

Small Footprint Terminal
for High Data Rate
Comms-on-the-Move



Arming mobile missions worldwide, the VMT-1220LA (light aircraft) is a complete airborne satellite terminal with an ultra small 12" antenna and lightweight equipment delivering broadband IP communications-on-the-move. With the VMT-1220LA and ViaSat's mobile broadband service, aircraft operators can send live, full-motion high-definition video over the horizon, make secure phone calls, conduct video conferences, access classified networks, and perform mission-critical communications while in flight.

The VMT-1220LA has logged hundreds of thousands of flight hours on deployed government aircraft such as the King Air, PC-12, De Havilland, and Caravan. The terminal is FAA and JITC certified for installation and secure network operation.

Equipped with integrated technologies and robust waveforms, the VMT-1220LA has been proven in-theater to deliver streaming data rates up to 4 Mbps with a 12" antenna, upgradable to 10 Mbps. True broadband communications-on-the-move is a reality, and made affordable with the VMT-1220LA and ViaSat's worldwide satellite network.

BROADBAND COMMS-ON-THE-MOVE FOR LIGHT AIRCRAFT MISSIONS

- » Intelligence, Surveillance, Reconnaissance
- » Command, Control, Communications (C3)
- » VIP Transport
- » Search & Rescue
- » Electronic Warfare

LIGHT AIRCRAFT MOBILE SATCOM AT-A-GLANCE

Secure High-Speed Communications

- » Field-proven 4 Mbps streaming return link (with 12" 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
- » DO-160 qualified antenna, antenna control unit, and modem

Flexible Design for Aircraft Requirements

- » Antenna mounts on tail or fuselage of aircraft
- » Modem can be located any distance from antenna
- » Multiple radome options
- » Accurate satellite tracking in all mission phases with GPS-aided Inertial Reference Unit (IRU)
- » 28V DC or 120V AC powered modem options

Affordable and Scalable Services

- » Ku and Ka satcom operations, including Military and Commercial-Ka
- » Standard fixed-price monthly plans
- » Worldwide satellite network with regional and global roaming options
- » Private in-theater network overlays available for specific mission operations
- » High-capacity coverage available over key regions including the Middle East, Southwest Asia, Europe, and the U.S.

Light Aircraft Terminal VMT-1220LA

SPECIFICATIONS

	Ku-Band	Ka-Band
Operating Frequency		
Transmit	14.0 – 14.5 GHz	29.5 – 31.0 GHz
Receive	11.55 – 12.75 GHz	19.7 – 21.2 GHz
Modulation and FEC		
Forward/Return Link	Network Optimized - Variable Coding, Spreading, and Modulation (VCSM)	
Spread Forward/Return Link	Variable to 150	
FEC	R = 1/3 Turbo or DVB-S2	
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°/s ² Elevation 30°/s ² Polarization 30°/s ²	Azimuth 30°/s ² Elevation 30°/s ² Circular Polarization

SMALL FOOTPRINT 12" ANTENNA, ACU, MODEM



BASEBAND INTERFACES

Data 10/100BaseT Ethernet
Console RS-232 and Ethernet (via SSH)

OPTIONAL FEATURES

Encryption » Type 1 HAIPE® (KG-250)
 » AES-256 FIPS 140-2
Acceleration Router TCP/IP Performance Enhancing Proxy
 Commercially available

ENVIRONMENTAL AND PHYSICAL

VR-12 Antenna

» Power Supplied by ACU
 » Operating Temperature -55° to 70° C
 » Storage Temperature -55° to 85° C
 » Weight 22 lb

Antenna Control Unit (ACU)

» Power <175W @ 28V DC (with Ku band Antenna)
 » Power < 275 W @ 28V DC (with Ka band Antenna)
 » Operating Temperature -55° to 70° C
 » Storage Temperature -55° to 85° C
 » Dimensions 8" X 11" X 3.4"
 » Weight 5.5 lb

ViaSat Mobile Broadband Router (VMBR-1500)

» Power <100W @ 28V DC
 » Operating Temperature -20° to 60° C
 » Storage Temperature -40° to 85° C
 » Dimensions 14.6" X 4.88" X 7.63"
 » Weight 10 lb

Inertial Reference Unit

» Power <18W @ 28V DC
 » Operating Temperature -46° to 60° C
 » Storage Temperature -46° to 71° C
 » Dimensions 7.45" X 7.5" X 4.78"
 » Weight 8.5 lb

CONTACT

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