



Operations Manual

Digital Gateway

phone > 813.249.1177
fax > 813.249.1126

www.edgeaccess.net
5425 Beaumont Center Blvd #918
Tampa, FL 33634

EdgeAccess Gateway

VOICE OVER IP TECHNOLOGIES

EdgeAccess, Inc.
5425 Beaumont Center Blvd, #918 • Tampa, FL 33634
Customer Support: support@edgeaccess.net

Table of Contents

About this Guide	5
Audience	5
Objectives	5
Organization.....	5
Conventions	5
Digital Gateway Overview	6
Features.....	6
Specifications.....	6
Surge Protection	7
General Specifications	7
Environmental Requirements.....	7
Technical Support	7
Installing the Gateway	8
Equipment Needed	8
Connecting the Digital Gateway.....	8
Using the Serial Port to Establish Basic Settings	9
Logging in Through Serial Port A	9
Changing Gateway IP Address	10
Changing the Netmask	11
Configuring the Gateway	13
Serial/Telnet Configuration.....	13
T1/E1 Configuration	14
Channel Configuration	15
Gatekeeper Configuration.....	16
Inbound/Outbound Call Parameters Configuration	17
Gateway Timing Configuration.....	18
Volume Configuration	20
Direct Connect Configuration	20
System Settings Configuration.....	20
VoIP Commands.....	20

Web Browser Configuration	22
Disabling Browser's Caching Feature	22
Navigation	22
Configuration Options	23
System Information	23
T1 Configuration	25
Channel Configuration	27
Direct Connect Setting.....	30
Volume Configuration	31
Gatekeeper Configuration.....	33
Phone Setting	33
Phone Access.....	34
Routing Configuration	34
CDR Configuration.....	37
Prefix Configuration	37
Inbound Prefix	38
Outbound Prefix.....	39
Delay.....	40
Outdial	40
Inbound Delay	40
Outbound Delay.....	41
Network Configuration	42
Fax Configuration.....	43
Appendix A.....	44
Appendix B.....	46
Index	48

Introduction

Audience

This guide is written for the installation and maintenance technician and other telecommunications professionals working with the Digital Equipment.

Technicians making the initial configurations to the Gateway need to use the command line utility for the non-Web configuration.

Objectives

This guide explains the complete installation and configuration procedures for the Gateway.

Conventions

In discussions of software configurations, this manual uses special typefaces to show prompts, the correct text to enter, and variables for which you should enter a value.

They are described below:

Displays on screen	This font shows a prompt or other information that displays on the screen. Machine name>
Characters you type	The bold font indicates the characters you type. Machine name> Default
<i>Variables you enter</i>	Italics indicate a variable for which you should enter a value Machine name> <i>Machine name</i>

Rather than convert each procedure to a series of steps, this manual uses procedural instructions in some areas and a combination of instructions and information tables in others. As the user becomes more experienced configuring the Gateway, he or she will find the tables to be a more practical reference.

This section provides features, system specifications and support information for the Digital gateway.

Features

- Fully self-contained IP Telephony System
- 10/100 Base T Fast Ethernet, compatible with 802.3u standard
- Supports 24 channels with a single T1 and up to 144 channels using 6 T1's with compression. Also supports 30 channels with a single E6 and up to 180 channels with 6 E1's with compression.
- DSP's are software configurable
- Full PBX and IVR Capabilities
- Integrated non-blocking switch
- Supports D4/ESF and B8ZS/AM1
- Supports E&M or ISDN PRI
- Supports G.711 A-law / u-law, G.726, G.727, G.723.1 and G.729A
Compression Algorithms
- Echo Canceler Algorithms
- DTMF Generation / Detection
- Remotely Configurable
- 19 inch Rackmount Unit
- Redundant Power Supply
- Specifications
- AT&T Pub. 62411, 54016
- FCC Part 15 and 68s
- ANSI T1.102 and T1.107
- UL 1459
- Bellcore DTMF Specs

Surge Protection

Complies with TR-NWT-001089 current and voltage limitations for metallic lightning surges and 120 VAC power cross immunity.

General Specifications

- Number of Ports – 48/60, dual T1/E1 interface card
- Framing - D4 or ESF SLC-96 compatible
- Line Codes - B8ZS, jammed bit (ZCS) or no zero code suppression AMI encoding and decoding
- Trunk type--E & M Immediate Start, E & M Wink, FGD, or Loop/Ground Start.
- Alarms - Yellow and blue alarm signaling bipolar violation, F_t error, CRC error counts
- Diagnostic - Local and remote loop back
- Timing Sources - Internal oscillator or line
- Output Signal - DSX-1 (T1.403)
- Line Interface - DSX-1 (T1.403)

Environmental Requirements

- Operating Temperature - 0° to 70° C
- Storage Temperature - 55° to 125° C
- Humidity - 80% non-condensing maximum

Technical Support

- Please contact our technical support team via e-mail at support@edgeaccess.net, or by phone at (813) 887-1151, or toll free 1-800-392-9949.

This section lists the installation procedures for the Gateway hardware.

Equipment Needed

- Power supply and cable
- Network cable
- Serial cable
- PC with a terminal emulation utility installed

Connecting the Digital Gateway

1. Unpack unit and place on a flat surface.
2. Plug in power cable to unit and power source.
3. Connect unit to LAN with the network cable.
4. Connect the T1 cables.
5. Power the system up and wait for booting to complete.
6. Observe the Network interface card (NIC) on the rear of the unit. The NIC is a dual T1, with separate indicator lights for each span, labeled T1-1 and T1-0 on the Gateway. The LED's are defined, viewed from left to right, as follows:

LIGHT COLOR	INDICATION
Green	Blinks to indicate the VoIP Gateway is active
Red	Alarm. Off during normal operation On to indicate T1 carrier loss or T1 synchronization loss
Yellow	Remote Alarm Indicator Off during normal operation, On to indicate that a yellow alarm signal is received from a remote terminal which is in red alarm.
Red	Blue Alarm Off during normal operation. On to indicate maintenance mode (all ones no frame).

During the boot, the LED's on both T1's should all light, except for the fourth light (the Red-Blue maintenance alarm).

When the system is booted, configured, and the application started, all LED's should extinguish except for the green, which should flash fast. If there is only one T1 connected to the unit, the other T1 will show a red alarm. If there is a problem with the connection or T1 configuration, the red or yellow LED will light steady.

If no T1 is connected to the system, light indicators blink green and solid red on both spans.

Using the Serial Port to Establish Basic Settings

As soon as the Gateway is connected and booted up, log in through Serial Port A using a serial cable with null modem and perform the following configurations:

- Change the IP Address
- Change the NetMask
- Add a route

Logging in Through Serial Port A

1. Connect the computer to the Digital Gateway's Serial Port A using a serial cable with null modem.
2. Launch terminal emulation software to log into the Gateway. See Appendix A for detailed instructions.
3. Start a new session, specifying direct connect to the appropriate com port and use the following settings:

9600 Baud, 8 bits, no parity.

4. Log into the Gateway. If session connects normally, data scroll displays across the terminal window, including the EdgeAccess Gateway copyright information as shown below.

....

Copyright 1997 EdgeAccess Corporation. AMCS48. All Rights Reserved
Digital Signal Processor Card - Advanced Multimedia Communication Services
Copyright 1997 Edge Access Corporation. AMCS48. All Rights Reserved
Network Interface Card - Advanced Multimedia Communication Services

....

In a short time, the system gives a prompt line, as shown below:
edgeaccess-u01 console login:

5. At the prompt, type the login and password the Gateway comes pre-configured with:

Login: **<username>**

Password: **<password>**

Example:

edgeaccess-u01 console

Login: **vip**

Password: **password**

Once successfully logged in, the following screen appears:

```
EdgeAccess Configuration Utility V1.0.2PCI  
-----
```

Please enter:

```
 1 to view/edit T1/E1 parameters,  
 2 to view/edit channel configuration,  
 3 to modify gatekeeper related information,  
 4 to modify inbound/outbound call parameters,  
 5 to modify gateway timing related information,  
 6 to view/edit volume settings,  
 7 to modify direct connect settings,  
 8 to issue gateway's system settings,  
 9 to issue VoIP commands,  
 s to save all settings,  
 q to exit (logout)
```

```
-->
```

You can now carry out the configuration changes needed to be able to connect to the network.

Changing the Gateway's IP Address

To change the IP address:

Type **8** (to issue gateway's system settings) and the following will be displayed on the screen.

Local Machine Configurations:

IP address=192.168.2.6

NetMask=255.255.255.0

DefaultRouter=192.168.2.10

Please enter:

1 to change machine's IP address
2 to change machine's NetMask
3 to change machine's default router
4 to add/modify/remove Web user
5 to set machine date/time
6 to change password
7 to shutdown
8 to reboot
b to back to previous page
d to redisplay information
s to save network settings
q to quit (logout)

--->

Type **1** to change IP address of machine. Enter IP Address and press [Enter].
Type **s** to save changes and return to the main menu.

