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Preliminary!

Open-Q™ 7790CQ µSOM

Based on Qualcomm® Dragonwing™ Q-7790 System-on-Chip



Ideal for Advanced Video and AI Applications

The Open- Q™ 7790CQ µSOM, powered by the Qualcomm® Q-7790 chipset, delivers high-performance computing and advanced multimedia capabilities in a compact system-on-module (SOM) form factor. Designed for demanding edge computing, AI-enabled, multimedia, and embedded applications, the module provides the processing performance, flexibility, and connectivity required for next-generation industrial and consumer products.

The Open-Q 7790CQ µSOM is well suited for a broad range of applications, including multi-camera and smart camera systems, drones, seatback monitors, rugged handhelds, video conferencing and robotics.

Backed by Lantronix's 10+ years of product longevity, TAA/NDAA-compliant options, rigorous BOM and quality controls, and more than 20 years of hardware and software expertise across 1,200+ successful projects, the Open-Q 7790CQ µSOM provides a reliable foundation for long-term product development and deployment.

Key Features

- Qualcomm® Dragonwing™ Q-7790 SoC
- On-device AI Engine up to 24 TOPS
- Footprint compatibility between module generations
- Android™ 16 and Linux* Support
- Multiple MIPI camera and display ports
- Multiple high speed connectivity options
- Long Life – until 2034+

Applications

- IP cameras
- Drones
- Video surveillance systems
- Robotics
- Multi-camera and smart camera systems
- Retail devices

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
- Machine learning
- Mechanical & RF design
- Thermal & power optimization

IoT product development made easy.

Qualcomm Dragonwing

PRODUCT LONGEVITY PROGRAM

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Lantronix Open-Q™ 7790CQ µSOM

Production Ready
Computing Module

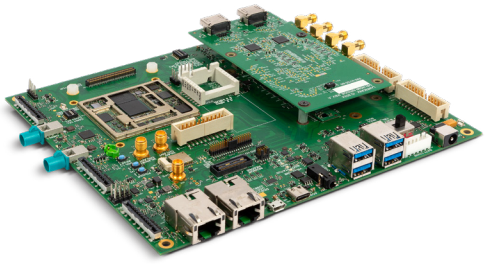
Hardware Specifications:

• **Processors**		Qualcomm Dragonwing™ Q-7790 SoC Octa Core 1 × Kryo Prime @ 2.8 GHz + 4 × Kryo Gold @ 2.4 GHz + 3 × Kryo Silver @ 1.8 GHz	
		Adreno™ 722 @ Up to 1.15 GHz	24 TOPS AI Engine Qualcomm® Hexagon tensor processor with Hexagon Vector eXtensions (HVX) and Hexagon Matrix eXtensions (HMX)
• **Memory/Storage**		8GB LPDDR5x and 128GB UFS 3.1	
• **Wireless**		Supports external Wi-Fi 7 and Bluetooth 6 connectivity	
• **Display Interfaces**		2 x 4 lane MIPI-DSI Data rate: up to 2.5 Gbps/lane WQHD+ @ 144 Hz, WFHD+ @ 180 Hz DisplayPort v1.4 over Type-C with MST	
• **Camera Interfaces**		4 × CSI D-PHY-1.2 4-lane, up to 2.5 Gbps/lane; Or C-PHY-2.0 3-trio, up to 13.68 Gbps/trio Qualcomm spectra ISP	Supports up to 4 cameras Supports up to 4 concurrent cameras; 3 × TFE (Multi Context) + 1 × IFElite ISP, supports up to 1 × 200MP @ 30 fps without MMF or 1 × 64 MP @ 30 fps or 3 × 21 MP @ 30 fps
• **Video Performance**	Decode	Video decode up to 4K120. Native decode support for H.265 Main 10, H.265 Main, H.264 High	
	Encode	Video encode up to 4K60. Native encode support for H.265 Main 10, H.265 Main, H.264 High	
• **Audio**		SWR, 2 digital MIC, 2 MI2S interfaces	
• **High Speed Connectivity**		1x PCIe Gen 3 1-lane 1x PCIe Gen 3 2-lane 1x USB 3.1 Gen 2 @ 10 Gbps, support DisplayPort v1.4 over Type-C with MST	
• **I/O Interfaces**		UART, I2C, SPI, I2S, ADI, SD Card	
• **Power/Battery**		Power management and battery charging solution on SOM	
• **Operating Environment**		Input voltage: 3.55–4.4 V, Typ. 3.8 V Operating Temperature: -35°C to +75°C	
• **Form Factor**		33 x 39 x 3.85 mm LGA SOM	

Software:

• **OS Support**	Yocto Linux, Android*

** Q-7790 Chipset Performance, see SOM Release Notes for details on tested configurations and platforms.*



Companion Development Kit, accessories available separately

Purchasing Information:

SKU	Description
QC7790-1AP-DN	Open-Q 7790CQ µSOM (8GB/128GB)

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-7790-usom

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