



Open-Q™ 820 Embedded Development Kit

Based on the Qualcomm® Snapdragon™ 820 processor

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

Intrinsyc's Open-Q 820 Embedded Development Kit is a versatile, easy-to-use exposed board platform providing the ideal starting point for creating the next generation embedded and IoT devices. The platform consists of Intrinsyc's Open-Q™ 820 System on Module (SOM), a carrier board exposing all the available IO, and a range of accessories to fast track your product development.

Technical Information

Open-Q 820 SOM	Snapdragon 820 Qualcomm® Kryo™ CPU, quad core, 64bit, 2.2GHz Qualcomm® Adreno™ 530 GPU Qualcomm® Hexagon™ 680 DSP Qualcomm® Spectra™ ISP 3GB LPDDR4 RAM (1866MHz) 32GB UFS 2.0 Flash 1-lane, gear 3 Wi-Fi 802.11b/g/n/ac 2.4 / 5.0 GHz 2x2 MU-MIMO Bluetooth 4.1 Qualcomm® IZat™ Gen 8C GPS Qualcomm Hi-Fi Audio Codec
Display	2x MIPI-DSI 4-lane, 60fps, up to 2560x1600 (single port), 4096x2160 (dual port) 1x HDMI 2.0 up to 4096x2160, 60fps
Camera	3x MIPI-CSI 4-lane, dual ISP, up to 28MP
Audio	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) 1x USB OTG micro-B 1x USB 3.0 host, micro-AB 2x USB 2.0 host, type A 2x PCIe 1x mini PCIe v1.2, 1x PCIe X1 slot v2.1 1x µSD Socket 8x Digital IO 4-pin port configurable as I ² C, SPI, UART or GPIO
OS Support	Android 6.0 (Marshmallow)
Operating Environment	Input Power 12V SOM Dimension 82mm x 42mm Carrier Board Dimension 170mm x 170mm



DESIGN : DEVELOP : BUILD



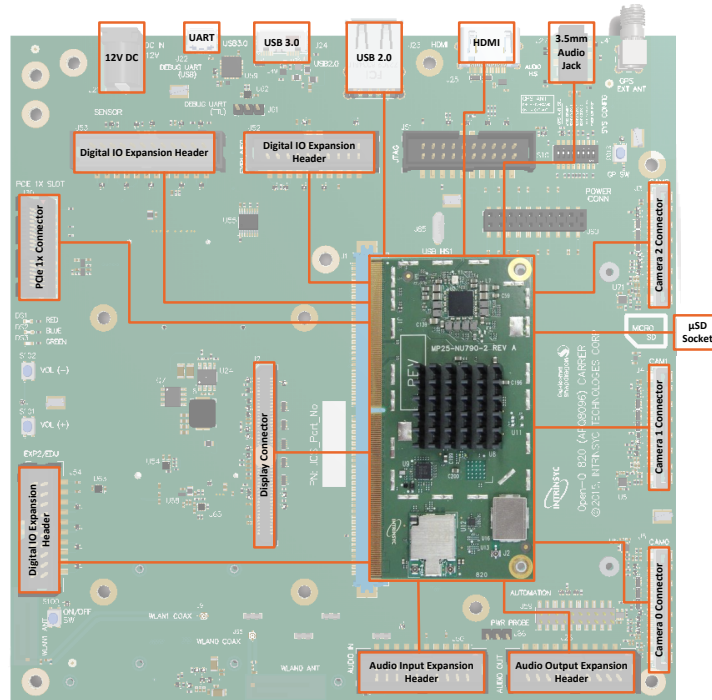
Implement Hi-Fi quality surround sound with 3D positional audio, multi-codec support including 24bit/192kHz FLAC playback. Record multi-channel audio with voice activation and active noise cancellation offered by Fluence™.



Realise 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 provide powerful image processing and computer vision solutions.



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



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



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.



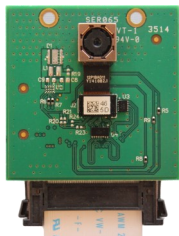
Record, stream and playback high quality multi-media video with H.265 (HEVC) encode and decode. Deliver eye catching visuals with both wired and wireless displays up to 4K UHD at 60fps.



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 development kit helps fast tracks your product development.

Optional Accessories

13MP Camera Module



4.5" FWVGA LCD Touch Display



ST Micro MEMS sensor module



For additional information and to order please visit

www.intrinsyc.com/820devkit

Datasheet: Open-Q 820 Dev Kit, June 2016, Rev. 0.4

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