



# ELECTION SOLUTIONS

**INMARSAT GLOBAL GOVERNMENT**  
**COMMUNICATIONS MADE CERTAIN**







# ELECTORAL LOGISTICS

**The spread of democracy around the world has been a significant achievement of our times and a fair and open election system sits at the heart of this as the means to establish legitimate government. But electoral events in each country are unique and reflect an individual country's political, geographic and historical characteristics and capability to deliver credible elections.**

Common constraints and difficulties in providing inclusive, transparent and sustainable elections in emerging democracies can include a widespread and remote population, extreme climatic conditions, limited time frames for the electoral process and a credible, reliable and secure means to transfer data from outlying centres. These hurdles can be surmounted with the aid of the Inmarsat solutions, services and applications outlined within this document.

The introduction of mobile satellite communications into the electoral process has served to significantly increase the participation of

remote populations in the democratic process. Whether it is for voter registration and census collection, the election process itself, or the facilitation of international observers, Inmarsat's mobile satellite communications solutions have proved to be a flexible, reliable and cost effective tool in modern day electoral logistics.

One of the challenges in co-ordinating an election ICT plan is the variance in availability of a reliable communications network which spans the entire electorate and the need for a uniform process across these. With Inmarsat as your communications partner, you will have access to the very latest in satellite communication technology and networks – be it for communication, data collection or analysis of results.

Inmarsat's global communications network provides a data connection to each electoral post – no matter how remote – whilst in-house solutions engineers constantly work with world-leading manufacturers and partners to source the most reliable and cost efficient applications to enhance the election process.



# ELECTION SATCOMS TECHNOLOGY

**With the advance of satcoms technology, the ability to support election activities at all phases of the process is now possible. The Inmarsat mobile satellite communications terminals deliver a portable, reliable and cost efficient communications link through all stages of the process.**

Inmarsat works with specialist elections partners in a full project methodology to ensure successful project implementation from initial solution concept, through resource planning, capacity planning, operational deployment, all fully supported 24/7 to ensure a robust and reliable voting process

## CENSUS AND VOTER REGISTRATION PHASE

Prior to the actual election, it is critical that voter registration and Census collection is both consistent and ongoing. Proper registration techniques require a means of collecting and

transmitting the data - often from remote and inhospitable locations. The Inmarsat BGAN terminals provide a highly portable and easy to use method of securely transmitting collected data back to a central processing point to ensure that databases are bona fide and 'double-voting' is avoided.

## ELECTION LOGISTIC PHASE

The election process requires the secure transmission of votes back to a central HQ for verification and counting. Inmarsat BGAN provides full network connectivity and can include services such as encryption and VPN. Video surveillance for voting areas can also be transmitted over the Inmarsat network, ensuring the process is properly safeguarded against fraud.

## ELECTION OBSERVERS

The participation of a population in the democratic process is ratified as one of the United Nations' basic human rights. It is a responsibility of the

international community to ensure that this process is conducted in a fair and transparent manner. This has increasingly required the need for election observers to oversee the election activities of emerging democracies. With the global trend towards democratisation, election observation has tended to focus on new democracies and countries in transition to democracy. A common denominator in these countries has been the lack of a reliable terrestrial communications infrastructure. Electoral observers have need for efficient communications both in terms of ensuring their safety and to enable them to report on activities on the ground. Inmarsat is the perfect communications link for this purpose. The IsatPhone Pro ensures an immediate and cost effective voice service whilst the Inmarsat BGAN terminals ensure a data connection for the transmission of critical data and enable a high-speed video conferencing capability.





# CASE STUDY: BRAZIL ELECTION

**Brazil has a history of innovation in voting. It was the first country in the world to implement fully electronic elections. In 2008, it became the first nation to use BGAN mobile satellite technology for voting. BGAN enabled fast, secure, reliable and cost-effective transmission of results from 1,125 remote precincts throughout Brazil—the world’s largest BGAN deployment to date.**

## CUSTOMER

Brazil’s Tribunal Superior Eleitoral (Superior Electoral Court), the agency responsible for national and municipal elections. Headquartered in Brasilia, the federal capitol.

## CHALLENGE

Establish faster, more reliable data and voice communications with electronic polling stations in hundreds of small rural villages lacking access to terrestrial networks.

## SOLUTION

Replaced low-bandwidth satellite phones with BGAN service from Inmarsat, terminals from Addvalue, and 24/7 training and support from Tesacom, an Inmarsat partner.

