Avaya 2050 IP Softphone Installation Guide

Avaya Business Communications Manager

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Contact Avaya Support
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Chapter 1
Customer service

Visit the Avaya Web site to access the complete range of services and support that Avaya provides. Go to www.avaya.com or go to one of the pages listed in the following sections.

Navigation

- "Getting technical documentation" on page 5
- "Getting product training" on page 5
- "Getting help from a distributor or reseller" on page 5
- "Getting technical support from the Avaya Web site" on page 5

Getting technical documentation

To download and print selected technical publications and release notes directly from the Internet, go to www.avaya.com/support.

Getting product training

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Getting help from a distributor or reseller

If you purchased a service contract for your Avaya product from a distributor or authorized reseller, contact the technical support staff for that distributor or reseller for assistance.

Getting technical support from the Avaya Web site

The easiest and most effective way to get technical support for Avaya products is from the Avaya Technical Support Web site at www.avaya.com/support.

Chapter 2
Introduction

The Avaya 2050 IP Softphone is a Voice over IP application that enables users to communicate over the LAN and WAN from their computers. This product combines the classic telephony services of Avaya IP communications servers with computer-resident directory capabilities.

The Avaya 2050 IP Softphone presents the following benefits:

- offers the rich set of telephony services of Avaya IP communications servers such as Meridian 1, Avaya CSE 1000, Business Communications Manager, Centrex, and SL-100.
- offers the “universality” of a Windows-based application
- encapsulates the operation of the IP 2004, providing all IP 2004 functionality in a familiar interface wrapper. As per the IP 2004, the Avaya 2050 IP Softphone provides:
  - Quality of Service (QoS) and authentication
  - automatic detection of call server location using DHCP
  - features and services are provided by the network (such as call features, calling line identification, and voice mail)
- reduces the set of wires required to the desktop by eliminating the need for separate computer and telephone wires
- presents an intuitive, flexible interface including:
  - slide-out trays that provide access to frequently used features and services
  - retracted trays that provide a smaller interface with full operational capabilities for a single line
  - viewable line status
  - ten item lists for quick dial and call log access from both the main and system tray interface
  - customizable interface and directories
  - multilingual interface
  - programmable macro functions for programming lengthy dialing patterns
  - hotkeys that map the computer keyboard to application buttons
- can be operated from the Windows system tray, allowing the user to take and place calls without interrupting other work
- includes a directory application that provides “one-click” direct dialing, access to a variety of directory types, quick dial lists, and incoming and outgoing call logs
- provides immediate answers to user questions through online help
- provides USB Audio Kit that has a controlled high quality audio environment. This adapter provides:
  - provides predictable, absolute audio levels
  - uses standard Windows drivers

  - — requires no additional software or drivers
  - — provides in-use lamp connector
- provides user selectable ringing device to alert the user to incoming calls through speakers when the headset is not being worn
- supports G.723, G.729 and G.711 codecs for a operation at a variety of network connection speeds

The intuitiveness of the Avaya 2050 IP Softphone interface is based on its similarity and compatibility with the ergonomics of the IP 2004 Internet Telephone and Windows-based applications. Training investment with the IP 2004 and network applications presented using the IP 2004 are directly portable to Avaya 2050 IP Softphone use.

Moreover, the Avaya 2050 IP Softphone allows users to customize the interface to their own preferences for:

- volume of speaker and microphone
- type of “receiver and speaker” (handset, headset, or hands-free communication)
- language of interface
- ringer device

The Avaya 2050 IP Softphone presents clearly identified windows to allow users to:

- manage one or more communications in progress
- access local or remote corporate directories
- track and manage records of incoming and outgoing calls
- access network resident services provided by the call server, such as voice mail

Chapter 3
Installing the Avaya 2050 IP Softphone

This section describes how to install the Avaya 2050 IP Softphone and the Avaya USB Audio Kit.

Hardware and software requirements

Minimum PC requirements

- Pentium Pro 200 MHz
- 256 MB memory
- 36 MB free hard-drive space (all languages)
- USB port
- Monitor settings: 16 bit High Color; 800x600 resolution or higher

Supported Operating Systems

- Windows XP SP3
- Windows Vista SP2 (32-bit)
- Windows 7 (32-bit)

USB Audio Kit

Operation of the Avaya 2050 IP Softphone requires the use of either a Bluetooth headset (Bluetooth Power Class 2 profiles) or the Avaya USB Audio Kit. The USB Audio Kit provides a high quality predictable audio interface that is highly optimized for telephony applications. The USB Audio kit allows the Avaya 2050 IP Softphone to have an absolute and predictable loss and level plan implementation, which is necessary to meet TIA-810, FCC part 68 and its international equivalents as well as the ADA requirements for the hearing impaired. With the USB Audio kit, the Avaya 2050 IP Softphone can achieve performance rivaling or surpassing that of hardware telephones.

The USB Audio Kit is fully-compliant with version 1.1 of the USB Device Specification and Windows Plug & Play specifications. It is fully compatible with the suspend and resume functions for effective use in battery operated laptops. It is functional on Windows XP, Windows Vista, and Windows 7. No drivers or software are required for installation.

In the box

- USB Headset Adapter
- Installation Guide (English and French)
- USB cord
- Telephony grade mon-aural headset
- Lower cordset with quick disconnect

Connectors

•RJ-9 headset/handset jack or mini jack (depending on model)

- Accessory jack for “in-use” lamp (not on all models)
- USB device jack

Specifications

- **Native Audio format**: 16 bit linear 8 KHz over USB, limited to 8 bit PCM logarithmic coding in hardware
- **OS Compatibility**: Windows XP SP3, Windows Vista SP2 (32-bit), Windows 7
- **Power Source**: USB power provided from computer
- **Enumeration**: Enumerates as USB Composite Device and USB Audio Device
- **Channels**: Mandatory control channel for enumeration, Bi-directional isochronous channel for audio
- **Electret Microphone Bias**: 3 V
- **Maximum SPL Protection**: Limited in headset
- **In-Use Lamp Connector**: Isolated contact closure - polarity insensitive

Installing the USB Audio Headset

To install the USB Audio Headset

1. If you have a two-piece headset cord, connect the coiled lower cord to the headset cord with the Quick Disconnect connector. Ensure the Quick Disconnect is securely fastened.
   If you have a one-piece headset cord, go to the next step.
2. Connect the headset cord to the RJ9 jack, or mini jack, on the adaptor.
3. Connect the USB cable to the headset adaptor and to one of the USB jacks on the back of your PC or USB hub.
4. The first time the headset adapter is plugged in, there is a delay while the Windows operating system configures the device and locates appropriate driver software. During the installation you can be prompted to supply the original Windows CD ROM so that the Windows operating system can locate drivers.

5 After you have installed the USB headset adapter, you must use the Avaya 2050 IP Softphone Configuration Utility to select 'USB Audio Device'.

USB FAQ

- My computer doesn't have USB, can I use an add-on USB card?

  The computer must have a USB connector. The USB Headset has not been tested on USB add on or upgrade cards. Performance or operation is not guaranteed of these cards.

- I don't have enough USB ports available, can I use a USB hub?

  The USB Headset has been tested successfully behind a variety of USB hubs. It is not practical to test on all, but no issues have been uncovered on the ones that have been tested. For best results, use powered hubs.

Optional In-Use indicator (not provided with kit)

A 2.5mm output jack is provided next to the USB connector for activation of a visual in-use indicator such as the 1127P Desktop Visual Alerter (Algo Communication Products Ltd.)

Note: Not all models of the USB Headset Adapter have the In-Use Indicator output jack.

Installing the Avaya 2050 IP Softphone

Note: If you have previously installed a version of the Avaya 2050 IP Softphone, you must uninstall the old version (through Add/Remove Programs) before installing this version.

Note: Install the Avaya USB Audio Kit before installing the Avaya 2050 IP Softphone. By doing this, you are presented with the option of using the USB Audio Device during installation of the Avaya 2050 IP Softphone.

The Avaya 2050 IP Softphone can be installed running the installation wizard from the Avaya 2050 IP Softphone CD.

You can use Active Directory to perform the remote installation of the Avaya 2050 IP Softphone client (versions 3.1 and later). For more information on how to remotely install the Avaya IP Softphone 2050, see *Communication Server 1000 IP Phones Fundamentals* (NN43001-368).

To install using the Avaya 2050 IP Softphone CD

1. Exit any programs that are running.
2. Disable any anti-virus programs that are running.
3. Insert the Avaya 2050 IP Softphone CD into the CD-ROM drive of your computer.
   If the install wizard starts, go to step 6. If the install wizard does not start, go to step 4.
4. Double-click the **My Computer** icon, and then double-click the **CD** icon.
5. Double-click the **Setup** icon.
6. Follow the instructions on the display to complete the installation.
7. Run the **Avaya 2050 IP Softphone Configuration Tool** to assign a server address and to configure audio peripherals.

You can access the Avaya 2050 IP Softphone from the Start menu at **Start > Programs > Avaya > 2050 IP Softphone**.

You can access the **Avaya 2050 IP Softphone Configuration Tool** from the Windows Control Panel.

Server configuration

After you have finished installing the Avaya 2050 IP Softphone, you must configure the server to recognize and accept calls to and from the Avaya 2050 IP Softphone. For information about how to configure your server, refer to the documentation that came with your server.

