

SAFARI™ & SAFARI™ 10

Land Vehicular BGAN Terminal



The SAFARI™ and SAFARI™ 10 Extended L-band BGAN Terminals operating on the Inmarsat BGAN Satellite Network are compliant with Inmarsat Land Vehicular class-11 (with low gain Antenna Unit) and class-10 (with high gain Antenna Unit) respectively. Both of the units have one of the highest dynamic turning rate Land Vehicular BGAN antennas in the market with a turning rate of 60° per second (full circle in 6 seconds). The complete system consists of three fully integrated units — an IP44 rated in-vehicle Transceiver Unit (TU) with built-in Wi-Fi, an IP66 rated Handset and an IP56 rated roof mounted Antenna Unit (AU). Both C11 and C10 Antenna Units are compact and lightweight, ideal for vehicles on-the-move. It has been designed for the most demanding environments — and is easy to transport when traveling to various locations around the world. Both Antenna units are designed to withstand wind loading of up to 210 km/hour (130mph) with the included magnetic mounting kit.

The SAFARI™ and the SAFARI™ 10 Land Vehicular BGAN Terminals offer the user standard voice (4kbps AMBE+2), 3.1 KHz high quality voice/ fax and Streaming IP (up to 128kbps for the SAFARI™ and up to 256kbps for the SAFARI™ 10) and Standard IP data connection service (up to 448/464 kbps send/receive for the SAFARI™ and up to 492kbps send/receive for the SAFARI™ 10) for various applications, including internet browsing, email and file transfer functions.

Both terminals allow simultaneous use of all services including voice/fax, data and bonded multiple SMS messages. Physical interfaces include: 2 x RJ-11 for Voice and Fax, 2 x RJ45 for Ethernet LAN connections, a RS232 port for GPS output and 4 x GPIOs, for external control or indications.

SPECIAL FEATURES

- Firewall (full-featured)
- Fleet Tracking Capability - with GeoFencing, up to 10 polygon areas can be configured
- Wi-Fi Access Point (802.11b/g)
- Push-To-Talk (PTT)
- Forced Dialing - SAC Configuration Control
- Restricted Dialing (for authorised calling)
- Handset call priority (allows Handset to pre-empt other active voice/fax calls)
- Remote Access (for Configuration and Diagnostics)
- Backup/Restore of Configuration Settings
- RF Transmitter ON/OFF Remote Control via GPIO (Radio Silence)
- SIM Lock based on IMSI/DP Code/SP Code/APN
- Time/Volume limited data sessions (to avoid bill shock)
- Multilingual WebConsole (English, Spanish, Chinese (Simplified & Traditional), Dutch and Japanese)
- Multi-User WebConsole with configurable access rights
- MAC Filtering (for authorised access control)
- PPPoE
- Router Functions: DHCP, NAT, NAPT (Port Forwarding)
- Hands Free Operation
- Remote Management (using SMS/AT Commands)
- IP Watchdog (for failsafe operation)
- External Ringer Control
- Supports 11 PDP Contexts simultaneously
- Extended L-band support
- Garage Mode (to reduce wear & tear of the moving parts in the Antenna Unit)



The customer has the option of Antenna Colour, either White or Tan for both the SAFARI™ and the SAFARI™ 10.

Antennas are supplied with magnetic roof mounts as standard. Simply place the Antenna Unit on the roof of the vehicle, connect it to the Transceiver Unit using the supplied RF cable and connect the Transceiver Unit to the vehicle's power source. The vehicle is now ready with a mobile communications Hub, which can be accessed by multiple users at the same time via the wired interfaces and via the built-in Wi-Fi interface. The SAFARI™ and the SAFARI™ 10 are so versatile that the built-in WebConsole of the unit can be accessed via any web browser including Wi-Fi enabled Smartphones such as BlackBerrys, iPhones, iPads, Android phones and PDAs via a secure Wi-Fi connection.

Both units also have a continuous GPS output feature which allows for GPS data to be sent out via the RS232 port in standard NMEA 0183 format. With an in-built GPS module, the units are able to provide tracking and monitoring required in fleet management applications.

