



# **Dialogic® 1000 Media Gateway Series**

## **Quick Start Guide for Avaya Modular Messaging Release 5.2**

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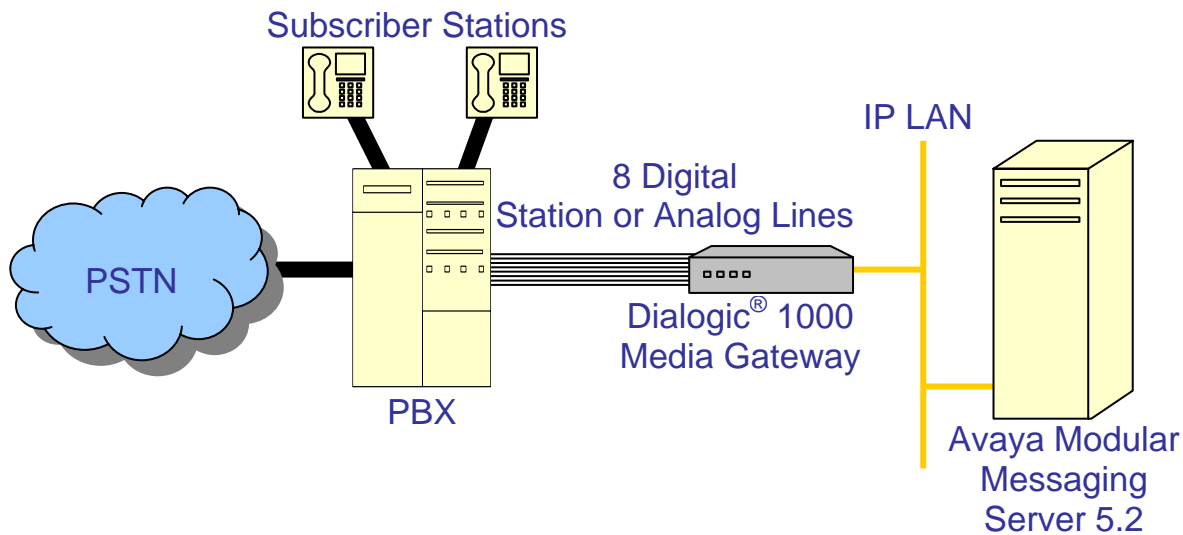
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## Introduction

Dialogic® Media Gateways can link a traditional PBX or PSTN voice circuit to new VoIP solutions such as Avaya Modular Messaging Release 5.2. They are designed and tested to be easy to deploy, easy to manage, and to provide reliable operation. This guide provides instructions for installation and configuration of the Dialogic® 1000 Media Gateway Series (DMG1000).

## System Diagram



*Caption: Dialogic® 1000 Media Gateway can link legacy PBX infrastructure and the Avaya Modular Messaging Release 5.2 Environment.*

## Step 1 - Preparation

### PBX Setup

For information on PBX programming requirements, refer to:  
<http://www.dialogic.com/support/helpweb/mg/integration.aspx>

### Cabling Requirements

It is recommended that total loop length (cable distance between PBX connection and the gateway interface) be no longer than 3000 feet (915 meters) and no shorter than 200 feet (60 meters).

## Step 2 - Gateway Installation

1. Unpack gateway.
2. Connect PBX station cables to the rear panel.
3. Connect power supply and power cord.

## Step 3 - Gateway Configuration

There are two options for performing the initial configuration of the gateway -- serial or IP.

### Connecting with Serial Port

1. Connect a DB9 serial cable to the DIAGNOSTICS port on the gateway.
2. Establish a connection to the gateway (Baud=38400, Data Bits=8, Stop Bits=1, Parity=none, Flow Control=none) using a terminal emulation program (e.g. HyperTerminal).  
See Table 2 for the serial port pin outs.

*Table 1. DIAGNOSTICS Connector Pin Designations*

<b>Pin</b>	<b>Description</b>
1	Not used
2	Transmit
3	Receive
4	Not used
5	Ground
6	Not used
7	Not used
8	Not used
9	Not used

### Connecting with Ethernet

1. Connect gateway to Network using LAN connector on the back of the gateway.
2. Configure computer connecting to gateway on the 10.12.13.x subnet (e.g. 10.12.13.75) and subnet mask of 255.255.255.0.
3. Use Telnet and connect to gateway at: 10.12.13.74.

