LANTRONIX®

Edge AI Out of the Lab & Into the Air
Enabling SOMs in Drones

April 2026

Lantronix: Leading Connected Compute, Globally

- Publicly Traded on Nasdaq: LTRX
- Proven expertise in AI/ML, imaging, security, and connectivity
- Trusted by leaders in defense, industrial, and enterprise markets
- Global engineering presence with U.S. program management

01

Network Infrastructure

- PoE Switches
- Media Convertors
- Network Cards
- Optics

02

Industrial IoT

- Percepxion Cloud IoT
- Gateways
- Routers
- Telematics

03

Embedded Compute

- Embedded SOMs
- Development Kits
- Design Services
- AI Solutions

Lantronix Global Presence

- HQ in Irvine, US
- Global Manufacturing

- TAA/NDAA Compliance
- Logistics in MN and HK

At the Center of Three Secular Edge AI Markets

Aerospace & Defense

Defense Drone Supercycle Underway

- **$1B+** Pentagon Drone Dominance program[1]
- **Pentagon procurement** scaling at unprecedented pace
- **Edge AI** enabling autonomous mission platforms
- **NDAA/TAA compliance** creates structural moat

Critical Infrastructure

Infrastructure Digitization Accelerating

- **Smart Infrastructure AI** optimizing generators, compressors with Kompress.ai
- **Modernizing industrial** assets with edge intelligence
- **Edge analytics** reducing downtime and operational risk
- **Multi-year** infrastructure investment cycle underway

Enterprise AI

Robotics, Managed Remotely

- **Autonomous AI workloads** enabling real-time robotic perception and control
- **Edge-native architectures** improving deterministic industrial performance
- **Digital transformation** accelerating distributed edge adoption
- **Enterprise Edge AI spend** growing at double digits

1. On February 3, 2026, the Department of War announced 25 vendors to compete in Phase 1 of the Drone Dominance Program (DDP), with $1.1B committed over four phases of the program.

Trusted Partner in Next-Gen Edge Solutions

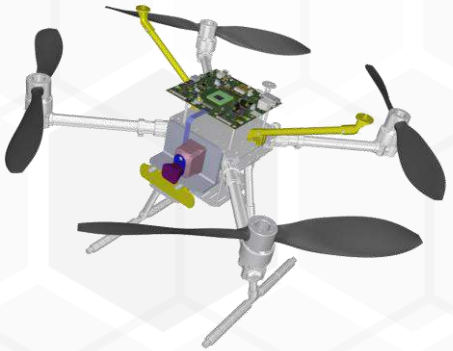
Qualcomm and Industry Leaders

Qualcomm Dragonwing

TELEDYNE FLIR

- **Strategic Positioning:** A strategic platform partner in Edge AI and Industrial IoT, The company is leveraging its compute and connectivity solutions
- **Innovative Pipeline:** Developing next-gen Edge AI programs in collaboration with Qualcomm
- **Scaling Advantage:** Recognized as Qualcomm's key Western scaling partner, enabling accelerated reach
- **Strategic Application:** Collaborating with Teledyne/FLIR on next-gen AI-enabled solutions in autonomous systems, drones, surveillance, and robotics
- **Technology Foundation:** Solutions powered by our Open-Q™ SoMs built on Qualcomm's Dragonwing platform
- **Differentiated Capability:** Enables advanced thermal image processing (ISP) and AI at the edge with greater flexibility for device innovation

Drone Reference Platform



In The Lab

- **Lab AI Works**
- **Thermals & Power Change**
- **Sensors Don’t Line Up**
- **Telemetry/Flight Control Gets Fragile**
- **Compliance Shows Up Late**

In The Air

- **Edge AI Compute (8550 / 6490 / IQ9 / Beyond)**
- **RGB + Thermal Pipelines (Flir-ready)**
- **Clean Flight-controller Coexistence**
- **High-speed Payload & Comms IO**
- **Supply Chain Security Foundation**

