

Innominate

mGuard

The innovative security solution for BGAN services



Inmarsat's Broadband Global Area Network (BGAN) delivers powerful IP-based communication services to mobile users. Using a corresponding portable satellite IP modem, fast data connections can be established from almost every point in the world via satellite to what are known as the LES (Land Earth Stations) of an Inmarsat service provider and then on into the Internet as well as company networks.

Global activities require global network connections

Particularly where local telecommunications connections are unreliable or unavailable, a laptop of a mobile user or any other network-capable system, e.g. the Local Area Network of a research station, an oil platform or of another "outpost", can be directly hooked up to the BGAN satellite modem for central connection. The result: Internet surfing, data exchange with the central office, and e-mail communication – substantially faster than via GPRS or dial-up modem connections.

BGAN terminals can also be installed and operated effortlessly by untrained users. Configuration time and effort for the user is negligible. The advantages of such trouble-free communications connections are obvious: permanent availability, direct data exchange and fast information.

However, these advantages also come with major drawbacks: the vulnerability of the connected system to attacks by hackers, as well as the lack of data protection for the transmission route between satellite IP modem, satellite, LES, the Internet and the corporate network. This represents a serious security risk for every remote system as well as a dangerous security hole in the company network.

Data security often does not make the grade

Conventional network security solutions are not designed for the requirements of mobile or quasi-stationary communication, because the manufacturer's hardware-based concepts generally concentrate on standard solutions for office environments. The drawback of such solutions is that systems must be configured locally, in addition to the fact that drivers and added software must often be installed. However, the IT expert required for the job is seldom available in remote outposts or during a business trip.

Software-based solutions such as personal firewalls only offer limited security, because they affect the computer's operating system. This is a problem, particularly for Windows systems – as the security holes in Microsoft operating systems have been widely documented. Microsoft does not support its older operating systems versions, making the danger even greater. And even for Windows XP, regular updates must be installed to eliminate security holes. These Microsoft updates – often in the megabyte range – can be extremely expensive when using volume-based rates for satellite connections.

For the same reasons, most software based anti-virus solutions are not recommended. As a basic rule, they require regular updates – as much as daily for some security levels. This means that for many programs, the virus database and the corresponding software modules, comprising a size of several megabytes, must always be completely reloaded. This can get expensive, and the high cost is the reason why many users reduce the number of updates to a minimum, thereby lowering the security level of their system.

Simple, reliable and economical:

The optimal security for satellite connections

Designed for use with all BGAN services, mGuard technology is a superior and easy to use security solution, offering reliable firewall, VPN functionality, protection against viruses and performance enhancing proxy. The technology is based on Innominate's innovative "device attached security" concept, which eliminates the drawbacks associated with conventional security concepts – in a simple, reliable and cost-effective manner.

The mGuard system is an independent platform. It can be installed quickly requiring no modifications to the BGAN satellite IP modem, network or computer configuration. Moreover, it runs independently of the processor technology as well as the operating system of the connected PC, laptop or network. With plug and play capability, the mGuard can be installed and operated by anyone. It merely needs to be integrated externally between the computer or any other network system and the network connection provided via the BGAN satellite IP modem. Power is supplied via the free USB port of the connected computer, so that no separate socket is required.

The mGuard system is universally compatible. If required, it can also be implemented as a PCI card in a standard PC.

Unassailable with the Innominate Stealth Mode

mGuard, the "device attached security" system from Innominate, features the unique Innominate Stealth Mode. This allows the device to work absolutely transparently, requiring no IP address of its own. mGuard uses the same IP as the computer it is protecting and therefore cannot be recognized by invaders, making it unassailable to attack.

To use the standard Stealth Mode setting, nothing must be reconfigured or modified on the mGuard. At the same time, it is possible to customize each individual mGuard device, even in Stealth Mode, to special security requirements.

Maximum data throughput for the VPN and firewall

The basis of the integrated security solution is the embedded Linux configured by Innominate, running on a special network processor with XScale core by Intel (IXP 42x), with up to 533 MHz processor capacity, up to 64 Mbytes of SDRAM working memory and 16 Mbytes of Flash memory. The processor features hardware based DES, 3DES and AES encryption. This guarantees maximum data throughput for firewall (up to 99 Mbit/s) and VPN (up to 70 Mbit/s), as well as the full performance of all Broadband Global Area Network services.

Reliable protection against viruses

The mGuard system offers reliable protection (optional) against viruses that are transmitted via e-mails or are hidden in the HTML code on websites.

A regular update of the anti-virus module virus signatures is cost-efficient, as only a few kbytes are transmitted. What's more, the module is able to limit the size of attached files on e-mails both for transmission and receipt, thus considerably influencing the profitability of the complete system.

High Speed Internet via satellite

Internet transport protocols are mainly designed for low latency terrestrial networks and slow down considerably if used via satellite, fixed- or mobile wireless links. The mGuard PEP-Box provides a set of sophisticated Internet performance enhancement techniques which significantly speed-up TCP/IP based Internet applications like HTTP for web browsing, FTP for file transfer, or SMB for file sharing between PCs.



mGuard's performance enhancement feature is based on an embedded version of the TelliNet Performance Enhancing Proxy (PEP). TelliNet is a distributed PEP and consists of a server component and the mGuard embedded client – with the satellite link in between. The mGuard client is able to act invisible to the end user's applications and offers surplus sophisticated enhancement features like conditional access, data encryption, data compression, and bandwidth optimisation on both the forward as well as the return channel.