## Initial Gateway Configuration

1. Configure initial gateway. Press Enter key until you get to the “PIMG” prompt. Follow the steps below and modify the settings in **red** to match your environment. The values in bold are what you will be entering.

```
PIMG> pwd
Enter Password: IpodAdmin
Admin level accepted.
PIMG-admin> quickcfg
LAN 1 IP Address[10.2.2.3] : (Enter new IP Address that matches gateway IP address entered in Modular Messaging Server)
LAN 1 Subnet Mask[255.255.255.0] : (Enter new Subnet Mask)
LAN 1 Default Network Gateway Address[10.2.2.5] : (Enter new Default Network Gateway Address)
LAN 2 IP Address[10.2.2.2] :
LAN 2 Subnet Mask[255.255.255.0] :
Select PBX Type ...
Valid entries:
  1. M1
  2. Norstar
  3. Optiset_300ECS
  4. Optiset_300E
  5. Lucent
  6. Magix
  7. NEC_IMG
  8. NEC_IMX
  9. NEC_NEAX
Enter Number for PBX Selection [Lucent] : (Enter number that matches the PBX you are connecting to)
Saving parameters now...
Parameters successfully configured!
***** Restart Required ***** (Type 'restart')
PIMG-admin> restart
restarting...
```

2. Clear ARP Table on computer connecting to gateway (e.g. on Windows® machine, the command is “arp -d\*” from a Command Shell).
3. Change the IP address on computer connecting to gateway to match the newly configured gateway IP subnet.

## Step 4 - Final Gateway Configuration

Once the initial configuration is complete and the gateway has been restarted, you will need to log into the web interface by browsing to the IP address of the gateway using “admin” as the user and entering the gateway password (“lpodAdmin” is the default).

Verify that you have Version 6.0 or later software. Update the gateway with firmware posted on the following FTP site: <ftp://avaya:file2take@ftp.dialogic.com>.

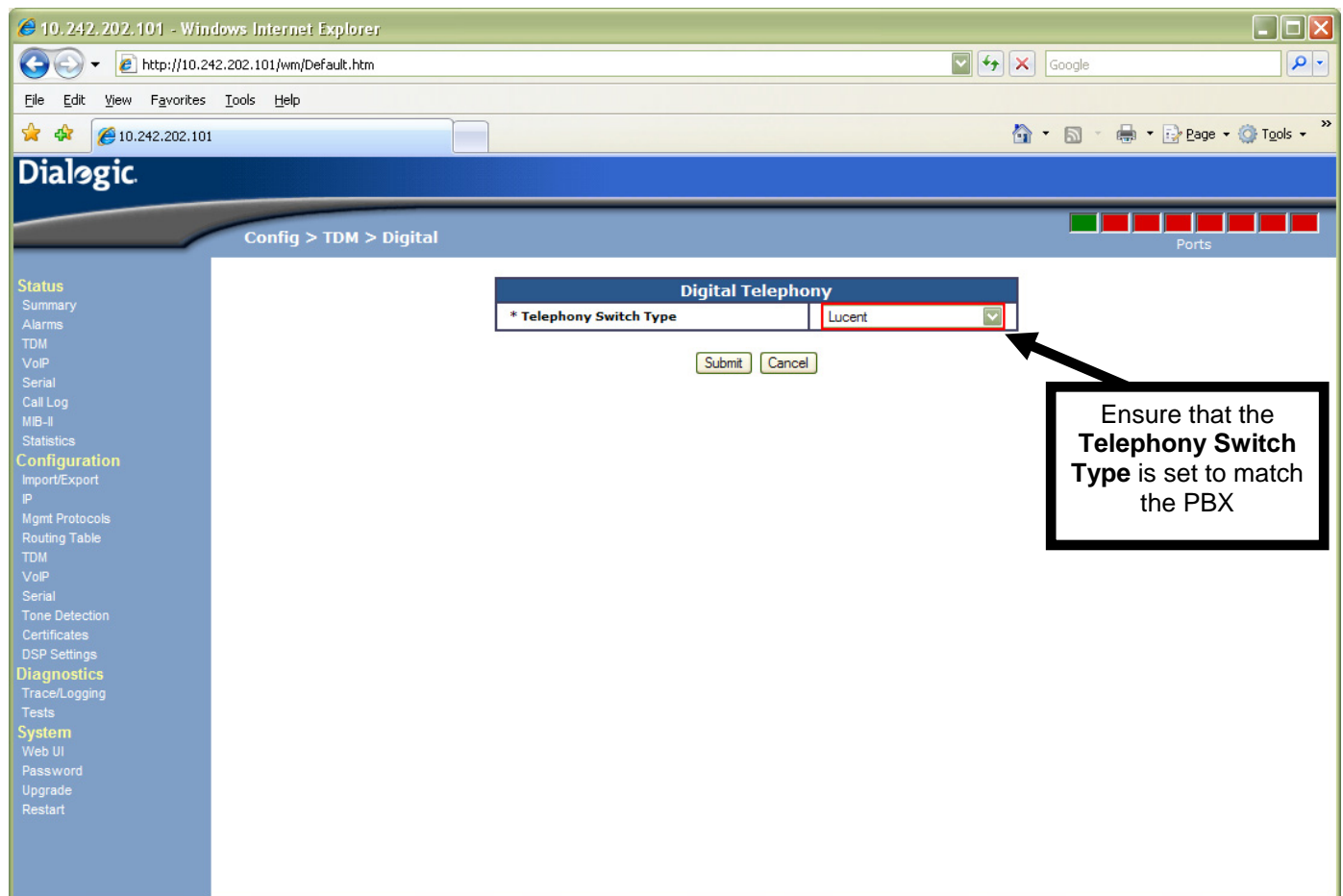
**Navigate to: System > Upgrade** after downloading the .pkg firmware file -

