



3Com VCX® V6000/V6100™ VoIP Media Gateway Installation Guide

System Release 5.2



<http://www.3com.com/>

Part Number 900-0507-01 Rev AA
Published February 2008

3Com Corporation
350 Campus Drive
Marlborough, MA
01752-3064

Copyright © 2008, 3Com Corporation. All rights reserved. No part of this documentation may be reproduced in any form or by any means or used to make any derivative work (such as translation, transformation, or adaptation) without written permission from 3Com Corporation.

3Com Corporation reserves the right to revise this documentation and to make changes in content from time to time without obligation on the part of 3Com Corporation to provide notification of such revision or change.

3Com Corporation provides this documentation without warranty of any kind, either implied or expressed, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. 3Com may make improvements or changes in the product(s) and/or the program(s) described in this documentation at any time.

UNITED STATES GOVERNMENT LEGENDS:

If you are a United States government agency, then this documentation and the software described herein are provided to you subject to the following:

United States Government Legend: All technical data and computer software is commercial in nature and developed solely at private expense. Software is delivered as Commercial Computer Software as defined in DFARS 252.227-7014 (June 1995) or as a commercial item as defined in FAR 2.101(a) and as such is provided with only such rights as are provided in 3Com's standard commercial license for the Software. Technical data is provided with limited rights only as provided in DFAR 252.227-7015 (Nov 1995) or FAR 52.227-14 (June 1987), whichever is applicable. You agree not to remove or deface any portion of any legend provided on any licensed program or documentation contained in, or delivered to you in conjunction with guide.

Unless otherwise indicated, 3Com registered trademarks are registered in the United States and may or may not be registered in other countries.

3Com and the 3Com logo are registered trademarks of 3Com Corporation. VCX is a trademark of 3Com Corporation.

Other brand and product names may be registered trademarks or trademarks of their respective holders.

CONTENTS

ABOUT THIS GUIDE

| | |
|-------------------------------|---|
| How to Use This Guide | 5 |
| Conventions | 6 |
| Documentation Comments | 6 |
| Notices | 6 |
| WEEE EU Directive | 6 |
| Abbreviations and Terminology | 6 |

QUICK START

INSTALLING THE V6000/V6100 MEDIA GATEWAYS

| | |
|--------------------------|----|
| Unpacking | 12 |
| Package Contents | 12 |
| Mounting the V6000/V6100 | 12 |
| Desktop Mounting | 12 |
| 19-inch Rack Mounting | 12 |
| Cabling the V6000/V6100 | 14 |
| Protective Earthing | 14 |

CONFIGURING THE V6000/V6100 MEDIA GATEWAYS

| | |
|---|----|
| Assigning the V6000/V6100 Gateway IP Address | 17 |
| Assigning an IP Address Using HTTP | 18 |
| Assigning an IP Address Using the CLI | 19 |
| Restoring Networking Parameters to their Initial State | 19 |
| Accessing the Embedded Web Server | 20 |
| Configuring the V6000/V6100 Basic Control Protocol Parameters | 21 |
| Configuring Basic SIP Parameters | 21 |

| | |
|--|----|
| Configuring Analog Ports | 23 |
| Configuring Endpoints | 24 |
| Configuring the Internal Routing Table | 25 |
| Making Calls | 25 |
| Configuring the Trunks | 28 |

CHANGING THE V6000/V6100 MEDIA GATEWAY USERNAME AND PASSWORD

RESTORING AND BACKING UP THE V6000/V6100 MEDIA GATEWAY CONFIGURATION

MONITORING THE V6000/V6100 MEDIA GATEWAYS

| | |
|--|----|
| Monitoring the V6000/V6100 Chassis LEDs | 37 |
| Monitoring Trunks and Channels via Embedded Web Server | 39 |

UPGRADING THE V6000/V6100 MEDIA GATEWAYS

| | |
|------------------------------|----|
| Software Upgrade Wizard | 41 |
| Updating the Auxiliary Files | 46 |

REGULATORY INFORMATION

OBTAINING SUPPORT FOR YOUR 3COM PRODUCT

| | |
|------------------|----|
| Customer Support | 57 |
|------------------|----|

ABOUT THIS GUIDE

This guide describes the installation of the V6000/V6100 VoIP Media Gateways.

Information contained in this document is believed to be accurate and reliable at the time of printing. However, because of on-going product improvements and revisions, 3Com cannot guarantee the accuracy of printed material after the Date Published nor can it accept responsibility for errors or omissions. Updates to this document and other documents can be viewed by registered Technical Support customers at www.3Com.com under Support / Downloads & Drivers.



When viewing this manual electronically, all cross-references are hyperlinked. Click the link (blue and underlined) to navigate to the target location. To return to your original location, simultaneously press the ALT key and the Left Arrow key.

How to Use This Guide

This book covers these topics:

- [Chapter 1: Quick Start](#)
- [Chapter 2: Installing the V6000/V6100 Media Gateways](#)
- [Chapter 3: Configuring the V6000/V6100 Media Gateways](#)
- [Chapter 4: Changing the V6000/V6100 Media Gateway Username and Password](#)
- [Chapter 5: Restoring and Backing Up the V6000/V6100 Media Gateway Configuration](#)
- [Chapter 6: Monitoring the V6000/V6100 Media Gateways](#)
- [Chapter 7: Upgrading the V6000/V6100 Media Gateways](#)
- [Chapter 8: Regulatory Information](#)

Conventions

[Table 1](#) lists conventions that are used throughout this guide.

Table 1 Notice Icons

| Icon | Notice Type | Description |
|---|------------------|--|
|  | Information note | Information that describes important features or instructions |
|  | Caution | Information that alerts you to potential loss of data or potential damage to an application, system, or device |
|  | Warning | Information that alerts you to potential personal injury |

Documentation Comments

Your suggestions are important to us because we want to make our documentation more useful to you.

Please send e-mail comments about this guide or any of the V6000/V6100 gateway documentation and Help systems to:

VOICE_TECHCOMM_COMMENTS@3com.com

Please include the following information with your comments:

- Document title
- Document part number (usually found on the front page)
- Page number
- Your name and organization (optional)

See the Appendix [Obtaining Support for Your 3Com Product](#) for how to register your product and get support from 3Com.

Notices

WEEE EU Directive

Pursuant to the WEEE EU Directive, electronic and electrical waste must not be disposed of with unsorted waste. Please contact your local recycling authority for disposal of this product.

Abbreviations and Terminology

Each abbreviation, unless widely used, is spelled out in full when first used. Only industry-standard terms are used throughout this manual. Hexadecimal notation is indicated by 0x preceding the number.



Where **network** appears in this manual, it means LAN, WAN, etc. accessed via the gateway's Ethernet interface.

FXO (Foreign Exchange Office) is the interface replacing the analog telephone and connects to a Public Switched Telephone Network (PSTN) line from the Central Office (CO) or to a Private Branch Exchange (PBX). The FXO is designed to **receive** line voltage and ringing current, supplied from the CO or the PBX (just like an analog telephone). An FXO VoIP gateway interfaces between the CO/PBX line and the Internet.

FXS (Foreign Exchange Station) is the interface replacing the Exchange (that is, the CO or the PBX) and connects to analog telephones, dial-up modems, and fax machines. The FXS is designed to **supply** line voltage and ringing current to these telephone devices. An FXS VoIP gateway interfaces between the analog telephone devices and the Internet.



WARNING: Ensure that you connect FXS ports to analog telephone or to PBX-trunk lines only and FXO ports to Central Office (CO)/PBX lines only.

The V6000/V6100 gateways are supplied as sealed units and must be installed or serviced only by qualified service personnel.

1

QUICK START

This guide provides you with step-by-step procedures on how to quickly setup the 3Com V6000/V6100 VoIP Gateways for the first time. Prior knowledge of IP networks is recommended.

The following steps provide a quick setup flow.

- 1** Unpack the V6000/V6100 Gateways
- 2** Mount the V6000/V6100 Gateways
- 3** Cable the V6000/V6100 Gateways
- 4** Assign the V6000/V6100 Gateway IP Addresses
- 5** Configure the V6000/V6100 Gateways basic control protocol parameters
- 6** Configure the PSTN parameters

2

INSTALLING THE V6000/V6100 MEDIA GATEWAYS

This section provides information on the hardware installation procedure for the V6000/V6100 Digital Gateways.



WARNING: Electrical Shock

The equipment must be installed or serviced only by qualified service personnel.

The following main sequential steps need to be performed for installing the V6000/V6100:

- 1 Unpack the V6000/V6100 (see [Unpacking](#)).
- 2 Check the package contents (see [Package Contents](#)).
- 3 Mount the V6000/V6100 (see [Mounting the V6000/V6100](#)).
- 4 Cable the V6000/V6100 (see [Cabling the V6000/V6100](#)).

After connecting the V6000/V6100 to the power source, the Power LED on the front panel of the power supply unit is lit green (after a self-testing period of about two minutes). Any power supply malfunction results in the LED switching off (see [Monitoring the V6000/V6100 Chassis LEDs](#) for details on the V6000/V6100 LEDs).

Once you have completed these hardware installation steps, you can begin configuring the gateway (see [Configuring the V6000/V6100 Media Gateways](#)).

Unpacking

Follow the procedure below for unpacking the box in which the V6000/V6100 is delivered.

To unpack the V6000/V6100, perform these steps:

- 1 Open the carton and remove packing materials.
- 2 Remove the V6000/V6100 unit from the carton.
- 3 Check that there is no equipment damage.
- 4 Check, retain, and process any documents.
- 5 Notify 3Com or your local supplier of any damage or discrepancies.

