The Dialogic® 1000 Media Gateway Series (DMG1000 Gateways) allows for a well-planned, phased migration to an IP network, making the gateways a smart solution for enterprises looking to enhance their legacy PBX equipment with new VoIP access and applications. Connected between a PBX or a digital handset and a LAN or WAN, the DMG1000 Gateways convert proprietary digital PBX messages into a format suitable for transmission over IP networks.

### Features

<table>
<thead>
<tr>
<th>Features</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suitable for small to medium enterprises and easy to install, configure, and maintain. Compatible with a variety of popular PBX manufacturers including Avaya, NEC, Nortel, and Siemens</td>
<td>Protects investment in legacy telecommunications equipment and allows a controlled migration to IP technology</td>
</tr>
<tr>
<td>Support for IP load balancing and IP fault tolerance</td>
<td>Allows the ability for inbound (TDM-to-IP) calls to round-robin between available media servers and automatically routes calls away from unresponsive media or proxy servers</td>
</tr>
<tr>
<td>Seamless interoperability with Dialogic® PowerMedia™ HMP Software</td>
<td>Provides the options for customers to build enhanced applications on top of base gateway and PBX functions</td>
</tr>
<tr>
<td>Supports configuration via serial, telnet, and a web browser including context-sensitive help</td>
<td>Easy to install, configure, debug, and maintain</td>
</tr>
<tr>
<td>IP security features include TLS, SRTP, and HTTPS</td>
<td>Enables secure communications for SIP messages via TLS, for media stream via SRTP, and for web interface via HTTPS</td>
</tr>
</tbody>
</table>
Dialogic® 1000 Media Gateway Series

Applications

- Centralized VoIP and FoIP application servers, including IP-based voice mail and unified messaging
- IVR and announcements
- IP PBX
- VoIP extension to branch offices
- Contact centers

Specific PBX digital network interface gateway units are compatible with the PBXs listed in Table 1. Units are specified by product code for convenient ordering.

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Models</th>
<th>Software Version</th>
<th>Product Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avaya</td>
<td>DEFINITY G3, 58100, 58300, 58700, and 58710</td>
<td>Version 3 or greater Communications Manager SW V2.0 or greater</td>
<td>DMG1008DNIW</td>
</tr>
<tr>
<td>Legend</td>
<td>Release 7.0 or greater</td>
<td>DMG1008LSW</td>
<td></td>
</tr>
<tr>
<td>Magix</td>
<td>Release 2.0 or greater</td>
<td>DMG1008DNIW</td>
<td></td>
</tr>
<tr>
<td>NEC</td>
<td>2000 IPS</td>
<td>Release 8.2 or greater</td>
<td>DMG1008DNIW</td>
</tr>
<tr>
<td></td>
<td>2400 IMG</td>
<td>Release 7400 or greater</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2400 IMX</td>
<td>Release 5200 Dec. 92 1b or greater</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2400 IPX</td>
<td>Release V.17 issue 3.46.001 or greater</td>
<td></td>
</tr>
<tr>
<td>Nortel</td>
<td>Meridian 1 – Option 11, 21, 21A, 51, 61, 71, and 81</td>
<td>Release 15 or greater and options 19 and 46 are required</td>
<td>DMG1008DNIW</td>
</tr>
<tr>
<td></td>
<td>Meridian SL1 – Generic X11</td>
<td>Release 15 or greater and options 19 and 46 are required</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Nortel Communication Server – 1000E, 1000M, and 1000S</td>
<td>Release V.3.0 or greater</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Norstar 8X24</td>
<td>DR5 Release 1.2 or greater</td>
<td></td>
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<tr>
<td></td>
<td>Norstar MICS</td>
<td>Release 4.5 or greater</td>
<td></td>
</tr>
<tr>
<td>Siemens</td>
<td>Hicom 300E CS</td>
<td>Release 9006.4 or greater</td>
<td>DMG1008DNIW</td>
</tr>
<tr>
<td></td>
<td>(Note: North American software load only)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hicom 300E</td>
<td>Release 2.0 or greater</td>
<td>DMG1008DNIW</td>
</tr>
<tr>
<td></td>
<td>(Note: EU software load only)</td>
<td>or DMG1008LSW</td>
<td></td>
</tr>
<tr>
<td>Various</td>
<td>Including Alcatel, Avaya, Ericsson, Fujitsu, Mitel, Siemens, etc., through analog port and/or serial port integration</td>
<td></td>
<td>DMG1008LSW or DMG1004LSW</td>
</tr>
</tbody>
</table>

Cables are not included. Each unit requires one Ethernet cable per unit and one RJ-11 cable per PBX channel.

Table 1. PBX Digital Network Interface PBX Compatibility

Functional Description

The DMG1000 Gateways each contain eight digital PBX emulation interfaces and a 10/100 Base-T Ethernet connection for connecting to a LAN. An analog loop start unit designed for voice mail and unified messaging applications is also available to connect to PBXs that do not have an appropriate digital interface. The analog loop start unit supports integration via in-band signaling (DTMF or FSK) or serial protocols (SMDI, MCI, and MD-110).