1. Click **Browse** to locate the .pkg firmware file.
2. Click **Install File**. After file installation is complete, restart the gateway as prompted.

## Setting TDM Parameters

**Navigate to: Configuration > TDM > Digital** and verify the following settings -

1. Ensure that the **Telephony Switch Type** is set to match the PBX connected to the gateway.
2. Click **Submit** to save settings. This will prevent loss of configuration. Do not restart the gateway.



Navigate to: **Configuration > TDM > General** and adjust the following settings -

1. Set **PCM Coding**: uLaw or aLaw to match your PBX setting.
2. Set **Hunt Group Extension** if the telephony ports are in a hunt group.
3. Set **Disconnect on Fax Cleardown Tone** to Yes.
4. Click **Submit** to save settings. This will prevent loss of configuration. Do not restart the gateway.

The screenshot shows the Dialogic web interface in Internet Explorer. The browser address bar shows 'http://10.242.202.101/wm/Default.htm'. The page title is 'Dialogic' and the breadcrumb navigation is 'Config > TDM > General'. On the left is a navigation menu with sections: Status, Configuration, Diagnostics, and System. The main content area displays the 'TDM General Settings' table. Three callout boxes with arrows point to specific settings: 'Set PCM Coding: uLaw or aLaw to match your PBX setting' points to the PCM Coding dropdown; 'Set Hunt Group Extension if the telephony ports are in a hunt group' points to the Hunt Group Extension text input; and 'Set Disconnect on Fax Cleardown Tone to Yes' points to the Disconnect on Fax Cleardown Tone dropdown. Below the table are 'Submit' and 'Cancel' buttons.

TDM General Settings	
* PCM Coding	uLaw
Minimum Call Party Delay (ms)	0
Maximum Call Party Delay (ms)	2000
Dial Digit On Time (ms)	100
Dial Inter-Digit Time (ms)	100
Dial Pause Time (ms)	2000
Turn MWI On FAC	
Turn MWI Off FAC	
Outbound Call Connect Timeout (ms)	10000
Wait for Ringback/Connect on Blind Transfer	Yes
* Hunt Group Extension	9894
Disconnect on Fax Cleardown Tone	Yes
Connect Outbound Call On DTMF	No

## Setting Avaya Modular Messaging 5.2 Specific Parameters

Navigate to: **Configuration > VoIP > General**, and adjust the following setting -

1. Set **Transport Type** to TLS.
2. Set **DNS Server Address** to the IP address of the DNS server.
3. Set **TLS Transport Enabled** to Yes.
4. Increase the **TLS Inactivity Timer** to 120.
5. Click **Submit** to save settings. This will prevent loss of configuration. Do not restart the gateway.

The screenshot shows the 'Voip General Settings' configuration page in a web browser. The page is titled 'Config > VoIP > General'. The settings are organized into sections: User-Agent, Server, TCP/UDP, and TLS. Four callout boxes with arrows point to specific settings: 'Set Transport Type to TLS' points to the 'Transport Type' dropdown; 'Set DNS Server Address to the IP address of the DNS server' points to the 'DNS Server Address' text field; 'Set TLS Transport Enabled to Yes' points to the 'TLS Transport Enabled' dropdown; and 'Increase the TLS Inactivity Timer to 120' points to the 'TLS Inactivity Timer (sec)' text field.

