

What's in this guide?

The top menu bar and the entries in the Table of Contents are all hyperlinks. Just click on them to go to the topic.

We recommend that you visit the Cisco web site regularly for updated versions of this guide. Go to: <u>http://www.cisco.com</u>

Introduction

Introduction4

Connecting the EX90

Rear sockets access	. 7
The EX90 parts	. 7
Connecting	
Connecting for use as PC screen	
Connecting a PC to the unit	
Use as PC screen	. 8
Setting the screen resolution	. 8
Using an external monitor to show presentations.	

Using the EX90

The Settings using Touch

Setting the EX90 in standby	
Shutting down the EX90	
Reverting to factory default settings	
Gaining access to the Settings	
System Information	
Call settings	
Call Status	
Camera Control and Settings	
Display Settings	
Ringtone & Sound Settings	
Background	
Administrator Settings–Date, Time & Locatio	n33
Administrator Settings–Call Settings	34
Administrator Settings–IP Settings	35
Administrator Settings-H.323 Settings	
Administrator Settings-SIP Settings	
Administrator Settings–Provisioning	
Administrator Settings-EMC Resilience Mod	

The web interface

Entering the web	interface	41
------------------	-----------	----



Introduction

The objective of this documentation is to provide the reader with assistance in using and configuring the product. The specifications for the product and the information in this Guide are subject to change at any time, without notice, by Cisco/TANDBERG. Every effort has been made to supply complete and accurate information in this Guide; however, Cisco/TANDBERG assumes no responsibility or liability for any errors or inaccuracies that may appear in this document.

TANDBERG[®] is a registered trademark belonging to Tandberg ASA. Other trademarks used in this document are the property of their respective holders.

This Guide may be reproduced in its entirety, including all copyright and intellectual property notices, in limited quantities in connection with the use of this product. Except for the limited exception set forth in the previous sentence, no part of this Guide may be reproduced, stored in a retrieval system, or transmitted, in any form, or by any means, electronically, mechanically, by photocopying, or otherwise, without the prior written permission of Cisco/TANDBERG.

www.tandberg.com TANDBERG is now part of Cisco © 2010–2011 TANDBERG This unit makes use of photos provided by Fotolia. These photos are Copyright © Fotolia. The following photographers have contributed: Anette Linnea Rasmussen Alex Bramwell Stephen Coburn Eric Gevaert Stephen Coburn Stocksnapper Yurok Aleksandrovich ordus Sven Taubert Bas Meelker Paylessimages Vilnis









Chapter 2 Connecting the EX90

Connecting the EX90

Connect the cables as shown. Sockets are located behind the rear cover. If you have one LAN connection only–and need that for your PC–the EX90 has a built in Gigabit ethernet switch that enables you to connect your PC to the EX90 to access the LAN through the EX90.



The EX90 parts

Camera with built-in privacy shutter.

The Cisco Telepresence touch screen controller





- Connect your PC here if you need to share a single LAN connection with the EX90.
- 2 Connect your EX90 to the LAN.
- **3** USB socket (for future use).
- 4 Connect the touch screen controller.

23

- 5 HDMI In (inner socket) and HDMI Out* (outer socket).
- 6 Connect power here.

* HDMI out is used when connecting an extra monitor (typically for presentations)—see the next page for more.

Connecting for use as PC screen





Connect your PC to the sockets on the rear panel as shown below.



Connect your PC video to 1 and PC audio to 2

A resolution of 1920 × 1200 is recommended. For a list of other screen resolutions supported, see "Setting the screen resolution" on page 9.

Connecting a PC to the unit

Your EX90 has an HD display, which also may serve as your PC screen. Connect your PC to the sockets on the rear panel as shown below. For optimal PC image quality, digital output (DVI) from the PC is recommended. If both DVI and HDMI are connected, a **Source** button appears in the setup menu on the touch screen to let you select which source to use as PC screen.



Setting the screen resolution

A resolution of 1920×1200 is recommended. However, other resolutions may also be used as shown in the below tables.

