AbovEdge™ 6000 Series
Media Gateway
Voice Resource Server
Media Service Server

AbovEdge™ 6000 series provides with functionalities of media gateway and voice processing resources to collaborate with AbovEdge™-CS call server at the same site, or to be deployed at the remote site to physically extend AbovEdge™ IP-PBX features and functions through Internet connection. It can also provides fully featured voice-based services like voice mail (VM), Auto Attendant (AA), interactive voice response (IVR), and conference services. With various options of up to four DSC (Digital Subscriber Circuit) interfaces, it provides local digital trunk connection (T1/E1/ISDN PRI), and/or local analog trunk and extension interfaces while using the DSC interfaces wired to TeleLEX™ analog expansion boxes (ES-0624 or ES-0030). With its built-in VoIP capability, AbovEdge™ 6000 series also supports SIP VoIP trunk and extension linkage.

AbovEdge™-MV Media Service Server works together with AbovEdge™-CS call server to provide with the functionalities of a media gateway, and voice resources such as AA, IVR, VM and conference services, as well as to provide for VoIP communication service.

AbovEdge™-MG Media Gateway is a high performance media gateway. When deployed remotely, it physically extends AbovEdge™ IP-PBX connection to the remote site. All the extensions under AbovEdge™-MG share the same functions and features as local extensions connected to the AbovEdge™-CS call server in the main office, and all the trunks connected to AbovEdge™-MG will function as if it were at the same site as the AbovEdge™-CS call server.

AbovEdge™-VR Voice Resource Server provides voice processing capacities for ever more demands of AA/IVR/VM, conference services to accommodate the company's growth.

Local Survival and Live Link Recovery

When AbovEdge™-MG is deployed remotely in distributed multi-location communication network; it can operate as independent PBX in the remote office even if the Internet connection fails. Once the Internet connection is re-acquired, AbovEdge™-MG will automatically recover the distributed networking linkage without manual setup or restarting the system. With Local Survival and Live Link Recovery from AbovEdge™, the impact of disconnected Internet on business usual operation and maintenance effort of administrator can be minimized.

FEATURES & BENEFITS

➢ Suitable for needs of 50 to 200 extensions
➢ 1U 19" Rack Mountable
➢ SIP compliant VoIP ports
➢ Up to 4 T1/E1 port for trunk or connect to TeleLEX™ ES-0624/0030 for analog trunk and extension
➢ 1-channel analog trunk and extension line interface with status LED
➢ Support FXO/T1/E1/PRI/VoIP SIP trunk
➢ Support FXS/IP/Softphone/WiFi extension
➢ Built-in voice resource for auto attendant, voice mail, and conference (MV/VR only)
➢ Local survival and live link recovery
➢ Intuitive LED status indicators
➢ Hot-swappable
➢ Remote on-line firmware upgradable
➢ Unified expansion/upgrade architecture
➢ Cost-effective and easily manageable through remote web-based user interface

APPLICATIONS

➢ Provide physical interface to the T1/E1 trunk for AbovEdge™-CS call server
➢ Provide VoIP and voice resources for AbovEdge™-CS call server.
➢ Connected to TeleLEX™ ES-0624/0030 for analog trunk and extension ports

VOICE and NETWORK SPECIFICATIONS

➢ Communication Protocol:
  ✓ RFC-3261 SIP
  ✓ RFC-2833 out-band DTMF signaling
  ✓ RFC-2327 SDP
  ✓ RFC-3264 offer/answer model
  ✓ RTP / RTCP with jitter buffering
  ✓ QoS for IP TOS (Type of Service)
➢ Codec Support:
  ✓ G.711
  ✓ G.723.1 (6.3kbps&5.3kbps)
  ✓ G.729A
  ✓ Selectable and auto codec negotiable
➢ DTMF dialing/ receiving: EIA464 & RFC2833 out-band
➢ Programmable gain control (±18db)
➢ Echo Cancellation: ITU-T G.165/168
➢ Silence Suppression:
  ✓ ITU-T G.729B   for G.729A
  ✓ ITU-T G.723.1A   for G.723.1
➢ T.38 Fax Relay supports Group III V.17, V.21, V.27ter, V.29, V.33 (2.4 to 14.4 Kbps)
➢ Auto Attendant/ interactive voice response/ voice mail
➢ On-line detection: remote hang-up, user defined tone
➢ Call Progress detection: ringback tone, Busy tone, user defined tone
➢ ADSI tone generation
➢ Network interface: 2 Fast Ethernet ports
            (10/100 Base-T auto-detection)
  ✓ Connector: RJ-45 × 2 (1 × WAN, 1 × LAN)

