Disaster Management

Disasters are unpredictable, Inmarsat is constant
Supporting the world’s most vulnerable communities

When a disaster occurs, real-time situational awareness becomes a crucial element of any rescue or recovery activity. Local terrestrial infrastructure on the ground is often damaged or non-existent and a reliable communications link to command centres becomes the backbone of every efficient disaster response operation. In such times of damage and confusion, Inmarsat offers a dependable platform upon which you can reliably base your mission to restore normality.

IsatPhone Pro Instant Voice Communications

**Designed for anyone, anywhere**

IsatPhone Pro offers satellite telephony with Bluetooth for hands free use, voicemail, text and email messaging.

The IsatPhone Pro is an essential part of any disaster recovery strategy. It is small enough to be provisioned as part of the standard Field Operative Kit and allows immediate voice communications back to command centres for instant situational awareness. The IsatPhone Pro handheld satellite phone lets you make that all-important call when the situation on the ground is critical. Inmarsat can be relied on to provide this most basic of services in times of crisis - a voice call.

**Purpose built**

IsatPhone Pro has been optimised to deliver the best performance over the world’s most advanced mobile satellite network. It is available on a global basis over the Inmarsat-4 satellites, which have an operational lifetime into the 2020s.

**The ultimate combination**

- Global coverage – supporting Bluetooth, place the handset on its side, with full manoeuvrability of antenna, for easy handsfree use.
- Robust handset – operates at -20°C to +55°C; dust, splash and shock resistance (IP54); humidity tolerance from 0 to 95 per cent
- Clear voice quality
- Reliable network connection – operates over global geostationary satellites, significantly less possibility of call dropping.
- Long battery life – up to 8 hours talk time and up to 100 hours standby time.
- Easy to use – Intuitive GSM-style interface; high-visibility colour screen; large keypad.
BGAN: Live video streaming and broadband data
Inmarsat’s Broadband Global Area Network service – BGAN – is the world’s first mobile communications service to provide both voice and broadband data simultaneously through a single, highly compact device on a global basis. It is also the first to offer guaranteed data rates on demand.

When disaster strikes, the response has to be quick - with free flow of information. Our BGAN service delivers voice and broadband data across the globe and enables you to set up a reliable link, even when terrestrial networks have failed.

Government personnel, aid workers and other established users of mobile satellite communications welcome the superior performance and lighter load of BGAN.

With BGAN you can set up a mobile field office in minutes. With a range of terminals varying in size and capability, there is a BGAN to suit every mission.

### Portable and fixed BGAN terminals

<table>
<thead>
<tr>
<th>Terminal</th>
<th>Description</th>
<th>Manufacturer</th>
<th>Dimensions (W x H x D) and weight</th>
<th>Portable / fixed</th>
<th>Standard IP (send / receive)</th>
<th>Streaming IP</th>
<th>Voice and Fax</th>
<th>ISDN</th>
<th>Other data Interfaces</th>
<th>Ingress protection</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Wideye™ Sabre™ I</strong></td>
<td>Voice and data, single-user device</td>
<td>Addvalue Communications wideye.com.sg</td>
<td>59 x 195 x 58mm 1.6kgs</td>
<td>Portable</td>
<td>Up to 240 / 384kbps</td>
<td>32, 64kbps</td>
<td>Via RJ-11, handset</td>
<td>N/A</td>
<td>Ethernet</td>
<td>IP 54</td>
</tr>
<tr>
<td><strong>EXPLORER® 300</strong></td>
<td>Highly compact, robust device</td>
<td>Cobham cobham.com</td>
<td>217 x 168mm (1.4kgs)</td>
<td>Portable</td>
<td>Up to 240 / 384kbps</td>
<td>32, 64kbps</td>
<td>Via RJ-11 or Bluetooth handset / headset</td>
<td>N/A</td>
<td>Ethernet</td>
<td>IP 54</td>
</tr>
<tr>
<td><strong>EXPLORER® 500</strong></td>
<td>High bandwidth, highly portable device</td>
<td>Cobham cobham.com</td>
<td>217 x 218 x 52mm 1.4kgs</td>
<td>Portable</td>
<td>Up to 448 / 464kbps</td>
<td>32, 64, 128kbps</td>
<td>Via RJ-11 or Bluetooth handset or 3.1kHz audio</td>
<td>64kbps via USB</td>
<td>Ethernet, USB</td>
<td>IP 54</td>
</tr>
<tr>
<td><strong>HUGHES 9202</strong></td>
<td>High performance, highly compact</td>
<td>Hughes BGAN.hughes.com</td>
<td>216 x 216 x 45mm 1.5kgs</td>
<td>Portable</td>
<td>Up to 448 / 464kbps</td>
<td>32, 64, 128kbps</td>
<td>Via RJ-11 (x2) for voice</td>
<td>64kbps via RJ-45</td>
<td>Ethernet, Wi-Fi</td>
<td>IP 55</td>
</tr>
<tr>
<td><strong>EXPLORER® 700</strong></td>
<td>Multi-user device with extensive functionality</td>
<td>Cobham cobham.com</td>
<td>399 x 297 x 51mm 3.2kgs</td>
<td>Portable and fixed</td>
<td>Up to 492kbps</td>
<td>32, 64, 128, 176, 256kbps</td>
<td>Via RJ-11 (x2), Bluetooth handset or 3.1kHz audio</td>
<td>UDI 64 kbps / RDI 56 kbps</td>
<td>2 x Ethernet, USB, Wi-Fi, Digital I/O</td>
<td>IP 52 (terminal)</td>
</tr>
<tr>
<td><strong>EXPLORER® 710</strong></td>
<td>Multi-user device with extensive functionality</td>
<td>Cobham cobham.com</td>
<td>348 x 279 x 54 mm</td>
<td>Portable</td>
<td>Over 1Mbps</td>
<td>650 Kbps</td>
<td>1 x Analogue RJ-11 phone/fax interface</td>
<td></td>
<td>Ethernet, Wi-Fi</td>
<td>IP 52 (terminal)</td>
</tr>
</tbody>
</table>