Voip General Settings	
<b>User-Agent</b>	
* Host and Domain Name	stockley.avaya.com
Transport Type	TLS
Call as Domain Name?	Yes
SIPS URI Scheme Enabled	No
Invite Expiration (sec)	0
Reliable Provisional Responses	Supported
<b>Server</b>	
* DNS Server Address	135.64.192.16
DNS Translation of Phone Numbers	No
Registration Server Address	
Registration Server Port	5060
Registered User	
Registration Expiration (sec)	0
<b>TCP/UDP</b>	
* UDP/TCP Transports Enabled	Yes
* TCP/UDP Server Port	5060
TCP Inactivity Timer (sec)	30
<b>TLS</b>	
* TLS Transport Enabled	Yes
* TLS Server Port	5061
* SSL TLS Protocol	TLSv1_Only
* Mutual TLS Authentication Required	No
TLS Inactivity Timer (sec)	120
Verify TLS Peer Certificate Date	No
Verify TLS Peer Certificate Trust	No
Verify TLS Peer Certificate Purpose	Yes

Navigate to: **Configuration > VoIP > Media**, and adjust the following settings -

1. Set **Audio Compression**: G.711u or G.711a to match Avaya Modular Messaging 5.2.
2. Set **Signaling Digit Relay Mode** to Off.
3. Set **Voice Activity Detection** to Off.
4. Set **G.711 Codec Frame Size** to 30ms.
5. Set **Fax IP-Transport Mode** to T.38.
6. Set **SRTP Preference** to SRTP\_Only.
7. Set **MKI on Transmit Stream** to No.
8. Set **UnEncrypted SRTCP Enable** to Yes.
9. Click **Submit** to save settings. This will prevent loss of configuration. Do not restart the gateway.

The screenshot shows the 'VoIP Media Settings' configuration page in a web browser. The page is divided into sections: Audio, Fax, and SRTP. The following table represents the settings shown in the screenshot:

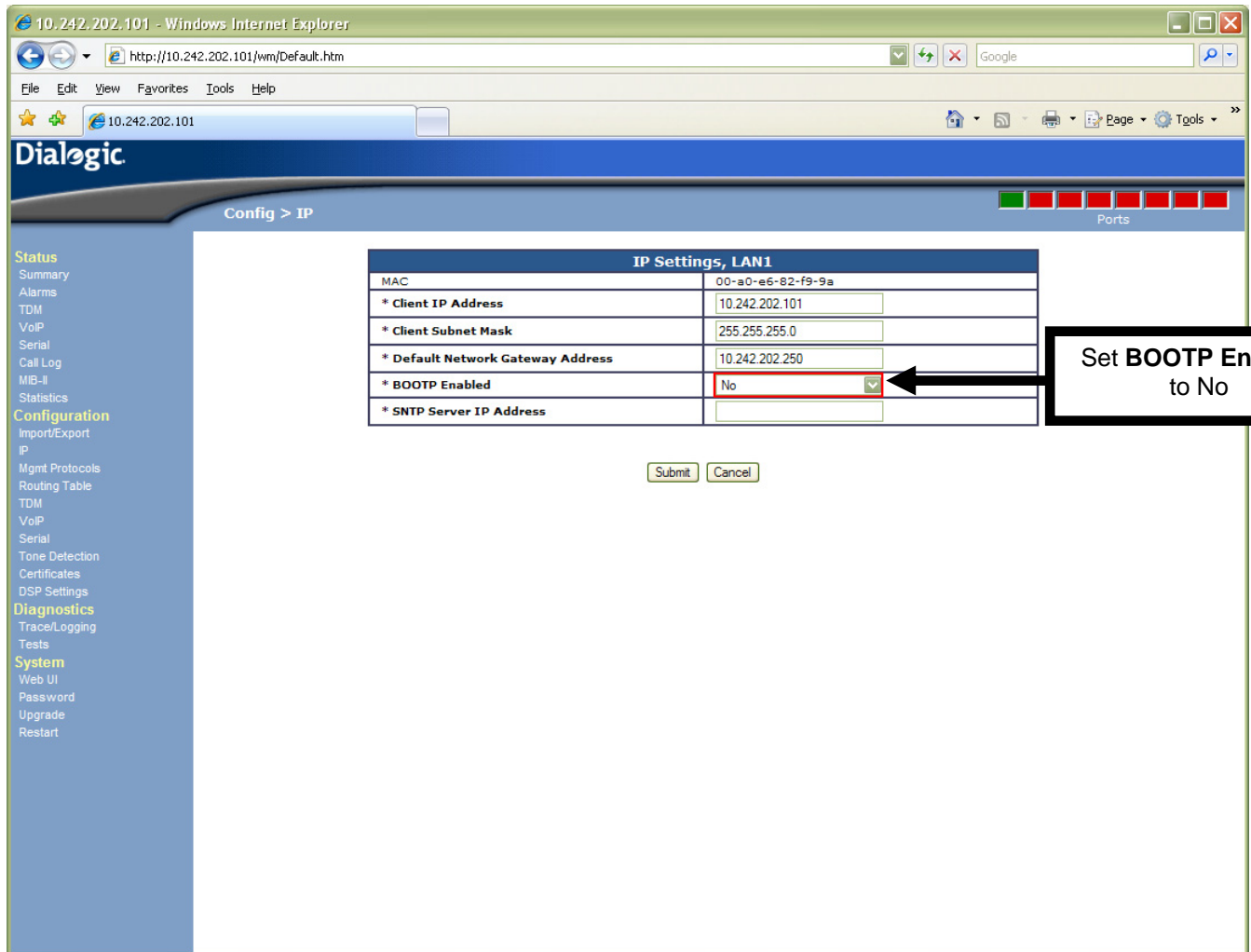
VoIP Media Settings		
Audio		
* Audio Compression	G.711u	
RTP Digit Relay Mode	RFC2833	
RTP Fax/Modem Tone Relay Mode	Inband-Tone	
* RTP Source IP Address Validation	Off	
* RTP Source UDP Port Validation	Off	
Signaling Digit Relay Mode	Off	
Voice Activity Detection	Off	
RFC 3960 Early Media Support	OnDemand	
Codec	Frame Size	Frames per Packet
G.711	30	1
G.723.1	30	1
G.729AB	10	3
Fax		
* Fax IP-Transport Mode	T.38	
SRTP		
* SRTP Preference	SRTP_Only	
MKI on Transmit Stream	No	
Key Derivation Enable	Yes	
Key Derivation Rate	16	
Anti-replay window size hint	64	
Cipher Mode	AES_Counter_Mode	
Authentication Type	SHA1	
Authentication Tag Length	SHA1_80_bit	
UnEncrypted SRTP Enable	No	
UnEncrypted SRTCP Enable	Yes	
UnAuthenticated SRTP Enable	No	