GENERAL SPECIFICATIONS

LED Indicator:
➢ FXS LED (Green)
➢ FXO LED (Green)
➢ SYS1 ~ SYS4 LED (Green): System status indicators
➢ FAN1 & FAN2 LED (Red): Fan alert indicators
➢ PWR LED (Green)
➢ RST LED (Red)
➢ Sync (Green) & Error (Orange) LEDs: DSC(T1/E1) link status indicators
➢ Link (Green) & ACT (Orange) LEDs: WAN/LAN status indicators

Reset Switch:
➢ Reset switch at the front panel

Power Supply:
➢ Input: AC 100V ~ 240VAC, 50 ~ 60 Hz
➢ Power consumption: 30W (max.)

Dimension:
438mm×333mm×44mm(WxDxH)

Environment:
➢ Operating Temperature: 0 °C to 45 °C
➢ Storage Temperature: -20 °C to 75 °C
➢ Humidity: 20% to 90% non-condensing

PHISICAL INTERFACE SPECIFICATIONS

Analog Trunk Interface:
➢ Loop start
➢ Loop voltage polarity reverse detection
➢ Loop current: 20 ~ 80mA,polarity insensitive
➢ Interface impedance: 600 ohms nominal
➢ Frequency response: 200 ~ 3400Hz
➢ Ring detection: 30Vrms ~ 140Vrms(16 ~ 68Hz)
➢ Pulse dialing: 10/20 PPS, M/B ratio 33/66, 40/60 selectable
➢ Caller ID receiving: Bellcore GR-30-CORE & DTMF
➢ Line Status Indicator: Ringing, Line In use ,Loop Current Off, Not in use
➢ Connector: 1 port RJ-11

Analog Extension Interface:
➢ Loop start
➢ Loop Range: 0 ~ 200 ohms
➢ DC Supply: -48V (standby)
➢ Loop current: 26mA
➢ Interface impedance: 600 ohms
➢ Frequency response: 200 ~ 3400Hz
➢ Ringing: 56Vrms (20Hz) / 60mA
➢ Caller ID generating: Bellcore GR-30-CORE / DTMF
➢ Message waiting indicator: Bellcore FSD 01-02-2000
➢ Pick-up/ hang-up detection, flash detection, and flash duration selection
➢ Connector: 1 port RJ-11

DSC (Digital Subscriber Circuit) Interface:
➢ Signaling
  ✓ ISDN PRI: ITU-T Q.921, Q.931
  ✓ Wink start: Bellcore GR-506
  ✓ Robbed bit tie trunk: ANSI T1.403 E&M
➢ T1/E1 Interface:
  ✓ Nominal bit rate: 1,544 Kbit/s (T1); 2,048 Kbit/s (E1)
  ✓ Frame Format: ESF/SF (T1); CRC4 (E1)
  ✓ Line code: B8ZS, AMI (T1); HDB3 (E1)
  ✓ CRC check capability
  ✓ Voice channel: a-law / μ-law compression
  ✓ Load impedance: 100 ohm (T1), 75/120 ohm (E1), ±5%
  ✓ Transmit level: 3 ± 0.6V
  ✓ Synchronization clock and timing mode: internal timing or recover clock from port 1 ~ 4
  ✓ Clock frequency departure: less than ± 32 ppm
➢ Connector: up to 4 RJ-45 phone jacks
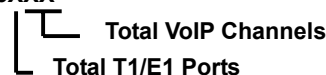   (depending on models)

SETUP AND MANAGEMENT

➢ Managing tool: web browser, syslog
➢ Remote management through web-browser:
  ✓ On-line system parameter modification
  ✓ Firmware upgrade
➢ Unified expansion architecture
➢ Unified upgrade architecture

Ordering Information

Model	Capacity
MV/MG-6216	▪ 2 T1/E1,Up to 50 extensions
MV/MG-6416	▪ 4 T1/E1,Up to 100 extensions
MV/MG-6432	▪ 4 T1/E1,Up to 100 extensions
MV/MG-6132	▪ 1 T1/E1,Up to 200 extensions
MV/MG-6140	▪ 1 T1/E1,Up to 200 extensions
MV/MG-6040	▪ Up to 200 extensions

Analog Expansion Box:

Model	Capacity
TeleLEX™ ES-0624	▪ 6 FXO, 24 FXS interface
TeleLEX™ ES-0030	▪ 30 FXS interface

MG/MV/VR-6XXX
        Total VoIP Channels
      Total T1/E1 Ports