

MiCollab Advanced Messaging Dialogic DMG1008 Digital Media Gateway Installation and Replacement Spare Parts Document

For version 9.0 and above

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Preface

This document is written for Mitel certified MiCollab Advanced Messaging (MiCollab AM) technicians who are experienced with MiCollab AM and are familiar with its procedures and terminology. This book assumes you are familiar with MiCollab AM and the Microsoft Windows® operating system.

This document applies to MiCollab AM version 5.0 and later. It consists of the following parts:

- DMG1008 specification
- Verifying the DMG1008 firmware version
- Upgrading the firmware on the DMG1008
- Preparing the DMG1008 for Service
- Installing the DMG1008
- Programming the DMG1008

References

A catalog of technical documentation is included on the MiCollab AM Installation Media. If you are installing any advanced applications, such as Networking and Fax Server applications, you should refer to the appropriate technical documentation for application and installation information.

Documentation

The technical documentation is produced in the PDF format and requires the PDF reader to view it. The documentation set for this MiCollab AM includes the following documents and resources:

- **Developer Resources.** Contains programming guides and API references for developers for integrating the server clients and web applications with MiCollab AM.
- **Integration Technical Notes (ITN).** Contains a set of guides that describe the integration methods and instructions for a variety of phone systems to work with MiCollab AM. The ITNs are generally used by resellers or administrators who are experienced with MiCollab AM and familiar with the integration procedures and terminology.
- **Quick Reference Card (QRC).** Contains shortcuts and quick instructions telling subscribers how to access and use the messaging system.
- **Server Documentation.** Available as a PDF only. Contains administrative guides for administrators about installing, configuring, and administering the messaging system, and user guides for subscribers about accessing the messaging system and checking and sending messages.
- **Spare Parts Documentation.** Contains a set of guides that describe the instructions for installing and configuring hardware parts to work with MiCollab AM. These documents are written for Mitel certified MiCollab AM technicians who are experienced with MiCollab AM and familiar with the procedures and terminology.

- **Software Release Notice (SRN).** This notice introduces the new features, capabilities, and hardware/software requirements for the corresponding MiCollab AM version.

For more detailed documents, refer to the following list of references:

Table 1. References

Document Type	Document Title
Server Documentation	System Administration Guide
Server Documentation	System Installation and Configuration Guide
Spare Parts Documentation	Hardware Warranty Program Guide
Spare Parts Documentation	Installation and Replacement Guides for Aculab/Dialogic
Integration Technical Note	The related Integration Technical Note for the integration you are installing

Documentation Updates

Documentation updates may be available from the following sources:

- Mitel certified technicians can view or download documents and program files from our partner web site: connect.mitel.com/connect

Help

The primary source of information about MiCollab AM is the online help available within any of its administrative utilities. You can access **Help** as follows:

- Click the **Help** button in the dialog box or window in which you are working
- Press the **F1** key at any time.

Document Conventions

The following conventions are used in this document:

- **Key Names.** Names of keys on the keyboard are shown in a box.

Example: **Enter**

When two keys must be pressed simultaneously, they are joined by a + sign.

Example: **Alt** + **Tab**

- **Reference to Document.** *Italics* fonts can also signify the titles of other documents.

Example: See the *System Installation and Configuration Guide*.

- **UI Element Names.** Names of UI elements such as dialog windows, screens, menu items, tabs, buttons, icons, etc. are shown in bold.

Example: On the **Startup** screen, click the **Start** icon.

- **User Input.** Information required to be typed is shown in italics.

Example: Type the password *voicemail*.

- **Warning, Caution, Important, and Notes.** Text for the contents that require attention are shown as follows:

WARNING A warning paragraph advises you of circumstances that can result in the loss of data, harm to the system server platform, or personal harm.

CAUTION Failure to follow these recommendations can result in unauthorized access to the system and consequent loss of data.

IMPORTANT An important paragraph gives decision-making information or informs you of the order in which tasks need to be completed.

NOTE A note gives additional information, provides an explanation, or indicates an exception to the information in the preceding text.

Frequently Used Terms

Table 2. Frequently Used Terms

Terms	Description
System Server	<p>Term refers to an organization's computer platform(s) that have MiCollab AM software installed and handles the core system functions such as storing messages, database.</p> <p>It can also refer generically to the System Server platform, the Call Server platform, or both. The term is most often used to describe a software or hardware installation or configuration practice where the role of the server platform is not specifically expressed.</p>
Call Server	<p>Term refers to an organization's computer platforms that have MiCollab AM software installed and serve as the interface to the system (PBX). The Call Server(s) interface with the System Server for the purpose of accessing messages, and database.</p>

Overview

This document explains how to install and upgrade a Dialogic 1008 Digital Media Gateway for use with MiCollab AM. The Digital Media Gateway is also referred to as DMG and is used throughout this document in reference to the Digital Media Gateway.

