drop-in replacement for the existing Open-Q™ 820 μSOM, requiring only SW changes to provide higher performance and long-term availability.

The development kit provides the ideal starting point for evaluating the Open-Q™ 820Pro μSOM or to develop next generation embedded and IoT devices with highly integrated features. The platform consists of Lantronix's Open-Q™ 820Pro μSOM, an 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 the ultra-compact Open-Q™ 820Pro μSOM
- HDMI output, MIPI DSI display connector
- 3x MIPI CSI camera connectors
- 1x PCI slot and 1x mini-PCIe socket
- Exposed I/O for evaluation and proof of concept work
- Mini-ITX Form-factor Carrier Board (170x170mm)
- Android™ 9, Debian Linux®



Open-Q™ 820Pro 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



Lantronix Open-Q™ 820Pro μSOM Development Kit

Hardware Specifications:

Open-Q™ 820Pro μSOM		*See the Open-Q 820Pro μSOM product brief for complete details
• Processors	Qualcomm® APQ8096SG built on 14nm technology Kryo™ Quad-Core CPU @ 2.342/1.593 GHz, Adreno™ 530 GPU @ 652.8 MHz, Hexagon™ 680 DSP @ 825 MHz	
• Memory/Storage	4GB LPDDR4 SDRAM, 32GB UFS 2.0 Flash 1-lane, gear 3	
• Wireless	Pre-certified Wi-Fi 802.11a/b/g/n/ac 2.4/5Ghz 2x2 MU-MIMO (QCA6174A) + Bluetooth 4.2 + BLE	
• Location Services	Qualcomm® IZat™ Gen 8C— GPS, GLONASS and Compass Receiver (WGR7640) with U.FL antenna connector	
Open-Q™ 820Pro μSOM Carrier Board		
• Display Interfaces	HDMI Output — up to 4K Ultra HD 60fps Type A output Optional LCD / Touch Panel — up to 4K Ultra HD 60fps	
• Camera Interfaces	3x 4-lane MIPI CSI camera connectors for optional camera accessories	
• Audio Interfaces	Hi-end Audio Codec (WCD9335) on carrier board with generous audio I/O: 1x 3.5mm ANC Jack headset 20pin Audio Input expansion header: 3x analog in, 3x digital in 20pin Audio Output expansion header: 5x analog out, 1x digital out	
• I/O Interfaces	1x UART debug (USB micro-B), 1x USB 2.0 client micro-AB, 2x USB 2.0 host type A, 2x USB 3.0 host on expansion header 2x PCIe: 1x mini PCIe v1.2, 1x PCIe X1 slot v2.1 8x Digital IO 4-pin port configurable as I2C, SPI, UART or GPIO, Haptics output, LED driver outputs, microSD card socket	
• Wireless	Dual Wi-Fi/BT PCB antennas, GNSS front-end LNA/filter with PCB antenna and external antenna connector	
• Power Input	Input 12V/3A or single-cell Li-ion battery (not included)	
• Size	SOM 50mm x 25mm, Carrier Board Mini-ITX 170mm x 170mm	
Software:		
• OS Support	Android™ 9, Debian Linux® *Note that all hardware features may not be supported by SW — see latest SW release notes for details	

Software:



Optional Display and Camera

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

Purchasing Information:

• Open-Q™ 820Pro μSOM Dev Kit	PN: QC-DB-I20003
• Open-Q™ 820Pro μSOM	PN: QC-DB-I20004
• Open-Q™ LCD	PN: QC-DB-G00005
• Open-Q™ 13MP Camera	PN: QC-DB-I10006

Contact Information:

Americas

800.422.7055
americas_sales@lantronix.com
www.lantronix.com
NASDAQ: LTRX

Europe

+31 (0) 76.52.3.6.74 4
eu_sales@lantronix.com

Asia/Pacific/Japan

+852 3428.2338
asiapacific_sales@lantronix.com
China: +86.21.6237.8868
India: +91 994-551-2488
Indonesia: +91 994-551-2488
Japan: +81.8.50.1354.6201

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