Viasat

FASTEST, MOST EFFICIENT REAL-TIME SITUATIONAL AWARENESS FOR THE WARFIGHTER

VMT-2100 VEHICULAR

VMT-2100 AVIATION

Viasat's Mobile Transceivers deliver increased capacity for greater throughput capabilities by leveraging the technology rooted in Viasat's family of SATCOM products. Viasat recognized the need for the growing, global command and control (C2) networks to improve upon legacy systems by providing tactical users with faster Position Location Information (PLI) refresh. Paired with a scalable, adaptable network and ground infrastructure, tactical users are able to increase their situational awareness (SA), send tactical messages, report enemy positions, and prevent blue-on-blue fratricide.

Users achieve global connectivity by operating through a low-cost, ubiquitous ground vehicular transceiver or an aviation transceiver. The ground transceiver is a single Line Replacement Unit (LRU), while the aviation transceiver is a two-LRU design to offer improved aerodynamic performance. Viasat Mobile Transceivers are currently outfitted on over 60,000 tactical platforms within the US military, delivering improved network efficiency and powering next-generation situational awareness systems, such as the Blue Force Tracking 2 (BFT2) Program. Designed to provide dramatic improvements in situational awareness for warfighters today, the Viasat Mobile Transceivers can be provisioned for different networks based on mission, coverage, and interoperability requirements.

Whether it is a sovereign network or a coalition-interoperable network, ground or space segment, Viasat's Mobile Transceivers work on agnostic systems to deliver maximum flexibility for your mission.

With built-in redundancy, the system can also achieve assured network availability. And with FIPS 140-2 Level 2 security, this next-generation network provides additional protection from adversarial traffic and data probing. Leveraging the same spread spectrum and mobile satellite technology that powers many commercial applications today, the enhanced waveform provides improvement on message reliability with the re-use of second generation Digital Video Broadcast (DVB-S2). This is vital for users who need to support command and control on a global scale. And with an over-the-air, software programmable approach, users can quickly modify and upgrade systems in the field — minimizing hardware changes and platform downtime.

VIASAT MOBILE TRANSCEIVERS AT-A-GLANCE

More Efficiency

» Reduce cost per user by providing ten times the number of remote users on your existing space segment

» Operate more cost-efficiently with both legacy and next-generation commercial L-band satellites by automatically leveraging combinations of symbol rate, chip rate and FEC rate in order to optimize capacity and latency while minimizing the required satellite EIRP and bandwidth

» Provides warfighters utilizing the BFT-2 network with the ability to exchange situational awareness information and IP-based command and control data with 47 times faster downloads and 10 times faster uploads than the legacy BFT network

More Security

» With embedded, NIST-certified FIPS-140-2 Level 2 AES-256-bit based encryption, the system ensures secure connectivity over the satellite channel and ground network infrastructure, protecting sensitive communications

Highly Scalable

» Manage and control up to 200,000 transceivers operating worldwide on leased L-band satellite channels from any satellite provider through up to 8 satellite ground stations 24 hours a day, 7 days a week

Ordering Information

Vehicular

PN: 1239327	BFT2 SATCOM Transceiver (USG authorization required)
PN: 1285141	Global C2 SATCOM Transceiver (Customer operated or sovereign network)

Aviation

PN: 1115604	BFT2 SATCOM Antenna (USG authorization required
PN: 1113215	BFT2 SATCOM Modem (USG authorization required)
PN: 1265676	Global C2 SATCOM Transceiver Set (Customer operated or sovereign network)

SPECIFICATIONS

NETWORK CONFIGURATION

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Topology	Hub-Spoke with instantaneous PLI reflection
Carrier Symbol Rates	Variable to operate on different commercial L-band satellites
Forward Link Waveform	Based on DVB-S2
Return Link Waveform	Spread GMSK, turbo-coded
Throughput (based on Inmarsat-4, 200 kHz channel)	
» Forward Link	122 kbps and higher
» Return Link	2.8 kbps and higher per transceiver
PLI Latency	Seconds

TRANSMISSION SECURITY

Link Encryption	AES 256-bit bulk encryption of the user data plane and the network control data plane
NIST Certification	FIPS-140-2 Level 2
Traffic Load Masking	Optional

