Embedded Compute Battlecard for SOM and Dev Kits

What is Embedded Compute?

Embedded Compute products are compact, power-efficient computing platforms that bring advanced processing, AI, and connectivity into smart devices — without the size, power, or complexity of traditional computers. With decades of Qualcomm experience and full-stack design capabilities, Lantronix delivers production-ready compute solutions that reduce risk, speed time-to-market, and meet strict regulatory and security requirements. We offer SOM and Devkits, which provide the quickest, easiest, and most cost-effective path for a wide range of IoT customers to create innovative products around a Qualcomm IoT/embedded compute solution.

Elevator Pitch

Lantronix simplifies access to Qualcomm's high-performance compute platforms with compact, production-ready SOMs and full-stack design services. Our portfolio empowers OEMs building next-gen smart devices with secure, scalable, and rapid-to-market solutions across industrial and enterprise markets.

Spotting Opportunities for Embedded Compute

End User Concerns / Pain Points for an Enterprise and Industrial Customer

Performance I General-purpose CPUs can't meet AI or edge compute demands. Qualcomm-based SOMs are optimized for performance at the edge.

Integration Complexity I Qualcomm tools are hard to access and license so We offer dev kits, custom boards, and BSPs.

Scalability & Support I Lack of in-house embedded expertise so Lantronix offers full engineering services and turn-key solutions.

Time to Market I Long lead times for chip-down designs, so we provide pre-certified and production-ready SOMs.

Security & Compliance I Regulatory & security constraints operate NDAA/TAA compliant SOMs with secure frameworks.

Who to Speak with

- R&D Heads for connected products
- Business Owners looking to scale smart devices
- Product Manager / Product Owner
- People interested in building connected products

Market Verticals

- Market Verticals
- Drones
- Edge Compute
- Security & Surveillance
- Industrial Automation
- Smart Cities
- Wearables & AR
- Healthcare
- Retail

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Why Lantronix for Embedded Compute?

- We simplify the development process with Qualcomm products. Most customers lack the internal resources or know-how to work directly with Qualcomm SoCs — we bridge that gap.
- Beyond board design. Anyone can build a board — the challenge is making it production-ready, supportable, and scalable. That's our specialty.
- Integrated expertise. We draw on deep knowledge across our connectivity, security, and network management businesses to deliver holistic, embedded solutions.
- Customer-first focus. When Lantronix handles the compute complexity, our customers stay focused on delivering value in their domain.

New Opportunity Drivers

Keep an eye out for these situations, they might be a good target to bring up embedded compute solutions:

- New product development cycles or roadmap pivots
- Need for high performance at the edge (AI, video, robotics)
- Frustration with chip-down design delays or complexity
- Mandates for NDAA/TAA compliance or regulatory needs
- Companies scaling from PoC to production

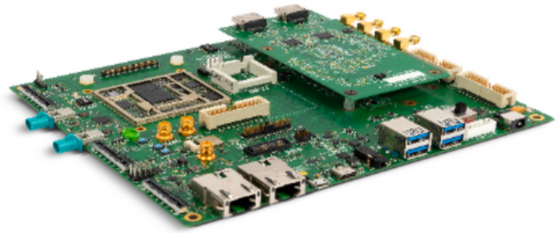
Lantronix Design Services

- 20+ years with Qualcomm, 2000+ projects
- End-to-end solutions & services from concept to production
- Comprehensive solution for HW, BSP, Middleware, Application and Cloud integration

Product Portfolio

Lantronix leverages Qualcomm's strategy across enterprise and industrial markets, engaging where value aligns with our tactical focus. Lantronix offers 4 different performance tiers, including Premium, High, Mid and Value, which will target a diverse range of smart IoT markets, including wearables, edge computing, drones, robotics, industrial automation, and public safety. **(for full details, see product briefs)**

Performance Tier	Enterprise	Industrial
Premium	8550	IQ9
High	8250 / 6490	IQ8
Mid	610	5165 / 7230 / IQ6
Value	4290 / 2290	4210 / 2210

Images		
Open-Q 8550CS	SOM	Devkit
Hardware Specifications		
Form Factor/Dimensions	54 x 45 x 3.61 mm LGA SOM	200mm x 170mm
Operating Enviroinment	Input voltage: 3.7V nominal	
• **Processors**	Qualcomm® 8550CS SoC built on 4nm technology	Qualcomm® Dragonwing™ 8550CS SoC built on 4nmtechnology
	Kryo™ Octa-core CPU: 1 Prime @ 3.2 GHz + 4 Gold @ 2.8 GHz + 3 Silver	Kryo™ Octa-core CPU: 1 Prime @ 3.2 GHz + 4 Gold @ 2.8 GHz + 3 Silver @
• **Memory/Storage**	"8GB LPDDR5x @ 4200MHz, and 128GB UFS /"	16GB LPDDR5x @ 4200MHz and 128GB UFS
• **Wireless**	Wi-Fi 7 + Bluetooth 5.3 capable	Wi-Fi 7 + Bluetooth 5.3 capable
• **Display Interfaces**	Up to four concurrent displays; up to 4K@60 Hz external display	2 MIPI DSI 4-Lane; 2 HDMI Ports; DisplayPort v1.4 via USB Type-C
• **Camera Interfaces**	Up to five concurrent cameras	Choice of 8 MIPI CSI interfaces
• **Video Performance**	Concurrent 4K60 Dec and 4K60 Enc	
• **Audio Interfaces**	Supports WCD938x high fidelity audio codec and WSA884x speaker	Qualcomm® WCD9385 Aqstic™ audio CODEC for audio outputs, digital
• **High Speed Connectivity**	2x PCIe Gen3 2-lane	4x USB 3.1 ports: 1x USB3.1 Type-C with DisplayPort, Serial UART over
	Support SGMII and USXGMII interfaces	SD socket, Nano-SIM socket, GPIO, 12C, UART, MikroBUS, CAN, JTAG
	1x USB 3.2 Gen 2 with support for Type-C + DisplayPort v1.4	Interfaces to evaluate Qualcomm Sensing Hub of the QCS8550
	1x USB 3.2 Gen 1	M.2 interfaces to evaluate 5G modem and NVMe SSD
	2x SDC v 3.0, 1x SD, UART, I2C, I3C, SPI,	SGMII interface, supports up to 2.5 Gbps Ethernet
	Configurable GPIOs, sensor I/O to Qualcomm Sensing Hub 3.0	USXGMII interface, supports up to 10 Gbps Ethernet
• **Power**	Power management and battery charging solution on SOM	12V input and battery connector
Software Specifications		
OS support	Android™ 13 and Linux Yocto Kirkstone	Android™ 13 and Yocto Linux Kirkstone