EmergeCard

Remote Access User Guide

Run Your Servers Smarter

APEX™

EmergeCard Remote Access User Guide

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1. Overview

EmergeCard Remote Access Overview

The EmergeCard is the fastest and most reliable way to remotely control and manage your entire server population—no matter where you are, and no matter where your servers are!

The EmergeCard provides you with the first digital, customizable, universal access solution available today. Emerge allows any number of network administrators to remotely access any number of systems from any location.

Across the building, campus or globe your servers are never more than a few keystrokes away. Unlike other remote control solutions, the EmergeCard, when used in conjunction with an Apex console switch, maintains the server connection even on system restart. Emerge takes up no target system resources and no remote control software is necessary on the target system.

The Emerge technology is a PCI card that can be installed inside most Windows NT based servers. It captures and digitizes the video and PS/2 data from the attached target server or switch and transmits it over any connection to a remote system. Digital Emerge technology provides the remote user with full GUI (Graphical User Interface) control of the attached system.

Package Contents

EmergeCard

CD containing the *EmergeCard Remote Access User Guide* and the Emerge software

EmergeCard Install Card

Save Your Emerge Packaging

Apex ships the Emerge system in packaging designed to protect its components during shipping and handling. Save the carton and packing materials until your equipment is fully installed and operational.

If anything is missing or was damaged during shipment, contact Apex Customer Support. If you need to return the product, you will need a return materials authorization (RMA) number from Customer Support. Apex cannot accept any returned materials without an RMA number.

How to Reach Apex Customer Support

E-mail   support@apex.com

Telephone   800.861.5858

                    Mon-Fri, 6 am to 6 pm Pacific Time

Key Features

Feature	Description
OSCAR Compatible	On-Screen Configuration and Activity Reporting. Compatible with OSCAR-enabled switches such as OutLook and Viewpoint, which provide access to all of the commands and functions of Apex's console switches. For Apex products that do not include an on-screen display, EmergeCard will allow 'soft switching' (keyboard access).
Many Possible Configurations	Direct to a critical server, Viewpoint or an OutLook switch in a variety of configurations.
Compatible Operating Systems	Emerge supports the following operating platforms on the target system: Windows 3.1; Windows 95, 98, 2000; Windows NT; and MS-DOS.
Full Network Security	Available through operating system and remote software. Multiple levels of access can be defined for each user.
Flash Memory	Download capable.
Supported Remote Control Software	LapLink Gold, PCAnywhere 9.2, Terminal Server.
Compatibility	Compatible with major computer and peripheral devices, including: industry-standard PS/2 mouse and keyboard, computers requiring serial pointing devices (through the Apex serial to PS/2 converter), and Apex products.
Console View Options	View one or more server consoles on the remote monitor.
Supported Resolutions	Supports standard high resolution VGA up to 1024 x 768 @75 Hz refresh rate.
Resolution Detection	Auto-sense resolution detection.
Video Control Options	Align server display (horizontal and vertical positioning). Adjust video characteristics to optimize performance.
Programmable Function Keys	Emerge application allows user-definable function keys.
Constant Connection	Continuously view the screen status and video of the target system, even during cold reboot.
Full Apex Service	Free technical support. Free software upgrades. One-year warranty.

2. Installation

System Requirements

The following are the recommended systems for your EmergeCard.

Recommended systems:

- Compaq 1850R
- Compaq Prosignia Series
- Compaq Proliant Series
- Dell Power Edge 6300
- Dell Dimension Series
- HP NetServer Series
- IBM NetFinity Series

Recommended system parameters:

- Pentium III 450MHz
- 128MB RAM
- NT Server 4.0 with Service Pack 4
- NT network connection
- 10MB available disk space

Installation Checklist

Follow the steps outlined in the checklist below to install your Emerge remote computer system.

1 **Check the contents of the package**

2 **Plan the Emerge system options**
Connection options
Location options
Remote access options
Tiering options
Cabling lengths
Video resolution support options

3 **Install your EmergeCard**

4 **Connect the Emerge system into your system in one of the following configurations:**
Directly to a critical server
To a single or multi-user Apex OutLook switch
To a Viewpoint user pod
To a Viewpoint user pod and system pod

5 **Power up your Emerge system and prepare to <u>install your Emerge software</u>**

Planning Your Emerge System Options

Before you setup your new Emerge system, take a few minutes to plan your layout. A quick review of your options will facilitate a quick, trouble-free installation.

System connection options

You may connect your Emerge system to a single critical server or integrate it with other Apex console switches. The following list illustrates the types of connections you might be considering:

- Connect directly to a critical server

- Connect to a single or multi-user OutLook switch

- Connect to a Viewpoint user pod

- Connect to a Viewpoint user pod and system pod

- Connect to a Viewpoint user pod and core

System location options

The Emerge system can be used in desktop or rack-mounted systems.

Remote access options

Users connect to the Emerge system using either a direct network connection or a high-speed (64 Kbps or higher) modem connection. All video, keyboard, and mouse signals originate with the remote computer through an established connection (phone line, ISDN, LAN, or serial) to the Emerge. The Emerge then passes the signals to the Apex switch, which transmits the signals to the target system.

