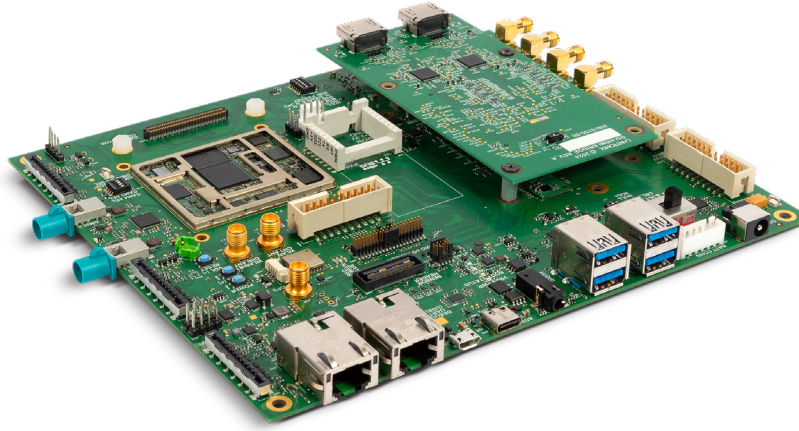


Open-Q™ 8550CS SOM Development Kit



The Open-Q™ 8550CS Development Kit is designed to facilitate easy evaluation of the key features of the Qualcomm® Dragonwing™ QCS8550, such as the Low Power AI subsystem with a dedicated DSP and AI accelerator supporting always-on audio, sensors, contextual data streams, and an always-on camera. The kit supports the evaluation of C-PHY and D-PHY MIPI CSI and GMSL cameras, dual MIPI DSI, DisplayPort, audio, sensors, GNSS, Gigabit Ethernet and many more features.

The development kit provides the ideal starting point for evaluating the Open-Q™ 8550CS SOM. The platform consists of Lantronix's Open-Q™ 8550CS SOM, an open-frame carrier board exposing all the available I/O, and a range of accessories to fast-track your product development.

Key Features

- Powered by Open-Q 8550CS SOM
- Standard M.2 and MikroBUS sockets
- C-PHY and D-PHY MIPI camera interfaces, GMSL camera interface
- MIPI DSI, HDMI interfaces and DisplayPort
- Audio CODEC and DMICs
- Gigabit Ethernet interfaces
- Sensor interfaces to evaluate Qualcomm® Sensing Hub
- Digital I/O, CAN
- Connectors to measure power consumption
- Android™ 13 and Yocto Linux Kirkstone

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.



Lantronix Open-Q™ 8550CS SOM Development Kit

Hardware Specifications:

Open-Q™ 8550CS SOM		*See the Open-Q 8550CS SOM product brief for complete details
• Processors	Qualcomm® Dragonwing™ 8550CS SoC built on 4nm technology: Kryo™ Octa-core CPU: 1 Prime @ 3.2 GHz + 4 Gold @ 2.8 GHz + 3 Silver @ 2.0 GHz	
• Memory/Storage	16GB LPDDR5x @ 4200MHz and 128GB UFS	
• Wireless	Wi-Fi 7 802.11be 2x2 MU-MIMO + Bluetooth 5.3 capable	
Open-Q™ 8550CS SOM Carrier Board		
• Display Interfaces	2 MIPI DSI 4-Lane 2 HDMI Ports DisplayPort v1.4 via USB Type-C	
• Camera Interfaces	Choice of 8 MIPI CSI interfaces, supports for both D-PHY and C-PHY camera interfaces, or 6 MIPI CSI and 2 GMSL camera interfaces	
• Audio Interfaces	Qualcomm® WCD9385 Aqstic™ audio CODEC for audio outputs, digital microphones	
• I/O Interfaces	4x USB 3.1 ports: 1x USB3.1 Type-C with DisplayPort, Serial UART over USB for debug SD socket, Nano-SIM socket, GPIO, I2C, UART, MikroBUS, CAN, JTAG Interfaces to evaluate Qualcomm Sensing Hub of the QCS8550 M.2 interfaces to evaluate 5G modem and NVMe SSD SGMII interface, supports up to 2.5 Gbps Ethernet USXGMII interface, supports up to 10 Gbps Ethernet	
• GPS/GNSS	Lantronix PNT-SG3FS module; multi-constellation receiver can track up to 32 satellite signals in view across GPS L1C/A, BeiDou B1, Galileo E1B/C, GLONASS L10F, SBAS L1C/A (WAAS, EGNOS, MSAS, GAGAN), and QZSS L1C/A bands	
• Power	12V input and battery connector	
• Form Factor	200mm x 170mm	

Software:

• OS Support	Android™ 13 and Yocto Linux Kirkstone
---------------------	---------------------------------------

Lantronix Advantage

- › Unique expertise with Qualcomm products
- › Addressing small to mid-size customer requirements
- › Complete solutions with HW, SW, & Services
- › Global TAA/NDAA-compliant manufacturer
- › Focused on Edge intelligence with Qualcomm-based AI acceleration
- › Qualcomm-Aligned: 100% in sync with QC IIOT Roadmap

Purchasing Information:

• LOQ-8550-EVK	Open-Q™ 8550CS SOM Dev Kit with Power Supply, Camera Adapter Board, and HDMI Adapter Board
-----------------------	--

© 2025 Lantronix, Inc. All rights reserved. Lantronix is a registered trademark of Lantronix, Inc. in the U.S. and other countries. Open-Q is a trademark of Lantronix, Inc. Qualcomm and Qualcomm Dragonwing are trademarks or registered trademarks of Qualcomm Incorporated. Qualcomm QCS8550, Qualcomm Aqstic and Qualcomm Kryo are products of Qualcomm Technologies, Inc. and/ or its subsidiaries. Qualcomm, Aqstic and Kryo are trademarks of Qualcomm Incorporated, registered in the United States and other countries. All other trademarks are the property of their respective owners. Specifications subject to change without notice. Not all features listed may be supported in software. MPB-00250 Rev B

Learn more at lantronix.com/open-q-8550-dev-kit

LANTRONIX®