

The Dialogic® 4000 Media Gateway Series (DMG4000 Gateways) is a set of integrated systems designed to connect unified communications solutions to existing PBX systems and PSTN networks. Based on a standard rack-mount server running the Windows® Server 2008 x64 operating system, the DMG4000 Gateways are basic hybrid media gateways designed for Microsoft® Office Communications Server 2007 Release 2 (R2) and therefore include the role of Mediation Server, which is Microsoft's technology providing PSTN and PBX interoperability, high-fidelity VoIP, and security.



## Features

## Benefits

**Certified as an interconnect between legacy PBXs or the PSTN and the Office Communications Server 2007 R2 through the Microsoft® Unified Communications Open Interoperability Program**

Enables unified communications features for a circuit-switched telephony network

**Available as a 1U rack mount integrated system supporting configurations from 8 channels (Analog or BRI) up to 96/120 channels (T1/E1)**

Offers a range of product densities and interfaces for businesses of various sizes

**Hosts co-located Mediation Server, an element of the Office Communications Server 2007 R2 solution**

Reduces the number of servers needed for a unified communications solution and minimizes administrative effort, resulting in lower TCO

**Compatible with the equipment of popular PBX manufacturers, including Aastra, Alcatel-Lucent, Avaya, Ericsson, Matra, Nortel, and Siemens**

Protects investment in legacy telecommunications equipment and allows a phased migration to IP

**Includes redundant power supply, Raid-1 hard disk subsystem, and a failover and load balancing Ethernet network connection**

Provides high availability

**Supports supplementary services on ETSI-DSS1, QSIG, and other TDM protocols**

Brings important supplementary services, such as call transfer, call hold, MWI, and call party information, to an IP environment

**Supports T.30 Fax Group 3 up to 33.6 kbps (depending on installed license) using T.38 real-time FoIP**

Offers a range of fax configurations to address demands regarding fax channel density and fax transmission speed

The DMG4000 Gateways have a familiar user interface, which minimizes Total Cost of Ownership (TCO) by reducing the need for operational and administrative training and special maintenance. In addition, the DMG4000 Gateways keep the number of devices needed to support Office Communications Server 2007 R2 to a minimum by integrating the Mediation Server into a gateway, reducing hardware maintenance.

The DMG4000 Gateways contain field-proven Dialogic® Diva® Media Boards and Dialogic® Diva® SIPcontrol™ Software in addition to the Mediation Server software. These elements are integrated in a rugged, compact 1U rack-mount server featuring a high performance 64-bit Intel Xeon processor. The DMG4000 Gateways also offer dual Gigabit Ethernet interfaces for IP network connection, as well as various interface options to the PSTN or PBX, including Analog, ISDN BRI, and E1/T1 interfaces. They can be configured to support up to 120 channels of unified communications traffic between legacy networks and an IP network hosting Office Communications Server 2007 R2.

## **Fax Functionality and Third-Party Application Hosting**

In addition to the role of hybrid media gateway for Office Communications Server 2007 R2, a DMG4000 Gateway can be used as a high-density Fax over IP (FoIP) gateway, providing up to 120 channels of fax at V.34 (33.6 kbps) speed.

A DMG4000 Gateway is also capable of hosting third-party Windows Server 2008 based applications, including fax server and IP-PBX software. A runtime version of the ESTOS Call Control Gateway (ECCG) is pre-loaded on each DMG4000 Gateway with five complimentary seat licenses for trial purposes. When hosted on a DMG4000 Gateway, this third-party application can provide remote call control functionality for existing PBX infrastructure (classic, hybrid, or pure VoIP).

The ECCG is middleware for Windows®, which enables Office Communications Server 2007 R2 to control an existing PBX and PBX desk phone. The Microsoft® Office Communicator Client can initiate PBX desk phone activities, allowing Office Communications Server 2007 R2 to capture presence information for a legacy PBX desk phone and share it across an enterprise and with federated partners.

