

AudioCodes Mediant™ Gateways

Interfacing between

PBX T1 Line and PAETEC

Configuration Note



Document # LTRT-39261

Table of Contents

1	Introduction	7
2	Software Requirements	9
2.1	Verifying Software Enabled Features	9
3	Configuring the Media Gateway.....	11
3.1	Step 1: Configuring IP Addresses.....	12
3.2	Step 2: Configuring Domain Name Server	13
3.3	Step 3: Configuring T1 Trunk Settings.....	14
3.3.1	Configuring a Trunk Group	14
3.3.2	Configuring Trunk Group Settings	15
3.3.2.1	Configuring the Trunk.....	15
3.3.2.2	Configuring TDM Bus	18
3.3.2.3	Configuring ISDN Trunk Termination Side.....	19
3.4	Step 4: Configuring Voice Coders.....	20
3.5	Step 5: Configuring SIP General Parameters	21
3.6	Step 6: Configuring Proxy and Registration Parameters.....	23
3.7	Step 7: Configuring Proxy Set Table.....	25
3.8	Step 8: Configuring IP-to-Tel Routing Rules	26
3.9	Step 9: Reset the Gateway.....	27

List of Figures

Figure 1-1: Topology	7
Figure 2-1: Software Upgrade Key Status Page	9
Figure 3-1: Web Interface Showing Basic/Full Navigation Tree Display.....	11
Figure 3-2: Multiple Interface Table Page	12
Figure 3-3: Application Settings page	13
Figure 3-4: Trunk Group Table Page	14
Figure 3-5: Trunk Group Settings Page	15
Figure 3-6: Trunk Settings Page-Not Configured.....	16
Figure 3-7: Trunk Settings Page-Active	17
Figure 3-8: TDM Bus Settings Page.....	18
Figure 3-9: Trunk Settings Page	19
Figure 3-10: Coders Table Page	20
Figure 3-11: Sip General Parameters	21
Figure 3-12: INI file Output Window	22
Figure 3-13: SIP Proxy and Registration.....	23
Figure 3-14: Proxy Set Table.....	25
Figure 3-15: IP-to-Tel Routing Rules.....	26
Figure 3-16: Reset the Gateway	27

Notice

This document describes the configuration of AudioCodes' Media Gateways for interfacing between a legacy PBX with T1 lines and PAETEC.

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Abbreviations and Terminology

Each abbreviation, unless widely used, is spelled out in full when first used, and only Industry standard terms are used throughout this manual.



Note: Throughout this guide, the term 'gateway' refers to AudioCodes' Mediant 800, Mediant 1000 and Mediant 3000 devices.

Reader's Notes

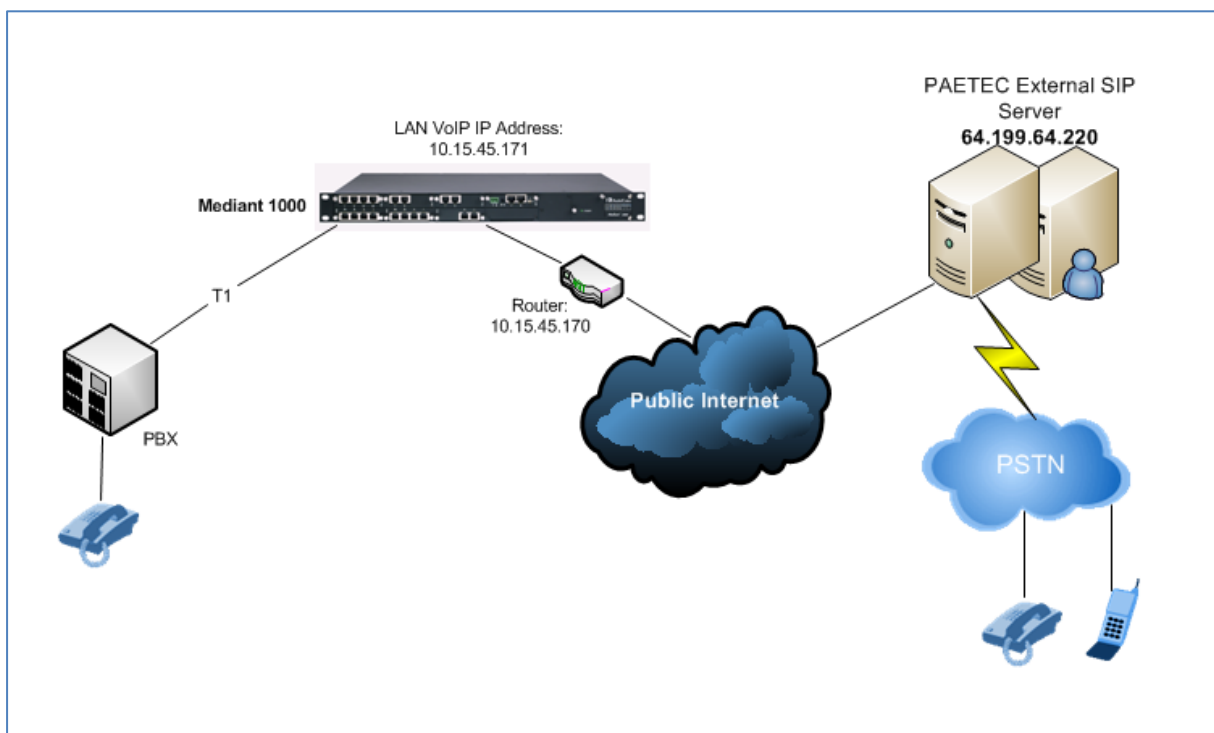
1 Introduction

This document is intended for IP telephony customers who wish to successfully integrate their legacy PBX environments with the PAETEC SIP Trunking service, using the AudioCodes' Media gateway device.

For Enterprises wishing to communicate over PSTN within the Enterprise; however communicate over IP outside the Enterprise, a SIP trunk provided by an Internet Telephony Service Provider (ITSP) (such as the PAETEC IP Trunking service), provides such a solution. Unlike traditional telephony, where bundles of physical wires are delivered from the PSTN service provider to a business, a SIP trunk allows a company to replace these traditional fixed PSTN lines with PSTN connectivity using a SIP Trunking service provider on the Internet.

This setup includes the PAETEC SIP Trunking service on the IP side and a legacy PBX using a T1 interface on the other side, where the Media gateway interfaces between these two entities. This architecture is illustrated in the figure below:

Figure 1-1: Topology



Reader's Notes

2 Software Requirements

The following minimum software version must be installed on your AudioCodes device:

- **SIP_F6.20A.038.005.cmp**

The following features must be enabled on your AudioCodes device:

- **T1 Trunks:** 1 or more
- **Coders:** G711U G729
- **Control Protocols:** SIP

2.1 Verifying Software Enabled Features

This section describes how to verify the configuration of the supplied feature key.



