

LINK 16 NETWORKING FOR AIRCRAFT AND SHIPBOARD CONNECTIVITY TO SUPPORT US AND COALITION OPERATIONS



Viasat’s team led the transformation in Link 16 technology by being the first to upgrade the design of many components of the terminal to provide greater flexibility, enhanced technological capabilities, decreased cost, and improved reliability. Embedded modules provide COMSEC and TACAN.

Through extensive use of reprogrammable components and a modular VME architecture, we’ve provided a lower cost design while also allowing for future growth requirements.

The Viasat terminal provides all operational modes of the Link 16 waveform, and implements all required Multifunctional Information Distribution System (MIDS) host interfaces for both US and coalition integration.

Viasat hardware implements Enhanced Throughput, a new capability that can increase coded data throughput from its current maximum of 115.2 kbps to over 800 kbps. Host interfaces and operational employment of this capability are still in the planning stages.

Together with Harris and European Aeronautic Defense and Space Company (EADS), Viasat is delivering a family of combat-proven, fully qualified, and EMC-Certified Link 16 MIDS terminals to US forces and coalition partners under contracts with the US Navy MIDS International Program Office (IPO) and other commercial customers.

SUPPORTED PLATFORM

Viasat has developed the MIDS Low Volume Terminal (LVT) to meet the Link 16 requirements of all US forces and coalition partners. MIDS-LVT(1) is designed for installation in fighter aircraft, including F-16s, F/A-18s, and the Eurofighter 2000. It is also being employed for MIDS-on-Ship, EA-6B, P-3, B-2, Airborne Laser, and other critical platforms.

NEW APPLICATIONS OF LINK 16

Viasat is a leader in the transformation of MIDS to Joint Tactical Radio System (JTRS) compliance. Through this and other key efforts such as Weapon Data Link (WDL) initiatives, IP over Link 16 demonstrations, enhanced Link 16 voice demonstrations, and other Bandwidth-on-Demand developments, we are contributing to the successful implementation of Network Centric Communications.

AIRBORNE TERMINAL AT-A-GLANCE

- » High capacity
- » Anti-jam
- » Highly secure
- » Situational awareness
- » Voice at 2.4 and/or 16 kbps
- » Embedded TACAN

Ordering Information

PN: VA-018100-0031	LVT(1) AN/ USQ-140(V)1(C) RT-1840
PN: VA-018300-0031	LVT(4) AN/ USQ-140(V)1(C) RT-1841
PN: VA-018200-0031	LVT(6) AN/ USQ-140(V)1(C) RT-1842
PN: VA-018400-0031	LVT(7) AN/ USQ-140(V)1(C) RT-1843



SPECIFICATIONS

PERFORMANCE CHARACTERISTICS

- » **Link 16 Messaging** TADIL J and IJMS
- » **Receive Sensitivity** Classified
(meets spec with 2 to 3 dB margin)
- » **Transmit Spectral Performance** Greater than -60 dBc in 1030/1090 MHz Bands
- » **Output Transmit Power** 1, 25, or 200 W + HPA interface
- » **Host Interfaces** MIL-STD 1553, X.25, Ethernet, and STANAG 3910
- » **Data Throughput** 26.8 through 1102 (growth) kbps
TADIL J Coded
- » **Keyfill** DS-101
- » **Voice Capability** 2.4 kbps LPC-10, and 16 kbps CVSD
- » **TACAN Capability** Air-to-Ground, Air-to-Air

PHYSICAL CHARACTERISTICS

- » **Main Terminal and RFA** 7.62 x 7.5 x 13.5 in.;
19.35 x 19.05 x 34.29 cm
- » **Power Supply (PS)** 7.62 x 2.252 x 13.46 in.;
19.35 x 5.72 x 34.19 cm
- » **Volume** 1000 in.³; 16,300 cc
- » **Weight**
 - MIDS-LVT RT LRU 42.5 lb; 19.28 kg
 - MIDS-LVT RPS LRU 9.0 lb; 4.08 kg

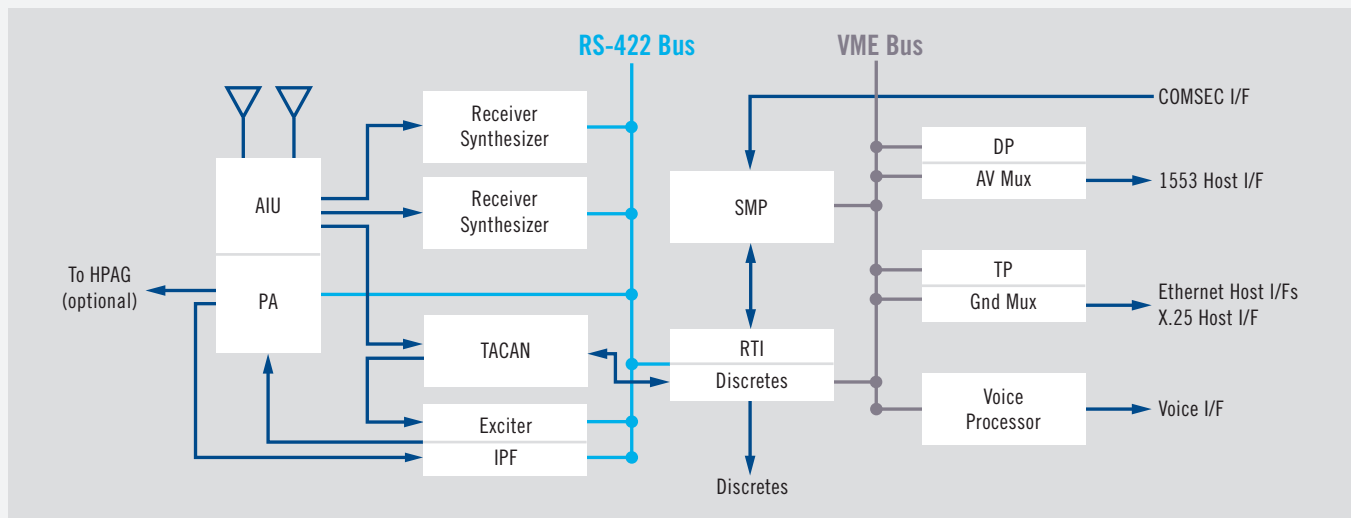
POWER AND COOLING

- » **Power Source** 115 VAC; 400 Hz
- » **Power Source Alternatives** 3 Phase or ± 140 VDC
- » **Power Consumption** 0% TSDF 150 W,
70% TSDF 350 W
- » **Cooling** External Conductive Air

OTHER CONFIGURATIONS

- » **LVT(4)** No TACAN
- » **LVT(6)** No voice
- » **LVT(7)** No voice, no TACAN

MIDS-LVT(1) CONFIGURATION



AIU Antenna Interface Unit
PA Power Amplifier
IPF Interface Protection Feature
HPAG High-Power Amplifier Group
RTI Receiver Transmitter Interface

SMP Signal Message Processor
DP Data Processor
TP Tailored Processor
Av Mux Avionics Multiplexer
Gnd Mux Ground Multiplexer

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