Digital input via DVI	Analog input via DVI
1920 × 1200 (recommended) 1920 × 1080	1920 × 1200 (recommended)
1776 × 1000 (not full screen)	
1680 × 1050	1680 × 1050
1600 × 1200 (not full screen)	1600 × 1200 (not full screen)
1440× 900	1440× 900
1400 × 1050 (not full screen)	
1280 × 1024 (not full screen)	1280 × 1024 (not full screen)
1280 × 960 (not full screen)	, , ,
1280 × 800	
1280 × 768 (not full screen)	
1280 × 720 (not full screen)	
1152 × 648 (not full screen)	
1024 × 768 (not full screen)	1024 × 768 (not full screen)
960 × 600 (not full screen)	
800 × 600 (not full screen)	800 × 600 (not full screen)
. , , , , , , , , , , , , , , , , , , ,	

Screen resolution must be set via the web interface, using the **Video Output HDMI [1] Resolution** setting. For details on this, see the EX90 Administrator Guide, which is available separately for download.

Use as PC screen

Your EX90 has an HD display, which also may serve as your PC screen. Connect your PC to the sockets on the rear panel as shown above.

Your EX90 will serve as your PC screen outside calls. In a call tap **Presentation** to view your desktop. Your desktop is not exposed to the other side before you press **Present**.

Jsing an external monitor to show presentations

You may connect an external monitor to your EX90 to have it work with two monitors at the same time. The second monitor can be configured to show presentations instead of having everything on a single screen.

To enable the use of a second monitor the system must be configured for it. This is done via the web interface using the **Video DefaultPresentationSource** setting. Doing so is described in the EX90 Administrator Guide which is available separately for download .





The camera can be tilted mechanically in vertical direction.



Use as document camera

Tilt the camera as shown to use it as a document camera. Image is automatically turned upside down, so that both parties will see the document correctly.











nitial settings-before you begin





2

The best view wil be the view that positions your face as high up on the screen as possible without cutting off the top of your head. B

If you need to adjust the camera, tap **Camera Control**.

Entering **Camera Control** will also cause the EX90 to show selfview, so if you know that camera adjustments are needed. you do not have to activate selfview first.



Calling someone by dialing the number or URI





... then tap Search or Dial.





Searching for an entry in any of the lists





... then tap Search or Dial.





Calling an entry in any of the lists





... then tap **Favorites**, **Directory**, or **History**.





... then tap the entry to be called (1) and finally tap **START** (2) to place the call.





Favorites. The list of favorites is your own shortlist of people and places you frequently call or otherwise want to have easy access to.

Directory. The directory serves as your corporate phone book. This directory cannot be edited by you. You may, however, copy entries to your list of favorites and edit them there.

History lists the received, placed and missed calls since the last time the list was cleared.

Keypad. Tap the keypad icon is to produce the keypad to enter a number or URI.

Two calls at the same time





... then tap Favorites, Directory, or History ...



... then tap the entry to be called (1) and finally tap **START** (2) to place the call.



You will now be in a call with the second person, while the first one is on hold. In this example, you talk to **Peer Gynt**, while **Berlin Sales Office** is on hold.

Click on the person currently on hold (here **Berlin Sales Office**) to be offered swapping of the calls or transferring the call on hold to someone else.

6

Optional feature: If you drag Berlin Sales Office from the bottom line and onto the stage, you will initiate a MultiSite call (a video conference) with yourself, Berlin Sales Office and Peer Gynt.



Transfer is available to SIP calls only and the procedure is shown on the next page.

If your EX90 is equipped with the optional MultiSite feature you may also set up a video conference with three participants and yourself. See "Calling more than one" on page 18.

Click on the person you currently talk to (here **Peer Gynt**) to terminate or transfer that call.

Transferring calls





Call the person to whom the current call shall be transfered. When you tap the green call button (not shown), the call will be transferred. The call will now be transferred. This will work irrespective of who initiated the call.

Note that you may combine **Transfer** with the **Hold** and **Swap** features as much as you want.

This means, for example, that in a call you may:

- Put your current call on hold and call a second party.
- Then initiate a transfer of the one on hold to the second party.
- You may now disengage yourself by tapping **END** on your unit.