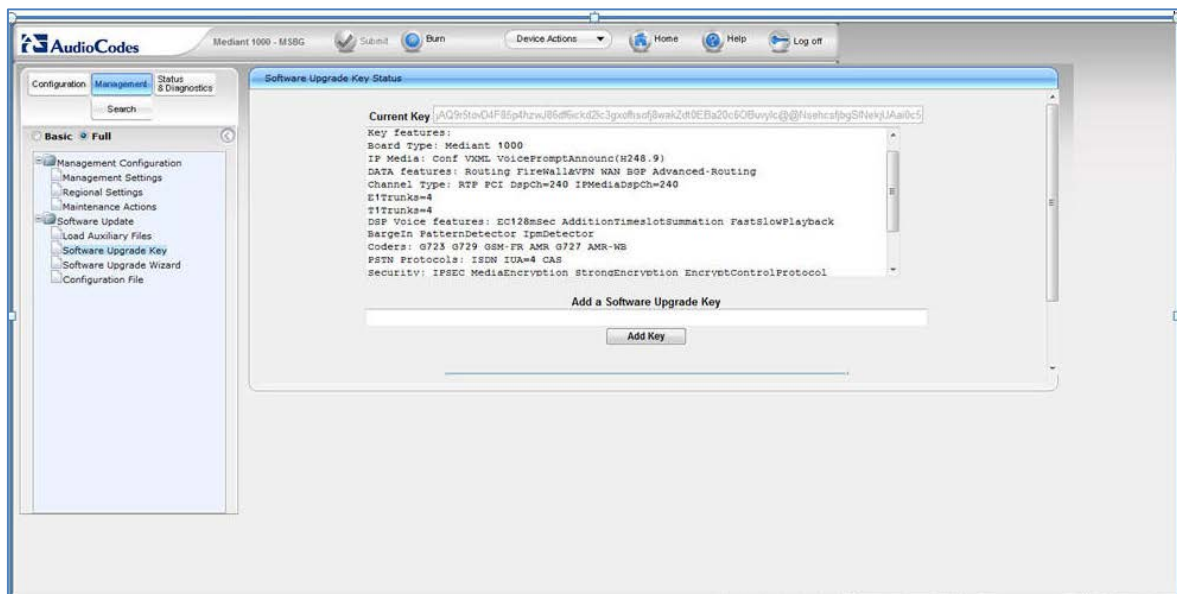
Note: If the required features (as specified above) are not configured on the supplied feature key, contact your AudioCodes sales representative to verify that all required features were purchased correctly.

➤ **To verify software enabled features:**

1. Open the 'Software Upgrade Key Status' page (**Management** tab > **Software Update** menu > **Software Upgrade Key**).

The configured features are displayed.

Figure 2-1: Software Upgrade Key Status Page



Reader's Notes

3 Configuring the Media Gateway

This section provides step-by-step procedures for configuring AudioCodes' gateway. These procedures are based on the setup example illustrated in [Figure 1-1: Topology](#).

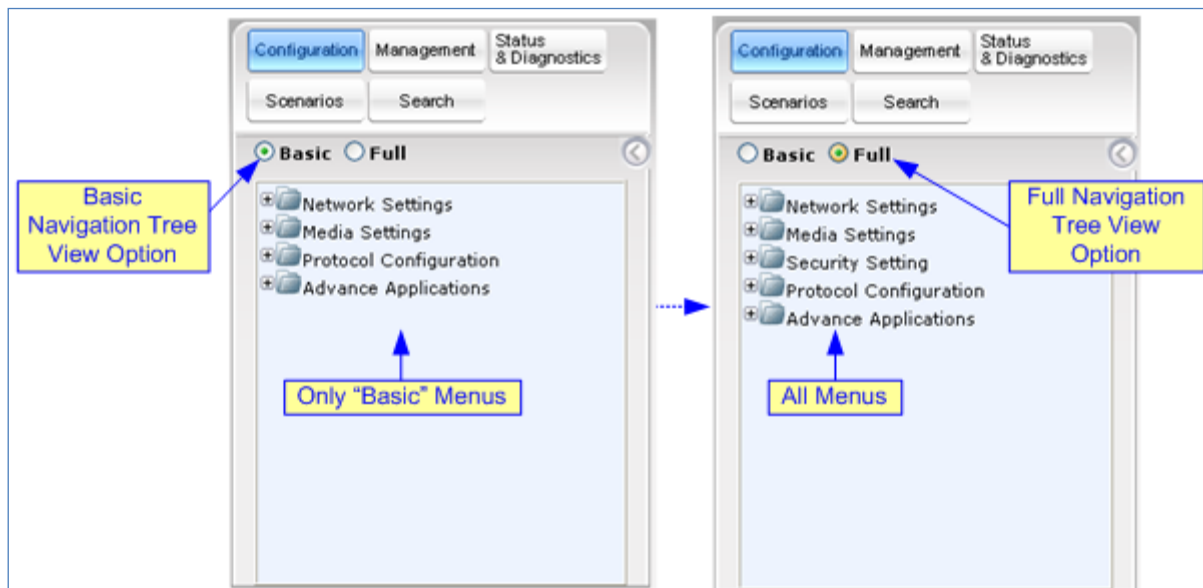
The steps for configuring the gateway can be summarized as follows:

- **Step 1:** Configuring IP Addresses. See [Section 3.1](#) on page 12.
- **Step 2:** Configuring Domain Name Server. See [Section 3.2](#) on page 13.
- **Step 3:** Configuring T1 Trunk Settings. See [Section 3.3](#) on page 14.
- **Step 4:** Configuring Voice Coders. See [Section 3.4](#) on page 20.
- **Step 5:** Configuring SIP General Parameters. See [Section 3.5](#) on page 21.
- **Step 6:** Configuring Proxy and Registration Parameters. See [Section 3.6](#) on page 23.
- **Step 7:** Configuring Proxy Set table. See [Section 3.7](#) on page 25.
- **Step 8:** Configuring IP-to-Tel Routing Rules. See [Section 3.8](#) on page 26.
- **Step 9:** Resetting the Gateway. See [Section 3.9](#) on page 27.

The procedure described in this section is performed using the Media Gateways' Web-based management tool (i.e., embedded Web server).