Callouts from the image:

- Set **Audio Compression**: G.711u or G.711a
- Set **Signaling Digit Relay Mode** and **Voice Activity Detection** to Off
- Set **G.711 Codec Frame Size** to 30ms
- Set **Fax IP-Transport Mode** to T.38
- Set **SRTP Preference** to SRTP\_Only
- Set **MKI on Transmit Stream** to No.
- Set **UnEncrypted SRTCP Enable** to Yes

Navigate to: **Configuration > IP**, and adjust the following setting -

1. Set **BOOTP Enabled** to No.
2. Click **Submit** to save settings. This will prevent loss of configuration. Do not restart the gateway.



Navigate to: **Configuration > Routing Table**, and adjust the following settings -

1. Select **VoIP Host Groups** radio button.
2. Enter your **Avaya Modular messaging 5.2 Server IP Address** in the **Host List** field.
3. Click **Submit** to save settings. This will prevent loss of configuration. Do not restart the gateway.

The screenshot shows the Dialogic web interface in Internet Explorer. The browser address bar shows `http://10.242.202.101/wm/Default.htm`. The page title is "Dialogic" and the breadcrumb is "Config > Routing Table".

The main content area is titled "Router Configuration" and has four radio buttons: "Inbound TDM Rules", "Inbound VoIP Rules", "TDM Trunk Groups", and "VoIP Host Groups". The "VoIP Host Groups" radio button is selected. A callout box with an arrow points to this radio button, containing the text: "Select VoIP Host Groups radio button".

Below the radio buttons is a table titled "VoIP Host Groups":

	Name	Load-Balanced	Fault-Tolerant	Host Summary
Delete	Modular Messaging Server	false	false	135.64.192.186;
Delete	MWI	false	false	135.64.192.200;

Below the table is an "Add Host Group" button.

Below the table is a section titled "The selected Host Group is referenced by the following rules:" with a list box containing "[Inbound TDM] InboundTdm (Primary Route)".

Below the list box is a "Host List" section with a table:

Host List	
Modular Messaging Server	Delete
135.64.192.186	Delete

Below the Host List table is an "Add Host" button. A callout box with an arrow points to the "135.64.192.186" field, containing the text: "Enter your Avaya Modular Messaging 5.2 Server IP Address in the Host List field".

At the bottom of the configuration area are "Submit" and "Cancel" buttons.

## Step 5 - Restarting the Gateway

For the configuration changes to take effect, you will be prompted to restart the gateway. Select the **Restart** menu option through the web interface and proceed to click on **Restart Unit Now**.