Changing the Netmask

The netmasks file associates Internet Protocol (IP) address masks with IP network numbers.

network-number netmask

The term network-number refers to a number obtained from the Internet Network Information Center. Currently this number is restricted to being a class A, B, or C network number. In the future, we should be able to support arbitrary network numbers per the Classless Internet Domain Routing guidelines.

Both the network-number and the netmasks are specified in "decimal dot" notation,

e.g.: 128.32.0.0 255.255.255.0

209.137.83.0 255.255.255.128

To change the netmask:

From the main prompt, follow the same steps as above.

1. Type **8** (to issue gateway's system settings) and the following will be displayed on the screen.

Local Machine Configurations:

IP address=192.168.2.6

NetMask=255.255.255.0

DefaultRouter=192.168.2.10

Please enter:

1 to change machine's IP address
2 to change machine's NetMask
3 to change machine's default router
4 to add/modify/remove Web user
5 to set machine date/time
6 to change password
7 to shutdown
8 to reboot
b to back to previous page

d to redisplay information
s to save network settings
q to quit (logout)

--->

2. Type **2** to change the NetMask of machine. Type the NetMask and press [Enter].
3. Type **s** to save and exit to the main menu.

Adding a Default Network Route

To add a default network route:

From the main prompt, follow the same steps as above.

1. Type **8** (to issue gateway's system settings) and the following will be displayed on the screen.

Local Machine Configurations:

IP address=192.168.2.6

NetMask=255.255.255.0

DefaultRouter=192.168.2.10

Please enter:

1 to change machine's IP address
2 to change machine's NetMask
3 to change machine's default router
4 to add/modify/remove Web user
5 to set machine date/time
6 to change password
7 to shutdown
8 to reboot
b to back to previous page
d to redisplay information
s to save network settings
q to quit (logout)

--->

2. Type **3** to add a default router entry. Type the router address and press [Enter].
3. Type **s** to save changes and exit to main menu.

After these changes are completed, reboot the system.

The digital gateway is ready for further configuring, use the Web application, a telnet session or continue the configuration process through the console port.

This section covers software configuration for the Gateway. It is broken down into two methods Serial/Telnet Configuration and Web Browser Configuration.

Serial/Telnet Configuration

If proceeding from the serial port configuration in the previous chapter, continue the configuration process. If the system is configured to be visible by the network, use a telnet session to login to the Gateway switch.

Once user has logged in using the supplied username and password, the following screen appears:

```
EdgeAccess Configuration Utility V1.0.2PCI  
-----
```

Please enter:

```
1 to view/edit T1/E1 parameters,  
2 to view/edit channel configuration,  
3 to modify gatekeeper related information,  
4 to modify inbound/outbound call parameters,  
5 to modify gateway timing related information,  
6 to view/edit volume settings,  
7 to modify direct connect settings,  
8 to issue gateway's system settings,  
9 to issue VoIP commands,  
s to save all settings,  
q to exit (logout)  
--->
```

T1/E1 Configuration

This configuration entry permits user to set the T1/E1 Telephone Interface to match requirements.

Note: The number of T1's/E1's displayed corresponds to the number available.

When selected, the following screen appears:

```
T1 #1: enabled.  
    Framing= D4  LineCode= B8ZS  
    Inbound Protocol= Wink Start  
    Outbound Protocol= Wink Start  
    Outbound digits prefix=  
    Inbound answer supervision=Disabled
```

```
T1 #2: enabled.  
    Framing= D4  LineCode= B8ZS
```

Inbound Protocol= Wink Start
Outbound Protocol= Wink Start
Outbound digits prefix=
Inbound answer supervision=Disabled

Enter:

1 to change T1-1 configuration
2 to change T1-2 configuration
a to apply changes to files
b to back to previous page
d to redisplay information
s to save all settings
q to quit (logout)
--->

1. Type **1** to change the configuration of T1 #1. The following appears:

Change T1-1 configurations,

Enter:

1 to Enable/Disable this T1
2 to change framing
3 to change line code
4 to change inbound protocol
5 to change outbound protocol
6 to change outbound digits prefix
7 to change inbound answer supervision
8 to change ISDN configuration
a to apply changes to files
b to back to previous page
d to redisplay information
s to save all settings
q to quit (logout)
--->

Entry description:

1. Is used to Enable or Disable the T1
2. Is used to modify the framing. The Options are D4 or ESF
3. Is used to modify the Line Coding. Options are AMI or B8ZS
4. To modify the Inbound Protocol. Options are: Immediate, Wink Start, Loop-Ground Start, ISDN
5. To modify the Outbound Protocol. Options are: Immediate, Wink Start, Loop-Ground Start.
6. To specify T1 outbound prefix digits. This setting is typically used when this system is connected behind a PBX. As an example, anytime an outside line is used, a digit (like "9") precedes the dialed number.
7. To modify Inbound Delay connect. Options are: ON/OFF. This entry is used for notifying the inbound call when the called party has actually answered the call. Typically needed for billing purposes.

8. To change ISDN settings. These settings are used for setting the Primary/Backup D-Channel information. Note, this change is only needed if your system as been configured as ISDN.

Channel Configuration

This configuration entry modifies the specific channel setting. Please note the numbering of the Channels is sequential (i.e. Channel 25 corresponds to channel 1 of the second T1).

When selected the following screen appears:

VoIP Channel configuration:

Enter channel number to modify:

- * for all channels,
- '-' for a range (select 1 range at a time),
or enter a number for single channel.
- a to apply changes to config file
- b to back to previous page
- d to display information on selected channel(s)
- s to save all settings
- q to quit (logout)

--->

Before any Channel setting can be displayed, a channel number or range must be specified (i.e. *, 1-24, 1).

Once specified, the following screen appears:

For the selected channels, enter:

- * to modify all fields
- 1 to enable/disable channels
- 2 to change VoIP speech codec
- 3 to change trunk number
- 4 to change silence detection setting
- 5 to change filtering setting
- 6 to change loop/ground type
- 7 to change inbound digits collection
- 8 to change inbound connect type
- 9 to change outbound connect type
- a to apply changes now
- b to back to select lines
- d for display settings for these lines
- s for save changes and exit
- q to quit

Entry Description:

1. Option used to Enable/Disable the Channel
2. To modify the speech encoding type (u-law, G.723, G.729). If no speech type is specified, the default speech type used is G.723 6.3kbps.
3. To modify trunk number assignment. Use this option to group channels into individual or in a group of trunks. This feature is used primarily for

routing features (i.e. calls are routed based on the trunk number assignment)

4. Change silence detection settings. Options are ON/OFF. Use this feature only when bandwidth transmission requirements are a limitation.
5. To enable Filter settings. This option is specific only to the G.723 and G.729 speech encoder.
6. To configure whether it is an FXS/FXO port. Note this option only applies when the T1 configuration is Loop-Ground.
7. To configure the number of digits to collect before answering the call. Special configuration parameters can also be set for Authorization, ANI, and DNIS collection (see DID configuration for details).
8. To set inbound connect type. The options are Default route, Direct connect, Prefix connect as defined in the Inbound Routing table. The **Default route** settings collect the inbound digits and routes the call based on this digits without further manipulation of this data. The **Direct Connect** option allows you to route the call based on the trunk number and remote IP specification. This option connects the local channel to the remote channel as soon as the seizure is received. The last option is **Prefix Connect**. This option configures the system to modify the digits received before routing the call. This is useful for translating numbers before the call is placed to the remote system.
9. To set Outbound connect type. The options in this entry are: Default, Outpulse Digits, Seizure Only and Regenerate based on routing table. The **Default** option will outdial the digits received and regenerate according to the replacement table. The **Outpulse Digits** option will not do any modifications to the dialed number. It will be generated as it was received. The **Seizure** only option is used only to seize the line without outdialing. The last option is **Regenerate according to table**. This option will seize the line regenerate the digits to outdial based on the Outbound replacement table as well as the prefix setting (under T1 Configuration setting).

Gatekeeper Configuration

This entry sets the system softswitch authorization process. For simple point-to-point, or point-to-multipoint, the Gateway switch configures without a softswitch. When systems require the use of a softswitch, it must be enabled through this setting.

When this option is selected the following screen will appear.

VoIP System Configuration:

```
GateKeeper Lookup=Enable Destination Address Lookup
GateKeeperIp= 192.168.2.5, Port= 5002
BackupGateKeeperIp= 192.168.2.5, Port= 5002
DefaultGateway= 192.168.2.6, Port= 5000
Send CDR= Enabled      IP= 192.168.2.5, Port= 5002
```

Enter:

- 1 to change Gatekeeper Lookup enable/disable flag
- 2 to change GateKeeper Address
- 3 to change Backup GateKeeper Address
- 4 to change Default Gateway Address
- 5 to change CDR settings
- a to apply changes to files
- b to back to previous page
- d to redisplay information
- s to save all settings
- q to quit (logout)

--->

Entry description:

1. Enable/disable Gatekeeper call routing
2. Modify IP address of Gatekeeper as well as port number
3. Specify backup gatekeeper IP address and port number
4. Specify a default gateway routing if no gatekeeper is used or if gatekeeper is no longer present in the network
5. Enable/disable delivery of Call Detail Records. This information is used by the gatekeeper to generate billing reports

Inbound/Outbound Call Parameters Configuration

This configuration options allows user to change parameters for inbound and outbound calls.

