



Open-Q™ 845 μSOM Development Kit

Based on the Qualcomm® Snapdragon™ SDA845 processor

Intrinsic's Open-Q™ 845 μSOM Development Kit is a versatile, easy-to-use, exposed board platform, powered by our ultra-compact, production-ready, Open-Q™ 845 μSOM. The 845 μSOM is based on the powerful Qualcomm® Snapdragon™ SDA845 SoC, their latest and most powerful IoT chipset. With new processing capabilities, on-device AI powers, and generous I/O, the 845 μSOM is ideal for powering the most advanced robotics, drones, cameras, and embedded IoT devices.

The development kit provides the ideal starting point for evaluating the Open-Q™ 845 μSOM or developing next generation embedded and IoT devices. The platform consists of Intrinsic's Open-Q™ 845 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

- Qualcomm® Snapdragon™ SDA845 processor
- Powered by micro-sized (50x25mm) Open-Q 845 μSOM
- Open-frame Mini-ITX Form-factor carrier board for evaluation and development
- Numerous I/O and connectivity options
- Optional LCD/touchscreen and cameras
- Wi-Fi and Bluetooth antennas on carrier board
- Android™ 9, Yocto Linux



Open-Q™ 845 μSOM



Hardware Specifications

Open-Q™ 845 μSOM

*See the Open-Q 845 μSOM datasheet for complete details

Processors	Qualcomm® Snapdragon™ SDA845 built on 2nd-Gen 10nm technology: Kryo™ 385 Quad-core CPU, Hexagon™ 685 DSP, Adreno™ 630 GPU
Memory/Storage	4GB or 6GB dual-channel high-speed LPDDR4X SDRAM at 1866MHz + 32GB or 64GB UFS Flash Storage
Wireless	Wi-Fi 802.11a/b/g/n/ac 2.4/5Ghz 2x2 MU-MIMO (WCN3990) + Bluetooth 5.x
Power Management	Qualcomm® PM845 + PM8998 + PM8005 power management and battery charging on SOM

Open-Q™ 845 μSOM Carrier Board

Display Interfaces	DisplayPort v1.4 on USB Type-C, up to 4K60 with USB data concurrency 2x 4 lane MIPI DSI connector for optional LCD / Touch panel accessory or custom display adapters
Camera Interfaces	3x 4-lane MIPI CSI + 1x 2-lane MIPI CSI with connectors to mate to optional camera accessories
Audio Interfaces	Qualcomm® WCD9340 Hi-Fi audio codec module on carrier board, with 1x 3.5mm headset jack (stereo out + mic in) Additional audio expansion: Analog output header, Analog input header, digital I/O header (SLIMBus/I2S/PDM)
I/O Interfaces	2 USB ports: 1x USB3.1 Type-C + DisplayPort v1.4 with USB data concurrency, 1x USB 3.1 Type-A host 1x PCIe Gen3 1-lane, microSD card socket I/O expansion headers with UART, I2C, SPI, configurable GPIOs
Wireless	Dual Wi-Fi/BT PCB antennas on carrier board
Power Input	Input: 12V/3A (adapter included) or single-cell Li-Ion battery (not included)
Form Factor	SOM: 50mm x 25mm, Carrier Board: Mini-ITX 170mm x 170mm

Software

OS Support	Android™ 9 Pie based on kernel v4.9, Linux OS based on Yocto Rocko, kernel v4.9 * Note that all hardware features may not be supported by all SW — see latest SW release notes for details.
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Optional Display and Camera

Purchasing Information

Open-Q™ 845 μSOM Dev Kit	PN: QC-DB-P10003	Store Link
Open-Q™ 845 μSOM (std memory)	PN: QC-DB-P10004	Store Link
Open-Q™ 845 μSOM (large memory)	PN: QC-DB-P10004B	Store Link
Open-Q™ LCD	PN: QC-DB-G00005	Store Link
Open-Q™ 13MP Camera	PN: 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, ST Micro sensor board, 12V power supply, Quick Start Guide, access to full documentation, SW updates, and basic development kit support.

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