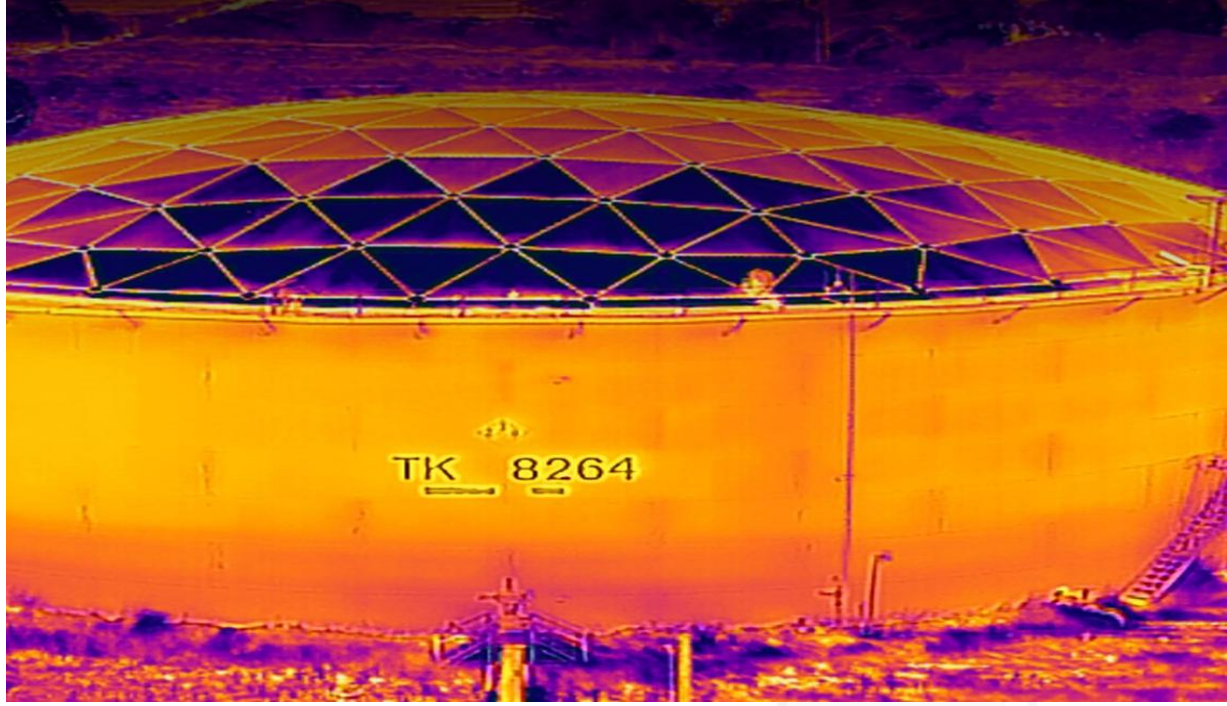
Turnkey, production-aligned reference architecture for autonomous UAVs

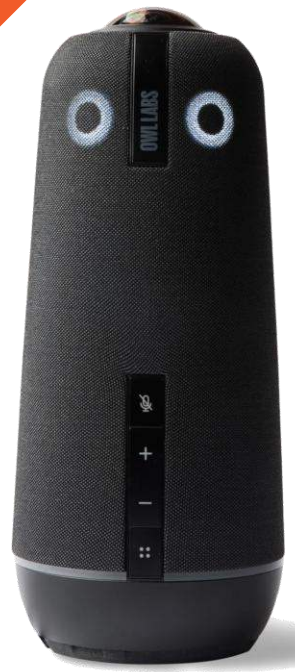
Cuts Integration Risk | Accelerates Time-to-flight | Becomes A Blueprint To Production

