

LANTRONIX® Embedded Compute Battlecard for Drones / UAV

What is Drone?

Drones, or Unmanned Aerial Vehicles (UAVs), are flying platforms used across industries for tasks such as surveillance, mapping, delivery, inspection, and public safety. Compute for Drones refers to the onboard computing power within a drone that enables it to perform advanced tasks such as process data, make decisions, Sensor data fusion, Edge AI for object detection, navigation, and obstacle avoidance and communicate in real time—often in challenging environments. Lantronix Open-Q™ SOMs deliver advanced edge AI processing, multi-sensor fusion, and real-time communication in a compact, power-efficient module—perfect for modern UAVs, ISR drones, and autonomous flight systems.

Elevator Pitch

Our compact, power-efficient Open-Q™ SOMs enable advanced edge AI, real-time sensor fusion, and autonomous flight control—right on the drone. Whether it's ISR, industrial inspection, or public safety, Lantronix simplifies access to Qualcomm's high-performance platforms, helping drone OEMs and integrators get to market faster with scalable, production-ready solutions.

Spotting Opportunities for Embedded Compute in Drones

Customer Benefits



Accelerated Development | Save valuable time by leveraging Lantronix's in-depth expertise in Qualcomm hardware and software platforms.



Simplified Integration | Eliminate the complexity of working directly with Qualcomm—Lantronix handles system integration, so customers don't have to.



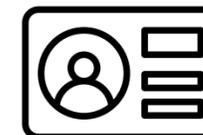
Expert-Level Software Support | Benefit from Lantronix's extensive experience in device driver development, ensuring seamless operation and faster time-to-market.



Security & Compliance | Regulatory & security constraints operate NDAA/TAA-compliant SOMs with secure frameworks

Who to Speak with

- UAV & Robotics Engineers
- ISR Payload Teams
- Aerospace & Defense OEMs
- System Integrators
- Government/Defense Program Leads
- Drone AI Software Devs



Market Verticals

- Defense & Tactical UAVs
- Border Surveillance
- Multi-INT ISR Payloads
- SAR/Disaster Response
- Infrastructure Inspection
- Precision Agriculture UAVs
- Maritime & Naval Drones
- Perimeter & Convoy Security



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Why Lantronix for Embedded Compute in Drones?

- **Lantronix Open-Q™ SOMs** are purpose-built to meet the unique demands of modern drone platforms.
- **Mission-Critical Edge Compute:** On-device AI/ML inference supports real-time object detection, navigation, and decision-making without cloud dependence.
- **Multi-Sensor Integration:** Seamlessly fuses data from cameras, LiDAR, GPS, and IMUs for autonomous missions and precision analytics.
- **Secure, NDAA-Compliant Design:** Fully NDAA/TAA compliant for defense and government deployments.
- **SWaP Optimized:** High performance in compact form factors with low power draw - weight-sensitive drones.

New Opportunity Drivers

Look out for these signals that may indicate a strong fit for Lantronix Embedded Compute Solutions:

- OEMs or system integrators developing next-gen drones for defense, surveillance, agriculture, or public safety applications.
- Drone teams looking to enable real-time AI, image recognition, or autonomous flight control.
- Developers seeking compact, power-efficient SOMs that support high compute performance in constrained drone form factors.
- Projects requiring tight integration with multiple sensors, HD cameras, and communication modules.
- Software-first drone companies lacking internal hardware design expertise and need a production-ready compute platform.

Lantronix Engineering Design Services

Engagement Models That Fit You

- Turnkey Builds
- Expert support
- Joint design model (JDM)

Client Solutions – From Idea to Execution

- Open-Q™ SOM + Carrier Boards
- Custom compute & AI-ready designs
- Faster time-to-market=



For more info, visit [Lantronix.com](https://www.lantronix.com)

Product Portfolio (for full details, see product briefs)

<p>Images</p>		
<p>SOM</p>	<p>Open-Q 8550CS</p>	<p>Open-Q 6490CS</p>
<p>Specifications</p>	<p>Weight: 15 grams Connectivity: Up to Wi-Fi 7 NPU: Dual eNPU V3, 4x HVX, HMX, 48 INT8, 12 FP16 TOPs Video: Video encode up to 4K120/8K30, support native H.265 Main 10, H.265, H.264 Camera: 8x MIPI CSI (D-PHY and C-PHY)</p>	<p>Weight: 10 grams Connectivity: Up to Wi-Fi 6E NPU: 12.5 TOPs Video: Video encode up to 4K30. Native encode for H.265/H.265 Camera: 5x MIPI CSI (D-PHY and C-PHY)</p>
<p>Software Support</p>	<p>Yocto Linux</p>	<p>Qualcomm Linux</p>
<p>Lantronix Products Application</p>	<p>Premium-performance SOM featuring Qualcomm 8th generation AI engine, 8K encoding, sensor fusion, and multi-cameras.</p>	<p>Cost-effective and low power, ideal for controllers with FHD+ display resolution and broad connectivity options.</p>