

Embeddable, Single-Channel Link 16 Comms for SWaP-Constrained Systems



With Viasat's Battlefield and Awareness Targeting System-Embedded 2000 (BATS-E 2000) KOR 25A Size, Weight and Power (SWaP)-constrained systems, including targeting pods and network enabled weapons, are now accounted for in the Common Operational Picture. This 360-degree visibility provides all Link 16 network participants with the ability to see, relay and share situational awareness data and allows for more accurate tracking, identification and engagement so controllers have a clear view of the battlespace.

Optimized for embedded applications, the extremely low SWaP BATS-E 2000 delivers maximum operational flexibility as the mission unfolds. Controllers have the ability to send target updates while in flight for secure, reliable weapons delivery, so as to significantly decrease the time in high-threat environments.

The BATS-E 2000's Enhanced Throughput (ET) mode boosts Link 16's protected data rate of 115 Kbps to over 1.1 Mbps. When combined with the Concurrent Multiple Reception (CMR) capability, the BATS-E 2000 is the first Link 16 radio capable of data rates in excess of 2 Mbps. The Concurrent Multinet (CMN) and Concurrent Contention Receive (CCR) features have also been implemented in the latest version of the BATS-E 2000. With Link 16 Cryptographic Modernization, the BATS-E also implements the latest high assurance algorithms using a field proven programmable crypto engine to securely serve joint and coalition mission requirements, while maintaining backwards compatibility with legacy communications systems.

For platforms that have traditionally lacked Link 16 network access, the Viasat BATS-E 2000 provides a cost-effective option for integrating Link 16 into existing targeting and weapon systems without the need for major platform modifications. This approach ensures that integration costs are kept to a minimum, while providing full interoperability with other platforms that are already outfitted with Link 16 communications.

The Viasat BATS-E 2000 combines full Link 16 functionality in an ultra-compact, embeddable form factor, delivering real-time, accurate targeting data to help controllers make split-second decisions to execute more missions with precision.

BATS-E 2000 AT-A-GLANCE

Mission Flexibility

- » Single-channel Link 16 terminal
- » Embeddable form factor
- » Extremely low size, weight, and power
- » Jam resistant for operations in contested and denied access environments

Command and Control

- » Status/weapons load/time on station
- » Sensor information sharing
- » WILCO/CANTCO

Target Attack

- » Target update
- » Mobile target attack
- » Ideal for SWaP-constrained platforms
- » Targeting pods
- » Network enabled weapons

SPECIFICATIONS AND TECHNICAL FEATURES

PERFORMANCE

- » Frequency Range 969 to 1206 MHz Link 16
- » Transmission Modes Link 16 TDMA, all OP modes and enhanced throughput
- » Antenna Port
 - Link 16 50 Ω
- » Data Interfaces Ethernet, Full Platform-J interface
- » Dimensions (W x H x D) 3.13 x 2.48 x 4.97 in.; 7.95 x 6.3 x 12.62 cm
- » Volume 38 cu in. (623 cc)
- » Weight 2.5 lb

TRANSMITTER

- » Power Output 10 W

WAVEFORMS

- » L-band Link 16 data including enhanced throughput modes

ENVIRONMENTAL

- » Operating Temperature -40° to +74° C;
-40° to +165.2° F
- » Storage Temperature -46° to +74° C;
-50.8° to +165.2° F

POWER CONSUMPTION

- » Average DC Power Consumption @ 10W RF output power: 27W @ 28VDC

FEATURES

- » Embeddable, single-channel, single antenna Link 16
- » Modular design for easy growth
- » Fully conduction cooled
- » Link 16 data
- » Link 16 Frequency Remapping (FR)
- » Enhanced Throughput (ET)
- » Concurrent multi-net (CMN)
- » Concurrent Contention Receive (CCR)
- » Interoperable with: JTIDS, MIDS-LVT, MIDS JTRS, STT, BATS-D AN/PRC-161, and all fielded Link 16 terminals
- » Cryptographic Modernization Initiative compliant

GROWTH CAPABILITIES

- » Enhanced anti-jam
- » Link 16 precision navigation



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