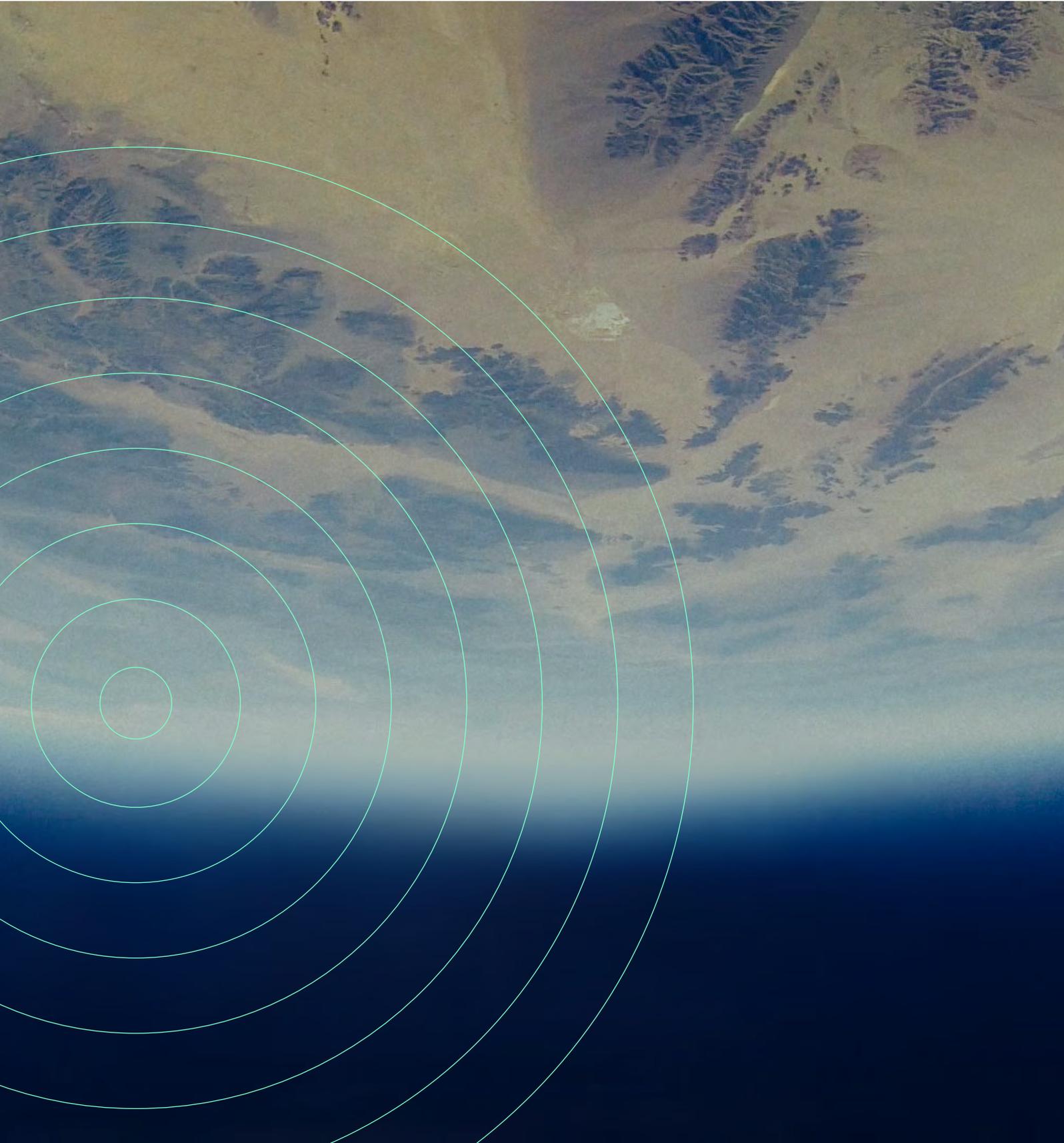


Gatehouse
Satcom

BGAN Protocol Stack



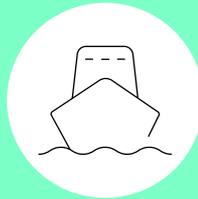
BGAN Protocol Stack



A proven protocol stack for the Inmarsat BGAN satellite system

The BGAN Protocol Stack (BPS) is a high-quality, reliable and mature product. The product is a 'must' for any new development of a BGAN user terminal. As an already proven product, it significantly reduces your cost and risk when developing a BGAN terminal. Using the mature BPS will release resources to focus on the important features targeting your customers' needs and hereby ensure your differentiation in the market.

The BGAN Protocol Stack supports all terminal classes defined by Inmarsat. The Gatehouse BGAN Protocol Stack has been integrated into land portable, maritime, aviation, satellite relay and land mobile terminals.



**APPLICABLE TO ANY SEGMENT
COMMERCIAL OR MILITARY**

Benefits

- Mature – several type approvals
- Highly generic and portable
- Comprehensive documentation
- Support of advanced testing
- Implemented in simple C++



Use cases

At Gatehouse Satcom, every licensing of BPS is unique and can be tailored fully to a customer's needs. All BPS functionality is covered by the product license.

A BPS customer project can cover a broad range of services, for example:

1. Product License

Gatehouse Satcom will release BPS Documentation and Product Package.

2. Product License and Porting

Gatehouse Satcom will further ensure that BPS can build and run on the platform. This will be shown by passing some Mandatory Test Requirement (MTR) tests with simulated interfaces.