The DMG1000 Gateways provide a simple, cost-effective transition to voice and data convergence for enterprises with PBXs. Connected externally, they offer an IP solution that works with current legacy equipment. They support SIP-based applications as well as T.38 for fax transmissions over IP (FoIP).

Gateway unit features include:

- **Voice over Internet Protocol (VoIP)** – Supports SIP per RFC 3261. Uses Real-time Transport Protocol/Real-Time Control Protocol (RTP/RTCP) for delivery of voice over the LAN or WAN
- **IP security** — Supports TLS for SIP messages, SRTP for media stream, and HTTP5 for web interface
- **Enhanced voice processing** – Supports a variety of compression algorithms, including G.711 A-law and μ-law, G.723.1, and G.729AB
- **T.38 Fax over Internet Protocol (FoIP)** – Emulation units transcode fax from T.30 fax protocol, supporting V.17, V.21, V.27, and V.29 modulation schemes, to T.38 for transmission over a packet network
- **Hot swap** – Allows gateway units to be added or removed without affecting other gateway units
- **Web server interface** – Each gateway unit is delivered with a web server interface, allowing configuration and software upgrades via a web browser
Configurations

The DMG1000 Gateways can be used to connect IP telephones to a legacy PBX, integrate network-hosted applications with the PBX, extend the PBX to branch offices, and integrate various voice and call processing capabilities in an enterprise LAN or WAN environment. Using exclusive PBX network interfaces (emulating), these media gateway appliances provide exceptional IP to PBX integration capabilities to protect an investment in legacy telecom equipment.

Figures 1 and 2 provide sample configurations.

Call Routing

The DMG1000 Gateways route calls from the switched network to a VoIP destination on the IP network. Conversely, the DMG1000 Gateways route calls from the IP network through a switch port to a destination telephone number on the switched network. The DMG1000 Gateways support the following call routing options:

- User-configurable list of VoIP servers
- IP load balancing
- IP fault tolerance
- TDM-to-TDM
Physical Description

Figure 3 shows the LEDs on the front panel of a DMG1000 Gateway, which reflects the status of the unit, Ethernet, and PBX telephony ports.

![Figure 3. DMG1000 Gateway Front Panel](image)

- **Ready** — Shows overall unit status
- **Link** — Shows the unit’s Ethernet status
- **Data** — Shows the unit’s Ethernet RTP activity
- **Port Status 1–8** — Shows the unit’s PBX link status for each TDM port

The back panel (Figure 4) contains both interfaces and indicators.

![Figure 4. DMG1000 Gateway Rear Panel](image)

**Interfaces**
- DC power
- Serial port for diagnostics or serial protocol support
- 8 telephony ports
- Ethernet port
- Reset switch

**Status Indicators**
- 10/100Base-T
- Full/half duplex
- TX/RX traffic
- Ethernet link state
- Ethernet collision
Dialogic® 1000 Media Gateway Series

Technical Specifications

PBX Interface
Number of ports: 8 port analog units, and 8 port Digital PBX emulation units
Connectors: 8 shielded female RJ-45 jacks

Network Interface
Connector: 10/100 Base-T Ethernet LAN port

VoIP Protocols
SIP per RFC 3261
RTP/RTCP for delivery of voice

FoIP Protocol
T.38 FoIP
Emulation units transcode fax from T.30 fax protocol, supporting V.17, V.21, V.27, and V.29 modulation schemes, to T.38 for transmission over a packet network

Voice Support
G.711 μ-Law and A-Law, G.723.1, G.729AB
Silence suppression with comfort noise
G.168 automatic echo cancellation
Call Progress Analysis (CPA), including Positive Voice Detection, Positive Answering Machine Detection (PAMD), DTMF detection, and fax tone detection

Quality of Service
Type of Service (ToS)
IP precedence

Configuration and Management
SNMP v1
Read-only for alarm reporting
Web GUI
With context-sensitive Help facility
Telnet
BOOTP client and TFTP client
Built-in

Call Routing
User configuration list of VoIP endpoints
IP load balancing
IP fault tolerance
Supports configuration of a backup SIP proxy server

IP Security
TLS for SIP messages
SRTP for media stream
HTTPS for web interface

Power Requirements
Line voltage: 90 VAC to 264 VAC
Frequency: 47 Hz to 63 Hz
Physical Dimensions

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>10 in. (25.4 cm)</td>
</tr>
<tr>
<td>Width</td>
<td>9.5 in. (24.1 cm)</td>
</tr>
<tr>
<td>Height</td>
<td>2.1 in. (5.3 cm)</td>
</tr>
<tr>
<td>Weight</td>
<td>Approximately 2.5 lbs. (1.13 kg)</td>
</tr>
</tbody>
</table>

Environmental Requirements

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Temperature Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating temperature</td>
<td>32°F to 122°F (0°C to 40°C)</td>
</tr>
<tr>
<td>Non-operating temperature</td>
<td>–4°F to 158°F (-20°C to 70°C)</td>
</tr>
</tbody>
</table>

Approvals, Compliance and Warranty


Ordering Information

Please see the Ordering Information tab for these products