FLIR + Pixhawk Integration

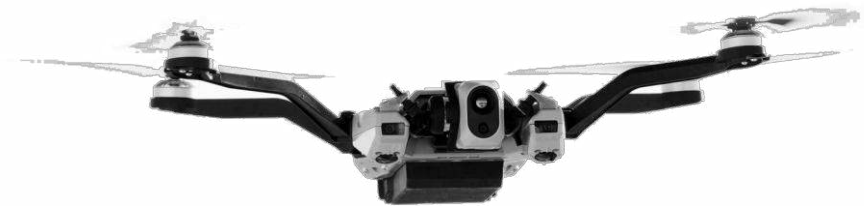
Enabling Seamless Integration into AI-powered Thermal Camera Technology

- **Teledyne/Flir application of next-gen AI-enabled solutions in autonomous navigation/drones, surveillance & robotics**
- **Powered by our Open-Q™ SoMs based on Qualcomm Dragonwing platform**
- **Provides the flexibility to develop advanced thermal image processing (ISP) and AI capabilities to edge devices**





Enabled by LANTRONIX®



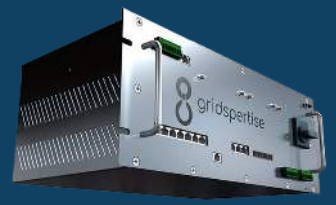
Trusted US-Based Qualcomm Partner

From idea to launch — We remove the barriers to building with Qualcomm

Embedded Modules

Design Services

Custom Solutions



Dev Kits

Qualcomm Dragonwing

Qualcomm Advantage Network Member
Qualcomm Authorized Design Center

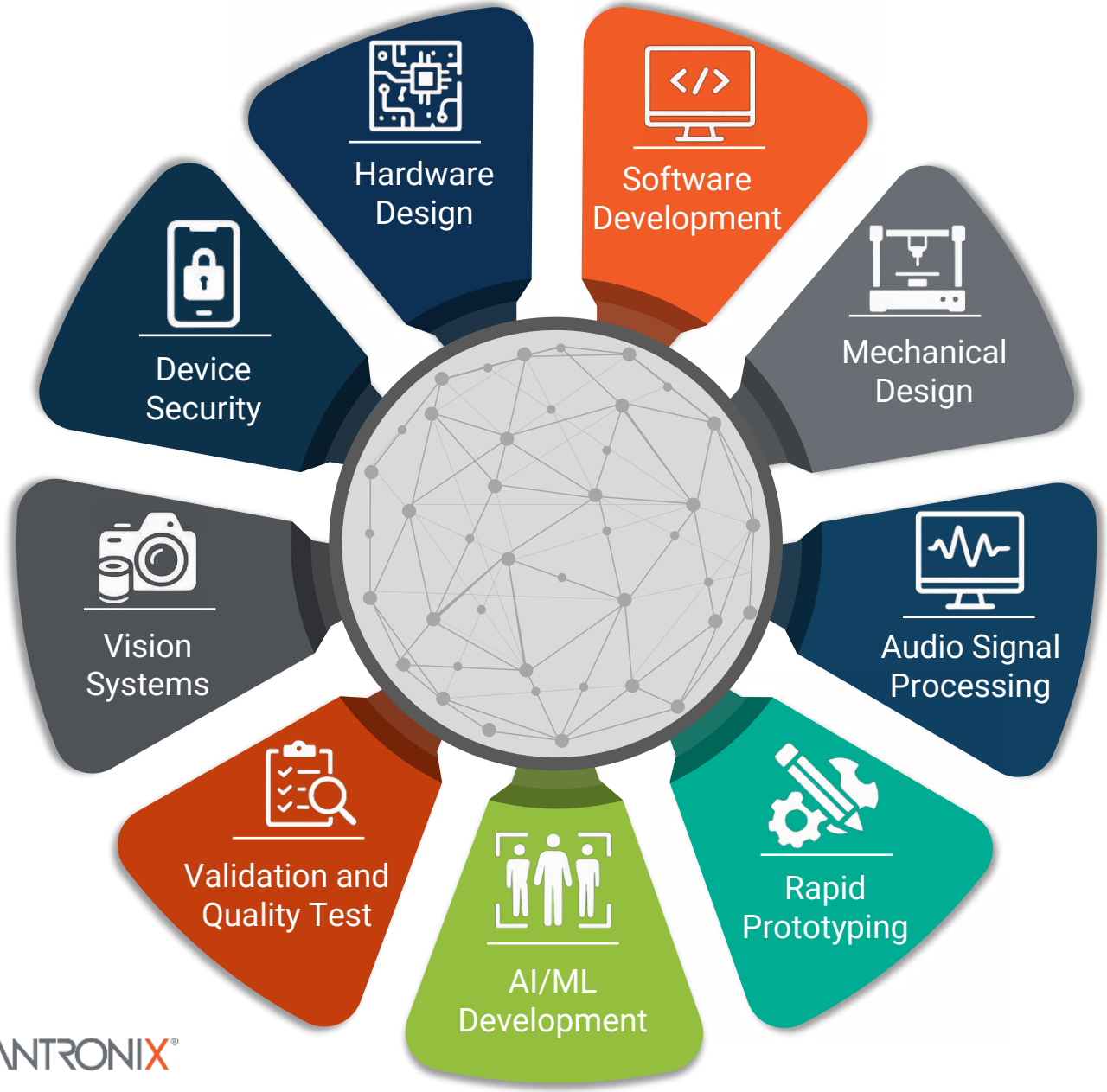
2000+ Projects Delivered | 200+ Engineers | 20+ Qualcomm Modules | 2+ Decades Experience