Avaya 2050 IP Softphone Configuration Utility

You configure the Avaya 2050 IP Softphone using the settings dialog box.

To start the configuration utility using the Control Panel

- Click **Start > Control Panel > Avaya 2050 IP Softphone.**

To start the configuration utility using the Start menu

- Click the **Start** > **All Programs** > **Avaya > Avaya 2050 IP Softphone** > **Avaya 2050 IP Softphone Settings**.

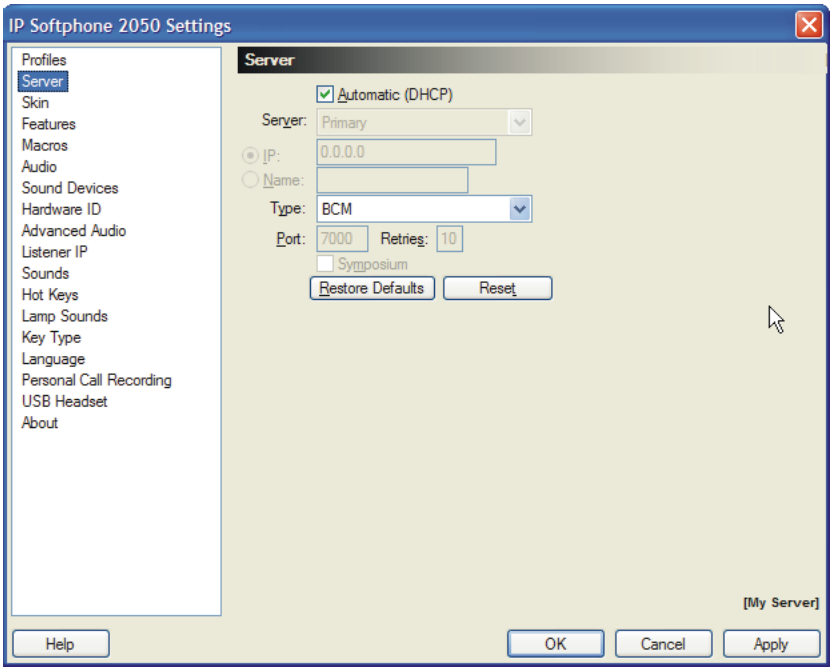
To start the configuration utility within the application

- Click **File > Settings.**

The Avaya 2050 IP Softphone Settings utility has tabs for

- Server
- Sound Devices
- USB Headset Adapter
- Additional tabs for system administrators

Server



If your site uses DHCP:

1 Select the **Automatic (DHCP)** option.

Using DHCP is the default method of locating the call server.
If DHCP is used, no further configuration is required.

Note: To use DHCP, you need a DHCP server with call server IP address values programmed as per the IP 2004.

Note: Using DHCP may not be appropriate for mobile users. These users commonly want to connect to their office communications server rather than the local office server.

If you are not using DHCP:

1 Clear the **Automatic (DHCP)** option.

2 Select the Server type you wish to configure: **Primary**, **Secondary** or **Application.**

3 Enter the **IP** address of the server.
Or
Enter the **Name** of the server.
If you do not know the server name or IP address and port number, ask your call server administrator.

4 Select the Server Type: **Meridian 1**, **CS 1000**, **BCM**, or **CS1000M**.
For example, select **BCM** if you are using an Avaya Business Communications Manager system.

5 Enter the **Port** number.

6 Enter the number of **Retries**.
If the initial connection fails, the 2050 will attempt to re-connect the number of times indicated by Retries

7 Select the **Symposium** check box to cause the 2050 to report itself as off-hook to the call server.
For Symposium Call Center users, the 2050 must indicate that it is off hook to be recognized as a Symposium agent device. ACD agents also must select the Symposium option

Sound Devices

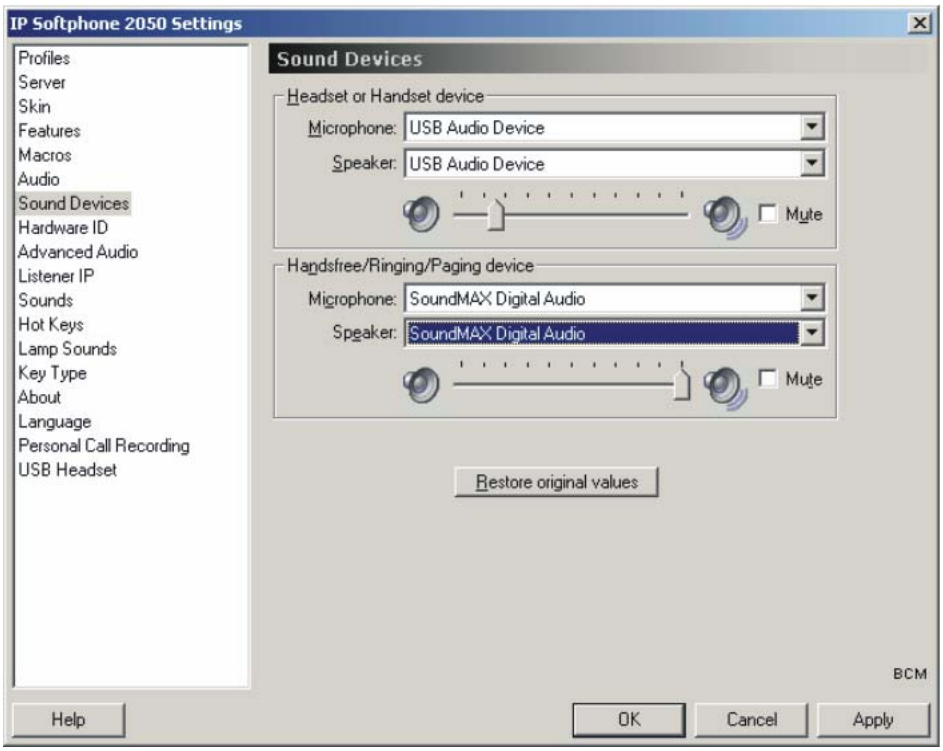


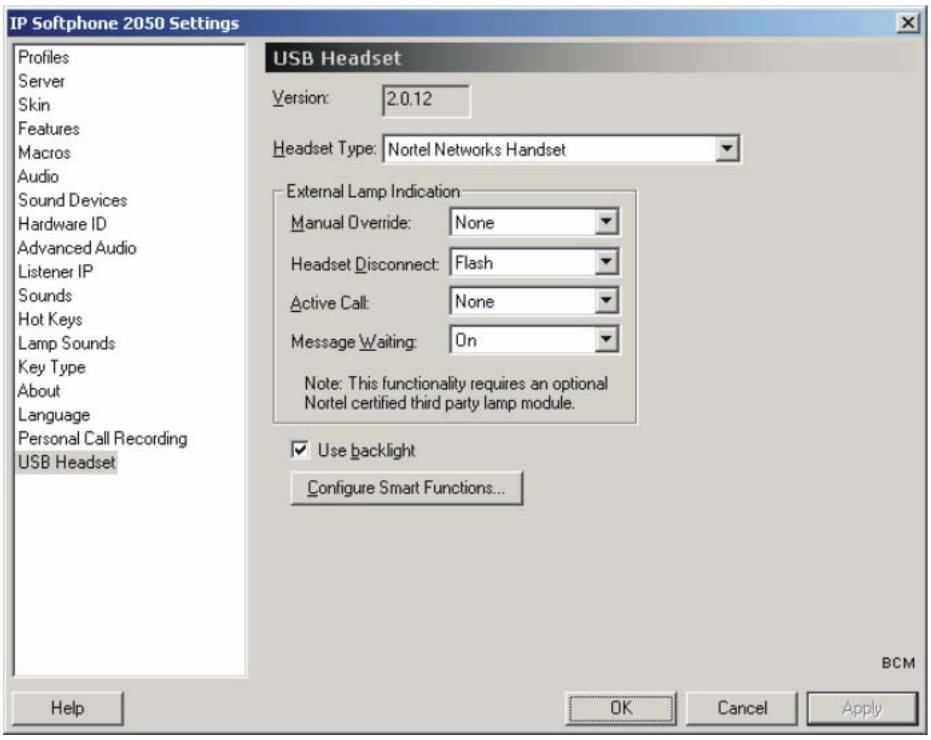
Table 1 Select Sound Devices

Attribute	Description
Headset or Handset Microphone	Select the microphone used for making calls. Select **USB Audio Device**.
Headset or Handset Speaker	Select the speaker used for making calls. Select **USB Audio Device**.

Table 1 Select Sound Devices (Continued)

Attribute	Description
Handsfree/ Paging/Ringing Microphone	This is the microphone which is used when the handsfree device is selected in the interface. This selection normally should match the Avaya USB Audio Kit which enumerates as a USB Audio Device
Handsfree/ Paging/Ringing Speaker	This is the speaker which is used when the handset free device is selected in the interface. It is also the speaker which is used to play ring tone and the device pages are directed. This selection normally should match the PC's speakers. This allows ring tone and pages to be heard over the PC speakers rather than on the headset

USB Headset Adapter



Use this screen to configure your USB Headset Adapter.

Note: You must select the Headset Type to ensure optimal headset performance.

Table 2 USB Headset Adapter

Attribute	Description
Version	Shows the version of the USB Headset Adapter. **Note**: If the USB Headset Adapter is not recognized or has a version number lower than 2.0, the other features in this table are grayed out and unavailable.