Before you begin, ensure that the Web interface's Navigation tree is in full menu display mode (i.e., the **Full** option on the Navigation bar is selected), as shown below:

Figure 3-1: Web Interface Showing Basic/Full Navigation Tree Display



3.1 Step 1: Configuring IP Addresses

This step describes how to configure IP addresses for the VoIP Enterprise LAN.

➤ **To change the device's IP address:**

1. Open the 'IP Settings' page, (**Configuration** tab > **VoIP** menu > **Network** sub-menu > **IP Settings**).

Figure 3-2: Multiple Interface Table Page



Index	Application Type	IP Address	Prefix Length	Gateway	VLAN ID	Interface Name
0	OAMP + Media + Control	10.15.45.171	16	10.15.45.170	1	Voice

WAN Interface Name: WAN Ethernet

2. Select the 'Index' radio button corresponding to the 'OAMP + Media + Control' application type, and then click **Edit**.
3. Configure the new IP address and subnet prefix length so that it corresponds to your network IP scheme.
4. Configure the gateway as the default router IP so that it corresponds to your network IP scheme.
5. Click **Apply**.
6. Click **Done** to apply and validate settings; if validation fails, the Media gateway does not reboot.
7. Save your settings to flash memory and reset the Media gateway.



Note: Do not change the Application Type for any of the selected interfaces (i.e., they should remain as 'OAMP + Media + Control').

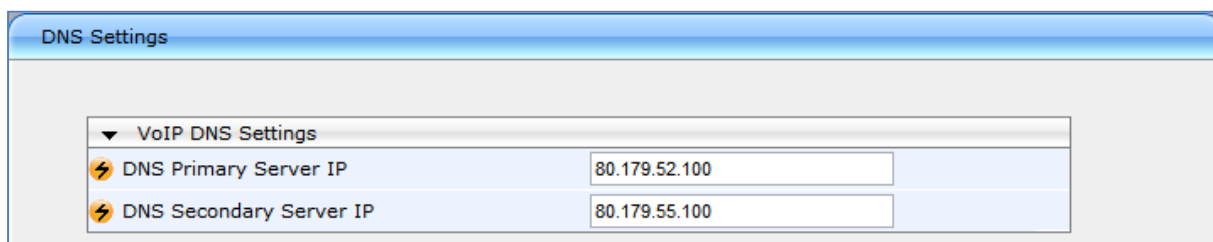
3.2 Step 2: Configuring Domain Name Server

This step describes how to configure the Domain Name Server (DNS).

➤ **To configure the DNS:**

1. Open the Application Settings' page (**Configuration** tab > **VoIP** menu > **Network** sub-menu > **DNS** > **DNS Settings**).
2. In the 'DNS Primary Server IP' field, define the DNS IP address as shown below, so that it corresponds to your network IP scheme (for example, '80.179.52.100' and '80.179.55.100').

Figure 3-3: Application Settings page



The screenshot shows the 'DNS Settings' page. At the top, there is a blue header bar with the text 'DNS Settings'. Below this, there is a section titled 'VoIP DNS Settings' with a downward-pointing arrow. Underneath, there are two rows of settings, each with a lightning bolt icon on the left and a text input field on the right. The first row is 'DNS Primary Server IP' with the value '80.179.52.100'. The second row is 'DNS Secondary Server IP' with the value '80.179.55.100'.

VoIP DNS Settings	
DNS Primary Server IP	80.179.52.100
DNS Secondary Server IP	80.179.55.100

3.3 Step 3: Configuring T1 Trunk Settings

This step describes how to enable the Media gateways' T1 trunk, which is connected to the legacy PBX. This is performed by assigning the trunk channels with telephone numbers and other attributes (e.g., Trunk Groups and Profiles). Channels that are not assigned are disabled.

3.3.1 Configuring a Trunk Group

This step below describes how to configure a Trunk Group for the T1 interface.

➤ **To configure a Trunk Group:**

1. Open the 'Trunk Group Table' page (**Configuration** tab > **VoIP** menu > **Gateway and IP to IP** sub-menu > **Trunk Group** > **Trunk Group**).

Figure 3-4: Trunk Group Table Page

The screenshot shows the 'Trunk Group Table' configuration page. At the top, there are tabs for 'Configuration', 'Management', and 'Status & Diagnostics'. Below the tabs is a search bar. On the left is a navigation tree with 'Basic' and 'Full' views. The main area contains a 'Trunk Group Table' with the following structure:

Group Index	Module	From Trunk	To Trunk	Channels	Phone Number	Trunk Group ID	Tel Profile ID
1	Module 1 PRI	1	1	1-23	1000	1	0
2							
3							
4							
5							
6							

Additional settings at the top of the table include 'Add Phone Context As Prefix' (set to 'Disable') and 'Trunk Group Index' (set to '1-10'). A 'Submit' button is located at the bottom right of the table area.

2. In the 'Module' column, select the module type (i.e., PRI) for which you wish to configure the Trunk Group.
3. In the 'From Trunk' and 'To Trunk' columns, select the starting and ending physical Trunk number in the Trunk Group.
4. In the 'Channel(s)' column, enter the Media gateways' Trunk B-channels (i.e. 1-23).
5. Enter the phone number (e.g., 1000) for the first channel in the 'Phone Number' column. Phone numbers, for example, 1001, 1002 and 1003 are sequentially assigned to subsequent channels (i.e., 2 through 23).
6. In the 'Trunk Group ID' column, enter the Trunk ID (i.e., 1).
7. Click **Submit** to save your changes.

3.3.2 Configuring Trunk Group Settings

This step describes how to configure the Trunk Group's setting, which defines the method for which IP-to-Tel calls are assigned to the Trunk Group's channel.

➤ **To configure the Trunk Group settings:**

1. Open the 'Trunk Group Settings' page (**Configuration** tab > **VoIP** menu > **Gateway and IP to IP** sub-menu > **Trunk Group** > **Trunk Group Settings**).

Figure 3-5: Trunk Group Settings Page

The screenshot shows the 'Trunk Group Settings' page with a table of 10 rows. The first row is highlighted. The columns are: Trunk Group ID (with a circled '2' pointing to the input field containing '1'), Channel Select Mode (with a circled '3' pointing to the dropdown menu showing 'Cyclic Ascending'), Registration Mode, Serving IP Group ID, Gateway Name, and Contact User. The page title is 'Trunk Group Settings' and there is a 'Basic Parameter List' link in the top right.

	Trunk Group ID	Channel Select Mode	Registration Mode	Serving IP Group ID	Gateway Name	Contact User
1	1	Cyclic Ascending				
2						
3						
4						
5						
6						
7						
8						
9						
10						

2. In the 'Trunk Group ID' column, enter the Trunk Group ID that you wish to configure.
3. From the 'Channel Select Mode' drop-down list, select the method for which IP-to-Tel calls are assigned to channels pertaining to the Trunk Group (i.e., 'Cyclic Ascending').
4. Click **Submit** to save your changes.

