

Dialogic® 2000 Media Gateway Series

The Dialogic® 2000 Media Gateway Series (DMG2000 Gateways) is a set of turnkey appliances that seamlessly merge traditional PSTN technology with IP networks. These economical gateways help consolidate typically separate voice and data networks and provide new and differentiated communication services. Without making radical, disruptive, and expensive upgrades to existing PBX equipment, service providers and enterprises can realize the benefits of a converged voice and data network with these gateways.



Features	Benefits
Provides an interconnect between legacy PBXs and various IP endpoints	Enables communication between a circuit-switched telephony network and Session Initiated Protocol (SIP) compatible remote devices such as IP voice mail, unified messaging applications, and IP phones
Available in single, dual, and quad density T1/E1 rack mount appliances	Offers a range of product densities to fit the needs of a variety of applications and business sizes
Compatible with a variety of popular PBX manufacturers including Avaya, Mitel, NEC, Nortel, and Siemens	Protects investment in legacy telecommunications equipment and allows a phased migration to IP
Support for IP load balancing and IP fault tolerance	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
Supports supplementary services on CAS, QSIG, Euro ISDN, NI2, DMS100 and 5ESS protocols, enabling call transfer, call hold, MWI, and call party information	Helps retain key supplementary services in the new IP environment
Supports configuration via serial, telnet, and a web browser including context-sensitive Help	Easy to install, configure, debug, and maintain
IP security features include TLS, SRTP, and HTTPS	Enables secure communications for SIP messages via TLS, media streams via SRTP, and web interfaces via HTTPS
Support for TDM-to-TDM routing on dual- and quad-density "S" models with survivability capabilities	Allows flexible deployment and survivability; options include IP failover to TDM circuits and PSTN-to-PBX or PSTN-to-IP routing
Supports Any-to-Any call routing	Allows for routing of calls from TDM-to-SIP, SIP-to-TDM, TDM-to-TDM, and SIP-to-SIP.

Applications

- Centralized VoIP and FoIP applications servers, including IP-based voice mail and unified messaging
- Interactive voice response (IVR) and announcements
- IP PBX
- Voice over Internet Protocol (VoIP) extension to branch offices
- Contact centers

The DMG2000 Gateways can be installed and configured “plug and play,” reducing the total cost of ownership. Operations, Administration, and Maintenance (OA&M) features, such as network alarm events and remote management enabled by a user-friendly web interface, along with advanced diagnostics and administration tools, make the installation and maintenance of these appliances quick and easy.

The cost of the DMG2000 Gateways makes them well suited for enterprises interested in deploying a variety of applications such as PBX extension, remote office connectivity, long-distance consolidation, call centers, and IP media servers. Available in a 19-inch standard rack mountable chassis, these appliances are also beneficial for service providers offering hosted IP-PBX, IP Centrex, and enhanced messaging servers.

Save Time, Money — and Existing PBX Equipment

Many enterprises today have legacy PBX equipment installed on their premises. These enterprises want to cut their communications costs by implementing a VoIP solution, but wish to retain their investment in legacy equipment. Because these enterprises have a diverse base of PBX equipment, solution providers need a product that will help them address this wide customer base with a single, simple solution.

The DMG2000 Gateways have been tested for interoperability with legacy PBXs from vendors such as Alcatel, Avaya, Mitel, NEC, Nortel, and Siemens. This testing lets solution providers focus on customer applications rather than integration efforts with legacy PBXs.

In addition to providing IP connectivity, the DMG2000 Gateways support key supplementary services such as call transfer, call forwarding, call hold, message waiting indicator (MWI), and call party information on most T1/E1 protocols including CAS, QSIG, Euro ISDN, NI2, DMS100, and 5ESS, enabling customers to retain application-critical PBX functionality in the new VoIP environment.

The dual- and quad-density “S” models (DMG2060DTISQ and DMG2120DTISQ respectively) provide failover relays and expanded call routing options, allowing connectivity to, and flexible routing between, the PSTN, IP networks, and TDM PBX networks. Possible configurations include TDM-to-TDM and TDM-to-IP with survivability support.

