Open-Q™ 820Pro μSOM Development Kit
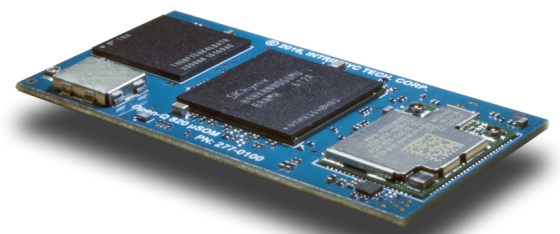
Based on the Qualcomm® Snapdragon™ 820E Long-Life, Second-Gen, System-on-Chip

Intrinsyc's Open-Q™ 820**Pro** μSOM Development Kit is a versatile, easy-to-use, exposed board platform, powered by our pre-certified, ultra-compact, production-ready, Open-Q™ 820**Pro** μSOM, based on the Qualcomm® Snapdragon™ 820E SoC (APQ8096SG). The 820**Pro** 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™ 820**Pro** μSOM or to develop next generation embedded and IoT devices with highly integrated features. The platform consists of Intrinsyc's Open-Q™ 820**Pro** 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™ 820**Pro** 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

www.intrinsyc.com

Hardware Specifications

Open-Q™ 820Pro µSOM
*See the Open-Q™ 820Pro µSOM datasheet for complete details

Processors	Qualcomm® Snapdragon™ 820E (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	3x 4-lane MIPI CSI camera connectors for optional camera accessories
Audio	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	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

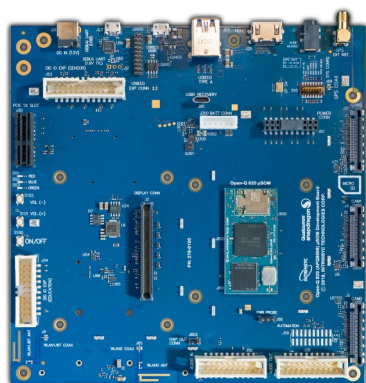|	
OS Support	Android™ 9, Debian Linux® *Note that all hardware features may not be supported by SW — see latest SW release notes for details

Optional Display & Camera

Purchasing Information

Open-Q™ 820 µSOM Dev Kit	Part number: QC-DB-I20003	**Store Link**
Open-Q™ 820 µSOM	Part number: QC-DB-I20004	**Store Link**
Open-Q™ LCD	Part number: QC-DB-G00005	**Store Link**
Open-Q™ 13MP Camera	Part number: 030-0181-0101_B	**Store Link**

Intrinsyc Product Design Services

Intrinsyc also offers comprehensive product development including hardware, software, mechanical engineering, as well as specialty services such as camera, audio, DSP, and RF development.
Contact Intrinsyc to discuss your product design needs today:

sales@intrinsyc.com

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.

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