How Lantronix is working with UAVs today

Flight Controller

- Edge AI Processing
- Sensor Fusion Engine
- High-Speed Multimedia & Connectivity
- Secure Boot & Encrypted Comms
- Power-Efficient Flight Computing

Engineering Design Services



Design, Build, and Deliver Custom Edge Platforms

Engagement Models That Fit You

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

Enable Camera Expertise

- De-risk complex camera designs
- Sensor fusion frameworks
- Customizable software ISP

Client Solutions – From Idea to Execution

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

Compute Product Portfolio

Premium

5165 SOM
- Compute: 15 TOPs
- Camera: 64MP
- Video: 4K120/8K60
- Wi-Fi 6 BLE 5.1
- Power: ~2.9 Watts

8250CS SOM
- Compute: 15 TOPs
- Camera: 64MP
- Video: 4K120/8K60
- Wi-Fi 6 BLE 5.1
- Power: ~2.9 Watts

8550CS SOM
- Compute: 48 TOPs
- Camera: 108MP
- Video:4K120/8K60
- Connect: Wi-Fi 7 BLE 5.3
- Power: <8 Watts

8750CS SOM*
- Compute: 77 TOPs
- Camera: 64MP*
- Video: 8K60D/ 8K60E
- Power: ~12 Watts*

9075IQ SOM
- Compute: 100 TOPs
- Camera: 16x Support
- Video: 4K120/8K60
- Power: <20 Watts

High

7230CS SOM
- Compute: 7 TOPs
- Camera: 64MP
- Video: 4K120/8K60
- Wi-Fi 6 BLE 5.1

6490CS SOM
- Compute: 12 TOPs
- Camera: 64MP
- Video: 4K60D/ 4K30E
- Power: ~4.7 Watts

7790CS SOM*
- Compute: 24 TOPs
- Camera: 64MP
- Video: 4K60D/ 4K60E
- Power: ~4.9 Watts*

Mid

610 µSOM
- Compute: ~1 TOPs
- Camera: 24MP
- Video: 4K30
- Wi-Fi 5 BLE 5.0
- Power: ~2.1 Watts

720G/520G SOM*
- Compute :10 TOPs
- Camera: up to 16+16MP
- Video: 4K30
- Wi-Fi 6/6E BLE 5.x
- Power: TBD

4200 Series SOM
- Compute : ~1 TOPs
- Camera: 25MP
- Video: 1080P 60fps
- Wi-Fi 5 BLE 5.1
- Power: ~1.7 Watts

615IQ SMARC
- Compute: 1.1 TOPs
- Camera: 6x Support
- Video: 4K60D/ 1080P60E
- Wi-Fi 6 BLE 5.3
- Power: ~3.1 Watts

