

Software Features – Switch/Router

	Features		
	iBG3026	iBG2016	iBG2006
L2/L3 LAN Switching	L2 Switching L3 Switching	←	← X
WAN Protocols	ISDN BRI/PRI, HDLC FR/MLFR, PPP/MLPPP, PPP/MLPPP over ISDN FR Congestion Management and Traffic Policing DDR (Dial-on Demand Routing) PPP over Ethernet PPP over FR ('08.Q3) MLPPP over FR('08.Q3)	←	←
Layer 2 Protocols	VLAN(802.1q, Port, Subnet*) Multiple STP (Support Backward Compatibility with STP & RSTP) Port Mirroring 802.1x Authentication IGMP Snooping LACP*	←	←
Routing Protocols	Static Routing, OSPF v1/v2, RIP v1/v2, BGP4, IGMP v1/v2 PIM-SM, DVMRP, IGMP v3, PIM-SSM VRRP Policy-Based Forwarding/Routing	←	BGP('08.Q3) ← ← ←

* 2006 does not support LACP or subnet based vlan

Specifications are subject to change without prior notice

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QoS	DiffServ Classification (MF, Flow Label) - Marker/Meter (srTCM/trTCM) - Policing/Shaping - Queuing (CBQ, PQ) - Scheduling (Deficit RR) - Congestion Avoidance (WRED) Bandwidth Guarantee, Auto QoS LF&I Mapping of IPQoS to Frame Relay QoS for FR PVC Queueing for IPSec Encryption Engine	←	←
Management	SNMP v1/v2/v3, RMON(1,2,3,9), CLI, Telnet SNTp, TFTP, DHCP SSHv2, SSH over IPv6* Web-based Device Manager, MIBs Logging, Diagnostic System Image Rollback Hot-swap Handling	←	←
AAA	802.1x, RADIUS, TACACS+	←	←
Load Balancing	Per Flow (ECMP, LACP*) Per Packet	←	←

* LACP is not supported in iBG2006

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IPv6	H/W Forwarding in LAN Switching* Dual Stack Configured Tunnel 6to4, NAT-PT(ALG) ('08.Q4) Routing (RIPng, OSPFv3, BGP4+) PIMv6-SM, PIMv6-SSM MLD (Multicast Listener Discovery Protocol)	←	'08.Q3

* IPv6 HW forwarding is not supported in iBG2006.

Software Features – Voice Gateway

	Features		
	iBG3026	iBG2016	iBG2006
System Interface and Signaling	Analog FXS, E&M, FXO Analog DID (Direct Inward Dial) BRI Q.931 T1-CAS E&M, FXO, FXS E1-CAS R2 MFC/DTMF T1/E1 ISDN PRI Q.931, T1/E1 Q.SIG T1 R1 CAMA Trunk	←	←
System Features	PSTN Fallback, Survivable Telephony Call Admission Control (CAC) FAX over IP Distinctive dial tone, Distinctive ring Number Analysis and Routing Local Voice Busy Out (LVBO) DTMF Signaling over IP Early Media Handling Private Line Automated Ringdown (PLAR) Audible/Visible MWI for Analog Phone	←	←
Supplementary Services	Caller ID/Name, Call Forwarding, Call Hold/Retrieve, Call Pickup, Call Transfer, Call Waiting, Incoming Call Blocking	←	←
Protocols	SIP, H.323, RTP/RTCP, cRTP, S/MIME, TLS, sRTP VoIP over IPv6(SIP, H.323, RTP) HTTP Digest Authentication	←	IPv6('08.Q3)
DSP Features	Codec: G.711, G723.1, G.726, G.729 A/B Echo Cancellation(G.168-2002) Comfort Noise Generation (CNG) Voice Activity Detection (VAD) Tone - MF/DTMF Tone - Dial, Ringback, Busy, Congestion, Wait, Hold, Progressing, Howling, Programmable, etc.	←	←

Software Features - Security



	Features		
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Firewall	<ul style="list-style-type: none"> • Stateful Packet Inspection • NAT <ul style="list-style-type: none"> – Static, Dynamic, PAT • ALG <ul style="list-style-type: none"> – SIP ALG • Application Content filtering <ul style="list-style-type: none"> – Block Java based on extension – Block URLs based on file extensions – Block ActiveX based on file extensions – FTP's protocol command Filtering – SMTP's protocol command Filtering – RPC program number Filtering • Cyber Defense Engine <ul style="list-style-type: none"> – Dos/DDoS, IP Spoofing, IP/TCP fragment attack protection (Protection for 60+ attacks) ▪ Traffic Scheduling ▪ URL Filtering • Rate limiting <ol style="list-style-type: none"> 1. Maximum connections per policy basis 2. Connection creation rate per policy basis 3. Bandwidth per policy basis 	←	←

Software Features - Security



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VPN	<ul style="list-style-type: none"> • IPSec for Site to Site • IPSec for Remote Access • IPSec <ul style="list-style-type: none"> - Protocols : ESP, AH, AH over ESP - Encryption : DES-CBC, 3DES-CBC, AES-CBC(128, 192, 256) - Hashing : HMAC-SHA1, HMAC-MD5 - Modes : Tunnel, Transport, Config Mode • IKE <ul style="list-style-type: none"> - Authentication : Preshared, RSA/DSA Signatures, Xauth - Modes : Main, Aggressive, Quick - Diffie-Hellman Group <ul style="list-style-type: none"> : Group 1(MODP 768), 2(MODP 1024), 5(MODP 1536) - Encryption : DES, 3DES, AES(128,192,256) - Hash : SHA1, MD5 • L2TP, GRE • PKI Support (SCEP, Manual, CRL, OCSP) • IPSec NAT Traversal 	←	←

Software Features - Security



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ISM (Integrated Security Module)	<ul style="list-style-type: none"> • IPS <ul style="list-style-type: none"> - Signature based Detection & Prevention - Behavior Based Detection & Prevention - Number of signatures : 2,000 + - DoS/DDoS Attack Defense - Online Signature Update - Traffic & Number of connections limitation • Monitoring & Logging • High Availability <ul style="list-style-type: none"> -Module bypass (health check) 	←	X