Table 2 USB Headset Adapter (Continued)

Attribute	Description
Headset Type	Select the type of headset that you have connected to the USB Headset Adapter. Due to differences in headset construction, you may not get optimal audio performance when using a headset that does not appear on the list. For optimal performance, always use one of the headsets that appears on the Headset Type drop list.
Manual Override	Select one of the available cadences to enable the Manual Override feature. For a description of the available cadences, refer to Table 3 on page 18. When Manual Override is enabled, you can manually turn on the external lamp using the Avaya 2050 IP Softphone Smart Functions button on the USB Headset Adapter. For more information about the Avaya 2050 IP Softphone Smart Functions button, refer to the Avaya 2050 IP Softphone Help. Select **None** to disable the Manual Override feature.
Headset Disconnect	Select one of the available cadences if you want the external lamp to indicate when the headset is disconnected from the USB Headset Adapter. For a description of the available cadences, refer to Table 3 on page 18. Select **None** if you do not want the external lamp to indicate when the headset is disconnected.
Active Call	Select one of the available cadences if you want the external lamp to indicate when there is an active call on the Avaya 2050 IP Softphone. For a description of the available cadences, refer to Table 3 on page 18. If the USB Headset Adapter is selected as the Ringing Speaker, the external lamp also indicates when there is a call ringing on the Avaya 2050 IP Softphone. For information about setting the ringing device, refer to "Sound Devices" on page 15. Select **None** if you do not want the external lamp to indicate when there is an active call. **Note**: If you select a cadence for Active Call, the external lamp also turns on or flashes when another application uses the audio channel for the USB Headset Adapter.
Message Waiting	Select one of the available cadences if you want the external lamp to indicate when the Avaya 2050 IP Softphone message waiting light is on. For a description of the available cadences, refer to Table 3 on page 18. The Avaya 2050 IP Softphone message waiting light normally indicates when there is a message waiting. However, most systems also turn on or flash the message waiting light when the Avaya 2050 IP Softphone is ringing. Select **None** if you do not want the external lamp to indicate when the message waiting light is on.
Use backlight	Select this check box to enable the backlight for the USB Headset Adapter buttons. Clear this check box to disable the backlight for the USB Headset Adapter buttons. **Note**: When you enable the backlight, you can use the state of the backlight to quickly determine if the Avaya 2050 IP Softphone is running. When the backlight is on, the Avaya 2050 IP Softphone is running. When the backlight is off, the Avaya 2050 IP Softphone is not running.
Configure Smart Functions	Click this button to set the options that are available when you press the Smart Functions button on the USB Headset Adapter. For more information about the Smart Functions button, refer to the Avaya 2050 IP Softphone Help.



Note: The External Lamp is an optional component. It normally is not included with the USB Headset Adapter, and must be ordered separately. The external lamp also is known as an "In-Use Indicator" lamp.

If more than one External Lamp Indication option is enabled and active, the external lamp shows the cadence of the option with highest precedence. The precedence of the External Lamp Indication options from highest to lowest is: Manual Override, Headset Disconnect, Active Call, and then Message Waiting. For example, if there is a message waiting and an active call, the cadence for Active Call is used for the external lamp.

Table 3 External Lamp Cadences

Cadence	Description
On	The external lamp is on-solid.
Flash	The external lamp cycles at the following rate: 0.5 seconds on; 0.5 seconds off.
Flicker	The external lamp cycles at the following rate: 1.625 seconds on; 0.375 seconds off.
Blink	The external lamp cycles at the following rate: 0.5 seconds on; 1.5 seconds off.

Hardware ID

Note: This screen is intended for expert users only.

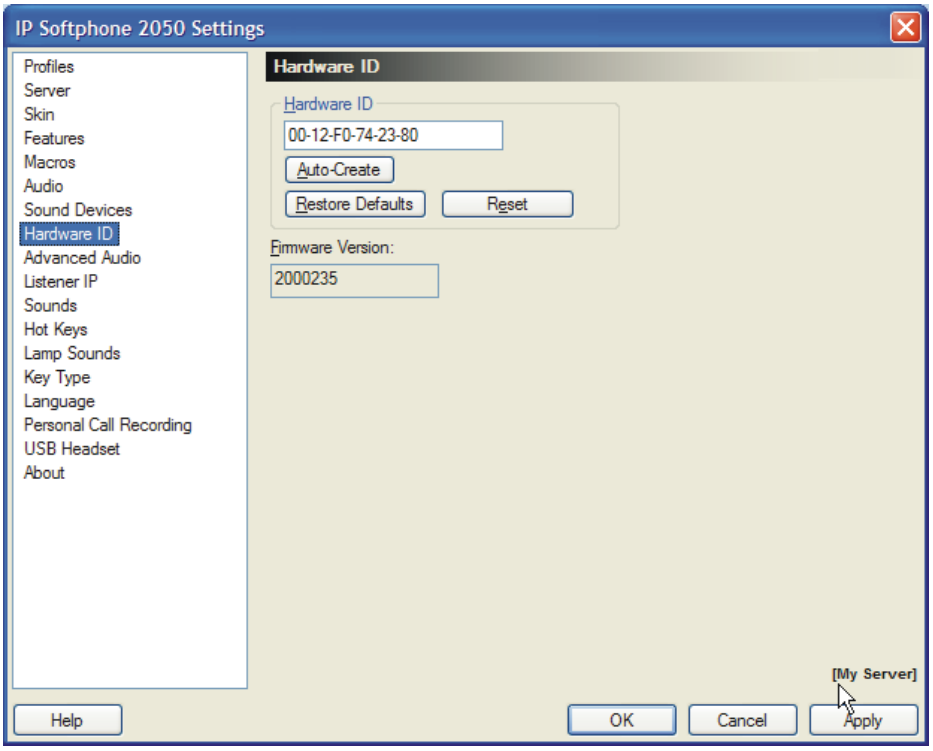
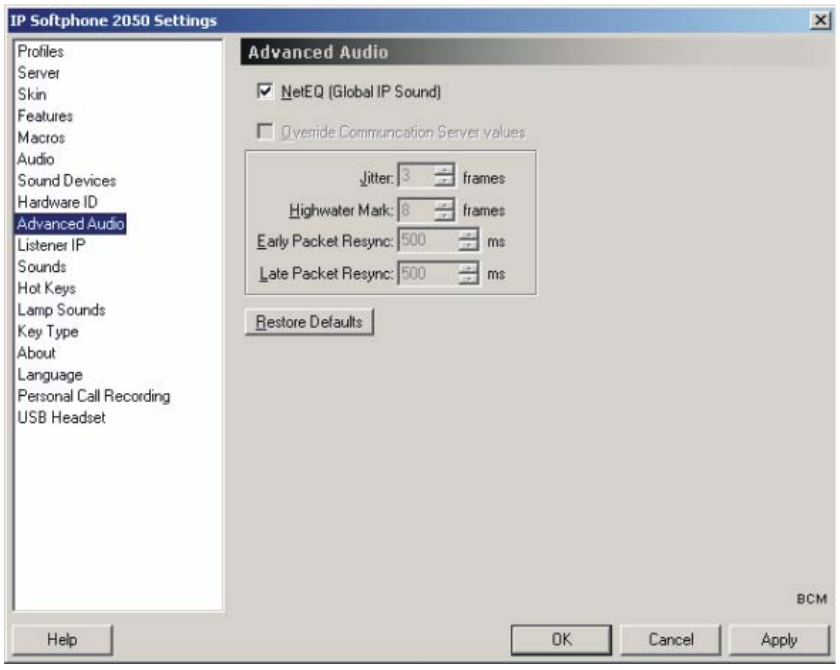


Table 4 Hardware ID

Attribute	Description
Hardware ID	Do not change the information in the first or last box in the Hardware ID field. The middle box contains the MAC address for the Ethernet card installed in your computer. The Avaya 2050 IP Softphone uses the MAC address of the computer as its hardware ID. You may have to change this value if there is more than one Ethernet card in the PC or if the PC is using an extranet client that hides the true MAC address. For example, Avaya Contivity Extranet Switch uses a single MAC address for all clients. This can potentially cause connection issues with your communications server.
Auto-Create	Changes the MAC address that appears in the middle Hardware ID box. If your computer has more than one Ethernet card (and, therefore, more than one MAC address), click the **Auto-Create** button to cycle through the set of MAC addresses on your computer.
Firmware Version	Shows the software version of the Avaya 2050 IP Softphone.

Advanced Audio

Note: This screen is intended for expert users only.



You can use this screen to override the communications server defined values.

