



Model 8690

Administrator's Guide



Part Number
550.8120



MODEL 8690 ADMINISTRATOR'S GUIDE

Issue 9, Revised, May 2005

NOTICE

This *Inter-Tel Model 8690 Administrator's Guide* is released by Inter-Tel[®], INC. as a guide for Model 8690 administrators. It provides information necessary to properly administer the Model 8690 endpoint.

The contents of this guide, which reflect current Inter-Tel standards, are subject to revision or change without notice. Software packages released after the publication of this guide will be documented in supplements to the guide or succeeding issues of the guide.

Some features or applications mentioned may require a future release and are not available in the initial release. Future product features and applications are subject to availability and cost. Some features or applications may require additional hardware and/or specific software.

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Overview

INTRODUCTION

The Model 8690 is a desktop endpoint used on Inter-Tel[®] communication platforms. The 8690 endpoint uses the technology available with a Personal Data Assistant (PDA). The operating system on the endpoint is a customized version of MicroSoft[®] Windows[®] CE. NET 4.2. The Model 8690 has an active matrix color Liquid Crystal Display (LCD) touch screen that displays a telephone user interface with traditional elements that include a display, dialpad, feature buttons, and menu buttons.

This section contains information about the following Model 8690 topics:

- Model 8690 Hardware (see [page 3](#))
- Optional USB Devices (see [page 6](#))
- Power Requirements (see [page 6](#))
- Network Connection (see [page 6](#))
- User Interface (see [page 7](#))
- Interface Skins (see [page 10](#))
- Operating System (see [page 11](#))
- Model 8690 operating modes (see [page 12](#))
- Software Compatibility (see [page 15](#))
- Firmware Compatibilities (see [page 15](#))
- VLAN Tagging (see [page 16](#))
- LAN QoS for VLAN Tagging (see [page 16](#))

This *Model 8690 Administrator's Guide* provides Model 8690 administrators with basic administration information. For information that is **not** covered in this document, refer to one of the documents listed below.

- **Model 8690 User Guides:** The Inter-Tel Protocol (ITP) Mode (part no. 550.8116) and Session Initiation Protocol (SIP) Mode (part no. 550.8025) user guides provide information and instructions for using the Model 8690 endpoint. These user guides provide a table of supported features and default feature codes. The user guides also provide detailed instructions on how to use telephone, voice mail, and UC features. It is recommended that you become familiar with the user guides before you attempt to provide assistance to Model 8690 users. If you need information about end-user features, refer to the appropriate user guide.
- **Axxess[®] Administrator Guide:** The *Axxess Administrator Guide* (part no. 550.8001) provides basic information about the Inter-Tel Axxess Converged Communications Platform, including call processing and voice mail features for system and voice mail administrators respectively. In addition, the guide provides detailed instructions for system administrator tasks. The *Axxess Administrator Guide* provides an expanded feature code table, which includes user and administrator features.
- **Inter-Tel CS-5200/5400 Communication Servers Administrator Guide:** *The Inter-Tel CS-5200/5400 Communication Servers Administrator Guide* (part no. 580.8001) provides basic information about the Inter-Tel 5000 Network Communications Solution, including system and voice mail administrator features and procedures. In addition, the guide provides details about the devices supported by the Inter-Tel 5000 system. The *Inter-Tel CS-5200/5400 Communication Servers Administrator Guide* provides an expanded feature code table, which includes user and administrator features.
- **IP Devices Installation Manual:** Technical information about installing and configuring the Model 8690 for use with the Inter-Tel Axxess Converged Communications Platform can be found in the *IP Devices Installation Manual* (part no. 835.2195). This manual is geared towards technicians and network administrators and provides in-depth installation, programming, and troubleshooting information for all of the IP devices supported by the Axxess system.
- **Inter-Tel[®] CS-5200/5400 Communication Servers Installation and Maintenance Manual:** *The Inter-Tel CS-5200/5400 Communication Servers Installation and Maintenance Manual* (part no. 580.8000) provides technical information about installing and configuring the Model 8690 for use with the Inter-Tel 5000 Network Communications Solution. This manual is geared towards technicians and network administrators and provides in-depth installation, programming, and troubleshooting information for all of the IP devices supported by the Inter-Tel 5000 system.

MODEL 8690 HARDWARE

The Model 8690 is an advanced IP endpoint that has an LCD touch screen that displays a telephone interface. To use the Model 8690, you must first install the 8690 client application. See [page 18](#) for instructions.

A stylus pen provides access to elements on the interface, which include a dialpad, feature buttons, menu buttons, and navigation buttons. The Model 8690 can operate in Inter-Tel Protocol (ITP) mode or Session Initiation Protocol (SIP) mode (see [page 12](#)). The endpoint uses a customized version of MicroSoft Windows CE. NET v4.2 (see [page 11](#)), and includes ports and connectors for optional hardware and memory cards (see [page 4](#)).

Additional hardware includes:

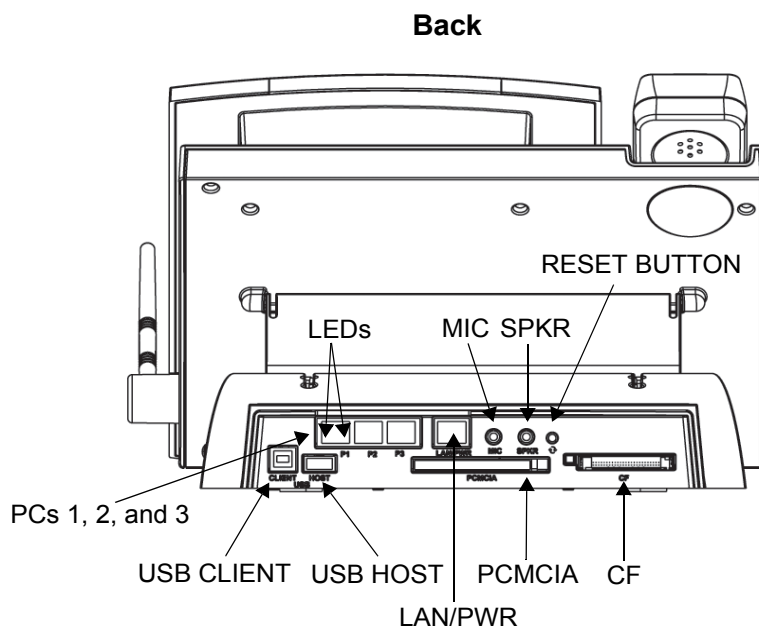
- **Headset/Handset Jack:** Connects to a headset or handset.
- **Speakers:** Used for ring, group listen, page, and speakerphone features—supports mono for IP endpoint and stereo for Windows CE playback.
- **Message Indicator:** Flashes when there is a voice mail or station message for the endpoint.
- **Handsfree Microphone:** Supports high fidelity.
- **Hearing Aid-Compatible (HAC) Handset:** Used to make and receive calls privately.



NOTE: The Model 8690 is not designed to be wall mounted.

PORTS, LEDS, AND CONNECTORS

The Model 8690 provides several ports, light-emitting diodes (LEDs), and connectors as shown in the figure below.



- **Light Emitting Diodes (LEDs):** Shows the status of the network connection. There are two LED indications on each port:
 - **Link Status:** When the link is valid, the green LED on the left side of the port is lit. When there is receive or transmit activity on the link, this LED flashes.
 - **10/100 Mbps:** When the link is connected at a speed of 100 Mbps, the green LED on the right side of the port is lit.
- **External Microphone Jack:** Connects to an external microphone (3.5mm connector).
- **External Speaker Jack:** Connects to an external speaker—supports mono for IP endpoint and stereo for Windows CE playback.
- **Reset Button:** Resets the endpoint (press and release the Reset button quickly).

NOTE: If you press and hold the Reset button until the four LEDs on the front of the endpoint (Message Lamp) start blinking, the system defaults the endpoint configuration (such as the configuration TFTP URL).

- **CF (Compact Flash) Port:** Connects to a compact flash memory card that can be used for copying music, pictures, etc. to the Model 8690. It also can be used as additional memory.
- **PCMCIA (Personal Computer Memory Card International Association) Port:** Connects to a memory card.
- **LAN (Local Area Network)/POWER Jack:** Connects to an external power supply or a network hub/switch.

- **USB Host Port:** Provide a connection for a keyboard, mouse, or other USB device to the endpoint.
- **Universal Serial Bus (USB) Client Port:** Connects the endpoint to a host computer running ActiveSync®.
- **PC (Personal Computer) Ports 1,2, and 3:** Connect to PCs or any other 10/100 Ethernet devices. The speeds on the single uplink and three downlink ports are independent from each other and auto-negotiable.
- **DRAM (Dynamic Random Access Memory):** Located inside the endpoint. Supports 128 MB (only one slot is occupied).

NOTE: For more information about supported features, buttons, and LED indicators for multi-protocol endpoints, see the *Multi-Protocol Endpoints: Supported Features Buttons and LED Indicators* (part no. 835.2840).

MEMORY

The Model 8690 has 128MB of memory occupying one memory slot. Although there are two DRAM slots, you cannot upgrade the memory by adding an extra memory stick. Currently, the second slot is not used.

MESSAGE INDICATOR LAMP

The Message Indicator lamp (located at the top, right corner of the endpoint) flashes whenever there is one or more waiting messages. In addition, the display indicates the number of messages waiting. See the appropriate user guide for instructions on retrieving messages.

If desired, you can program the endpoint so that the message lamp does not flash, even when new messages are waiting (see [page 34](#)). For details, see the appropriate user guide.

NOTE: By default, the message lamp is programmed to light when the user receives a new voice mail message. However, this lamp can be programmed for other functions. Check with your system's installer to see which feature the message indicator is programmed for.

RESET BUTTON

The Reset Button on the back of the endpoint immediately shuts down the operating system and any applications that are currently running on the endpoint. When the Reset Button is pushed, the screen goes blank, and the default settings are restored. After a few moments the operating system restarts and the client application re-opens when network connectivity is re-established.