Package Contents

Ensure that in addition to the V6000/V6100 unit, the package contains the following items:

- One or two AC power cables
- Four anti-slide bumpers (supplied in a small plastic bag) for desktop mounting
- CD (software and documentation)
- Two meter RS-232 DB9 adaptor cable (for direct connection to PC)
- Lifeline RJ-11 adaptor cable (only supplied with FXS I/O analog modules)
- This V6000/V6100 Fast Track Guide

Mounting the V6000/V6100

The V6000/V6100 can be mounted on a desktop or installed in a standard 19-inch rack.

Desktop Mounting

For desktop mounting, attach the four self-adhesive, anti-slide bumpers (supplied) to the underside of the V6000/V6100 and place it on the desktop in the desired position. (The integral front brackets are not used for desktop mounting.)

19-inch Rack Mounting

You can install the V6000/V6100 in a standard 19-inch rack either by placing it on a shelf pre-installed in the rack (preferred method), or by attaching it directly to the rack's frame. If the rack is without shelves, it is advised to acquire shelves. Mounting the V6000/V6100 in a rack without shelves requires you to directly attach the V6000/V6100 integral front

brackets and the user-adapted rear brackets (not supplied) to the rack's frame.



If you are assembling the rear brackets, note the following:

- *The distance between the screws on each bracket is 28 mm.*
- *To attach the brackets, use 4-40 screws with a maximal box penetration length of 3.5 mm.*

To place the V6000/V6100 on a 19-inch rack's shelf, perform these steps:

- 1 Place the V6000/V6100 on a pre-installed shelf.
- 2 It's recommended to attach the V6000/V6100 integral front brackets to the rack frame to prevent it from sliding off the shelf during cabling. Use standard 19-inch rack bolts (not provided) to fasten the front of the V6000/V6100 to the frame of the rack.

To install the V6000/V6100 in a rack without shelves, perform these steps:

- 1 Position the V6000/V6100 in a 19-inch rack and align the front and rear bracket holes to the desired holes in the vertical tracks of the 19-inch rack.
- 2 Use standard 19-inch rack bolts (not provided) to fasten the brackets to the rack frame.



CAUTION: *Rack Mount Safety Instructions (UL)*

When installing the chassis in a rack, be sure to implement the following safety instructions recommended by Underwriters Laboratories:

- **Elevated Operating Ambient Temperature:** *If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient temperature. Therefore, consideration should be given to installing the equipment in an environment compatible with the maximum ambient temperature (T_{ma}) specified by the manufacturer.*
- **Reduced Air Flow:** *Installation of the equipment in a rack should be such that the amount of air flow required for safe operation on the equipment is not compromised.*
- **Mechanical Loading:** *Mounting of the equipment in the rack should be such that a hazardous condition is not achieved due to uneven mechanical loading.*

- **Circuit Overloading:** Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of the circuits might have on overcurrent protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.
- **Reliable Earthing:** Reliable earthing of rack-mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit (e.g., use of power strips.)

Cabling the V6000/V6100

Protective Earthing

The equipment is classified as Class I EN60950 and UL60950 and must be earthed at all times. Units providing power sockets with three pins must be connected by service personnel to a socket-outlet with a protective earthing connection.

To cable the V6000/V6100, perform these steps:

- 1 The V6000/V6100 must be permanently earthed using an equipment-earthing conductor. Connect an electrically earthed strap of 16 AWG wire (minimum) to the chassis earthing screw (located on the rear panel) using the supplied washer. The connection to the protective earthing must be in accordance with the regulations enforced in the country of installation.
- 2 For V6000/V6100 digital interfaces: Connect the E1/T1 trunk cables to the RJ-48c ports on the I/O module(s). Connect the other ends of the trunk cables to your PBX/PSTN switch.



WARNING: To protect against electrical shock and fire, use a 26 AWG min wire to connect T1 or E1 ports to the PSTN.

Figure 1 RJ-48c Trunk Connector Pinouts

RJ-48c Connector and Pinout



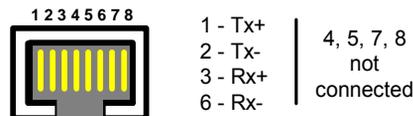
- 3 For V6000/V6100 analog interfaces (applicable only to SIP): Connect the RJ-11 connectors of the analog FXS module/s to fax machines, modems, or telephones. Connect the RJ-11 connectors of the analog FXO module/s to telephone exchange analog lines or PBX extensions. Ensure that FXS and FXO are connected to the correct external devices, otherwise damage can occur.

Figure 2 RJ-11 Telephone Connector Pinouts



- 4 Connect the first Ethernet connection (labeled I), located on the CPU module of the V6000/V6100 front panel, directly to the network using a standard RJ-45 Ethernet cable (and the second connection as optional redundancy / backup). For the connector pinouts, see the figure below.

Figure 3 RJ-45 Ethernet Connector Pinouts



Notes:

- For redundancy, it is recommended to connect each of the Ethernet connectors to a different switch.
 - When assigning an IP address to the V6000/V6100 using HTTP (see [Assigning an IP Address Using HTTP](#)), you may be required to disconnect this cable and re-cable it differently.
- 5 Using the supplied RS-232 cable, connect the V6000/V6100 RS-232 port (labeled IOIO) to either the COM1 or COM2 RS-232 communication port on your PC. Using the RS-232 port is optional.
- 6 If you want to set up a dry contact system, contact 3Com.
- 7 Connect the left (active) 100-240V~50-60 Hz power socket to the mains using the supplied cord.

3

CONFIGURING THE V6000/V6100 MEDIA GATEWAYS

The V6000/V6100 gateways are supplied with application software already resident in flash memory (with factory default 3Com parameters).

[Assigning the V6000/V6100 Gateway IP Address](#) describes how to assign an IP address to the V6000/V6100. [Configuring the V6000/V6100 Basic Control Protocol Parameters](#) describes how to set up the V6000/V6100 with basic parameters using a standard Web browser (such as Microsoft™ Internet Explorer, version 6.0 or later or Mozilla Firefox, version 2.0 or later).

Assigning the V6000/V6100 Gateway IP Address

To assign an IP address to the V6000/V6100 Gateway use one of the following methods:

- HTTP using a Web browser (see [Assigning an IP Address Using HTTP](#))
- The embedded Command Line Interface (CLI) accessed using Telnet (see [Assigning an IP Address Using the CLI](#))
- DHCP (contact 3Com)

Use the Reset button at any time to restore the V6000/V6100 networking parameters to their factory default values (see [Restoring Networking Parameters to their Initial State](#)).

Table 2 V6000/V6100 Default Networking Parameters

| Parameter | Default Value |
|----------------------------|---------------|
| IP Address | 10.1.10.10 |
| Subnet Mask | 255.255.0.0 |
| Default Gateway IP address | 0.0.0.0 |

Assigning an IP Address Using HTTP

To assign an IP address using HTTP, perform these steps:

- 1 Disconnect the V6000/V6100 from the network and reconnect it to your PC using one of the following two methods:
 - Use a standard Ethernet cable to connect the network interface on your PC to a port on a network hub / switch. Use a second standard Ethernet cable to connect the V6000/V6100 to another port on the same network hub / switch.

OR

 - Use an Ethernet cross-over cable to directly connect the network interface on your PC to the V6000/V6100.
- 2 Change your PC's IP address and subnet mask to correspond with the V6000/V6100 factory default IP address and subnet mask (listed in [Table 2](#)). For details on changing the IP address and subnet mask of your PC, see Windows™ Online Help (Start > Help).
- 3 Access the V6000/V6100 Embedded Web Server (see [Accessing the Embedded Web Server](#)).
- 4 In the Quick Setup screen (Quick Setup menu), configure the V6000/V6100 IP Address, Subnet Mask, and Default Gateway IP Address fields under IP Configuration to correspond with your network IP settings.
- 5 Click the Reset Device button, and then at the prompt, click OK; the V6000/V6100 applies the changes and restarts.



Record and retain the IP address and subnet mask you assign the V6000/V6100. Do the same when defining new username or password. If the Embedded Web Server is unavailable (for example, if you've lost your username and password), use the BootP/TFTP configuration utility to access the device, "reflash" the load and reset the password.

- 6 Disconnect your PC from the V6000/V6100 or from the hub / switch (depending on the connection method you used in [step 1](#)).
- 7 Reconnect the V6000/V6100 and your PC (if required) to the network.
- 8 Restore your PC's IP address and subnet mask to their original settings. If necessary, restart your PC and re-access the V6000/V6100 via the Embedded Web Server with its new assigned IP address.

Assigning an IP Address Using the CLI

To assign an IP address using the CLI, perform these steps:

- 1 Enable the Embedded Telnet Server by performing the following:
 - a Access the V6000/V6100 Embedded Web Server (see [Accessing the Embedded Web Server](#)).
 - b Set the parameter Embedded Telnet Server (under Advanced Configuration > Network Settings > Application Settings) to Enable (Unsecured).
 - c On the main menu bar, click the Maintenance button; the **Maintenance Actions** screen appears. From the **Burn to FLASH** drop-down list, select **Yes**, and then click the **Reset** button; the V6000/V6100 is shut down and re-activated. A message about the waiting period appears. The screen is refreshed.
- 2 Use a standard Telnet application to connect to the V6000/V6100 Embedded Telnet Server.
- 3 Login using the username (Admin) and password (Admin).
- 4 At the prompt type `conf`, and then press Enter; the configuration folder is accessed.
- 5 To check the current network parameters, at the prompt, type `GCP IP`, and then press Enter; the current network settings are displayed.
- 6 Change the network settings by typing: `SCP IP [ip_address] [subnet_mask] [default_gateway]` (e.g., `SCP IP 10.13.77.7 255.255.0.0 10.13.0.1`); the new settings take effect immediately. Connectivity is active at the new IP address.



This command requires you to enter all three network parameters (each separated by a space).