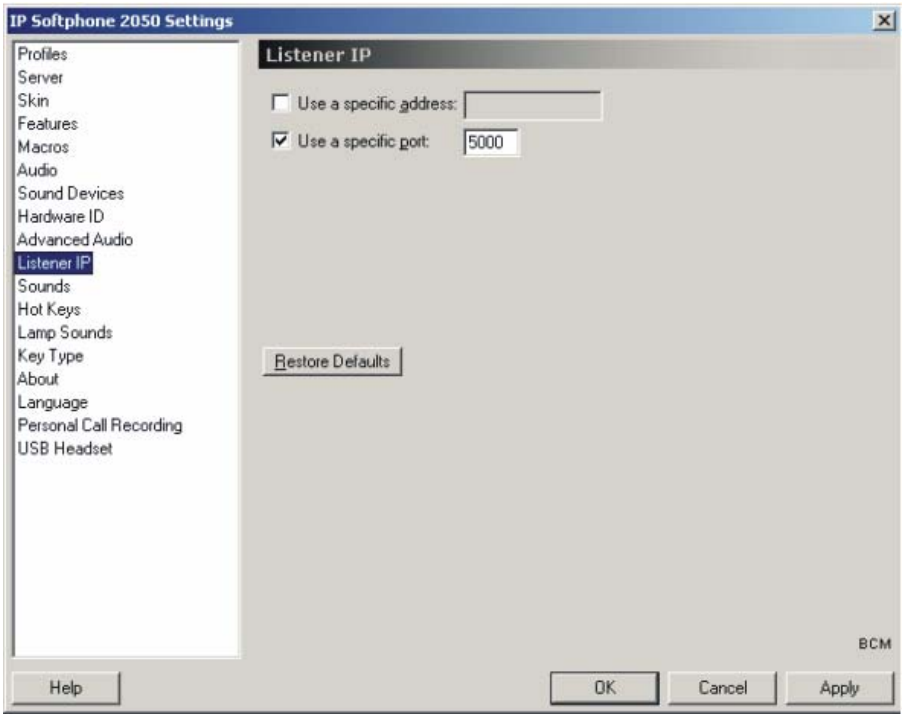
Note: Changing the values on this screen should be considered a last resort if audio quality issues are encountered.

Table 5 Advanced Audio

Attribute	Description
Use Communication Server values	The Avaya 2050 IP Softphone uses the values assigned by the communications server. This is the normal mode of operation.
Override Communication Server Values	In very rare cases where audio quality is adversely affected by network performance for a few users, these values can achieve a workable balance of quality.

Listener IP

Note: This screen is intended for expert users only.

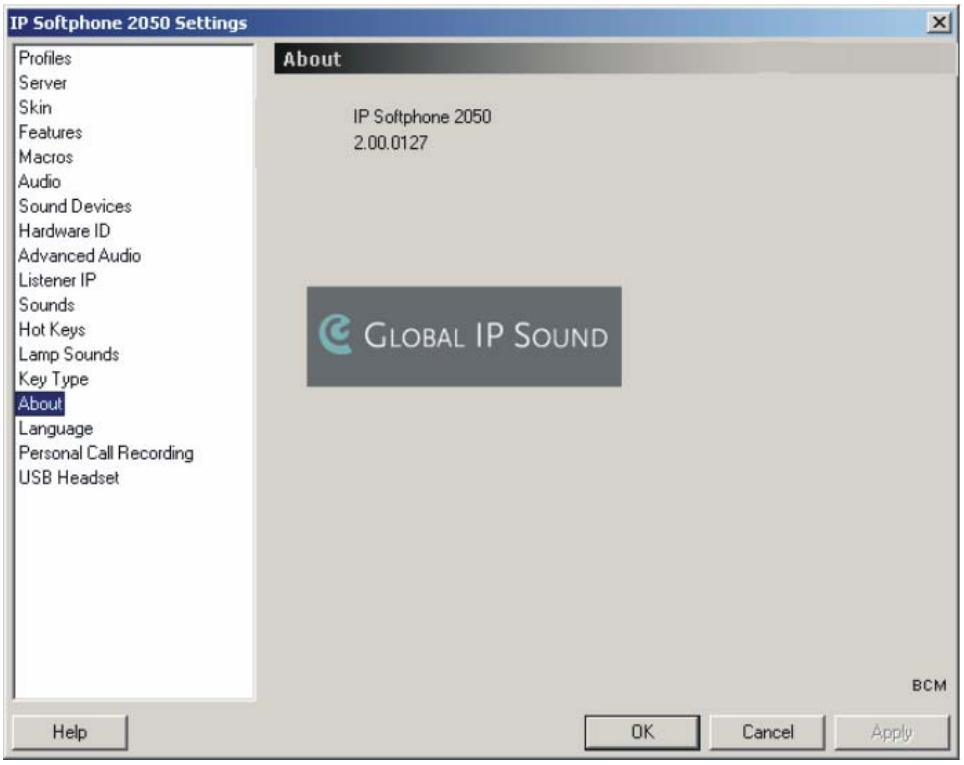


This screen identifies the IP addresses and ports where the Avaya 2050 IP Softphone is listening for UNIStim traffic. You can use this screen to override the port assignments when there is a conflicting application on the computer.

Table 6 Listener IP

Attribute	Description
Use specific address	Using a specific address can be useful in cases where there is more than one Ethernet card, and an application conflict exists.
Port	This value can require adjustment if another application on the computer is using the same port. The two applications can co-exist by moving the port or IP address to which the Avaya 2050 IP Softphone is listening.

About



This screen identifies the version of the Avaya 2050 IP Softphone Configuration Utility. This always matches the version of the Avaya 2050 IP Softphone application.

Accessing the Avaya 2050 IP Softphone help

After you have successfully installed the Avaya 2050 IP Softphone, you can access the Avaya 2050 IP Softphone help system. This help system provides detailed information about how to use and configure the Avaya 2050 IP Softphone.

To access the Avaya 2050 IP Softphone help from the Primary interface (Enhanced):

1. Start the Avaya 2050 IP Softphone.
2. On the menu bar, click **Help**.
3. Click **Contents**.
   The Avaya 2050 IP Softphone help window appears.

Registering the Avaya 2050 IP Softphone on Avaya BCM

If you are using a Avaya BCM as your communications server, the first time you start the Avaya 2050 IP Softphone, you must register with the Avaya BCM system.

To register your Avaya 2050 IP Softphone on a Avaya BCM system

1. Start the Avaya 2050 IP Softphone.
2. If a password prompt appears on the Avaya 2050 IP Softphone display, enter the registration password and press the **OK** soft key.
   If you do not know the registration password, contact your system administrator.
3. If a DN prompt appears on the Avaya 2050 IP Softphone display, enter the DN you want assigned to this telephone, and press the **OK** soft key.

After the registration is complete, you do not need to go through the registration steps described above, unless you deregister the terminal.

If the Avaya 2050 IP Softphone cannot register, or cannot find the communications server, refer to the *Avaya Business Communications Manager Installation — Devices* (NN40170-304) for more information about registering and deregistering IP telephones. For more information about troubleshooting the licensing server, see *Avaya Communication Server 1000 — IP Phones Fundamentals* (NN43001-368).

Licensing

Each Avaya 2050 IP Softphone requires a keycode license seat on the BCM. Additionally, the 2050 IP Softphone itself should be licensed.You can license the Avaya 2050 IP Softphone in one of the following ways:

- Node-locked licensing
- Licensing using the BCM HTTP server
- Downloading and installing the licensing server

Node-locked licensing

The IP Softphone 2050 Release 4.0 supports the node-locked license solution, which allows a license to be associated with a specific instance of the application based on the Hardware ID or the Media Access Control (MAC) address of the network interface where the client is installed. This solution eliminates the need for a license server to be located on the network. The embedded server of the phone uses the locally stored license file to obtain the number of tokens required to activate the features. The license file is generated by the KRS and is loaded to the phone using the provisioning mechanism. The license file contains the following types of tokens:

- SRS (Standard) tokens — valid when either the client firmware build date or the warranty date are less then the contract date specified with the token
- expiry-based keycode — expires based on an expiry date associated with the keycode

The licensing feature controls access to the call server. The 2050 IP Softphone validates the stored license file.

You must first register your IP Softphone before you can generate a license file and download it to the phone.



Note: Ensure the appropriate configuration file (.cfg) created and uploaded to the TFTP server. The configuration file is required to specify the license file type that can be downloaded to the phone.

For more information on registering IP phones, see *Avaya Business Communications Manager 6.0 Installation — Devices* (NN40170-304).

Application of the license using the node-locked method consists of the following steps:

1. Install the Avaya 2050 IP Softphone on a PC.
2. Obtain the Avaya 2050 IP Softphone hardware ID (see "Hardware ID" on page 18). Your keycode supplier needs this information.
3. Obtain the license files from your keycode supplier.
4. Place the .license files in the default location of a TFTP server.
5. Set the TFTP server address in the i2050 Provisioning Server IP Address field.
6. Restart the Avaya 2050 IP Softphone.

   The Avaya 2050 IP Softphone searches for the .cfg and keycode information and installs the license, allowing the Avaya 2050 IP Softphone to connect to the BCM.

For more information about configuring node-locked licensing, see *Avaya Communication Server 1000 — IP Phones Fundamentals* (NN43001-368), which is available at www.avaya.com/support under Avaya Communications Server 1000.

Licensing using the BCM HTTP server

The simplest method of licensing an Avaya 2050 IP Softphone is through the BCM HTTP licensing server. License files are served from the BCM to the Avaya 2050 IP Softphone, unlocking the softphone and enabling full functionality. License files are specific to each installation of the Avaya 2050 IP Softphone.

Using this licensing method, you must generate a license for each Avaya 2050 IP Softphone that you install. The Avaya 2050 IP Softphone must be installed on a PC and you must obtain the required licensing files from your keycode supplied before you start this procedure.

Licensing using the BCM HTTP server is part of node-locked licensing methods. The Avaya 2050 IP Softphone uses two types of licensing methods: server-based licensing and node-locked licensing. Node-locked licensing can be applied to the Avaya 2050 IP Softphone by licensing using the BCM HTTP server.