Tiering options

The Emerge is a remote access device. Unlike the OutLook switch, it cannot be tiered to itself. It can connect to a primary or secondary OutLook switch in a multi-switch or tiered configuration.

Note
When deciding on the layout for your Emerge system, planning the environment is critical. Operating outside of acceptable temperature or humidity ranges can result in diminished system operation or damage to your system.

Cable lengths

A target system is connected to the Emerge by means of keyboard, mouse, and high-quality video cables. Use a high-quality video cable to obtain the best possible video image. Using lower quality cables may result in poor video quality.

12 ft   Maximum cable length for video, keyboard, mouse cable from Emerge to the target system.

Note
Cable length affects video quality as well as keyboard and mouse data timing. The maximum cable length is determined in part by the computer and peripherals used. Not all systems will give satisfactory results at the maximum length.

Hotplug cable sequence

When hotplugging cables, always plug in the keyboard last or your mouse may not initialize properly.

Video resolution support options

The Emerge supports standard high-resolution VGA video up to 1024 x 768 @75 Hz refresh rate.

- 640 x 480 @60 Hz

- 640 x 480 @72 Hz

- 640 x 480 @75 Hz

- 640 x 480 @85 Hz

- 800 x 600 @56 Hz

- 800 x 600 @60 Hz

- 800 x 600 @72 Hz

- 800 x 600 @75 Hz

- 800 x 600 @85 Hz

- 1024 x 768 @60 Hz

- 1024 x 768 @70 Hz

- 1024 x 768 @75 Hz

- 720 x 400 @ 70 Hz

Note
Interlaced resolutions are not supported.

Installing your EmergeCard

The exact installation procedure you will follow to install your EmergeCard will depend on the computer system brand you are using. The following instructions give you the essential steps to accomplish your installation successfully.

To install your EmergeCard

1   Ensure that the system into which you will be installing your EmergeCard is powered off and unplugged.

2   Remove the cover of your system.

3   Locate an open PCI slot.

4   Remove the EmergeCard from its protective bag and insert it into the open PCI slot.

5   Secure the EmergeCard with a standard PCI card screw.

6   Replace the system's cover.

Now you are ready to connect your Emerge into your system. Review the following pages that illustrate the various ways that you might integrate your new Emerge.

Connecting to an OutLook Switch or a Server

The Emerge can be attached directly to an OutLook switch or to a server to allow the remote user to gain access to servers or remotely access commands and functionality of remote switches.
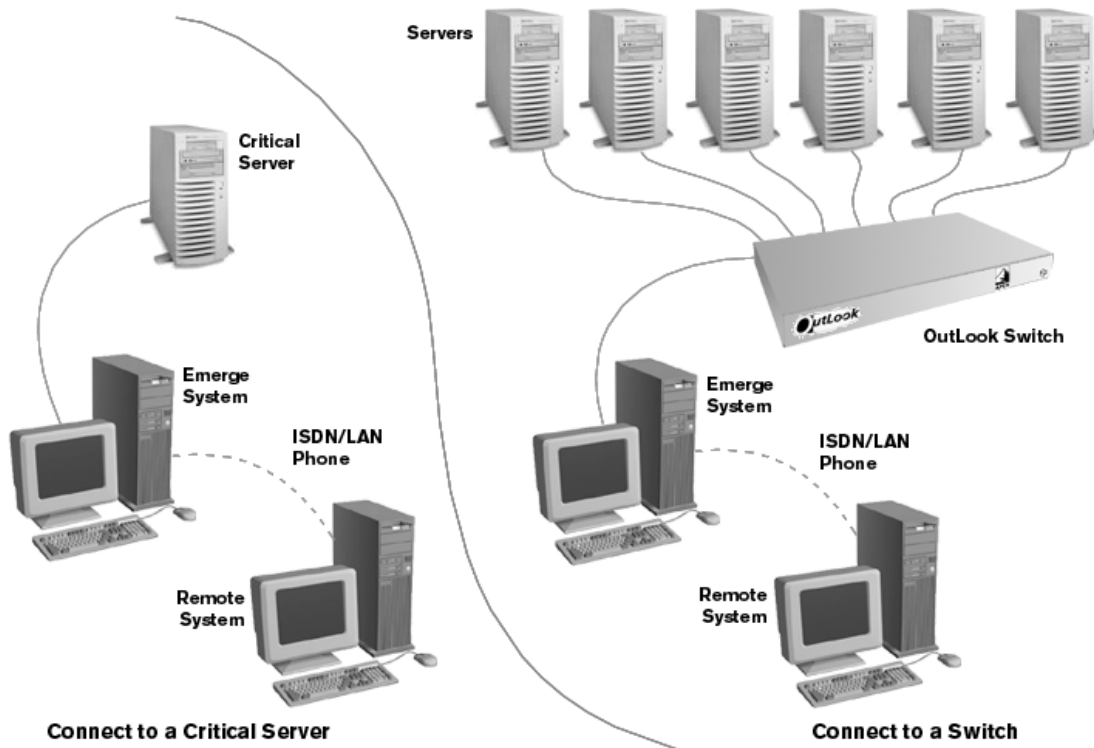
Connect directly to a server
The Emerge can be connected directly the keyboard, monitor, and mouse ports of a server or other single computer.