Calling more than one

0

Calling several to initiate a video conference is an optional feature. If your system permits it, you may define two participants and then call them both in one go.

Enter a number or URI, or pick an entry from the **Directory**, the list of **Favorites**, or from the **History**.



2



The entry will appear on the bottom line of the touch pad, as outlined.



0



While in a call you may add another participant, provided that your system permits to do so. Tap Add ...



... then select, in the usual way, whom to add to the ongoing call.



Once you have selected someone, the **ADD TO** MEETING dialog box wil be produced ...



... now, tap ADD TO MEETING to include this participant in the meeting.



participant's name along the bottom line and then tap END.

ayout control in MultiSite

0



If you are in a MultiSite call or in a Point-to-point call with a presentation, you may alter the layout on the screen. To do this start by tapping **More** ...







When a presentation is included in a call, all participants will be shown **above** the presentation instead of below. This will provide a better feeling of eye contact. Full screen will show the

presentation only.

History lists the received, placed and missed calls since the last time the list was cleared.

Tap **History** to produce the list ...



... then tap an entry.





You will now be able to:

- Call the entry by tapping Start.
- Add the entry to an ongoing call (optional feature).
- Add the entry to Favorites.
- Edit the entry information and then place the call.
- Change the call rate settings.
- Remove the entry from the list.
- Clear the entire list. To do this. scroll as outlined beyond what appears to be the top of the list. A Clear List button will then appear.

Favorites Directory History Q. Search or Dial Peer Gynt Horry P. Otter Berlin Soles O

The **Directory** serves as your corporate phone book. This directory cannot be edited by you. You may, however, copy entries to your list of favorites and edit them there.

Tap **Contacts** (if needed) and then tap **Directory**. The directory is typically organized as folders.



Tap a folder (1) to show its contents. scroll (2) if needed to locate a folder or an entry within a folder. Once located, tap the entry to call, edit or add to your list of favorites in the same way as with the history list.

It may happen that an entry copied from the directory to the list of favorites later is updated in the directory. This update will not be reflected in your list of favoritesyou must then manually update the entry in the list of favorites.

Favorites is your own shortlist of contacts you frequently call or otherwise want to have easy access to.

Adding to Favorites. To add someone to the list of favorites, locate the entry in **Directory** or **History** (as outlined) and tap it (1). This will produce a dialog box which allows you to tap Add to Favorites (2).



You may now edit the entry, if needed-just tap a field and the keyboard will be produced. Tap **Save** to put changes into effect..



Favorites should be considered as an editable directory and is used in the same way as History.

You may search for entries (numbers or URIs). Searches will be conducted within all the folders, i.e. within the Favorites, the Directory and the History.

Tap in the Search or Dial field and key in the name, URI or number. Matches will appear as you search.

Once located, tap the entry to call, edit or add to Favorites



When searching within the corporate **Directory**, the search will apply to the current directory folder and its subfolders only. To go one level up, tap the search apply to the entire corporate directory, do not enter (tap) any folder before the search is commenced

Do not disturb

When set to **Do Not Disturb** (DND), ringtones are muted and missed calls you get while having DND active, will be presented when you exit DND..

You may, however, place calls as much as you like. To activate this feature, press the icon in the upper left corner. Press again to deactivate.



You may also hide the Do Not Disturb poster by tapping **Hide**.

Jsing Touch Tones (DTMF)

Sometimes you may be urged to enter touch tones (DTMF) during a call, typically to reach extensions or to provide a pin code.



Use the touch tone keypad. Tap anywhere outside it to exit.





Far end camera control

If the other end point permits it, you may control their camera. This is known as **Far end**

camera control.

If the other camera cannot be controlled, nothing happens.

This works in Point-topoint calls as well as MultiSite calls.





Sharing contents-conducting presentations



0

You may share contents while in a call. The EX90 accepts two sources—via DVI and via HDMI.

2



Note! You must be in a call to be able to share contents. Your presentation source must be powered and active as well as connected. Otherwise the **Presentation** icon (button) will fail to appear.





... then tap **PRESENT** to start sharing contents.



If you have two sources connected, you will be presented with the possibility to swap between these at any time.

