

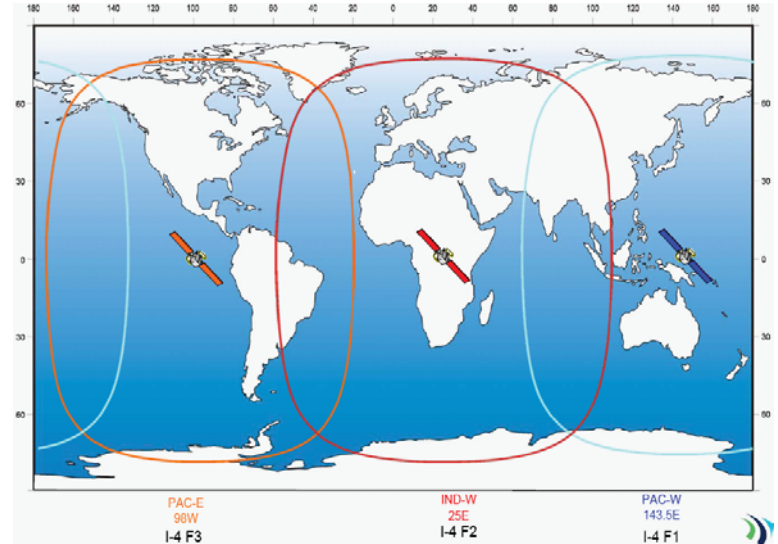
got BGAN?

Software Defined Radio Implementation

What is Inmarsat BGAN?

Inmarsat Broadband Global Area Network (BGAN) is a family of products and services that offers mobile phone calls and broadband data connection virtually anywhere on the globe through a network of geostationary satellites.

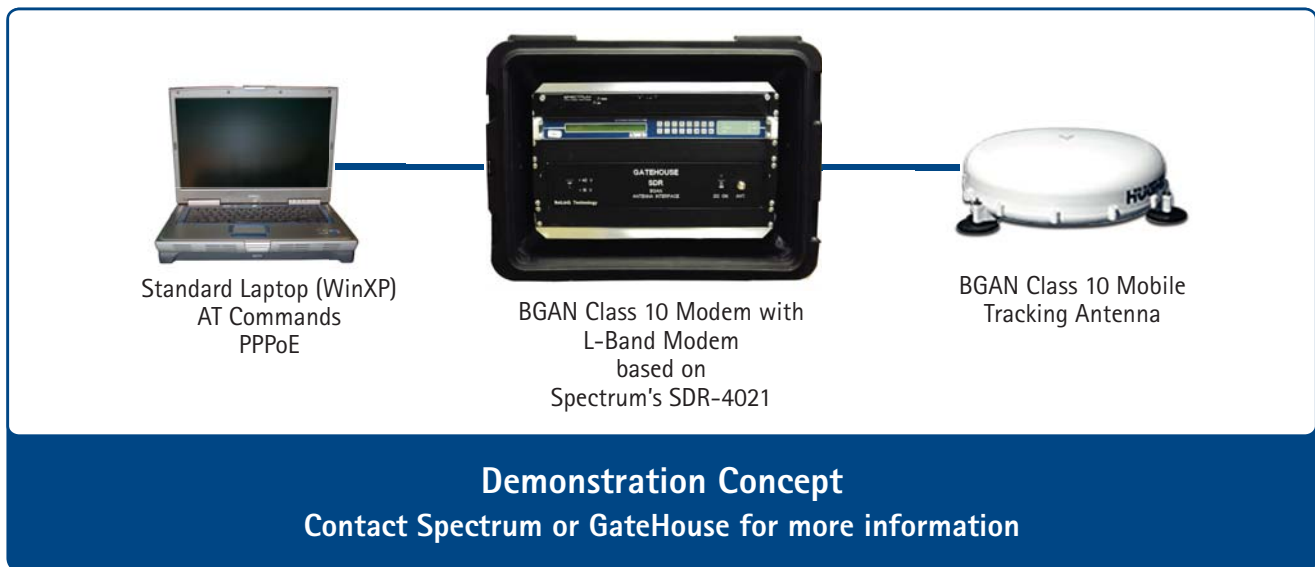
Due to its global connectivity, it has a wide user base including commercial and military customers, and is one of the world's most popular Mobile Satellite Services.



What have Spectrum and GateHouse done with it?

GateHouse has been developing a fully software-defined version of the Inmarsat BGAN waveform known as Inmarsat BGAN SDR Waveform. GateHouse will be demonstrating the full capabilities of the SDR waveform using Spectrum's SDR-4021 software defined radio platform.

The Inmarsat BGAN SDR Waveform can be used to implement an Inmarsat BGAN terminal. The implementation is fully compatible with, and has been fully tested under, the SCA Core Framework (CRC SCARI++).



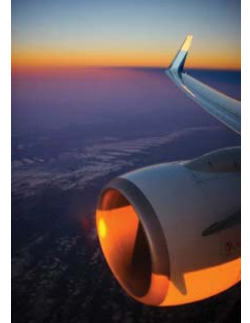
Why is this important...

...for those purchasing satellite terminals?

For customers responsible for purchasing radios this can open up a new range of options that would allow them to offer additional capabilities while minimizing and protecting their hardware investment. Some of these new capabilities include the possibility of supporting both multiple terrestrial and satellite communications standards on the same terminal. A terminal or radio that is based on software defined radio technology, such as the SDR-4021, can minimize costly upgrades by allowing for future updates in the field via software.

...for those building satellite radios?

An SDR-based Inmarsat BGAN implementation allows for rapid development and customization of a satellite terminal or radio product that must support the Inmarsat BGAN standard. Currently, manufacturers must develop much of the physical layer waveform on their own from scratch or through re-use of existing IP. Manufacturer's may also have to port or develop the waveform on hardware developed in-house or acquired from other vendors. Development effort, cost and risk can be significantly reduced using GateHouse Inmarsat BGAN SDR waveform that is pre-ported and tested on production-ready modem hardware.



Who is Spectrum?

Spectrum delivers advanced reconfigurable radio technologies that connect the complex world. Spectrum's products and services enable customers to reduce their total cost of ownership through managing and maintaining their own intellectual property (IP). Spectrum's multipurpose reconfigurable platforms support a diverse array of waveforms including:

- Inmarsat BGAN
- Wideband Networking Waveform - Orthogonal Frequency Division Multiplexing mode (WNW OFDM)
- Soldier Radio Waveform - Electronic Warfare mode (SRW EW)
- Single Channel Ground and Airborne Radio System (SINCGARS)
- Future Multiband Multiwaveform Modular Tactical Radio (FM3TR)
- APCO Project (P25)

Who is GateHouse?

GateHouse is a satellite communications software provider, based in Denmark. They currently supply the Inmarsat BGAN protocol software to 8 different Inmarsat Terminal Manufacturers including:

- Inmarsat (as UT Reference Stack)
- DSpace (Australia)
- Hughes Network Systems (USA)
- Addvalue (Singapore)
- ComSine (UK)
- Japan Radio Company (Japan)
- EMS SATCOM (UK/Canada)
- Thales Avionics (as part of EU project)

Contact Spectrum today for more information

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