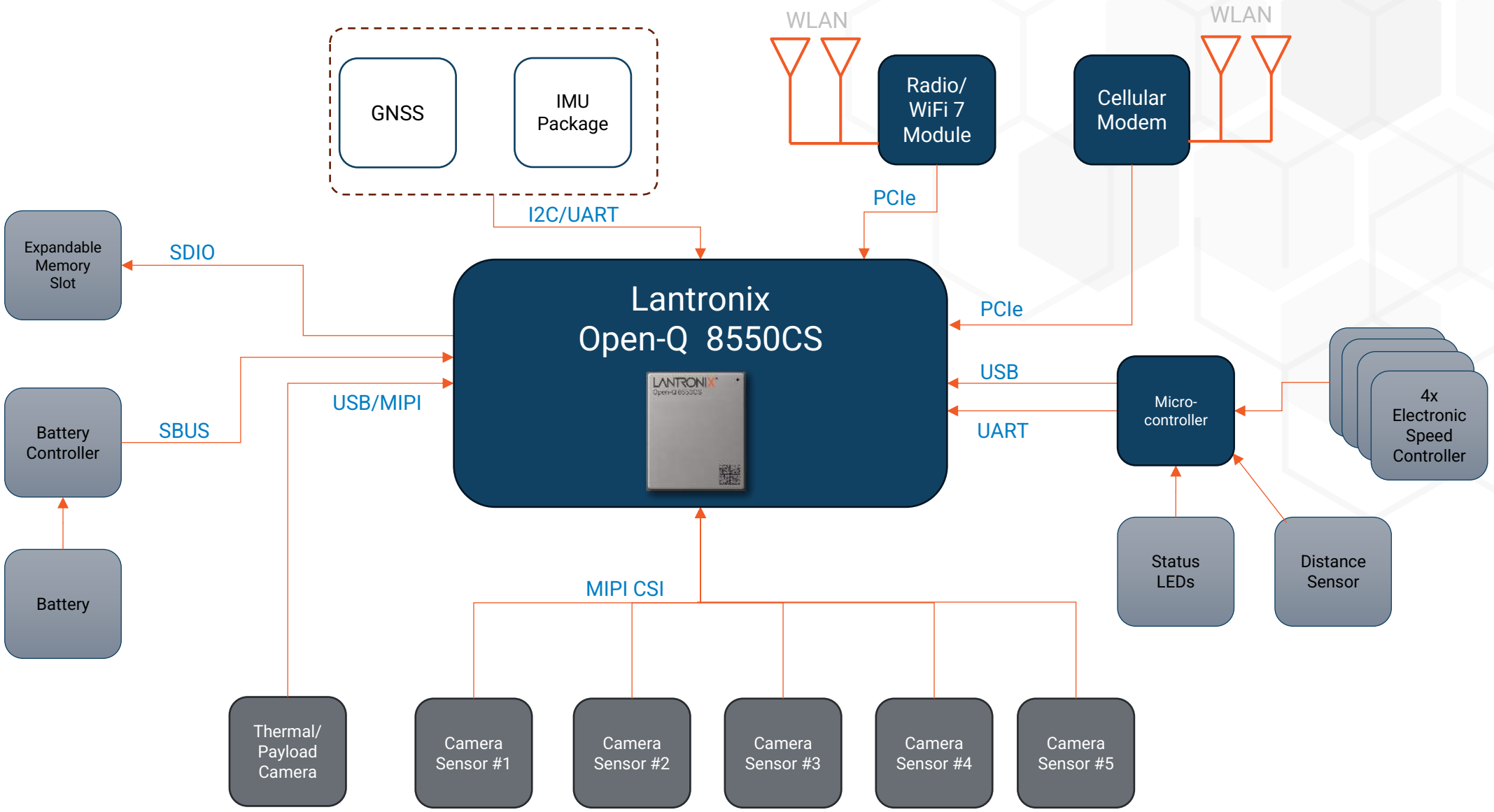
Entry

2200 Series SOM
- Compute: GFLOPs
- Camera: 25MP
- Video: 1080P 30fps
- Wi-Fi 5 BLE 5.0
- Power: ~1.3 Watts

3000IQ Series SOM*
- Compute: 0.5 TOPs
- Camera: 8MP
- Video: 1080P 30fps
- Power: TBD*