D14724.04 User guide EX90, TC4.1, February 2010. All contents are Copyright © 2010–2011 Cisco Systems, Inc. All rights reserved.



The EX90 can be configured via the touch screen controller or via its web interface. For full access to all configurable parameters the web interface must be used—the touch screen controller provides access to a limited set of parameters only.

Chapter 4 The Settings using Touch

Setting the EX90 in standby

Outside a call, you may have the unit enter standby mode by touching the **Power** button on the main unit (the screen). The *Standby* dialog is displayed and the unit enters standby immediately. This does not work when you are in a call.





Tap as shown to wake up the system from standby.

Shutting down the EX90

Outside a call, press the **Power** button until the *Shutdown progress bar* is filled completely.

Release the button and the unit will go in shutdown in just a few seconds.



To start the system again, press the **Power** button until the LED illuminates (green light).

To revert to the factory default settings, do as follows:

- 1. Disconnect the power cord.
- 2. Reconnect the power cord-a green light will illuminate shortly after.
- **3.** Press the **Power** button as soon as the green light appears. Keep it depressed for 15 seconds or so, until the green light starts flashing.
- **4.** Release the button and press twice within 2 seconds. All settings will now revert to factory default settings.

Gaining access to the Settings

Access the Settings as follows:



Settings	System Information		rmation Ex	
System Information	System Name:	My video system		
-	Uptime:	1 day, 23 hours, 56 minutes		
Call Status	NETWORK			
Camera Control & Settings	IP Address:	1.47 18.08		
comero control a cetunga	Touch Screen IP	10.47 10.100		
Display Settings	H323			
	Number:	12xxxxxxx		
Ringtone & Sound Settings	ID:	norah.dollhouse@company.com		
	Gotekeeper:	10.11.1.00		
Bockground	Status:	Registered		
Administrator Settings	SIP			
	Address:	sip.norah.dollhouse@company.com		
	Proxy 1:	10.47.1.58		
	Proxy 2:	n/a		
	Proxy 3:	n/a		
	Proxy 4:	n/a		
	Status:	Registered. Secured. Not verified.		

2

... and then you get access to the settings available. Observe that there are several other settings available, but these can be acessed from the web interface only. See the Administrator guide for your Cisco product. This guide is available for download separately. User guide

The System information provides all the system information at a glance.

Scroll down to also see status on video inputs (DVI and HDMI).

Settings	System Information		
System Information	System Name: Uptime:	My video system 1 day, 23 hours, 56 minutes	
Call Status	NETWORK		
Camera Control & Settings	IP Address: Touch Screen IP	10.07 (0.08) 10.07 (0.18)	
Display Settings	H323		
Ringtone & Sound Settings	Number: ID:	12xxxxxx norah.dollhouse@company.com	
Background	Gatekeeper: Status:	Registered	
Administrator Settings	SIP		
	Address:	sip.norah.dollhouse@company.com	
	Proxy 1:	10.47.1.58	
	Proxy 2:	n/a	
	Proxy 3:	n/a	
	Proxy 4:	n/a	
	Status:	Registered. Secured. Not verified.	
	SOETWARE		

Call Status

The **Call Status** pane provides in-call information on such things as call rate and frame rate, protocols used, packet loss and jitter.

Settings	Call Status				
System Information	Remote URI:	peer.gynt@l	himself.enough.no		
	Call Rate:	768	Encryption Type:	None	
Call Status	Protocol:	sip	Encryption	Off	
Camera Control & Settings	VIDEO	Transmit	Presentation	Receive	Presentation
	Protocol:	H264	Off	H264	Off
Display Settings	Resolution:	768x448	n/a	768x448	n/a
	Frame Rate:	30	n/a	29	n/a
Ringtone & Sound Settings	Channel Rate:	704 kbps	n/a	664 kbps	n/a
ringtone a cound cettings	Total Packet Loss	0.0%		0.0%	
Development	Current Packet Loss	0.0%		0.0%	
Background	Jitter:	1 ms		2 ms	
Administrator Settings	AUDIO	Transmit		Receive	
Protocol: AACLD - Mono		AACLD - Mo	no		
	Channel Rate:	63 kbps		63 kbps	
	Total Packet Loss	0.0%		0.0%	
	Current Packet Loss	0.0%		0.0%	
	Jitter:	2 ms		0 ms	

Camera Control and Settings

The **Camera Control & Settings** pane lets you set the whitebalance and exposure of the camera. If you do not want to tweak this yourself, just leave it to the system by selecting **Auto**.

