

GEOBORDERS Airtime Services Description

Part 1 - Inmarsat Existing & Evolved (“E&E”) Services

Inmarsat C and Inmarsat Mini C

Inmarsat C and Mini C services provide a global two-way messaging service (data, telex, fax, text messaging & e-mail communications). Inmarsat C or Mini C is a digital system providing messaging, distress calling, data reporting and polling as well as Enhanced Group Call (EGC) such as EGC SafetyNET™ and FleetNET™. Inmarsat C is compliant with Global Maritime Distress and Safety System (GMDSS).

Inmarsat Mini M

Inmarsat Mini M provides digital technology for global communications. Inmarsat Mini M is a service offering Voice (4.8 kb p s), Fax (2.4 kb p s), and Data (2.4 kb p s).

Fleet 77

Fleet F77 is a digital global maritime communications service that offers data, voice, and fax at speeds up to 64 kbps.

The F77 Mobile Integrated Services Digital Network (ISDN) Service is a dedicated Single Channel per Carrier (SCPC) service that enables high-speed data transfer at 128 kbps, 64 kbps UDI data (Unrestricted Digital Interface) and 64 kbps speech. Completely meets Global Maritime Distress and Safety System (GMDSS) requirements when paired with an Inmarsat C Terminal. Enhanced maritime distress and safety features including fixed to mobile pre-emption and enhanced priority pre-emption help guarantee completion of user defined urgent and distress level calls. The Mobile Packet Data Service (MPDS) enables users to remain on-line for extended periods of time, enabling web access and e-mail, while being charged only for the data transmitted and received. MPDS supports speeds of up to 64 kbps for downloading and up to 28 kbps for uploading.

Fleet 55

The F55 Mobile Integrated Services Digital Network (ISDN) Service is a global digital maritime service that provides 4.8 kbps voice , 9.6 kbps Fax, 64 kbps UDI Data (Unrestricted Digital Interface), 56 kbps v.110 Data, 3.1 kHz Audio communications. The F55 Mobile Packet Data Service (MPDS) enables users to remain on-line for extended periods of time, enabling Web access and e -mail, while being charged only for the data transmitted and received . MPDS supports speeds of up to 64 kbps for downloading and up to 28 kbps for uploading .

Fleet 33

Fleet F33 is a global digital maritime communications service that offers voice and fax at 4.8kbps and data at speeds of 9.6 kbps. There is also the option of a Mobile Packet Data Service (MPDS), enabling users to remain on-line for extended periods of while being charged only for the data transmitted and received. MPDS supports speeds of up to 64 kbps for downloading and up to 28 kbps for uploading.

GAN

The Global Area Network is a global, digital land mobile communications service offering voice, fax and data. Three transmission modes are available: low-speed (circuit mode), ISDN (circuit mode), MPDS (packet mode).

Swift64

Swift64 is a global, digital aeronautical communications service that offers data , voice , and fax at speeds up to 64 kbps. Users can choose:

- Swift Mobile ISDN Service : Mobile ISDN is a dedicated Single Channel Per Carrier service that enables high-speed data applications. The service offers: 64 kbps UDI (Unrestricted Digital Interface), 56 kbps v.110 and 64 kbps Speech.
- Swift Mobile Packet Data Service : Mobile Packet Data uses Internet Protocol (IP) technology and time-shared channels to allocate network resources allowing aeronautical users to stay online, with ready access to e -mail and the Internet.

Part 2 - Inmarsat 4th Generation Services

BGAN Service

BGAN is the brand name for a range of global, digital mobile satellite services that are operated by Inmarsat and that are providing voice, Integrated Services Digital Network (ISDN) and Internet Protocol (IP) services under a best effort mode up to 492 Kilo bits per second (shared channel) or with a guaranteed throughput from 32 Kbps up to 256 Kbps (Kbps).

Fleet Broadband

Fleet Broadband is a maritime communications service from Inmarsat to provide simultaneous voice and high-speed data communications.

Swift Broadband

Swift Broadband is a n in flight IP-based packet-switched communications service from Inmarsat to provide simultaneous voice and high-speed data communications.

