

VORTEX®

The industry standard for secure, flexible and interoperable ISR communications

L3Harris VORTEX is the industry standard of compact, highly capable, multi-use transceivers. With simultaneous dual-band transmission, VORTEX transforms sensor-to-shooter networking via increased levels of collaboration and interoperability. A VORTEX-to-VORTEX dual-band link provides high reliability through spatial and frequency redundancy.

PRODUCT DESCRIPTION

Designed for air, surface and maritime use, VORTEX transceiver provides real-time, full-motion video and other data for situational awareness, targeting, battle damage assessment, surveillance, relay, convoy overwatch operations and other situations where eyes-on-target are required. VORTEX can transmit and receive analog and/or digital data simultaneously. VORTEX is interoperable with ROVER®, CDL, virtually all UAVs, targeting pods and other waveforms. VORTEX can simultaneously transmit common data to multiple platforms using two different channels in one or two different bands. VORTEX is able to receive on two different channels in one or two different bands from a single source. This band and channel diversity provides link redundancy, better reception and resiliency to platform shading, multipath interference, line-of-sight blockages and RF interference.



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Comprehensive and flexible features ensure the system enables your exacting mission requirements

KEY FEATURES

- > Multiband reception and transmission
- > Two simultaneous transmit channels
 - Same or different bands
 - Common data source
 - Common baseband modulation
 - Two external transmit interfaces
- > Web browser GUI control
- > Front panel indicators include video activity, transmit-enabled, system status and reverse polarity
- > Two simultaneous reception channels
 - Same or different bands
 - Diversity reception with two receive antennas
 - Single data source
 - Two external receive interfaces
- > Control for two external transmitters
- > Baseband modulation output for two transmitters
- > Reverse polarity protection
- > STANAG 7085-certified

SPECIFICATIONS

PERFORMANCE CHARACTERISTICS

Transmit and Receive Bands

- > Ku-Band: 14.40 GHz to 14.83 GHz and 15.15 GHz to 15.35 GHz, 1.0 MHz steps
- > C-Band: 4400 MHz to 4940 MHz and 5250 MHz to 5850 MHz, 1.0 MHz steps
- > S-Band: 2200 MHz to 2500 MHz, 0.5 MHz steps
- > L-Band: 1710 MHz to 1850 MHz, 0.5 MHz steps
- > UHF: 400 MHz to 470 MHz, 1 kHz steps

Data Rates

- > CDL: 200 kbps to 45 Mbps
- > Tactical: 1.6 Mbps to 6.4 Mbps
- > VNW (FSK): 50 kbps to 5 Mbps
- > Legacy ROVER 455k and ROVER 466ER
- > Analog FM
- > BE-CDL: 512 kbps to 45 Mbps
rev. B modes 1 to 15, 101 to 104

Video

- > NTSC/PAL
- > H.261 (decode only)
- > H.264 (MPEG-4 part 10)
- > MPEG-2 (legacy-compatible) and MPEG-4 part 2
- > Motion JPEG

Encryption

- > Type 1 encryption available
- > AES

FEC (Forward Error Correction)

- > Rate 1/2 convolutional
- > Reed-Solomon (247, 231)
- > Rate 1/2 convolutional with concatenated Reed-Solomon
- > Turbo product code

External Interfaces

- > IPv4
- > 10/100 Base-T Ethernet
- > RS-232 (2 user channels, 1 GPS console)
- > RS-422 (2 full-duplex user channels)

- > Headset connection
- > SMA (1 video output, 1 video input)
- > Remote LED indicators
- > Dual external SSPA and transmitter control
- > Dual interfaces for external directional antenna control
- > Dual DC bias RF receive (for external LNA)

Modulation

- > STANAG 7085-certified
- > CDL-compliant

PHYSICAL CHARACTERISTICS

- > Size: 4.75" (w) x 3.7" (h) x 8.6" (d)
- > Weight: < 10 lb.
- > Power: 9 to 32 VDC, approx. 45 watts¹ (typical)
- > Immersion: 1 meter of water for up to 30 minutes
- > Shock: 20 G, 11 msec (terminal sawtooth peak), (operating)
- > Altitude: < 70,000 feet (operating)
- > Temperature: -20 °C to +70 °C (operating at MSL)
-20 °C to +85 °C (non-operating)

COMPRESSION AND WAVEFORMS

	MJPEG	ANALOG	H.261	MPEG-4 (PART 2)	MPEG-2	H.264 (MPEG-4 PART 10)
VNW	X			X	X	X
FM Analog		X				
ROVER 455k			X ²			
ROVER 466ER				X		
CDL					X	
BE-CDL						X
Tactical					X	X

1. Varies based on configuration and temperature

2. H.261 is decode only

VORTEX

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L3Harris Technologies is an agile global aerospace and defense technology innovator, delivering end-to-end solutions that meet customers' mission-critical needs. The company provides advanced defense and commercial technologies across air, land, sea, space and cyber domains.

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