

BANSHEE™ ADVANCED TACTICAL DATA LINK (ATDL) TRANSCEIVER

Reliable communications and robust connectivity
for all swarming operations

The L3Harris BANSHEE system provides protected and assured networked data link for advanced collaborative swarming weapons. The weapons data link is optimized to provide robust communications for the control systems of cruise missiles, or other attritable platforms.

PRODUCT DESCRIPTION

The BANSHEE Advanced Tactical Data Link (ATDL) Transceiver is designed to provide a robust protected data link, enabling coordinated swarming UAVs to operate unimpeded in spectrally congested environments. It is a low cost secure radio, using advanced features of L3Harris' ATDL 1.0 Waveform and Network Technology.

The networking topology manager supports advanced mesh networking features through a distributed mesh, enabling the network to scale from 2 to 32 nodes in a coordinated flat network. Tiered networks can be employed to extend well beyond 32 nodes. Optimization for real-time network management enable rapid network convergence amid highly dynamic airborne swarm operations.



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Secure and scalable
networking for advanced
collaborative and swarming
applications

KEY BENEFITS

- > Secure swarm networking
- > Scalable swarm size, up to 32 nodes in a swarm
- > Inter-Swarm communication for enhanced coordinated attack
- > Advanced waveform features
- > Anti-jam capability
- > Low latency messages
- > Three channel waveform
- > Support for omni-directional and conformal antennas
- > Authenticated swarm entry/grouping

FUTURE ENHANCEMENTS

- > Cooperative emitter location
- > GPS denied relative navigation
- > Position and timing capability

SPECIFICATIONS

Performance Characteristics

- > Multiband reception and transmission: S- and C-Bands
- > 3 floppable FDD Bands – 1 TX / 2 RX simultaneously

Waveform Characteristics

- > ATDL Mesh 1.0 compatible
- > Data rates from 4 kbps to 11 Mbps
- > Up to 32 node mesh connectivity
- > Less than 64ms latency across entire swarm
- > Up to 250 knots relative velocities

Encryption

- > AES

SWaP

- > Size: 4.321 (h) x 3.334 (l) x 4.496 (w) inches
- > Weight: 1.85 lbs
- > RF Power out: 30dBm or 1 Watt
- > Power Consumption: 42 Watts (typical), 50 Watts (max)
- > Input Voltage: 22 to 32 VDC

Environmental

- > Operating Temperature: -25 °C to +49 °C
- > Shock: 100G transient for launch

Networking

- > 6 Direct neighbors
- > Up to 32 nodes
- > Optimal Mesh and Swarm topology management
- > Internet Protocol (IP) HW-based routing
- > IP-based quality of service (QoS)

Special Features

- > In-band jammer/interference sensing algorithm
- > Automatic frequency agility
- > Power limiting mode controlled by profile

Applications

- > Coordinated operations
- > Small tactical aircraft executing in spectrally congested environments



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