Advanced Voice Features Provide Superior Caller Experience

The extensive features of the DMG2000 Gateways can help those who are building reliable, high-quality VoIP applications. The DMG2000 Gateways support Any-to-Any call routing for maximum flexibility. The Gateways provide the interoperability needed for high-quality media streaming with a wide variety of industry-standard IP endpoints by supporting advanced coders including:

- G.711 (packet size 10 ms, 20 ms, and 30 ms)
- G.723.1
- G.729ab

Echo cancellation is essential for packet-switched networks to carry voice traffic successfully. The DMG2000 Gateways conform to ITU G.168 echo cancellation with a tail length up to 128 ms. Voice quality is further enhanced with features such as comfort noise generation, silence detection, and adaptive jitter buffering.

The DMG2000 Gateways have QoS features, including type of service (TOS)/IP precedence, and DiffServ, providing a low-latency, high-reliability path for sensitive voice traffic through today’s networks. In addition, the Gateways support advanced call progress analysis on all channels.

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Configurations

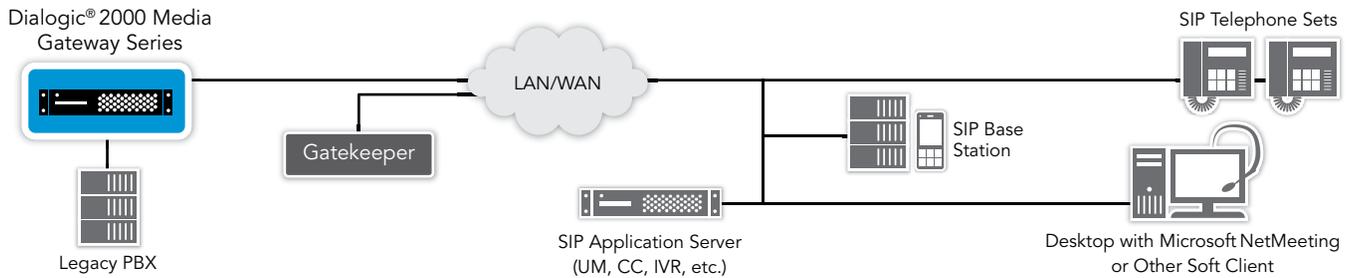


Figure 1. Bridge the Gap Between PSTN and IP End Points

The DMG2000 Gateways provide a cost-effective way to connect various IP end points to the circuit-switched network (see Figure 1), eliminating the need to swap out legacy PBXs and helping to protect telecom investment.