Each Dialogic 1008 Media Gateway supports eight lines of the telephone system and provides a network connection to MiCollab AM. These lines are programmed in the telephone system as station ports, and as such provide either a digital station emulation integration or an analog integration to the DMG depending on the model type. Calls are sent to MiCollab AM through the DMG; the DMG reads calling-party and called-party data, converts the digits and audio stream into the SIP/RPT protocol and delivers it to MiCollab AM through the network interface as a TCP/IP packet. The data is matched with the ringing extension, and MiCollab AM answers with the appropriate dialog. Message waiting indicator (MWI) operation is performed through the DMG.

Mitel recommends that you read this entire document before installing the hardware.

IMPORTANT If you are removing Dialogic software and you are not installing another version of Dialogic software, you must re-install MiCollab AM software after you un-install any previous version of Dialogic software.

Before You Begin

Review this section before performing any of the procedures in this document. This section provides important information about electrostatic discharge and the tools and equipment required to complete the installation.

Electrostatic Discharge (ESD) Warning

Computer components are extremely sensitive to electrostatic discharge (ESD). Do not open the static-protective container until necessary. Before removing the unit from the static-protective container, touch the container to a grounded, unpainted metal surface for at least two seconds (this drains the static electricity from the container and from your body).

Gathering Tools and Equipment

Before you begin disassembling the MiCollab AM platform, verify that you have the following required tools and equipment:

- MiCollab AM Installation Media
- One grounded AC outlet for each DMG you are installing
- One PBX line interface cable with an RJ-45 plug for each port on the DMG you are installing
- One Ethernet network cable for connection to the LAN

- MiCollab AM License (feature) key to enable the correct number of lines

Technical Specifications of the DMG 1008

Table 2 lists the Dialogic 1008 Digital Media Gateway model numbers approved for use with MiCollab AM.

IMPORTANT You must use the specific DMG model required for the PBX and the digital station emulation it supports.

Table 3. DMG 1008 Technical Specifications

Product	No. of Ports	Description
DMG1008LSW	8	Analog Inband FXO (Inband integration)
DMG1008DNIW	8	Digital Station Emulation, Avaya, Avaya/Nortel, Siemens
DMG1008MTLDNIW	8	Digital Station Emulation, MITEL
DMG1008RLMDNIW	8	Digital Station Emulation, ROLM

Table 3 lists the technical specifications for the Dialogic 1008 Digital Media Gateway approved for use with MiCollab AM.

Table 4. DMG 1008 Technical Specifications

Feature	Specifications
Number of Ports	8
Network Interface	One 10/100 Base-T Ethernet port (RJ-45)
VoIP Protocol	SIP (per RFC 3261) RTP/RTCP for Voice
Voice Codec	G.711
QOS (Quality of Service)	ToS, IP Precedence
Configuration Management	Web GUI w/help, Telnet, BOOTP, TFTP, SNMP (for alarm reporting)
Power	US-110VAC, EU-220VAC
Cooling Requirements	66 BTU/hr

Verifying the Current Firmware Version

Once you have configured the DMG to communicate with MiCollab AM you can verify the current firmware version through the administration web interface.

To determine the current firmware version:

- 1 From the Call Server open the web browser, and then enter the TCP/IP address for the DMG.
- 2 Log on to the DMG, and then select **Status > Version**.
- 3 Determine the current Dialogic Media Gateway firmware version. Refer to [Table 5](#) for the correct firmware version for the MiCollab AM version you are supporting.

Table 5. Supported Dialogic Firmware versions

MiCollab AM version	Dialogic Firmware version
5.0x	6.0 SU5
5.0x	6.0 SU5
5.0 SP2x	6.0 SU7
5.0 SP3x	6.0 SU7
5.1 x	6.0 SU7
6.0x	6.0 SU7
9.0	6.0 SU7

Upgrading the DMG1008 Firmware

To upgrade the DMG, visit the File Downloads area of the Mitel Connect website: connect.mitel.com/connect or upload the current DMG firmware version from the MiCollab AM Installation Media.

The firmware update is located in the Utilities folder of the installation media.

Path: \Utilities\Dialogic_DMG\DMG2000<*>\6.0\SU<n>

<*> is the specific folder for the model unit you are upgrading and <n> is the supported software update for the MiCollab AM version you are installing.