3.3.2.1 Configuring the Trunk

This step describes how to configure the Trunk parameters.

➤ **To configure the Trunk:**

1. Open the 'Trunk Settings' page (**Configuration** tab > **VoIP** menu > **PSTN** sub-menu > **Trunk Settings**).

On the top of the page, a bar with Trunk number icons displays the status of each trunk, according to the following color codes:

- **Grey:** Disabled
- **Green:** Active
- **Yellow:** RAI alarm
- **Red:** LOS / LOF alarm
- **Blue:** AIS alarm
- **Orange:** D-channel alarm (ISDN only)

Figure 3-6: Trunk Settings Page-Not Configured

The screenshot shows the 'Trunk Settings' interface. At the top, there is a 'Basic Parameter List' and a 'Trunk Settings' title bar. Below this is a 'General Settings' section with the following fields:

Module ID	2
Trunk ID	1
Trunk Configuration State	Not Configured
Protocol Type	T1 NI1 ISDN

Below the general settings is a 'Trunk Configuration' section with the following fields:

Clock Master	Recovered
Auto Clock Trunk Priority	0
Line Code	B8ZS
Line Build Out Loss	0 dB
Trace Level	No Trace
Line Build Out Overwrite	OFF
Framing Method	Extended Super Frame

At the bottom of the page, there are two buttons: 'Apply to All Trunks' on the left and 'Apply Trunk Settings' on the right, both with green checkmark icons.

2. Select the Trunk that you wish to configure, by clicking the desired Trunk number icon. After you have selected a trunk, the following is displayed:
 - The read-only 'Module ID' field displays the module number to which the trunk belongs.
 - The read-only 'Trunk ID' field displays the selected trunk number.
 - The read-only 'Trunk Configuration State' displays the state of the trunk (e.g., 'Active' or 'Inactive').
 - The parameters displayed in the page refer to the selected trunk only.
3. If required, click the **Stop Trunk** button (located at the bottom of the page) to de-activate the trunk so that you can configure currently grayed out (unavailable or Offline) parameters.



Note: Skip this step if you only wish to configure parameters that are always available when the trunk is active (Online parameters).

When the trunk is stopped, the following is indicated:

- The 'Trunk Configuration State' field displays **Inactive**.
 - The **Stop Trunk** button is replaced by the **Apply Trunk Settings** button. When all trunks are stopped, the **Apply to All Trunks** button also appears.
 - All the parameters are available and can be modified.
4. From the 'Protocol Type' drop-down list, select the trunk T1 protocol type, for example, **T1 NI1 ISDN**.
 5. From the 'Clock Master' drop-down list, select the clock source that corresponds to the PBX trunk setting.
 6. From the 'Line Code' drop-down list, select the line code corresponding to the trunk setting - for T1 trunks, it is usually **B8ZS**.
 7. From the 'Framing Method' drop-down list, select the Framing Method corresponding to the PBX trunk setting - for T1 trunks, it is usually **Extended Super Frame**.

8. Click the **Apply Trunk Settings** button to apply the changes to the selected trunk (or click **Apply to All Trunks** to apply the changes to all trunks); the **Stop Trunk** button replaces **Apply Trunk Settings** and the 'Trunk Configuration State' displays **Active**.

Figure 3-7: Trunk Settings Page-Active

The screenshot shows the 'Trunk Settings' page for a Mediant 1000 - MSBG device. The page is divided into three main sections:

- General Settings:**
 - Module ID: 1
 - Trunk ID: 1
 - Trunk Configuration State: **Active**
 - Protocol Type: T1 N1 ISDN
- Trunk Configuration:**
 - Clock Master: Recovered
 - Auto Clock Trunk Priority: 0
 - Line Code: BBZS
 - Line Build Out Loss: 0 dB
 - Line Build Out Overwrite: OFF
 - Framing Method: Extended Super Frame
- ISDN Configuration:**
 - ISDN Termination Side: Network side
 - Q931 Layer Response Behavior: 0x0
 - Outgoing Calls Behavior: 0x400
 - Incoming Calls Behavior: 0x11000
 - General Call Control Behavior: 0x0
 - ISDN NS Behaviour 2: 0x0
 - NFAS Group Number: 0
 - IUA Interface ID: -1
 - NFAS Interface ID: 255
 - D-channel Configuration: PRIMARY

At the bottom of the page, there is a 'Submit' button on the left, a 'Deactivate' button in the center, and a 'Stop Trunk' button on the right.

9. Save (burn) the configuration and reset Media gateways using the 'Maintenance Actions' page (**Maintenance tab > Maintenance menu > Maintenance Actions**).

Notes:

- If the 'Protocol Type' field displays **None** (i.e., no protocol type selected) and no other trunks have been configured, after selecting a PRI protocol type, you must reset the device.
- The displayed parameters on the page depend on the protocol selected in the 'Protocol Type' field.
- All trunks must be of the same line type (i.e., either E1 or T1). However, different variants of the same line type can be configured on different trunks, for example, E1 Euro ISDN and E1 CAS (subject to the 'Constraints' described in the respective device's Release Notes).
- If the trunk protocol type is 'CAS', you can assign or modify a dial plan (in the 'Dial Plan' field) and perform this action without stopping the trunk.
- If the trunk can't be stopped because it provides the device's clock (assuming the device is synchronized with the E1/T1 clock), assign a different E1/T1 trunk to provide the device's clock or enable 'TDM Bus PSTN Auto Clock' in the 'TDM Bus Settings' page.
- To delete a previously configured trunk, set the parameter 'Protocol Type' to **None**.