*** In Development Subject to Change**

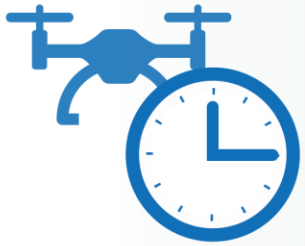
Typical G1/2 Drone Block Diagram



Qualcomm's Edge in Drone Technology

Excelling in Low-SWaP Use Cases

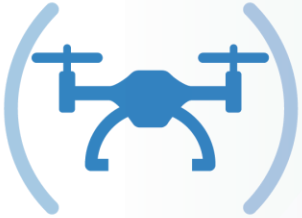
Longer Flight Endurance



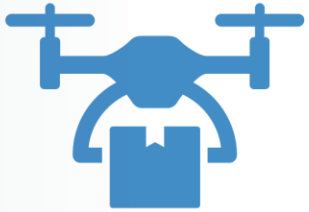
Greater Power Efficiency

More Efficient AI Inferencing

Smaller Form Factor



Increased Payload Capacity



Extended Flight Time: The Qualcomm Advantage

Qualcomm Dragonwing

- Lower Power Consumption:

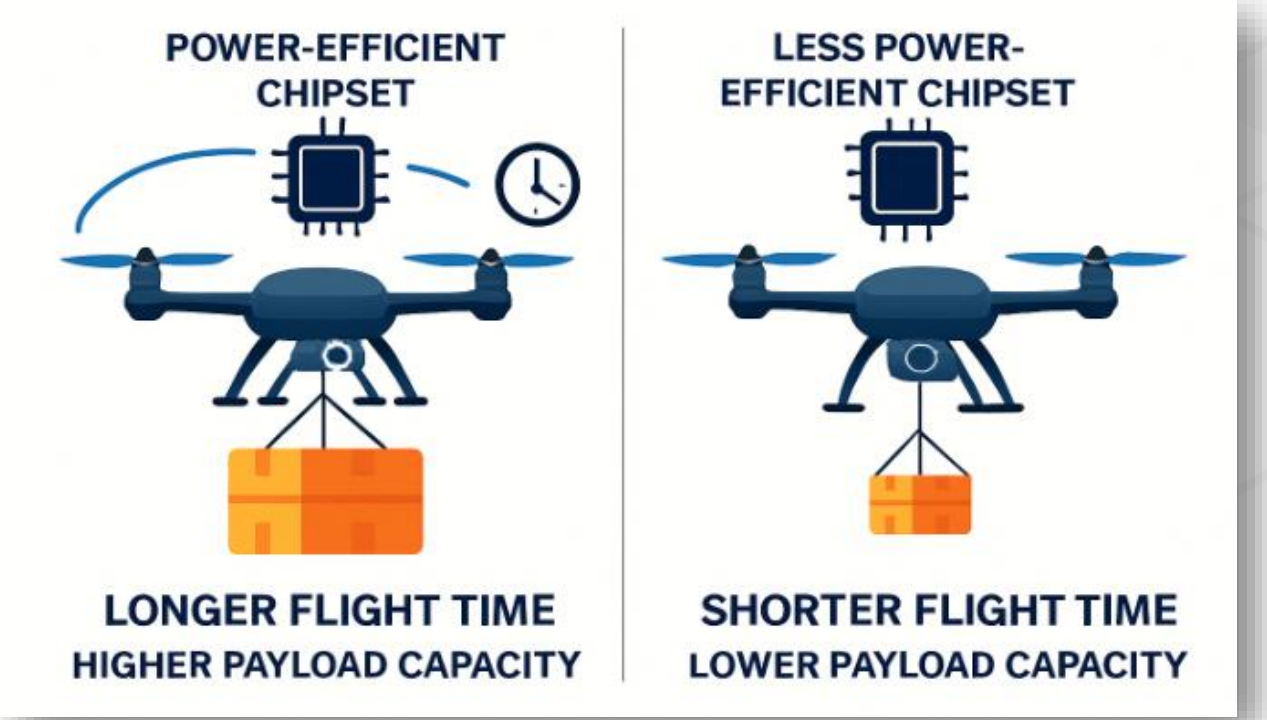
  *~5-10W vs. Competitors ~15-25W**

- Extended Flight Time:

  8%-15% longer*

Business Impact

- Greater Operational Efficiency
- Enhanced Capabilities
- Cost Savings



**Actual performance may vary depending on battery size, payload weight, and motor power draw – Qualcomm 8550.*

AI Developer Tool

Lantronix's EdgeFabric.ai is a visual platform that empowers developers to build, orchestrate, and deploy AI pipelines at the edge.

