

C-130 Hatch-Mount Terminal VMT-1220HM

Two-Way Broadband Ku/Ka SATCOM-On-the-Move



Arming hundreds of mobile missions worldwide, the VMT-1220HM is a complete, self-contained airborne satellite terminal delivering high-speed IP communications-on-themove. With the VMT-1220HM and Viasat's Yonder® mobile broadband service, C-130 operators can send live, full-motion high-definition video over the horizon, make phone calls, conduct video conferences, access classified networks, and perform mission-critical communications while in flight.

For simple installation and rapid integration, the VMT-1220HM features a roll-on/roll-off design. The terminal can be quickly installed into a C-130 escape hatch while retaining use as an emergency exit. The terminal is JITC certified for installation and secure network operation.

Equipped with integrated technologies and robust waveforms, the VMT-1220HM has proven in-theater to deliver streaming data rates up to 4 Mbps with a 12 in. antenna, upgradable to 10 Mbps. True broadband communications-on-the-move are a reality, and affordable with the VMT-1220HM and the Yonder worldwide network of satellites.

BROADBAND COMMS-ON-THE-MOVE FOR ANY C-130 MISSION

- » Intelligence, Surveillance, Reconnaissance
- » Command, Control, Communications (C3)
- » VIP Transport
- » Search & Rescue
- » Anti-Piracy
- » Electronic Warfare
- » Telemedicine
- » Aerial Refueling

C-130 MOBILE SATCOM AT-A-GLANCE

Secure High-Speed Communications

- » Field-proven 4 Mbps streaming return link (with 12 in. antenna), upgradable to 10 Mbps
- » 10 to 30 Mbps shared forward link
- » Protected IP traffic with HAIPE® Type 1 encryption

FCC/ITU-Compliant

- » Authorized in over 100 countries
- » Mitigates adjacent satellite interference with spread spectrum waveforms
- » Optimized capacity with closed loop power control and advanced network management

Flexible Design for Aircraft Requirements

- » Roll-on/roll-off capability for use on different C-130 aircraft
- » Installed and ready-to-fly in 20 minutes or less
- » Accurate satellite tracking in all mission phases with Inertial Reference Unit (IRU)
- » Operates from aircraft or ground power
- » Integrated UPS allows seamless transition from aircraft or ground power
- » Airworthiness certified by USAF

Affordable and Scalable Services

- » Ku and Ka SATCOM operations, including Military and Commercial-Ka
- » Standard fixed-price monthly plans
- » Worldwide Yonder network with regional and global roaming options
- » Private in-theater networks available for specific mission charters
- » High-capacity coverage available over key regions including the Middle East, Southwest Asia, Europe, and the US

SPECIFICATIONS

	Ku-band	Ka-band (Preliminary)
OPERATING FREQUENCY		
Transmit	14.0 to 14.5 GHz	29.5 to 31.0 GHz
Receive	11.55 to 12.75 GHz (optional 11.45 to 12.65 GHz)	19.7 to 21.2 GHz
MODULATION AND FEC		
Forward/Return Link	Network Optimized to Variable Coding, Spreading, and Modulation (VCSM)	
Spread Forward/Return Link	Variable to 150	
FEC	R = 1/3 Turbo	
Frequency Reuse	Paired Carrier Multiple Access (PCMA)	
TRANSMISSION RATES		
Forward/Return Link	128 Kbps to 4 Mbps	128 Kbps to 10 Mbps
RF/TRACKING PERFORMANCE		
EIRP	39.5 dBW minimum	46.5 dBW minimum
G/T	9 dB/K minimum	10.2 dB/K minimum
Polarization	Selectable horizontal/vertical linear polarization	Circular LH & RH
Coverage	Azimuth 360° Elevation 5° to 85°	
Tracking Rates	Azimuth 30°/s Elevation 20°/s Polarization 20°/s	Azimuth 30°/s Elevation 20°/s Circular Polarization
Tracking Acceleration	Azimuth 30°/s² Elevation 30°/s²	Azimuth 30°/s² Elevation 30°/s²

Polarization 30°/s²

BASEBAND INTERFACES

Data10/100BASE-T EthernetConsoleRS-232 and Ethernet

(via telnet)

OTHER FEATURES

Encryption Type 1 HAIPE® (KG-250);

AES-256 FIPS 140-2 optional

Acceleration TCP/IP Performance

Enhancing Proxy

Router Cisco® Systems 2811 router

(red and black)

POWER

Input 120 V Single Phase AC

47 to 450 Hz, maximum 950 W

ENVIRONMENTAL AND PHYSICAL

Operating Temperature

» Hatch w/Antenna-55° to 65° C» IRU andO° to 40° C

In-Aircraft Equiment

Weight

» Hatch w/Antenna 65.5 lb» IRU with quick-release 12 lb

mount

» In-Aircraft Equipment 199 lb

Size

» Hatch w/Antenna (H x D)» In-Aircraft Equipment24 x 30 in. base23 x 20 x 36 in.

 $(W \times H \times D)$

MULTI-MISSION CAPABLE DESIGN





Circular Polarization

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