

# Trusted performance, unrivaled capability



## ORION Gen 6 Tactical Communications Systems

# More Power. Better Range. Smaller size.

The ORION Gen 6 is Ultra I&C's latest generation family of tactical radio systems and is the culmination of over 100 years of tactical radio technology and waveform innovation. The ORION Gen 6 is the most capable multi-channel, multi-waveform family of tactical radios on the market today for land, aerial and naval applications. The ORION Gen 6 lineup leads the way in line-of-sight and mesh technologies, providing an interoperable family of systems to bridge the Upper and Lower tactical tiers and reduce overall cost of ownership. The new family of radios from Ultra I&C are more powerful, have additional range and are significantly smaller than all previous generations. ORION Gen 6 is interoperable with previous generation Ultra I&C tactical radios, providing seamless integration with currently fielded U.S. Army TRILOS and U.S. Marine Corps LRS systems.



## FAMILY OF SYSTEMS FEATURES AND BENEFITS

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Highest throughput in class

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Designed for improved command post mobility and survivability

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Multi-channel and multi-waveform

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Unmatched resiliency in contested environments

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Joint-domain capable: Land, Aerial, Naval

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All topologies supported (PTP, PMP, Mesh)

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Spectrum agility in the field

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Very low swap

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AI/ML-powered automation and resiliency

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Reduced lifecycle costs via common Graphical User Interface and interoperability with in-service TRILOS and LRS radios

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## ORION X650

The ORION X650 is a two-channel MIMO tactical radio designed to meet the needs of the connected war fighter today and to evolve to meet ongoing tactical communications requirements well into the future. It's low SWAP and high throughput is ideally suited to ensure next-generation, digitized command post mobility and survivability. The ORION X650 has the most advanced resiliency features ever to be delivered with a tactical radio system for assured LPI/LPD. With a modular, multi-band, multi-waveform software-defined architecture, the ORION X650 is well-suited to meet any current or future tactical communications operational needs.



### KEY FEATURES

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Two-channel tactical radio

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Lowest SWAP high-capacity radio on the market

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Considerably smaller, lighter and more powerful than existing TRILOS and LRS radios

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True 4x4 MIMO for optimal resilience and capacity

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Native anti-jam and LPD capabilities

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Very high power for extended range

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Supports PTP, PMP and Mesh

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Supports multiple frequency bands on the same hardware

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Ready for AI/ML-based capabilities

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Optional UHF channel for operations in foliage environments

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Pre-integrated with masts including Blue Sky™ and Comrod™

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Pre-integrated with Adaptive Antenna Systems including BATS™ FAST

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System integration capability via Network Interface Unit

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Designed to meet mil standards including MIL-STD-810H

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Leading encryption and designed to meet highest cyber security standards including FIPS 140-3

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## ORION X630

The ORION X630 is a very small form-factor, two-channel MIMO tactical radio ideally suited for Vertical Height Antennas (VHA), drones, or any other application where low SWAP is a key requirement. The ORION X630 is the most capable two-channel radio ever to be produced by Ultra I&C in such a small form factor and will be a game-changer for on-the-move and beyond-line-of-sight communications. The ORION X630 will benefit from the same great resiliency features of the X650 and is AI/ML ready. It can be quickly deployed on a VHA such as the Hoverfly Spectre™, providing wide-area network coverage ideal in dense foliage or mountainous environments. Like the ORION X650, the ORION X630 can be configured to support point-to-point, point-to-multipoint and MESH topologies.



### KEY FEATURES

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Only two-channel UAV tactical radio

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Very low SWAP for use on UAVs Groups 1-5

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True 4x4 MIMO for optimal resilience and capacity

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Native anti-jam and LPD capabilities

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Highest throughput UAV radio on the market

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High-power for extended range

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Supports PTP, PMP and Mesh

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Supports multiple frequency bands on the same hardware

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Pre-integrated with VHA platforms including Hoverfly HL Spectre™, antennas including BATS™

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ESAs, third-party waveforms including Trellisware™ TSM

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System integration with Land, Aerial and Surface UxVs

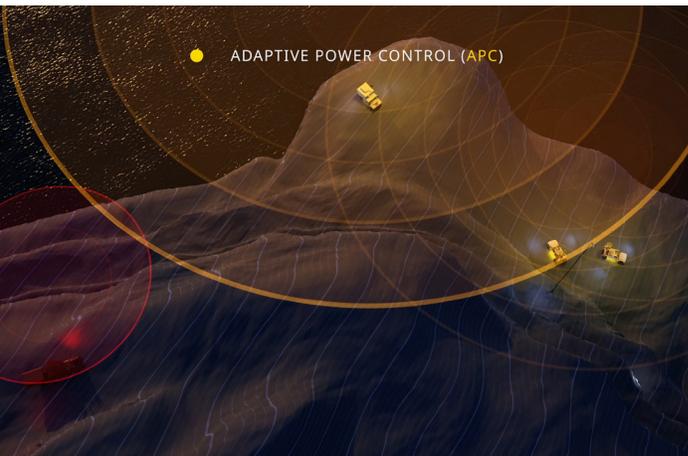
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Designed to meet mil standards including MIL-STD-810H

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Leading encryption and designed to meet highest cyber security standards including FIPS 140-3

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## EXTREMELY RESILIENT

The ORION Gen 6 product line incorporates features to ensure resiliency in contested and congested environments, including Adaptive Power Control, Automatic Frequency Control and UltraHop™ Adaptive Frequency Hopping. ORION Gen 6 is ready to incorporate newer AI/ML technologies to offer even better levels of resiliency, including Integrated Spectrum Monitoring and Classification.