Backlight compensation comes in handy when there is much light behind you. Without compensation you will easily appear very dark to the far end.

Note how the settings chosen are indicated. In the example shown, Backlight compensation is set to Off.

Settings	Camera Control & Settings		
System Information	Whitebalance	Auto Manual	
Call Status			
Camera Control & Settings	Whitebalance (1)	1 16	
Display Settings	Exposure	Auto Manual	
Ringtone & Sound Settings	Exposure (1)	1 31	
Background	Backlight		
Administrator Settings	compensation	OFF ON	

Display Settings

The **Display settings** let you adjust:

Preferred brightness by moving the Brightness slider.

The color balance. There are four preset color settings (Cold, Neutral, Warm and your own (Custom)) available. When you select Custom, you may use the Red, Green and Blue sliders to specify your own setting.

The DVI mode can be set to automatically detect the type of video signal received, or forced to analog or digital. The DVI mode is used when the unit is connected to a PC to serve as a PC monitor.

Settings	Display Settings		Exit
System Information	Brightness (50)	0 100	
Call Status			
Camera Control & Settings	Colors	Cold Neutral Warm Custom	
Display Settings	Red (50)	0 100	
Ringtone & Sound Settings	Green (50)	0 100	
Background			
Administrator Settings	Blue (50)	0 100	
	DVI Mode	Auto Digital Analog	

Ringtone & Sound Settings

The **Ringtone & Sound Settings** pane lets you specify:

Keytones on or off. When set to on you will hear a sound every time you tap a field on the Touch controller.

Ringtone volume. How loud your ringtone shall sound.

Ringtone. Select among several ringtones. You will hear a sample every time you tap a ringtone.

Note how the settings chosen are indicated. In the example shown, Keytones are set to Off.

Settings	Ringtone & Sound Settings				
System Information	Keytones	Keytones OFF ON			
Call Status					
Camera Control & Settings	Ringtone volume (50)	0 100			
Display Settings	Ringtone	Marbles IceCrystals Polaris			
Ringtone & Sound Settings		Alert Discreet Fantasy			
Background		Jazz Nordic Echo			
Administrator Settings		Rhythmic			

Background

The background image on the touch screen controller can be changed.

Tap one of the small images to use it as background image.



Administrator Settings–Date, Time & Location

The **Date, Time & Location** settings let you specify:

- 24h or 12h time format.
- Your preferred date format.
- Your preferred time zone.
- Whether date and time shall be set automatically or manually.

Note how the settings chosen are indicated. In the example shown, Time format is set to 24h.

Settings Administrator	Date, Time & Locat	ion					Exit
Date, Time & Location	Time format	24	h 12h				
Call Settings			_				
IP Settings	Date format	do	i.mm.yy	mm.dd.yy	yy.mr	n.dd	
H323 Settings	Time zone	-	GMT+01:00 (An	nsterdam, Berli	n, Bern, I	R +	
SIP Settings	Date and time	Au	to Manual	í.			
Provisioning		Hour	Minute	Year	Month	Day	
EMC Resilience Mode						+	
		13	11	2011	Jan	31	

Administrator Settings–Call Settings

The **Call Settings** pane lets you specify:

- Auto Answer On or Off. If you set this to On, the system will respond automatically to incoming calls. Note that the microphone wil NOT be muted. If risk of eavesdropping is an issue, you may want to set this setting to Off.
- Auto Answer Delay. Specify the time until your system actually reponds to an incoming call.
- Default Call Rate. If your connection has limited capacity you may want to use this setting.
- Max Incoming/Outgoing Bandwidth. You may specify these separately. May come in handy if you are on an asymmetric connection.
- Default Call Protcol. Specify which protocol to use as default.