CAUTION

Do not press the Reset button on the endpoint unless you are told to do so by your network administrator. Desktop shortcuts and any preferences that have not been saved in the registry are lost when you press the Reset button. In addition, the endpoint will require additional programming to restore it to its previous operational state.

OPTIONAL USB DEVICES

You can connect a standard USB keyboard to the Model 8690 endpoint using the USB host port on the back of the endpoint (see [page 4](#)). The operating system will automatically detect the device when the endpoint is powered on. You can configure the keyboard properties under Start - Settings - Control Panel - **Keyboard**. You can also use the USB host port to connect a mouse. You can configure mouse properties under Start - Settings - Control Panel - **Mouse**.

If you would like to connect both a mouse and a keyboard to the endpoint, you will need to use two USB cables. First connect the mouse to the keyboard and then connect the keyboard to the USB host port on the endpoint. The operating system recognizes all daisy-chained USB devices.

POWER REQUIREMENTS

The Model 8690 should remain powered on at all times. The endpoint receives power from an individual power supply unit. It is important to use the power supply unit that is compatible with the endpoint. The Inter-Tel Universal Power Supply (part number 806.1119) is compatible with the Model 8690 and is available through Inter-Tel's CommSource® division.

It is recommended that you plug the endpoint's power supply unit into an Uninterruptible Power Supply (UPS). If the endpoint's power supply unit is not plugged into a UPS and the power fails, the current call will be dropped.

Your system may be configured to use a centralized power source (power over Ethernet) as a backup power source. If the main power supply unit for the endpoint fails and your system is running power over Ethernet, the backup power source will support the audio portion only of the endpoint. Power over Ethernet does not support the display portion of the endpoint.

For more information about compatible backup power supplies, see the *IP Device Power Supply Compatibility Matrix* (part no. 835.2688).

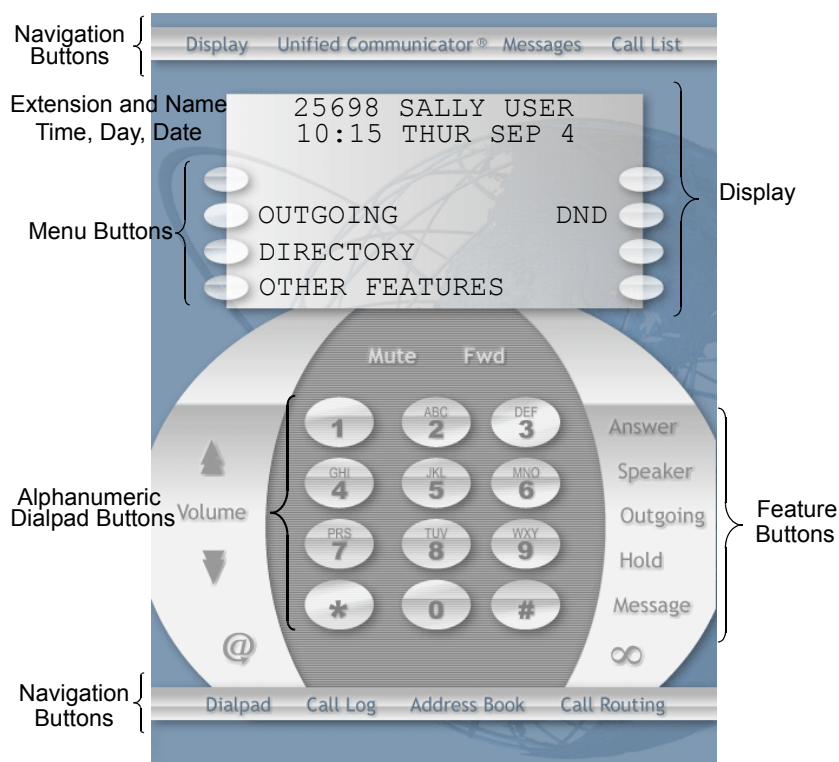
NETWORK CONNECTION

The LAN/PWR jack on the back of the Model 8690 endpoint provides access to the network servers, including the SIP and UC servers. SIP Server is a standards-based, SIP proxy server that allows SIP-enabled devices and applications to communicate with the telephone system. UC is a presence management tool designed to help stationary and mobile users manage their communication effectively, and control most endpoint features including DND status and call routing. For detailed information about SIP Server and UC, see the latest version of the *Unified Communicator® and SIP Server Installation and Programming Manual*.

USER INTERFACE

The user interface on the Model 8690 endpoint contains elements that simulate a traditional Inter-Tel six-line display endpoint. These elements allow users to place and receive calls and access telephone and voice mail features just like a conventional Inter-Tel endpoint. The user interface includes the following elements:

- **Navigation buttons:** Provide access to UC views (see [page 9](#)).
- **Six-line display:** Provides extension and system information and a menu for accessing additional options or features.
- **Menu buttons:** Allow users to scroll through options and make selections based on the active feature.
- **Dialpad buttons:** Allow users to enter numbers and letters.
- **Feature buttons:** Provide quick access to various telephone and voice mail features.



NOTE: The instructions throughout this user guide assume that you are using the stylus with the endpoint. When you are instructed to “press” an area on the screen, gently tap the appropriate area of the touch screen with the stylus.

FEATURE BUTTONS

The feature buttons are designed to automate some of the commonly used functions, such as dialing an outside number. Each of these is described in the table below.

Table 1. *Feature Buttons*

BUTTON	ACTION	RESULT
Mute	Press Mute .	Mute the microphone.
Fwd	Press Fwd .	Forward calls.
Answer	Press Answer .	Answer a call.
Speaker	Press Speaker .	Put a call on the speaker.
Outgoing	Press Outgoing and dial the number.	Place an outgoing call.
Hold	Press Hold .	Put a call on hold.
Message	Press Message .	Leave or listen to a message.
Volume Up/Down	Press the Up or Down Volume arrow.	Adjust volume.
Auto Dial	Press the Auto Dial button (@).	Enable/disable the auto dial feature.
Special	Press the Special button (∞).	Depending on how the system is configured, the user may need to press this button before dialing a feature code.

DISPLAY AND MENU

The six-line display area of the interface provides basic system information as well as a menu to access more advanced telephone features. The first two lines of the display contain user and system information. The lower four lines of the display contain menu options that change according to the feature that the user is currently accessing. To select a menu option, press the menu button closest to it. If there is only one option on a line, you can press the button on either side. (You can also select the text in the display.)

Because the menu display can only support 16 characters, the system may substitute a few abbreviations. The most commonly used abbreviations are provided in the table below.

Table 2. *Menu Display Abbreviations*

ABBREVIATION	MEANING
ACCT CODE	Account Code
CNF	Conference
DEST	Destination
DIR	Directory
DND	Do-Not-Disturb
EXT	Extension
MSG	Message
RCL	Recall
SPKR	Speaker
SPKRPHN	Speakerphone
STN SPD	Station Speed Dial
SYS SPD	System Speed Dial
TFR	Transfer
TG	Trunk Group (a group of outside lines)
TRNK	Trunk (an outside line)




UNIFIED COMMUNICATOR ELEMENTS

Unified Communicator (UC) is a presence management tool designed to help manage communication effectively. The UC elements on the telephone interface consist of the system tray icon in the system tray and the navigation buttons on the user interface. Information about these elements appears below. For instructions on how to use UC features and options on the endpoint, see the appropriate user guide.

System Tray Icon

When the client application is running, the system tray icon appears in the system tray. The system tray is located in the lower-right portion of the taskbar near the clock. If you press the icon, the system tray menu is displayed.

The system tray icon represents the current UC status as one of the following:

-  Not currently logged on to UC.
-  Logged on to UC, available status.
-  Logged on to UC, unavailable status.

Navigation Buttons

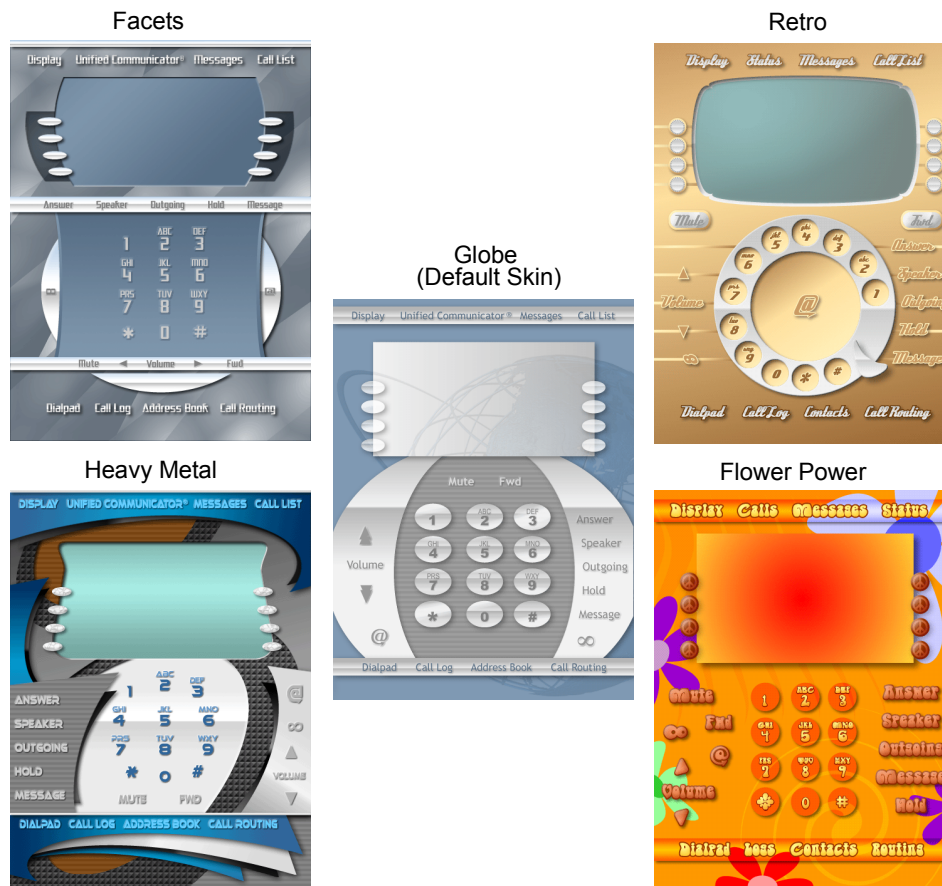
The navigation buttons on the user interface provide access to UC views. Pressing a navigation button highlights the button and displays the associated view. Pressing the button again closes the view. At any time, you can press the **Display** or **Dialpad** navigation buttons to return to the endpoint display or dialpad.

