

Fast Ethernet L₃

High Quality Video Over IP



Layer 3 Ethernet Switch

iBG-2016



Experience the power of secure convergence. The powerful mid-range Samsung iBG2016 accommodates mid-to-large locations including remote branch and regional offices, and small-to-medium sized businesses. Packing a rich feature set in a compact U1 size, the Samsung iBG2016 provides a robust and resilient platform to build and maintain converged IP Based Video Networks.

- **Integration** of L2/L3 switching, routing in one video optimized platform.
- **High Port Density.** Four mini module slots and one network module slot, providing WAN interface configuration with up to eight T1/E1 and one T3 interfaces or 12 T1/E1 interfaces
- **High Performance.** Wire-rate performance for concurrent and advanced services in maximum WAN port configuration
- **Best-in-class Security.** Complete security for protection from both internal and external threats when combined with the Samsung Integrated Security Module Onboard firewall and VPN Integrated Security Module: IPS/IDS, Gateway Anti-Virus, Anti-Spam, URL filtering, WAF, End-Point Security
- **Full support for voice.** Switching modules with optional PoE for IP cameras and WLAN access points Voice interfaces (FXS, FXO, E&M, T1 CAS, E1 R2, PRI/BRI) SIP/H.323 ALG, plus more than 30 kinds of ALG
- **High-Availability Features.** Hot-Swappable Personality Modules
- **Advanced routing.** IPv6 and MPLS in addition to RIP, OSPF, BGP
- **Quality of Service.** Support for QoS to prioritize mission-critical traffic

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Switch/Router Features



SWITCH/ROUTER FEATURES

L2/L3 LAN SWITCHING

L2/L3 Switching
IPv4/IPv6 Switching
Layer 2 Protocols
VLAN (802.1q, Port, Protocol, Subnet-Based), GARP/GVRP
Multiple STP (Support Backward Compatibility with STP & RSTP)
Port Mirroring
802.1x Authentication
IGMP Snooping
LACP, GMRP

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)
IPoA
PPP over Ethernet
PPP over ATM
PPP Payload Compression and Encryption
Routing Protocols and Transparent Bridging over ISDN
FR over ISDN
ISDN Supplementary Services
IP Header Compression over FR
LQM, BAP/BACP (RFC2125)
LCP Internationalization Option

ROUTING PROTOCOLS

Static Routing, OSPF v1/v2/v3, RIP v1/v2, BGP4, BGP4+, IGMP v1/v2
PIM-SM, DVMRR, IGMP v3, PIM-SSM
VRRP
Policy-Based Forwarding/Routing

MPLS

Signaling: LDP, RSVP-TE
MPLS Fast Reroute (One-to-one Backup)
L2 VPN (Martini), L2 VPN (VPLS)
MPLS QoS (E-LSP)
MPLS-TE

QOS

DiffServ
Classification (MF, Flow Label)
Marker/Meter (srTCM/trTCM)
Policing/Shaping
Queuing (CBQ, PQ)
Scheduling (Deficit RR)
Congestion Avoidance (WRED)
Bandwidth Guarantee, SLA, Hierarchical QoS, Auto QoS
LF&I
Mapping of IP QoS to Frame Relay
QoS for FR PVC

LOAD BALANCING

Per Flow (ECMP, LACP)
Per Packet

IPv6

H/W Forwarding in LAN Switching
Dual Stack
Configured Tunnel
6to4, NAT-PT (ALG)
Routing (RIPng, OSPFv3, BGP4+)
PIMv6-SM, PIMv6-SSM
MLD

MANAGEMENT

SNMP v1/v2/v3, RMON (1,2,3,9), CLI, Telnet
SNTP, TFTP, BOOTP, DHCP, SCP
SSHv2
Web-based Device Manager, MIBs
Logging & Reporting, Diagnostic System Image Rollback, Hot-Swap Handling
Syslog

AAA CLIENT

802.1x
RADIUS
TACACS+

PROTOCOLS

SIP, H.323, RTP/RTCP, cRTP, S/MIME, TLS, sRTP
VoIP over IPv6 (SIP, H.323, RTP)
HTTP Digest Authentication

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 RI
CAMA Trunk

SYSTEM FEATURES

SIP Registrar, SIP Relay server (stateless proxy), SIP B2BUA, SIP survivability control
Configurable Media Proxy
PSTN Fallback, Survivable Telephony
Call Admission Control (CAC)
FAX over IP (T.38, pass-through)
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

Find me numbers
Call Forward All, busy, No Answer, Unreachable, DND, to Voice Mail
Caller ID/Name
Call Waiting
Call Hold/Retrieve

SECURITY FEATURES

FIREWALL

Stateful Packet Inspection
ALG (FTP, ICMP, DNS, SIP, H.323, IPsec ESP, IKE, L2TP, etc)
NAT (Static, Dynamic, PAT, Port Forwarding)
Application Content Filtering
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

Attack Defense (Protection for 90+ Attacks)
DoS/DDoS Protection
Fragment Attack
IP Spoofing
Multiple Security Zone (DMZ)
Rate Limiting
Max Connections per Policy Basis
Connection Creation Rate per Policy Basis
Bandwidth per Policy Basis
IP access-list
Mac address filtering

VPN

IPsec for Site to Site
IPsec for Remote Access
IPsec
Protocols: ESP, AH, AH over ESP
Encryption: DES-CBC, 3DES-CBC, AES-CBC (128, 192, 256)
Hashing: HMAC-SHA1, HMAC-MD5
IKE
Authentication: Preshared, RSA/DSA Signatures, Xauth
Modes: Main, Aggressive, Quick

Diffie-Hellman Group: Group 1 (MODP 768), Group 2 (MODP 1024), Group 5 (MODP 1536)
Encryption: DES, 3DES, AES (128, 192, 256)
Hash: SHA1, MD5
L2TP, GRE, NAT Traversal
PKI Support (SCEP, Manual, CRL, OCSP).



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