

Open-Q™ 8750CQ μSOM

Based on Qualcomm® Dragonwing™ Q-8750 System-on-Chip



Ideal for Advanced Video and AI Applications

The Open-Q™ 8750CQ μSOM, powered by the Qualcomm Dragonwing™ Q-8750 processor, delivers high-performance on-device AI, advanced video processing, and multi-camera capabilities for next-generation edge devices.

With support for 8K/4K video, up to 12 cameras, fast interfaces, and rugged temperature operation, it is designed for demanding applications such as Enterprise Drones, Automated Guided Vehicles and Autonomous Mobile Robots, Smart Surveillance, and Video Collaboration Systems.

Lantronix offers 10+ years of product longevity, TAA/NDAA-compliant options, and strict BOM and quality controls to support reliable, long-term product deployment. With more than 20 years of hardware and software expertise and 1,200+ successful projects, Lantronix will be your long-term partner, ensuring the ongoing success of your product journey.

Key Features

- Qualcomm® Dragonwing™ Q-8750 SoC
- With 77 TOPS of AI compute, the processor supports INT4/8/16 and FP16 precision
- Footprint compatibility between module generations
- Android™ 15* and Yocto Linux
- Enhanced camera architecture with 3 ISPs supporting 6 camera interfaces, up to 5 concurrent cameras.
- Multiple high speed connectivity options
- Long Life – until 2035

Applications

- IP Cameras
- Multi-camera and smart camera systems
- Drones & UAVs
- Video Surveillance systems
- Robotics / AMR
- Smart City / Infrastructure

Engineering Services:

We provide a full solution – our unparalleled engineering expertise and product development skills deliver innovative products that are cost-effective and can jumpstart your Go-to-Market timeline.

Our business model offers turnkey product development services, or we can augment your team in specific areas of development. The choice is yours.

Key development expertise in:

- Camera development and tuning
- Voice control
- AI/ML Application
- Mechanical & RF design
- Thermal & power optimization

IoT product development made easy.



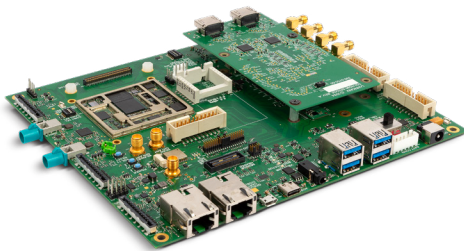
Hardware Specifications:

• Processors		Qualcomm Dragonwing™ Q-8750 SoC, Built on a cutting-edge 3nm process Max clock speed of 4.32 GHz powered by the custom 7- or 8-core Qualcomm Oryon CPU	
		Adreno™ A830 : Max speed of 1.1 GHz	Qualcomm® Hexagon™ NPU Up to 77 Dense TOPS; supports INT4/8/16 and FP16 precision
• Memory/Storage		12GB LPDDR5x and 256GB UFS*	
• Wireless		Supports external Wi-Fi 7 and Bluetooth 6 connectivity	
• Display Interfaces		2 x 4 lane MIPI-DSI, DP v1.4 up to 8K60 Data rate: up to 2.5 Gbps/lane Supports up to UHD + (3840 x 2560) @ 144 Hz	
• Camera Interfaces		Up to 6 camera interfaces; up to 5 concurrent cameras CSI D-PHY 4-lane, with up to 2.5 Gbps/ lane data rate CSI C-PHY 3-trio, with up to 13.68 Gbps/ trio	3 x 48 MP at 30 fps ZSL ISP 1 x 108 MP @ 30 fps ZSL 3 x ful ISPs + 2 x Lite ISPs
• Video Performance	Decode	Video decode up to 4K240/8K60. Native decode support for H.265 Main 10, H.265 Main, H.264 High, VP9 profile 2 and AV1	
	Encode	Video encode up to 4K120/8K30. Native encode support for H.265 Main 10, H.265 Main, H.264 High	
	Dec & Enc	Concurrent 4K60 Dec and 4K60 Enc	
• Audio		SoundWire, DMICs, MI2S interface and Hi-Fi I2S	
• High Speed Connectivity		1x PCIe Gen 3 2-lane 1x USB 3.1 Gen 2 @ 10 Gbps, support USB Type-C with DP	
• I/O Interfaces		GPIO, UART, I2C, I3C, SPI, I2C hubs via QUP	
• Power/Battery		Power management and battery charging solution on SOM	
• Operating Environment		Input voltage: 3.55 – 4.4V; Typ 4V Operating Temperature: -30°C to +75°C	
• Form Factor		33 x 39 x 3.85 mm LGA SOM	

Software:

• OS Support	Yocto Linux, Android*
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* Q-8750 Chipset Performance, see SOM Release Notes for details on tested configurations and platforms.



Companion Development Kit, accessories
available separately

Purchasing Information:

SKU	Description
QC8750-1AP-E0	Open-Q 8750CQ μSOM (12GB/256GB)
Alternate SOM configurations available by special order (minimum order quantities apply) - e.g. different memory size, etc. Contact sales to discuss your specific needs today.	

Certifications



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Learn more at lantronix.com/open-q-8750-usom