- **Unified Communicator:** Provides access to advanced UC features.
- **Messages:** Displays a list of various messages.
- **Call List:** Displays a list of current calls.
- **Call Log:** Provides access to a history of recent calls.
- **Address Book:** Provides access to store and manage contact information.
- **Call Routing:** Enables/disables call routing rules.

INTERFACE SKINS

If users want to customize the interface, they can select and apply an interface “skin.” All skin options include navigation buttons, a display, a dialpad, and feature buttons. Skin options for the Model 8690 interface are shown below.

NOTE: The names for the navigation buttons may vary slightly depending on the skin that you are using. The instructions in this guide assume you are using the default skin (Globe).



To select and apply a skin:

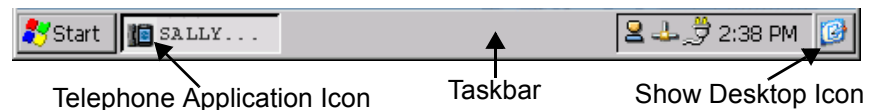
1. Press the system tray icon (see [page 9](#)), then select **Options** from the menu. The Options dialog box opens to the Session tab.
2. Press the Appearance tab, then enable the **Specify alternate appearance** option.
3. Press **Browse** to navigate to the program folder where the desired skin is stored, and select the skin specification file. (The specification file has an **.xml** file extension.)
4. Press **OK**.

NOTE: Skins for the Model 8690 are available from Tech Central on the *edGe* under Software Downloads.

OPERATING SYSTEM

The operating system on the Model 8690 endpoint is a customized version of Microsoft Windows CE. NET v4.2. When the endpoint is first powered up, the screen remains blank for approximately 10 seconds. After this period, the Windows CE. NET desktop appears, followed by the **Loading Application Appearance** dialog box. This dialog box signals that the telephone application is launching. Once it has launched, the user interface (see [page 7](#)) covers the entire desktop except the taskbar.

To minimize the telephone interface and access the desktop area of the screen, press the telephone icon or the Show Desktop icon located on the taskbar, as shown below. The user interface is minimized, and you have access to the desktop. To restore the user interface, press either icon again.



The version of Windows CE. NET running on the Model 8690 endpoint has been customized specifically for the endpoint. This version is different from Windows PC operating systems and Windows handheld/mobile device operating systems. When using Windows CE. NET, you may notice the following differences:

- The Windows Viewer applications that are included in the operating system do not have the full functionality that their counterparts do on Windows PC operating systems. These applications include Word, Excel, PowerPoint[®], Media Player, and Internet Explorer.
- A range of applications, tools, and functionality normally included in PC operating systems, such as Microsoft Outlook[®], administrator tools, fonts, etc., are not included with Windows CE. NET.
- Some applications will not work with Windows CE. NET. Before running an application, consult the Microsoft Web site to make sure it is compatible with Windows CE. NET.
- Because Windows CE. NET has limited Random Access Memory (RAM) available for executing programs, users may experience much slower processing times than they are accustomed to on their desktop PCs.
- To “right-click” an element on the screen, press and hold the stylus on an icon. A ring of black dots appears indicating a right mouse click, and the “shortcut” menu appears.

NOTE: The Windows CE. NET help file contains information about control panel settings and other system tools. This help file is provided by Microsoft for Windows CE. NET. Because the operating system on the Model 8690 has been customized, some of the information contained in this help file may not apply to the endpoint. For more information about the operating system help, see [page 39](#).

For additional information about Windows CE. NET, visit the Microsoft Web site.

MODEL 8690 OPERATING MODES

The Model 8690 multi-protocol endpoint supports Inter-Tel Protocol (ITP) and Session Initiation Protocol (SIP) operating modes. You can change the operating mode of the endpoint using the Web interface as described in the *IP Devices Installation Manual* and the *Inter-Tel CS-5200/8400 Communication Servers Installation and Maintenance Manual*.

Details about each of the modes are described in the following pages.

INTER-TEL PROTOCOL (ITP) MODE

When the Model 8690 is running in ITP mode, it operates like a traditional Inter-Tel IP endpoint. The endpoint connects to the Inter-Tel telephone system via a TCP/IP stream.

NOTE: To run in ITP mode on an Axxess system, the Model 8690 requires system software v8.1 or later and IPRC firmware v8.1 or later. To run in ITP mode on an Inter-Tel 5000 system, the Model 8690 requires system software v1.0 or later.

The advantage of ITP mode over SIP mode is that ITP mode allows you to use all of the system features and functionality available for an IP endpoint. The disadvantage of ITP mode over SIP mode is that when the endpoint is in ITP mode, it cannot connect to another vendor's switch. The Model 8690 endpoint is configured to use ITP mode by default.

NOTE: A Call Processing software license is required to support the Model 8690 in ITP mode.

For details about how to use the Model 8690 in ITP Mode, see the current version of the *Model 8690 User Guide—Inter-Tel Protocol (ITP) Mode* (part no. 550.8116).

[Table 3 on page 13](#) lists the default feature codes for features supported in ITP mode.

Table 3. ITP Mode Default Feature Codes

FEATURE	FEATURE CODE	FEATURE	FEATURE CODE
Account Code – Following Calls	391	Hunt Group Remove	322
Account Code – Optional	390	Hunt Group Replace	323
ACD Agent Log In	326	Hunt Group Remove/Replace	324
ACD Agent Log Out	327	LCD Contrast Control	303
ACD Agent Log In/Out	328	Message	365
ACD Agent Wrap-Up Terminate	329	Message – Cancel Message Left	366
Agent Help Request	375	Message – Cancel Message On Endpoint	368
Agent Help Reject	376	Message – Silent Message	367
Answer (Ringing Call)	351	Microphone Mute On/Off	314
Automatic Intercom Access On/Off	361	Page	7
Automatic Line Access On/Off	360	Page Receive On/Off	325
Automatic Line Answer	350	Program Buttons	397
Background Music On/Off	313	Program Station Password	392
Call Forward All Calls	355	Queue (Callback) Request	6
Call Forward If Busy	357	Record-A-Call	385
Call Forward If No Answer	356	Redial	380
Call Forward No Answer/Busy	358	Redirect Call	331
Conference	5	Reminder Message	305
Default Station	394	Reminder Message Cancel	306
Directory	307	Remote Programming	359
Display Time And Date	300	Reverse Transfer (Call Pick-Up)	4
Do-Not-Disturb	370	Review Buttons	396
Do-Not-Disturb Cancel	371	Ring Intercom Always On/Off	377
Do-Not-Disturb On/Off	372	Ring Tone Selection	398
Do-Not-Disturb Override	373	Routing Off	304
Feature Button Default	395	Station Speed Dial	382
Group Listen	312	Station Speed-Dial Programming	383
Handsfree On/Off	319	System Forward Enable	352
Headset On	315	System Forward Disable	353
Headset Off	316	System Forward On/Off	354
Headset On/Off	317	System Speed Dial	381
Hold – Individual	336	Switch Keymap	399
Hold – System	335	Transfer To Hold	346
Hookflash	330	Transfer To Ring	345

SESSION INITIATION PROTOCOL (SIP) MODE

When the Model 8690 endpoint is in SIP mode, the endpoint uses SIP to connect to the Inter-Tel SIP Server (v1.1 or later). The advantage of running in SIP mode on an Inter-Tel telephone system is the use of the Shared Extension feature. A shared extension allows up to five SIP endpoints to use the same extension number on the system. Incoming calls to a shared extension are sent to SIP endpoints simultaneously. When one of the endpoints answers the call, the SIP Server cancels the call to all other endpoints. This provides users with mobility so that they do not miss any calls when they are away from their main desk. For details about the Shared Extension feature, refer to the *Unified Communicator and SIP Server Installation and Programming Manual*. An endpoint configured to use SIP mode can also be run on another vendor's SIP-enabled switch.

The disadvantage of running an endpoint in SIP mode on an Inter-Tel telephone system is the reduced number of features that SIP supports.

For details about how to use the Model 8690 in SIP mode, see the current version of the *Model 8690 User Guide—Session Initiation Protocol (SIP) Mode* (part no. 550.8025).

The following table lists the default feature codes for features supported in SIP mode.

Table 4. *SIP Mode Default Feature Codes*

FEATURE	FEATURE CODE	FEATURE	FEATURE CODE
Answer (Ringing Call)	351	Hold – Individual	336
Call Forward All Calls	355	LCD Contrast Control	303
Conference	5	Message	365
Do-Not-Disturb	370	Microphone Mute On/Off	314
Do-Not-Disturb Cancel	371	Redial	380
Do-Not-Disturb On/Off	372	Redirect Call	331
Group Listen	312	Reverse Transfer (Call Pick-Up)	4
Headset On	315	Ring Tone Selection	398
Headset Off	316	Show IP Address	300
Headset On/Off	317	Transfer To Ring	345

NOTE: A SIP Server software license is required to support the Model 8690 in SIP mode.

ALSO: The multi-protocol endpoints in SIP mode use the feature codes that are programmed in the telephone system node.

FEATURE EXCEPTIONS

Two of the features supported in ITP mode and SIP mode operate differently depending on the mode. The table below lists the feature exceptions and gives a brief description of the differences.