No Code Builder

Drag-N-Drop Interface

Bounding Classification Overlays

80+ Gstreamer Nodes

ONNX, TFLite, PyTorch Support

Qualcomm AI Hub Integration

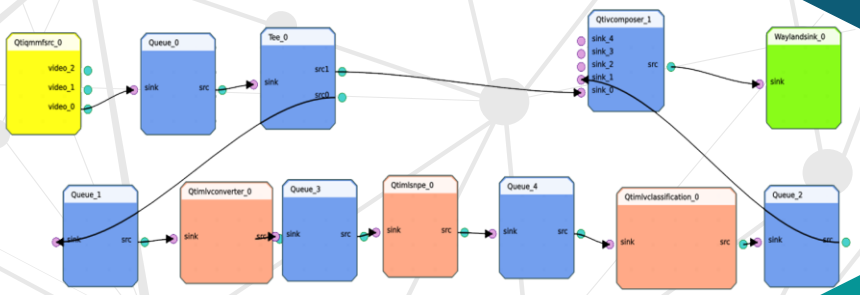
Open-Q SOM Optimized

Quick Start Templates

Model Orchestration

Auto-Generated C++ & Python code

Edge Fabric.ai



Smart Surveillance

Queue and Foot Traffic Analysis

Behavior Analytics

Vehicle Classification Incident Detection

Transportation and Traffic Tracking

Industrial IoT Monitoring

Predictive Maintenance

Drones, and Public Safety

EdgeFabric.ai Pipeline

From Model to Market - Faster
Lantronix simplifies edge AI from orchestration to deployment, helping products release faster

How It Works For *You*

Training Data
Build Custom Model
w/ Edge Impulse etc

Pre-Trained Model

Model Validation

Qualcomm AI Hub
Optimize Trained Models

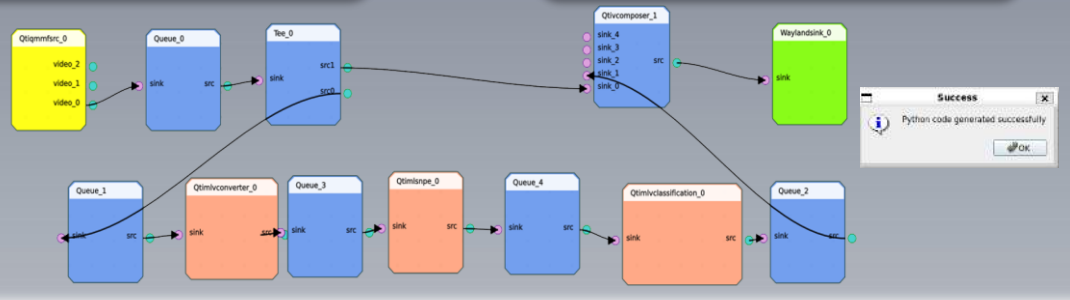
Lantronix-Managed Stack:
Composer, Integration & Deployment

