Technical Information

Inmarsat Fleet F55

Inmarsat Fleet F55 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 F55 antenna and below deck unit are smaller than the Inmarsat Fleet F77 equivalents and particularly suitable for installation onboard a wide range of vessels, including medium-sized merchant ships, large yachts, fishing vessels, patrol boats and offshore support craft. Fleet F55 offers a comprehensive array of features and benefits.

Voice

Inmarsat Fleet F55 service offers digital voice communications on a virtually global basis*. In addition to the standard 4.8kbit/s voice service, a high quality 3.1kHz audio channel is also available.

Fax

Fleet F55 provides for 64kbit/s Group 4 fax and includes an option for standard 9.6kbit/s Group-3 fax.

Data

Mobile ISDN
Fleet F55 satisfies high-speed data communications onboard vessels through the provision of a Mobile ISDN data channel. This channel offers data rates of up to 64kbit/s in the Inmarsat spot beams** and supports Internet Protocol (IP) and File Transfer Protocol (FTP). Two units can be bonded to offer 128kbit/s. For users requiring a 56kbit/s service, this is available using a V.110 rate adaptor through the terminal's RJ-45 connector.

An option is available for 9.6kbit/s asynchronous data in the spot beams.

Mobile Packet Data Service
Fleet F55's Mobile Packet Data service (MPDS) offers data transfer speeds of up to 64kbit/s 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.

Call waiting

Call waiting is available to notify users of the presence of an incoming voice, fax or data calls 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 F55 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 F55 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.

Secure connections

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

Uses and applications

Because Fleet F55 is IP compatible, it supports an extensive range of commercial 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 and crew calling
- Group-3 and 4 fax

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Terminal specifications

Feature	Details
BDE terminal weight	The Below Deck Equipment (BDE) weights about 2.5kg. 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 164mm by 55mm, or 220mm by 270mm by 75mm.
Antenna weight	The antenna unit, which includes the radome, the stabilized antenna dish with tracking electronics and RF (Radio Frequency) equipment, weighs around 18kg.
Antenna size	Typically a semi-spherical 0.6m diameter radome.
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 9 to 32 VDC. Power consumption is a maximum of 110 W in transmit 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)
Configuration	The operational characteristics and port settings of the Fleet F55 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	Global beam coverage for 4.8kbit/s voice*. All other services are available in the Inmarsat spot beams**.

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