Table 5: *Feature Exceptions*

FEATURE NAME	FEATURE CODE	SIP MODE	AXXES IP MODE
Show IP or Display Time/Date	300	Displays the IP address of the endpoint.	Displays the system date and time, username, and extension.
Show Version or Diagnostics - Show Version)	9928	Displays the firmware version on the endpoint.	Displays the version and date of the call processing software.

SOFTWARE COMPATIBILITY

Depending upon which platform and software system your site is using, some of the features listed in the tables on [page 12](#) (ITP mode) and [page 14](#) (SIP mode) may not be supported on the endpoint. Check with your system administrator to see if there are any feature restrictions for your system.

The Model 8690 endpoint is compatible with the following Inter-Tel software:

- Inter-Tel® 5000 system software v1.0 and later
- Axxess® system software v8.1 and later
- Unified Communicator® v2.1 and later

FIRMWARE COMPATIBILITIES (AXXESS SYSTEM ONLY)

There are several versions of IPRC and IP endpoint firmware available for Axxess system endpoints, depending on the application and devices to be used. The following table lists the versions of Axxess IPRC firmware that the Model 8690 is compatible with. For information about updating the IPRC firmware, see the latest version of the *IP Devices Installation Manual*.

NOTE: ✓ means this version of firmware is supported for the operating mode. ✗ means this version of firmware is not supported for the operating mode.

Table 6. *Model 8690 Endpoint Firmware Compatibility*

DEVICE/MODE	IPRC FIRMWARE VERSION		
	1.5.2	7.0.5	8.1.0 (AND LATER)
Model 8690 (ITP Mode)	✗	✗	✓ ^b
Model 8690 (SIP Mode)	✓ ^{a, c}	✗	✓ ^c

- a. Does not support peer-to-peer (P2P) audio. (P2P audio is only supported in one v8.1 or later.)
 b. Requires an IP endpoint license instead of a PAL.
 c. Requires SIP Server v1.1 or later and a SIP license.

VIRTUAL LOCAL AREA NETWORK (VLAN) TAGGING SUPPORT

Inter-Tel supports the IEEE 802.1Q/p standard (VLAN) to improve voice quality and provide a higher level of security through a feature known as “VLAN tagging.” Using this feature, a VLAN-enabled network Ethernet switch (or network switch) inserts tags with unique identifiers (VLAN IDs) into Ethernet frames to break large networks into smaller groups. This prevents broadcast and multicast traffic from seizing more bandwidth than necessary. The multi-protocol endpoints and devices are tagged and behave as if they are connected to the same wire, even though they may be physically located on different segments of a network. The VLAN tagging feature does not require any system call processing and DB Studio changes.

Each port on the endpoint, except the uplink port, has an associated VLAN group. The VLAN group must be uniquely identified by a VLAN ID (number 1 through 4094). The Model 8690 can be programmed with up to three different VLAN groups because it has three downlink ports. By default, VLAN IDs for the Phone and Downlink ports are set to *zero*.

To use the VLAN Tagging feature, you must first obtain the VLAN ID information from your network administrator, and program the IDs in the endpoint using one of the following methods:

- Model 8690 Control Panel (see [page 25](#))
- Web interface (see the *IP Devices Installation Manual* or the *Inter-Tel CS-5200/5400 Communication Servers Installation and Maintenance Manual*)

LAN QOS FOR VLAN TAGGING

When endpoints are connected to a network switch that supports 802.1Q/p, it is strongly recommended that the network administrator enable LAN QoS to prioritize the Ethernet frames from the endpoint. LAN QoS is disabled by default.

For more information about how to enable LAN QoS, see the latest version of the *IP Devices Installation Manual* or the *Inter-Tel CS-5200/5400 Communication Servers Installation and Maintenance Manual*.

Programming

INTRODUCTION

This section provides information about Model 8690 programming using the Model 8690 client application and the Windows CE .NET operating system. This information includes the following:

- Installing the client application (see [page 18](#))
- Running the Setup Wizard (see [page 19](#))
- Using the Input Panel (see [page 20](#))
- Saving the System Registry (see [page 20](#))
- Viewing system memory and storage (see [page 21](#))
- Reformatting the flash file system (see [page 22](#))
- Setting Control Panel options (see [page 23](#))
- Completing an automatic upgrade (see [page 26](#))
- Completing a manual upgrade (see [page 29](#))

For information about how to use the 8690 client application, refer to the appropriate *Model 8690 User Guide*—Inter-Tel Protocol (ITP) or Session Initiation Protocol (SIP) mode.

CLIENT APPLICATION

The client application is the software that provides the interface for the Model 8690 and access to the telephone and Unified Communicator (UC) features. This application comes pre-installed on the endpoint, however, you may need to re-install the application if it becomes inoperable or if an upgrade fails. If an upgrade fails, you will also need to reformat the flash file system (see [page 22](#)).

INSTALLING THE MODEL 8690 CLIENT

The 8690 client application is distributed in a single CAB (cabinet) file. A CAB file contains one or more application files compressed into a single archive file (like a WinZip[®] file).

The following lists the system requirements for installing the 8690 client application:

- Windows CE .NET v4.2
- 400 MHz Processor, 128 MB RAM
- 5 MB Persistent Storage

To install the client application on the Model 8690:

1. Obtain the latest CAB file, **8690Phone.8690_CEDOTNET_MIPSII.CAB**, from the edGe Web site in the Tech Central\Software Downloads location.
2. Copy the CAB file onto the Model 8690 endpoint.
3. Double-press on the CAB file to launch the installation program.
4. The display shows the default location, **\Mounted Volume\8690 Phone**, where the application will be installed. Click **OK** to accept the default location.

NOTE: Make sure that you install the client application to the flash file system (in the Mounted Volume folder). This insures that the files will persist in the event that the endpoint is reset. When the installation is complete, launch **8690Phone.exe** to start the client application.


ALSO: If an installation or update fails, or if the application is partially installed, you must reformat the flash file system on the endpoint. See [page 22](#) for instructions on how to reformat the Model 8690 flash file system.

RUNNING THE SETUP WIZARD

The first time the 8690 client application runs, the Setup Wizard launches. Once you successfully complete the Setup Wizard, it will not run again unless the configuration is defaulted.

NOTE: The Default Configuration option (see [page 37](#)) on the Advanced menu resets the endpoint to its default state. If the Default Configuration option is run, the Setup Wizard will run automatically the next time the client application starts.

To run the Setup Wizard:

1. Press the UC system tray icon () , then press **Advanced – Run Setup Wizard** from the menu. Press **Next** at the opening screen and then press **Control Panel**.

NOTE: UC is included in the Model 8690 client application package. This application provides simplified access to telephone functionality, advanced features, and presence management options. For more details, refer to the latest version of the *Unified Communicator® and SIP Server Installation and Programming Manual*.

2. Double-press **Network and Dial-up Connections**.
3. Double-press **AUMAC1** to open the AU 1x00 Ethernet Controller Settings dialog box.
4. *EITHER*, Press the option **Obtain an IP address via DHCP** and then press **OK**.
OR, If the endpoint is not using DHCP, specify the hostname or IP address of the endpoint, the subnet mask, the default gateway, and the DNS server and then press **OK**.


NOTE: Obtain the IP address, subnet mask, default gateway, and DNS server settings from your network administrator.

5. Press **Next**. In the Phone Configuration Download screen, enter the hostname or IP address (in the format: 172.34.56.78) of the computer hosting the endpoint configuration file.
6. Press **Next**. At the UC screen, enter the following information:

NOTE: If you do not enter this information now, you will be prompted for it each time you log on or power on the endpoint.

- **Web Address:** Enter the URL for the UC computer where the account is located.
 - **Username:** Enter the account username.
 - **Password:** Enter the account password.
 - **Automatically log on:** Enable this option and you will not be prompted for logon information each time the endpoint starts or you select Log on from the system tray icon menu. Press **Next**.
7. Enable or disable the option to log on to UC upon completing the Setup Wizard. Press **Finish**.

USING THE INPUT PANEL

The operating system includes an on-screen keyboard function called the Input Panel. When a feature requires you to enter characters, the Input Panel pops to the front of the screen. To access the Input Panel, press the Input Panel icon () located in the far-right corner of the taskbar. Then select **LargeKB** (large keyboard). You can relocate the Input Panel by pressing the title bar with the stylus and dragging it to another area of the screen. To hide the Input Panel, press the Input Panel icon and then press **Hide Input Panel**.

If you connect an external keyboard to the endpoint (see [page 6](#)), it is recommended that you disable the Input Panel.

To disable the Input Panel:

1. Press Start - Settings - **Control Panel**.
2. Double-press **Input Panel**.
3. Disable the **Allow applications to change the input panel state** option.
4. Press **OK**.
5. Save the registry (see [page 20](#)).

SAVING THE SYSTEM REGISTRY

The information stored in the Windows CE .NET registry is not accessible. The registry contains a number of settings and preferences that are saved in two separate locations for backup purposes.

To safeguard registry settings, it is recommended that you save the registry after you make changes to operating system preferences using the Control Panel, and to UC preferences using the system tray menu. If the endpoint loses power during a registry update, the registry will be destroyed. However, the last saved version of the registry can be recovered upon reboot.

Saving the registry takes approximately 60 seconds to complete. To avoid locking up the endpoint, do not make additional changes to the preferences until the “Registry Saved Successfully” dialog box appears.

To save registry settings:

1. Press Start - Programs - **Save Registry**.
2. Press **Yes** to save registry settings.
3. Press **OK** when the “Registry Saved Successfully” message appears.

VIEWING SYSTEM MEMORY AND STORAGE

The Model 8690 endpoint ships with 128 MB of RAM and 64 MB of flash RAM. The telephone application is pre-loaded on the device, and you have approximately 5 MB of RAM available for use.

CAUTION

The Model 8690 endpoint does not have a built-in hard drive. **Storage memory will not survive a reset or an upgrade to the operating system unless the files are stored in the Mounted Volume folder on the endpoint (My Computer\Mounted Volume) or on a host that is accessible from the Model 8690 endpoint.** Desktop shortcuts and any preferences that have not been saved in the registry (including UC preferences) will be lost if you upgrade the operating system or if the endpoint resets.