3. Full Integration

Gatehouse Satcom has full responsibility for L2 and up, including integration of external interfaces.

4. Full UT

Gatehouse Satcom takes full responsibility for terminal, including subcontractor handling, etc.

Project Management

When a project is started, Gatehouse Satcom allocates a Project Manager as the primary point of contact to the customer. The Project Manager ensures that the qualities of releases are as agreed. The initial release is a Document Package containing Architectural Design Document, all Interface Control Documents, etc. The next release contains binary libraries or source code for BPS depending of the license type. The following releases will typically be maintenance releases, which for example can include SDM (System Definition Manual) updates. During a project a development support agreement is in place, which covers all maintenance releases, questions, etc. When the User Terminal has passed Inmarsat Final Type Approval (FTA) the development support is replaced by a support and maintenance agreement.

UT Reference Stack

The re-usability, portability and testability of BPS are ensured through several different customer implementations. The BPS is also the main component of the UT Reference Stack for Inmarsat used as a reference implementation to validate MTR scripts and associated type approval equipment.

Technical Description

The BGAN Protocol Stack is a combined UMTS Non-Access Stratum stack (incl. PDCP) on top of the proprietary Inmarsat Access Stratum. Together with physical layer software and application layer it forms the required software for a BGAN user terminal.

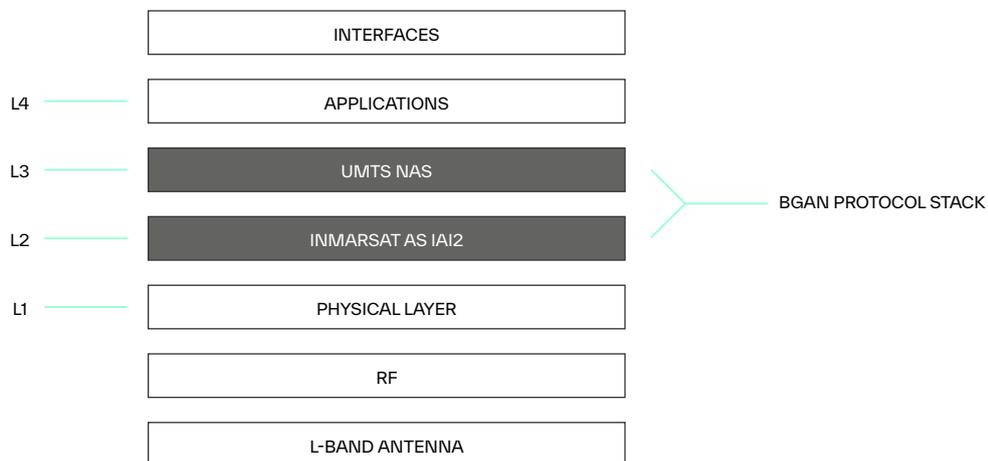
Full compliance and thorough testing

The BPS is a core component in the Inmarsat User Terminal Reference Stack which guarantees that the BPS is compliant to Inmarsat System Definition Manual (SDM). The

BPS is thoroughly tested using Inmarsat MTR and over-the-air by BGAN satellite. Further, exhaustive testing is also done with Gatehouse Satcom's own automatic test suite which has been refined over many years. It is possible to integrate BPS with any physical layer, whether developed by the customer or offered by Gatehouse Satcom.

In addition to BPS we have several useful optional related products available, e.g. BGAN Network Emulator (BNE), Test Case Manager Controller (TCMC), or Physical Layer Simulator (Physim).

User Terminal



Features

The UMTS module consists of:

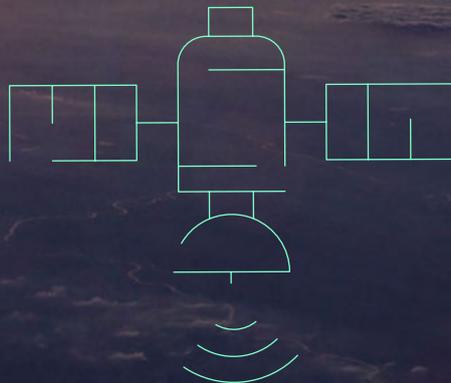
- Connection Management
 - Mobility Management
 - Radio Access Bearer Manager
 - Packet Data Convergence Protocol (currently including RFC2507)
-

The IAI-2 module consists of:

- Background IP
 - Streaming IP
 - Multiple Access Points
 - Short Message Service (SMS)
 - Voice calling (loopback, file, net2000 handset)
 - ISDN calling (loopback, file, PPP data)
 - Maritime Safety Data Service
 - SwiftBroadband Oceanic Safety Service
 - Regional SAS
-

The UMTS and IAI-2 modules are fully integrated with several external interfaces:

- Antenna Pointing
 - Ciphering
 - AMBE+2™, Voice Codec and ISDN
 - ETSI (Layer 3 SAPs)
 - GPS / navigation
 - USIM
 - HAL
 - Kernel/Platform
 - Trace/Debug
-



**RAPIDLY DELIVER A HIGH-QUALITY TERMINAL
TO MARKET WITH A PROVEN PROTOCOL STACK**

Get in touch

Get in touch with us to learn how you can rapidly deliver a high-quality terminal to market with a proven protocol stack.
You can contact us at satcom@gatehouse.com.



Gatehouse
Satcom

Let's unlock the power of satellite communications software