- 7 To save the configuration, at the prompt, type `save`, and then press Enter; the V6000/V6100 restarts with the new network settings.

Restoring Networking Parameters to their Initial State

You can use the **Reset** button located on the V6000/V6100 chassis to restore the V6000/V6100 networking parameters to their factory default values (listed in [Table 2](#)) and to reset the case-sensitive username and password.

The V6000/V6100 returns to the software version burned in flash. Therefore, you must load your previously backed-up ini file or the default ini file (received with the software kit) to set them to their correct values.

To restore networking parameters to their initial state, perform these steps:

- 1 Press in the Reset button uninterruptedly for a duration of more than six seconds; the gateway is restored to its factory settings (username: Admin, password: Admin).
- 2 Assign the V6000/V6100 an IP address (see [Assigning the V6000/V6100 Gateway IP Address](#) on [page 17](#)).
- 3 Load your previously backed-up ini file or the default ini file (received with the software kit). To load the ini file via the Embedded Web Server, see [Accessing the Embedded Web Server](#).

Accessing the Embedded Web Server

To access the Embedded Web Server, perform these steps:

- 1 Open a standard Web-browsing application such as Microsoft™ Internet Explorer™ (Version 6.0 and higher) or Netscape™ Navigator™ (Version 7.2 and higher).
- 2 In the URL field, specify the IP address of the gateway (e.g., <http://10.1.10.10>); the Embedded Web Server's Enter Network Password screen appears (see [Figure 4](#)).

Figure 4 Enter Network Password Screen



- 3 Enter the username (default: Admin), and password (default: Admin). Note that the User Name and Password fields are case-sensitive.
- 4 Click **OK**. The Home page appears.

Configuring the V6000/V6100 Basic Control Protocol Parameters

To configure the V6000/V6100 basic control protocol parameters use the Embedded Web Server’s Quick Setup screen.

Once the gateway is configured correctly, back up your settings by saving a copy of the VoIP gateway configuration (ini file) in a directory on your PC. This saved file can be used to restore configuration settings at a future time. For information on backing up and restoring the gateway’s configuration see [Restoring and Backing Up the V6000/V6100 Media Gateway Configuration](#).

Configuring Basic SIP Parameters

The basic SIP parameters are configured in the Quick Setup screen, as displayed below.

Figure 5 V6000/V6100 SIP Quick Setup Screen

| Quick Setup | |
|----------------------------|--|
| IP Configuration | |
| IP Address | <input type="text" value="10.4.4.113"/> |
| NAT IP Address | <input type="text" value="0.0.0.0"/> |
| Subnet Mask | <input type="text" value="255.255.0.0"/> |
| Default Gateway IP Address | <input type="text" value="10.4.0.1"/> |
| SIP Parameters | |
| Gateway Name | <input type="text"/> |
| Working with Proxy | <input type="text" value="No"/> |
| Proxy IP Address | <input type="text" value="0.0.0.0"/> |
| Proxy Name | <input type="text"/> |
| Enable Registration | <input type="text" value="Disable"/> |
| Tables | |
| Coders Table | <input type="button" value="-->"/> |
| Tel to IP Routing Table | <input type="button" value="-->"/> |
| Trunk Group Table | <input type="button" value="-->"/> |

To configure basic SIP parameters, perform these steps:

- 1 Access the Quick Setup screen, by clicking the **Quick Setup** menu (see [Figure 5](#)).
- 2 If the V6000/V6100 is connected to a router with NAT enabled, perform the following procedure (if it isn't, leave the NAT IP Address field undefined):
 - a Determine the public IP address assigned to the router (by using, for instance, router Web management). Enter this public IP address in the NAT IP Address field.
 - b Enable the DMZ configuration on the residential router for the LAN port where the V6000/V6100 gateway is connected. This enables unknown packets to be routed to the DMZ port.
- 3 Under **SIP Parameters**, enter the V6000/V6100 domain name in the field Gateway Name. If the field is not specified, the V6000/V6100 IP address is used instead (default).
- 4 When working with a Proxy server, set **Working with Proxy** field to **Yes**, and then enter the IP address of the primary Proxy server in the field Proxy IP address. When no Proxy is used, the internal routing table is used to route the calls.
- 5 In the field **Proxy Name**, enter the Proxy name. If Proxy name is used, it replaces the Proxy IP address in all SIP messages. This means that messages are still sent to the physical Proxy IP address, but the SIP URI contains the Proxy name instead.
- 6 Configure **Enable Registration** to Yes or No:
 - **Disable:** The V6000/V6100 does not register to a Proxy server/Registrar (default).
 - **Enable:** The V6000/V6100 registers to a Proxy server/Registrar at power up and every Registration Time seconds.
- 7 Select the coder (i.e., vocoder) that best suits your VoIP system requirements. The default coder is G.723.1 30 msec. To configure the entire list of coders you want the V6000/V6100 to use, contact 3Com.
- 8 Map outgoing calls to IP addresses (when Proxy isn't used) by completing these steps:
 - a Click the arrow button next to the **Tel to IP Routing Table** label; the Tel to IP Routing screen opens. Any telephone number whose destination number matches the prefix defined in the **Destination Phone Prefix** field and whose source number matches the prefix

defined in the adjacent **Source Phone Prefix** field is sent to the IP address entered in the IP Address field.

- b** Click the **Submit** button; the Tel to IP Routing table is automatically updated.
- c** Click **Quick Setup**; the Quick Setup screen opens.

For more information on the Tel to IP Routing table contact 3Com.

- 9** Enable E1/T1 B-channels (applicable only for V6000/V6100 digital interfaces) by performing the following:
 - a** Click the arrow button next to the **Trunk Group Table** label; the Trunk Group Table screen opens.
 - b** From the **Trunk ID** drop-down list, select the number of the trunk you want to enable.
 - c** In the **Channels** field, enter the number of B-channels you want to enable.
 - d** In the adjacent **Phone Number** field, enter the starting phone number (these are virtual numbers, used only to define enabled B channels).
 - e** Click the **Submit** button; the **Trunk Group Table** table is automatically updated.
 - f** Click **Quick Setup**; the Quick Setup screen opens.
- 10** Click the **Reset** button, and then at the prompt, click **OK**; the V6000/V6100 applies the changes and restarts.
- 11** After the gateway is reset, configure the V6000/V6100 analog ports (see [Configuring Analog Ports](#)) and / or V6000/V6100 trunk parameters (see [Configuring the Trunks](#)).

Configuring Analog Ports

This section provides a configuration example for analog ports in a V6000/V6100 implementing an FXS and FXO module.

Configuring Endpoints

To configure the V6000/V6100 analog ports, perform these steps:

- 1 Open the **Trunk Group Table** screen (**Protocol Management menu > Trunk Group**).

Figure 6 Trunk Group Table Screen

| Trunk Group Table | | | | | | | |
|-------------------|--------------|------------|----------|----------|--------------|----------------|------------|
| Trunk Group Index | | | | | | 1-12 | |
| Group Index | Module | From Trunk | To Trunk | Channels | Phone Number | Trunk Group ID | Profile ID |
| 1 | Module 2 FXS | | | 1-4 | 101 | | |
| 2 | Module 1 FXO | | | 1-4 | 201 | | |

- 2 From the **Module** drop-down list, select **Module 2 FXS**, and then define 1-4 under column Channel(s) and the first phone number, for example, 101, corresponding to channel 1, under column Phone Number. The phone numbers 102, 103, and 104 are automatically assigned (in sequence) to the subsequent channels.
- 3 From the **Module** drop-down list, select **Module 1 FXO**, and then define 1-4 under column Channel(s) and the first phone number under column Phone Number, for example, 201, corresponding to channel 1, under column Phone Number. The phone numbers 202, 203, and 204 are automatically assigned (in sequence) to subsequent channels.
- 4 Click **Submit**.

Configuring the Internal Routing Table

To configure internal routing, perform these steps:

- 1 In the **Quick Setup** screen, click the button adjacent to the label **Tel to IP Routing Table**; the Tel to IP Routing screen opens.

Figure 7 Tel to IP Routing Screen

| Tel to IP Routing | | | | | |
|------------------------|--------------------|---------------------|------------------|------------|---------------------------------|
| Routing Index | | | | | 1-10 |
| Tel to IP Routing Mode | | | | | Route calls before manipulation |
| | Dest. Phone Prefix | Source Phone Prefix | Dest. IP Address | Profile ID | Status |
| 1 | 10 | * | 10.33.24.14 | | |
| 2 | 20 | * | 10.33.24.14 | | |

- 2 In Row 1, for **Dest. Phone Prefix** field, enter 10. In the **Source Phone Prefix** field, enter an asterisk (*). In the **Dest. IP Address** field, enter the IP address you assigned the V6000/V6100; every call whose destination number starts with 10 is routed to the V6000/V6100.
- 3 Repeat [step 2](#) for the Row 2, but instead enter 20 in the **Dest. Phone Prefix field**; every call whose destination number starts with 20 is routed to the V6000/V6100.
- 4 Click the **Submit** button.

Making Calls Making an FXS-to-FXS Call

The following setup requires two telephones (A and B) and two RJ-11 cables, using the settings from the example shown in [Figure 6](#).

To make an FXS-to-FXS call, perform these steps:

- 1 Connect the RJ-11 cable of telephone A to Port 1 of module 1 (where module 1 is an FXS module). Connect the RJ-11 cable of telephone B to Port 2 of the same module (module 1).
- 2 Offhook the receiver of telephone A (whose number you defined as 101), and then dial 102 (the automatically defined number of port 2); telephone B, which is connected to port 2, rings.
- 3 Offhook telephone B and test the line for voice.

Making an FXS-to-FXO Call

The following setup requires two telephones (A and B) and three RJ-11 cables, using the settings from the example shown in [Figure 6](#).