ENVIRONMENTAL & PHYSICAL CHARACTERISTICS

Temperature Range	
» Operational	-40° to +71° C
» Storage	-55° to +85° C
Relative Humidity	100% Condensing
Shock/Vibration	MIL-STD 461, 464 and 810 Compliant
Dimensions (L x W x H)	
» Ground Mobile	8.75 x 8.75 x 4.75 in.
» Aviation	
‣ RF assembly	11.00 x 4.00 x 3.56 in.
‣ Modem assembly	4.50 x 4.50 x 5.95 in.
Weight	
» Ground Mobile	6 lb
» Aviation	
‣ RF assembly	2.8 lb
‣ Modem assembly	2.4 lb

ELECTRICAL

Prime Power	20 to 33 VDC
Power Consumption	<2.5 VA
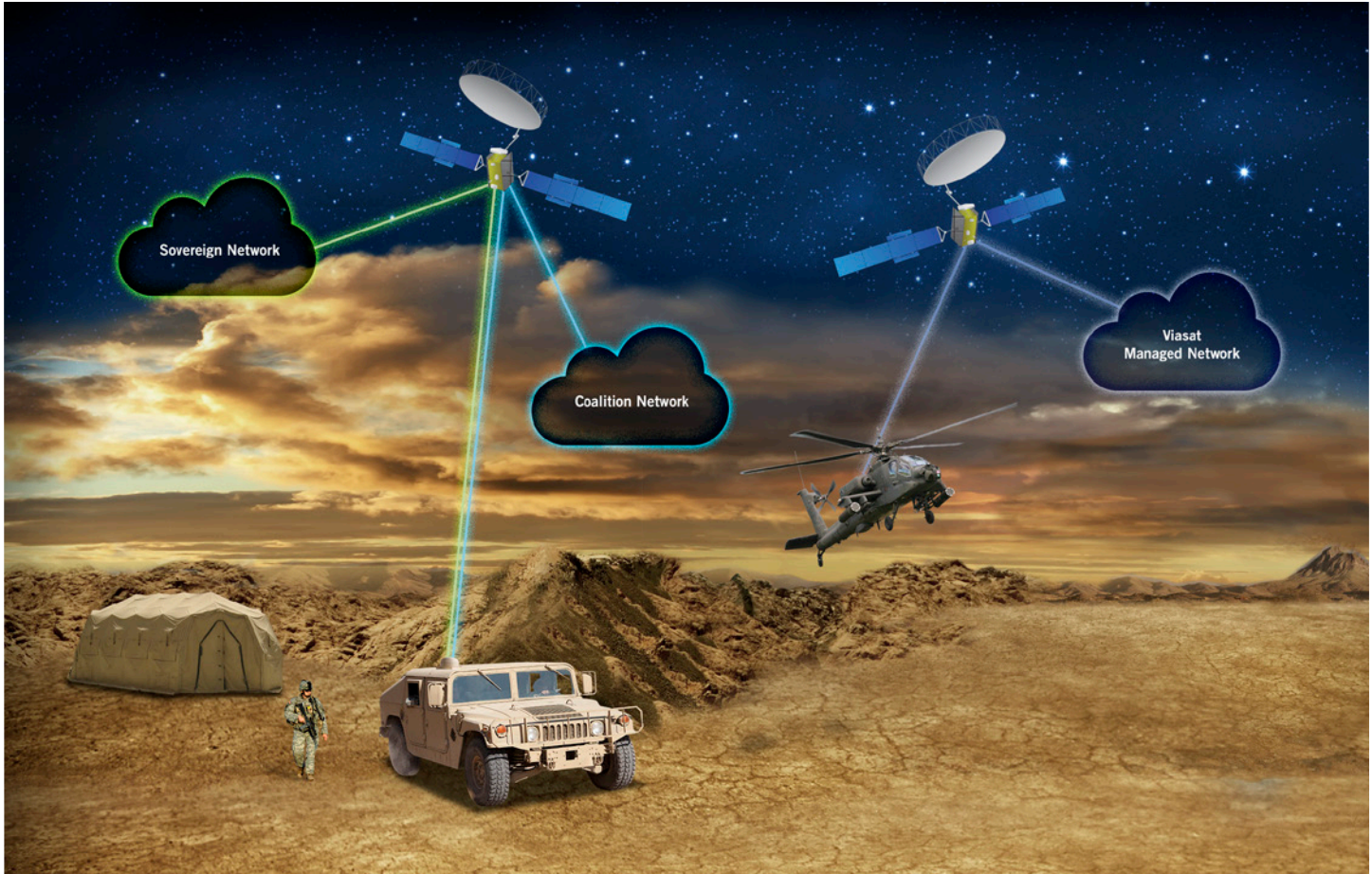
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