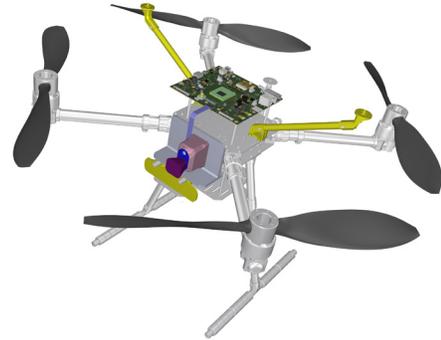
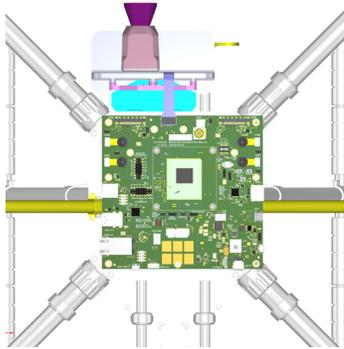


# Lantronix Drone Reference Platform

Based on the Lantronix Open-Q™ 8550CS  $\mu$ SOM



## From Concept to Flight Faster!

- Pre-integrated hardware and software eliminates months of integration work
- Cutting-edge solution built on Qualcomm® Dragonwing™ QCS8550 + Pixhawk 6X flight controller running PX4
- Multi-platform ready for multicopters, fixed-wings, VTOLs, rovers and UAVs
- Advanced AI Vision FLIR Hadron 640R thermal camera + onboard AI for real-time detection and tracking

The Lantronix Drone Reference Platform (DRP) allows drone OEMs to accelerate the development, validation, testing and deployment of their specific UAV designs, by enabling them to move from concept to flight-ready prototype in weeks instead of months. Based on Lantronix's Open-Q™ 8550CS  $\mu$ SOM an ideal development platform for drones and robotics leveraging the high performance Qualcomm Dragonwing QCS8550 processor, with its high-end imaging and signal processing capabilities.

Optimized for size, weight & power (SWaP) for UAV applications, the advanced thermal sensing capability combined with on-device AI provided by the Open-Q 8550CS  $\mu$ SOM, enables onboard detection, tracking, classification, and other advanced vision/AI tasks needed in Search & Rescue, Inspection & Monitoring, Security & Surveillance and Autonomous Robotics applications.

## Key Features and Benefits

- Lantronix Open-Q 8550CS  $\mu$ SOM
- Flight-ready
- Support for Pixhawk PX4
- Support for FLIR Hadron 640R
- Linux Yocto
- On-device AI Engine with Qualcomm Hexagon™ Tensor Processor (HTP)
- Multiple MIPI cameras
- Multiple wireless connectivity options
- NDAA compliant

## Applications

- Multi-camera and smart camera systems
- Intelligence, Surveillance and Reconnaissance
- Security and Perimeter Monitoring
- Industrial Inspection and Infrastructure Monitoring
- Navigation and Obstacle Avoidance in Wireless communication degraded environments

## Drone Engineering Services:

We provide a full solution for drone systems – our unparalleled engineering expertise and product development skills deliver innovative drone products that are cost-effective and can jumpstart your Go-to-Market timeline.

Our business model includes turnkey product development services, or we can augment your team in specific areas of development. The choice is yours.

## Specialized drone capabilities:

- Camera sensor integration and multi-camera systems
- Advanced image tuning for low light, high contrast, and aerial conditions
- Machine learning for autonomous navigation and object detection
- Image and video stabilization for in-flight capture
- Complex camera use-cases: multiple concurrent cameras, gimbal integration, in-camera features, sensor synchronization
- Optimized mechanical, RF, thermal, and power design for extended flight performance

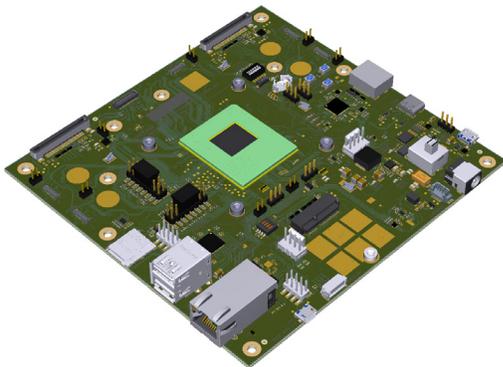


## Technical Specifications:

• <b>Open-Q™ 8550CS μSOM</b>	Qualcomm® 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	
	Adreno™ 740 GPU Spectra™ Image signal processor Adreno™ 8550 video processing unit	Adreno™ 1295 display processing unit Dual eNPU V3, 4x HVX, HMX, 48 INT8, 12 FP16 TOPs Secure processing unit
• <b>Memory/Storage</b>	12GB LPDDR5x @ 4200MHz, and 256GB UFS	
• <b>Wireless</b>	Supports external Wi-Fi/BT or wireless Ethernet radios via M.2	
• <b>Display Interfaces</b>	HDMI USB-C DP 1.4	
• <b>Supported Cameras</b>	FLIR Hadron 640R, OV64B, OV9281, IMX258	
• <b>Video Performance</b>	Decode	Video decode up to 4K240/8K60. Native decode support for H.265 Main 10, H.265 Main, H.264 High, VP9 profile 2
	Encode	Video encode up to 4K120/8K30. Native encode support for H.265 Main 10, H.265 Main, H.264 High
	Dec & Enc	Concurrent 4K60 Dec and 4K60 Enc
• <b>I/O Interfaces</b>	1x Gb Ethernet, 2x USB3, 1x M.2 E-key, 1x USB-C, 1x uSD, CAN, headers for GPIO/I2C/SPI	
• <b>Power/Battery</b>	Power management and battery charging solution on SOM	
• <b>Operating Environment</b>	Input voltage: 3.7V nominal Operating Temperature: -25°C to +85°C	
• <b>Dimensions</b>	152 x 145 mm	

## Software:

• <b>OS Support</b>	Linux Yocto
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Learn more at [lantronix.com/drone-reference-platform](https://lantronix.com/drone-reference-platform)

## Certifications