To make an FXS-to-FXO call, perform these steps:

- 1 Connect telephone A to Port 1 of module 1 (where module 1 is an FXS module).
- 2 Using an RJ-11 cable, connect Port 2 of module 1 to Port 1 of module 2 (where module 2 is the FXO module).
- 3 Connect telephone B to Port 3 of module 1.
- 4 Offhook telephone A, and then dial 201 (Port 1 of module 2 - FXO); you'll receive a dial tone. This dial tone is the equivalent of the PBX's dial tone.
- 5 Dial 103 (the number configured for telephone B connected to Port 3 of module 1 - FXS); telephone B rings (the FXO module's Port 1 outputs digits).
- 6 Offhook telephone B and test the line for voice.

Making a V6000/V6100 to MP-104 FXS Call

The following setup requires two telephones (A and B), two RJ-11 cables, and an MP-104 gateway. Note that the V6000/V6100 and the MP-104 must be in the same subnet.

To make a V6000/V6100 to V7111 FXS call, perform these steps:

- 1 In the V6000/V6100 **Tel to IP Routing Table**, in Row 3, in the **Dest. Phone Prefix** field, enter 30. In the **Source Phone Prefix** field, enter an asterisk wildcard (*). In the **Dest. IP Address** field, enter the IP address of

the V7111 FXS module; every call whose destination number starts with 30 is routed to the V7111 FXS.

Figure 8 V6000/V6100 Tel to IP Routing Screen

| Tel to IP Routing | | | | | |
|------------------------|--------------------|---------------------|------------------|------------|---------------------------------|
| Routing Index | | | | | 1-10 |
| Tel to IP Routing Mode | | | | | Route calls before manipulation |
| | Dest. Phone Prefix | Source Phone Prefix | Dest. IP Address | Profile ID | Status |
| 1 | 10 | * | 10.33.24.14 | | |
| 2 | 20 | * | 10.33.24.14 | | |
| 3 | 30 | * | 10.13.77.7 | | |

- In the V7111 4-port FXS **Endpoint Phone Number Table** screen, in Row 1, in the Channel(s) field, enter 1-4, and the first phone number, for example, 301, corresponding to channel 1, in the **Phone Number** field (shown in [Figure 6](#)). The phone numbers 302, 303, and 304 are automatically assigned (in sequence) to corresponding channels.

Figure 9 MP-104 Endpoint Phone Number Table Screen

| Endpoint Phone Number Table | | | | |
|-----------------------------|------------|--------------|---------------|------------|
| | Channel(s) | Phone Number | Hunt Group ID | Profile ID |
| 1 | 1-4 | 301 | | 0 |
| 2 | | | | |

- Connect the RJ-11 cable of telephone A to Port 1 of module 1 (where module 1 is an FXS module) on the V6000/V6100. Connect the RJ-11 cable of telephone B to Port 1 on the V7111 4-port FXS gateway.
- Offhook the receiver of telephone A (whose number you defined as 101), and then dial 301; telephone B connected to the V7111 FXS rings.
- Offhook telephone B and test the line for voice.



To make a call from telephone B on the V7111 4-port FXS module to telephone A on the V6000/V6100, you must define the internal routing table on the V7111 4-port FXS module.

Configuring the Trunks

To configure the trunks, perform these steps:

- 1 Access the Embedded Web Server (see [Accessing the Embedded Web Server](#)).
- 2 Open the **Trunk Settings** screen (**Advanced Configuration menu > Trunk Settings**); the screen parameter fields are grayed (indicating read-only), and the **Stop Trunk** button appears at the bottom of the screen (indicating that the trunk is currently active). [Table 3](#) describes the Trunk Status icons.

Figure 10 Trunk Settings Screen

The screenshot shows the 'Trunk Settings' screen. At the top, there is a 'Trunk Number' dropdown menu with options 1, 2, 3, and 4. Below it is a 'Trunk Status' indicator showing four green icons. The main content area is titled 'Trunk Settings' and contains a table of configuration parameters:

| Trunk Configuration | |
|---------------------------|----------------------|
| Module ID | 1 |
| Trunk ID | 4 |
| Trunk Configuration State | Active |
| Protocol Type | E1 EURO ISDN |
| Clock Master | Recovered |
| Auto Clock Trunk Priority | 0 |
| Line Code | HDB3 |
| Line Build Out Loss | 0 dB |
| Trace Level | No Trace |
| Line Build Out Overwrite | OFF |
| Framing Method | Extended Super Frame |

Table 3 Trunks Status Color-Code Description

| Indicator | Color | Description |
|-----------|--------|-----------------------------|
| | Gray | Disabled |
| | Green | Active-OK |
| | Yellow | RAI Alarm |
| | Red | LOS/LOF Alarm |
| | Blue | AIS Alarm |
| | Orange | D-channel Alarm (ISDN only) |

- 3 Select the trunk you want to configure by clicking the **Trunk Status** icon pertaining to the trunk. The read-only **Trunk ID** field displays the trunk number that you selected. The parameters displayed in the screen pertain to the selected trunk only.
- 4 Click the **Stop Trunk** button (unless modifying a Dial Plan -- see the note below); the trunk is stopped. This is indicated by the following:
 - The **Trunk Configuration State** read-only 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.)
 - The parameters are no longer grayed and can now be modified.



Note:

- *If the trunk protocol type is CAS (displayed in the 'Protocol Type' field), you can apply or modify a dial plan (in the 'Dial Plan' field) without stopping the trunk. Modifying the dial plan replaces the Stop Trunk with the Apply Dial Plan button.*
 - *If the trunk can't be stopped because it provides the gateway's clock (assuming the gateway is synchronized with the E1/T1 clock), assign a different E1/T1 trunk to provide the gateway's clock or enable TDM Bus PSTN Auto Clock in the 'TDM Bus Settings' screen.*
 - *To assign a different E1/T1 trunk that provides the gateway's clock, access the TDM Bus Setting screen (Configuring the TDM Bus Settings' on page 232) and change the TDM Bus Local Reference number to any other trunk number (this operation can be performed on-the-fly).*
- 5 From the Protocol Type drop-down list, select the required protocol. Different trunks can be defined with different protocols (CAS or ISDN variants) on the same gateway (subject to the constraints in the V6000/V6100 Release Notes).



When modifying the Protocol Type field, the available parameters are automatically updated according to the selected protocol.

- 6 From the **Framing Method** drop-down list, select the required Framing method (for E1 trunks, always set the **Framing Method** to **Extended Super Frame**).
- 7 From the **Clock Master** drop-down list, select the trunk clock source. Choose either **Recovered** (the clock is recovered from the trunk -- default) or **Generated** (the trunk's clock source is provided by the internal TDM bus clock source, according to the parameter TDM Bus

Clock Source). For detailed information on the parameter TDM Bus Clock Source, contact 3Com.

- 8 From the **Line Code** drop-down list, select the required Line Code: B8ZS (bipolar 8-zero substitution) for T1; HDB3 (high-density bipolar 3) for E1; or AMI (for both T1 and E1).
- 9 From the **ISDN Termination Side** drop-down list (only for ISDN protocols), select **User Side** when PSTN or PBX side is configured as Network side and vice versa. If the V6000/V6100 ISDN termination side is unknown, choose User Side, and then open the **Alarms** screen (by clicking the **Home** button). If the D-channel alarm is indicated, choose **Network Side**.
- 10 To configure the different behavior bits, enter the exact hexadecimal bits value in the field to the right of the relevant behavior parameter, or directly configure each bit field by performing the following:
 - a Click the arrow button (-->) to the right of the relevant behavior parameter.
 - b Modify each bit field according to your requirements.
 - c Click the **Submit** button to save your changes.
- 11 After modifying the parameters:
 - To apply the changes to the selected trunk only, click the **Apply Trunk Settings** button.
 - To apply the changes to all the trunks, click the **Apply to all Trunks** button.

The screen is refreshed and parameters become read-only (indicated by being grayed). The **Stop Trunk** button appears at the bottom of the screen.

- 12 Access the TDM Bus Settings screen (Advanced Configuration > TDM Bus Settings). From the PCM Law Select drop-down list, select Alaw for E1 and MuLaw for T1 trunks.
- 13 To save the changes so they are available after a power fail, perform the following:
 - a On the main menu bar, click the **Maintenance** button; the **Maintenance Actions** screen appears.
 - b From the **Burn to FLASH** drop-down list, select **Yes**, and then click the **Reset** button; a confirmation message appears when the save is complete.

For detailed information on configuring V6000/V6100 trunks, contact 3Com.

4

CHANGING THE V6000/V6100 MEDIA GATEWAY USERNAME AND PASSWORD

To prevent unauthorized access to the Embedded Web Server, two user accounts are available: a primary and secondary. For detailed information on the user account mechanism, contact 3Com.

It is recommended that you change the default username and password of the account you use to access the Embedded Web Server.

To change the username and password, perform these steps:

- 1 Open the **Web User Accounts** screen (**Advanced Configuration menu > Security Settings > Web User Accounts** option); the **Web User Accounts** screen is displayed. See [Figure 11](#).