Note how the settings chosen are indicated. In the example shown, Auto Answer is set to Off.

Settings Administrator	Call Settings						Exit
Date, Time & Location	Auto Answer	OFF		ON			
Call Settings							
IP Settings	Auto Answer Delay		0s				
H323 Settings	Call Rate						
SIP Settings	Default Call Rate (768)	-		768	+		
Provisioning	Max Incoming Bandwidth (6000)	-		6000	+		
EMC Resilience Mode	Max Outgoing Bandwidth (6000)	-		6000	+		
	Default Call Protocol (Sip)	H32	3	Sip			

Administrator Settings-IP Settings

The **IP settings** pane lets you specify:

The use of DHCP or Static IP addresses. If you decide to use Static, make sure you tap Save before leaving the menu.

Settings Administrator	IP Settings		Exit
Date, Time & Location	IP assignment	DHCP Static	
Call Settings	IP address	10.47.19.219	
IP Settings		255.255.255.0	
H323 Settings	Subnet mask	10.47.19.1	
SIP Settings	Gateway	10.47.13.1	
Provisioning			
EMC Resilience Mode			
		Save	

Administrator Settings–H.323 Settings

The **H.323 Settings** pane lets you specify:

- An H.323 alias.
- Your **H.323** id.
- Gatekeeper discovery (Manual or Automatic).
- The **Gatekeeper address** must be specified by you if discovery has been set to manual.
- Authentication mode On or Off. If set to On, the video system will send Login name and Password to the Gatekeeper for authentication.

In addition there are:

• Two fields to enter **Login name** and **Password**. The alphanumeric keyboard will appear whenever needed.

Be sure to:

• Tap **Save** to put changes into effect.

Settings Administrator	H323 Settings	E	Exit
Date, Time & Location	H323 number	559171	
Call Settings	H323 id	peer.gynt@himself.enough.com	
IP Settings	Gatekeeper discovery	Auto Manual	
H323 Settings	Gatekeeper	10.47.1.58	
SIP Settings	address		
Provisioning	mode	OFF ON	
EMC Resilience Mode	Login name		
	Password		
		Save	

User guide

Administrator Settings-SIP Settings

The **SIP settings** pane lets you specify:

- Your **URI**.
- The Default transport layer, this can be set to TCP, UDP, TLS or Auto.
- The Proxy type can be set to Standard, Alcatel, Avaya, Cisco, Microsoft, Nortel, Experimental, Siemens.

The experimental setting is for testing purposes.

- **Outbound** is not used in this version.
- Proxy discovery can automatic or manual. In the case of manual the proxy address must be specified by you.
- Login name and Password is required by the VCS.

Be sure to:

• Tap **Save** to put settings into effect.

Settings Administrator	SIP Settings					Exit
Date, Time & Location	URI	sip:peer.gynt	@himself.eno	ugh.com		
Call Settings	Default transport	TCP UDP TLS			Auto	
IP Settings	-					
H323 Settings	Proxy type		Stand	dard	+	
SIP Settings	Proxy discovery	Auto N	lanual			
Provisioning	Proxy address	10.47.1.58				
EMC Resilience Mode	Login name					
	Password					
					Save	

Administrator Settings–Provisioning

Provisioning connects you to Callway or VCS. When either of these were ordered and received from Cisco you should also have obtained the necessary information and codes. Just follow the wizard.

Settings Administrator	Provisioning		Exit
Date, Time & Location	Provisioning wizard:	Stort	
Call Settings			
IP Settings			
H323 Settings			
SIP Settings			
Provisioning			
EMC Resilience Mode			







Administrator Settings–EMC Resilience Mode

If the Touch controller is used in environments with considerable amounts of electromagnetic noise present, you may experience an appearance of false signals—as if someone tapped the Touch controller when nobody obviously did so.

To cope with this you may set the **EMC Resilience Mode** to **On**. You must then press and hold for a little while, rather than just tap, in order to make the system aware of your tapping. This will avoid the appearance of false signals.

As long as the system is used in environments without consideable amounts of electromagnetic noise, the setting should be set to Off (as shown).