Note: The BCM HTTP licensing server is only supported on BCM 6.0 platforms.

1. In the Business Element Manager Configuration tab, navigate to **Resources > Telephony Resources**.
2. In the Configured Device column of the Telephony Resources table, select **IP Sets**.

   The Details for Module panel appears below the Telephony Resources table.
3. In the IP Terminal Global Settings tab of the Details area, click **Upload**.

   The Import Files dialog appears.
4. In the Import files window, click **Browse** to locate the licensing files obtained from your keycode supplier.
5. Select all the i2050 licensing files obtained from your keycode supplier.
6. Click **Select files**.
7. Click **OK.**

   The files upload to the BCM and appear in the IP clients configuration files area.
8. Configure the Avaya 2050 IP Softphone to search for the files on the BCM. In the 2050 IP Softphone Settings window, click **Server**.
9. In the Provisioning Server field of the Server panel, ensure the Protocol is set to HTTP and that the URL field contains the location of the BCM.
10. Click **OK**.

    You can now register the phone.

Downloading and installing the licensing server

The License Server Manager and the vendor daemon make up the License Server system. The License Server Manager is the main point of contact for Avaya 2050 IP Softphone Clients, which require license certificates. This method does not require a license to be generated for each Avaya 2050 IP Softphone on the KRS. Instead, a number of seats can be purchased and applied to the Licensing Server, which then controls the number of Avaya 2050 IP Softphone installations that can connect to the BCM.

If an Avaya 2050 IP Softphone is licensed via the Licensing Server method, the Avaya 2050 IP Softphone uses a heartbeat mechanism to validate the license every two minutes. If the heartbeat is lost, that is, if the Avaya 2050 IP Softphone cannot connect to the server, the Avaya 2050 IP Softphone tries to reconnect five more times. If the connection cannot be re-established, then the Avaya 2050 IP Softphone loses its licence and its connection to the BCM. The PC on which the Licensing Server is installed must be available at all times.

You can install the license server components on any machine (PC) running other applications, which runs one of the following operating systems:

- Microsoft Windows XP
- Microsoft Windows 2003 Server
- Microsoft Windows Vista
- Microsoft Windows 7
- Microsoft Windows Server 2008

The Licensing Server requires ports 27000 and 27001 to be accessible.

You can modify the TCP/IP port number of the License Server Manager (lmgrd) in the SERVER line. The SERVER line specifies the host name and host ID of the license server system and the TCP/IP port number of the License Server Manager.

The format of the SERVER line is **SERVER host hostid [port]**.

Table 7 SERVER line elements

Field	Description
host	The system host name or IP address.
hostid	The host ID generated by the Get Host ID command. KRS requires the host ID in order to provision the server system with valid licenses.
port	TCP/IP port number to use. A valid number is any used number between 0 and 64000. If you do not specify a TCP/IP port number, on of the default ports (27000-27009) is used.

You can use one of the following options to start the License Server Manager:

- manual server
- configure as a service

If the server is run as "manual server" a console window appears on the desktop, which displays the output of both the lmgrd.exe and nortelip.exe processes.

You can select one of the following options from **Start > All Programs > Avaya > 2050 IP Softphone Licensing Server > Manual Server**:

- Restart Licensing Server
- Shut Down Licensing Server
- Start Up Licensing Server

If the server is run as “server service” the server can supply licenses even when you are not logged on to the computer. You can observe the status of the service in the Windows Services administrative tool. The output of the lmgrd.exe and nortelip.exe processes writes to a log file called “ServiceLog.log” in the installation path of the licensing server.

You can select one of the following options from **Start > All Programs > Avaya > 2050 IP Softphone Licensing Server > Server Service**:

- Install Licensing Server as a Service
- Uninstall Licensing Server Service
- Restart Licensing Server Service

License server components

The License Server includes the following components:

- vendor daemon–service which provides license rights to 2050 IP Softphone clients (nortelIP.exe)
- License Server Manager (lmgrd.exe)
- FLEXnet Licensing Administration Tools
  - — command line tools available with the installer
  - — lmtools.exe–graphical user interface (GUI) for license server management

For FLEXnet Licensing and license management provided by Macrovision, go to www.macrovision.com.

To download the license server software

1. Go to www.avaya.com/support.
2. Select “Phones, Clients & Accessories”
3. Select “2050 IP Softphone” on the 2050 IP Softphone page.
4. Select “Major Release”
5. Select “2050 IP Softphone Release 4.0”.
6. Select “setup_server.exe”.

To install the license server software

1. On your license server PC, double-click the **setup_server.exe** file.

   The **Welcome** screen appears.

2 Click **Next**.

3 If you agree with the terms of the License Agreement, select the appropriate option and click **Next**.

The Installshield Wizard appears.

4 Click **Next.**

5 Choose the installation path of the target directory for the license server component files.

A confirmation window appears.

6 Click **Next**. A progress bar appears to show the progress of the installation.

7 After the installation completes, select **Install as a service** if you want to install the license server as a Windows Service.

8 Click **Finish** to complete the installation.

Obtaining a valid license

For more information about obtaining a valid license, see http://www.avaya.com/support.

To verify user licenses

1 Select **Run...** from the start menu.

2 enter **cmd** in the Run... window.

3 Click **OK**. A command prompt window appears.

4 From the command prompt, go to the license server software directory, for example, C:\Program Files\Avaya\2050 IP Softphone Licensing Server.

5 At the prompt, enter **lmstat -A**.

The number of user licenses and the number of licenses in use are displayed.

Chapter 4
Avaya 2050 IP Softphone interfaces

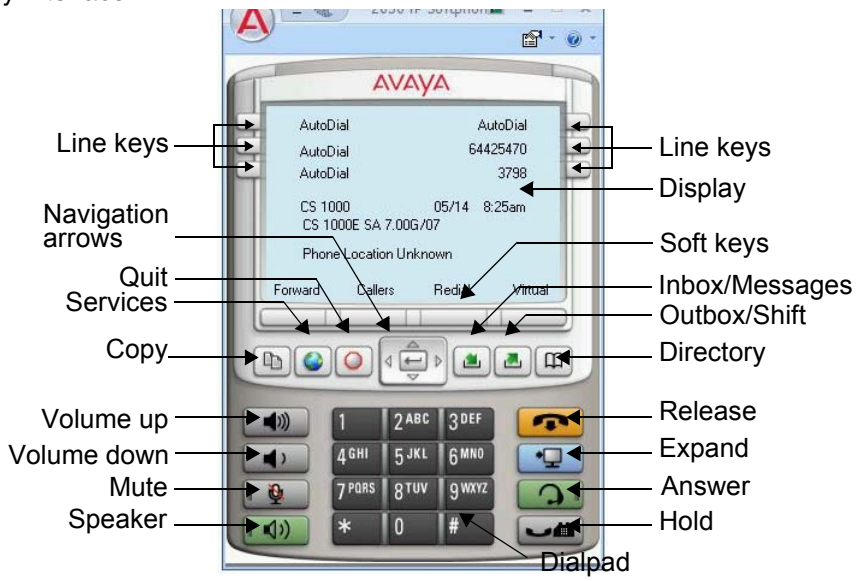
This chapter describes the following Avaya 2050 IP Softphone interfaces:

- Primary User Interface, which provides access to features and line appearances
- System Tray Interface, which provides operation of the Avaya 2050 IP Softphone from the Windows system tray
- Directory Interface, which offers access to internal and external databases (directory, personal address book, call logbook, quick dial lists)
- Enhanced Accessibility Interface, which organizes interface elements into intuitive categories with customizable fonts and icons for users with disabilities.

Primary User Interface

The Avaya 2050 IP Softphone Primary User Interface provides call control and access to other network services. The display area and application buttons are mapped directly from the IP 2004 Internet Telephone. Therefore, knowledge of one interface is directly portable to the other, reducing training costs.

Figure 1 Primary Interface



Within the Primary User Interface, the computer keyboard provides hotkeys for one-press access to common features:

- answer (Enter)
- release (F12)
- hold (F5)