You can view the available amount of system memory using the System Properties dialog box. System memory is divided into Storage Memory (see caution above) and Program Memory. Program Memory is used for executing programs.

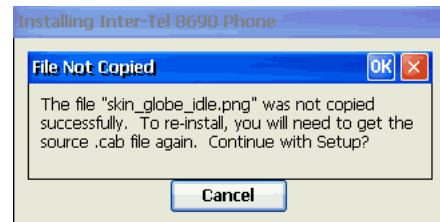
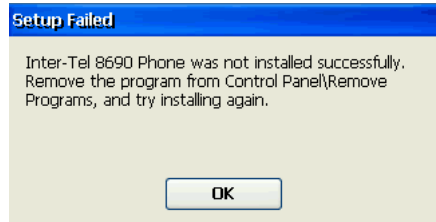
To view system memory:

1. Press Start - Settings - **Control Panel**.
2. Double-press **System**.
3. Select the Memory tab.

NOTE: You can reassign unused RAM using the slider on the Memory tab. To assign more memory for programs, move the slider to the left. To assign more memory for storage, move the slider to the right.

REFORMATTING THE FLASH FILE SYSTEM

Installing the client application on the Model 8690 may fail if the endpoint does not have sufficient memory resources or if the endpoint loses power before the upgrade is complete. If the upgrade fails, or if the application is partially installed (see the dialog boxes below), it is strongly recommended that you reformat the flash file system on the endpoint.

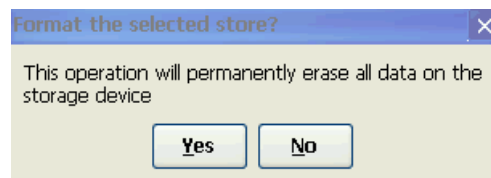


CAUTION

Any data or files saved in the Mounted Volume folder will be lost. To avoid loss of data, the data should be saved to a host, a memory card, or a location on the network.

To reformat the flash file system:

1. Press Start - Settings - **Control Panel**.
2. Double-press **Storage Manager**.
3. Press **Dismount**, and then press **Format**. The following dialog box appears.



4. Press **Yes** to erase all data.
5. Press **OK** to close the Format store succeeded dialog box.
6. In the Storage Properties dialog box, press **New** to create a new partition.
7. Enter a name for the partition (the default partition name is Part00*), then press **OK**.
8. Press **Properties**. The Partition Properties dialog box opens.
9. Press Dismount, and then press **Format**. The Format dialog box opens.
10. Verify that the Quick Format option is selected and press **Start**.
11. Press **Yes** to format.
12. Press **OK** to close the Format dialog box.
13. In the Partition Properties dialog box press **Mount** and then **OK**.
14. Close the Storage Properties dialog box and then exit the Control Panel.
15. Reinstall the client application as described on [page 18](#).

SETTING CONTROL PANEL OPTIONS

When you press Start - Settings - **Control Panel**, you have access to several operating system settings for the device. These settings determine the endpoint's volume, network and dial-up connections, the backlight timeout, etc. For information about control panel settings that are not covered in this section, consult the operating system help (see [page 39](#)).

Screen Calibration

Before using the touch screen, it is important to calibrate it. Calibration ensures the display interprets the stylus presses accurately. These settings are stored in the Windows CE. NET registry and may need to be configured again if the registry is lost or reset, and after upgrading to the operating system.

To test and calibrate the screen:

1. Press Start - Settings - **Control Panel**.
2. Double-press **Stylus**.
3. Test the settings using the icons on the Double-Tap tab.
4. If the screen does not respond to your presses properly, press the Calibration tab.
5. Press **Recalibrate**.
6. Press and hold the stylus on the center of the target in every position on the screen.
7. Tap the screen to save the settings in the registry.
8. Press **OK**.

Audio Properties

The client application's audio feature has priority over the operating system's audio feature. For example, if the user is running Windows Media Player to play music and the endpoint receives a call, the audio for Media Player is cut off and audio output switches to the call. When the call ends, audio is switched back to Media Player. To configure audio properties, press Start - Settings - Control Panel - **Volume & Sounds**.

Backlight Options

To save power and extend the life of the display, you can set an option that automatically shuts off the display's backlight. When the endpoint remains inactive for the specified amount of time, the display automatically goes into "sleep" mode and the screen goes dark. To "wake" the screen, either lift the handset or touch the screen. An incoming call or input from an external mouse or keyboard will also "wake" the screen.

The default backlight timeout is four hours. You can select a different backlight timeout as explained below.

NOTE: UC message and status alerts (see [page 34](#)) do not "wake" the screen, however software upgrade prompts (see [page 26](#)) do.

To change the default value for the backlight timeout:

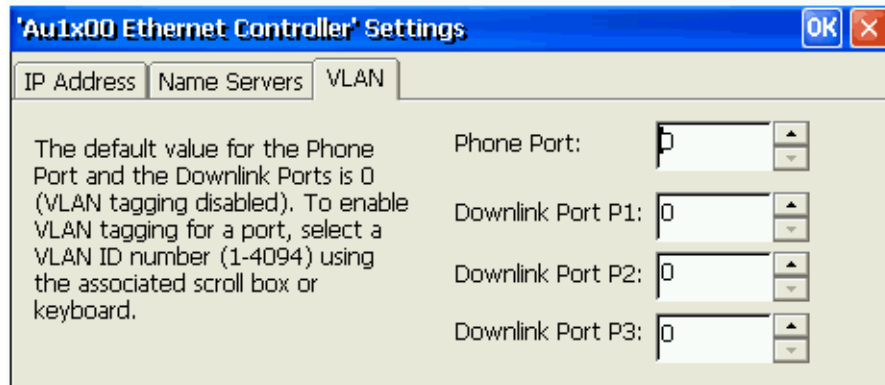
1. Press Start - Settings - **Control Panel**.
2. Double-press **Display**.
3. Select the Backlight tab.
4. Select the **Automatically turn off backlight while on external power** option.
5. Select the amount of time you want the endpoint to remain idle before the backlight turns off. Timeout choices include:
 - 1 minute
 - 2 minutes
 - 5 minutes
 - 10 minutes
 - 15 minutes
 - 30 minutes
 - 1 hour
 - 4 hours
6. Press **OK**.

VLAN IDs

To configure VLAN IDs for the Model 8690 endpoint's ports, use the Network and Dial-up Connections option on the Control Panel.

To configure VLAN IDs for the ports:

1. Press Start - Settings - **Control Panel**.
2. Double-press **Network and Dial-up Connections**.
3. Double-press **AUMAC1**. The 'AU1x00 Ethernet Controller' Settings dialog box opens as shown below.



4. Select the VLAN tab.
5. Select the VLAN ID number (supplied by your network administrator) for the Phone Port and the Downlink Ports using the associated scroll buttons.
6. Press **OK**.
7. Save the registry (see [page 20](#)).

UPGRADES

The Model 8690 is capable of downloading software and firmware upgrades from the configured TFTP server. If the endpoint is configured to periodically check for upgrades, the user is notified when an upgrade is available. The following information explains how automatic and manual upgrades work.

CAUTION

To successfully run updates on the Model 8690 endpoint, you must use a TFTP server client that is capable of file transfers larger than 32 MB. (The operating system update file is larger than 32 MB.) Currently, the only known TFTP client with this capability is a freeware application called Jounin TFTP32 available at (<http://tftpd32.jounin.net>). If another TFTP client is used, and it cannot transfer files larger than 32 MB, the partially downloaded file will be corrupted and render the Model 8690 inoperable. **There is no restore procedure other than to return the endpoint to Inter-Tel for repair or replacement.**

COMPLETING AN AUTOMATIC UPGRADE

NOTE: If an upgrade fails, or if the application is partially installed, you must reformat the flash file system on the endpoint. See [page 22](#) for instructions on how to reformat the Model 8690 flash file system.

The 8690 client application can be upgraded automatically or manually. Listed below are the three types of upgrades available for the endpoint and a brief description of the automatic upgrade process.

The upgrade process is explained in the following sections.

Firmware Upgrades

The Model 8690 endpoint is loaded with Inter-Tel-provided firmware that allows it to communicate with the telephone system. Firmware is software that is embedded in a hardware device that allows it to operate. Endpoints may require updates when a new version of software or firmware is available.

When the endpoint downloads a new firmware version, the user is notified that the upgrade is starting, and the client application continues to run. The upgrade process can be monitored on the six-line display. When the upgrade is complete, the endpoint resets and returns to normal operation.

Telephone Client Application

When the endpoint downloads a new version of the telephone client application, the application exits and the upgrade application launches. The upgrade application downloads the new version of the client application from the TFTP server, and the user can monitor the download progress. When the download completes, the upgrade application launches the Windows CE .NET installation mechanism and installs the new client application version. At this point, you are prompted for where you would like to install the new files (the default is \\Mounted Volume\8690 Phone). Press **OK** to continue with the installation. Press **Yes** when prompted to overwrite existing files. You are notified when the upgrade is complete. The upgrade application launches the new version of the client application and then exits.

CAUTION

Do not press **Cancel** when the installation dialog box prompts you where you would like to install the new files. At this point the previous client application has been deleted and if you cancel the upgrade, you will need to contact your network administrator to manually reinstall the client application. Also, do not change the default location (\\Mounted Volume\8690 Phone) specified in the installation dialog box. The client application must be installed in the Mounted Volume folder to survive a reset or an upgrade to the operating system.

Operating System

When a new version of the operating system is downloaded, the client application exits, and the upgrade application launches. An upgrade of the operating system takes approximately 30 minutes to complete.