When this option is selected the following screen will appear.

Please enter:

- 1 to modify inbound digits collect path
- 2 to modify inbound prefix replace table
- 3 to modify inbound local routing table
- 4 to modify outbound prefix replace table
- 5 to modify international access code,
country code, or
local area code(s)
- b to back to main page
- s to save all settings
- q to quit (logout)

--->

Entry description:

1. Modify, add or remove a DID entry in the table. The entries in this table are used by the system to configure the inbound call routing flow such as: the system responds with a dial tone when a seizure is received, the system is configured to communicate with and external switch, Collect # of digits for ANI and DNIS, etc). See Appendix B for detailed description of how to setup channel digit collection.
2. Modify, add or remove a Prefix replacement entry. The entries in this table are used by the system to replace any inbound digits received with a replacement "string" based on the number matched
3. Modify, add or remove inbound local routing table entry. The entries in this table are used by the system primarily when a gateway routes calls without the use of a gatekeeper. The routing is based on the number, area code, and/or country code. The destination of the call is determined by the IP address and Port number specified in the matched entry
4. Modify, add or remove an outbound replacement entry. This entry is used by the system to modify any string of digits before they are outpulsed based on the matched entry
5. Modify, add or remove an International access code entry. The fields in this entry specify the international dialing plan as well as country code, area code where the system is located.

Gateway Timing Configuration

This configuration setting is used to add or modify application's timing parameters.

When this entry is selected, the following screen appears:

VoIP Gateway System Configuration:

```
DNIS Digits timeout= Disabled
No Activity timeout= 25 second(s)
ImmedStart OutDial Guard time=500 millisecond(s)
Dsp Monitor Settings:
  MaxDspInactiv before retry=5000 millisecond(s)
  MaxDspRetry before reset Dsp=1
  C54 AutoRecover=Enabled
VoicePacket transport related configurations:
  w=480
  n=90
  SilenceHangupInSec=20
```

Please enter:

```
1 to change DNIS Digits timeout
2 to change no-activity timeout
3 to change ImmedStart OutDial Guard time
4 to change DSP monitor settings
----- Transport related configurations
5 to change w
6 to change n
7 to change SilenceHangupInSec
'i' to insert a new transport related configuration
a to apply changes to files
b to back to previous page
d to redisplay information
s to save all settings
q to quit (logout)
```

--->

Entry description:

1. Modify inbound collection of digits timeout (in seconds)
2. Modify no-activity timeout. The entry disconnects the call in the event that no activity is seen on the line. Timeout setting is in seconds.
3. Modify outdial delay before outpulsing digits. The field in this entry determines the amount of time to wait before outdialing. The setting in this field is in milliseconds.
4. Modify Recovery settings. This entry is used to automatically recover in the event of an error during packet transmission.
5. Modify transport layer specifications. The settings in this table modify the "high" watermark limit for buffered packets. These settings are very useful especially over Wide Area networks where bandwidth is a limitation. Please note the larger the number the longer the delay.

6. The settings in this table modify the number of network packets (in ms) as they are packaged for transmission. These settings are very useful especially over Wide Area networks where bandwidth is a limitation. Please note the larger the number the longer the delay.
7. The settings in this table modify the amount of time the system waits when silence is detected before hanging up.

Volume Configuration

This configuration setting is used to add or modify Volume settings on a per channel basis.

When this entry is selected the following screen appears:

VoIP Channel Volume configuration:

channel	Voice-Volume	DTMF-SigGain	DTMF-Volume	Prompt-Volume
0	0	0	0	0
1	Default	-15	Default	Default

*Note: Only shown channel(s) contain non default volume setting(s)

Enter channel number to modify:

- '*' for all channels,
- '-' for a range (select 1 range at a time),
- or enter a number for single channel.
- a to apply changes to config file
- b to back to previous page
- d to display information on selected channel(s)
- s to save all settings
- q to quit (logout)

--->

Once a channel is entered, the following screen is displayed.

For the selected channels, enter:

- * to modify all fields:
- 1 to change default voice volume
- 2 to change DTMF Sig Gain
- 3 to change DTMF volume
- 4 to change Prompt volume
- a to apply changes now
- b to back to select lines
- d for display settings for these lines
- s for save changes and exit
- q to quit

--->

Entry description:

1. Change default Voice volume settings. Each gateway has the capability to specify, on a per channel basis, its output volume setting (values are in dBs).

2. Change DTMF signal gain parameter. This value may be needed in certain situations where an applied gain to the signal is factored in order to regenerate DTMF digits.
3. Modify DTMF volume setting. Use this entry in combination with the gain above to obtain the desired signal levels.
4. Change Prompt voice levels. This entry is used if the gateway is pre-configured to answer a call with greeting or welcome prompts.

Direct Connect Configuration

This configuration setting is used to add or modify direct connect settings on a per channel basis. When this entry is selected, a request for a channel number or a range of channels is prompted. Subsequently a request for a direct connected IP address and port number prompts for entry. This setting is only used when a channel has been configured for Direct connect (this parameter is set under Channel configuration).

System Settings Configuration

This configuration setting is used to add or modify local machine parameters such as IP Address, Netmask and Router as defined in the previous chapter.

VoIP Commands

When selected, the following screen appears:

VoIP Command Request Page:

Enter:

1. to soft ShutDown VoIP
 2. to start VoIP
 3. set debug output file
 4. clear debug output
 5. set/clear a channel command
 6. snapshot of All channel
 7. view activity on a span
- b to back to previous page
q to quit (logout)

-->

Entry 1 and 2 allow the user to stop and start the Voice over IP application without having to restart the system (power cycle). Other commands are available only under maintenance mode.

Web Browser Configuration

A Web browser may be used (Microsoft Internet Explorer or Netscape versions 3.0 or above) to log on to the Gateway switch. Once you have access into the switch, making assignments to lines or other configurations to the device is a straightforward procedure, as described in this chapter.

To use a Web browser to log into the Gateway, type the IP address of the gateway into the browser's address line and press the Enter key.

The Gateway responds with a password authentication dialog box. Use the login name and password provided by Edge Access technical support. (Contact Edge Access if login name and password were not provided.) Once the security information is entered, the Gateway takes user to the Configuration Main Menu.

Disabling Browser's Caching Feature

The Gateway Web configuration utility demands that the browser's caching feature be disabled.

In Microsoft IE 4.0, select *View> Internet Options> General Tab> Settings*, and select the option requiring the browser to check for new versions of the stored page on "Every visit."

Navigation

Use the [Go Back](#) hyperlink whenever available. If no Go Back hyperlink is available, use the browser's **Back** button.

Configuration Options

The Digital Gateway is pre-configured in some ways, but there are still configurations that may be needed. You can make these changes using the system's Web-based configuration software.

This chapter describes how to use that software to make changes to the Gateway.

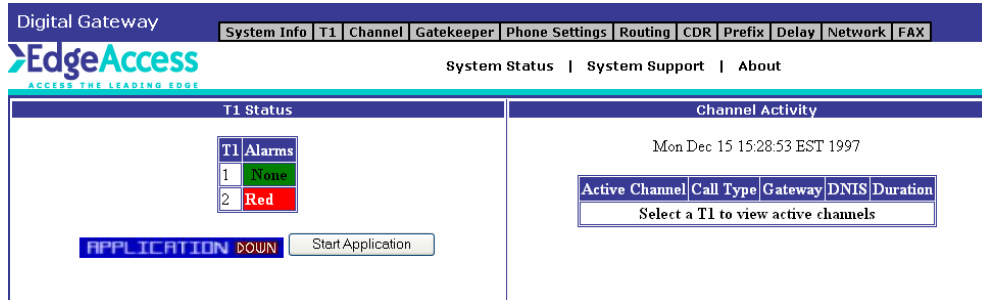


Figure 3-1

The following pages describe each of the above options, the related features for each and its configuration requirements.

User may configure the sections of the Gateway in any order. In order for changes to take effect, user must stop and restart the application from System Info page (Figure 3-1).

System Status

The System Status shows all the call activity passing across the Gateway (Figure 3-1). This monitor page automatically refreshes every 10 seconds.

To view system status:

Click the **System Status** hyperlink from the Gateway Configuration main menu.

To view an individual T1, click on its hyperlinked number.

A list of active channels and their activity appear in the center frame. The types of status information appear in the table below.

System Status feature	Definition/Configuration Option
Active Channel	The number of the active channel in the list. Note: Idle channels are not listed. If you need information on idle channels (or the complete channel list) refer to the channel configuration.
Call type	Inbound or Outbound
Gateway	The gateway the call is being routed through.
DNIS	The DNIS number associated with the channel.
Duration	The activity time of the channel.