IMPORTANT If the DMG firmware version on the unit you have is currently version 4.0, you must upgrade to version 5.0SU1 before you can upgrade to a current version. You can find the 5.0 SU1 files and upgrade instructions at www.dialogic.com.

NOTE For the complete list of files required for the specific DMG you are upgrading, see the *Upgrade Instructions* document included the designated folder of the DMG version.

To upgrade the firmware on the Dialogic DMG:

- 1 Check the serial number of the DMG unit to verify if it can support a firmware upgrade. The DMG can support a firmware upgrade only if the serial number of the unit is equal to or greater than the serial numbers in the following table.

IMPORTANT If the DMG you are installing is not compatible with the upgrade to the firmware version you require, contact Mitel Technical Support.

Table 6. Compatible DMG1008 Serial Numbers for version 6.0 firmware

DMG 1008 Model	Minimum Serial Number for Upgrade
DMG1008DNI	IP006669
DMG1008MTLDNI	IP006957
DMG1008RLMDNI	IP006957
DMG1008LS	IP006578

- 2 Do one of the following:

Table 7. Upgrade options

If you are...	Then...
Upgrading from the Mitel Connect website	Log on to the Mitel Connect website, navigate to the Technical Area, and then select File Downloads . Continue to Step 3.
Upgrading from the MiCollab AM Installation Media	Insert the MiCollab AM Installation Media appropriate drive of the Call Server you have connected to the DMG. Skip to Step 4.

- 3 Select the Dialogic DMG1008 folder for the specific model of DMG 1008 you are upgrading, and then download the contents of the folder to a temporary folder on the Call Server.
- 4 From the Call Server, connect to the DMG1008 via the web interface, and then log on to the unit.
- 5 Select **Upgrade** from the **System** menu.
- 6 From the **Upgrade** web page, click **Browse**, and then browse to the specific drive and folder containing the files you are using to upgrade the unit.

Table 8. Upgrade options

If you are...	Then...
Upgrading from the Mitel Connect website	Browse to the temporary folder on the Call Server to which you have downloaded the files.
Upgrading from the MiCollab AM Installation Media	<p>Browse to the installation media: \Utilities\Dialogic_DMG\DMG2000<*>\6.0\6.0SU<n></p> <p>Where <*> is the specific folder of the unit model you are upgrading and <n> is the supported software update for the MiCollab AM version you are installing.</p> <p>For example: If you are upgrading <i>DMG1008DNIW</i>, select the folder named <i>DMG1008DNIW</i>.</p>

IMPORTANT Once you begin the upgrade process, do not Restart or Power Cycle the unit until the entire upgrade is complete. If you have trouble uploading a file, retry the file upgrade by starting over at Step 6.

- 7 Select the first file to upload, and then click the **Install** button.
- 8 Continue uploading each file until all of the files have been uploaded.
- 9 Once the upgrade is complete select **Restart** from the **Configure** menu, and then click **Restart Now**.
- 10 The new software is active once the unit is restarted.

Preparing the DMG1008 for Installation

The Dialogic Media Gateway is a self-contained unit. It provides the ports necessary to connect eight station lines from the telephone system, an Ethernet port for connection to the network, an RS-232 port for maintenance, and a connection for power. LED indicators on the unit provide status indication of the ports and the unit. This section discusses the various indicators and connectors of the DMG.

DMG 1008 Front Panel Indicators

The front panel of the DMG provides status LED indicators for the unit and for each port.

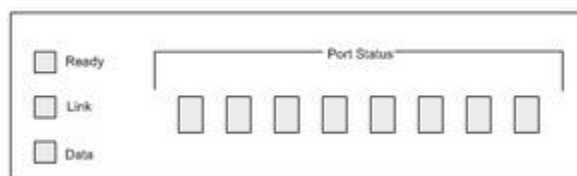


Figure 1. Port Status

The Front Panel indicators are:

- **Ready Indicator** – a multi-colored LED that displays the unit's status.
 - *Unlit* – indicates no power to the unit.
 - *Steady Red* – indicates the power-on initialization state.
 - *Steady green* – indicates the power-on initialization is complete and the unit is waiting for the application to load.
 - *Flashing Green* – indicates the application initialization is complete and the unit is active.
 - *Flashing Red* – indicates an error in the application initialization and the unit is inactive. Check the DMG Status/Alarm page for the cause of the error.
 - *Flashing Orange* – indicates functionality after recovering from an error. Check the DMG Status/Alarm page for the cause of the error.
- **Link Indicator** – displays the unit's Ethernet connection status.
 - *Unlit* – indicates no network connection is established.
 - *Steady Green* – indicates an established network connection.
- **Data Indicator** – indicates the unit's network real time processing (RTP) activity.
 - *Unlit* – indicates the unit is not transmitting or receiving RTP packets.
 - *Flashing Green* – indicates RTP packet information is being exchanged with the Call Server.
- **Port Status Indicators** – multi-colored LEDs that indicate the port status of each respective station port (1–8).

