

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 Reconnaissance) 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 aperture 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



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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.