



Qualcomm®
snapdragon

Open-Q™ 820 μSOM Development Kit

Based on the Qualcomm® Snapdragon™ 820 processor

**START DESIGNING
YOUR EMBEDDED
AND IOT DEVICES
TODAY**

Intrinsyc's Open-Q™ 820 micro System on Module (μSOM) Development Kit is a versatile, easy-to-use exposed board platform that uses our ultra-small form-factor μSOM. This development kit provides the ideal starting point for creating the next generation embedded and IoT devices. The platform consists of Intrinsyc's Open-Q™ 820 μSOM, a carrier board exposing all the available I/O, and a range of accessories to fast track your product development.

Technical Information

Processor	Snapdragon™ 820 Qualcomm® Kryo™ CPU Quad-Core, 64-bit, 2.15GHz Qualcomm® Adreno™ 530 GPU Qualcomm® Hexagon™ 680 DSP
Memory/Storage	3GB LPDDR4 RAM (1866MHz), 32GB UFS 2.0 Flash 1-lane, gear 3
Wireless	Wi-Fi 802.11a/b/g/n/ac 2.4/5.0 GHz 2x2 MU-MIMO Bluetooth 4.1
Location	Qualcomm® IZat™ Gen 8C GPS
Display	2x MIPI-DSI 4-lane, 60fps, up to 2560x1600 (single port), 4096x2160 (dual port) 1x HDMI 2.0 up to 4096x2160, 60fps
Camera	Qualcomm® Spectra™ ISP 3x MIPI-CSI 4-lane, dual ISP, up to 28MP
Audio	Codec (WCD9335) 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
Other Interfaces	1x UART debug (USB micro-B) 2x USB 3.0 host Type A 2x USB 3.0 host available through header 1x USB 2.0 client, micro-AB 2x PCIe 1x mini PCIe v1.2, 1x PCIe X1 slot v2.1 1x μSD Socket, 1x SIM card slot 8x Digital IO 4-pin port configurable as I2C, SPI, UART or GPIO
OS Support	Android 6 Marshmallow, Android 7 Nougat, Android 8 Oreo Contact Sales for Linux
Operating Environment	Power input: 12V barrel jack or single-cell Li-Ion battery Operating Temperature: -10°C to +70°C, size: 170mm x 170mm



DESIGN : DEVELOP : BUILD

**63%
Smaller**

Highest combination of power and performance; our ultra-small Snapdragon™ 820 based μSOM dev kit—63% smaller than our previous SOM.

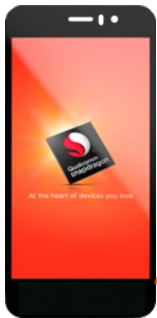


Realize DSLR quality image capture with the new Spectra ISP

offering advanced noise reduction, low light performance and fast focus methods such as PDAF and contrast AF. With dedicated HVX (Hexagon Vector Extensions) running on the Hexagon 680 DSP provides powerful image processing.



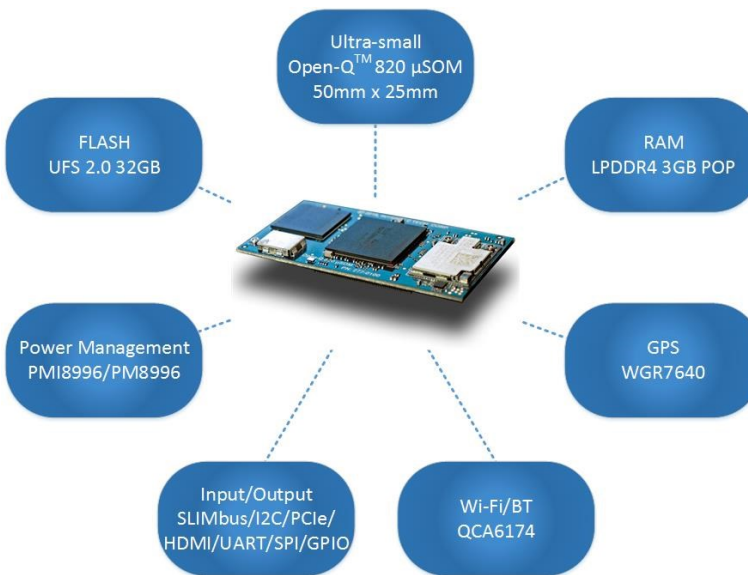
Use the latest Gen 8C GPS technology. Track, tag and embed additional information with real time device location data.



Touch LCD (optional)



Up to three cameras (optional)



Deliver a superior, immersive user experience with the new custom 64-bit Kryo CPU. The tightly integrated heterogeneous architecture including the Hexagon 680 DSP and Adreno 530 GPU, offers more intelligent solutions with the highest peak performance and greatest power efficiency.



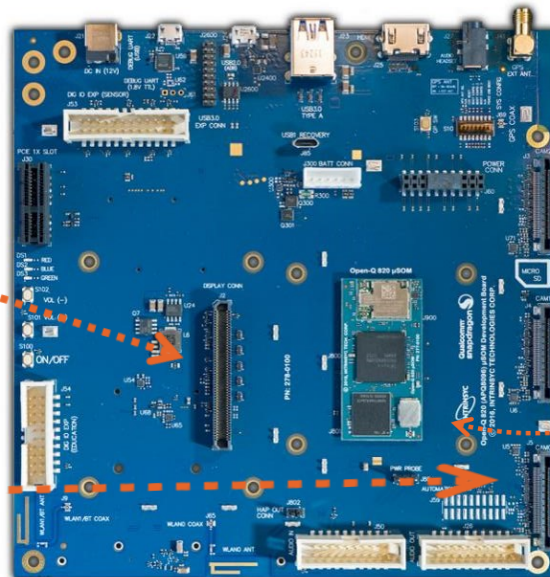
Design and develop smart connected devices with integrated wireless connectivity. Support for the fastest 802.11ac 2x2 MU-MIMO Wi-Fi offering the quickest data transfers and streaming speeds as well as Bluetooth 4.1 for low energy peripheral connectivity.



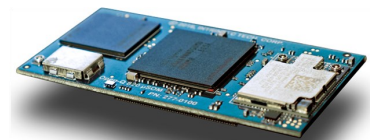
Record, stream and playback high quality multi-media video with H.265 (HEVC) encode and decode. Deliver eye catching visuals with both wired and wireless displays up to 4K UHD at 60fps.



Offering seamless connectivity to external memory, sensors, and a host of other peripheral devices via the comprehensive list of configurable IO. The Open-Q™ 820 μSOM offers great reliability, quality and speed.



170mm x 170mm



50mm x 25mm

Datasheet: Open-Q 820 μSOM DK r2.8

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