## Technical Specifications

Ports per unit	Dialogic® DMG4008LSW Media Gateway: 8-port Analog FXO (8 channels) Dialogic® DMG4008BRI Media Gateway: 4-port ISDN BRI (8 channels) Dialogic® DMG4030DTI Media Gateway: 1-port T1/E1 (24/30 channels) Dialogic® DMG4060DTI Media Gateway: 2-port T1/E1 (48/60 channels) Dialogic® DMG4120DTI Media Gateway: 4-port T1/E1 (96/120 channels)
Server Type	Intel IP Network Server NSW1U
Processor	Intel Xeon 5160 (dual core processor running at 3.0 GHz)
Memory	2GB FB-DIMM DDR2 (667 MHz)
Hard disk subsystem	2 x 70 GB SATA in Raid-1 using 10 k rpm drives
Network interface	2x 10/100/1000 Base-T Ethernet LAN ports with load balancing 2x 10/100/1000 Base-T Ethernet LAN ports for optional use
Protocol support	Analog: Loopstart ISDN BRI: DSS1 (Euro-ISDN), NI-1, 5ESS, 1TR6, INS Net 64, VN3, CT1, QSIG E1 ISDN: ETSI-DSS1 (EuroISDN), INS-1500 (Japan), QSIG E1 CAS: MFR2 T1 ISDN: NI-1, 4ESS, 5ESS, DMS100, QSIG T1 CAS: RBS
VoIP services	SIP methods: ACK, BYE, INVITE, NOTIFY, REFER, CANCEL, OPTIONS, REGISTER Configurable IP transport layer UDP or TCP Number normalization and manipulation of Called, Calling, and Redirected Number Call Routing based on Called/Calling/Redirected Number, PSTN Interface, and/or SIP Peer Call Hold/Retrieve (for example, Re-Invite mapping towards ISDN) PSTN-side Call Transfer (that is, REFER points to PSTN) Call Diversion Message Waiting Activation/Deactivation Call Redirection via 302 Moved Temporarily Simplified Number Normalization based on PSTN connection parameters Number Manipulation using Regular Expressions Configurable Cause Code Mapping Clear Channel Fax Clear Channel Modem
FoIP (T.38) services	T.30 Fax Group 3 up to 33.6 kbps using T.38 real-time FoIP Fax compression MH, MR, MMR Error Correction Mode (ECM)

**Technical Specifications (continued)**

Additional SIP features	Registering SIPcontrol at a Registrar server Digest Authentication of SIP Requests from SIPcontrol according to RFC2617
Security	TLS and SSL authentication SRTP (secure Real-time Transport Protocol) SIPS (Secure SIP) Supported ciphers: DH, ADH, AES (128-256 bits), 3DES (64 bits), DES (64 bits), RC4 (64bytes), RC4 (256 bytes), MD5, SHA1
Reliability	Load balancing and failover on PSTN side Load balancing and failover on SIP side (optionally uses OPTIONS for keep-alive check) Alive check for active calls on SIP side via SIP session timer (RFC4028)
Media processing features	DTMF generation and recognition (in-band) DTMF relay, RFC2833 Echo Cancellation as per G.168 standard with up to 256 ms echo tail (depending on Media Gateway interface) Voice Activity Detection and Comfort Noise Generation
IP Media CODEC features	IP Real-time Transport Protocol (RTP) RTP profile name RTP/AVP RTP event (RFC2833) for DTMF, Fax and modem tones G.711 CODEC, 64 kbps (64 kbps, A-law, $\mu$ -law) G.726 (16, 24, 32, and 40 kbps) G.729 CODEC (requires additional license) GSM full rate CODEC iLBC CODEC (not available on DMG4008LSW and DMG4008BRI) Comfort Noise (RFC3389) Configurable packetization time between 20 ms and 200 ms (iLBC only 20 ms and 30 ms)
Microsoft® Mediation Server	Globally Routable User Agents URI SIP over mutual TLS SRTP on Communications Server RTaudio on Communications Server Interactive Connectivity Establishment (ICE) support
Physical dimensions	Height: 1.70 in. (4.32 cm) Width: 16.93 in. (43.0 cm) Length: 20.0 in. (50.8 cm)
Power supply	90 VAC to 264 VAC 450 W Power Factor Corrected (EN61000-3-2) Two (2) redundant power supplies included

## Technical Specifications *(continued)*

### Approvals, Compliance, and Warranty

Hazardous substances      RoHS compliance information at <http://www.dialogic.com/rohs>

Country-specific approvals      Global product approvals database at <http://www.dialogic.com/declarations>

Warranty      Warranty information at <http://www.dialogic.com/warranties>

### Ordering Information

Dialogic® Product	Order Code	Description	
		Channel Density	
		VoIP	FoIP (default)
DMG4008LSW Media Gateway	306-374	8	8
DMG4008BRI Media Gateway	306-373	8	8
DMG4030DTI Media Gateway	306-372	30	12
DMG4060DTI Media Gateway	306-313	60	12
DMG4060DTIV34 Media Gateway	306-370	60	60
DMG4120DTI Media Gateway	306-314	120	12
DMG4120DTIV34 Media Gateway	306-399	120	120

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