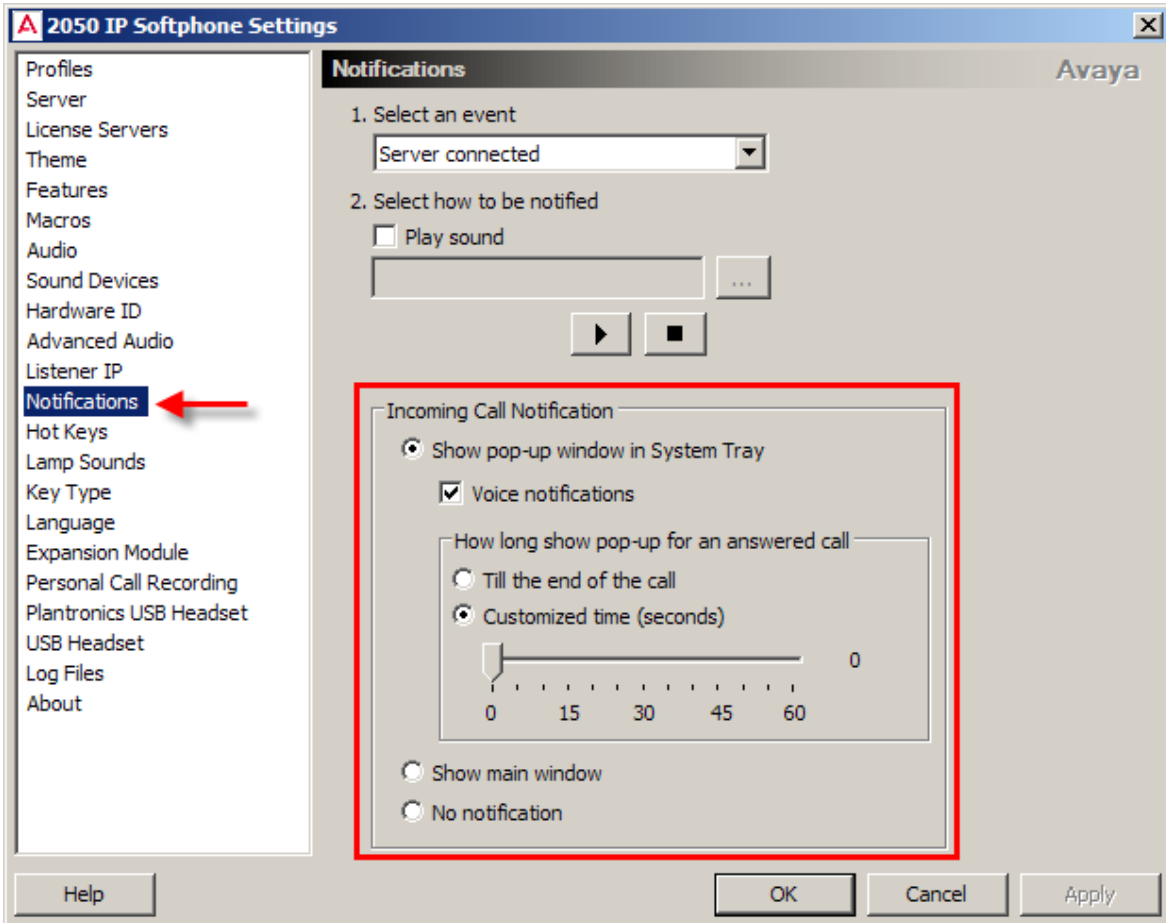
- softkeys/interactive keys (F1-F4)
- alphabetic keys map to numbers as per IP 2004 dialpad mapping
- arrow keys map to navigation keys
- Alt-V paste/inserts data to the interface (For example, you can copy a phone number from Outlook, and paste it into the Avaya 2050 IP Softphone interface.)

Incoming and disconnected call pop-up notifications

BCM 6.0 supports both incoming call pop-up notification and call disconnect pop-up notification on the Avaya 2050 IP Softphone (version 4.0 only). This feature is especially useful if the Avaya 2050 IP Softphone is minimized or operational in the System Tray.

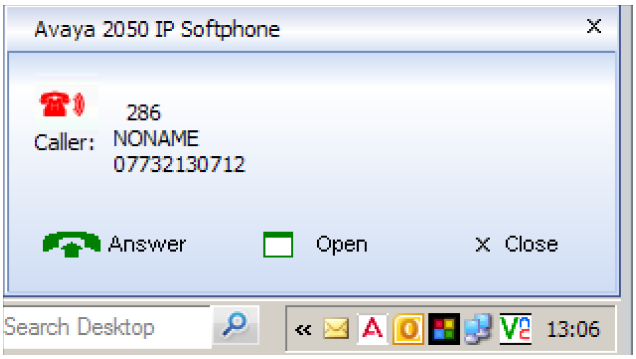
Incoming call pop-up notification identifies the call by its DN, Calling Part Name, and Calling Party Number. When either party (caller or receiver) disconnects either an incoming or outgoing call, the Avaya 2050 IP Softphone displays a disconnect call pop-up notification identifying only its own DN. The pop-up window behaviour is determined in the Notifications area of the Avaya 2050 IP Softphone Settings options.

Figure 2 Call pop-up notification configuration settings



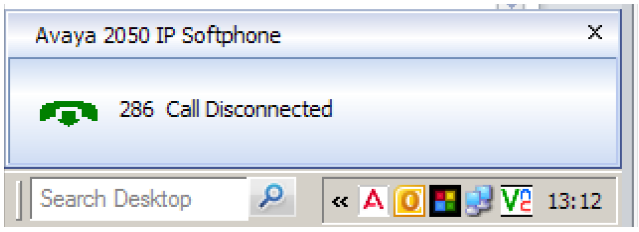
Incoming calls generate a call pop-up window in the lower right corner of the windows desktop. Users can answer a call from the pop-up window, or can launch the Avaya 2050 IP Softphone by clicking the Open button.

Figure 3 Incoming call pop-up notification on desktop



When the call is ended by either party, the Call Disconnected display appears. This pop-up window appears if the Avaya 2050 IP Softphone is minimized or operating in the System Tray.

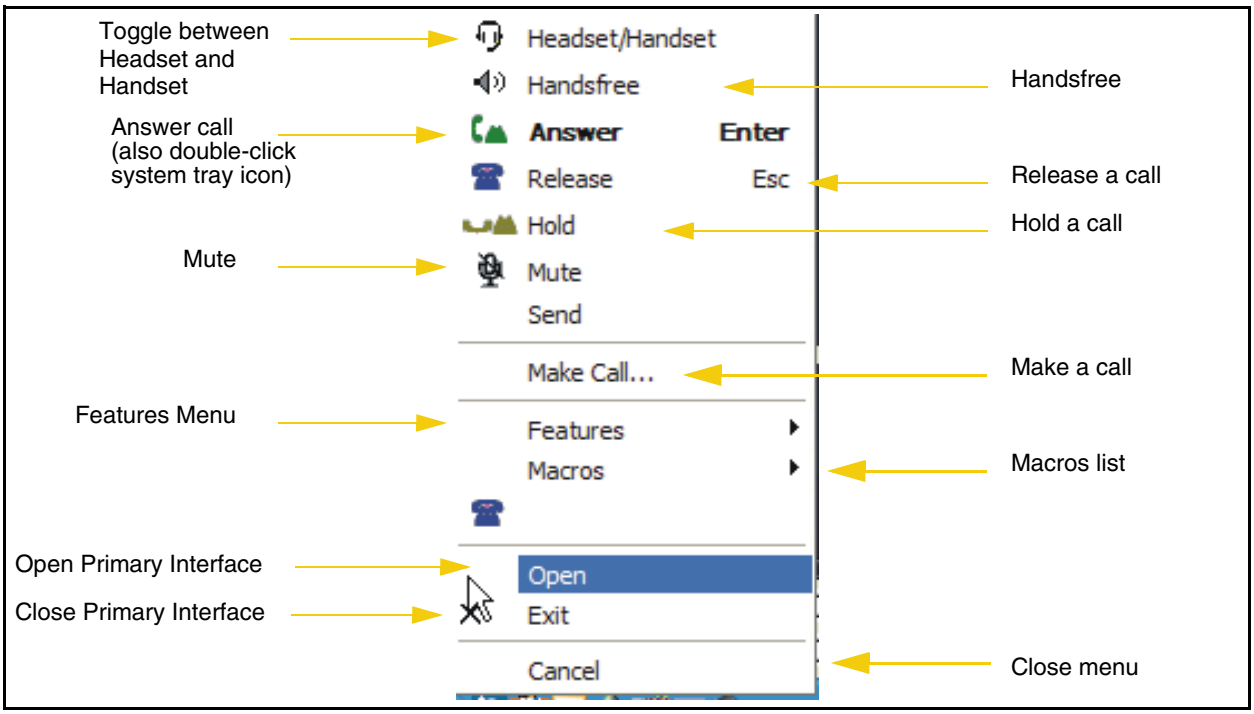
Figure 4 Disconnected call pop-up notification on desktop



System Tray Interface

Many of the Avaya 2050 IP Softphone features are available from the System Tray Interface. This interface enables you to operate the Avaya 2050 IP Softphone without interrupting your workflow. For example, you can answer an incoming call from the system tray without launching the Primary User Interface.

Figure 5 System Tray Interface



Easy access to the Directory, Inbox, and Services is provided by fly-out menus.

Local Directory Interface

The Avaya 2050 IP Softphone Directory Interface allows the user to maintain a personal directory for placing calls. The directory can be stored with the Avaya 2050 IP Softphone itself (by default in a local file named Directory.mdb), or linked to external directories. Linking to LDAP, Outlook, Windows Address Book (WAB), and ACT! directory types is supported.