Communications on the Move
Compact voice and broadband solution

When you’re engaged in humanitarian operations, rescue and recovery missions or telemedicine, you need easily deployable communication equipment you can always rely on. Regardless of time or place.

Compact and discreet
Most vehicular terminals comprise a roof-mountable antenna and in-car unit. Antennas are compact, relatively lightweight and discreet, so as not to draw attention.

Global coverage
BGAN is available across the globe, with the exception of the extreme polar regions, providing connectivity from wherever your business or operations take you. Vehicular BGAN terminals automatically track the satellite as you move, ensuring you stay connected.

Totally flexible
Supporting the latest IP services, as well as traditional circuit-switched voice and data, BGAN integrates seamlessly with corporate network and legacy applications. The vehicular antenna can be permanently or magnetically mounted to the roof of any suitable vehicle, be it a truck, bus or recreational vehicle (RV).

Simultaneous voice and data
BGAN provides simultaneous voice and broadband data up to 492 kbps. With a vehicular terminal, you can access email, the internet and other applications on the move.

Easy to use
No technical expertise or training is needed to set up and use BGAN. All terminals are plug and play, so you can go online within minutes.

Secure
BGAN meets military and government requirements for security and supports all major VPN products and encryption standards.
Hughes 9450
The world’s smallest mobile BGAN terminal, the Hughes 9450 connects you to BGAN’s Standard IP data service at rates up to 464 kbps while on-the-move. It has four Ethernet ports with Power over Ethernet (PoE), which allow the user to connect multiple devices.

Hughes 9350
High-performance connectivity on the move for the most demanding environments with the Hughes 9350. Offers Standard IP at up to 492 kbps, supports circuit-switched voice or 64 kbps ISDN data calls, and includes interfaces for Ethernet and WLAN.

Cobham Explorer 727
Cobham’s second-generation BGAN vehicular terminal, comprising a robust, compact, roof-mounted antenna, which constantly tracks the satellite while on the move, and a transceiver which is positioned inside the vehicle.

Cobham Explorer 325
A compact BGAN system for on-the-move communication. The Explorer 325 system consists of three fully integrated units – a transceiver, an IP handset and a roof mountable antenna with magnetic mount.

Addvalue Safari
The SAFARI™ is a ‘Comms On The Move’ BGAN terminal and is one of the smallest Land Vehicular BGAN antennas in the market. Offering seamless access to BGAN services up to 464 kbps while on the road.
Interoperability

As the world’s leading global mobile satellite services provider, Inmarsat is the commercial network government clients can depend on, and the reliable common platform in the coordination of a multi-nation recovery effort.

With your satellite communications links entrusted to Inmarsat, your efforts can be more efficiently concentrated on the recovery task at hand. With Inmarsat as your disaster relief partner, you are safe in the knowledge that you have access to the resources of a global communications powerhouse backed up by the local support of a strong regional presence with expert in-country partners.