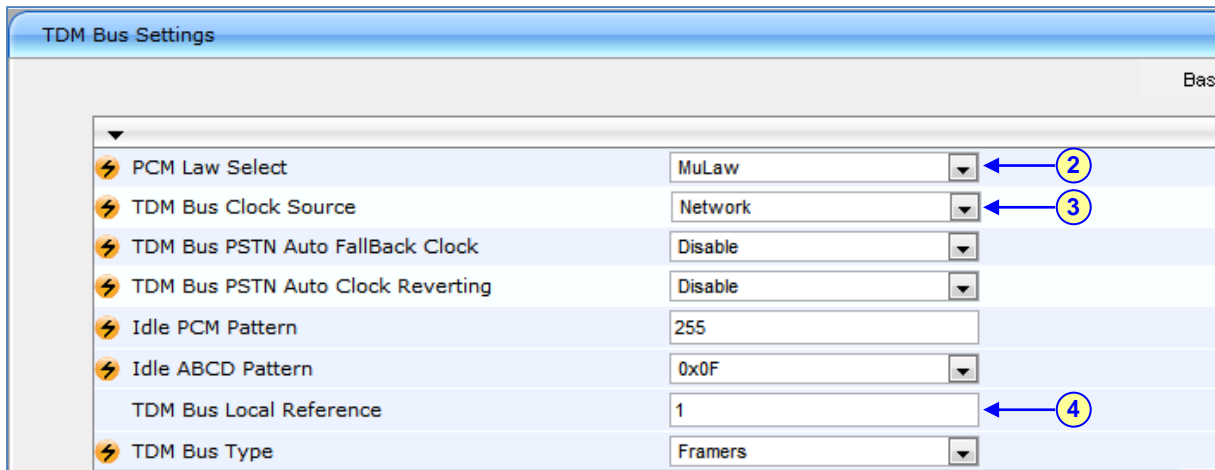
3.3.2.2 Configuring TDM Bus

This step describes how to configure TDM bus settings.

➤ **To configure the TDM bus settings:**

1. Open the 'TDM Bus Settings' page (**Configuration** tab > **VoIP** menu > **TDM** menu > **TDM Bus Settings**).

Figure 3-8: TDM Bus Settings Page



Parameter	Value	Annotation
PCM Law Select	MuLaw	2
TDM Bus Clock Source	Network	3
TDM Bus PSTN Auto FallBack Clock	Disable	
TDM Bus PSTN Auto Clock Reverting	Disable	
Idle PCM Pattern	255	
Idle ABCD Pattern	0x0F	
TDM Bus Local Reference	1	4
TDM Bus Type	Framers	

Configure the TDM bus parameters according to your deployment:

2. **PCM Law Select** - determines the type of PCM companding law in input/output TDM bus. Typically, A-Law is used for E1 spans and Mu-Law for T1/J1 spans. Since the Trunk was configured for T1 PRI NI1, ensure the PCM law select is compatible and use **MuLaw** from the drop-down menu.
3. **TDM Bus Clock Source** – determines the clock source to which the Media gateways synchronizes - generate clock from local source (Internal) or recover clock from PBX line (Network).
4. **TDM Bus Local Reference** – determines the Physical Trunk ID from which the Media gateways recovers (receives) its clock synchronization when the TDM Bus Clock Source is configured to recover the clock from the PBX line.
5. Click **Submit** to save your changes.

3.3.2.3 Configuring ISDN Trunk Termination Side

This step describes how to change the ISDN termination side ('User' or 'Network' side).

➤ **To configure the Trunk ISDN termination side:**

1. Open the 'Trunk Settings' page (**Configuration** tab > **VoIP** menu > **PSTN Settings** sub-menu > **Trunk Settings**).

Figure 3-9: Trunk Settings Page

ISDN Configuration	
ISDN Termination Side	User side
Q931 Layer Response Behavior	0x0
Outgoing Calls Behavior	0x400
Incoming Calls Behavior	0x11000
General Call Control Behavior	0x0
ISDN NS Behaviour 2	0x0
NFAS Group Number	0
IUA Interface ID	-1
NFAS Interface ID	255
D-channel Configuration	PRIMARY

PSTN Alert Timeout	-1
Local ISDN Ringback Tone Source	PBX
Set PI in Rx Disconnect Message	Not Configured
ISDN Transfer Capabilities	Not Configured
Progress Indicator to ISDN	Not Configured

2. Click the **Trunk** icon pertaining to the trunk you wish to configure, and then click **Stop Trunk** to de-activate the Trunk.
3. From the 'ISDN Termination Side' drop-down list, select whether the Trunk is connected to the PBX is **User side** or **Network side**. This is important to understand which side of the PRI connect the device is to support on the Q.921 layer.
4. Click **Apply Trunk Settings** to apply the settings.

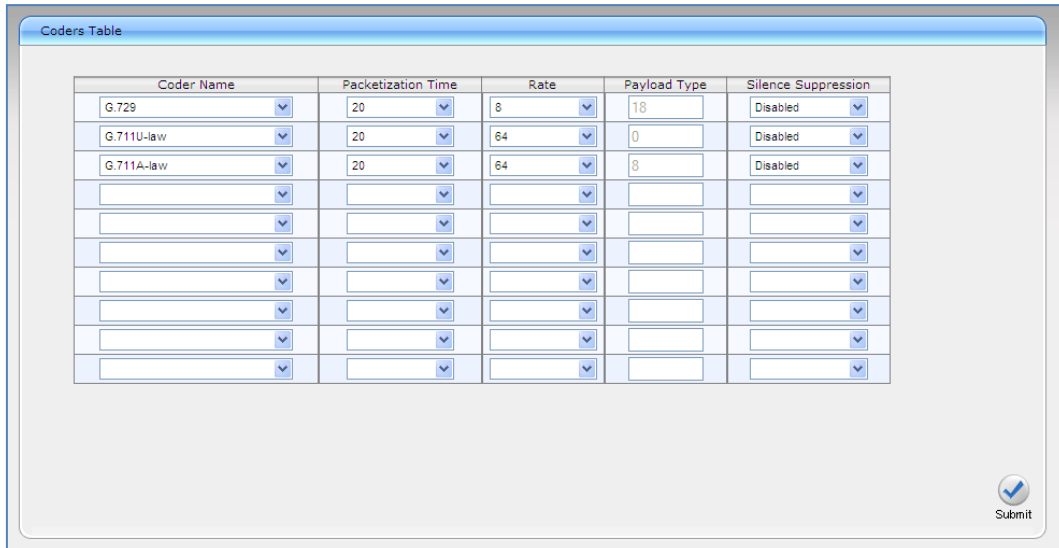
3.4 Step 4: Configuring Voice Coders

This step describes how to configure Voice Coders. Media gateways communicate with the PAETEC environment using G.711 μ -law (Mu-Law) voice coder. This step describes how to change the default coder. The PAETEC environment also supports the G.729 coder. Therefore if you setup your account to support G.729, setup Media gateways as described in this step.

➤ **To configure the voice coder:**

1. Open the 'Coders' page (**Configuration** tab > **VoIP** menu > **Coders And Profiles** > **Coders**).

Figure 3-10: Coders Table Page



Coder Name	Packetization Time	Rate	Payload Type	Silence Suppression
G.729	20	8	18	Disabled
G.711U-law	20	64	0	Disabled
G.711A-law	20	64	8	Disabled

Submit

2. From the 'Coder Name' drop-down list, select the required coder.
3. Click **Submit**.

3.5 Step 5: Configuring SIP General Parameters

This step describes how to configure the SIP protocol related parameters.