BGAN/ Fleet Broadband/ Swift Broadband service offers

- High speed data rate
 - Standard IP up to 492 kbps for BGAN service and 432 kbps for Fleet Broadband and Swift Broadband services over a shared channel
 - Guaranteed streaming rate (up to 256 kbps) for BGAN and Fleet Broadband
 - Guaranteed streaming rate (up to 128 kbps) for Swift Broadband
- ISDN 64 kbps (for BGAN: depending on the Terminal)
- Voice: 4 kbps service
- SMS up to 160 characters
- Fax via 3.1 kHz channel (for BGAN: depending on the terminal)

Note : Guaranteed streaming rate s vary depending on terminal type . Check with terminal supplier for details.

IsatPhone Pro

“IsatPhone Pro” is a brand name for Inmarsat’ s Handheld terminal that provides voice/SMS/email services.

Part 3 - Thuraya Services

Thuraya services are providing regional communications services in more than 110 countries in Europe , most o f Africa , the Mid d le East, Central & South Asia and Australia.

Thuraya Standard Service

Thuraya offers satellite-based mobile telephone services via the Geo-mobile Packet Radio Service (GmPRS) satellite system. All handsets offer voice, data, fax, SMS & GPS (Global Positioning System).

Thuraya GmPRS-enabled terminals deliver continuous internet connectivity at speeds of up to 60 kbps. One model of XT handset integrates satellite connectivity and GSM mode

Thuraya Maritime

Thuraya Maritime provides voice , data , SMS, fax, internet, e -mail, corporate LAN and weather reports.

Thuraya Maritime offers: Voice (2.4 kbps); Fax digital, (9.6 kbps); Data : (9.6 kbps); GmPRS service (up to 60kbps).

Thuraya IP

The Thuraya IP terminal offers IP connectivity. It offers background data transfer and internet browsing at speeds up to 384 kbps and streaming services up to 256 kbps with selectable speeds of 16, 32, 64, 128 and 256 kbps with the basic terminal and an additional speed o f 384 kbps with an optional external antenna. Both dynamic and static IP operation is available.

Part 4 - Iridium Services

Iridium service is a satellite communications service with worldwide coverage (including the poles).

The service offers:

- High quality standard voice service;
- SMS up to 160 characters;
- Fax & paging services;
- Data services (dial-up , direct internet, Short Burst Data) at 2.4 kbps, with an optional adapter;
- Up to 9.6 kbps data communications using compression program.
- Up to 128 kbps IP based data using OpenPort
- LBS Location Based services

Short Burst Data

Iridium voice and circuit switch network provides a single channel voice facility a long with a circuit switched data channel at speeds up to 2.4 kbps. The system also supports the Short Burst Data (SBD) system which allows for small packet data transfer at low data rates. This data can be delivered up to five simultaneous addresses which can be a mix o f IP and email. Iridium handsets are small and light weight and provide the user with the choice of both fixed and portable installations.

OpenPort

Iridium OpenPort provides an IP based satellite service on a shared channel with speeds up to 128 kbps. The OpenPort hardware supports up to three voice channels with crew calling ability with three simultaneous outgoing calls at any one time . The service provides a public dynamic IP address and can be used for email, data/file transfer and internet connectivity. Airtime packages are available to suit most applications.



Part 5 - Globalstar

The Globalstar service provides voice, data and tracking facilities using LEO satellite and regional earth stations. Single voice channels and data speeds up to 9.6 kbps are available along with a simplex tracking service. A range of handsets are available offering portable operation with data options. Fixed units provide fixed installations in buildings and vessels.

Part 6 - iDirect Based VSAT

GEOBORDERS have a VSAT broadband service built on the iDirect Intelligent Platform. The service introduces higher bandwidth data rates as well as a flat-fee service model to customers. iDirect is a world leader in satellite based IP communications technology.

The new broadband service provides Ku-band and C-band coverage and is designed to operate on both stabilized VSAT antenna range for marine and fixed sites on land. Data rates can reach up to 4 Mbps on the inbound channel and up to 2Mbps on the outbound channel, supporting bandwidth intensive applications such as Voice over IP, remote engine monitoring, real-time data transfer and video streaming.

The VSAT service from GEOBORDERS is available to vessels or land-based operations in Europe, Middle East, Africa and Asia Pacific regions.