System Support

The System Status shows the status of each channel on the Gateway (*Figure 3-1*). This monitor page automatically refreshes every 10 seconds.

1. To view System Support select the System Information tab and then click on the System Support hyperlink.
2. To view the Channel Status of a T1, click on the T1 hyperlink and a list of channels and their status will be displayed (*Figure 3-2*).

The screenshot shows the 'Digital Gateway' interface with the 'System Support' tab selected. The 'T1 Support' section displays 'T1 Alarms' with two entries: '1 None' and '2 Red'. Below this is an 'APPLICATION UP' indicator and a 'Stop Application' button. The 'Channel Status' section shows a table of 14 channels, all in an 'IDLE' state, with a duration of 18.547 and a term code of 'Term Code'. The table is titled 'Channel Status' and includes a timestamp 'Tue Dec 16 13:05:47 EST 1997'.

Reset	Channel	Call Type	Gateway	DNIS	Duration	Term Code
Reset	1	IDLE	66.82.220.110(0)	_	17.14.2	Term Code
Reset	2	IDLE			18.5.47	Term Code
Reset	3	IDLE			18.5.47	Term Code
Reset	4	IDLE			18.5.47	Term Code
Reset	5	IDLE			18.5.47	Term Code
Reset	6	IDLE			18.5.47	Term Code
Reset	7	IDLE			18.5.47	Term Code
Reset	8	IDLE			18.5.47	Term Code
Reset	9	IDLE			18.5.47	Term Code
Reset	10	IDLE			18.5.47	Term Code
Reset	11	IDLE			18.5.47	Term Code
Reset	12	IDLE			18.5.47	Term Code
Reset	13	IDLE			18.5.47	Term Code
Reset	14	IDLE			18.5.47	Term Code

Figure 3-2

About

The About page shows the time and date when the Gateway was last invoked and the current version of the application.

1. Click on the System Info tab and then select the About hyperlink. The following screen will be displayed (*Figure 3-3*).

Digital Gateway

System Info | T1 | Channel | Gatekeeper | Phone Settings | Routing | CDR | Prefix | Delay | Network | FAX

EdgeAccess
ACCESS THE LEADING EDGE

System Status | System Support | **About**

About OMNIAXS Gateway

Last Invoked at: 19:39:35 11/28/1997
DspApp: Version 1.2.11_Release(PCI)(X86)

Figure 3-3

T1 Configuration

Use the T1 Configuration to establish system settings for the T1. This configuration menu supports as many T1s as the Digital Gateway.

To access the T1 Configuration Web pages select the T1 Configuration tab. The T1 List permits the user to add T1 configuration records or to access records for T1s already configured.

Digital Gateway

System Info | **T1** | Channel | Gatekeeper | Phone Settings | Routing | CDR | Prefix | Delay | Network | FAX

EdgeAccess
ACCESS THE LEADING EDGE

T1 List

T1 List

T1	Enabled	Framing	LineCode	Inbound	Outbound	Outbound Prefix	PRI T1	PRI DCH	BAK T1	BAK DCH
1	Yes	D4	AMI	Wink Start	Wink Start		0	24	1	24
2	Yes	D4	AMI	Wink Start	Wink Start		0	24	1	24

Add T1

Figure 3-4

To add a T1 configuration record:

1. Click on **Add T1** on the T1 list page. The following screen will be displayed (*Figure 3-5*).

Digital Gateway

System Info | T1 | Channel | Gatekeeper | Phone Settings | Routing | CDR | Prefix | Delay | Network | FAX

EdgeAccess
ACCESS THE LEADING EDGE

T1 Configuration

T1 Configuration

T1 Number:

Status: Disabled Enabled

Framing:

Line Code:

Inbound Protocol:

Outbound Protocol:

Outbound Prefix:

Primary D-CHAN SPAN:

Primary D-CHANNEL:

Backup D-CHAN SPAN:

Backup D-CHANNEL:

Figure 3-5

2. Enter the information in the fields as defined in the table below.

T1 feature	Definition/Configuration Option
T1 number	Sequentially assigned ID number
Status	Enabled or Disabled
Framing	D4 or ESF
Line Code	B8ZS or AMI
Inbound Protocol	Immediate Start, Wink Start, Loop/Ground Start, or FGD
Outbound Protocol	Immediate Start, Wink Start, Loop/Ground Start, or FGD
Outdial Prefix	Digit prefix for outbound dialing outside network (set to <i>blank</i> for no dialing prefix)
Primary D-CHAN SPAN	0 or 1
Primary D-CHANNEL	Channel# to be used as the primary data channel
Backup SPAN	0 or 1 (Whichever is not being used as the primary)
Backup D-CHANNEL	Channel # to be used as the back up data channel

Click on **Update Config** to save changes.

To update any of the T1 configurations:

1. Access the T1 configuration record by clicking the T1's number on the T1 list page.
2. Change the selections in one or more of the fields on the T1 Configuration page.
3. *Click* on **Update Config** to save changes.

To delete a T1 configuration:

1. Access the T1 configuration record by clicking the T1's number on the T1 List page.
2. *Click* on **Delete Record** at the bottom of the T1 Configuration page.

Channel Configuration

Use the channel configuration to create and assign voice channels on the T1(s).

To access the Channel Configuration option select the Channel tab. The following screen will be displayed (*Figure 3-6*).

The Channel List page allows user to add channel configuration records or to access records for channels already configured.

Digital Gateway | System Info | T1 | Channel | Gatekeeper | Phone Settings | Routing | CDR | Prefix | Delay | Network | FAX

EdgeAccess | Channel | Direct Connect | Volume

Channel List

Channel	Enabled	Speech Type	Trunk#	Silence Detection	Filtering	Connect Type	DID	Inbound Type	Outbound Type
1	Yes	G723.1 6.3 kbps	0	Off	Off	FXS	11	Default	Default
2	Yes	G723.1 6.3 kbps	0	Off	Off	FXS	X	Default	Default
3	Yes	G723.1 6.3 kbps	0	Off	Off	FXS	X	Default	Default
4	Yes	G723.1 6.3 kbps	0	Off	Off	FXS	X	Default	Default
5	Yes	G723.1 6.3 kbps	0	Off	Off	FXS	X	Default	Default
6	Yes	G723.1 6.3 kbps	0	Off	Off	FXS	X	Default	Default
7	Yes	G723.1 6.3 kbps	0	Off	Off	FXS	X	Default	Default
8	Yes	G723.1 6.3 kbps	0	Off	Off	FXS	X	Default	Default
9	Yes	G723.1 6.3 kbps	0	Off	Off	FXS	X	Default	Default
10	Yes	G723.1 6.3 kbps	0	Off	Off	FXS	X	Default	Default
11	Yes	G723.1 6.3 kbps	0	Off	Off	FXS	X	Default	Default
12	Yes	G723.1 6.3 kbps	0	Off	Off	FXS	X	Default	Default
13	Yes	G723.1 6.3 kbps	0	Off	Off	FXS	X	Default	Default
14	Yes	G723.1 6.3 kbps	0	Off	Off	FXS	X	Default	Default
15	Yes	G723.1 6.3 kbps	0	Off	Off	FXS	X	Default	Default
16	Yes	G723.1 6.3 kbps	0	Off	Off	FXS	X	Default	Default
17	Yes	G723.1 6.3 kbps	0	Off	Off	FXS	X	Default	Default

Add Channel

To add a channel configuration:

1. *Click* on **Add Channel** button at the bottom of the Channel List page. The Channel Configuration screen will be displayed (*Figure 3-7*).

The screenshot shows the 'Channel Configuration' page in the Digital Gateway interface. The page has a navigation bar with tabs for System Info, T1, Channel, Gatekeeper, Phone Settings, Routing, CDR, Prefix, Delay, Network, and FAX. The 'Channel' tab is selected. Below the navigation bar, there are sub-tabs for Channel, Direct Connect, and Volume. The main content area is titled 'Channel Configuration' and contains the following fields:

- Channel Number: 0
- Status: Disabled Enabled
- Speech Type: Default (dropdown)
- Trunk Number: 1
- Silence Detection: Disabled Enabled
- Filtering: Disabled Enabled
- Connect Type: FXO FXS
- DID: 2
- Inbound Connect Option: Disabled (dropdown)
- Outbound Type: Zero (dropdown)

At the bottom of the form, there are two buttons: 'Update Config' and 'Delete Record'.

Figure 3-7

2. Enter configuration details for the channel. Each option is defined in the table below.

Channel Feature	Definition/Configuration Options
Channel number	Number assigned by the technician to identify that channel Note: Channels 1-24 belong to T1 #1; Channels 25-48 belong to T1 #2.
Enabled?	Yes or No to indicate Enabled or Disabled
Speech Type Options:	Default (G723.1 6.3kbps) G711 U-law G723.1 5.3 kbps G723.1 6.3kbps G729A 8kbps
Trunk number	The number of the trunk associated with the channel.
Silence Detection	On* or Off
Filtering	On* or Off
Connect Type:	FXO (Foreign Exchange Office) or FXS (Foreign Exchange Station)
DID	Specifies the number of digits to collect for Inbound calls
Inbound Connect :	Disabled Direct Connect (Trunk) Direct Connect (No Trunk) Prefix Connect

Outbound Type :	Default Straight DNIS Seizure only Replace Add Prefix Add Prefix
-----------------	--

*On is the recommended setting to improve performance and audio quality.