## RESULTS

Achieved secure, efficient and cost effective satellite communications for 1,125 remote sites. Simplified training. Cut voting data transmission time from hours to minutes.

## NEED FOR SUPERIOR REMOTE COMMUNICATIONS

Brazil was the first country in the world to hold fully electronic elections, successfully shortening the time required to count ballots, which could take more than a week in a presidential election. However, to transmit electronic polling data from hundreds of small villages in rural areas, technicians for Brazil’s Tribunal Superior Eleitoral (TSE) used laptops connected via satellite phones.

Frequently, the signal would get lost and transmission was slow. Maximum data speed, in fact, was only 9.6 kbps. Transmitting electronic ballots, counting votes, and returning results to regional electoral courts took 12 hours or more. Final counts, therefore, were not available until the day after polls closed—a frustrating situation for voters and candidates alike.

In 2008, the TSE issued a tender looking for more reliable, secure and cost-effective satellite communications for 1,125 remote polling stations to be set up for municipal elections in the fall. After three intense rounds of

bidding against two competitors in Brazil, Tesacom—an Inmarsat partner based in Argentina—won the contract. Tesacom joined forces with Inmarsat and Addvalue to provide TSE with a complete BGAN solution.



BGAN terminals like this one transmitted results gathered by electronic voting machines

**“During BGAN testing at a rural village we transferred data from ten polling stations to the Court. It took just five minutes—a speedy success.”**

Rivaldo Pereira Borges,  
Director of Technology,  
Regional Electoral Court-Mato  
Grosso do Sul





# BGAN

**Our award-winning BGAN service provides simultaneous voice and data communications globally.**

BGAN offers Standard IP and a portfolio of guaranteed Streaming IP rates to meet all your data, voice and video needs wherever you're located.

## GLOBAL COVERAGE

BGAN is available across the globe, with the exception of the extreme polar regions, providing connectivity wherever your business or operations take you

## SECURE

BGAN meets military and government requirements for security and supports all major VPN products and encryption standards.

## TOTALLY FLEXIBLE

Supporting the latest IP services, as well as traditional circuit-switched voice and data, BGAN integrates seamlessly with corporate networks and legacy applications.

## 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.

## RELIABLE NETWORK

BGAN services are delivered via the Inmarsat-4 network, with 99.9 per cent overall network availability and an operational lifespan expected into the 2020s.

## SIMULTANEOUS VOICE AND DATA

A single BGAN terminal provides simultaneous voice and data up to 492kbps, enabling you to access the internet or send email, and talk on the phone at the same time.

## STREAMING IP AND BGAN X-STREAM™ AND HDR

BGAN supports a range of guaranteed on-demand Streaming IP rates from 32kbps to at least 384kbps, and up to 450kbps with BGAN X-Stream™.

The new HDR service will allow high data rates of streaming, up to 650kbps.





# ISATPHONE 2



## The IsatPhone 2 from Inmarsat. Designed to work with the most reliable satellite communications network in the world.

IsatPhone 2 is the latest addition to our handheld satellite phone portfolio, offering a range of new features to ensure you stay connected in even the most extreme and remote locations.

IsatPhone 2 is a tough phone for a tough world. The robust handset has been engineered to cope with anything that nature can throw at it - from searing heat to icy blasts, desert sandstorms or monsoon rain.

And with fast network registration, an unrivalled battery life offering 8 hours' talk time and up to 160 hours on standby, you know you can always depend on IsatPhone 2.

What's more, IsatPhone 2 gives you the excellent voice clarity and call stability you expect from the world-leading Inmarsat network.

## RELIABLE NETWORK

Operates over our global I-4 satellite network, ensuring reliable call stability and seamless roaming worldwide.

## GLOBAL COVERAGE

IsatPhone 2 coverage is worldwide, apart from the Poles. Calls are made via a single, global network so there are no roaming charges.

## ROBUST HANDSET

Engineered to withstand the most extreme conditions, IsatPhone 2 operates at -20°C to +55°C, has humidity tolerance up to 95 per cent, and is dust, splash and shock resistant (IP65, IK04).

## STAY CONNECTED

Location services, including tracking and an assistance button, keep people updated with your GPS co-ordinates when it matters. Receive notification of inbound calls, even with the antenna stowed.

## GLOBAL ASSISTANCE

IsatPhone 2 customers on monthly plans can benefit from free-of-charge worldwide emergency assistance from GEOS. Once configured, a single push of the assistance button will send a message to the GEOS' 24/7 emergency response centre, who will get in touch with you, and liaise with the most appropriate emergency services to get you the help you need.

