Services for Defence

inmarsat

A key component
of interoperability

⊙ Inmarsat delivers secure, reliable mobile broadband services that enable interoperability on a global basis - on land, at sea and in the air. We help maximise your operational effectiveness and chances of mission success.

The separation of land, sea and air operations has fallen away and communications that enable interoperability across multi-national coalition forces have become increasingly important. Emphasis is more on expeditionary warfare, with small, highly mobile tactical units that are deployed to remote locations.

Inmarsat's mobile broadband services – Broadband Global Area Network (BGAN) for land, FleetBroadband for sea and SwiftBroadband for air – provide simultaneous voice and broadband data on a global basis. Secure reachback and in-theatre interoperability is possible through a range of relatively small, compact terminals that support a wide variety of applications and solutions.

These services enable IP-based data connectivity for email, internet and VPN access, while supporting simultaneous voice and ISDN. Lightweight and about the size of a laptop, BGAN terminals are rapidly becoming standard for land-based users in a deployable communications and information systems solution.

For maritime and aeronautical users, a range of terminals and antennae is available to suit different platforms and communications requirements. Together they enable tri-service interoperable communications, linking disparate components on land, in the air and at sea.

Inmarsat's mobile broadband services are delivered over its latest generation I-4 satellites. The most advanced commercial communications satellites ever launched, they will be in operation into the 2020s – providing defence users with service continuity and a stable and reliable platform for future requirements.

" BGAN has proven itself time and again on operations as a success. It has managed to provide a service in harsh, and at times, hostile conditions. With the ability to communicate large amounts of data to the troops it keeps those who require it well informed; its impact on morale by delivering the e-bluey service has been first rate - a reliable, versatile and effective capability."

Lt Col M Griffiths
UK MoD DEC CCII

Global interoperability

Maximise operational effectiveness with our global mobile broadband services – on land, at sea and in the air.

Enabling highly mobile b

On land, at sea, in the air

Key service features

- Global coverage
- Broadband data and voice
- Compact, lightweight terminals
- Mobile, quick to deploy and easy to use
- Near-instant connectivity
- All-weather capability
- Standard, intuitive interface
- Interoperable and flexible

Image courtesy Department of Defence

❯ **The operational demands placed upon today's expeditionary warfighter are exceptional. Inmarsat provides highly reliable, secure communications that support not just these operations, but a range of applications from welfare communications to the rigorous demands of C4ISTAR systems.**

Multi-level information assurance

The I-4 network has a high level of inherent security for data and signalling traffic. At the application layer, the I-4 network also supports both circuit-switched and IP packet-switched cryptographic devices, enabling military users to add a further layer of information assurance to protect their communications.

Tactical area radio net integration

BGAN provides a reachback capability from a VHF/UHF tactical radio net to a forward operating base HQ, or out-of-theatre to national HQ, adding significantly to the effectiveness of an operation.

Communications-on-the-move

Vehicular BGAN terminals provide voice and broadband data on-the-move for the land-based user. FleetBroadband is provided through high, medium and low-gain antennae. SwiftBroadband is delivered through existing high-gain aircraft antennae. Compact and lightweight variants of SwiftBroadband are now available for use on UAV platforms.

Situational awareness and CCIS

Inmarsat currently supports a number of situational awareness solutions for military users. These solutions operate over a low data rate bearer and integrate location and identity data with sophisticated mapping products that form part of Command and Control Information Systems (CCIS).

roadband satcoms

Multicast/netted comms

Based on the IP-multicast capability, this sophisticated satellite solution will allow the simultaneous broadcast of voice, video, or other data from one to many users, over the I-4 satellite network. It will enable such diverse applications as the synchronisation of vehicle-mounted battlefield information systems, video briefings from commanders to troops, and also a more advanced situational awareness capability.

Surveillance and remote monitoring

Remote or unattended land, maritime or air-based ISTAR operations can be enhanced by linking them over the I-4 network directly to tactical units, deployed or national HQ, enabling more rapid access to live motion video, still imagery or other sensor products.

Live motion video and voice

BGAN delivers the bandwidth to support a live motion video feed with simultaneous voice from a remote, hostile or mobile scenario. There are multiple applications for this service, including telemedicine links from field hospitals back to specialists, and technical assistance to remote repair and maintenance activities.

GSM pico cell

BGAN can be used to establish and link back from an individual GSM pico-cell in a remote area or where normal GSM communications have been disrupted. This solution is ideally suited for 'first-in' personnel.

Service coverage

■ I-4 Americas   ■ I-4 EMEA   ■ I-4 Asia-Pacific

This map depicts Inmarsat's expectations of coverage, but does not represent a guarantee of service. The availability of service at the edge of coverage areas fluctuates depending on various conditions.

Enhanced connectivity
for the global mobile environment

> "We have found BGAN to be very useful during operations; it is able to cope with downloading large amounts of data, its easy to set up, and doesn't take up much space when deploying. We have experienced little to no problems with this piece of kit."
>
> WO2 A Hall RLC
> British Army

Image courtesy Department of Defence

Mobile broadband services

Service	Land BGAN	Sea FleetBroadband	Air SwiftBroadband
Standard IP	Up to 492kbps over a shared channel	Up to 432kbps over a shared channel	Up to 432kbps per channel; 2 channels per terminal
Streaming IP	Guaranteed data rates on demand in excess of 384kbps	Guaranteed data rates on demand up to 256kbps	Guaranteed data rates on demand up to 128kbps
Voice	Voice calls with voicemail and other 3G services	Voice calls with voicemail and other 3G services*	Voice calls with voicemail and other 3G services
ISDN	Standard ISDN at 64kbps	Standard ISDN at 64kbps	Standard ISDN at 64kbps

Terminals

BGAN is accessible through a range of compact, highly portable terminals with performance options to suit team needs. Vehicular comms-on-the-move systems comprise an interior rack-mountable terminal and roof-top tracking antenna.

FleetBroadband is available through three types of terminal, differing in size and performance capability. All terminals are designed specifically for the marine environment and support a range of off-the-shelf software, as well as specialised user applications.

SwiftBroadband terminals are mounted inside the aircraft and utilise existing high-gain Aero H+/Swift 64 antennae, if present. Smaller, lighter units are available for UAV applications.

*FB250: above 20 degree elevation

Comms-on-the-move

Delivering real-time, high-speed connectivity to units at the edge, during fast-moving operations.

How to buy

Services for Defence are available through our worldwide network of partners. Contact your existing Inmarsat service provider or visit our website to find the right partner for your company.

inmarsat.com/government