3. *Click* on **Update Config** button to save the record information.

To update a channel configuration record:

1. *Click* on the **Channel Configuration** hyperlink from the Gateway
2. From the Channel List page, click on the number of the channel configuration record to be updated.
3. Make changes to one or more fields on the Channel Configurations page (see table above).
4. *Click* on **Update Config** button on the bottom of the page.

To delete a channel configuration record:

1. *Click* on the **Channel Configuration** hyperlink from the Gateway Configuration Main Menu.
2. On the Channel List page, click on the number of the channel configuration to be deleted.
3. *Click* on **Delete Record** button on the bottom of the Channel Configuration page.

Note: Deleted channels are not available for call traffic.

Direct Connect Setting

Select this entry only when the channel has been configured for Direct Connect using the Channel Configuration hyperlink. Each channel requires the remotes IP address, as well as port number and trunk number.

To access the **Direct Connect Configuration** option, select the Channel tab and then click on the Direct Connect hyperlink. The Direct Connect List will be displayed as shown below (*Figure 3-8*).

Digital Gateway

System Info | T1 | Channel | Gatekeeper | Phone Settings | Routing | CDR | Prefix | Delay | Network | FAX

EdgeAccess
ACCESS THE LEADING EDGE

Channel | Direct Connect | Volume

Direct Connect List

Channel	Gateway Address	GatewayPort	Trunk#
1	b	5000	-1
2	b	5000	-1
3	b	5000	-1
4	b	5000	-1
5	b	5000	-1
6	b	5000	-1
7	b	5000	-1
8	b	5000	-1
9	b	5000	-1
10	b	5000	-1
11	b	5000	-1
12	b	5000	-1
13	b	5000	-1
14	b	5000	-1

Add Channel

To update a channel configuration record:

1. On the Channel List page, click on the number of the channel to be updated. The following screen will be displayed (*Figure 3-9*).

Digital Gateway

System Info | T1 | Channel | Gatekeeper | Phone Settings | Routing | CDR | Prefix | Delay | Network | FAX

EdgeAccess
ACCESS THE LEADING EDGE

Channel | Direct Connect | Volume

Direct Connect Configuration

Channel Number:

Gateway Address:

Port Number:

Trunk Number:

Update Config | Delete Record

Figure 3-9

2. Make changes to one or more fields on the Direct Connect Configurations page.
3. Click on **Update Config** button on the bottom of the page.

To delete a channel configuration record:

1. Click on the Channel Configuration hyperlink from the Gateway Configuration Main Menu.
2. On the Channel List page, click on the number of the channel configuration to be deleted.
3. *Click* on **Delete Record** button on the bottom of the Direct Connect Configuration page.

Note: Deleted channels use the default route if no entry is specified.

Volume Configuration

The volume for calls transmitted by the Digital Gateway is preset to an acceptable volume for most calls. If problems occur with call volume or volume needs to be adjusted for FXO connections, use this volume configuration page to make changes.

Digital Gateway

System Info | T1 | Channel | Gatekeeper | Phone Settings | Routing | CDR | Prefix | Delay | Network | FAX

EdgeAccess
ACCESS THE LEADING EDGE

Channel | Direct Connect | **Volume**

Volume List

Channel	Speech Volume	DTMF/Tone Gain	DTMF/Tone Volume	Prompt Volume
1	0	-9	-9	
2	0	-9	-9	
3	0	-9	-9	
4	0	-9	-9	
5	0	-9	-9	
6	0	-9	-9	
7	0	-9	-9	
8	0	-9	-9	
9	0	-9	-9	
10	0	-9	-9	
11	0	-9	-9	
12	0	-9	-9	
13	0	-9	-9	

Add Volume Record

Figure 3-10

To access the Volume Configuration option, select the Channel tab and then click on the Volume hyperlink. The following page will be displayed (*Figure 3-10*). The Volume List shows a list of each channel with a volume configuration record different from the default.

Click on any hyperlinked channel number to see the Volume Configuration window shown below.

Digital Gateway

System Info | T1 | Channel | Gatekeeper | Phone Settings | Routing | CDR | Prefix | Delay | Network | FAX

EdgeAccess
ACCESS THE LEADING EDGE

Channel | Direct Connect | Volume

Volume Configuration

Channel:	<input type="text" value="1"/>
Speech Volume (db):	<input type="text" value="0"/>
DTMF/Tone Gain (db):	<input type="text" value="-9"/>
DTMF/Tone Volume (db):	<input type="text" value="-9"/>
Prompt Volume (db):	<input type="text"/>

Figure 3-11

To add a volume detail record:

1. *Click* the **Volume Configuration** hyperlink on the Gateway Configuration page to display the Volume List.
2. *Click* on **Add Volume Record** button. The Volume Configuration detail window will be displayed.
3. Edit the fields as labeled (see table below for more information).
4. *Click* on **Update Config** button.

To edit a volume configuration record:

1. *Click* the **Volume Configuration** hyperlink on the Gateway Configuration page to see the Volume List.
2. *Click* the hyperlinked channel number on the Volume List to see the Volume Configuration detail window.
3. Edit the fields as defined in the table above.
4. *Click* on **Update Config** button.

To delete a volume configuration record:

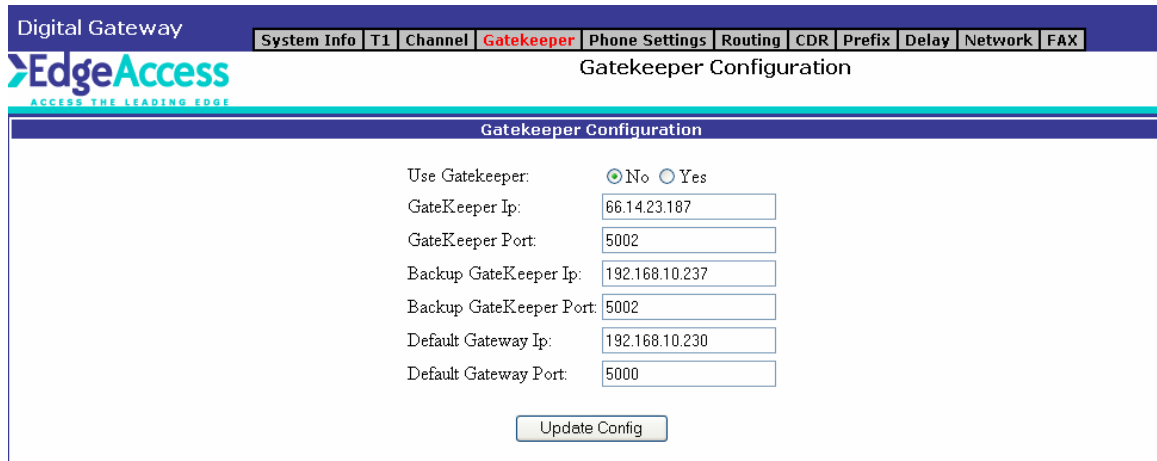
1. *Click* the **Volume Configuration** hyperlink on the Gateway Configuration page to see the Volume List.
2. *Click* the hyperlinked channel number on the Volume List to see the Volume Configuration detail window.
3. *Click* on **Delete Record** button.

Gateway Configuration

The Softswitch configuration allows user to first specify whether a Softswitch is being used.

Important: *If not using a Softswitch, the Default Gateway IP and port to the connecting gateway must be set.*

To access the Gatekeeper Configuration option, select the Gatekeeper tab. The following screen will be displayed (*Figure 3-12*).