- *Steady Green* – indicates an idle line state and the port is correctly emulating a station.
- *Flashing Green* – indicates offhook station activity.
- *Steady Yellow* – indicates a station hardware connection to the PBX but there is no software communication.
- *Flashing Yellow* – indicates external power from the PBX is detected but the port register or connect carrier.
- *Steady Red* – indicates no power or carrier from the PBX connection.

DMG 1008 Rear Panel Indicators, Controls, and Connectors

The rear panel of the DMG provides status LED indicators for the unit, connectors for power, diagnostics, LAN, and PBX station ports. A reset switch is also fitted to the rear panel of the unit.

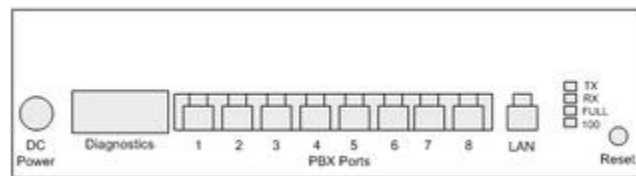


Figure 2. DMG 1008 Rear Panel

- **DC Power**—Power connector for connection with the unit's power supply cord.
- **LAN Port**—provides a shielded 10/100 Ethernet connection.
- **TX/RX/Full/100** indicators provide the following:
 - *TX* – the indicator blinks when data is transmitted through the Ethernet port.
 - *RX* – the indicator blinks when data is received on the Ethernet port.
 - *FULL* – a steady indicator denotes a full duplex network connection.
 - *100* – indicates a 100 base T network connection.
- **Reset Switch** – Allows you to reset the unit to update changes to the programming.
- **Diagnostics Connector** – DB-9 connector for diagnostics, set-up, and use as a PBX serial port interface.

Table 9. Diagnostics Connector Pin-out

Pin	Description
2	Transmit
3	Receive
5	Ground
1,4, 6-9	Unused

- PBX Port Connectors-provides an RJ-45 connection for each PBX station (ports 1-8).

Table 10. PBX Port RJ45 Connector Pin-out

RJ45 Pins	DMG 1008
1	
2	
3	
4	Tip
5	Ring
6	
7	
8	

Installing the DMG1008

The Dialogic Digital Media Gateway consists of three pieces, the DMG unit, the power supply cord, and the AC adapter. The unit should be installed in a location suitable for computerized equipment and near an acceptable source of AC power where connections to the telephone system and the network are easily made.

To install the DMG 1008:

- Verify the DMG 1008 unit is the correct unit for the PBX integration you are installing. See [Table 3](#) for the model numbers that support each integration.
- Unpack the unit and power it using an adequate AC power source.
- Connect a 10/100 network cable to the Ethernet port. The TCP/IP address must be negotiable to the Call Server you are integrating.
- Connect the PBX station lines to each port.
- Verify that the DMG firmware version is correct for the MiCollab AM software version you are installing. See the section, [Upgrading the DMG1008 Firmware](#) for instructions on how to upgrade the DMG.
- Program the DMG for use with MiCollab AM. See the next section, [Programming the DMG1008](#), for information on how to configure the DMG for use with MiCollab AM. To verify the DMG firmware version, refer to the section, [Verifying the Current Firmware Version](#).

Programming the DMG1008

Follow the recommendations and programming examples in this section to create a connection with the Call Server.

IMPORTANT The Dialogic 1008 Media Gateway must have a TCP/IP address that MiCollab AM can communicate with over the network. If you do not know this information, consult your network administrator for the correct address information required for installing both the DMG and MiCollab AM.

Configuring the TCP/IP Address

The initial programming mode of the DMG can be accessed in either of two ways; through the serial port on the rear panel of the DMG or through the DMG Web interface. Choose one of the following procedures to configure the TCP/IP address.

To configure the TCP/IP address through the Web Interface:

NOTE All DMGs have the same default TCP/IP address at initial startup. If you are installing more than one Dialogic 1008 Media Gateway, you must connect them to the network one at a time to avoid TCP/IP address conflicts.