➤ **To configure SIP General Parameters:**

1. Open the 'SIP General Parameters' page (**Configuration** tab > **VoIP** menu > **SIP Definitions** sub-menu > **General Parameters**).

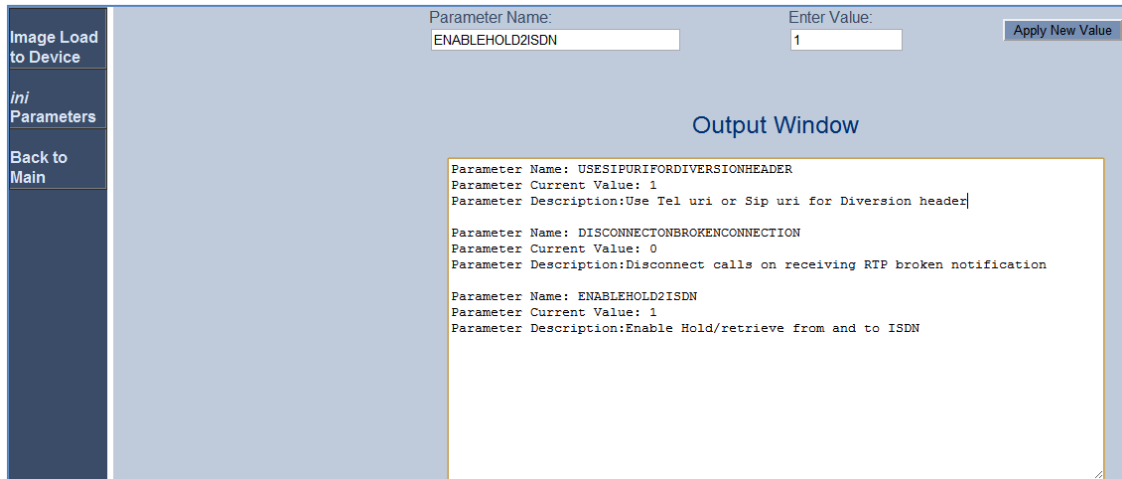
Figure 3-11: Sip General Parameters

SIP General	
NAT IP Address	0.0.0.0
PRACK Mode	Supported
Channel Select Mode	Cyclic Ascending
Enable Early Media	Enable
Session-Expires Time	180
Minimum Session-Expires	90
Session Expires Method	Re-INVITE
Asserted Identity Mode	Adding PAsserted Identity
Fax Signaling Method	No Fax
SIP Transport Type	UDP
SIP UDP Local Port	5060
SIP TCP Local Port	5060
SIP TLS Local Port	5061
Enable SIPS	Disable
Enable TCP Connection Reuse	Enable
SIP Destination Port	5060
Enable Remote Party ID	Disable
Enable History-Info Header	Disable
Play Ringback Tone to IP	Play
Play Ringback Tone to Tel	Prefer IP

2. Set Enable Early Media to **Enable**.
3. Set **Session-Expires Time** to the time that the UA refreshes the session (e.g. 180).
4. Verify that the 'Minimum Session-Expires' is set to **90**.
5. Set Asserted Identity Mode to **Adding PAsserted Identity**. This action adds the P-Asserted Identity to all calls.
6. Verify that the 'SIP Transport Type' drop-down list is set to **UDP**.
7. Verify that the 'SIP UDP Local Port' drop-down list is set to **5060**.
8. Verify that the 'SIP Destination Port' drop-down list is set to **5060**.
9. Set Play Ringback Tone to IP to **Play**.

10. Open the 'Admin' page, by appending the case-sensitive suffix 'AdminPage' to the Media gateway's IP address in your Web browser's URL field (e.g., <http://10.15.45.171/AdminPage>).
11. On the left pane, click *ini* Parameters.

Figure 3-12: INI file Output Window



12. In the 'Parameter Name' field, enter the following parameters:
 - **DISCONNECTONBROKENCONNECTION**; In the 'Enter Value' field, enter **0**.
 - **USESIPURIFORDIVERSIONHEADER**; In the Enter Value field, enter **1**.
 - **ENABLEHOLD2ISDN**; In the Enter Value field, enter **1**.
13. Click **Apply New Value**.

3.6 Step 6: Configuring Proxy and Registration Parameters

This step describes how to configure the SIP proxy server and registration parameters.

➤ **To configure the SIP proxy server and registration:**

1. Open the 'Proxy & Registration' page (**Configuration** tab > **VoIP** menu > **SIP Definitions** sub-menu > **Proxy & Registration**).

Figure 3-13: SIP Proxy and Registration

Proxy & Registration	
Use Default Proxy	Yes
Proxy Set Table	<input type="button" value="..."/>
Proxy Name	
Redundancy Mode	Parking
Proxy IP List Refresh Time	60
Enable Fallback to Routing Table	Disable
Prefer Routing Table	No
Always Use Proxy	Disable
Redundant Routing Mode	Proxy
SIP ReRouting Mode	Standard Mode
Enable Registration	Enable
Registrar Name	
Registrar IP Address	64.199.64.220
Registrar Transport Type	UDP
Registration Time	30
Re-registration Timing [%]	50
Registration Retry Time	30
Registration Time Threshold	0
Re-register On INVITE Failure	Disable
ReRegister On Connection Failure	Disable
Gateway Name	
Gateway Registration Name	
DNS Query Type	A-Record
Proxy DNS Query Type	A-Record
Number of RTX Before Hot-Swap	3
Use Gateway Name for OPTIONS	No
User Name	2814022036
Password	Default_Passwd
Cnonce	Default_Cnonce
Registration Mode	Per Gateway
Challenge Caching Mode	None
Mutual Authentication Mode	Optional

2. From the 'Use Default Proxy' drop-down list, select **Yes**.
3. In the 'Proxy Name' field, enter the PAETEC server domain name that you received from PAETEC (e.g., 'siptrunking.PAETEC.com').
4. In the 'Gateway Name' field, enter the PAETEC server domain name that you received from PAETEC (e.g., 'cust. PAETEC.com'). If one is not provided, the gateway IP address is used.
5. From the 'Use Gateway Name for OPTIONS' drop-down list, select **Yes** to display the Gateway Name in the Options message or **No** to use the Gateway IP address.

6. In the 'User Name' field, enter the PAETEC user name.
7. In the 'Password' field, enter the PAETEC password.
8. Ensure that the 'Registration Mode' is set to **Per Gateway**.