Figure 11 Web User Accounts Screen

| Web User Accounts | | |
|--|---|--|
| Current Logged User: Admin | | |
| Account Data for User: Admin | | |
| User Name | <input type="text" value="Admin"/> | <input type="button" value="Change User Name"/> |
| Access Level | <input type="text" value="Security Administrator"/> | |
| Fill in the following 3 fields to change the password | | |
| Current Password | <input type="text"/> | |
| New Password | <input type="text"/> | |
| Confirm New Password | <input type="text"/> | <input type="button" value="Change Password"/> |
| Account Data for User: User | | |
| User Name | <input type="text" value="User"/> | <input type="button" value="Change User Name"/> |
| Access Level | <input type="text" value="Administrator"/> | <input type="button" value="Change Access Level"/> |
| Fill in the following 3 fields to change the password | | |
| Current Password | <input type="text"/> | |
| New Password | <input type="text"/> | |
| Confirm New Password | <input type="text"/> | <input type="button" value="Change Password"/> |

- 2 To change the username of an account, enter the new username in the field **User Name** and click the button **Change User Name**; the new username is applied immediately and the **Enter Network Password** screen appears (see [Figure 4](#)). Enter the updated username in the **Enter Network Password** screen. Note that the username can be a maximum of 19 case-sensitive characters.
- 3 To change the password of an account, enter the current password in the field **Current Password**, the new password in the fields **New Password** and **Confirm New Password** and click the button **Change Password**; the new password is applied immediately and the **Enter Network Password** screen appears (see [Figure 4](#)). Enter the updated password in the **Enter Network Password** screen. Note that the password can be a maximum of 19 case-sensitive characters.

5

RESTORING AND BACKING UP THE V6000/V6100 MEDIA GATEWAY CONFIGURATION

The 'Configuration File' screen enables you to restore (load a new **ini** file to the gateway), or back up (save the VoIP gateway **ini** file in a directory on your PC) the current gateway configuration. For information on the ini file, see [Table 8](#).

Back up your configuration if you want to protect your VoIP gateway configuration. The backup **ini** file includes only those parameters that were modified and contain other than default values.

Restore your configuration if the VoIP gateway has been replaced or has lost its configuration. You can restore the VoIP gateway configuration from a previous backup or from a newly created **ini** file. To restore the VoIP gateway configuration from a previous backup you must have a backup of the VoIP gateway configuration stored on your PC.

To restore or back up the **ini** file, open the **Configuration File** screen (**Advanced Configuration menu > Configuration File**); the Configuration File screen appears. See [Figure 12](#).

Figure 12 Configuration File Screen

The screenshot shows a web interface titled "Configuration File". It has a dark blue header with the title in white. Below the header, there are two main sections. The first section is titled "Get the ini file from the device to your computer" and contains a single blue button labeled "Get ini File". The second section is titled "Send the ini file from your computer to the device" and contains a text input field, a "Browse..." button, and a blue button labeled "Send ini File". At the bottom of the interface, there is a note: "The device will perform a 'Reset' after sending the ini file".

To back up the ini file, perform these steps:

- 1 Click the **Get ini File** button; the **File Download** window opens.
- 2 Click the **Save** button; the **Save As** window opens.
- 3 Navigate to the folder where you want to save the **ini** file.
- 4 Click the **Save** button; the VoIP gateway copies the ini file to the folder you selected.

To restore the ini file, perform these steps:

- 1 Click the **Browse** button.
- 2 Navigate to the folder that contains the **ini** file you want to load.
- 3 Select the file, and then click **Open**; the name and path of the file appear in the field beside the **Browse** button.
- 4 Click the **Send ini File** button, and then at the prompt, click **OK**; the gateway is automatically reset (from the **cmp** version stored on the flash memory).

6

MONITORING THE V6000/V6100 MEDIA GATEWAYS

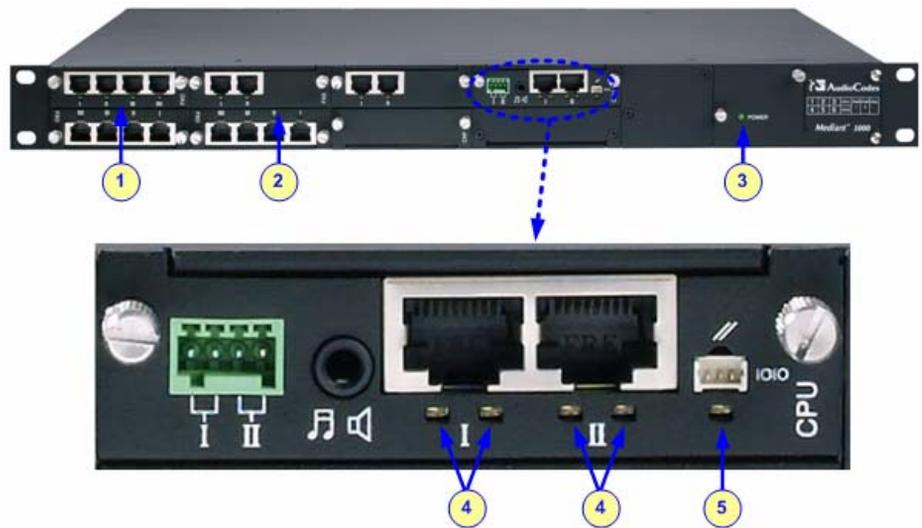
The V6000/V6100 provides several ways for monitoring the status of the gateway:

- [Monitoring the V6000/V6100 Chassis LEDs](#)
- [Monitoring Trunks and Channels via Embedded Web Server](#)

Monitoring the V6000/V6100 Chassis LEDs

The next figure shows the location of the front panel LEDs on the V6000/V6100 chassis.

Figure 13 Location of Front Panel LEDs



The V6000/V6100 LEDs are described in [Table 4](#), [Table 5](#), and [Table 6](#).

Table 4 Analog I/O Modules LEDs Description (Only SIP)

| LED | Item | Color | State | Description |
|-------|------|-------|----------|--|
| RJ-11 | 1 | Green | On | FXS phone is offhooked or FXO offhooks the line toward the PBX. |
| | | | Blinking | FXS rings the extension line or the FXO detects a ring signal from the PBX |
| | | Red | On | Error (line is malfunctioning) |

Table 5 Digital I/O Modules LED Description

| LED | Item | Color | State | Description |
|--------|------|-------|-------|---|
| RJ-48c | 2 | Green | On | Trunk is synchronized (normal operation) |
| | | Red | On | Loss due to any of the following 4 signals: <ul style="list-style-type: none"> ■ LOS - Loss of Signal ■ LOF - Loss of Frame ■ AIS - Alarm Indication Signal (the Blue Alarm) ■ RAI - Remote Alarm Indication (the Yellow Alarm) |
| | | -- | Off | Failure / disruption in AC power supply or power is not being supplied to the V6000/V6100 through the AC power supply entry |
| POWER | 3 | Green | On | LED of each AC power supply is lit green when the power supply is operating correctly. |
| | | -- | Off | Failure / disruption in AC supply or power is currently not being supplied to the V6000/V6100 through AC power supply entry. |

Table 6 CPU Module LEDs Description

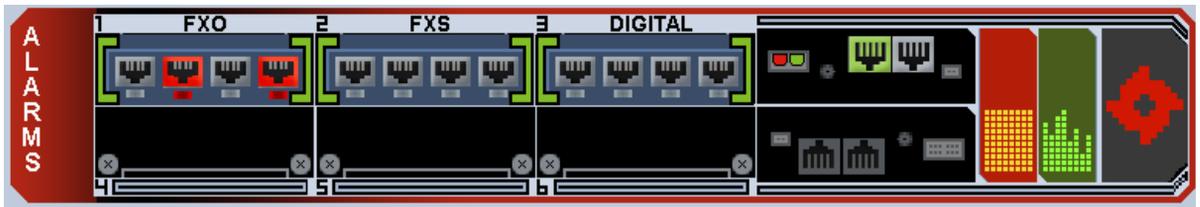
| LED | Item | Color | State | LED Indication |
|-----------------------|---------------|--------|----------|------------------------|
| Ethernet Ports 1 & II | 4 (left LED) | Orange | Blinking | Activity |
| | | Green | On | Link OK |
| | 4 (right LED) | Yellow | Blinking | Data is being received |
| | | -- | Off | No link |

Table 6 CPU Module LEDs Description (continued)

| LED | Item | Color | State | LED Indication |
|-----------------|------|-------|----------------------|----------------|
| General Purpose | 5 | Green | N/A (Future support) | |

Monitoring Trunks and Channels via Embedded Web Server

To monitor the trunks and channels, open the Home Page by clicking the **Home** icon.

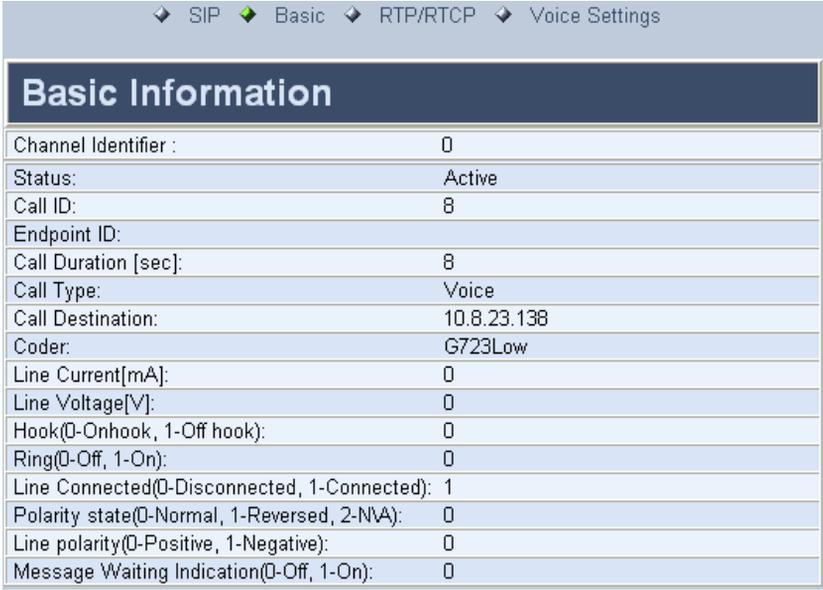
Figure 14 Home Page**Table 7** Trunk, FXO, and FXS Color Coding Icons Description

| Trunk/Channel Icon | | Trunk (Digital Module) | | Channel (Analog Module) | |
|---|--------|------------------------|---|-------------------------|--|
| Indicator | Color | Label | Description | Label | Description |
|  | Grey | Disable | Trunk not configured (not in use) | Inactive | Channel currently onhook |
|  | Green | Active OK | Trunk synchronized | Call Connected | Active TRP stream |
|  | Yellow | RAI Alarm | Remote Alarm Indication (RAI), also known as the Yellow Alarm | -- | -- |
|  | Red | LOS/LOF Alarm | Loss due to LOS (Loss of Signal) or LOF (Loss of Frame) | Not Connected | No analog line is connected to this port (FXO only) |
|  | Blue | AIS Alarm | Alarm Indication Signal (AIS), also known as the Blue Alarm | Handset Offhook | Channel is offhook, but there is no active RTP session |
|  | Orange | D Channel Alarm | D-channel alarm | -- | -- |

To monitor the details of a channel, perform these steps:

- 1 In the Home page, click the required trunk or analog (FXS / FXO) channel; a shortcut menu appears.
- 2 From the shortcut menu, choose **Port Settings**.
 - **Trunks:** The **Trunk & Channel Status** screen appears, displaying the channels pertaining to the specific trunk. Click the required channel to view detailed information regarding the channel.
 - **Analog channels (FXO / FXS):** The **Channel Status** screens appear.

