

Open-Q™ 2500 System on Module

Based on the Qualcomm® Snapdragon™ Wear SDW2500 platform

Intrinsyc's Open-Q™ 2500 SOM combines critical elements for wearable device innovation and performance: high performance, small size, low power, integrated sensor support, and seamless connectivity. The SOM is designed to meet the needs across a range of Android based wearable devices including pet, children, and elderly trackers, high-end fitness trackers, smartwatches, connected headsets, smart eyewear, and more. An integrated, ultra-low power sensor hub supports rich algorithms with superior accuracy, and to help extend battery life for wearables, the Snapdragon Wear 2500 platform incorporates a new wearable PMIC, which supports reduced power consumption both on standby and when active.

Key Features

- High Performance Quad-Core ARM Cortex A7
- DSP for low power sensor processing
- Qualcomm® Wi-Fi/BT 802.11b/g/n + BT 4.x
- Qualcomm® Gen 8C GNSS location system
- Camera 2-lane MIPI CSI up to 8MP
- Long battery life with new wearables specific PMIC
- USB Type-C to support Qualcomm Quick Charge

Applications

- Connected wearables
- Pet, children, elderly trackers
- Fitness trackers
- Connected headsets
- Smart eyewear
- Ultra-compact embedded devices



Hardware Specifications

Processor	Snapdragon™ Wear 2500 (APQ8009W) optimized for wearables Quad-Core ARM Cortex A7 (32-bit) at 1.094GHz Qualcomm® Adreno™ 304 GPU DSP for low power sensor core
Memory/Storage	PoP memory: 1GB LPDDR3 RAM, 8GB eMMC Flash
Wireless	Wi-Fi 802.11b/g/n (WCN3620) w/ U.FL ant. connector Bluetooth 4.x
Location Services	Gen 8C GNSS (WGR7640) with U.FL connector
Display Interface	4-lane MIPI DSI, up to 720p at 60fps optimized for wearables
Camera Interface	2-lane MIPI CSI supports up to 8MP camera
Audio Interfaces	2x I2S interfaces + DMIC input for digital audio peripherals
Power/Battery Management	Power management and battery charging on SOM with Quickcharge capability via USB Type-C (PMW3100 power management chip)
USB Interface	USB2 with Type-C interface for quick-charge capability
General I/O	GPIO, BLSP, Sensor I/O, SDIO
Sensor Support	Snapdragon sensor core DSP Interface
Operating Environment	Input voltage: 3.6V to 4.2V Operating Temperature: -25°C to +85°C Tc (based on component case temperature specifications)
Form Factor	Size: 31.5mm x 15mm with 2x 100 pin board to board connectors

Software

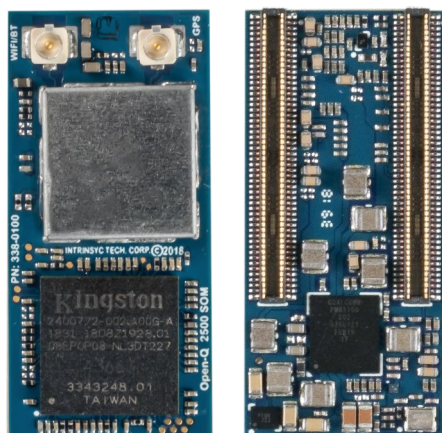
OS Support	Android™ 8 for Wearables — Note that all hardware features may not be supported by all SW — see latest SW release notes for details
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Purchasing Information

Open-Q 2500 SOM	Part number: QC-DB-J10004	Store Link
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Open-Q 2500 Dev Kit	Part number: QC-DB-J10003	Store Link
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Alternate SOM configurations available by special order (minimum order quantities apply) - e.g. no GPS, different memory size, etc. Contact sales to discuss your specific needs today: sales@intrinsyc.com



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