

RF-7800B-VU104

Land Mobile BGAN Terminal

The L3Harris RF-7800B-VU104 Land Mobile Broadband Global Area Network (BGAN) Terminal provides critical high-speed SATCOM capabilities to forces on the move. When paired with the L3Harris Falcon III® Manpack Vehicular Amplifier Adapter, the terminal extends the range of wideband networks beyond the limitations of ground-based Line-Of-Sight (LOS) communications. Ruggedized for extreme conditions, the L3Harris RF-7800B-VU104 is the only Class 10 BGAN SATCOM-On-The-Move terminal available today.



The L3Harris Land Mobile BGAN Terminal is ideal for law enforcement, homeland security or humanitarian and disaster-relief forces operating in harsh environments. It features a permanently mounted vehicular antenna that continuously tracks with INMARSAT satellites, providing seamless Beyond-Line-Of-Sight (BLOS) connectivity. When

used with the L3Harris Falcon III® AN/PRC-117G(V)1(C) or RF-7800M-MP manpacks, the terminal harnesses ANW2®C ad-hoc networking capabilities to automatically route between mobile wideband LOS and BLOS communication nodes. This, along with abilities for increased data throughput of up to two Mbps over an INMARSAT satellite, helps users better manage subscriber time and related costs.

The L3Harris RF-7800B-VU104 is engineered for rapid set up and operation. Users can configure, remotely control and provide status and fault monitoring for the RF-7800B-VU104 using the front panel of a L3Harris Falcon III manpack radio.

HIGH-SPEED SATCOM CONNECTIVITY ON-THE-MOVE

KEY BENEFITS

- > High-speed IP data rates up to 492 kbps
- > Reliable connectivity On-The-Move
- > Seamless transition between SATCOM and LOS communications
- > Easy set up and operation

The diagram illustrates the ANW2°C network architecture, showing the flow of data from land-based units to the Central Command via the INMARSAT Satellite.

Brigade (BDE) Regional Headquarters: This section shows a cluster of buildings and vehicles. It is connected to the INMARSAT Satellite via an L-Band link. A Falcon III Manpack (ANW2°C & BGAN) is shown nearby.

INMARSAT Satellite: The central hub of the network, receiving data from the Brigade (BDE) Regional Headquarters and the ANW2°C on-the-Move units, and relaying it to the INMARSAT Satellite Access Station.

INMARSAT Satellite Access Station: This station, located on the right, is connected to the INMARSAT Satellite via a C-Band link (6 GHz, 4 GHz Rx). It is also connected to the Central Command via a dashed line.

Central Command: The final destination of the data, shown on the far right with a control room interface.

ANW2°C LOS to SATCOM-on-the-Quick-Halt (Land Portable BGAN): This section shows soldiers and a vehicle. They are connected to the INMARSAT Satellite via an L-Band link. A Falcon III Manpack (ANW2°C & BGAN) is shown nearby.

ANW2°C LOS to SATCOM-on-the-Move (Land Mobile BGAN): This section shows a Humvee and soldiers. They are connected to the INMARSAT Satellite via an L-Band link. A Vehicular Falcon III Manpack (ANW2°C & BGAN) is shown nearby.

ANW2°C Net: Dashed lines indicate the network connections between the various units and the satellite, showing a mesh-like structure.

Full IP Capability	Email, Web browsing, FTP, etc.
INMARSAT Certified	Land Mobile User Equipment Class 10, BGAN background user data rates up to 492 kbps, BGAN streaming QoS: User data rates of 32, 64, 128, 256. Data rate 256 kbps is only available at elevation angles > 45°, Global coverage
Multi-user capability of up to 11 simultaneous primary user contexts/sessions	
IP network bridging mode and modem mode support	
FCC, C5, GMPCS/ITM certified	

Dimensions	8 H x 20 D in (20 H x 51 D cm)
Weight	28 lbs (12.6 kg)
BGAN Satellite	L-Band: TX: 1625.5 - 1660.5 MHz RX: 1525 - 1559 MHz Alphasat Satellite: TX: 1668 - 1675 MHz RX: 1518 - 1559 MHz
Operation	Full-duplex, BLOS operation
Power Options	Internal MIL-STD-1275 power supply, 120/240 AC power supply, standard vehicle DC adapter
Continuous Tracking with Vehicle Motion Changes	Angular velocity of 100°/s (azimuth and elevation), angular acceleration of 100°/s ² (azimuth and elevation), 360° continuous field of view in azimuth, 5°–90° continuous field of view in elevation, travel speeds up to 70 mph

Ruggedness	MIL-STD-810F
Immersion	1 meter (3 ft)
EMI	MIL-STD-461E
Compliance	ROHS

Data	Ethernet, USB
ISDN	Voice (4 kbps), data (64 kbps)
DC Power	12/24 VDC
User-removable SIM card slot	
Simultaneous use of all interfaces	

12043-0830-A015	AN/PRC-117G, RF-7800M-MP Black Ethernet Cable
12043-0831-A015	AN/PRC-117G, RF-7800M-MP Black Ethernet and ISDN Cable
12043-0833-A010	Ethernet Cable
12043-0834-A010	Standalone Ethernet and ISDN Cable
12043-0835-A010	Standalone ISDN Cable
12043-0836-A010	Standalone USB and ISDN Cable
12043-0837-A015	Data Extension Cable, Ethernet and ISDN
12043-0843-A015	Automobile 12 VDC Power Cable
12043-0890-A015	DC Power to 4 Leads
12043-0891-A015	BGAN DC Power to RF-505X PS
12043-0892-A015	BGAN DC Power to RF-505X PS , Remote On-Off
12043-0894-A1	Automobile 12 VDC Power Cable
12043-0895-A015	DC Power Extension Cable
12043-0896-A015	BGAN DC Power to 2 Leads
12091-0070-01	AN/PRC-117G, RF-7800M-MP Land Portable Ancillary Kit
12091-4160-01	ISDN to POTS Converter
12091-4200-01	HF/VHF/UHF CoSite Low Pass Filter Kit for L-Band

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