Figure 15 Detailed Page



| Basic Information | |
|--|-------------|
| Channel Identifier : | 0 |
| Status: | Active |
| Call ID: | 8 |
| Endpoint ID: | |
| Call Duration [sec]: | 8 |
| Call Type: | Voice |
| Call Destination: | 10.8.23.138 |
| Coder: | G723Low |
| Line Current[mA]: | 0 |
| Line Voltage[V]: | 0 |
| Hook(0-Onhook, 1-Off hook): | 0 |
| Ring(0-Off, 1-On): | 0 |
| Line Connected(0-Disconnected, 1-Connected): | 1 |
| Polarity state(0-Normal, 1-Reversed, 2-NVA): | 0 |
| Line polarity(0-Positive, 1-Negative): | 0 |
| Message Waiting Indication(0-Off, 1-On): | 0 |

- 3 Click the submenu links to view the channel's parameter settings.

7

UPGRADING THE V6000/V6100 MEDIA GATEWAYS

The **Software Update** menu enables you to upgrade the V6000/V6100 software by loading a new **cmp** file along with the **ini** and a suite of auxiliary files, or to update the existing auxiliary files.

The **Software Update** menu comprises two submenus:

- Software Upgrade Wizard (see [Software Upgrade Wizard](#)).
- Load Auxiliary Files (see [Updating the Auxiliary Files](#)).



*When you upgrade the V6000/V6100 Gateway software you must load the new **cmp** file with all other related configuration files.*

Software Upgrade Wizard

The Software Upgrade Wizard guides you through the process of software upgrade: selecting files and loading them to the gateway. The wizard also enables you to upgrade software while maintaining the existing configuration. Using the wizard obligates you to load a cmp file. You can also use the wizard to load the ini and auxiliary files (e.g., Call Progress Tones), but this option cannot be pursued without loading the cmp file. For the ini and each auxiliary file type, you can choose to reload an existing file, load a new file, or not load a file at all.



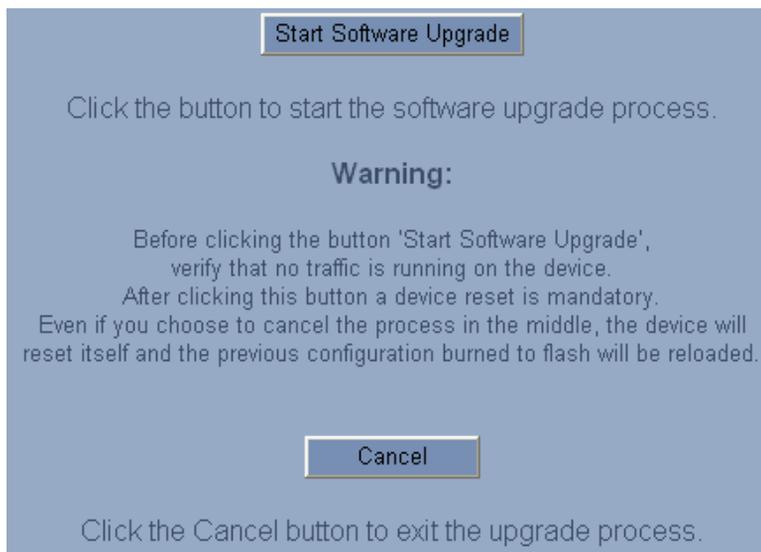
The Software Upgrade Wizard requires the gateway to be reset at the end of the process, which may disrupt traffic. To avoid this, disable all traffic on the device before initiating the wizard by performing a graceful lock (contact 3Com).

- *When you activate the wizard, the rest of the Web interface is unavailable. After the process is complete, access to the full Web interface is restored.*
- *The wizard allows you to load an **ini** auxiliary file only after you have loaded a **cmp** file.*

To use the Software Upgrade Wizard, perform these steps:

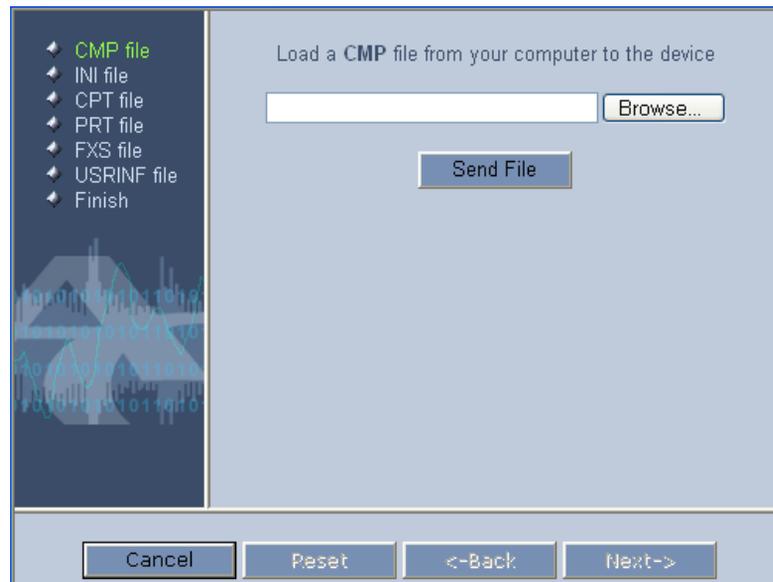
- 1 Stop all traffic on the V6000/V6100 (see the note above).
- 2 Open the **Software Upgrade Wizard (Software Update menu > Software Upgrade Wizard)**; the **Start Software Upgrade** screen appears.

Figure 16 Start Software Upgrade Screen



*At this stage, the Software Upgrade Wizard can be canceled (by clicking Cancel), without requiring a gateway reset. However, if you continue the wizard (by clicking the **Start Software Upgrade** button), the process must be followed through and completed with a gateway reset at the end. If you click the **Cancel** button in any of the subsequent screens, the gateway is automatically reset with the configuration that was previously burned in flash memory.*

- 3 Click the **Start Software Upgrade** button; the **Load a cmp file** screen appears (see [Figure 17](#)).

Figure 17 Load a cmp File Screen

- 4 Click the **Browse** button, navigate to the **cmp** file, and then click **Send File**; the cmp file is loaded to the V6000/V6100 and you're notified as to a successful loading (see [Figure 18](#)).

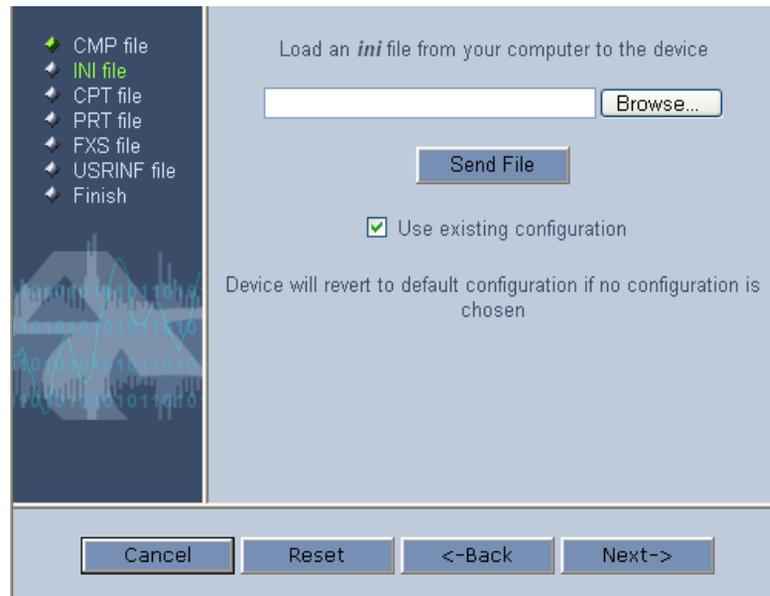
Figure 18 cmp File Successfully Loaded into the Device Notification

- 5 Note that the four action buttons (**Cancel**, **Reset**, **Back**, and **Next**) are now activated (following **cmp** file loading).

