Hughes 9502 BGAN M2M Terminal

The world's most cost-effective, all-IP BGAN machine-to-machine satellite terminal with exceptionally low power consumption

The Hughes 9502 IP satellite terminal provides reliable connectivity over the Inmarsat Broadband Global Area Network (BGAN) for IP SCADA and machine-to-machine (M2M) applications. The Hughes terminal delivers affordable, global, end-to-end IP data connectivity enabling applications in industry sectors such as environmental monitoring, SmartGrid, pipeline monitoring, compressor monitoring, well site automation, video surveillance, and out-of-band management to primary site communications.

The exceptional low power consumption (<1 W idle) of the Hughes 9502 makes it possible to provide end-to-end IP connectivity to sites that are off the grid. This breakthrough provides end-to-end IP connectivity to power-challenged locations that rely upon solar-battery arrays involving sensitive power budgets.

The Hughes 9502 includes 10 meters of RF cabling, granting the user freedom to position the antenna remotely and away from the transceiver in complex installations while securing the SIM card inside a premise or enclosure to better protect against unauthorized use, theft, and vandalism.

Future firmware releases would be uncommon, meanwhile any such modem update will qualify for no charge over-the-air (OTA) upgrades saving customers time and money.

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- Main Features
  - No connection charge with BGAN M2M (normal BGAN charge is 100 Kbytes)
  - Minimum CDRs only 1 Kbyte (normal BGAN charge is 10 Kbytes)
  - No charge over-the-air modem software upgrades
  - Exclusive airtime packages unique to the Hughes 9502
  - Integrated IP Watchdog to ensure “always-on” network connectivity. No manual intervention required to recover from an outage
  - Auto-on/auto-context activation automatically restores power and PDP connection to itself following loss of power and/or IP connection
  - Remote control via SMS—remote management platform for command and control to the terminal using SMS, including configuration, debugging, and access to Web interface
  - Ultra-low power consumption
    - Transmit: < 20 W
    - Narrow beam w/o transmit: 3 W
    - Idle (regional beam): < 1 W
    - Off (wake on packet): < 10 mW (@ 12 Vdc)
    - Off (wake on packet): < 30 mW (@ 24 Vdc)
    - Off (GPIO control): 0 W
  - Relay mode passes WAN IP address to the connected RTU
  - Security enhancements with extended layers of embedded security options
  - Basic installation; no PC required
  - Outdoor unit (ODU) can be pole mounted
  - Indoor unit (IDU) is housed inside building or the remote terminal unit (RTU)
  - Built-in GPS receiver
  - XL compliant
- Interfaces
  - Ethernet connection (RJ45)
  - USB–Type B for connection to configuration PC
  - RS-232 (DB9) to external NMEA 0183-based GNSS device (e.g., GLONASS receiver)
  - TNC connection on the IDU to the external antenna
- Package Contents
  - Hughes 9502 BGAN M2M Terminal IDU
  - 10 meters RF antenna cable
  - External antenna (ODU)
- Accessories
  - Modem (IDU) strap
  - Antenna basic fixed mount kit
  - Antenna azimuth elevation bracket
  - Extended warranty options

Satellite Transmit Frequency	1626.5–1660.5 MHz
Satellite Receive Frequency	1525–1559 MHz
GPS Frequency	1574.42–1576.42 MHz
IDU Weight	1.2 Kg (2.64 lbs)
IDU Dimensions	150 mm x 200 mm x 45 mm
ODU Weight	1.9 Kg (4.18 lbs)
ODU Dimensions	385 mm x 385 mm x 33 mm
Operating Temperature	-40° C to +75° C
Storage Temperature	-55° C to +75° C
Humidity	95% RH at +40° C
ODU Wind Loading	Survival wind loading (with optional mount) up to 100 mph
IDU Water and Dust	IP-40 Compliant
ODU Water and Dust	IP-65 Compliant
Input Voltage	+12 Vdc/+24 Vdc nominal
Firmware Upgrades	Over the air or local

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