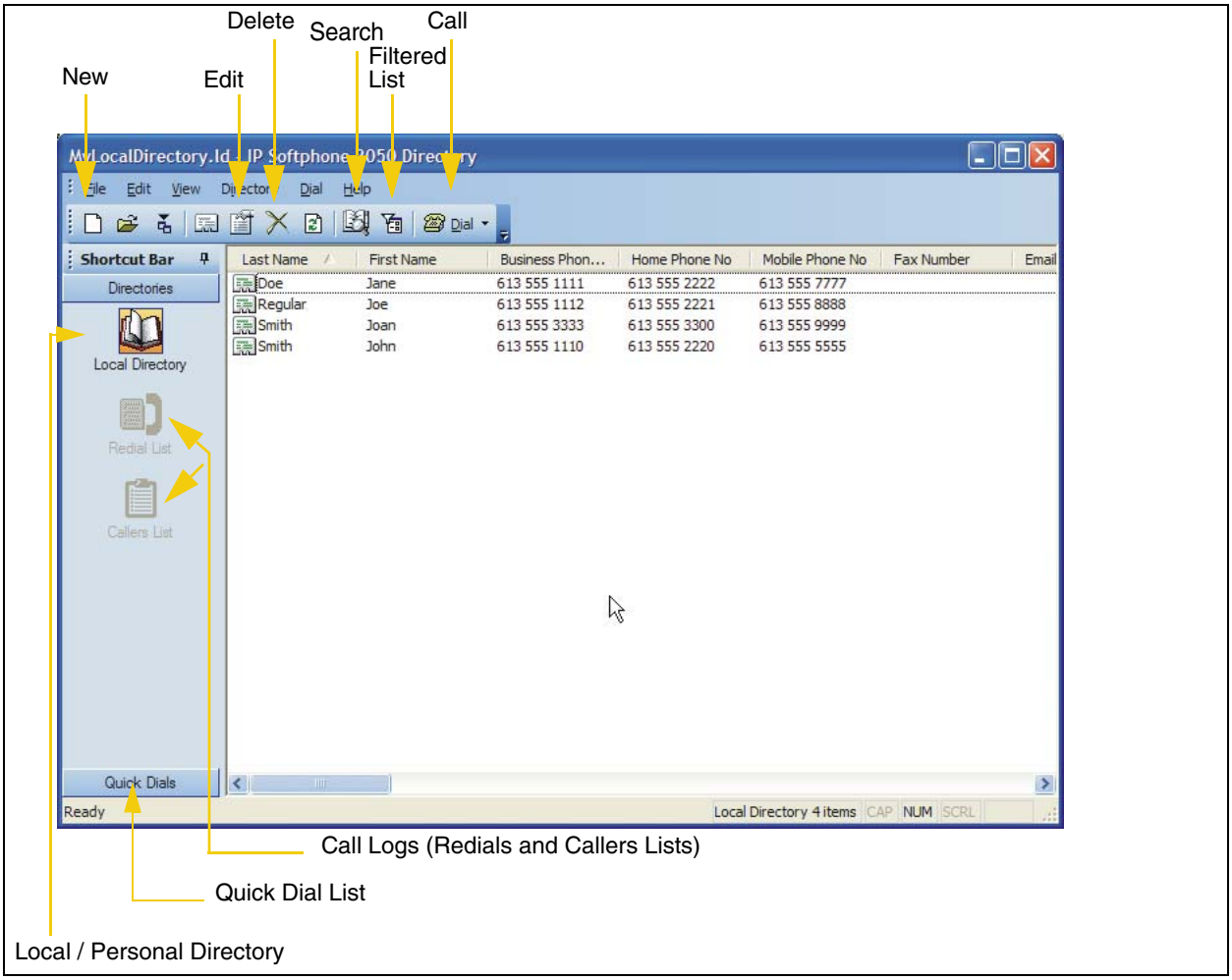
Users can create, modify, and delete entries in the local directory, and can copy entries from external directories, the redial list and the caller lists into the local directory (select an entry, right-click and select “Add to Local Directory …”).

Directory lists can be filtered in simple or complex ways to show, for example, people whose last name starts with “B” and who work for “Avaya”.

Ten items from each of the Quick Dial list, Caller list ad Redial list also viewable from the Primary User Interface and the System Tray Interface.

The Quick Dial list is a shortcut to entries stored elsewhere (in the local directory or in an external directory). Callers list and Redial list are stored as lists within the directory storage file of the Avaya 2050 IP Softphone. Some communications servers do not provide caller identification to the Avaya 2050 IP Softphone.

Figure 6 Directory interface



Calls can be made by selecting a contact entry, and then:

- right-clicking and selecting which of the contact numbers to call.

  or

- pressing the call function at the top of the directory window.

Figure 7 Directory interface - make a call

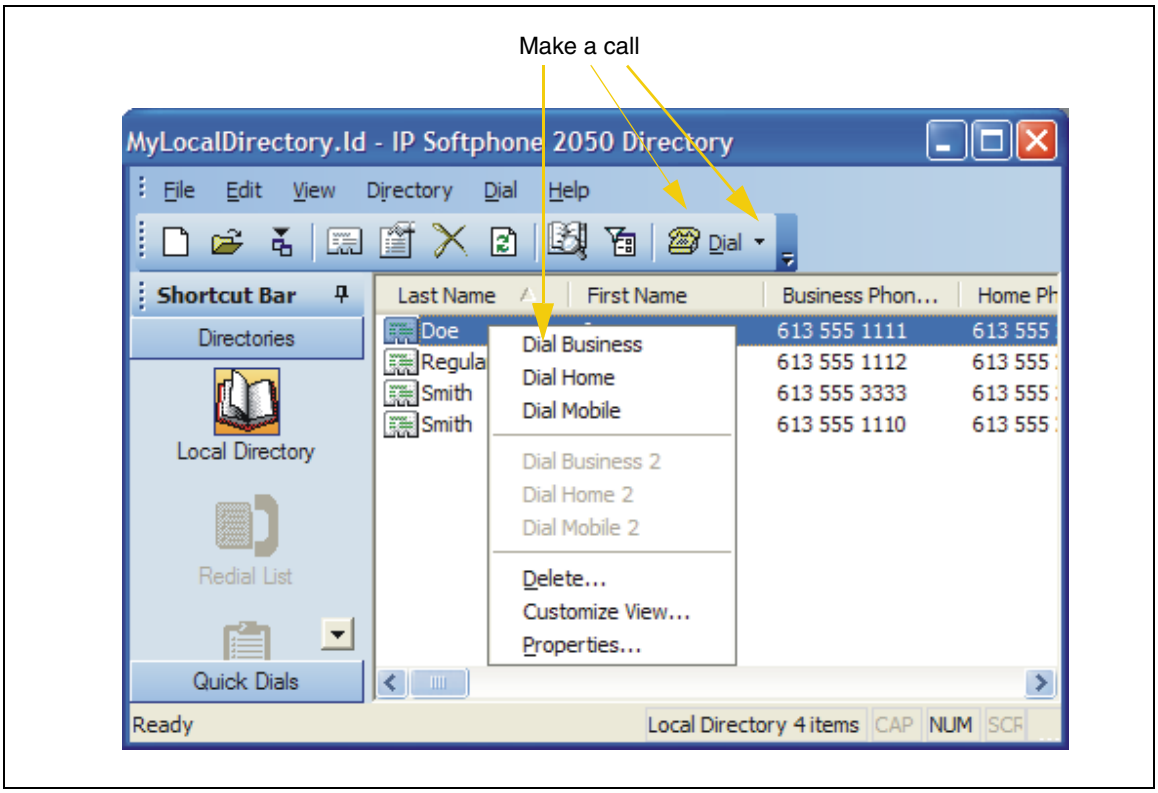
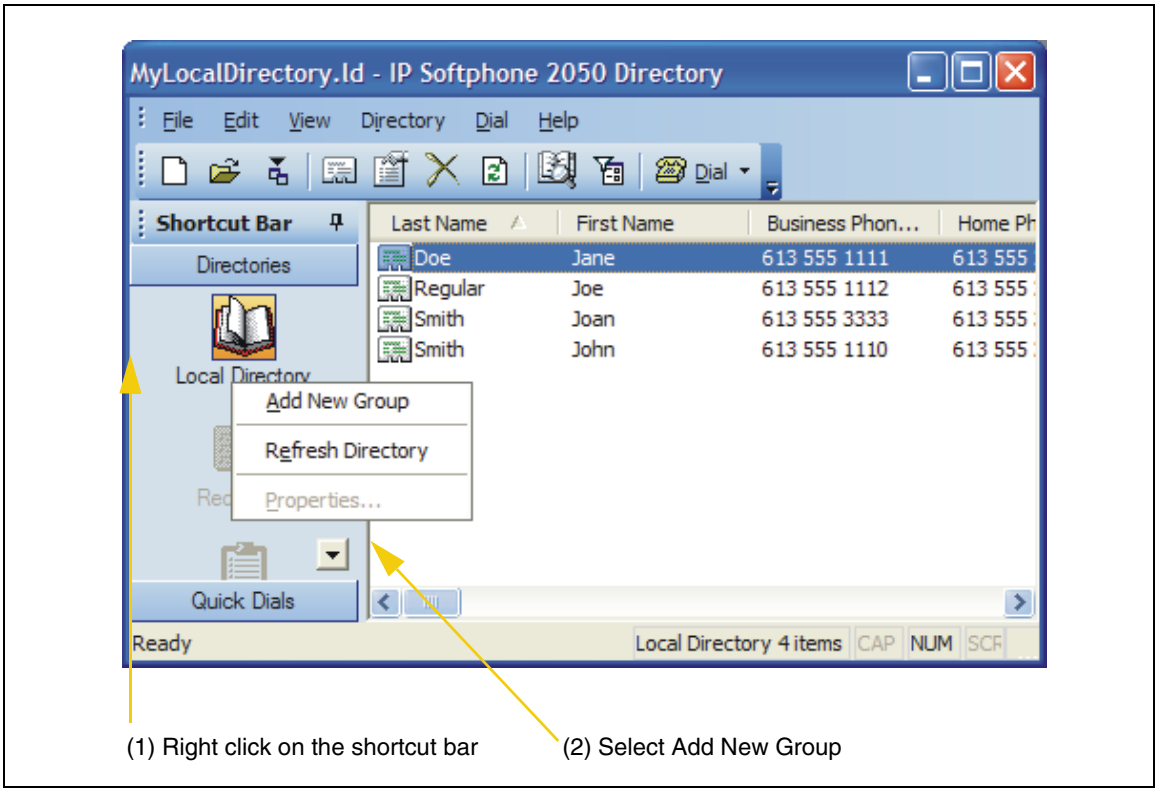