Physical Data		SAFARI™	SAFARI™10
Dimension:	Transceiver Unit:	340 x 253 x 61.5 mm 13.4 x 10.0 x 2.4 in	
	Antenna Unit:	252 mm (Dia) x 119.12mm (H) 9.9 in (Dia) x 4.7 in (H)	494 mm (Dia) x 151.5 mm (H) 19.45 in (Dia) x 5.96 in (H)
Weight:	Transceiver Unit:	3.5Kg / 7.7 lbs	
	Antenna Unit:	1.9Kg / 4.2 lb	5.5Kg / 12.1 lb

Technical Specifications

Operating Frequency

Transmit : 1626.5MHz – 660.5MHz & 1668MHz - 1675MHz
Receive : 1518MHz – 1559MHz

Transceiver Unit to Antenna Unit RF Cabling max loss 12dB at 1.6GHz and 4 Ohms DC loop resistance

Services

Voice : 4kbps AMBE+2
Fax : G3 Fax (>45° elevation for SAFARI™)
: G3 Fax (>20° elevation for SAFARI™10)
Streaming IP : 32, 64, 128, for SAFARI™
: 32, 64, 128, 256kbps for SAFARI™10 (>45° for 256kbps)
Short Message Service(SMS): Up to 160 characters (standard)
Larger SMS content (> 160 characters); supported as multipart or segmented SMS
Background IP Data : Up to 448/464 kbps for SAFARI™ (send & receive)
: Up to 492kbps for SAFARI™ 10 (send & receive)

Router Functions

Single User Router Mode : NAT disabled, with option to enable/disable DHCP
Modem mode : NAT/ NAPT enabled, with option to enable/disable DHCP
Multi-User Router Mode : NAT/ NAPT enabled, with option to enable/disable DHCP

Interfaces

2 x RJ-45 Ethernet ports (one is Power over Ethernet (PoE) port)
1 x Primary Handset connector
1 x GPS output connector (NMEA-0183, Offset latch RJ11)
WLAN 802.11b/g built-in
1 x Antenna Connector:
- Transceiver Unit: TNC female
- Antenna Unit : TNC female
2 x Standard phone port (RJ11) for FAX and phone
1 x SIM Card Slot
3 x Status indicator LED
1 x Power On/Off switch
1 x DC Power Input socket
1 x Grounding stud connector
1 x GPIO signal port connector
- 1 x Transmitter ON/OFF (Digital Input)
- 1 x Ignition ON/OFF (Digital Input)
- 1 x External Buzzer (Open-drain)
- 1 x Illuminate Remote ON/OFF switch (Open-drain)
1 x Safe Mode switch
1 x Circuit breaker reset switch

Power Supply

DC input : +12V / 24V (+10.8V to 32V)
Power (Max) - w/o PoE : 60Watts

Environmental Conditions

Transceiver Unit
Operating Temperature : -25°C to +55°C
Storage Temperature : -40°C to +80°C
Operating humidity : 95% non-condensing at +40°C
Ingress protection : IP44

Antenna Unit

Operating Temperature : -25°C to +55°C
Storage Temperature : -40°C to +80°C
Operating humidity : 95% non-condensing at +40°C
Ingress protection : IP56
Turning Rate : 60°/s
Turning acceleration : 50°/s²

Primary Handset

Display : 2 inches, 65K color, 220 x 176 pixel, TFT Liquid Crystal Display
Dimension : 142 x 56 x 22 mm
5.6 x 2.2 x 0.9 in
Weight : 390g / 0.8 lb
Operational Temperature : -20°C to +55°C
Storage Temperature : -30°C to +70°C
Ingress protection : IP66

Feature Highlights of Primary Handset

- Configuration settings
- Basic circuit switched telephone functions
- Phone book retrieval from the SIM card
- Call Log for most recent 5 missed, received and dialed calls with date and time stamps
- Short Message Services (SMS)
- User friendly Menu driven graphical user interface
- Hands free Headset (optional)

Regulatory Approvals

Inmarsat Type Approval
Certification mark: FCC, CE, Industry Canada
GMPCS MoU – ITU REGISTRY
Compliant to RoHS2, WEEE Logo
Wi-Fi compliant: IEEE802.11b/g



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