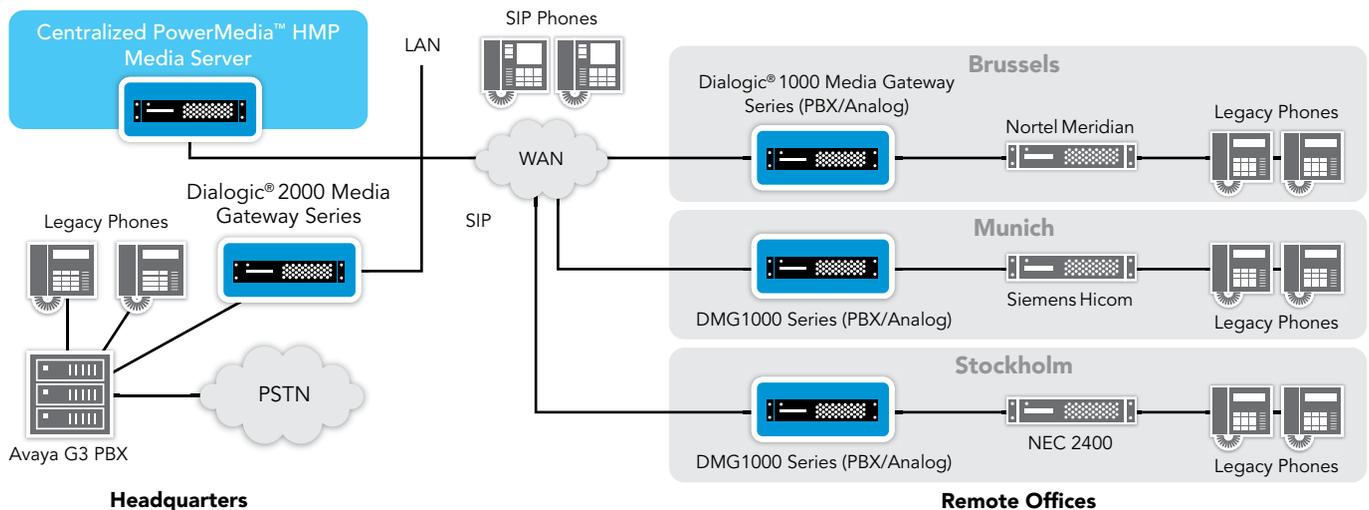


Figure 2. Converged IP Media Server Architecture

The DMG2000 Gateways - along with Dialogic® PowerMedia™ Host Media Processing Software - support the development of cost-effective IP media servers accessible from both PSTN and IP networks (see Figure 2). IP media servers can provide a central and efficient server in existing Time Division Multiplex (TDM) voice infrastructures by servicing remote locations via an IP network.

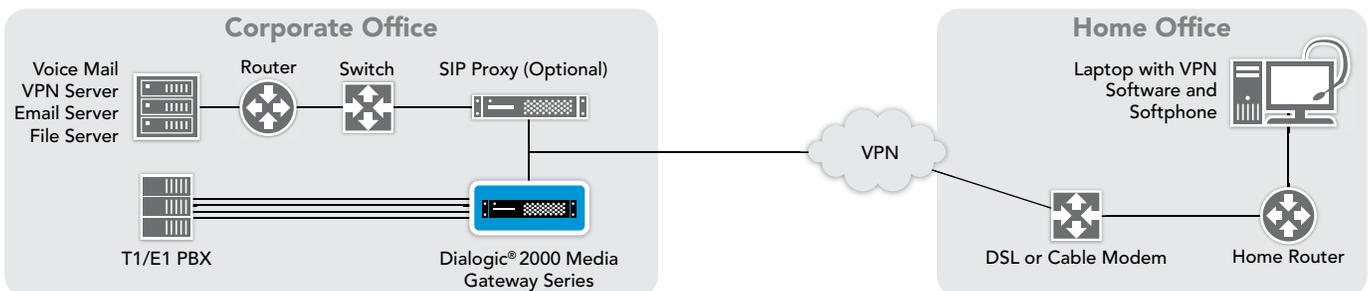


Figure 3. Next-generation Application Solutions — Telecommuting

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Media gateways help service providers and enterprises offer cost-saving voice, data, and multimedia convergence services and solutions. One such solution is an application for telecommuters.

The number of employees working from home on a permanent or periodic basis continues to rise. These employees need full access to company voice and data services. By installing a DMG2000 Gateway (see Figure 3) at a corporate office site, employees working from home offices can have the same telephony experience as their counterparts who are working in the corporate office itself. They can make and receive calls and access other features such as unified messaging from home, just as if they were in the office. Their office extension can be “bridged” onto a Gateway port so their “phone” rings, no matter where they are working. This enhances productivity, reduces costs, and improves both customer and employee satisfaction.

