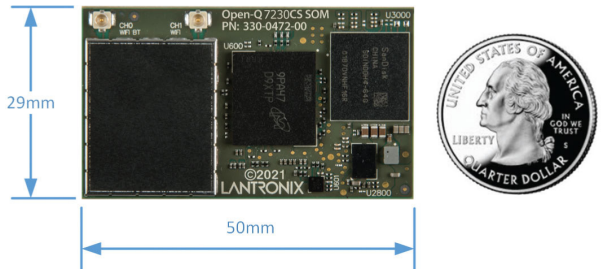
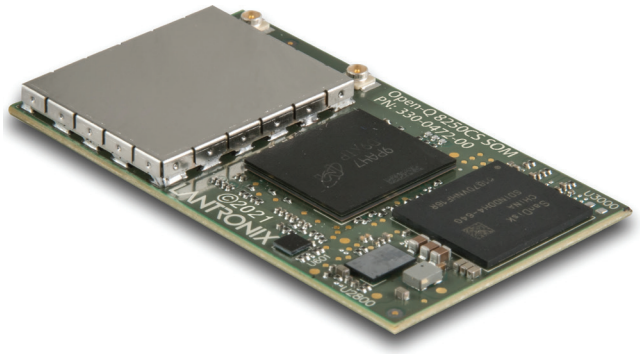
LANTRONIX®

Open-Q™ 7230CS SOM (System on Module)

Based on Qualcomm® QCS7230 System-on-Chip





Optimized Processor for Compute Intensive Camera and Edge AI Applications

- SOM with powerful specialized processing cores
- On-device Qualcomm® AI Engine™ (7 TOPS) for machine vision, neural networks, deep learning workloads at low power
- Powerful image signal processor supporting multiple video streaming cameras
- Up to 8K video encode/decode, up to 64MP photo and video capture
- WiFi 6, Bluetooth Low Energy v5.1

The Open-Q™ 7230CS production-ready computing SOM provides a power platform for edge computing:

Connect – integrated WiFi 6 & BLE 5.1 in chipset

Compute – efficient CPU, GPU, neural, and DSP engines

Control – various I/O interfaces to external systems to provide intelligent feedback

The development software package has capability to support multiple concurrent decode and encode sessions, UVC/UAC source mode for video collaboration bars to function as a USB class device, an AI director framework to track and zoom a camera onto the person speaking and QSAT for smooth zoom.

The Open-Q™ 7230CS is pin-compatible with the existing Open-Q™ 8250CS and Open-Q™ 5165RB products. Lantronix offers our customers product options that enable them to scale their product line with less investment and save time.

Key Features

- Qualcomm® 7230CS SoC
- Up to 8GB LPDDR5 RAM + 128GB UFS Flash
- Android™ 13, Yocto Kirkstone
- On-device AI Engine up to 7 TOPS
- Dedicated Computer Vision Engine
- Multiple MIPI camera and display ports
- Multiple high speed connectivity options
- Ultra-compact 50 x 29 mm form factor

Applications

- Video collaboration systems
- Multi-camera and smart camera systems
- Machine vision platforms
- Fleet management
- Medical imaging, connected healthcare
- Retail self-check-out
- Digital signage

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

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Lantronix Open-Q™ 7230CS SOM

Production Ready Computing Module

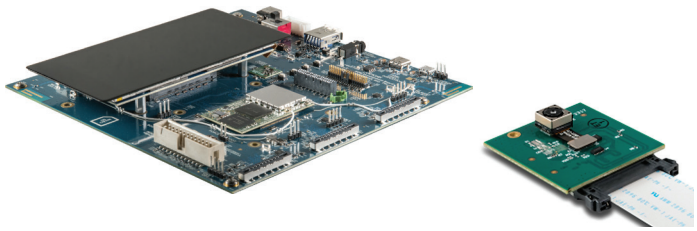
Hardware Specifications:

• **Processors**	Qualcomm® 7230CS SoC built on 7nm technology: Kryo™ 585 Octa-core CPU: 1 Kryo Gold prime @ 2.84 GHz + 3 Kryo Gold @ 2.42 GHz + 2 Kryo Silver @ 1.81 GHz Hexagon™ 698 DSP with quad Hexagon Vector eXtensions V66Q		
	Adreno™ 650 GPU @ Fmax = 587 MHz Spectra™ 480 Image Signal Processor Adreno™ 665 Video Processing unit	Adreno™ 995 Display Processing unit NPU230 Neural Processing unit SPU240 Secure Processing unit	
• **Memory/Storage**	6GB LPDDR5 @ 2750MHz, and 64GB UFS, or 8GB LPDDR5 @ 2750MHz and 128GB UFS		
• **Wireless**	802.11ax 2x2 MU-MIMO + Bluetooth 5.1, Bluetooth Milan ready		
• **Display Interfaces**	Up to three 4K displays (1 internal display through DSI and 2 external displays through DisplayPort) 2x 4-lane MIPI DSI D-PHY 1.2, up to 5040 × 2160 @ 60 fps (or 120 Hz in VR mode) + touchscreen support DisplayPort v1.4 on USB Type-C, with USB3 and USB2 data concurrency		
• **Camera Interfaces**	3x 4-lane MIPI CSI camera ports + CCI I2C control	Spectra 480 ISP supporting multiple concurrent cameras	
• **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, VP8, and MPEG-2 codecs	
	Encode	Video encode up to 4K120/8K30. Native encode support for H.265 Main 10, H.265 Main, H.264 High, and VP8 codecs	
	Dec & Enc	Concurrent 4K60 Dec and 4K30 Enc	
• **Audio**	Supports WCD938x high fidelity audio codec and WSA881x speaker amp on carrier board. Dedicated Hexagon™ audio DSP, SoundWire, MI2S, DMIC, TDM/PCM interfaces for audio devices on carrier board		
• **High Speed Connectivity**	1x PCIe Gen3 2-lane 1x USB 3.1 with support for Type-C + DisplayPort v1.4 with USB SS data concurrency 1x USB 3.1 Type-A		
• **I/O Interfaces**	4-bit SD 3.0, UART, I2C, I3C, SPI, configurable GPIOs, sensor I/O to dedicated Hexagon™ sensor DSP		
• **Power/Battery**	Power management and battery charging solution on SOM		
• **Operating Environment**	Input voltage: 3.7V nominal Operating Temperature: -25 to +85°C		
• **Form Factor**	50mm x 29mm with 2x 100-pin + 1x 120-pin board to board connectors		

Software:

• **OS Support**	Android™ 13, Yocto Kirkstone

** QCS7230 Chipset Performance, see SOM Release Notes for details on tested configurations and platforms.*



Companion Development Kit, display and camera accessories available separately

Purchasing Information:

• **Open-Q™ 7230CS SOM (6GB + 64GB)**	PN: QC-SOM-7230CS-A
• **Open-Q™ 7230CS SOM (8GB +128GB)**	PN: QC-SOM-7230CS-B
• **Open-Q™ 865 Dev Kit (SOM not included)**	PN: QC-865-DK-CARRIERBRD

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

Learn more at lantronix.com/open-q-7230-som

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