Narda Satellite Networks

AN/TSC-179

GROUND MULTI-BAND TERMINAL (GMT)

Mission

Deployable satellite communications contained in transit cases required for repeated tactical deployments with continuous operations when deployed worldwide for C⁴ISR missions.

Solution

L-3 Narda Satellite Networks provides the quad-band dual hub Ground Multi-band Terminal (GMT) in response to the complex, transitional communication missions confronting today's warfighters.

Second-Generation
Quad-band Dual Hub SATCOM Terminal

The GMT is an extension to the successful forerunner — QHSAT or AN/TSC-168 — providing increased transmission capacity, enhanced operational functionality, mission adaptability through "Plug and Play" architecture and reliability.

- The GMT provides advanced technology SATCOM solutions to a wide range of DoD theater-deployable communications requirements — current and future!
- Multi-band (C-, X-, Ku- and Ka-band), high data throughput, operational availability, flexibility, reduced logistics, high reliability and low operating cost provide the answers to the forward-deployed Commanders.
- High wind stability, ease of deployment and operations enables the troops to execute critical C⁴ISR (Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaisance) missions securely and quickly.

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ENVIRONMENTAL CONDITIONS		SYSTEM RELIABILITY	CONFIGURATION FLEXIBILITY
Temperature (operating)	-30° to +55° C with the addition of solar loading for all exposed equipment/transit cases	GMT has a Mean Time Between Critical Failure (MTBCF) greater than 2000 hours. The GMT's operational availability is greater than 96.5 percent over a 30-day period.	•Supports operations in four bands (C-, X-, Ku-, Ka-) •Spoke, Hub, Hub/Spoke, Dual Hub •Inter Facility Link (IFL) length of up to 1.2 miles •Interoperable with QDHT, FTSAT, QHSAT •Interfaces with large aperature antennas including LMAA, LHGXA, QRSA, LAMDA
Wind (operating)	45 mph with gusts to 60 mph		
Rain (operating)	2 in./hr. with 25 mph wind		
Ice (operating)	1/2 in. ice		
Snow (operating)	20 lbs./square ft. on horizontal surfaces		

The GMT is designed for setup, operation, maintenance, and teardown by personnel wearing arctic gear.

PERFORMANCE SPECIFICATIONS

BAND	TRANSMIT	RECEIVE	EIRP	G/T
C-band	5850 – 6425 MHz	3400 – 4200 MHz	63.0 dBW	16.5 dB/K
X-band	7900 – 8400 MHz	7250 – 7750 MHz	67.0 dBW	21.0 dB/K (22.0 dB/K available)
Ku-band	13.75 – 14.5 GHz	10.95 – 12.75 GHz	70.0 dBW	Per paragraph 1.1 of Intelsat Earth Station Standards (IESS)-208 for standard E-1
Ka-band	30.0 – 31.0 GHz	20.2 – 21.2 GHz	71.0 dBW	27.0 dB/K

Key Benefits

- Separable dual hub transit case configuration offers deployment flexibility
- Functional packaging
- Core terminal transportable on one 463L pallet
- Easy setup, satellite acquisition and operation
- XTAR-ready
- L-band IF architecture
- IP/TDMA capability optional
- Superior wind stability (60 mph operating)
- Data rate: 52 Mbps on each of two RF strings (274 Mbps optional)
- Integrated logistics support

Features

- Local and remote system Control Monitor Alarm (CMA) up to 1000 ft. (1.2 miles optional)
- DISA and ARSTRAT certified to operate over DSCS and WGS military satellites
- Interoperability certified by JITC (Joint Interoperability Test Command)
- Intelsat certified for commercial frequency bands
- High frequency stability
- Built-in self-test capability
- GMF-compatible
- Environmentally protected electronic cases for outdoor operation
- ETSSP operation up to 52 Mbps
- Dual-carrier certified for Ka- and Ku-band operation
- Consumption 15 KVA 99-264 VAC, 47-63 Hz auto-sensing
- Setup / take-down time: 60 minutes or less
- Auto acquisition and scan
- Extended operational frequency bands
- GPS-disciplined 5 MHz timing source
- Replacement Frequency Modulated Order Wire (RFMOW)
- Turbo product code-forward error correction

ISO 9001

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SATCOM Group

communications
Narda Satellite Networks

L-3. Headquartered in New York City, L-3 Communications employs over 64,000 people worldwide and is a prime contractor in aircraft modernization and maintenance, C3ISR (Command, Control, Communications, Intelligence, Surveillance and Reconnaissance) systems and government services. L-3 is also a leading provider of high technology products, subsystems and systems.

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