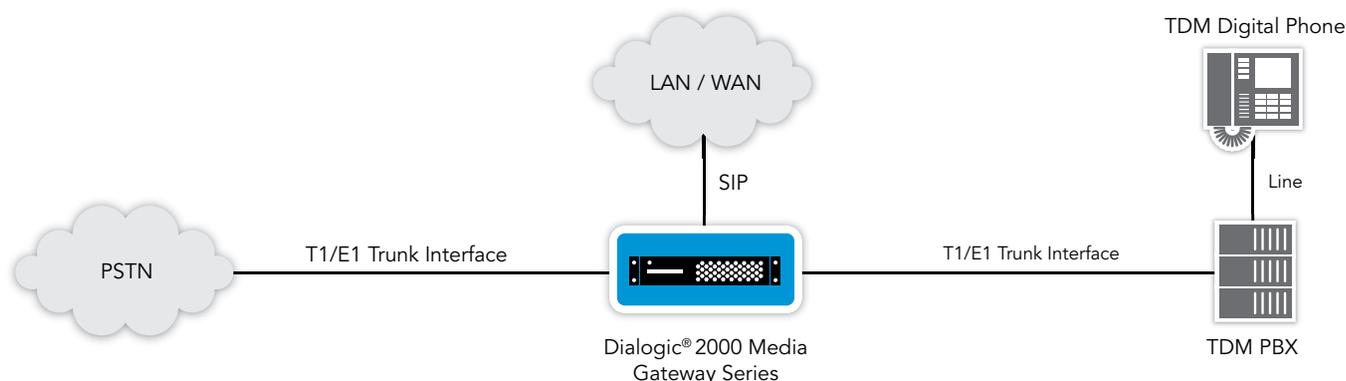


Figure 4. Access Gateway with Survivability Capabilities

The DMG2000 Gateway “S” models can be used for SIP trunking, PSTN toll bypass, and other access gateway applications because of their TDM-to-TDM routing capability, which is included along with traditional SIP-to-TDM and TDM-to-SIP routing. The addition of failover relays for direct TDM-to-TDM connectivity in case of power failures or IP network issues provides a survivable telephony connection as well. For an example configuration, see Figure 4.

Technical Specifications

TDM Port Density by Model

DMG2030DTI	1 T1 or 1 E1
DMG2060DTIS	2 T1 or 2 E1
DMG2120DTIS	4 T1 or 4 E1

IP Channel Density by Model

DMG2030DTI	30
DMG2060DTIS	60
DMG2120DTIS	120

Connectors

RJ-45 jacks

Network Interfaces

10/100 BaseT Ethernet LAN port
Connector 1 shielded female RJ-45 jack for LAN

Configuration and Management

Web browser with context-sensitive Help facility
Telnet
BOOTP client and TFTP client built-in
SNMP v2 read-only for alarm reporting

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Call Routing

Any-to-Any call routing (TDM-to-SIP, SIP-to-TDM, TDM-to-TDM, and SIP-to-SIP)

IP Security

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

Power Requirements

Line voltage 90VAC to 264VAC
Frequency 47 Hz to 63 Hz

Physical Dimensions

Height 1.68 in. (4.27 cm)
Width 19 in. (48.26 cm)
Length 14.2 in. (36.07 cm)
Weight 11.1 lbs (5.03 kg)

Environmental Requirements

Operating temperature +32°F to +122°F (0°C to 40°C)
Storage temperature -4°F to +158°F (-20°C to 70°C)

Protocol Support

Serial	MCI MD-110 SMDI
T-1 ISDN	5ESS DMS100 NI2 QSIG
T-1 CAS	E&M GroundStart LoopStart
E-1	EuroISDN QSIG
VoIP	Call transfer/call hold/message waiting indicator SIP per RFC 3261 RTP/RTCP for delivery of voice
FoIP	T.38 FoIP emulating units transcode fax from T.30 fax protocol, supporting V.21, V.27, V.29, V.17, and V.34* modulation schemes, to T.38 for transmission over a packet network
Security	SRTP HTTPS TLS

Voice Support

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

* V.34 fax functionality has been frozen; further development, bug fixes, and enhancements for V.34 fax has ceased

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Quality of Service

Type of service (ToS)/IP precedence

DiffServ

Approvals, Compliance and Warranty

Environmental Information

<http://www.dialogic.com/en/company/environmental-policy.aspx>

Country-specific safety and telecom approvals

<http://www.dialogic.com/declarations>

Warranty Information

<http://www.dialogic.com/warranties>

Ordering Information

Please see the [Ordering Information](#) tab for these products



www.dialogic.com

For a list of Dialogic locations and offices, please visit: <https://www.dialogic.com/contact.aspx>

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