## VERTICAL HEIGHT ANTENNA (VHA) CAPABLE

ORION Gen 6 will provide aerial-extension connectivity when natural or manmade obstacles prevent the reliable use of Line-of-Sight (LOS) communications. By mounting the radio on a Vertical Height Antenna (VHA) drone, the system provides a reliable and secure broadband connectivity overlay over wide operational areas for consumers of the data fabric. A VHA extends the line-of-sight Upper Tactical Tier (UTT) to near-beyond-line-of-sight, thereby reducing SATCOM cost and operational SATCOM dependencies in satellite-degraded or denied conditions. VHAs also improve command-post mobility by being faster to deploy than traditional static masts and require significantly less overall transit case space.



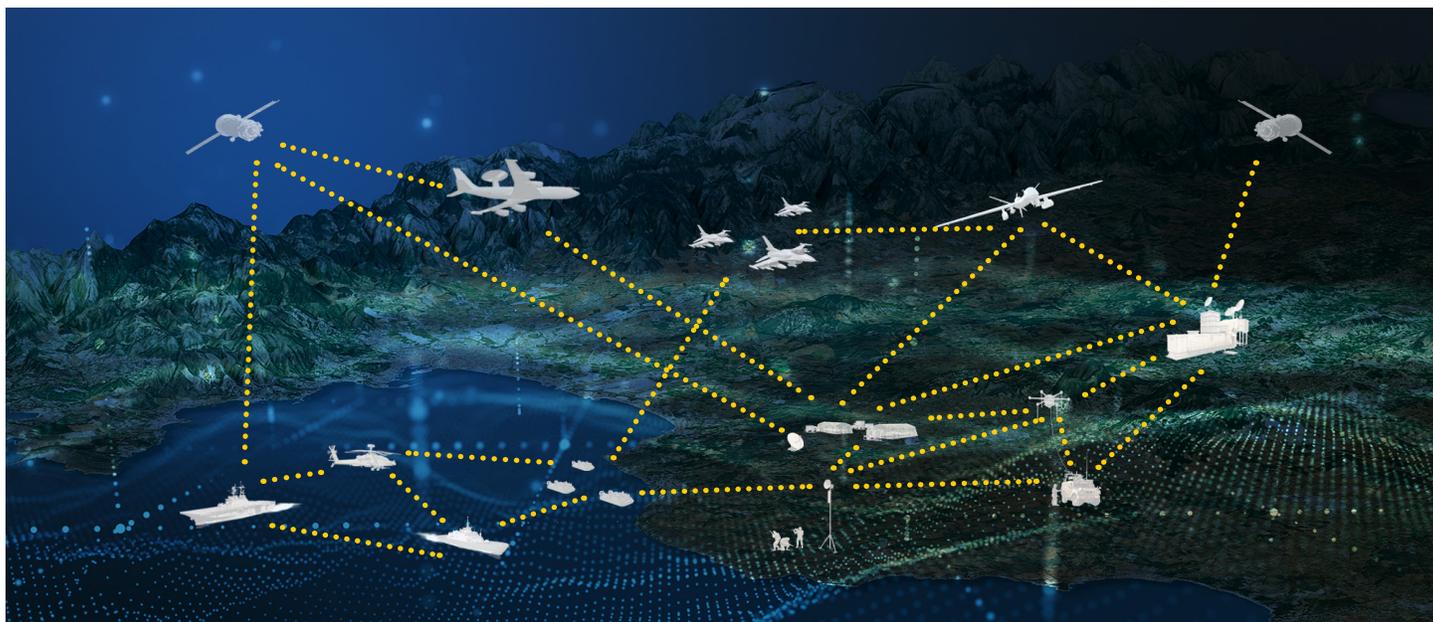
## FAMILY OF SYSTEMS COMMONALITY AND INTEROPERABILITY

Sharing in the same design approach, manufacturing quality, and supply chain, Ultra I&C's product line offers commonality that not only benefits the warfighter in the field, but also provides simplified maintenance and repair, with reduced lifecycle costs. Commonality of systems across ORION Gen 5, TRILOS, LRS and ORION Gen 6 offers much greater ease-of-use through a single user interface and experience (UI/UX), reducing the training burden. Common waveforms between all systems ensure interoperability of systems and eases integration of new radios.



## SECURE COMMUNICATIONS THROUGH SOVEREIGN CRYPTO CAPABILITIES

While all ORION radio systems support FIPS compliant encryption mechanisms, Ultra I&C also has the expertise and experience to implement NSA Type 1 or High-Grade encryption for communication systems. Ultra I&C specializes in the development and sustainment of Key Management and Distribution and NSA Type 1 / High-grade designed solutions. Any additional cryptographic solutions required beyond FIPS / AES already provided by the ORION Gen 6 product family can be incorporated.



## A UNIFIED COMMUNICATIONS NETWORK FOR CJADC2

The ORION network architecture is ideally suited to enable the CJADC2 and Project Convergence vision for a unified network. By combining resilient (anti-jamming), mobile and aerial extensions to TRILOS with multi-MANET interoperability at the edge, Ultra I&C is uniquely positioned to deliver all-domain connectivity, ensure coalition interoperability and provide a common data fabric transport for enhanced situational awareness.

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