

## Unmanned concealed broadband satellite terminal with global coverage

Low profile BGAN supplies the high speed IP communications needed to make electronic surveillance and intelligence a powerful force multiplier.

### Key features

- Compatible with any IP sensor system
- High data rates supporting real-time video and audio
- Remote control via SMS Lie-flat operation
- Ultra-low power consumption Simple installation without PC
- Minimal pointing required
- GPS built-in

### Key benefits

Allows high performance sensors to be rapidly deployed at zero notice

Fills gaps in existing sensor networks

Reduces the need for trained manpower

Reduces the exposure of personnel to unnecessary risks

Can be used for discreet and sensitive operations

Inmarsat and Hughes have jointly developed a solution that services border forces, police, security and military groups can utilize for covert/discrete applications. The Low Profile BGAN system is in two parts:

- A rapidly deployable lie-flat antenna
- A robust remotely operable BGAN terminal



The antenna is placed on a flat surface and oriented in the direction of the satellite. It can then be covered with a light layer of soil or vegetation. The terminal is then connected to the IP feed from the surveillance and intelligence gathering systems. It can be configured to lie dormant until woken by a command over the network or a locally generated alarm signal from a connected sensor.

The system is designed to form the backbone of future discreet smart surveillance solutions. The global coverage of Inmarsat's I-4 network allows Low Profile BGAN to be deployed rapidly with sensor systems to cover a gap in existing surveillance infrastructure, to deal with a rapidly developing situation, or to exploit a fleeting window of intelligence opportunity.

Because it has a very long battery life, can be remotely operated, and can be very effectively hidden, it offers the opportunity to extend the reach of a surveillance network into areas where manned observation posts would be impractical, unsafe or simply not cost effective.

## How does it work?

The Low Profile BGAN antenna is built around a solid-state multi phased array that provides a 30 to 60 degree view angle when laid flat. The antenna can be tilted toward the satellite to achieve higher elevations if required. An arrow on the antenna's cover indicates the direction in which the antenna needs to be pointed, and audio pointing tones are also generated to a 3.5mm jack socket. The antenna can be covered with a thin layer of any non-metallic material. The unit is silent in operation, and both modem and antenna are IP-67 rated. The wake-on-trigger and wake-on-signal power management regime delivers very long battery life.

## Government applications

Coastguards and border forces need to detect, recognize, identify and track static and moving targets. Police and intelligence units need to observe personnel, equipment and installations of interest. Security personnel need to protect sensitive perimeters of critical installations. In every case their effectiveness can be multiplied many times by deploying advanced sensor technology connected using Low Profile BGAN.



## Covert, discreet, ruggedised

The lie-flat antenna enables the unit to be hidden in a number of ways. Experience shows that simply placing the unit up on the top of a flat-topped building or ISO container can often be enough to prevent casual discovery. The fact that the antenna can be covered with soil or other material offers many other concealment options. The unit can also be supplied with a number of ready-moulded covers (such as simulated bark) for specific applications. In consequence, the unit is suitable for a wide range of covert or discreet applications, in which discovery of the sensor and communication systems might alert the subject of surveillance, or cause interference with, or destruction of, the system.

## Unique risk mitigation tool

What makes Low Profile BGAN unique is the way that it provides the full capability of a classic BGAN terminal in a package that is optimised for unattended covert operations in a hostile environment. It thus provides streaming and standard IP services throughout the global footprint of Inmarsat's I-4 constellation.

The lie-flat capability, generated by the use of an advanced solid-state phased-array antenna, differentiates Low Profile BGAN from all other terminals. Remote operation and advanced power-management reflect the design principles of maximizing cost and operational effectiveness while minimizing the exposure of personnel to risk.

## Discreet and reliable

Remote operation is a powerful capability which makes it possible to cover an area of intelligence responsibility with reduced manpower – or allows existing manpower to go further. Low Profile BGAN's sophisticated power management capability takes this effect even further. Remote wake-on-SMS or local automatically triggered power-up allow the system to operate for extended periods in stand-by mode, which enables low-power consumption and thus extended battery life.