## LONG BATTERY LIFE

Network registration in under 45 seconds, plus unrivalled battery life - with 8 hours of talk time and up to 160 hours on standby.

## EASY TO USE

Easy-to-use interface, with large high-visibility, scratch-resistant transreflective display that's readable even in bright sunlight.

## OTHER FEATURES

- eCompass for enhanced pointing
- Alarm
- Minute minder
- Microphone muting
- Speakerphone
- Bluetooth
- Contact synchronisation With MS Outlook 2007 (PC).
- OS compatibility: Windows 10, Windows 8, Windows 7 and Windows XP.

## LANGUAGES SUPPORTED

Arabic, Chinese, English, French, Japanese, Portuguese, Russian, Spanish, Turkish.







# INMARSAT L-TAC UHF AND VHF BEYOND LINE OF SIGHT COMMUNICATIONS.

## MOBILE COMMUNICATIONS IN THE FIELD

Designed with Government and Military in mind, Inmarsat's L-TAC service combined with Spectra's SlingShot™ enables existing in-service tactical radios to transparently access Beyond Line of Sight communications (BLOS) without the need to modify the radio hardware or the cryptos. The service can be leased for a fixed period (minimum 1 month) and provides a complementary service to existing UHF/VHF Satcom channel availability. SlingShot™ combined with Inmarsat's L-TAC lease service is fully flexible and designed to meet

security and reliability requirements cost-effectively. Once deployed, remote management and support is provided through a 24/7 network operation centre. The service offers a combination of reliable voice and data connectivity that is available globally, independently of local infrastructure. It is also quick to set up, providing a fully configured solution which needs minimal user intervention before deployment. Comms on the Move (COTM) solutions are available for vehicles and the dismantled soldier.