The screenshot shows the 'Digital Gateway' interface with a navigation bar containing tabs: System Info, T1, Channel, Gatekeeper (selected), Phone Settings, Routing, CDR, Prefix, Delay, Network, and FAX. Below the navigation bar is the 'EdgeAccess' logo and the text 'ACCESS THE LEADING EDGE'. The main content area is titled 'Gatekeeper Configuration' and contains the following fields:

Use Gatekeeper:	<input checked="" type="radio"/> No <input type="radio"/> Yes
GateKeeper Ip:	<input type="text" value="66.14.23.187"/>
GateKeeper Port:	<input type="text" value="5002"/>
Backup GateKeeper Ip:	<input type="text" value="192.168.10.237"/>
Backup GateKeeper Port:	<input type="text" value="5002"/>
Default Gateway Ip:	<input type="text" value="192.168.10.230"/>
Default Gateway Port:	<input type="text" value="5000"/>

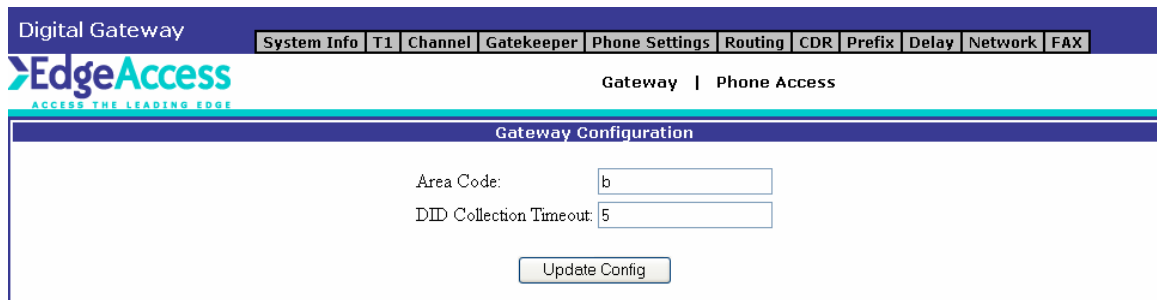
At the bottom of the form is an 'Update Config' button.

Figure 3-12

1. Edit fields.
2. *Click* on **Update Config** button to save the changes.

Phone Settings Configuration

To access the Phone Settings option, select the Phone Settings tab. The following screen will be displayed (*Figure 3-13*).



The screenshot shows the 'Digital Gateway' interface with a navigation bar containing tabs: System Info, T1, Channel, Gatekeeper, Phone Settings (selected), Routing, CDR, Prefix, Delay, Network, and FAX. Below the navigation bar is the 'EdgeAccess' logo and the text 'ACCESS THE LEADING EDGE'. The main content area is titled 'Gateway Configuration' and contains the following fields:

Area Code:	<input type="text" value="b"/>
DID Collection Timeout:	<input type="text" value="5"/>

At the bottom of the form is an 'Update Config' button.

Figure 3-13

1. Edit the fields.
2. *Click* on **Update Config** button to save changes.

Phone Access

Use the Phone Access configuration to change the International Access Code, Country code and Area Code associated with the Gateway.

To view the Phone Access option, select the Phone Settings tab and then click on the Phone Access hyperlink. The following screen will be displayed (Figure 3-14).

Digital Gateway

System Info | T1 | Channel | Gatekeeper | Phone Settings | Routing | CDR | Prefix | Delay | Network | FAX

EdgeAccess
ACCESS THE LEADING EDGE

Gateway | Phone Access

Phone Access Configuration

International Access Code:

Country Code:

Area Code:

Figure 3-14

1. Edit the Fields.
2. *Click* on Update Config button to save changes.

Routing Configuration

Use the routing configuration to establish routing paths for trunks on the Gateway switch.

To view the Routing option, select the Routing tab. The following screen will be displayed (Figure 3-15).

Digital Gateway

System Info | T1 | Channel | Gatekeeper | Phone Settings | Routing | CDR | Prefix | Delay | Network | FAX

EdgeAccess
ACCESS THE LEADING EDGE

Routing List

Routing List

Entry	DID#	AreaCode	Gateway Ip	Gateway Port	Trunk#
1	*	*	1001	192.168.10.247	5060
2	*	*	1111111	66.82.220.110	5000
3	*	*	2222222	209.208.69.74	5000
4	*	*	1234567	209.208.69.77	50820
5	1	813	2492021	192.168.10.232	5000
6	1	813	2492022	192.168.10.232	5000
7	1	813	2492023	192.168.10.232	5000
8	1	813	2492024	192.168.10.232	5000
9	1	813	2492025	192.168.10.232	5000
10	1	813	2492026	192.168.10.232	5000
11	1	813	2492027	192.168.10.232	5000
12	1	813	2492028	192.168.10.232	5000

Figure 3-15

To add a route:

1. Click on **Add Route** button at the bottom of the routing list page. The following screen will be displayed (Figure 3-16).

Figure 3-16

2. Enter the new route's information in the labeled fields as defined in the table below.

Route feature	Definition/Configuration options
Entry number	Assigned by the system
DID number	The DID number to be routed; add the asterisk * for a wild card match. For example, 555* would route any number beginning with 555 to the specified destination.
Area Code	The area code associated with the DID number; use 000 for all area codes.
Gateway IP	The IP address the call should be routed to.

Gateway Port	The port the call should be routed to
Trunk number	The trunk number where the call should be routed to.
Speech type	Default (G723.1 6.3kbps) G711 U-law G723.1 5.3 kbps G723.1 6.3kbps G 729A 8kbps

3. *Click* on **Update Config** button at the bottom of the page.

To update a routing configuration record:

1. *Click* on the **Routing Configuration** hyperlink on the Gateway Configuration Main Menu.
2. Using the Routing List, select a route by clicking on the entry number.
3. Make changes to one or more fields on the route configuration page (see table above).
4. *Click* on **Update Config** button on the bottom of the page.

To delete a routing configuration record:

1. *Click* on the **Routing Configuration** hyperlink from the Gateway Configuration Main Menu.
2. Using the Routing List, select a route by clicking on the entry number.
3. *Click* on **Delete Record** button on the bottom of the page.

CDR Configuration

The CDR (Call Detail Record) configuration permits user to send the CDR to a specific destination IP and port.

To view the CDR option, select the CDR tab. The following screen will be displayed (*Figure 3-17*).

Digital Gateway

System Info | T1 | Channel | Gatekeeper | Phone Settings | Routing | CDR | Prefix | Delay | Network | FAX

EdgeAccess
ACCESS THE LEADING EDGE

CDR Configuration

CDR Configuration

Send CDR: No Yes

Destination Ip:

Destination Port:

Figure 3-17

1. Edit the CDR Configuration using the table below.

CDR feature	CDR Option
Send CDR	Yes or No
Destination IP	Enter Destination IP address
Destination Port	Enter Port address

2. Click on **Update Config** button on the bottom of the page to save changes.

Prefix Configuration

Use the Prefix configuration to rearrange outbound call numbers. For example, to add the local area code to outgoing calls, enter the new digits in the replace with field. This option allows for complete control of dialed number sequences.

To access the Prefix option, select the Prefix tab. The following screen will be displayed (Figure 3-18).

Digital Gateway

System Info | T1 | Channel | Gatekeeper | Phone Settings | Routing | CDR | Prefix | Delay | Network | FAX

EdgeAccess
ACCESS THE LEADING EDGE

Inbound Prefix | Outbound Prefix

Inbound Prefix List

Figure 3-18

1. Click on **Add T1** button. The following screen will be displayed (Figure 3-19).

Digital Gateway

System Info | T1 | Channel | Gatekeeper | Phone Settings | Routing | CDR | Prefix | Delay | Network | FAX

EdgeAccess
ACCESS THE LEADING EDGE

Inbound Prefix | Outbound Prefix

Inbound Prefix Configuration

Prefix:

Replace With:

Figure 3-19

2. In the Prefix field, enter the outbound dialing prefix you want to edit.
3. In the Replace With field, enter the numbers (if any) the prefix should be replaced with.
4. *Click* on **Update Config** to save changes.

To edit an Inbound dialing configuration:

1. Access the Prefix Configuration page by clicking on the tab then click on the Inbound hyperlink. The Inbound Prefix List will be displayed.
2. Using the Inbound Prefix List page, click the Entry number of the prefix configuration record to make changes.
3. Edit any of the fields as necessary.
4. *Click* on **Update Config** to save changes.

To delete an Inbound dialing configuration:

1. Access the Prefix Configuration page by clicking on the tab and then clicking on the Inbound hyperlink. The Inbound Prefix List will be displayed.
2. Using the Inbound Prefix list page, click the Entry number of the prefix configuration record to be deleted.
3. *Click* on **Delete Record** button.

Outbound Prefix Configuration

Use this entry when adding outbound string replacement entries.

To access the Outbound Prefix option, select the Prefix tab and then click on the Outbound hyperlink. The following screen will be displayed (Figure 3-20).

The screenshot shows the 'Outbound Prefix List' page. At the top, there is a navigation bar with 'Digital Gateway' and a menu of tabs: System Info, T1, Channel, Gatekeeper, Phone Settings, Routing, CDR, Prefix, Delay, Network, and FAX. Below the navigation bar is the 'EdgeAccess' logo and the text 'ACCESS THE LEADING EDGE'. The page title is 'Outbound Prefix List'. Below the title is a table with three columns: 'Entry', 'Prefix', and 'Replace With'. The table contains one row with the values '1', '1444', and '1'. Below the table is an 'Add Prefix' button.

Entry	Prefix	Replace With
1	1444	1

Figure 3-20

1. Click on **Add Prefix** button. The Prefix Configuration screen will be displayed (Figure 3-21).

The screenshot shows the 'Outbound Prefix Configuration' page. At the top, there is a navigation bar with 'Digital Gateway' and a menu of tabs: System Info, T1, Channel, Gatekeeper, Phone Settings, Routing, CDR, Prefix, Delay, Network, and FAX. Below the navigation bar is the 'EdgeAccess' logo and the text 'ACCESS THE LEADING EDGE'. The page title is 'Outbound Prefix Configuration'. Below the title are two input fields: 'Prefix:' with the value '0' and 'Replace With:' with the value '000'. Below the input fields are two buttons: 'Update Config' and 'Delete Record'.