Chapter 5 The web interface

User guide

Entering the web interface

Key in the IP address of your EX90 in your browser to access its web interface. A detailed description of the options available can be found in the Administrator guide for this product. The Administrator guide is available separately for download.

System Information	System Info		2
Call			
Snapshot	System name: My System	Software version:	
Users	Product: Cisco TelePresence	Module serial number: BA9876543210 MAC address: 00:33:66:99:CC:FF	
Change Password	IP address: 192.168.1.128 Valid release key: Yes	Installed options: NaturalPresenter, MultiSite, PremiumResolution	
Wallpaper	H323	SIP	
Logon Banner	Number: 1234567	Address: sip:firstname.lastname@company.com	
Upload Certificates	ID: firstname.lastname@company.com Gatekeeper:192.168.1.1	Proxy:192.168.1.1 Status: Registered	
Audit Certificate	Status: Registered	otatus. Registered	
Logs			
XML Files	Login Info		,
Upgrade Software			2
Advanced Configuration	Last successful login: Tue Oct 26 15:05:08 2010 Number of unsuccessful login attempts since las Password expires in: Never		
Restart			
Sign Out	Security		
	Strong security mode: Disabled		

THE SPECIFICATIONS AND INFORMATION REGARDING THE PRODUCTS IN THIS MANUAL ARE SUBJECT TO CHANGE WITHOUT NOTICE. ALL STATEMENTS, INFORMATION, AND RECOMMENDATIONS IN THIS MANUAL ARE BELIEVED TO BE ACCURATE BUT ARE PRESENTED WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED. USERS MUST TAKE FULL RESPONSIBILITY FOR THEIR APPLICATION OF ANY PRODUCTS.

THE SOFTWARE LICENSE AND LIMITED WARRANTY FOR THE ACCOMPANYING PRODUCT ARE SET FORTH IN THE INFORMATION PACKET THAT SHIPPED WITH THE PRODUCT AND ARE INCORPORATED HEREIN BY THIS REFERENCE. IF YOU ARE UNABLE TO LOCATE THE SOFTWARE LICENSE OR LIMITED WARRANTY, CONTACT YOUR CISCO REPRESENTATIVE FOR A COPY.

The Cisco implementation of TCP header compression is an adaptation of a program developed by the University of California, Berkeley (UCB) as part of UCB's public domain version of the UNIX operating system. All rights reserved. Copyright © 1981, Regents of the University of California.

NOTWITHSTANDING ANY OTHER WARRANTY HEREIN, ALL DOCUMENT FILES AND SOFTWARE OF THESE SUPPLIERS ARE PROVIDED "AS IS" WITH ALL FAULTS. CISCO AND THE ABOVE-NAMED SUPPLIERS DISCLAIM ALL WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, WITHOUT LIMITATION, THOSE OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT OR ARISING FROM A COURSE OF DEALING, USAGE, OR TRADE PRACTICE.

IN NO EVENT SHALL CISCO OR ITS SUPPLIERS BE LIABLE FOR ANY INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES, INCLUDING, WITHOUT LIMITATION, LOST PROFITS OR LOSS OR DAMAGE TO DATA ARISING OUT OF THE USE OR INABILITY TO USE THIS MANUAL, EVEN IF CISCO OR ITS SUPPLIERS HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

Cisco and the Cisco Logo are trademarks of Cisco Systems, Inc. and/or its affiliates in the U.S. and other countries. A listing of Cisco's trademarks can be found at www.cisco.com/go/trademarks. Third party trademarks mentioned are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company. (1005R)

Any Internet Protocol (IP) addresses and phone numbers used in this document are not intended to be actual addresses and phone numbers. Any examples, command display output, network topology diagrams, and other figures included in the document are shown for illustrative purposes only. Any use of actual IP addresses or phone numbers in illustrative content is unintentional and coincidental.

On our web site you will find an overview of the worldwide Cisco contacts. Go to: http://www.cisco.com/web/siteassets/contacts/index.html

> Corporate Headquarters Ciso Systems, Inc. 170 West Tasman Dr. San Jose, CA 95134 USA