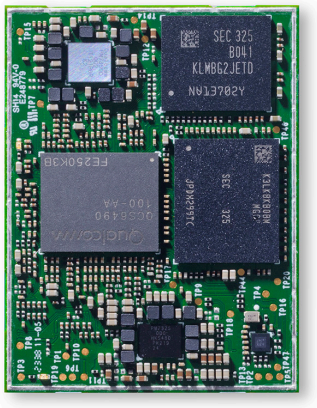
LANTRONIX®

NEW!

Open-Q™ 6490CS SOM

Based on Qualcomm® Dragonwing™ QCS6490 System-on-Chip



Optimized Processor for Compute Intensive Cameras

The Open-Q 6490CS provides flexible and effective AI/ML performance, low power consumption, and cost efficiency for edge device applications such as smart cameras, video collaboration, industrial handhelds, and video telematics. Based on the Qualcomm® Dragonwing™ QCS6490 SoC, these products share exceptional characteristics, including a 6nm process, high performance, low power consumption, support for on-device machine learning and edge computing, Wi-Fi 6E, multiple camera interfaces, and up to 4K video encoding/decoding resolution.

With the release of the pin-compatible Open-Q 5430CS and Open-Q 6490CS, Lantronix offers our customers product choices that allow them to scale their product line with less investment and shorter time to market.

Lantronix offers TAA and NDAA compliant products with at least 10 years of longevity for the Open-Q 5430CS, Open-Q 6490CS, Open-Q 5165RB, Open-Q 8250CS, and Open-Q 8550CS with strict Bill-of-Material and quality control. Combined with over 20 years of hardware design and software development experience, and 1200+ successful projects, Lantronix will be your long-term partner, ensuring the ongoing success of your product journey.

Key Features

- Qualcomm® Dragonwing™ QCS6490 SoC
- Up to 16GB LPDDR5 RAM + 64GB eMMC
- Support UFS and NVMe storage
- Android™ 13 and Qualcomm Linux
- On-device AI Engine up to 12.5 TOPS
- Dedicated Computer Vision Engine
- Multiple MIPI camera and display ports
- Multiple high speed connectivity options
- Ultra-compact 47 x 35 mm form factor

Applications

- IP Cameras
- Multi-camera and smart camera systems
- Video telematics
- Video conferencing
- Retail self-check-out
- Digital signage
- Drones
- Rugged Handhelds

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.

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Lantronix Open-Q™ 6490CS SOM

Production Ready Computing Module

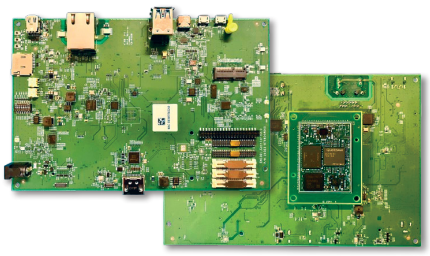
Hardware Specifications:

• **Processors**		Qualcomm® Dragonwing™ QCS6490 SoC built on 6nm technology: Kryo™ 670 Octa-core CPU: 1 Prime @ 2.7 GHz + 3 Gold @ 2.4 GHz + 4 Silver @ 1.8 GHz Hexagon™ 770 with Hexagon Vector eXtensions (HVX)	
		Adreno™ 643L GPU @ Fmax Spectra™ Spectra™ 570L ISP Adreno™ 633 video processing unit	Adreno™ 1075 display processing unit 6th Gen Qualcomm AI Engine Secure processing unit
• **Memory/Storage**		Up to 16GB LPDDR5 and 64GB eMMC configuration (other configurations available upon request) Supports external UFS and NVMe storages	
• **Wireless**		Supports external Wi-Fi via PCIe 1-lane, up to Wi-Fi 6E, 2x2 MU-MIMO + Bluetooth 5.2	
• **Display Interfaces**		1x 4-lane MIPI DSI D-PHY 1.2, up to FHD+ touchscreen support Support for USB3.1 Type-C with DisplayPort v1.4 and USB 2.0 Embedded DisplayPort (eDP)	
• **Camera Interfaces**		5x 4-lane MIPI CSI D-PHY 1.2 or C-PHY 1.2 with CCI I2C control	Spectra 570L ISP supporting 36 MP + 22 MP at 30 fps or three 22 MP at 30fps ZSL. 3x IFE, 2x IFE-lite, 5 concurrent MIPI CSI configurable in 4 + 4 + 4 + 4 + 4 + 4 configuration.
• **Video Performance**	Decode	Video decode up to 4K60. Native decode for H.265/H.265/VP9	
	Encode	Video encode up to 4K30. Native encode for H.265/H.265; Support for HDR10 and HDR10+ playback	
	Dec & Enc	Concurrent 1080p60 Decode and 1080p60 Encode or 4K30 Decode and 4K30 Encode	
• **Audio**		Support interfaces to WCD938x/WCD937x high fidelity audio codec and WSA883x speaker amp on carrier board. Hexagon™ audio DSP V66M	
• **High Speed Connectivity**		1x PCIe Gen3 2-lane; 1x PCIe Gen3 1-lane for connectivity 1x USB 3.1 with support for Type-C + DisplayPort v1.4 with USB SS data concurrency 1x USB 2.0	
• **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 on SOM	
• **Operating Environment**		Input voltage: 3.8V nominal Operating Temperature: commercial and industrial temperatures available	
• **Form Factor**		47 x 35 x 2.72 mm LGA	

Software:

• **OS Support**	Android™ 13 and Qualcomm Linux

** QCS6490 Chipset Performance, see SOM/SIP Release Notes for details on tested configurations and platforms.*



Companion development kit available separately

Purchasing Information:

SKU	Description
QC-SIP-6490CS-A	4GB LPDDR5 / 32GB eMMC
QC-SIP-6490CS-C	8GB LPDDR5 / 64GB eMMC
QC-SIP-6490CS-D	16GB LPDDR5 / 64GB eMMC
LOQ-6490-EVK-BI	Open-Q 6490CS development kit with accessories

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-6490-som

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