Prefix:

Replace With:

Figure 3-21

2. In the Prefix field, enter the outbound dialing prefix you want to edit.
3. In the Replace With field, enter the numbers (if any) the prefix should be replaced with.
4. Click on **Update Config** to save changes.

To edit an Outbound dialing configuration:

1. Access the Prefix Configuration page by clicking on the tab and then click the Outbound hyperlink. The Outbound Prefix List will be displayed.
2. Using the Outbound Prefix List page, click the Entry number of the prefix configuration record to make changes.
3. Edit any of the fields as necessary.
4. Click on **Update Config** to save changes.

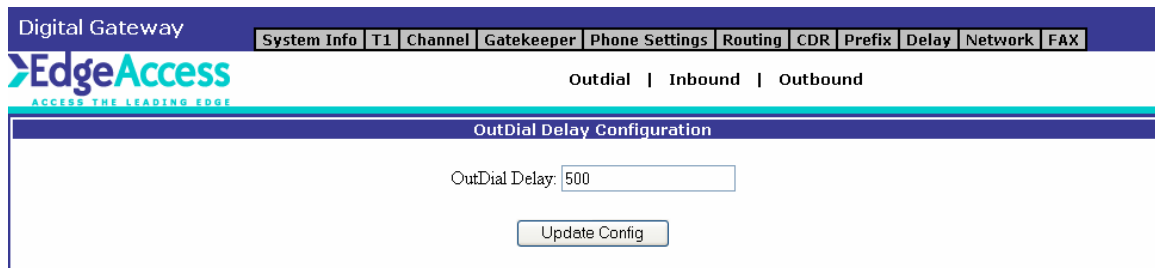
To delete an outbound dialing configuration:

1. Access the Prefix Configuration page by clicking on the tab then click on the Outbound hyperlink. The Outbound Prefix List will be displayed.
2. Using the Outbound Prefix list page, click the Entry number of the prefix configuration record to be deleted.
3. *Click* on **Delete Record** button.

Delay Configuration

Use this entry to set a default time parameter before outpulsing a string of digits. This parameter is needed in special cases where outdialing is delayed after a line seizure.

To access the Delay option, select the Delay tab. The following screen will be displayed (*Figure 3-22*).



Digital Gateway

System Info | T1 | Channel | Gatekeeper | Phone Settings | Routing | CDR | Prefix | Delay | Network | FAX

EdgeAccess
ACCESS THE LEADING EDGE

Outdial | Inbound | Outbound

OutDial Delay Configuration

OutDial Delay: 500

Update Config

Figure 3-22

1. Enter the desired OutDial Delay in milliseconds.
2. *Click* on **Update Config** button to save changes.

Inbound Delay Configuration

Use this setting for configuring the answering system to signal the switch when the remote party has gone off-hook. In other words, the off-hook signal is propagated from the remote (outdialing system), to the local (indialing system) to the switch.

To access the Inbound option, select the Delay tab and then click on the Inbound hyperlink. The following screen will be displayed (*Figure 3-23*).

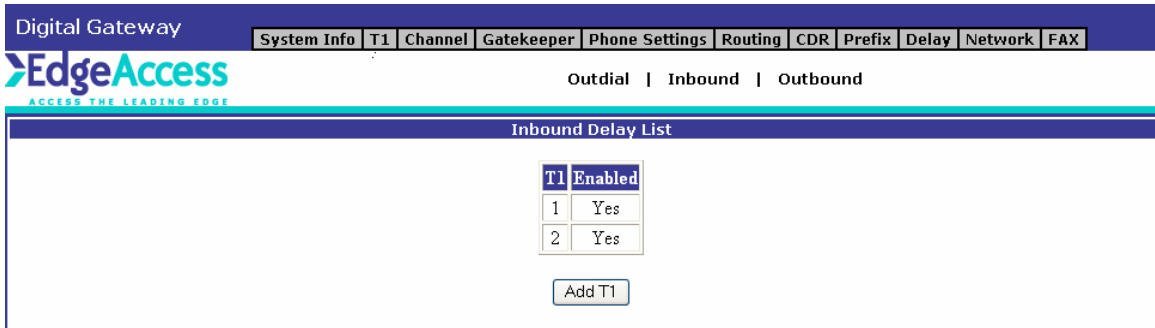


Figure 3-23

1. Click on a T1 number to display the Inbound delay configuration screen.

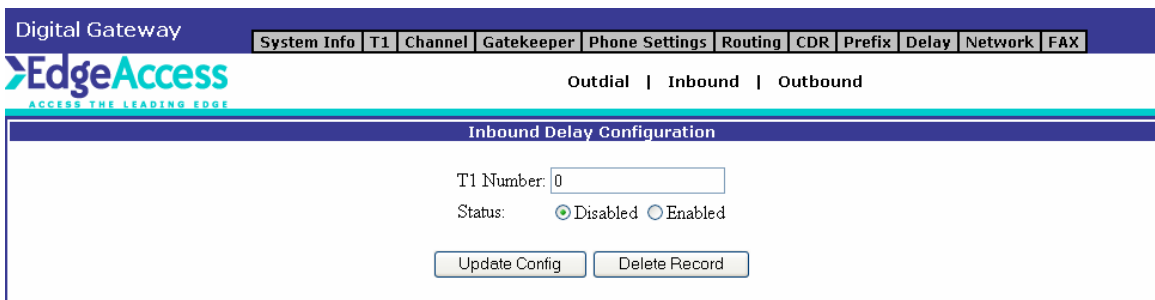


Figure 3-24

2. Click on disabled or enabled option as required.
3. Click on Update Config to save changes.

Outbound Delay Configuration

To access the Outbound option, select the Delay tab and then click on the Outbound hyperlink. The following screen will be displayed (Figure 3-23).

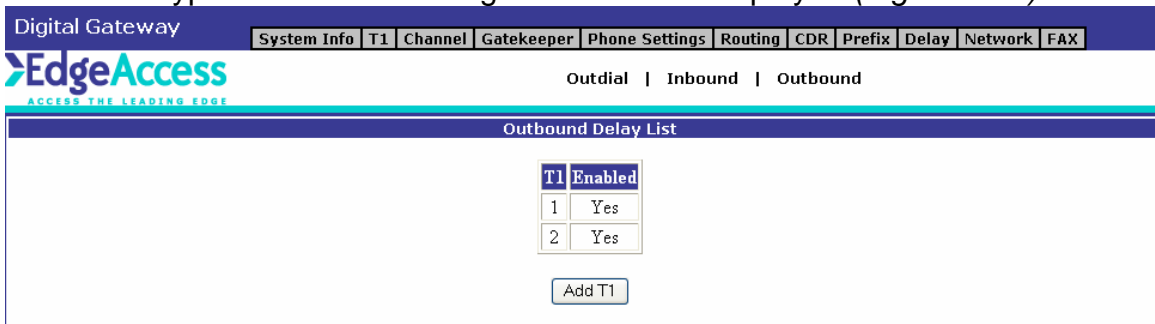


Figure 3-24

1. Click on a T1 number to display the Outbound delay configuration screen.

Figure 3-25

2. Click on disabled or enabled option as required.
3. *Click* on **Update Config** to save changes.

Network Speed Configuration

Use this entry to view the Network parameter configuration.

Note: to modify entries in this field, user must use the telnet session configuration utility. When using telnet configuration utility, select option 5 Gateway Timing Configuration.

To access the Network option, select the Network tab. The following screen will be displayed (Figure 3-26).

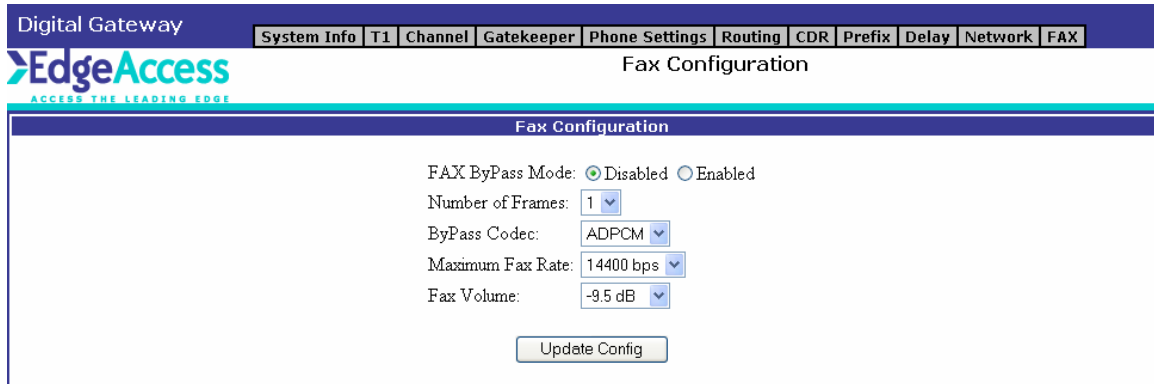
Figure 3-26

To edit the Inactivity Configuration, Route Type and TOS Bit:

1. Edit any of the fields as necessary.
2. *Click* on **Update Config** to save changes.

FAX

To access the Fax option, select the Fax tab. The following screen will be displayed (*Figure 3-27*).