Figure 8 Directory interface - adding new groups

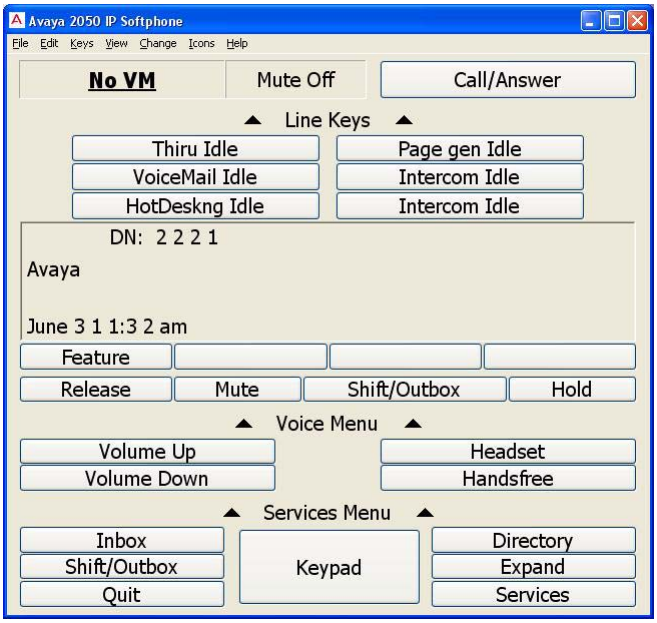


Enhanced Accessibility Interface

The Enhanced Accessibility interface provides information grouped into 5 major sections. Three of the sections, Line Keys, Voice Menu and Services Menu may be either expanded or collapsed depending on the need for the additional information and functions to be revealed. In addition, The font size, style, and color of interface is customizable.

The following provides a detailed description of each interface element.

Figure 9 Enhanced Accessibility Interface



The following table describes the elements of the Enhanced Accessibility Interface

Table 8 Enhanced Accessibility Interface elements

Element	Description
Indicators	Includes two UI elements. **Messages** indicates if you have a voice mail message. Values are No VM or VOICE MESSAGE. **Mute** indicates if the active call is muted. Values are Mute On and Mute Off.
Line keys	Includes 6 buttons where you can program lines and features. An individual button can be programmed as either a line key or a feature key (subject to server restrictions). By default the Line keys group is expanded. It can be collapsed by clicking on Line keys group name. A line key represents a directory number, a line appearance or a dedicated external line. Pressing a line key will give a dial tone. You can then make a call, or answer an incoming call. A directory number, sometimes called a primary line, is a system wide, uniquely identified line key. When your directory number is dialed the server routes calls to your directory number on your set. This is the simplest variant of a line key and is very similar in concept to a residential phone number. All active sets have an associated directory number. A line appearance is a server feature which allows users to have virtual appearances of each others directory numbers. For example, co-workers who have been given line appearances of your directory number may pick up your calls if you are unavailable.
Display	Provides server information, including current display contents, comprised of up to four lines of text containing the CLID information for incoming calls if available. If using a directory application this area can present a callers list or directory entries depending on the application features.

Table 8 Enhanced Accessibility Interface elements

Element	Description
Voice menu	Includes 4 buttons for call processing. **Volume Up** and **Volume Down** changes the volume level of speech path during the call and volume level of ringing tone during incoming call. **Headset** and **Handsfree** buttons make or answer calls using appropriate audio paths. By default Voice menu is expanded on the screen. It can be collapsed by clicking on Voice menu group name.
Services menu	Includes 7 buttons that provide call server features: **Msg/Inbox** - accesses the voice mail application to listen to messages. **Shift/Outbox** - provides access to voice mail application to compose an outgoing message or switch between line keys pages. **Quit** - exits from the current display menu if one is in active. **Directory** - accesses the network directory application. **Expand** - accesses GXAS server applications. **Services** - Selects a feature. Specific features depend on how the call server administrator has configured your set. Examples of features which can be made available here include: Hot Desking, Do Not Disturb, Page, Call Park, Call Pickup Directed, Call Pickup Group, Voice Call, Speed Dial, Message Send, Link, Ring Again, Voice Call Deny, Call Forward, Conference, Transfer, Background Music, Last Number Redial. The same functionalities can be called from Keys->Features menu. The **Keypad** button displays the new dialog with digit keys. By default the services menu is expanded. It can be collapsed by clicking on Services menu group name.

You can navigate the Enhanced Accessibility Interface using mouse clicks or by using the following keyboard shortcuts:

- **Tab** - Move to the next field
- **Shift** + **Tab** - Move to the previous field
- **Space bar** - Execute the operation at the current cursor location, if available. For example, if the current cursor location is on a line key or a softkey, that function is executed. If the current cursor location is on a display line or the time or date field, nothing will be executed.
- **Up arrow** - In a call server menu, move the cursor up to the previous selection.
- **Down arrow** - In a call server menu, move the cursor down to the next selection.

Additional configuration options

The following options can be configured according to your needs or preferences.

- Numeric/Alphabetic feature - you can choose whether numeric or alphabetic character display on the keypad by selecting **Edit > Input mode**. Note that Dragon users can dictate the number without the keypad as long as there is dial tone.
- Font - You can change the font type, size, style, and color of both the interface elements and the focus font to meet individual needs by selecting **Change > Change Font**.
- Color - You can change the color of indicators (for example Mute on, or Voice message indicators) by selecting **Change > Change Color**.
- Style - You can change the style of the Enhanced Accessibility Interface to meet visual needs or preferences by selecting **Change > Change Style**.
- Icons - You can choose to view the Enhanced Accessibility Interface with text and icons, icons only, or text only by selecting the appropriate option from the **Icons** menu.

Active call status in Window title

The accessibility interface window title indicates the current call status. You will see "Incoming call" during ringing for an incoming call, "On Call" during an active call and "On Hold" when you have a call on hold.

If your 2050 IP Softphone is in background, you can quickly check the call state from the Windows Task Bar. JAWS users can simply hit a JAWS keystroke to read the title of the window to view the status.

The feature is implemented for the Accessibility mode only.

Limitations

The following limitations apply to the 2050 IP Softphone for Windows Release 4.0.

-The Graphical External Application Server (GXAS) interface (added in Release 3.1) is not compliant with the accessibility feature;

-KEM is not supported for accessibility mode.

Software Expansion Module interface

The Avaya 2050 IP Softphone provides a Software Expansion Module to support extra feature or autodial buttons. The Avaya 2050 IP Softphone Expansion Module emulates the Avaya 2004 IP Deskphone Key Expansion Module with 54 keys. that the user can configure.



Note: Calls arriving on keys on the software Expansion Module do not support incoming and disconnect pop-ups.

Users can configure the expansion module buttons using the usual button programming features through the interface. Administrators can use the expansion module buttons or Business Element Manager (Telephony > Sets > Active Sets > Capabilities and Preferences > CAP/KIM Button Programming tab). To monitor lines, Administrators can configure the Software Expansion Module as a CAP Assignment in Business Element Manager under Telephony > Global Settings > CAP Assignment.

To display the Software Expansion Module, click on the Avaya logo and navigate to View > Expansion Module.

The Software Expansion Module loads, and displays the buttons functions and features as programmed. Use the scroll bar on the right-hand side of the expansion module window to view and locate all the buttons.

Figure 10 Avaya 2050 IP Softphone Expansion Module navigation

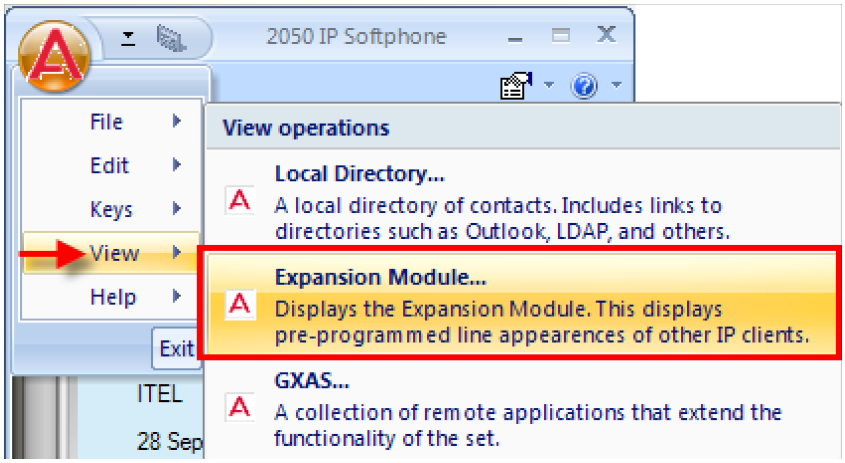


Figure 11 Avaya 2050 IP Softphone with Expansion Module