- 1 Connect the DMG to the LAN MiCollab AM is currently operating on.
- 2 You must temporarily change the TCP/IP address of the Call Server to access the DMG.
The default TCP/IP address of the DMG is *10.12.13.74*.
Change the Call Server TCP/IP address so it communicates on the same subnet as the DMG.
Example: *10.12.13.75*
- 3 Start the web browser on the Call Server, and then enter the following address in the address bar:
http://10.12.13.74.
- 4 When the **System Login** dialog box appears, enter the default user name, *admin*, and then enter the default password, *lpodAdmin*.
- 5 Click **OK**.
- 6 Select the **Configuration > IP** web page from the main menu.
Change the unit's TCP/IP address from the default address by entering the new TCP/IP address in the Client TCP/IP address box.
- 7 Enter a new subnet mask in the **Client Subnet Mask** box.
- 8 Enter the TCP/IP address of the default network gateway router in the **Default Network Gateway Address** box.

- 9 Click the **Apply Changes** button to save the configuration in the database.
- 10 Click **Restart**, or select **System > Restart** from the main menu. When the **Restart Web** page appears, click **Restart Unit Now**.

NOTE The DMG **must** be restarted for the changes to take effect.

- 11 Change the temporary Call Server TCP/IP address back to the previous working TCP/IP address. You should now be able to connect to the DMG Web interface using the new TCP/IP address.
- 12 Proceed to the section, [Upgrading the DMG1008 Firmware](#).

To configure the TCP/IP address through the serial port:

- 1 Connect the serial port of the DMG to a serial COM port of the MiCollab AM server with a DB9 serial cable.
- 2 From the taskbar, select **Start > Programs > Accessories > Communications > HyperTerminal**.
- 3 Enter a value such as DMG in the **New Connection** dialog box, and then click **OK**.
- 4 In the **Connect To** dialog box select the COM port to communicate to the DMG, and then click **OK**.
- 5 In the COM port dialog box configure the COM port to the following settings:
 - Baud Rate = 38400
 - Parity = None
 - Data Bits = 8
 - Stop Bits = 1
 - Hardware Flow Control = Off
- 6 Press the **Enter** key until the prompt PIMG> appears.
- 7 At the **PIMG>** prompt type *pwd*.
- 8 Type the default password, *lpodAdmin*, and then press **Enter**.
- 9 At the **PIMG>** prompt type *quickcfg*, and then press **Enter**. You are prompted to enter the following information:
- 10 Enter a new TCP/IP address in the **Client IP** address box.
- 11 Enter a new subnet mask in the **Client Subnet Mask** box.
- 12 Enter the TCP/IP address of the default network gateway router in the **Default Network Gateway Address** box.

NOTE The DMG **must** be restarted for the changes to take effect.

- 13 At the **PIMG>** prompt, type *restart*. You should now be able to connect using the Web interface of the DMG through the LAN connection.
- 14 Proceed to the section, [Upgrading the DMG1008 Firmware](#).

Completing the DMG1008 Installation

Refer to the specific Integration Technical Note for the Dialogic DMG1008 integration you are installing. See the *System Installation and Configuration Guide* and the *System Administration Guide*, or refer to the MiCollab AM online help system, for additional instructions.

For general information on integrations, you may also wish to consult *Integrating MiCollab AM with the Telephone System*, in the *System Installation and Configuration Guide*, and the topic, *Integrate the Telephony Server with the telephone system*, in the online help system.

Appendix A – Updating the Parser Definitions on the DMG1008

Mitel reserves the right to update existing parser file rules when necessary to allow MiCollab AM to integrate more closely with the DMG. The parser file definitions on the DMG1008 can be updated using the web administrative interface of the DMG1008.

Updates to the parser rules are managed by Mitel Technical Support. New parser files are posted to the Mitel Connect website along with related Technical Bulletins. You must download the new file to a location accessible to the Call Server to which you are connected with the DMG before you can begin.

To import a new parser file:

- 1 From the Call Server open the web browser, and then enter the TCP/IP address for the DMG.
- 2 When the **System Login** dialog box appears, enter the user name and password, and then click **OK**.
- 3 From the **Configuration** menu, click the **Import/Export** link. The **Dialogic Import/Export** web page displays.
- 4 In the **Browse for Import File** area, click the **Browse** button to browse to the parser file location, and then select the file specific to the DMG you are updating.
- 5 Click the **Import File** button, and then wait for the DMG to confirm the import was successful.
- 6 **Restart** the DMG if prompted.