

# Orion X610

## HIGH-CAPACITY, SMALL FORM FACTOR MIMO RADIO

The Orion X610 2x2 MIMO tactical radio delivers high throughput, extended range and spectrum agility in a compact form factor. It can be deployed on a variety of SWaP-constrained platforms such as UAVs, UGVs and USVs, reducing space usage on vehicles and payload weight on masts.

The Orion X610 supports multiple network topologies—including high-capacity mesh, point-to-point and point-to-multipoint—enabling resilient connectivity on the move or at the quick halt.

Operators can quickly switch between available tactical waveforms to meet mission demands while maintaining interoperability with fielded systems. Ultra I&C's waveforms also support anti-jam protections and low probability of intercept/detection (LPI/LPD) features.

The Orion X610 can be factory-configured for a range of frequency bands, including dual-band S and C or tri-band L, S and C. Its rugged design ensures reliable performance across air, land and sea.

Minimal training is required, and its intuitive interface makes configuration fast and easy.



### HIGH CAPACITY IN A SMALL FORM FACTOR

Ideal for SWAP-constrained platforms such as small UAVs, UGVs and USVs

2x2 MIMO for superior performance

Ultra I&C's High Throughput Mesh (HTM) waveform offering >200 Mbps



### WAVEFORM FLEXIBILITY AND SURVIVABILITY

Supports U.S. Army TRILOS and USMC LRS waveforms for interoperability

Adaptive Frequency Hopping, Adaptive Power Control, Automatic Frequency Control, and Spectrum Scanning for enhanced resiliency



### WIDE FREQUENCY AND POWER OPTIONS

Dual-Band and Tri-Band coverage across L, S, and C bands

High output power (up to 36 dBm per RF port) for extended range



### BUILT FOR LARGE SCALE COMBAT OPERATIONS

Deployable as a Variable Height Antenna relay node

Designed to meet MIL-STD-810H and MIL-STD-461G standards

# TECHNICAL SPECIFICATION

## OPERATIONAL FLEXIBILITY

The Orion X610 integrates seamlessly across platforms:

- UxV-mounted: Compatible with UAVs, UGVs, and USVs
- Vehicular-mounted: Mobility for dynamic operations
- Mast-mounted: Enhanced field connectivity

The Orion X610 radio is supported by Ultra I&C's suite of accessories, including power supply units and specialized antennas, customizable for specific mission needs.

RADIO CHANNELS	12x2 MIMO Software-Defined Radio Channel
ANTENNA RF PORTS	2
WAVEFORMS	High Throughput Mesh (HTM), NBH
TOPOLOGIES	Mesh, Point-to-Multipoint (PMP), Point-to-Point (PTP)
FREQUENCY BANDS	Options for: 2200-2500 and 4400-5000 MHz 4400-5000 and 5250-5850 MHz 1350-2500 MHz and 4400-5000 MHz
CHANNEL	1.25 / 2.5 / 3.5 / 5 / 7 / 10 / 14 / 20 / 25 / 33 / 40 MHz
BANDWIDTHS	
THROUGHPUT	>200 Mbps
TRANSMIT POWER	Up to 36 dBm/RF port
OUTPUT	
DIMENSIONS (W X H X D)	3.94 x 2.52 x 6.89 in. (10.01 x 6.40 x 17.50 cm)
WEIGHT	2.5 lbs (1.13 kgs)
POWER CONSUMPTION	<70W average
VOLTAGE	14-36 VDC
MIMO SUPPORT	Space-Time Coding, Spatial Multiplexing
ENCRYPTION	AES256 (Standard) Designed for FIPS140-3 Level 2 (Suite B)
SPECTRUM	Adaptive Power Control
RESILIENCE*	Automatic Frequency Control Adaptive Frequency Hopping Band Diversity Spectrum Scan
INTERFACES	2 TNC or N RF Connectors 1 Gigabit Ethernet Military Circular Connector 1 Power Military Circular Connector
MATERIAL	Tan/Green/Black Painted Aluminum
ENVIRONMENTAL STANDARDS	Designed to meet MIL-STD-810H
EMI/EMC	Designed to meet MIL-STD-461G

\*Contact us for additional details