## FEATURES

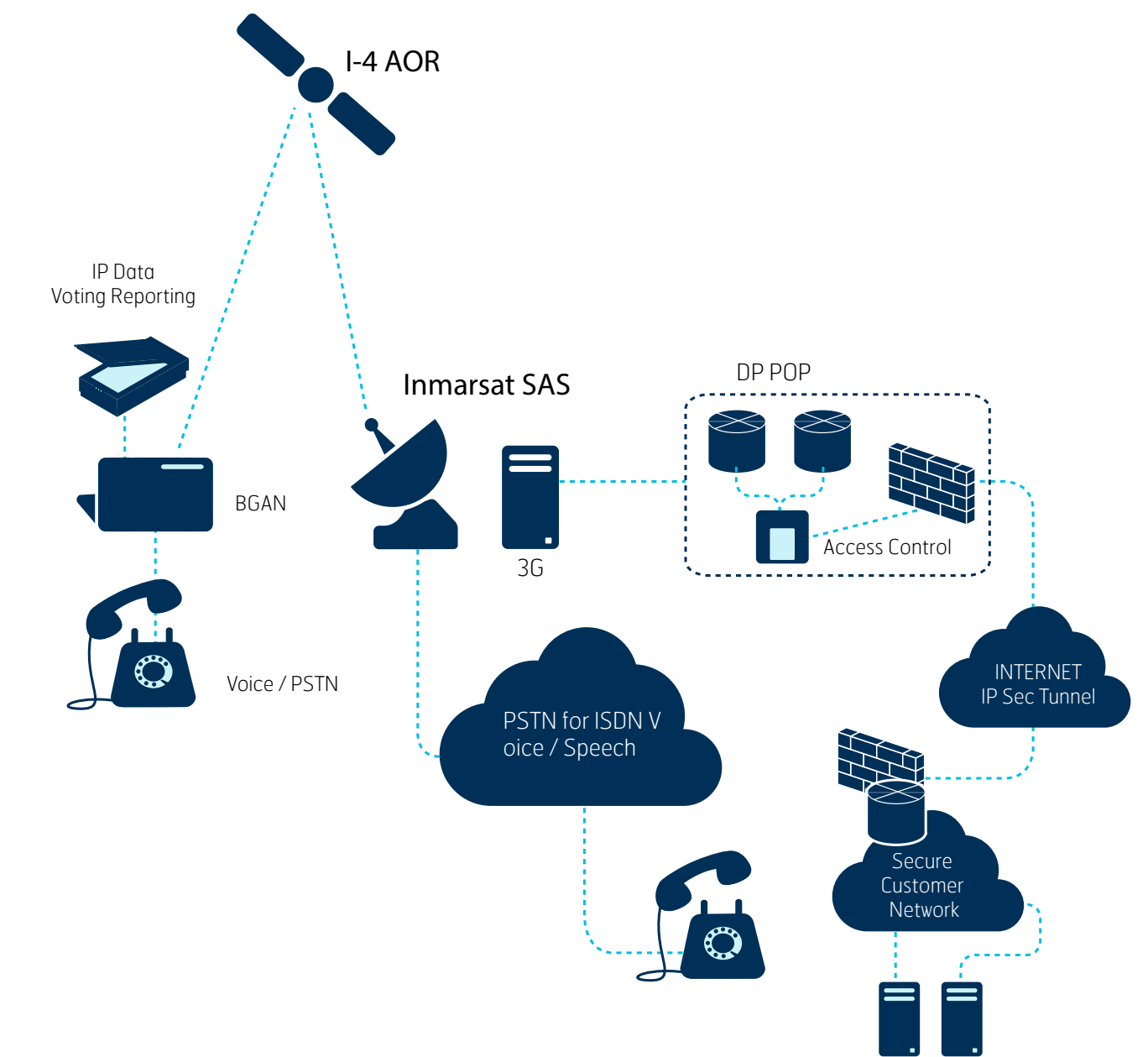
Designed to support in-service radios

- Supports UHF & VHF military and commercial frequencies
- Approved for Inmarsat I-4 constellation
- Omni-directional antennas
- Complements existing military capacity
- Utilises Narrow Beams, Regional Beams, Customised Beams and Relocatable Beams
- Lease airtime for a minimum of 1 month
- Standard lease provides 25kHz Channel
- Data enabled
- 1 x Wideband or 5 x ANDVT channels
- HPW and ViaSat proven up to 56kbps



# SECURE ACCESS VPN

With a need to send Electrical results needed to be sent encrypted to HQ, Inmarsat and its partners can organise a private network set up to ensure the security of data transfer.





# YOUR COMMUNICATIONS LINK

The communications requirements for an efficient election process often require a range of applications; be they portable BGAN terminals for the provision of reliable data from remote polling locations, the IsatPhone Pro to provide reliable voice communications, video conferencing solutions for international observers on the ground, in the air or at sea, and the ability to transfer and analyse data on the move. Inmarsat provides a transparent, secure global communications link that allows interoperability amongst all parties in a cost efficient and reliable manner.



## ON THE GROUND

Inmarsat's land-focused service, BGAN, is accessible through a range of compact, highly portable terminals with performance options to support your integrated border management needs, whether in remote or congested locations. Standard terminals are highly portable and robust enough to withstand challenging environments and weather conditions. Specialist low-profile versions have been developed for covert operations and can be manufactured to order.



## ON THE MOVE

Vehicular comms-on-the-move systems comprise an interior rack-mountable terminal and roof-top tracking antenna, delivering real-time, high speed connectivity during rapidly-developing mobile operations.



## AT SEA

Inmarsat's maritime service, FleetBroadband, is completely interoperable with BGAN. It is available through three types of terminal, differing in size and performance. All terminals are designed specifically for the maritime environment and support a range of off-the-shelf software, as well as specialised user applications.



## IN THE AIR

Inmarsat's aviation service, SwiftBroadband, is also completely interoperable with BGAN. SwiftBroadband terminals are mounted inside the aircraft and utilize existing high-gain Aero H+/Swift 64 antennae, if present. Smaller, lighter units are available for UAV applications. We are working on an upgrade to enable under-the-rotor SwiftBroadband operation in helicopters from early 2014.





# INMARSAT NETWORK

**Inmarsat's capabilities are growing as the demand for data increases and technological innovation offers solutions. Our network programs meet the needs of today while preparing to fulfil the requirements of tomorrow's government customers.**

By enhancing our current services and expanding into the world of Global Xpress we are continuing to grow our network capability in line with your operational requirements. Inmarsat is your network for the future.

## **INMARSAT I-4 DELIVERS:**

### **Standard IP**

For email, Internet and intranet via secure VPN connection, at speeds of up to 492kbps over a shared channel.