Deploy!
Cloud Integration
On-going OTA support

Integrate
Build into Customer App

Composer Tool
No-Code pipeline
Hardware Integration

- Input (RTSP/MIPI/ Audio/Etc)
- Gstreamer Orchestration
- Inference
- Deployment and OTA
- Output C++/Python
- Post-Process



Recommended Product List for Drone Applications

	Product	Product Highlights	OS	Notes
1	Open-Q 8550CS	**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)	Yocto Linux	• Capable of supporting multiple concurrent video streams • Context sharing and AI acceleration for audio, sensors, always-on camera in LPI • The Open-Q 8550CS Development Kit includes ready-to-evaluate interfaces and accessories for sensors such as an IMU, 3-axis accelerometers, 3-axis gyroscope, always-on eco power mode, digital 3-axis magnetometer, and more
2	Open-Q 6490CS	**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)	Qualcomm Linux	• Please consult with our product team regarding options to support drone applications, such as a SOM version with an integrated Wi-Fi solution. • Currently trusted and utilized by top drone providers today, designs drone controllers using the QCS6490 platform.
3	Open-Q 5165RB	**Weight**: 6 gram **Connectivity**: Up to Wi-Fi 6 **NPU**: up to 15 TOPs **Video**: Video encode up to 4K120/8K30 **Camera**: 3x MIPI CSI (D-PHY)	Ubuntu	• Available as part of the Drone Camera Payload Solution Kit with Teledyne FLIR • Capable of supporting multiple concurrent video streams • Supports interfaces for sensor integration • Capable of handling complex sensor fusion algorithms • The Open-Q 865 Development Kit includes ready-to-evaluate interfaces and accessories for sensors such as an IMU, 3-axis accelerometers, 3-axis gyroscope, always-on eco power mode, digital 3-axis magnetometer, and more.

(1) This power consumption value represents a specific use case. For absolute power consumption ratings and values for other use cases, please refer to the datasheet.

Real-world Products - Aerora Technology (US)

About Aerora

- A US-based drone technology headquartered in Santa Clara, California.
- Focused on custom UAV platforms, embedded systems, scalable manufacturing for enterprise, industrial, and government.
- It supplies drone platforms to other manufacturers, such as ACSL in Japan, and utilizes a range of Qualcomm processors to power its solutions.

Products and Technology

- The company supplies gimbal camera payloads to other drone manufacturers, powered by Qualcomm QRB5165 and QCS8550 processors.
- Aerora stands out in engineering flexibility, rapid prototyping, and mission-specific solutions.

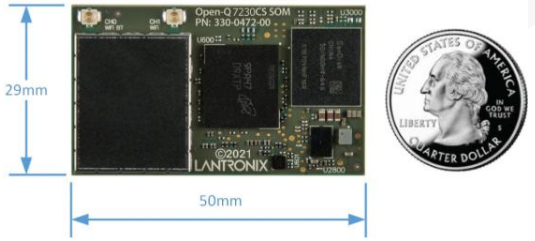
QCS6490

QRB5165

QCS8550

Lantronix's Product:

- We are supplying **Open-Q 5165**
- **TAA compliance**



Camera Payload Specifications

- NDAA-compliant solutions, designed for a variety of drones, including options like **LIDAR**, multi-sensor cameras featuring **RGB** and **thermal imaging**, **laser range meters**, oblique camera systems, and **multi-spectral** image systems

Key Takeaways

Sensors & Payloads
Thermal, RGB, LiDAR, GNSS, IMUs

+

Lantronix SOM
Real-time AI inference, GStreamer pipelines, SLAM, object detection

+

Mission Autonomy + Uplink
Navigation, decision-making, and telemetry via secure links

=

Autonomous UAV with Real-Time Intelligence at the Edge

LANTRONIX®

Thank You!

/LantronixIoT

/lantronix

@lantronix

www.lantronix.com

/user/LantronixInc