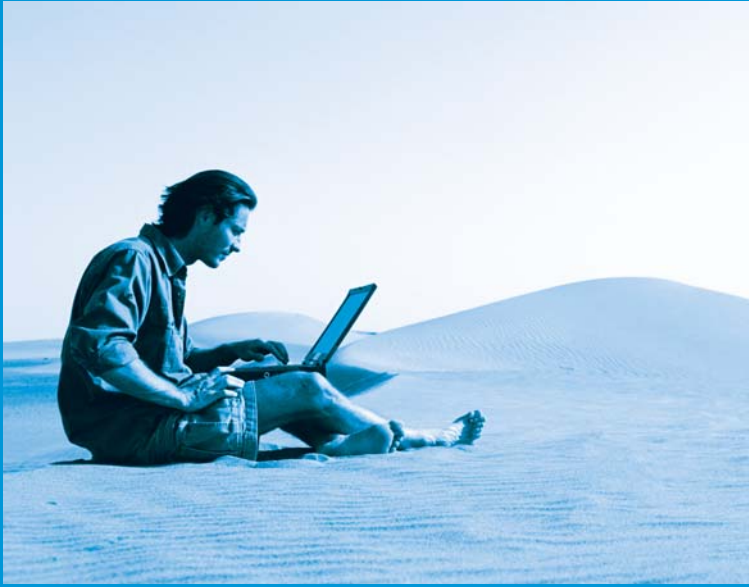


# Accelerating BGAN Performance



**W**ith speeds of up to 492kbps, BGAN is the world's first mobile broadband service to provide data and voice services anywhere on the planet. BGAN's standard IP service provides high-speed shared bandwidth ideally suited for responsive web browsing, email, VPN and file transfer. BGAN also offers a streaming mode service for dedicated bandwidth supporting more demanding applications, such as voice and videoconferencing.

KlasRouter provides easy-to-use access to all of these services, guaranteeing that the maximum bandwidth is exploited despite typical satellite conditions, such as high latency, dropped packets and jitter. Specifically designed for satellite environments, KlasRouter offers special built-in features that are not found in standard routers. Features like TCP Acceleration and satellite-optimized QoS ensure enhanced performance leading to more productive and cost-effective communications. With its 4 VoIP ports, 8 Ethernet LAN ports and Ethernet WAN interface, KlasRouter coupled with BGAN offers the perfect combination for a remote office WAN link.



#### **TCP Acceleration with SCPS**

TCP Acceleration is the critical component for getting the maximum bandwidth over BGAN. At satellite bandwidths above 128kbps/s, TCP-based applications, such as Internet, email and FTP transfers, interpret latency as network congestion. This causes TCP applications to slow the rate at which data is transferred, resulting in download speeds that are barely 20% of the quoted BGAN terminal speed. KlasRouter uses the standards-based SCPS protocol for TCP Acceleration in order to counter latency, jitter and high error-rates giving consistent wire speed performance over satellite links.

#### **Accelerated VPN**

The higher bandwidths provided by BGAN gives users better access to IT resources, such as email, file servers and database services, as provided by their corporate network through Virtual Private Networks (VPN). For security purposes, VPN requires IPSec/AES-256 to encrypt communications over the Internet. This encryption, however, can make the TCP header unreadable preventing TCP Acceleration. KlasRouter's Cisco-interoperable VPN stack can be used in conjunction with TCP Acceleration allowing all TCP data to be accelerated prior to encryption giving maximum performance. IPSec tunnels may also be compressed removing the need for PC-based compression software.