### **Streaming IP**

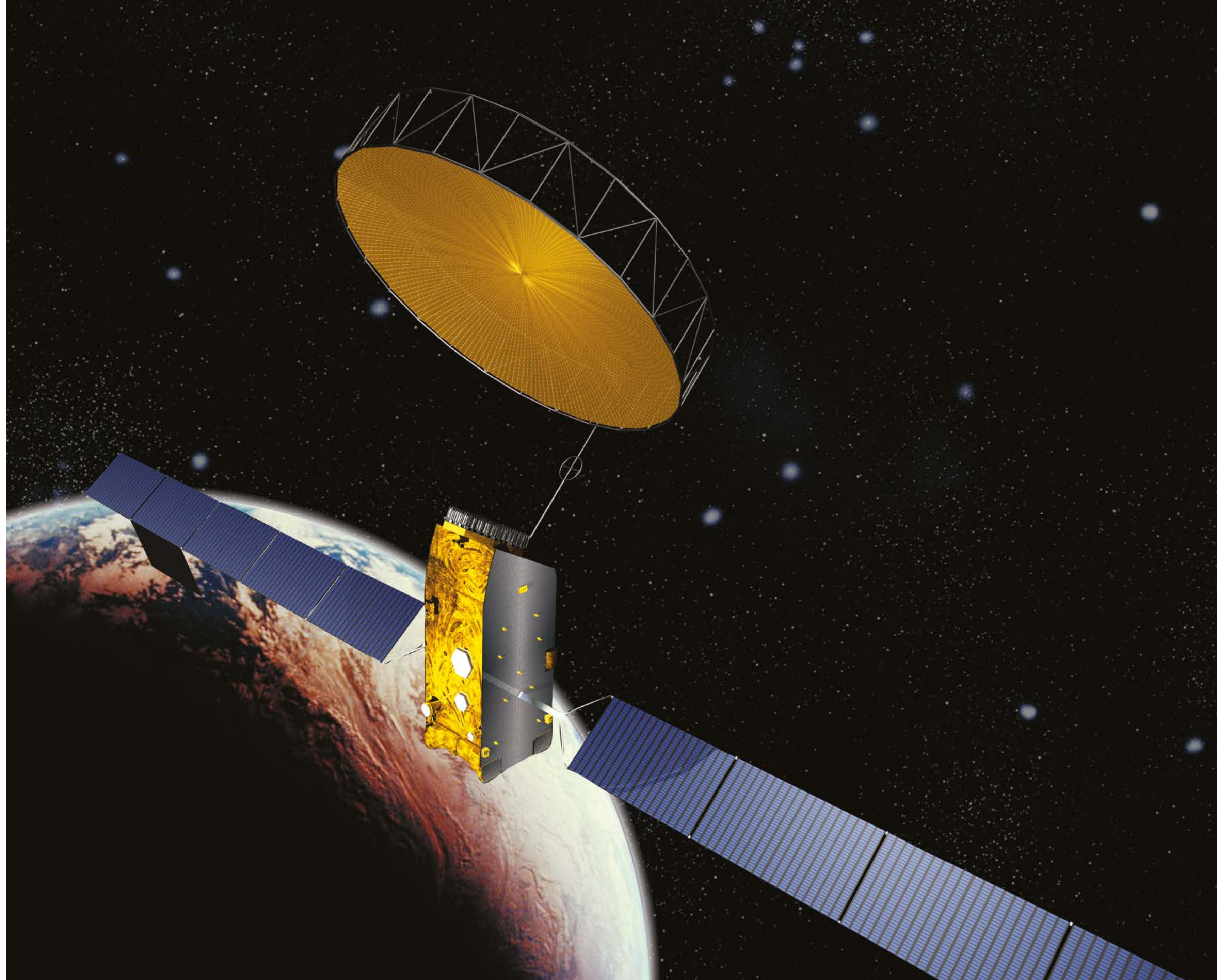
Guaranteed data rates on demand up to 384kbps. Choose your required data rate on a case-by-case basis, depending on your chosen application. Also supports ISDN and HDR.

### **Voice**

Make phone calls at the same time as accessing your data applications. Voicemail and other mobile supplementary services are available.

### **Text**

Send and receive text messages via your laptop, to or from any mobile phone.