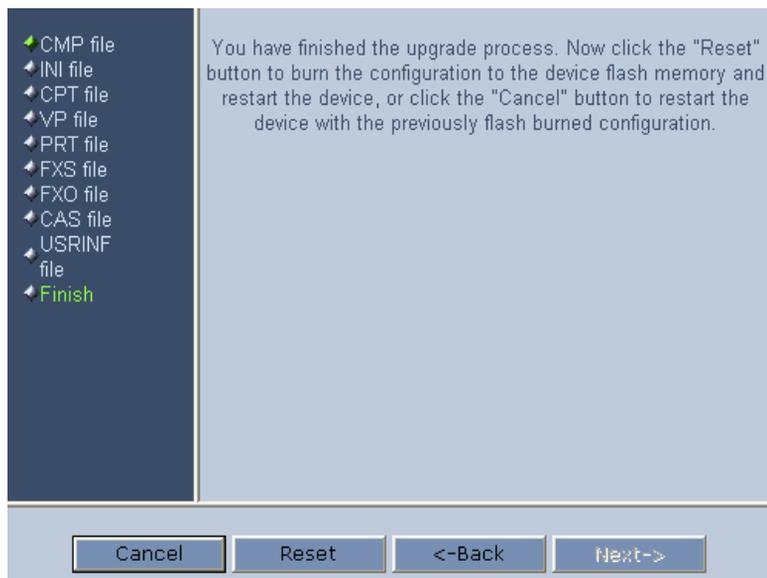
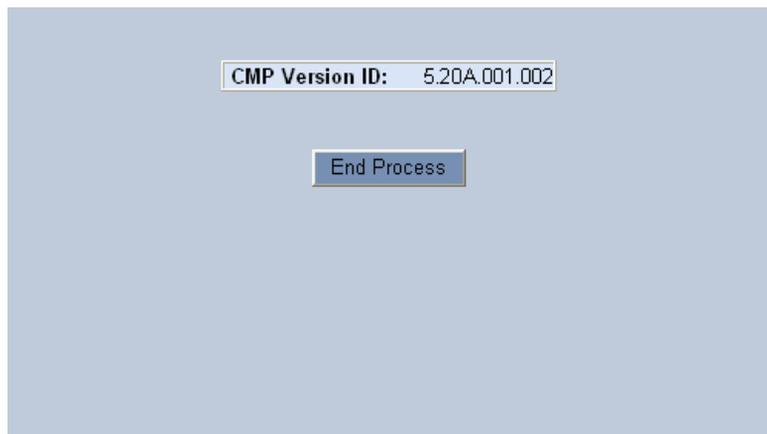
You can now choose to either:

- Click **Reset**; the device resets, utilizing the new **cmp** you loaded and utilizing the current configuration files.
- Click **Cancel**; the device resets utilizing the **cmp**, **ini** and all other configuration files that were previously stored in flash memory. Note that these are NOT the files you loaded in the previous Wizard steps.
- Click **Back**; the **Load a cmp File** screen is reverted to (see [Figure 17](#)).
- Click **Next**; the **Load an ini File** screen opens (see [Figure 19](#)). Loading a new ini file or any other auxiliary file listed in the Wizard is optional.

Note that as you progress, the file type list on the left indicates which file type loading is in process by illuminating green (until **Finish**).

Figure 19 Load an ini File Screen

- 6 When you have loaded all the required files, click **Next** until the **Finish** screen appears (see [Figure 20](#)). The **Next** button is disabled. Complete the upgrade process by clicking **Reset** or **Cancel**.
- Click **Reset**, the V6000/V6100 burns the newly loaded files to flash memory. The **Burning files to flash memory** screen appears. Wait for the burn to finish. When it finishes, the End Process screen appears displaying the burned configuration files (see [Figure 21](#)).
 - Click **Cancel**, the V6000/V6100 resets, utilizing the files previously stored in flash memory. (Note that these are NOT the files you loaded in the previous wizard steps).

Figure 20 Finish Screen**Figure 21** End Process Screen

- 7 Click the **End Process** button; the **Quick Setup** screen appears and the full Web application is reactivated.

Updating the Auxiliary Files

The auxiliary files are configuration **dat** files that can be loaded to the gateway (in addition to the **ini** file) to enable enhanced gateway provisioning. The 'Auxiliary Files' screen allows you to load these files

without having to load the cmp file (as is mandatory when using the Software Upgrade Wizard). [Table 8](#) presents a brief description of the ini file and of each auxiliary file.

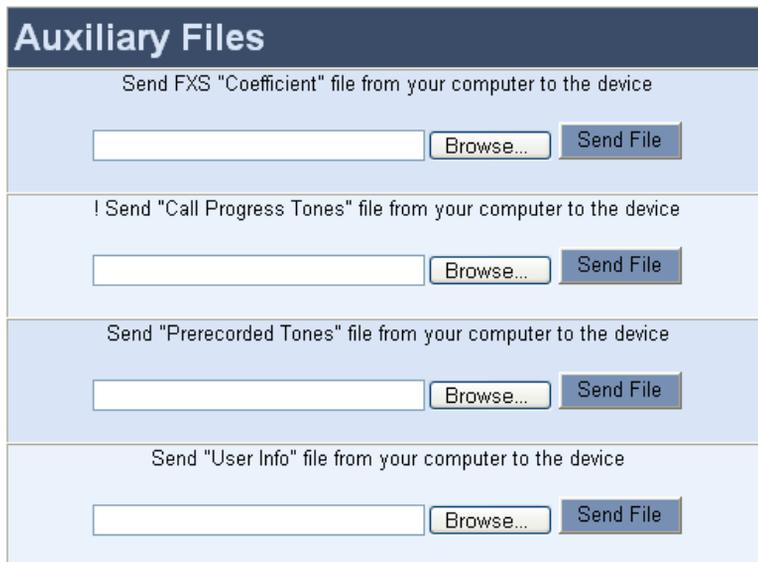
Table 8 ini and Auxiliary Files Descriptions

| File Type | Description |
|----------------------------|--|
| ini | <p>Load this file to provision the device's parameters. The Embedded Web Server enables practically full device provisioning but customers may occasionally require new feature configuration parameters in which case this file is loaded.</p> <p>Note that loading the ini file only provisions parameters that are contained in the ini file. If a parameter is not specified in the ini file, values associated with that parameter are reset to a default value. These values may not be the same as the values that were configured for the VoIP gateway at the time of manufacture.</p> <p>Note: After the file has completed loading, the VoIP gateway automatically restarts (software is loaded from the flash).</p> |
| Coefficient | <p>(Only applicable for analog interfaces.) This file (different file for FXS and FXO modules), contains the telephony interface configuration information for the VoIP gateway. This information includes telephony interface characteristics such as DC and AC impedance, feeding current, and ringing voltage. This file is specific to the type of telephony interface that the VoIP gateway supports. In most cases you have to load this type of file.</p> |
| CAS | <p>(Only applicable for digital interfaces.) Up to eight different CAS files containing specific CAS protocol definitions.</p> <p>These files are provided to support various types of CAS signaling.</p> |
| Voice Prompts | <p>The voice announcement file contains a set of Voice Prompts to be played by the V6000/V6100 during operation on Call Agent request.</p> |
| Dial Plan | <p>The Dial Plan file.</p> |
| Call Progress Tones | <p>This is a region-specific, telephone exchange-dependent file that contains the Call Progress Tones levels and frequencies that the VoIP gateway uses. Default CPT file: U.S.A.</p> |
| Prerecorded Tones | <p>The dat PRT file enhances the gateway's capabilities of playing a wide range of telephone exchange tones that cannot be defined in the Call Progress Tones file.</p> |
| User Information | <p>The User Information file maps PBX extensions to IP numbers. This file can be used to represent PBX extensions as IP phones in the global 'IP world'.</p> |

To load an auxiliary file via the Embedded Web Server, perform these steps:

- 1 Open the **Auxiliary Files** screen (**Software Update menu > Load Auxiliary Files**); the **Auxiliary Files** screen is displayed (see [Figure 22](#)).
- 2 Click the **Browse** button corresponding to the type of file you want to load.
- 3 Navigate to the folder that contains the file you want to load.
- 4 Select the file, and then click **Open**; the name and path of the file appear in the field next to the **Browse** button.
- 5 Click the **Send File** button corresponding to the field that contains the name of the file you want to load. Note that parameters preceded by an exclamation mark (!) are not changeable on-the-fly and require that the device be reset (e.g., Call Progress Tones file).
- 6 Repeat steps 2 through 5 for each file you want to load.

Figure 22 Auxiliary Files Screen (e.g., SIP Gateways)



The screenshot displays the 'Auxiliary Files' web interface. It features a dark blue header with the title 'Auxiliary Files'. Below the header, there are four distinct sections, each for a different file type. Each section contains a text input field, a 'Browse...' button, and a 'Send File' button. The sections are: 1. 'Send FXS "Coefficient" file from your computer to the device'. 2. '! Send "Call Progress Tones" file from your computer to the device'. 3. 'Send "Prerecorded Tones" file from your computer to the device'. 4. 'Send "User Info" file from your computer to the device'. The 'Send File' buttons are highlighted in a darker blue color.

To save the loaded auxiliary files (e.g., CPT) to flash memory and reset the gateway, perform these steps:

- 1 On the main menu bar, click the **Maintenance** button; the **Maintenance Actions** screen appears.
- 2 Saving an auxiliary file to flash memory may disrupt traffic. Therefore, disable all traffic on the device by performing a **Graceful Lock**:
 - a Under the **LOCK / UNLOCK** group, select **Yes** from the **Graceful Option** drop-down list.
 - b In the **Lock Timeout** field, enter the time (in seconds) after which the gateway locks.
 - c Click **LOCK**; now new calls are accepted and the gateway locks and terminates all calls after the **Lock Timeout** value expires. Note that if no traffic exists and the time has not yet expired, the gateway locks.
- 3 Under the **RESET** group, select the **Yes** option from the **Burn to FLASH** drop-down list, and then click **Reset**; the auxiliary files are saved into flash and the V6000/V6100 Gateways restart.