3.7 Step 7: Configuring Proxy Set Table

This step describes how to configure the default proxy set table for the PAETEC SIP trunk.

➤ **To configure Proxy Set Table:**

1. Open the 'Proxy Sets Table' page (**Configuration** tab > **VoIP** menu > **Control Network** sub-menu > **Proxy Sets Table**).

Figure 3-14: Proxy Set Table

	Proxy Address	Transport Type
1	64.199.64.220	UDP
2	64.199.64.221	UDP
3		
4		
5		

Enable Proxy Keep Alive	Using Options	
Proxy Keep Alive Time	60	
Proxy Load Balancing Method	Disable	
Is Proxy Hot Swap	Yes	

2. From the 'Proxy Set ID' drop-down list, select **0**.
3. In the 'Proxy Address' field, enter the PAETEC server FQDN or IP address (e.g., 'siptrunking.PAETEC.com'). If you received more than one FQDN or IP address, then add them as separate entries.
4. From the 'Enable Proxy Keep Alive' drop-down list, select **Using Options** to discover whether a particular PAETEC Server in the cluster is available.

3.8 Step 8: Configuring IP-to-Tel Routing Rules

This step describes how to configure IP-to-Tel routing rules.

➤ **To configure IP-to-Tel routing rules:**

1. Open the 'Inbound IP Routing Table' page (**Configuration** tab > **VoIP** menu > **Routing** sub-menu > **IP to Trunk Group Routing**).

Figure 3-15: IP-to-Tel Routing Rules

	Dest. Host Prefix	Source Host Prefix	Dest. Phone Prefix	Source Phone Prefix	Source IP Address	- > Trunk Group ID	IP Profile ID	Source IPGroup ID
1			*	*	*	1	0	-1
2								
3								
4								
5								
6								
7								
8								
9								
10								

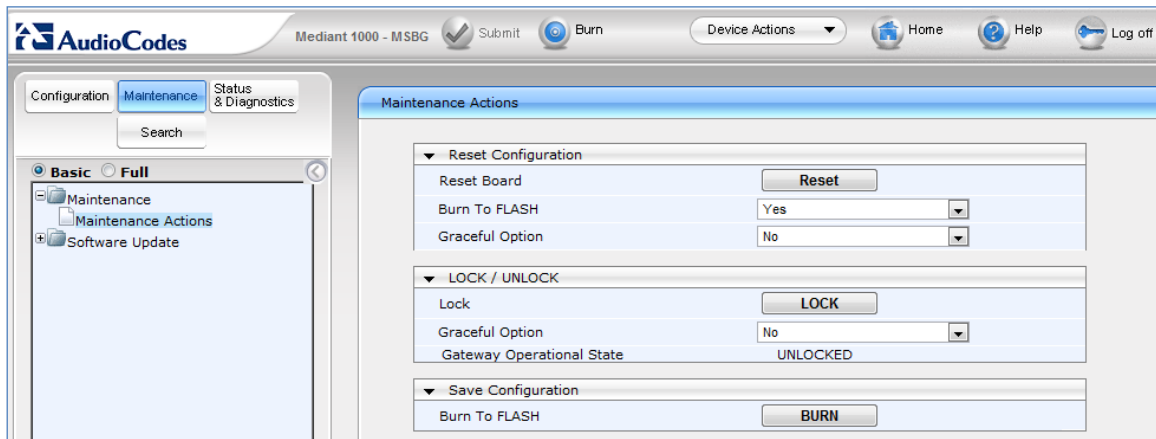
2. **Index #1** configuration identifies all IP calls (received from PAETEC SIP-Trunk) and routes them to the Trunk side:
 - 'Dest. Phone Prefix': enter the asterisk (*) symbol to indicate all destinations.
 - 'Source Phone Prefix': enter the asterisk (*) symbol to indicate all sources.
 - 'Trunk Group ID': enter "1" to indicate that these calls should route to Trunk Group number 1 (to the T1 Trunk).

3.9 Step 9: Reset the Gateway

This step describes how to reset the gateway. After you have completed the gateway configuration as described in the steps above, burn the configuration to the gateway's flash memory and reset the gateway.

- Click the **Reset** button on the Web GUI toolbar to burn the configuration to flash and reset the gateway (ensure that the 'Burn to FLASH' field is set to **Yes**).

Figure 3-16: Reset the Gateway



The screenshot displays the AudioCodes Mediant 1000 - MSBG Web GUI. The top navigation bar includes 'Submit', 'Burn', 'Device Actions', 'Home', 'Help', and 'Log off'. The left sidebar shows 'Configuration', 'Maintenance', and 'Status & Diagnostics' tabs, with a search bar and a tree view containing 'Basic', 'Full', 'Maintenance', 'Maintenance Actions', and 'Software Update'. The main content area is titled 'Maintenance Actions' and contains three sections: 'Reset Configuration' (with 'Reset Board' button, 'Burn To FLASH' dropdown set to 'Yes', and 'Graceful Option' dropdown set to 'No'), 'LOCK / UNLOCK' (with 'Lock' button, 'Graceful Option' dropdown set to 'No', and 'Gateway Operational State' set to 'UNLOCKED'), and 'Save Configuration' (with 'Burn To FLASH' button).



Note: Reset with BURN to FLASH is required.

Reader's Notes

A Appendix: AudioCodes INI file

The Media gateway device INI file is displayed below.

```

;*****
;** Ini File **
;*****

;Board: Mediant 1000
;Serial Number: 3589366
;Slot Number: 1
;Software Version: 6.20A.038.005
;DSP Software Version: 624AE3 => 620.08
;Board IP Address: 10.15.45.171
;Board Subnet Mask: 255.255.0.0
;Board Default Gateway: 10.15.45.170
;Ram size: 512M   Flash size: 64M
;Num of DSP Cores: 13   Num DSP Channels: 76
;Profile: NONE
;Key features:;Board Type: Mediant 1000; PSTN Protocols: ISDN
IUA=4 CAS ;Coders: G723 G729 GSM-FR G727 ILBC ;E1Trunks=4
;T1Trunks=4 ;IP Media: Conf VXML VoicePromptAnnounc(H248.9)
;Channel Type: RTP PCI DspCh=240 IPMediaDspCh=240 ;DSP Voice
features: EC128mSec AdditionTimeslotSummation FastSlowPlayback
BargeIn PatternDetector IpmDetector ;DATA features: Routing
FireWall&VPN WAN Advanced-Routing ;Security: IPSEC
MediaEncryption StrongEncryption EncryptControlProtocol ;Control
Protocols: MSFT MGCP MEGACO SIP SASurvivability SBC=120 ;Default
features:;Coders: G711 G726;

;----- Mediant-1000 HW components -----
;
; Slot # : Module type : # of ports : # of DSPs
;-----
;      1 : FALC56      :          2 :          3
;      2 : FXS         :          4 :          1
;      3 : Empty
;      4 : Empty
;      5 : Empty
;      6 : Empty
;-----

[SYSTEM Params]

DNSPriServerIP = 80.179.52.100
DNSSecServerIP = 80.179.55.100
SyslogServerIP = 195.189.192.133
EnableSyslog = 1
PM_VEDSPUtil = '1,68,76,15'