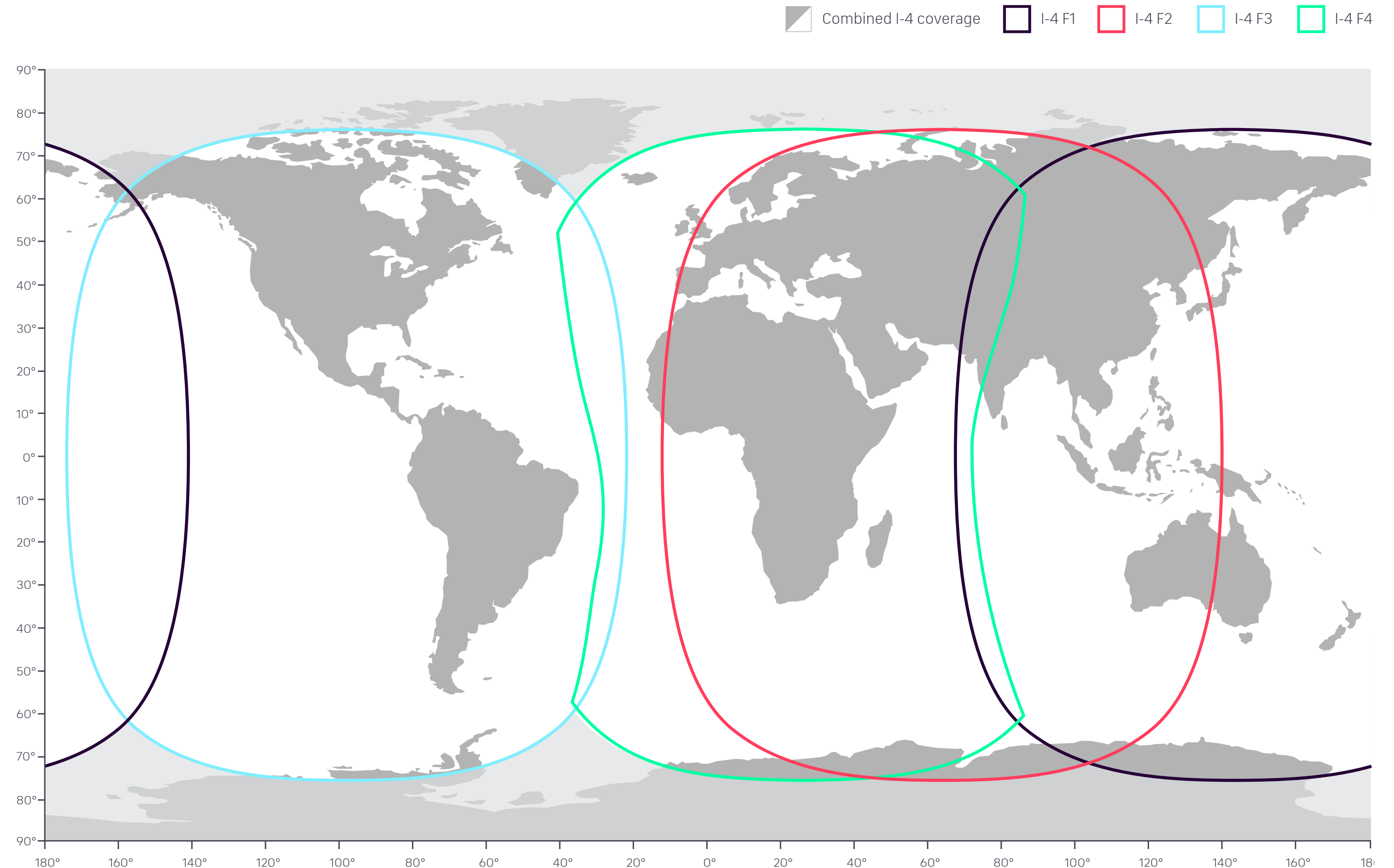
# WE CONNECT THOSE WHO PROTECT

## LOCAL PRESENCE, GLOBAL REACH LOCAL PRESENCE, LOCAL KNOWLEDGE, LOCAL SUPPORT

Inmarsat is extremely proud of more than 30 years of heritage supporting a wide range of government customers throughout the world. We have offices all over the world, each of which works with local partners to provide a hub of support for government clients. Through these partnerships, we can work together to understand your operational requirements and provide solutions that are tailored to your regionally specific communications needs.

## GLOBAL REACH

- 20GHz bandwidth on 50 satellites
- 25 terrestrial anchor stations
- 30 Gbps terrestrial network capacity
- 600 channel partners
- Over 1,600 employees in 40 countries
- 4 Operating satellite constellations; 5th one due soon
- Secure network access anywhere, anytime



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# HOW TO BUY

Inmarsat products and services are available through select Inmarsat distribution partners and service providers.

Visit our website to find the right partner for you.

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