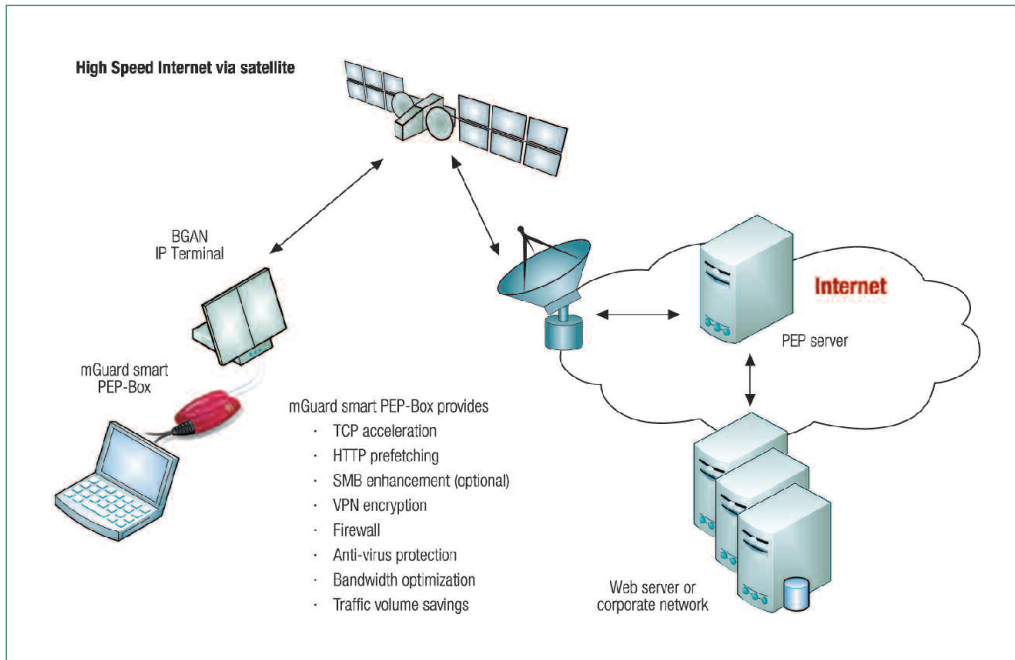
Whilst mGuard will be installed at end user's site, the server can be located either centrally at the network operator's or the service provider's hub, the companies headquarter or somewhere more off-site in the Internet.

The advantages offered by the mGuard PEP-Box can be used by single users, ISPs, corporate clients, and governmental users.

Primary functions

mGuard, the "device attached security" solution from Innominate, unites a full range of functions to reliably protect IP connections using Broadband Global Area Network services:

- VPN router for secure data transmission via IP networks (hardware-based DES, 3DES and AES encryption, IPsec protocol).
- Configurable firewall – protects the system from unauthorized access from "outside". The packet filter scrutinizes data packets based on the originating and target address, blocking undesired data traffic.
- The Innominate Stealth Mode ensures the mGuard system is invisible for invaders and allows its instant integration in existent network configurations without installation of a driver.
- Integrated Kaspersky virus protection (optional) supporting the protocols HTTP, SMTP and POP3. At just 40 kbytes, the average size of a necessary update packet is extremely small and therefore optimal for BGAN connections. Moreover, the virus detection takes place in the mGuard. Therefore, no incursion into the computer's operating system takes place.
- Performance Enhancing Proxy (optional) – for high speed Internet via satellite, wireless and terrestrial networks, TCP acceleration, HTTP prefetching and SMB enhancement.
- Traffic volume savings and bandwidth optimization.



Convenient integration and administration

If several mGuard systems are implemented in the companywide network, configuration, roll-out and administration of the mGuard can be centrally supported using the Innominate Security Configuration Manager – based on tried and tested technology from the Solsoft Policy Server. Using a graphic network model, the security settings can be quickly and conveniently configured, loaded for the individual mGuards, activated and monitored. In addition, the VPN connections are set up and managed, both between the mGuards themselves and the gateways of other manufacturers.

At a glance

- Simple integration without configuration changes and without installation of drivers or additional software.
- Independent operation in every multi-vendor environment, regardless of the processor technology or operating system version used.
- Innominate Stealth Mode operates absolutely transparently, using the same IP as the computer it is protecting and thereby protecting the entire system from attack.
- Simple to use tcp acceleration.
- Traffic volume savings by data compression and bandwidth optimization.
- Currently the most compact security device on the market with such high data throughput rates for VPN and firewall.
- Platform-overreaching management with the Innominate Security Configuration Manager (optional).
- Integrated, high-capacity anti-virus solution based on Kaspersky technology, which protects the entire computer including operating system and which has extremely small update packets (optional).
- Power supply either via USB connection on the computer or power cord.

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