CAUTION

It is imperative that the upgrade process for the operating system is not interrupted before it is complete. **Do not disconnect the endpoint from its power source or attempt to use the endpoint during the download process. These actions may cause serious damage to the endpoint, and the endpoint may need to be shipped back to Inter-Tel for repair.**

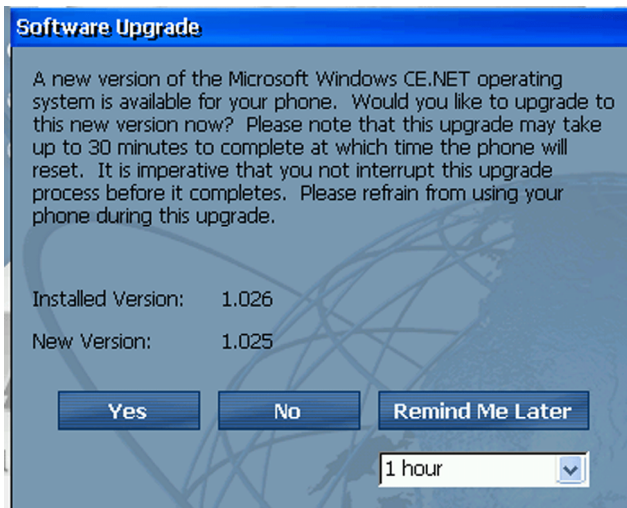
The upgrade application erases the existing version of the operating system from the persistent memory. Upon completion, the upgrade application downloads the new version of the operating system from the TFTP server. As the new version of the operating system is downloaded, it is simultaneously written to persistent memory, and you can monitor the progress. When the download and installation completes, the user is notified and the endpoint resets. The registry settings are lost when the operating system is upgraded. This means that certain client application settings stored in the registry are lost as well. These include the session and diagnostic options.

CAUTION

The Model 8690 does not have a built-in hard drive. Desktop shortcuts, and any preferences that have not been saved in the registry (including UC preferences) will be lost if you upgrade the operating system or if the endpoint resets. **Storage memory will not survive a reset or an upgrade to the operating system unless your data is stored in the Mounted Volume folder on the endpoint (My Computer\Mounted Volume) or on a host that is accessible from the Model 8690.**

INSTALLING A NEW VERSION OF SOFTWARE OR FIRMWARE

When an upgrade is available, the Software Upgrade dialog box (shown below) opens, and the user is prompted to install the upgrade.



To install the upgrade immediately, press **OK**. To install the upgrade later, you can set a reminder (see instructions below). When the reminder timer has expired, the Software Upgrade dialog box automatically prompts you to install the pending upgrade.

To set a reminder to install an upgrade:

1. On the Software Upgrade dialog box, set the reminder timer using the drop-down box. Your options are:
 - **1 hour**
 - **1 day**
 - **3 days**

Press **Remind Me Later**. When the specified time has elapsed, the Software Upgrade dialog box opens, and you are prompted to install the pending upgrade manually (see [page 29](#)).

COMPLETING A MANUAL UPGRADE

Although the Model 8690 automatically checks for upgrades, you can manually check for upgrades by running the Auto Upgrade feature. If there are no new upgrades available, you will not be notified, and the endpoint will function normally. If an upgrade is available, the Software Upgrade dialog box opens, and you are prompted to install the upgrade. You can choose to install the upgrade then by pressing **OK** (see [page 26](#)) or set a reminder to install it later.

To run the Auto Upgrade feature:

1. Press the system tray icon, then press **Advanced – Auto Upgrade – Check for New Versions**. The upgrade search dialog box opens.
2. Press **OK** to allow the system to search for software upgrades. You are not informed if upgrades are *not* available.

In addition to running the Auto Upgrade feature, you can view, install, or cancel pending upgrades using the Advanced options.

To view and install pending upgrades:

1. Press the system tray icon, then press **Advanced – Auto Upgrade – Pending Upgrades**. The Pending Upgrades dialog box opens and displays the status for the following:
 - Firmware
 - Client Application
 - Operating System

NOTE: The **Upgrade Now** option indicates a pending software upgrade.

2. Press **Upgrade Now** next to the upgrade you want to install. There is one button for each upgrade type.
3. When the Software Upgrade dialog box opens, press **OK** to install the upgrade.

To cancel pending upgrades:

1. Press the system tray icon, then press **Advanced – Auto Upgrade – Pending Upgrades**. The Pending Upgrades dialog box opens and displays the status for the following:
 - Firmware
 - Client Application
 - Operating System
2. Press **Cancel** next to the upgrade that you want to cancel. There is one button for each upgrade type.
3. Press **OK**.

Using

INTRODUCTION

This section provides the following information:

- Administrator guidelines (see [page 31](#))
- Setting system tray options (see [page 33](#))
- Adding a .NET Passport (see [page 36](#))
- Advanced options (see [page 36](#))

For detailed end-user information, see the appropriate Model 8690 user guide.

ADMINISTRATOR GUIDELINES

The following guidelines provide basic usage information for Model 8690 administrators.

- Consult your local Inter-Tel servicing company for important information about dialing emergency services from the Model 8690 endpoint. **Inform users on how to access emergency services with their endpoint.**
- There can only be one memory card (PCMCIA or CF) inserted when you power on the endpoint. If you use both types of memory cards, remove one card before powering up the endpoint.
- Generally the endpoint should remain powered on at all times. If you must power down the endpoint, save the registry first (see [page 20](#)) or the user's preferences will be lost.
- Obtain the proper network settings from your network administrator before you attempt to use the Default Configuration (see [page 37](#)) and Run Setup Wizard (see [page 19](#)) options on the Advanced submenu (see [page 36](#)). Selecting these options require you to reconfigure the endpoint for your network. The endpoint will be unable to connect with the network if you configure the network settings incorrectly.
- Periodically, the endpoint checks for software upgrades. When an upgrade is available, the Software Upgrade dialog box opens, and the user is prompted to install the upgrade. **Inform users that they must take certain precautions to safeguard data and preferences before performing an upgrade to the operating system.** See [page 26](#) for important information about installing software upgrades.
- **Instruct users to not make or receive calls while upgrading the operating system to avoid a flash memory conflict.** See [page 26](#) for important information about installing software upgrades.
- Because the Model 8690 endpoint does **not** contain a battery, any data and/or files in storage memory that are not saved in the Mounted Volume folder will be **lost** when the device loses power.
- Because the Model 8690 endpoint has a limited storage capacity, it is recommended that you instruct users to save applications and data on a host device, such as a memory card inserted in the appropriate port on the back of the endpoint (see [page 4](#)). For example, using a 128 MB Compact Flash memory card significantly increases the available storage on the 8690 endpoint. Any applications or data saved on the memory card will be saved even if the endpoint loses power or resets.

- Instruct users that before they can begin using Unified Communicator (UC) on their endpoint, certain options must be changed or implemented from the UC Web client on their PC. In addition, users cannot access the UC Web client URL from their endpoint's browser. For more information about setting UC Web client options, see the appropriate Model 8690 user guide.
- The endpoint has a 640x480 pixel LCD touch screen. A stylus pen is shipped with the endpoint to access elements on the screen. Instruct users to always use the stylus with their endpoint and to not use another pointing device on the screen such as a pen or pencil.
- The telephone application's audio feature has priority over the operating system's audio feature. When a call comes in, audio is transferred to the call, and other applications that are running are muted. For more information about audio properties, see [page 23](#).
- If the endpoint remains idle for more than four hours, the backlight on the screen times out and the screen goes dark. To "wake" the screen, either lift the handset or touch the screen. The display automatically "wakes" when the user makes or receives a call. See [page 24](#) to change the default backlight timeout.
- If you hear four fast tones or repeating fast tones when you are programming or using the Model 8690 endpoint, you have done one of the following:
 - Pressed an invalid button combination.
 - Tried to select a restricted line.
 - Dialed a restricted or invalid number.
 - Dialed too slowly between digits.
 - Waited too long before performing the next step.

Hang up and try again.

CAUTION

Inter-Tel strongly recommends using the IP devices on a managed private network. If connected to the public Internet, IP devices will function, but the quality may suffer due to the dynamic bandwidth availability. The possible problems could be voice quality degradation, garbled speech, dropped calls, equipment resets, etc. Also, the VoIP suitability of any Internet connection can change at any time, with no advance notice. **Inter-Tel cannot guarantee any voice quality when connected to the public Internet. Therefore, Inter-Tel is not responsible for network quality issues that are caused by using the public Internet.** For recommended guidelines on IP network specifications for the Axxess system, see the latest version of the *IP Devices Installation Manual* (part no. 835.2195). For IP network specifications for the Inter-Tel 5000 system, see the *Inter-Tel CS-5200/5400 Communication Servers Installation and Maintenance Manual* (part no. 580.8000).

THE SYSTEM TRAY MENU

To access the system tray menu, press the system tray icon (see [page 9](#)) to display the menu. Menu-accessible options are discussed throughout this section.

SETTING OPTIONS

The system tray menu provides access to the Options dialog box, providing access to client options. The Options dialog box contains the Session, Appearance, Behavior, Advanced and About tabs. These tabs have options you can set and information about the endpoint.

The following instructions explain how to set the available options in the Options dialog box. Some of these settings require you to obtain information from your network administrator. To open the Options dialog box, press the system tray icon, then select **Options** from the menu. The Options dialog box opens to the Session tab.

Session Tab

To set or edit options on the Session tab:

NOTE: The Session tab requires users to enter their UC account username and password. For security reasons, users may want to enter this information themselves. These instructions appear in the Model 8690 user guides.

1. Enter the **Web Address** that you use to access UC.
2. Enter the account **Username**. (This is the same username used to log onto the Web client on the user's desktop PC.)
3. Enter the account **Password**. (This is the same password used to log onto the Web client on the user's desktop PC.)
4. Enable the **Automatically log on** option if you would like UC to launch without having to enter the Web address, username, and password information.

If this option is enabled, the application will not prompt you for Web address, username and password information, unless you have not already provided it or the logon fails.