#### **Auto-QoS Mode for Real-Time Applications**

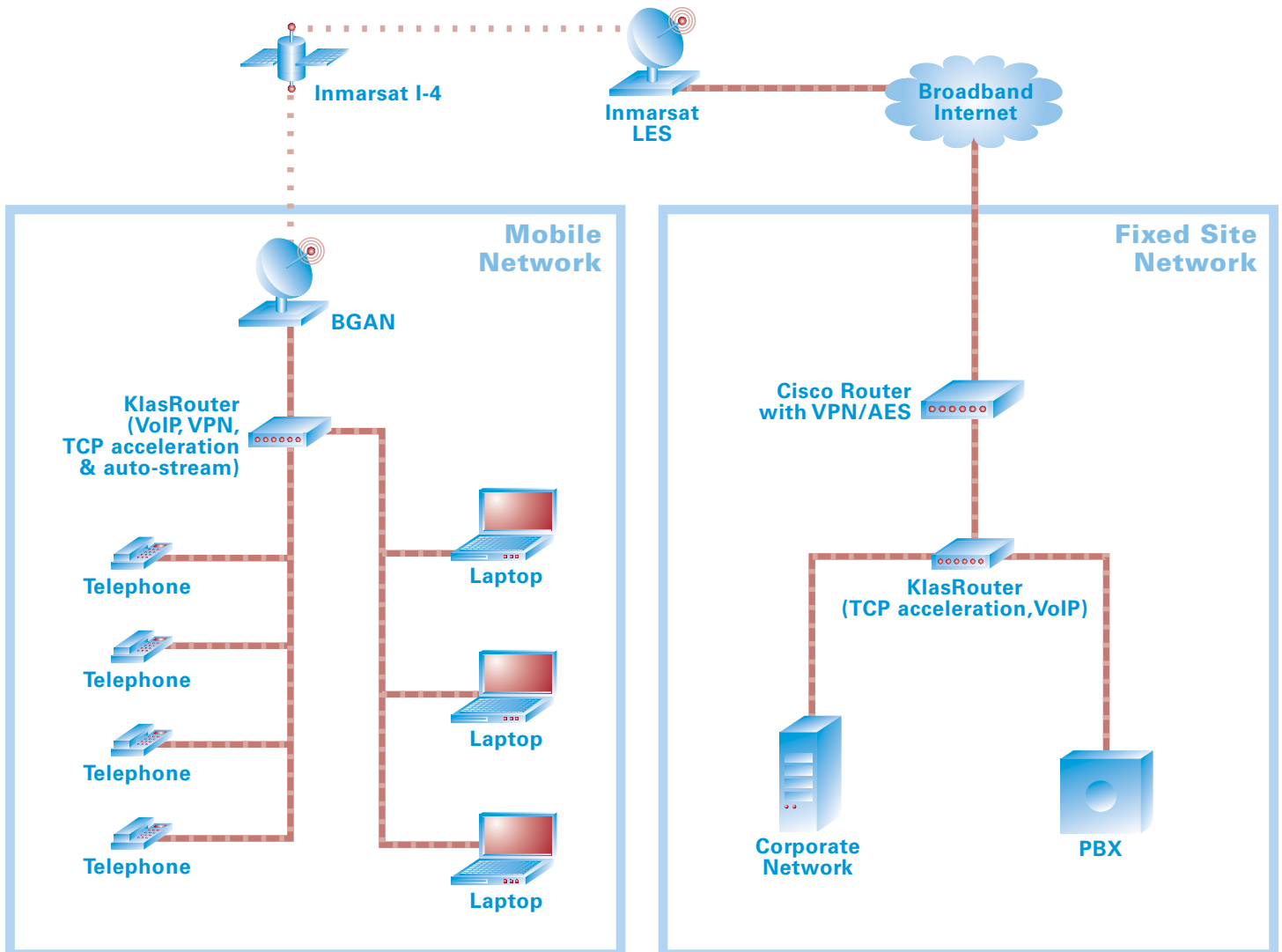
BGAN provides dedicated streaming channels at speeds from 32-256kbps/s to support jitter-sensitive real-time applications, such as voice and videoconferencing. This service, however, is more expensive and also requires users to access the BGAN terminal's web interface, which is not feasible in a multi-user environment. KlasRouter overcomes this limitation by providing an option to automatically switch to a Quality of Service setting that will adjust for higher jitter and latency. With this setting, KlasRouter can support the stringent demands of voice and video applications in standard mode and offer users a simple cost-effective alternative to expensive dedicated channels.



# Accelerating BGAN Performance



KLASROUTER



## KlasRouter Technical Specifications

8.9" x 1.6" x 7.2" (228mm x 42mm x 183mm)  
 Ethernet WAN port for BGAN connection  
 8-port Ethernet Switch  
 4 RJ-11 voice ports  
 Integrated Lithium Ion 80Wh battery

SCPSTCP acceleration supporting multiple tunnels  
 IPSec with 3DES, 128-bit and 256-bit AES  
 Ruggedized VoIP supporting:  
 SIPv2, G.711, G.729, G.723.1, G.726,  
 RTP header compression, Advanced jitter buffer management

DNS relay and caching  
 QoS priority queuing, ToS & Diffserv aware  
 Static routes, RIP, OSPF  
 DHCP client and server, VLAN  
 Stateful firewall, ACLs, SNMP, PAT, Dynamic DNS  
 Internet, telnet and serial-based configuration options

## Contact

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