```

```
[BSP Params]

PCMLawSelect = 1

[Analog Params]

[ControlProtocols Params]

AdminStateLockControl = 0

[MGCP Params]

[MEGACO Params]

EP_Num_0 = 0
EP_Num_1 = 1
EP_Num_2 = 1
EP_Num_3 = 0
EP_Num_4 = 0

[PSTN Params]

ProtocolType_0 = 31
ClockMaster_0 = 0
TerminationSide_0 = 0
FramingMethod_0 = 0
LineCode_0 = 0

[SS7 Params]

[Voice Engine Params]

CallProgressTonesFilename = 'usa_tones_13.dat'

[WEB Params]

LogoWidth = '145'
HTTPSCipherString = 'RC4:EXP'

[SIP Params]

PLAYRBTONE2IP = 1
ISPROXYUSED = 1
AUTHENTICATIONMODE = 1
USESIPURIFORDIVERSIONHEADER = 1
SIPSESSIONEXPIRES = 180
ENABLEEARLYMEDIA = 1
GWDEBUGLEVEL = 5
```

```
PROXYNAME = 'siptrunking.PAETEC.com'
SIPGATEWAYNAME = 'cust.PAETEC.com'
USERNAME = '2814022036'
DISCONNECTONBROKENCONNECTION = 0
ASSERTEDIDMODE = 1
USEGATEWAYNAMEFOROPTIONS = 1
ENABLEHOLD2ISDN = 1

[SCTP Params]

[VXML Params]

[IPsec Params]

[Audio Staging Params]

[SNMP Params]

;
; *** TABLE InterfaceTable ***
;
;

[ InterfaceTable ]
FORMAT InterfaceTable_Index = InterfaceTable_ApplicationTypes,
InterfaceTable_InterfaceMode, InterfaceTable_IPAddress,
InterfaceTable_PrefixLength, InterfaceTable_Gateway,
InterfaceTable_VlanID, InterfaceTable_InterfaceName;
InterfaceTable 0 = 6, 10, 10.15.45.171, 16, 10.15.45.170, 1,
Voice;

[ \InterfaceTable ]

;
; *** TABLE DspTemplates ***
; This table contains hidden elements and will not be exposed.
; This table exists on board and will be saved during restarts
;

;
; *** TABLE TrunkGroup ***
;
;

[ TrunkGroup ]
```

```

FORMAT TrunkGroup_Index = TrunkGroup_TrunkGroupNum,
TrunkGroup_FirstTrunkId, TrunkGroup_FirstBChannel,
TrunkGroup_LastBChannel, TrunkGroup_FirstPhoneNumber,
TrunkGroup_ProfileId, TrunkGroup_LastTrunkId, TrunkGroup_Module;
TrunkGroup 0 = 1, 0, 1, 31, 1000, 0, 0, 1;

[ \TrunkGroup ]

;

;

; *** TABLE NumberMapTel2Ip ***
;
;

[ NumberMapTel2Ip ]

[ \NumberMapTel2Ip ]

;

; *** TABLE SourceNumberMapTel2Ip ***
;
;

[ SourceNumberMapTel2Ip ]

[ \SourceNumberMapTel2Ip ]

;

; *** TABLE PstnPrefix ***
;
;

[ PstnPrefix ]
FORMAT PstnPrefix_Index = PstnPrefix_DestPrefix,
PstnPrefix_TrunkGroupId, PstnPrefix_SourcePrefix,
PstnPrefix_SourceAddress, PstnPrefix_ProfileId,
PstnPrefix_SrcIPGroupID, PstnPrefix_DestHostPrefix,
PstnPrefix_SrcHostPrefix;
PstnPrefix 0 = *, 1, *, *, 0, -1, , ;

[ \PstnPrefix ]

;

;

;

;

; *** TABLE ProxyIp ***

```



```
;

[ ProxyIp ]
FORMAT ProxyIp_Index = ProxyIp_IpAddress, ProxyIp_TransportType,
ProxyIp_ProxySetId;
ProxyIp 0 = 64.199.64.220, 0, 0;

[ \ProxyIp ]

;

[ TxDtmfOption ]
FORMAT TxDtmfOption_Index = TxDtmfOption_Type;
TxDtmfOption 0 = 4;

[ \TxDtmfOption ]

;
; *** TABLE TrunkGroupSettings ***
;
;

[ TrunkGroupSettings ]
FORMAT TrunkGroupSettings_Index =
TrunkGroupSettings_TrunkGroupId,
TrunkGroupSettings_ChannelSelectMode,
TrunkGroupSettings_RegistrationMode,
TrunkGroupSettings_GatewayName, TrunkGroupSettings_ContactUser,
TrunkGroupSettings_ServingIPGroup,
TrunkGroupSettings_MWIInterrogationType;
TrunkGroupSettings 0 = 1, 0, 255, , , -1, 255;

[ \TrunkGroupSettings ]

;
; *** TABLE ProxySet ***
;
;

[ ProxySet ]
FORMAT ProxySet_Index = ProxySet_EnableProxyKeepAlive,
ProxySet_ProxyKeepAliveTime, ProxySet_ProxyLoadBalancingMethod,
ProxySet_IsProxyHotSwap, ProxySet_SRD,
ProxySet_ClassificationInput, ProxySet_ProxyRedundancyMode;
ProxySet 0 = 1, 60, 0, 0, 0, 0, -1;

[ \ProxySet ]

;
; *** TABLE RedirectNumberMapTel2Ip ***
```

```
;
; *** TABLE CodersGroup0 ***
;

[ CodersGroup0 ]
FORMAT CodersGroup0_Index = CodersGroup0_Name,
CodersGroup0_pTime, CodersGroup0_rate, CodersGroup0_PayloadType,
CodersGroup0_Sce;
CodersGroup0 0 = g711Ulaw64k, 20, 0, -1, 0;
CodersGroup0 1 = g711Alaw64k, 20, 0, -1, 0;
CodersGroup0 2 = g729, 20, 0, -1, 0;

[ \CodersGroup0 ]
;
```

Reader's Notes



Configuration Note