NOTE: Enabling the **Automatically log on** option will not automatically launch UC. See the appropriate user guide for more information about using UC on the Model 8690

5. Press **OK** in the upper-right corner of the Options dialog box or select another tab to edit.

Appearances Tab

To set or edit options on the Appearance tab:

1. Select **Specify alternate appearance** to change the default skin (see [page 10](#) for detailed instructions).
2. Select the UC functions where you would like to use large icons. You may want to use large icons so that screen items are easier to read. However, less information will be displayed. Options include:
 - Search Results
 - Messages
 - Call List
 - Call Log
 - Address Book
 - Call Routing
3. Press **OK** in the upper-right corner of the Options dialog box or select another tab to edit.

Behavior Tab

To set or edit options on the Behavior tab:

1. If desired, change the endpoint's ring from the default:

NOTE: The Model 8690 must have access to the **.wav** file you want to use for the custom ring. The **.wav** file must use the following format: **PCM 11.025 kHz, 8 Bit, Mono.**

- a. Enable **Specify custom ring**.
 - b. Press **Browse** to navigate to the folder where **.wav** files are stored. Select the **.wav** file you want to use.
 - c. Press **OK**.
2. Enable or disable the option for the client application to be displayed using the **Display window when** field. Select from the following options:
 - Phone goes off-hook (when you lift the handset or press **Speaker**)
 - Incoming call received (when the endpoint receives a call)
 3. Enable or disable the option to display alert messages using the **Show alerts when** field. An "alert" is a system tray popup window that draws attention to specific events. Select from the following options:
 - I receive a new message
 - The status of a contact in my speed-dial list changes
 - I receive a new call

NOTE: Alerts are only shown when you are logged on to UC.

4. Enable or disable the **Flash message lamp for new messages** option.
5. Press **OK** in the upper-right corner of the Options dialog box or select another tab to edit.

Advanced Tab

To set or edit options on the Advanced tab:

1. Enable or disable the **Auto Dial** option. If you enable this option, you must provide a telephone number. When Auto Dial is enabled, the @ symbol is highlighted. Pressing the @ symbol quickly enables/disables the Auto Dial option. When Auto Dial is enabled, picking up the handset dials the number you chose for the Auto Dial option.

NOTE: Typically, you would enter the extension of the UC telephone client (or an attendant) in this field. When the endpoint auto dials the UC voice client, you can use the UC Voice User Interface (VUI) to issue voice commands such as, "Call Bob Smith" to make calls. You must enable the auto-logon option (using the Web client - My Account link - Advanced tab options) to use the Auto Dial option to dial the UC voice client.

2. Enter the number for the **Backup Number** option.

NOTE: This field allows you to specify a backup telephone number that the endpoint will automatically dial when you go off hook if the Windows CE. NET subsystem is down. (Typically, you would enter an attendant telephone number in this field.) If "0" is not the number you use to reach an attendant or operator, then provide the number here.

3. Enter the maximum amount of disk space in KB that you want to allocate for endpoint diagnostic files on the Windows CE. NET subsystem. By default, this is 200 KB, but is limited by the amount of available RAM on the endpoint. If this field is set too high, the endpoint may run out of available memory.

4. Enable or disable the following options:

- **Log to file:** Diagnostics are logged to a file stored in the My Computer folder on the endpoint. This option is ON by default.

NOTE: This file is stored in an area of the file system that will be lost if you reset the endpoint. If you are asked to provide this file to technical support, either copy the file off of the device, or copy the file to the Mounted Volume folder (My Computer\Mounted Volume) before resetting the endpoint.

- **Log to phone system:** Diagnostics are logged to a location on the telephone system. This option is OFF by default.
- **Log extended information:** Additional diagnostic information is logged. This option is usually only enabled when a network administrator needs to troubleshoot endpoint issues. Enabling this option may affect the performance of the client application.

5. Press **OK** in the upper-right corner of the Options dialog box to save and apply the selections.

About Tab

The About tab contains read-only and copyright information about the endpoint. This information includes:

- Endpoint model (Model 8690)
- User Interface Version
- Firmware Version
- Operating System Version

ADDING A .NET PASSPORT

NOTE: This option is only available when you are logged on to UC.

Microsoft Passport is a “universal login” service that allows users to log in to many Web sites using one account. Working with .NET Messenger service, passport holders can also send messages online or through the telephone system if it is configured to handle calls from this type of endpoint. Ask your network administrator if your system is configured to handle .NET Messenger calls..

NOTICE

At the time of this publication, Microsoft had disabled connectivity to the MSN network for third-party products like UC, in preparation for a licensing model which had not yet been disclosed. Currently, the .NET Passport dialog box allows you to enter information, but the **functionality has been disabled**. When Inter-Tel is able to determine licensing requirements (if any) and how that will affect the future functionality of this product, the documentation will be updated accordingly.

To add passport information:

1. Press the system tray icon, then select **Passport from the menu**.
2. Enter the .NET passport **Username** and **Password** in the fields provided.
3. Enable **Handle passport calls**.
4. Press **OK**.

ADVANCED OPTIONS

This section details how to use the advanced options available on the client application. Check with your network administrator before using advanced options.

CAUTION

Consult your network administrator before setting options on the Advanced submenu. Although you can access these options from the system tray menu, you should not use them unless your network administrator has supplied you with all of the network settings and additional information that are required.

RUNNING UPGRADES

Periodically, users receive notification if a new version of the Model 8690 software is available. When this happens, the user can either upgrade their endpoint automatically or elect to do a manual upgrade at a later time. The Auto Upgrade option on the Advanced submenu allows users to check for upgrades, install upgrades, and search for pending upgrades. For instructions on how to complete automatic and manual upgrades, see [page 26](#).

CAUTION

It is imperative that users do not interrupt the operating system upgrade process before it completes. If users attempt to use the endpoint during an upgrade they may destroy the operating system. **To replace the operating system you will need to send the endpoint back to Inter-Tel for repair.**

SETTING A STATION PASSWORD

NOTE: This option is only available when you are logged on to UC.

The station password allows you to quickly add the endpoint as a UC device.

To set the station password:

1. Press the system tray icon, then select Advanced – **Set Station Password**.
2. Enter the old password.
3. Enter a new password.
4. Enter the new password again to confirm it.
5. Press **OK**.

DEFAULTING THE CONFIGURATION

The Default Configuration option restores the endpoint configuration to its default state. When you select this option, you will need to reconfigure the network settings on the endpoint if they differ from the default. In addition, you will need to re-enter the user's UC login information on the Session tab in the Options dialog box.

CAUTION

Do not select the Default Configuration option unless you have the network settings that are required to reconfigure the endpoint.

To default the endpoint configuration:

1. Press the system tray icon, then select Advanced – **Default Configuration**.
2. When prompted, press **Yes**. The default settings are restored to the endpoint.
3. Enter the UC login information on the Session tab (see instructions on [page 33](#)).

RUNNING A SELF TEST

The Self Test option is used as a diagnostics tool to help determine if the endpoint is operating properly.

To run the Self Test:

1. Press the system tray icon, then select Advanced – **Self Test**. A reset warning is displayed.
2. Press **Yes** to proceed with the self test. The endpoint resets.
3. When the endpoint restarts, lift the handset. The endpoint begins the basic tests as indicated on the display. After each test, press and release the hookswitch. When the tests are complete, a **SELF TEST COMPLETED** message is displayed. Replace the handset. The endpoint resets and returns to normal operation.

Troubleshooting

INTRODUCTION

This section provides information about help options, status displays, and troubleshooting procedures for multi-protocol endpoint and VLAN issues:

- Help options (see below)
- Endpoint-Related Issues (see [page 40](#))
- VLAN Tagging-Related Issues (see [page 43](#))

HELP OPTIONS

The Model 8690 endpoint includes two Help options. Based on the descriptions below, first determine which help file to open to obtain the information you need. After you open the file, navigate to the appropriate area of the help file for assistance.

USING MODEL 8690 HELP

The 8690 Help file contains information specific to the Model 8690, the supported telephone features, and Unified Communicator (UC) features. This help file contains information for endpoints operating in SIP mode and ITP mode. The Search function allows users to easily locate information. You can access this help file by pressing Start - **Help** or by pressing the **Help** option in the system tray menu.

USING WINDOWS CE. NET HELP

The Model 8690 endpoint also has a help file with information pertaining to the Windows CE. NET operating system. The information in this help file is provided by Microsoft. It is limited to Windows CE. NET and the viewer applications that come pre-installed with the operating system. Because the operating system on the Model 8690 has been customized, some of the information provided in this file may not apply to the endpoint. To access the operating system help file, press Start - **Help**.

NOTE: If the Model 8690 endpoint's user interface is displayed when you press Start - **Help**, the operating system help file opens, and then the Model 8690 help file opens. If you want to use the operating system help, close the Model 8690 help window. If the control panel is open when you press Start - **Help**, the operating system help file opens.

