L3HARRIS®
FAST. FORWARD.

VORTEX®i

The industry standard for secure, flexible and interoperable ISR communications

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

PRODUCT DESCRIPTION

Designed for air, surface and maritime use, the VORTEXi transceiver provides real-time full-motion video and other data, for situational awareness, targeting, battle damage assessment (BDA), surveillance, relay, convoy overwatch operations and other situations where eyes on target are required. VORTEXi can transmit and receive analog and/or digital data simultaneously. VORTEXi is interoperable with ROVER®, CDL, virtually all UAVs, targeting pods and other waveforms. VORTEXi can simultaneously transmit common data to multiple platforms using two different channels in one or two different bands. VORTEXi 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.


Use of U.S. DoD visual information does not imply or constitute DoD endorsement.

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
- Provides control for two external transmitters
- Baseband modulation output for two transmitter
- Front panel indicators includes video activity, transmit-enabled, system status and reverse polarity
- Reverse polarity protection
- Two simultaneous reception channels
  - Same or different bands
  - Diversity reception with two receive antennas
  - Single data source
  - Two external receive interfaces

SPECIFICATIONS

PERFORMANCE CHARACTERISTICS

Transmit and Receive Bands

- Ku-Band: 14.4 to 14.83 and 15.15 to 15.35 GHz 1.0 MHz steps
- C-Band: 4.4 to 4.94 and 5.25 to 5.85 GHz, 1.0 MHz steps
- S-Band: 2.2 to 2.5 GHz, 0.5 MHz steps
- L-Band: 1.71 to 1.85 GHz, 0.5 MHz steps
- UHF: 400 to 470 MHz, 1 kHz steps

Data Rates

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

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

- 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)

PHYSICAL CHARACTERISTICS

- Size: 11.9 cm (w) x 9.4 cm (h) x 21.8 cm (d)
- Weight: < 4.5 kg
- Power: 9 to 32 VDC, approx. 50 watts[1] (typical)
- Immersion: 1 meter of water for up to 30 minutes
- Shock: 20 G, 11 msec (terminal sawtooth peak), (operating)
- Altitude: < 21.3 km (70,000 ft) (operating)
- Temperature: -20 °C to +70 °C (operating at MSL)
  -20 °C to +85 °C (non-operating)

COMPRESSION AND WAVEFORMS

	MJPEG	ANALOG	H.261[2]	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	X
BE-CDL					X	X
Tactical					X	X

1 Varies based on configuration and temperature
2 H.261 is decode only.

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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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