The screenshot shows the 'Digital Gateway' interface with a navigation bar containing tabs: System Info, T1, Channel, Gatekeeper, Phone Settings, Routing, CDR, Prefix, Delay, Network, and FAX. The 'FAX' tab is selected. Below the navigation bar is the 'EdgeAccess' logo and the text 'ACCESS THE LEADING EDGE'. The main content area is titled 'Fax Configuration' and contains the following settings:

- FAX ByPass Mode: Disabled Enabled
- Number of Frames: 1 (dropdown)
- ByPass Codec: ADPCM (dropdown)
- Maximum Fax Rate: 14400 bps (dropdown)
- Fax Volume: -9.5 dB (dropdown)

An 'Update Config' button is located at the bottom of the configuration area.

Figure 3-27

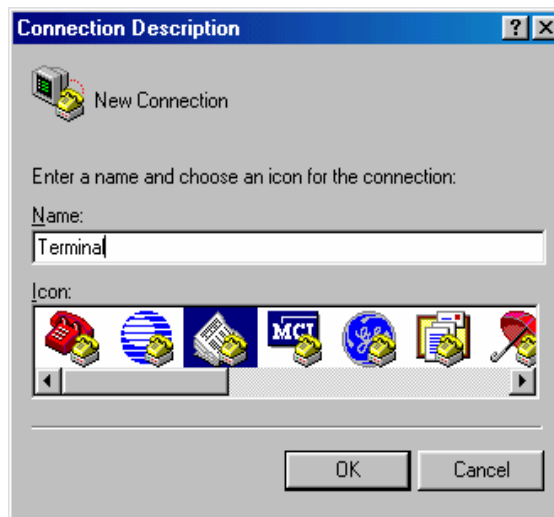
1. Edit any of the fields as necessary.
2. *Click* on Update Config to save changes.

APPENDIX A: HYPERTERMINAL INSTRUCTIONS FOR WINDOS 95, 98 OR NT

1. Click

Start Programs->Accessories->Communications->Hyper Terminal->Hypertrm.exe.

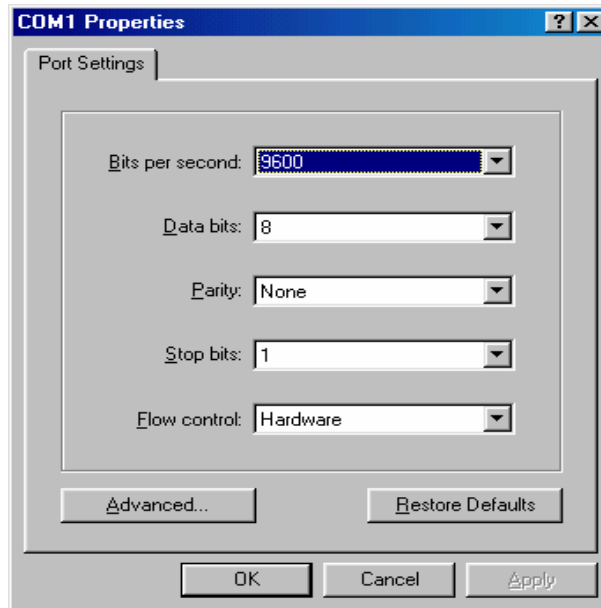
The following screen will be displayed:



2. Type any name (i.e. Terminal) and select an icon from the choices displayed. Click OK. The following screen will be displayed.



3. Under Connect Using: select Direct to Com1 or Com 2 (depending where the serial cable is connected). Click on OK and the following screen will be displayed.



4. Change Port Settings to the following values as shown in the above display.
Bits per Second: 9600
Data Bits: 8
Parity: None
Stop Bit: 1
Flow Control: Hardware
5. *Click* OK.

APPENDIX B: CHANNEL DIGIT COLLECTION

The following describes the GSP Gateway Switch Signaling flow:

There are two methodologies for capturing digits when responding to an inbound call.

The first method is simple: Digit collection from the switch is configurable to collect a number of digits. The second methodology uses a complex flow that allows the user to collect digits based on the users' application. Description of the flow is determined by the specifications shown below.

Every channel can be independently configured to follow a particular flow.

Method 1: This method can be configured using web browser or telnet configuration utility.

Every channel configures to answer and collect straight DNIS numbers by entering a value from 2 to 16.

For example: Let's say that the system is connected to a switch or a T1 line. In addition, user has secured a series or a block of numbers that are always delivered as the DNIS (Destination number ex: 8005551212-24) whenever there is an inbound call.

In this case, the only change that needs to be made is to enter the number of digits being received. For the above example, user has to enter **10** in the DID field under the Channel Configuration menu.

After receiving the DNIS that gateways automatically route the call based on either their own table or a Gatekeeper route.

Method 2: This method can only be configured using the telnet configuration utility under the Inbound/Outbound Call Parameters Configuration option 1.

Every Channel can be configured to an independent flow as specified in the "Inbound Digit Collect Path".

This method requires a bit of thinking in assigning the call flow parameters determined by user's application. "Inbound Call flows" are specified by alpha characters (A-Z).

There are three levels of collection/validation provided in the call flow:

1. Switch Collect Phase
2. ANI Verification phase
3. OffHook phase

The parameters that can be entered in any one of these phases are as follows:

<Definition><Number of Digits>[<Terminating Character>]

Note: the Terminating character is optional.

Multiple parameters can be entered in a single phase (comma delimited).

Valid Definition entries are:

DNIS
ANI
AUTHCODE
PIN
DID

Number of digits can be **2 to 16**

Terminating Character can be * **or** #

As an example, to collect 10 digits of an Authorization Number and 10 digits for the outdialing number enter the following parameters in the Off hook phase.

AUTHCODE10#,DNIS10#

If user does not want to put a terminating character in the authorization entry then the parameter looks as follows:

AUTHCODE10,DNIS10#

As a second example, if connected to a T1 and the switch is delivering the DNIS; and user wants to collect user Authcode and Destination number, the flow should be set as follows:

In the Switch Collect phase the following entry should appear:

SwitchCollect Phase: **DID10#**
Validation Phase: (blank)
OffHook phase: **AUTHCODE10#,DNIS10#**

Index

1	
10/100 Base T Fast Ethernet	6
8	
802.3u standard	6
A	
Adding a Route	9, 12
ANSI T1.102 and T1.107	6
Area Code	35, 37, 38
AT&T Pub.62411, 540166	6
Audience	5
B	
Bellcore DTMF Specs	6
C	
Call Type	25
CDR Configuration	38
Changing the Netmask	9, 11
Changing the Gateway IP Address	10
Channel Configuration	16, 25, 30
Channel Enabling	28
Channel Number	28, 29
Connect Type	29
Connecting	8
Conventions	5
D	
Default Gateway	34
Destination IP for CDR	38
Destination Port for CDR	38
DID	29
DID Number	37
DNIS	47

DTMF Generation/Detection	6
E	
Echo Canceler Algorithms.....	6
F	
FCC Partsd 15 and 68.....	6
Filtering	29
Font.....	5
Framing	27
G	
Gatekeeper Configuration.....	34
Gateway.....	14
Gateway IP	37
Gateway Port.....	37
Green Light	8
H	
Humidity	7
I	
Inbound Connect Options.....	29
Inbound Configuration.....	42
Indicator Light Graphic	19
Installation Procedures.....	8
IP Address, changing.....	10
L	
LED's	8
Line Interface	7
Logging in through Serial Port.....	9
M	
Maintenance Alarm.....	8
N	
Netmask, changing.....	11
Network Interface Card (NIC).....	8
Network Number.....	11

O	
Digital Gateway Configuration	23
Operating Temperature	7
Outbound Configuration	42
Outbound Type	30
Outdial Prefix	41
Output Signal	7
P	
Power Supply	6
Prefix Configuration	38
Prompt Line.....	9
R	
Rackmount.....	6
Red Alarm.....	8
Red-blue Alarm.....	8
Route, adding.....	11
Routing Configuration	35
S	
Serial Cable.....	9
Serial Port.....	9
Silence Detection.....	29
Speech Type	39
Status, T1	27, 29
System Specifications	6
System Status.....	24
T	
T1 Configuration.....	26
T1 Framing	27, 29
T1 Line Code	27
T1 Status	27, 29
T1-1, T1-0.....	8
Terminal Emulation	9
Trunk Number	29, 40

U	
UL 1459	6
Y	
Yellow Alarm	8