ENDPOINT-RELATED ISSUES

Table 7: *Multi-Protocol Endpoint-Related Issues*

SYMPTOM	PROBABLE CAUSE	CORRECTIVE ACTION
<p>The multi-protocol endpoint powers up and all the lamps remain lit permanently.</p>	<p>The endpoint software is corrupt</p>	<p>The voice processing software is corrupt, and the multi-protocol endpoint must be recovered using the following steps:</p> <ol style="list-style-type: none"> 1. Set up a PC on the same LAN as the endpoint. 2. Make sure the PC has a TFTP server and the correct software image file. 3. Rename the software image from 86xx_x_x_x.bin (where the _x_x_x represents the version number) to 86xx.bin. For example: <ul style="list-style-type: none"> — Rename 8600_1_1_5.bin to 8600.bin — Rename 8620_1_1_5.bin to 8620.bin (note that the Models 8620 and 8622 share the same binary image) — Rename 8662_1_1_5.bin to 8662.bin (note that the Models 8622 and 8622E share the same binary image) — Rename 8690_1_1_5.bin to 8690.bin 4. Point the TFTP server at the directory that contains this software image file. 5. Configure the IP address of the PC as 192.168.200.202. The endpoint starts pulling this file from the TFTP server. When finished, the endpoint resets on its own.
<p>While installing the client application on the Model 8690, an error message indicating that the setup failed appears.</p>	<p>The endpoint does not have sufficient memory resources or the endpoint has lost power before the upgrade is complete</p>	<p>The client application installation on the Model 8690 has failed. You must reformat the flash file system on the endpoint. See page 22 for details.</p>
<p>A multi-protocol endpoint flashes the error message "ERROR WRONG VERSION" when attempting to download a new image.</p>	<p>The version number in the xxxx_image_ver string may not match up with the image's version.</p>	<p>Correct the xxxx_image_ver image version number or the image name (if pointing at the wrong image file).</p>

Table 7: *Multi-Protocol Endpoint-Related Issues (Continued)*

SYMPTOM	PROBABLE CAUSE	CORRECTIVE ACTION
<p>The Windows CE.Net stops during the firmware upgrade.</p>	<p>This may be caused by using most of the system resources (processor and RAM) during an upgrade.</p>	<p>Try doing one of the following:</p> <ul style="list-style-type: none"> • Restart the Windows CE upgrade by going into Pending Upgrades. Windows CE will still show up as “Pending” because it has not completed copying, which results in a reset of the Model 8690. Press “OK” to restart the upgrade and eventually this causes the original upgrade time out and display the dialog box to restart that upgrade. Press “No” to cancel the original upgrade and continue with the second download that is in progress (usually still erasing flash at this point). • Launch the 8690 manually by using a USB mouse. The USB mouse does not require a lot of memory in the CPU. With the USB mouse attached the user can perform some basic functions and still see the Model 8690 endpoint responding. The mouse should be attached before the upgrade is started. <hr/> <p>NOTE: When an upgrade is in progress, DO NOT use the Model 8690 endpoint.</p> <hr/>

Table 7: *Multi-Protocol Endpoint-Related Issues (Continued)*

SYMPTOM	PROBABLE CAUSE	CORRECTIVE ACTION
<p>When the multi-protocol endpoints reset, network connectivity on the downlink (i.e., the LAN port labeled "PC" on the back on the endpoint) is temporarily lost.</p>	<p>The endpoints generally reset for one of the following reasons:</p> <p>(1) Endpoint setting or firmware updates - the endpoints may require a reset for certain configuration changes to take place and will reset if the firmware is updated.</p> <p>(2) Telephony system updates - the endpoints will reset when the Call Processing system disconnects their connection for updates on the Call Processing side. The endpoint will continue to reset every several minutes until the telephony system recovers and the endpoint can re-connect.</p> <p>(3) Loss of network connectivity - the endpoints will reset when network congestion or loss of network connectivity prevents necessary keep-alive packets from being exchanged between Call Processing and the endpoint.</p>	<p>Work-arounds for this issue are as follows:</p> <ul style="list-style-type: none"> • Minimize endpoint resets due to system updates - Schedule telephony system and endpoint updates for non-peak hours when endpoint and network connectivity outages are less service affecting. • Isolate and eliminate any network issues - Isolate and eliminate any network congestion issues that may cause the endpoint to lose communication with Call Processing and thus reset. • For critical applications that cannot tolerate any interruptions in LAN service, use an external switch in place of the downlink port for network connectivity until resets due to external factors can be minimized. <p>In the case of (3) loss of network connectivity, make sure that the network in question meets the minimum requirements specified in the <i>Inter-Tel's VoIP Data Network Requirements</i> (document part no. 835.2885). This document can be found on the Inter-Tel eDge Web site, under Online Manuals & Guides – IP Telephony Online Manuals (www.inter-tel.com/techpublications).</p>

VLAN TAGGING-RELATED ISSUES

Table 8: *VLAN Tagging-Related Issues*

SYMPTOM	PROBABLE CAUSE	CORRECTIVE ACTION
The user cannot connect to the Web interface for a multi-protocol endpoint.	The PC that the user uses may not be in the same VLAN group as the endpoint.	The PC that the user uses may not be in the same VLAN group as the endpoint. Make sure that the PC and endpoint are in the same VLAN group. If not, set the endpoint VLAN ID to match the PC or disable the VLAN feature for the endpoint (see page 25).
The user cannot connect to the Model 8690 Web interface but could connect to the Model 8622 or 8662 Web interface. The VLAN ID of the phone port is disabled but the VLAN ID of the downlink port is enabled (not zero).	The VLAN ID of the endpoint is disabled	This is a limitation of the 8690 internal phone Ethernet switch. The 8690 Ethernet switch inserts the default VLAN ID which is 1 if the frames from the endpoint are untagged. Connect the PC to one of the downlink ports which has VLAN ID set to zero.
The user powers up the endpoint with the correct VLAN ID, but the endpoint receives the wrong IP settings from the wrong DHCP from another VLAN.	The network switch may not support VLAN or wrong VLAN ID is programmed at the switch port of the core switch network.	Make sure that the core network switch is programmed correctly.
The user powers up 8690 but the network settings still show the settings with the old VLAN values.	The phone application may not be updated so the new VLAN settings may not have been propagated to the VPS. If the phone application is up to date, then the new VLAN IDs may not have been sent down to the VPS in time.	Make sure that the phone application is up to date, and reset the endpoint after the VLAN ID in the phone port has been changed from the networking control panel of Windows CE.

Glossary

B

Bootstrap Protocol (BOOTP)

A protocol that lets a network user be automatically configured (receive an IP address) and have an operating system booted or initiated without user involvement.

C

Circuit

Crosspoint connection on the IPRC.

Client Application

The software that provides the interface for the Model 8690 and access to the telephone and Unified Communicator (UC) features.

D

Device

Devices are endpoints connected to the telephone system and can be associated with UC accounts. An account can own more than one device. A device is connected to a single node and can only be owned by one account at a time. Devices have properties such as a DND state and a manual-forwarding state that can be programmed from UC. Devices can also be used to place or receive calls.

Dynamic Host Configuration Protocol (DHCP)

Allows a network administrator to supervise and distribute IP addresses from a central point and automatically send a new IP address when a computer is plugged into a different place in the network.

F

Firmware

Firmware is software that is embedded in a hardware device that allows it to operate. Endpoints may require updates when a new version of software or firmware is available.

Firewall

A set of related programs, located at a network gateway server, that protects the resources of a private network from users on other networks.

G

Gateway

A network point that acts as an entrance to another network.

I

Internet Explorer (IE)

Microsoft Internet Explorer.

Internet Protocol (IP)

The method or protocol by which data is sent from one computer to another on the Internet.

Internet Protocol Resource Card (IPRC)

The cabinet card that provides the functionality required to make telephone calls through the IP network to the telephone system.

Inter-Tel Protocol (ITP)

The Inter-Tel proprietary protocol that allows an IP endpoint to connect to the Inter-Tel telephone system via a TCP/IP stream to the Internet Protocol Resource Card (IPRC).

L

Local Area Network (LAN)

A network of interconnected workstations sharing the resources of a single processor or server within a relatively small geographic area.

LAN QoS

A MAC-level QoS that involves the entire LAN. When LAN QoS is enabled, the Phone Ethernet switch can prioritize Ethernet frames that have 802.1Q/p tags.

N

Network

A series of points or nodes interconnected by communication paths.

P

Passport

Developed by Microsoft, Passport is a “universal-login” service that allows users to log in to many Web sites using one account. Many of these Web sites include Microsoft services such as Hotmail or MSN Messenger. Working in conjunction with .NET Messenger service, Passport holders can also send messages online or through a telephone system.

Personal Computer Memory Card International Association (PCMCIA) Port

A port for small, credit card-sized memory cards. There are three types of PCMCIA cards.

PDA

Personal Data Assistant

Port

A port number is a way to identify a specific process to which an Internet or other network message is to be forwarded when it arrives at a server.

Proxy Server

A server that acts as an intermediary device between a workstation user and the Internet to ensure security, administrative control, and caching service capabilities. A proxy server is associated with or is part of a gateway server that separates the enterprise network from the outside network and a firewall server that protects the enterprise network from outside intrusion.

S

Session Initiation Protocol (SIP)

A text-based, standards protocol, for IP communication, enabling IP Telephony gateways, client endpoints, PBXs and other communication systems or devices to communicate with each other.

Subnet

An identifiably separate part of an organization's network. Typically, a subnet may represent all of the machines at one geographic location, in one building, or on the same local area network (LAN).

T

Transmission Control Protocol (TCP)

A method used along with the Internet Protocol (IP) to send data in the form of message units between computers over the Internet.

TUI

Touch-tone User-Interface

TUI/VUI Telephone Client

The TUI/VUI telephone client allows you to call into the telephone system and access various options through a touch-tone user interface and/or voice user interface.

U

User Datagram Protocol (UDP)

A communications method that offers a limited amount of service when messages are exchanged between computers in a network that uses the Internet. UDP is an alternative to the Transmission Control Protocol (TCP). It also provides port numbers to help distinguish different user requests.

Unified Communicator (UC)

An Inter-Tel presence management tool designed to help stationary and mobile users manage their communication effectively. The Model 8690 client application includes a version of UC that runs on the Windows CE. NET operating system.

UPS

Uninterruptible Power Supply

URL

Uniform Resource Locator. A URL is a Web page address.

USB

Universal Serial Bus

User Interface

The graphical display on the screen that uses standard windows, icons, and menus.

V

VLAN Tagging

The IEEE 802.1Q/p standard that uses a VLAN-enabled network Ethernet switch (or network switch) to insert tags with unique identifiers (VLAN IDs) into Ethernet frames to break large networks into smaller groups. VLAN tagging prevents broadcast and multicast traffic from seizing more bandwidth than necessary.

VUI

Voice User-Interface

W

Web Client

The Web client is the primary end-user PC interface to the UC product. It provides access to all UC features.

Windows CE. NET Operating System

An open, scalable, 32-bit operating system that is targeted and customized for PDA devices.

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Part No. 550.8120
Issue 9, Revised, May 2005

