



FX 500

Higher Performance
Enhanced Connectivity

The FX 500 FleetBroadband is the latest-generation maritime communication systems operating on the Inmarsat FleetBroadband Satellite System. It is compactly designed and easy to install.

Using Inmarsat's most advanced commercial communication satellites, the FX 500 FleetBroadband provides simultaneous access to clear digital voice and high-speed data with email, fax and SMS. It makes it easier for the Captain to download the latest weather and navigational charts while the crew members can call, talk, send and receive text messages and email around the world. Moreover there will be no noticeable degradation of data bandwidth when the terminal is at the edge of satellite coverage unlike other classes of FleetBroadband terminals.

The FX 500 FleetBroadband offers the data speeds of up to 432kbps with the value-added features:

- Firewall
- Fleet Tracking Capability - Geofencing, up to 10 polygon areas can be configured
- Non-SOLAS Voice Distress
- Wi-Fi
- Push To Talk (PTT)
- Forced Dialing – SAC Configuration Control
- Restricted Dialing (for crew calling)
- Handset Call Priority (allows the Captain to pre-empt all other calls)
- Remote Access (for configuration and diagnostics)
- Remote Management (using SMS/AT commands)
- Link Monitor (IP Watchdog)
- Backup / Restore of previous Configuration Settings
- SIM Lock based on IMSI/APN
- Multilingual WebConsole (English, Spanish, Dutch, Japanese, Simplified Chinese and Traditional Chinese)
- Multi-User WebConsole access with configurable access rights
- Time/Volume limited data sessions (to avoid bill shock)
- PPPoE
- MAC Filtering
- Port Forwarding

New optional feature of Multi-Voice is available and it supports up to 9 concurrent voice calls by using Vocality's BASIC Multivoice 8. Other new optional features of Dynamic Telemetry Service will be available soon.

FX 500 is a high performance satellite communication terminal with the unique features:

- NMEA 0183 Continuous GPS Output
- 3-Axis Stabilised Antenna including ATC-Resilience, Extended L-Band and IP56 Protection capability.
- Append GPS Position to SMS
- No Fuses – Uses Intelligent Circuit Breaker protection
- Primary Handset with IP66 Environmental Protection

The FX 500 includes a primary handset with a large colour LCD display and mobile phone type keys for making phone calls, sending and receiving SMS messages, including larger SMS content of greater than 160 characters as multipart or segmented messages. This feature is popular for the Captain and the crew members who are used to texting from their GSM mobiles while on shore.

For internet service, the FX 500 can simply be connected to an onboard computer network using RJ45 Ethernet connection. With MAC address filtering and user control of NAT, DHCP functions and PPPoE, the FX 500 offers both Single User and Multi-User Router modes.

The FleetBroadband terminal has a continuous GPS output feature which allows GPS data to be sent out via the RS232 port in standard NMEA 0183 format. With the built-in GPS module, the FX 500 is able to provide accurate position information to onboard systems such as plotters and depth sounders.

With the standard built-in Wi-Fi feature, the web-based user interface can be accessed via any web browser including Wi-Fi-enabled Smartphones such as BlackBerrys, iPhones, iPads, and PDAs via the FX 500's secure Wi-Fi (WLAN). The Wi-Fi connection also offers wireless Push-to-Talk (PTT) service to Smartphone users using free PTT applications such as Zello, without having to add any additional hardware to the terminal, unlike other PTT solutions that require expensive add-on hardware.



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Technical Specifications

Inmarsat FleetBroadband Type Approval
Compliant to R&TTE, IEC60495:2000, RoHS
Certification Mark : FCC, CE, Industry Canada
Wi-Fi Compliant IEEE802.11b/g
Green Passport

Frequency Band

Transmit: 1626.5 ~ 1675.0 MHz
Receive: 1518.0 ~ 1559.0 MHz

Recommended Antenna Cable

Cable loss: 12dB at 1.6GHz and 1 ohm DC loop resistance

BDU Interfaces

Power On/Off Switch
DC Power Input Socket
Antenna Connector (N-Type)
Status Indicator LEDs (3)
SIM Card Slot
GPS Output Connector (NMEA-0183)
Primary Handset Connector
4 RJ45 Ethernet Connectors (including 2 x Power over Ethernet (PoE) ports)
2 RJ11 Connectors for Analog Phone and G3 Fax
Built-in WLAN 802.11b/g
Resettable Circuit Breaker
Safe Mode Switch
I/O Connector for radio silence, external ringer, etc
Grounding Stud

Communication Services

Standard Voice : 4 kbps circuit switched (AMBE+2 codec)
Standard IP : Up to 432 kbps
Streaming IP : 8, 16, 32, 64, 128, 176, 256 kbps
Fax : G3 via 3.1KHz Audio
Short Messaging Service: Up to 160 characters (3G standard) (SMS)
Larger SMS content : supported as multipart or segmented SMS (> 160 characters)

Router Functions

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

Environmental Conditions

Operating Temperature: -25 to +55°C
Storage Temperature : -40 to +80°C
Operating Humidity : 95% non-condensing at +40°C
ADU Ingress Rating : IP56
BDU Ingress Rating : IP31

Ship's Motion

Roll : 30°/8 sec
Pitch : 10°/6 sec
Yaw : 8°/50 sec
Turning Rate : 6°/sec

Power Supply and Consumption

DC input (isolated) : +10.8VDC to +31.2VDC
Power (max) : 150W including antenna

Physical Data

Dimension : BDU : 360 x 250 x 67 mm
: ADU : 653 (Dia) x 652 mm
Weight : BDU : 3.9 Kg
: ADU : 19.2 Kg

Primary Handset

Display : 2 in, 220 x 176 pixel TFT, 65K Color LCD
Dimension : 142 x 56 x 22 mm
Weight : 390g / 0.8 lbs
Ingress Rating : IP66
Operating Temperature: -20 to +55°C
Storage Temperature : -30 to +70°C

Feature highlights of Primary Handset

- Configuration setting
- Basic Circuit-switched telephone functions
- Phone book retrieval from SIM card
- Call log for most recent 5 missed, received and dialed calls with date and time stamps
- Short message service (SMS)
- User-friendly menu driven graphical user interface
- Hands free headset