Technical Information

Inmarsat Fleet F77

Inmarsat Fleet F77 is a single, integrated solution that delivers versatility and choice through voice, fax and Mobile ISDN, Mobile Packet Data Service (MPDS) communications.

The Inmarsat Fleet F77 antenna and below deck equipment package is suitable for installation onboard large merchant ships, government vessels, research ships, superyachts and offshore vessels, and offers a comprehensive array of features and benefits.

Voice

Inmarsat Fleet F77 service offers digital voice communications on a virtually global basis*. In addition to the standard 4.8kbps voice service, 64kbps voice can also be achieved between ISDN telephones. A high quality 3.1kHz audio channel also is available.

GMDSS compliant
Fleet F77 is fully compliant for Global Maritime Distress and Safety System (GMDSS) operation in GMDSS area A3 under IMO Resolution A.888 (21). The service provides a multi-layered priority system allowing Distress, Urgency and Safety calls to take precedence over non-essential and low-priority regular communications.

This works in a hierarchical way – a Distress call will pre-empt all other communications; Urgency calls will pre-empt both safety and routine calls; a Safety call will pre-empt routine calls.

The Fleet F77 package includes a prominent red Distress button, with features to prevent accidental activation.

Fax

Fleet F77 provides for global* 64kbps Group 4 fax and 9.6kbps Group-3 fax for vessel-to-shore, shore-to-vessel and vessel-to-vessel applications.

Data

Mobile ISDN
Fleet F77 satisfies high-speed data communications onboard vessels through the provision of a Mobile ISDN data channel. This channel offers data rates of up to up to 64kbps globally* and supports Internet Protocol (IP) and File Transfer Protocol (FTP). Fleet F77 also offers data rates of 128kbps, subject to service provision and 128kbps enabled terminal.

For users requiring a 56kbps service, this is available using a V.110 rate adaptor through the terminal's RJ-45 connector.

Mobile Packet Data Service
Fleet F77's Mobile Packet Data Service (MPDS) offers data transfer speeds of up to 128kbps (or 64kbps depending on variant chosen) through a shared-bearer channel. MPDS is a cost-effective packet-based service that charges only for the amount of data sent and received, not the time spent online. This facilitates short-burst data and 'always on' connectivity to the Internet or corporate/private networks.

Uses and applications

Because Fleet F77 is IP compatible, it supports an extensive range of commercially available off the shelf software, as well as specialized user applications. This makes it an ideal solution for:

- e-mail
- instant messaging
- universal messaging, including SMS
- Internet and private network access
- office and ship management applications
- 'thin client' applications
- secure communications
- data file transfer, including FTP and digital images
- online electronic chart updates
- real time weather information
- fishing and oceanographic applications

- vessel telemetry, SCADA and technical support applications
- videoconferencing
- store-and-forward video
- telemedicine
- high quality digital voice
- crew calling
- Differential GPS corrections
- e-learning

Secure connections

MPDS facilitates a range of security enhancements for PC protection and the transmission of sensitive data.

Call waiting

Call waiting is available to notify users of the presence of an incoming voice, fax or data call while they are conducting an MPDS session.

When the call-waiting alert is received, the user will have the choice of whether to accept the incoming call or not. To aid this decision, the display on the Fleet F77 terminal handset will indicate the type of incoming call together with the caller ID number if available.

For incoming voice calls, the user can simply pick up the phone as normal to answer them. The Fleet F77 terminal will automatically disconnect the MPDS session, and an optional screen alert on the user's PC can highlight this.

If the user decides not to accept the incoming call, either by explicitly rejecting the call alert or letting the call ring time-out, then the MPDS session is left connected and unaltered.

Terminal specifications

Feature	Details
BDE terminal weight	The Below Deck Equipment (BDE) weights about 6.8kg. This includes the power supply unit and the main communications unit. Peripheral equipment such as handsets, distribution unit, distress box, fax machines, PCs etc. are additional.
BDE terminal size	Depending on the manufacturer, the BDE measures approximately 380mm by 372mm by 86mm, or 372mm by 163mm by 53.75mm.
Antenna weight	The antenna unit, which includes the radome, the stabilized antenna dish with tracking electronics and RF (Radio Frequency) equipment, weighs around 27kg.
Antenna size	Typically a semi-spherical radome with a diameter of 85cm to 132cm (depending on version and manufacturer). Deck and mast mounted versions are available.
SIM card (option)	The SIM card identifies the user using the terminal. The card contains the numbers that are used to contact this user and defines the preferences, such as the network service provider, stored number list etc. A PIN number prevents unauthorised use.
Telephone handsets	The BDE permits a number of handsets to be connected, either 2–wire analogue or ISDN. Handsets may be placed up to 100m away from the BDE.
Power	The BDE input power is 110-240 VAC (or 24 VDC). Power consumption is a maximum of 150 W in transmit mode or 40W in receiving mode. This is for the BDE alone and excludes peripherals such as fax machines and PCs.
Operating conditions	The ambient operating temperature for the ADE is -25° C to +55° C.
Connectors	x.21 Analogue telephone port (RJ11) ISDN (RJ45) RS449 serial port USB serial port RS232 serial data port (accessed via an enhanced AT command set) RS422 serial data port
Configuration	The operational characteristics and port settings of the Fleet F77 Mobile Earth Station (MES) can be configured using a PC connected to the RS232 or USB ports. The information on how to do this is provided in the user manual from each manufacturer. (Accessed via an enhanced AT command set).
User interface	The user interface may either be through the liquid crystal display on the ISDN handset together with the keys on the handset, or through menu screens on the PC.
Coverage	Virtual global beam coverage for 4.8kbps voice*. All other services are available in the inmarsat spot beams**

* Polar restrictions apply
** See www.inmarsat.com/coverage

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