Inmarsat I-4 Coverage Map

The map depicts Inmarsat’s expectations of coverage, but does not represent a guarantee of service. The availability of service at the edge of the coverage areas fluctuated depending on various conditions.
Your air, land and sea assets can all communicate with each other across platforms. A coordinated command centre can be immediately established amongst partner nations.
A range of specialist applications now support disaster and humanitarian relief operations, including solutions which provide geo-tagged information, mobile data networks which work with existing smartphones and tablets and even the ability to use push to talk devices beyond line of site.

EXPLORER Push-To-Talk

EXPLORER Push-To-Talk (PTT) is a rugged voice dispatch and communication system. It is a cost effective, IP based voice and data communication system designed to replace VHF/UHF based trunk radio systems widely used in search and rescue. The system extends classical Push–To-Talk capabilities to hybrid data networks such as terrestrial 2G/3G/GPRS networks (where available) supplemented by the Inmarsat BGAN satellite network where no terrestrial network coverage is present. With no user intervention required the system automatically routes voice and data traffic via the least expensive network available.

The EXPLORER PTT solution solves the majority of the built–in challenges inherent in existing VHF systems.

The use of BGAN and already existing 2G/3G/GPRS networks extended the coverage area.

- Improved voice quality with IP based digital voice quality compared to the analogue VHF voice quality.
- No expensive infrastructure (no VHF towers, no fixed VSAT) and thereby lower maintenance costs.
- High quality voice but also an on-the-move internet connection.

The look and feel is exactly like the replaced VHF system - only a few buttons and easy push to transmit communication. A car installation includes a vehicular EXPLORER 325 BGAN terminal and a Push-To-Talk terminal with a hand microphone (fist-mike).

- Uses cellular networks as default.
- If one of the cellular networks is congested or unavailable the system will automatically switch to the other 3G network.
- If limited or no cellular coverage the system will switch to the Inmarsat BGAN satellite network.
ASIGN
A global image communication system for satellite and wireless links.

ASIGN is built from the ground up with active collaboration with central, global, governmental institutions and organizations. Collaborative development together with United Nations agencies, national and international defence organisations, civil protection units, and others, have secured a basis for communication systems that

➢ saves time
➢ saves money
➢ secures better decisions
➢ is easy to set up and manage
➢ save lives, property, infrastructure and the environment

Full size digital photos produce large files, particularly as camera resolution is on the increase. However, government departments throughout the world are on a mission to decrease operating expenses. Sending large files over satellite are not cost nor time efficient which has resulted in many operators filtering out and downsizing images for FTP or email transfer. However ASIGN allows all images the observer wants, in any resolution required, to be sent to an operations center.

High Quality: ASIGN is optimized for providing both rapid transfer and access to the highest quality photo and video information, even in remote areas. Simultaneously, full integration with photo triggering sensors allows for true multi-source observations.

Geo-Tagging: ASIGN supports direct GPS tagging and integrates with GIS and rapid mapping. Combined with human advice and computer processing, this is a powerful tool for situational awareness and quality management.

Low cost – High speed: ASIGN images can be received, processed and distributed worldwide in less than a minute after capture in a cost effective, fully controlled, manner.

Multicast distribution: ASIGN is the only solution supporting reliable satellite multicast using Inmarsat BGAN. Group sending with robust protocols can be used when multicast is not available.
Mobile Data Node
Access to mobile ‘apps’ in remote, hostile and extreme environments

Combining Inmarsat’s BGAN service with SEA’s MDN delivers a man-portable, global, 3G base station to even the most inhospitable theatres of engagement.

Government forces across the world continually seek ways to gain and maintain an operational edge. To do so, they are increasingly adopting the innovative and disruptive technologies sometimes referred to as the nexus of forces: social interaction, mobility, cloud and information.

Inmarsat has partnered with SEA to deliver the technology platform that underpins this innovation. Smartphones and tablets are powerful, versatile tools for information capture, data processing and communications. Mobile apps can rapidly and affordably deliver improvements in operational capability, in areas such as intelligence gathering, logistics, maintenance and telemedicine.

The global coverage of Inmarsat’s BGAN service and the exceptional portability and ease of use of both BGAN terminals and the Mobile Data Node make it possible to exploit the full operational potential of these mobile devices.

In combination, BGAN and the Mobile Data Node provide disaster recovery teams with a portable, easy-to-use and flexible way to maintain their broadband connection wherever they deploy. The Mobile Data Node’s 3G capability generates a “bubble” of cellular network connectivity 1km in diameter, within which users can use their mobile devices and smartphones. This powerful communications capability will enable governments to exploit the full potential of mobile apps to enhance capability beyond the terrestrial cellular footprint.
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