8

REGULATORY INFORMATION

Table 9 Declaration of Conformity

| | |
|---|---|
| Application of Council Directives: | 73/23/EEC (including amendments), 89/336/EEC (including amendments), 1999/5/EC Annex-II of the Directive |
| Standards to which Conformity is Declared: | EN55022: 1998 + A1: 2000 + A2: 2003 EN55024:1998 + A1: 2001 + A2: 2003 EN61000-3-2: 2000 + A2: 2005 EN61000-3-3: 1995 + A1: 2001 EN60950-1: 2001 |
| Manufacturer's Name: | AudioCodes Ltd. |
| Manufacturer's Address: | 1 Hayarden Street, Airport City, Lod 70151, Israel. |
| Type of Equipment: | Analog VoIP System. |
| Model Numbers: | MP-11x/FXS+FXO Mixed Series (MP-114/ 2FXS/2FXO; MP-118/ 4FXS/4FXO) MP-11x/FXS Series (MP-112/ 2FXS; MP-114/ 4FXS; MP-118/ 8FXS) MP-11x/FXO Series (MP-112/ 2FXO; MP-114/ 4FXO; MP-118/ 8FXO) MP-124/FXS Series (MP-124D/FXS) |

I, the undersigned, hereby declare that the equipment specified above conforms to the above Directives and Standards.

Signature Date: 27th June 2006

Location: Airport City, Lod, Israel

I. Zusmanovich, Compliance Engineering Manager

| | |
|------------|--|
| Czech | [AudioCodes Ltd] tímto prohlašuje, že tento [MP-11x/FXS & FXO Series & MP-124] je ve shodě se základními požadavky a dalšími příslušnými ustanoveními směrnice 89/336/EEC, 73/23/EEC. |
| Danish | Undertegnede [AudioCodes Ltd] erklærer herved, at følgende udstyr [MP-11x/FXS & FXO Series & MP-124] overholder de væsentlige krav og øvrige relevante krav i direktiv 89/336/EEC, 73/23/EEC. |
| Dutch | Hierbij verklaart [AudioCodes Ltd] dat het toestel [MP-11x/FXS & FXO Series & MP-124] in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 89/336/EEC, 73/23/EEC |
| English | Hereby, [AudioCodes Ltd], declares that this [MP-11x/FXS & FXO Series & MP-124] is in compliance with the essential requirements and other relevant provisions of Directive 89/336/EEC, 73/23/EEC. |
| Estonian | Käesolevaga kinnitab [AudioCodes Ltd] seadme [MP-11x/FXS & FXO Series & MP-124] vastavust direktiivi 89/336/EEC, 73/23/EEC põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele. |
| Finnish | [AudioCodes Ltd] vakuuttaa täten että [MP-11x/FXS & FXO Series & MP-124] tyypinen laite on direktiivin 89/336/EEC, 73/23/EEC oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen. |
| French | Par la présente [AudioCodes Ltd] déclare que l'appareil [MP-11x/FXS & FXO Series & MP-124] est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 89/336/EEC, 73/23/EEC |
| German | Hiermit erkläre [AudioCodes Ltd], dass sich dieser/diese/dieses [MP-11x/FXS & FXO Series & MP-124] in Übereinstimmung mit den grundlegenden Anforderungen und den anderen relevanten Vorschriften der Richtlinie 89/336/EEC, 73/23/EEC befindet*. (BMWV) |
| Greek | ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ [AudioCodes Ltd] ΔΗΛΩΝΕΙ ΟΤΙ [MP-11x/FXS & FXO Series & MP-124] ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 89/336/EEC, 73/23/EEC |
| Hungarian | Alulírott, [AudioCodes Ltd] nyilatkozom, hogy a [MP-11x/FXS & FXO Series & MP-124] megfelel a vonatkozó alapvető követelményeknek és az 89/336/EEC, 73/23/EEC irányelv egyéb előírásainak |
| Icelandic | æki þetta er í samræmi við tilskipun Evrópusambandsins 89/336/EEC, 73/23/EEC |
| Italian | Con la presente [AudioCodes Ltd] dichiara che questo [MP-11x/FXS & FXO Series & MP-124] è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 89/336/EEC, 73/23/EEC. |
| Latvian | Ar šo [AudioCodes Ltd] deklarē, ka [MP-11x/FXS & FXO Series & MP-124] atbilst Direktīvas 89/336/EEC, 73/23/EEC būtiskajām prasībām un citiem ar to saistītajiem noteikumiem. |
| Lithuanian | [AudioCodes Ltd] deklaruoja, kad irenginys [MP-11x/FXS & FXO Series & MP-124] tenkina 89/336/EEC, 73/23/EEC Direktyvos esminius reikalavimus ir kitas šios direktyvos nuostatas |
| Maltese | Hawnhekk, [AudioCodes Ltd], jiddikjara li dan [MP-11x/FXS & FXO Series & MP-124] jikkonforma mal-?ti?ijiet essenzjali u ma provvedimenti o?rajn relevanti li hemm fid-Dirrettiva 89/336/EEC, 73/23/EEC |
| Norwegian | Dette produktet er i samhrighet med det Europeiske Direktiv 89/336/EEC, 73/23/EEC |
| Polish | [AudioCodes Ltd], deklarujemy z pełną odpowiedzialnością, że wyrób [MP-11x/FXS & FXO Series & MP-124] spełnia podstawowe wymagania i odpowiada warunkom zawartym w dyrektywie 89/336/EEC, 73/23/EEC |
| Portuguese | [AudioCodes Ltd] declara que este [MP-11x/FXS & FXO Series & MP-124] está conforme com os requisitos essenciais e outras disposições da Directiva 89/336/EEC, 73/23/EEC. |
| Slovak | [AudioCodes Ltd] týmto vyhlasuje, že [MP-11x/FXS & FXO Series & MP-124] spĺňa základné požiadavky a všetky príslušné ustanovenia Smernice 89/336/EEC, 73/23/EEC. |
| Slovene | Šiuo [AudioCodes Ltd] deklaruojao, kad šis [MP-11x/FXS & FXO Series & MP-124] atitinka esminius reikalavimus ir kitas 89/336/EEC, 73/23/EEC Direktyvos nuostatas. |
| Spanish | Por medio de la presente [AudioCodes Ltd] declara que el [MP-11x/FXS & FXO Series & MP-124] cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 89/336/EEC, 73/23/EEC |
| Swedish | Härmed intygar [AudioCodes Ltd] att denna [MP-11x/FXS & FXO Series & MP-124] står i överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 89/336/EEC, 73/23/EEC. |

Safety Notice

- 1 Installation and service of this gateway must only be performed by authorized, qualified service personnel.
- 2 To avoid risk of fire use 26 AWG or higher wiring to connect the FXS or FXO telecom ports.
- 3 The equipment must be connected by service personnel to a socket-outlet with a protective earthing connection.
- 4 The protective earth terminal on the back of the MP-124 must be permanently connected to protective earth.

Telecommunication Safety

The safety status of each port on the gateway is declared and detailed in the table below:

| Ports | Safety Status |
|------------------------|---------------|
| Ethernet (100 Base-TX) | SELV |
| FXS | TNV-3 |
| FXO | TNV-3 |

TNV-3:

Circuit whose normal operating voltages exceeds the limits for an SELV circuit under normal operating conditions and on which over voltages from Telecommunication Networks are possible

SELV:

Safety extra low voltage circuit.

FCC Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Industry Canada Notice

This equipment meets the applicable Industry Canada Terminal Equipment technical specifications. This is confirmed by the registration

numbers. The abbreviation, IC, before the registration number signifies that registration was performed based on a declaration of conformity indicating that Industry Canada technical specifications were met. It does not imply that Industry Canada approved the equipment.

FXO Ports: The Ringer Equivalence Number (REN) for this terminal is 0.05. The REN assigned to each terminal equipment provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of Ringer Equivalence Number of all devices do not exceed five.

Network Compatibility of FXO Ports

The products support the Telecom networks in EU that comply with TBR21.

ACTA Customer information

- 1** This equipment, the VoIP Analog Gateway, models MP-118, MP-114 and MP-112 complies with Part 68 of the FCC Rules and the requirements adopted by the ACTA. On the bottom of the unit of this equipment is a label, that contains among other information, a product identifier in the format US:AC1IT00BMP11X3AC. If requested, this number must be provided to the telephone company.
- 2** This equipment is designed to be connected to the telephone network using an RJ-11C connector, which is Part 68 compliant. The service order code (SOC) is 9.0Y and the Facility interface code (FIC) is 02LS2.
- 3** The REN is used to determine the number of devices that may be connected to a telephone line. Excessive RENs on a telephone line may result in the devices not ringing in response to an incoming call. In most but not all areas, the sum of RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to a line, as determined by the total RENs, contact the local telephone company. The REN for this product is part of the product identifier that has the format US:AC1IT00BMP11X3AC. The digits represented by 00 are the REN without a decimal point.
- 4** Should the product causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. If advance notice is not practical, you will be notified as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if it is necessary.

- 5** The telephone company may make changes in its facilities, equipment, operations or procedures that could affect the operation of the equipment. If this happens the telephone company will provide advance notice in order for you to make necessary modifications to maintain uninterrupted service.
- 6** If trouble is experienced with this equipment, for repair or warranty information please contact AudioCodes Inc., 2099 Gateway Place, Suite 500, San Jose, CA, 95110, phone number 1-408-441-1175. If the equipment is causing harm to the telephone network, the telephone company may request to disconnect the equipment until the problem is resolved.
- 7** Installation is described in the Product User's manual. Connection to Telephone Company-provided coin service is prohibited. Connection to party lines service is subject to State tariffs.

A

OBTAINING SUPPORT FOR YOUR 3COM PRODUCT

Customer Support

Customer technical support and service are provided by 3Com Distributors, Partners, and Resellers from whom the product was purchased. To obtain Customer Support for products purchased directly from 3Com, contact support@3Com.com.

