LANTRONIX®

Open-Q™ 820Pro µSOM
Based on the Qualcomm® APQ8096SG Long-Life, Second-Gen, SoC

Lantronix's Open-Q™ 820Pro µSOM provides an even better power-performance combination than our standard 820 µSOM, with higher performance, more memory, and long-life in the same µSOM form factor. The ultracompact, production ready, pre-certified 820Pro µSOM is a pin compatible, drop-in replacement for the existing 820 µSOM, requiring only SW changes to provide higher performance and long-term availability. With 9% faster CPU and 5% faster GPU at the same power consumption, combined with 33% more RAM, the 820Pro µSOM can provide either more processing power for your demanding applications, or lower average power consumption for the same processing tasks.

Lantronix supports the latest Android and Linux SW for the 820 and offers a supporting development kit to allow quick and easy evaluation of the 820Pro µSOM and to fast-track new product development.

Key Features

- Qualcomm® APQ8096SG Long-life SoC
- Kryo™ Quad-Core @ 2.342 GHz/1.593GHz
- 4GB LPDDR4 and 32GB UFS
- FCC/IC Pre-certified Wi-Fi/BT Module
- Ultra-compact 50mm x 25mm
- Android™ 9, Debian Linux®

Applications

- Next-gen computer vision systems
- Robotics / drones / UAVs
- Industrial IoT
- Digital Signage
- Virtual reality / augmented reality applications
- Stereo-vision cameras
- Retail analytics cameras

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

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Lantronix Open-Q™ 820Pro µSOM

Hardware Specifications:

Open-Q™ 820Pro µSOM

• **Processors**	Qualcomm® APQ8096SG built on 14nm technology Qualcomm® Kryo™ Quad-Core 64-bit CPU: 2X Gold cores @ 2.342 GHz, 2X Silver cores @1.593 GHz Qualcomm® Adreno™ 530 GPU @ 652.8 MHz with OpenGL ES 3.1, OpenCL 2.0 Full, DirectX 11, Path Rendering Qualcomm® Hexagon™ 680 DSP @ 825 MHz
• **Memory/Storage**	4GB LPDDR4 SDRAM dual-channel PoP @ 1866MHz 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) with U.FL antenna connector Bluetooth 4.2 + BLE
• **Location Services**	Qualcomm® IZat™ Gen 8C— GPS, GLONASS, Compass (WGR7640) with U.FL antenna connector
• **Display Interfaces**	2x MIPI-DSI 4-lane, up to 3840x2400 @60fps, 1x HDMI 2.0 up to 4K @ 60fps Up to 3 concurrent displays — 2 panels + external
• **Camera Interface**	3x 4-lane MIPI CSI supporting up to 28MP with dual ISP Qualcomm® Spectra™ Dual 14-bit ISP
• **Video**	H.264 (AVC): Video Playback and Capture at 4K60 H.265 (HEVC): Video Playback at 4K60 and video capture at 4K30
• **Audio**	1x SLIMbus supporting WCD9335 audio codec (external), and 2x I2S, or 3x I2S for other external audio devices
• **Power/Battery Management**	Power management and battery charging (PMI8996)
• **I/O**	1x USB 3.0 client or host, 1x USB 2.0 client or host, 2x PCIe v2.1, 8x BLSP configurable ports (I2C, SPI, UART or GPIO), 1x SDIO, LED driver outputs
• **Operating Environment**	Input 3.6V to 4.2V Operating Temperature -10°C to +70°C
• **Form Factor**	3x 100 pin board to board connectors 50mm x 25mm

Software:

• **OS Support**	Android™ 9, Debian Linux® *Note that all hardware features may not be supported by all SW — see latest SW release notes for details
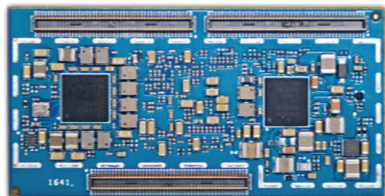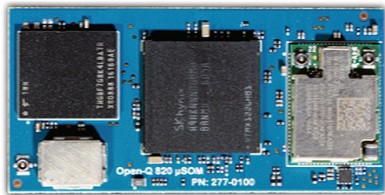
Purchasing Information:

• **Open-Q™ 820Pro µSOM**	PN: QC-DB-I20004

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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Certifications

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