Connect to a switch console port
The Emerge can be connected to the console port of an OutLook switch as if it were a user. All (4, 8, or 16) system ports are available for servers. Monitor installation is optional. Connect a monitor if you want to perform setup or maintenance locally at the Emerge system.

Connect to a switch system port
The Emerge can be connected to one of the computer ports of an OutLook switch as if it were a computer. All four (or two) user consoles are available for users. This configuration does not require a keyboard and mouse to be attached to the Emerge system. Onsite users can perform maintenance.

To connect to a switch console port or server

1   Make sure the Emerge system is turned off and unplugged.

2   Place the unit in the desired location. The maximum length of cable between the Emerge system and a computer or switch should be no more than 12 feet.

3   Connect the video, mouse, and keyboard cable set to their respective jacks on the back panel of the Emerge system.

4   Connect the other end of the video, mouse, and keyboard interconnecting cables to their respective jacks on the target system (the server or the console port on the OutLook switch).

5   Connect the local mouse and keyboard to the jacks marked with their respective symbols on the back panel of the Emerge.

6   Plug in your remote access connection to the modem or network connection port.

7   Plug the power cord into its socket on the back panel of the Emerge system.

Note

You will need a monitor, keyboard, and mouse attached to the Emerge to configure the Emerge system in Windows NT. Setting up the system in Windows NT must be done at the Emerge system. After setup is completed, then the monitor is optional. Keyboard and mouse attachment is required if you are connecting to the user console.

Connecting to a Multi-user OutLook Switch

The Emerge can be connected to an OutLook multi-user switch in two different ways: either to a user console or system port.

Connect to a Multi-user OutLook Switch
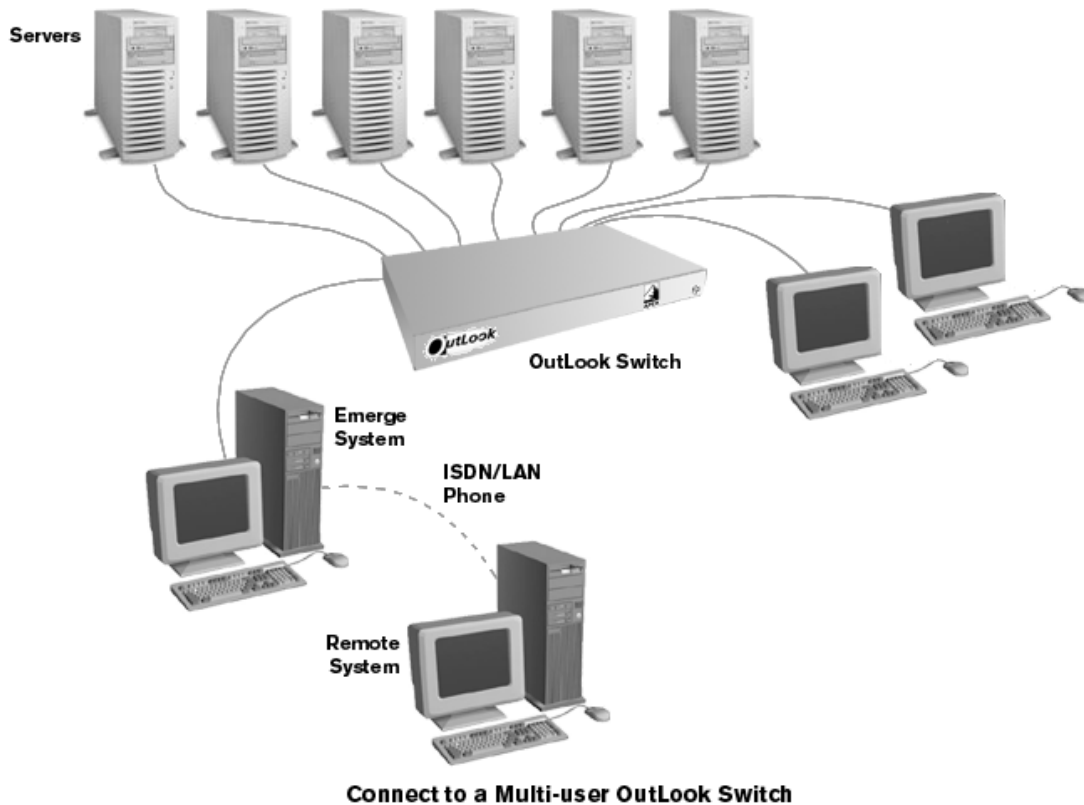
Connect to a switch console port
Emerge can be connected to one of the user console ports of the OutLook switch. Monitor installation is optional if you want to perform setup or maintenance locally at the Emerge system.

Note
Console settings need to be at preemptive (rather than cooperative) at the KVM switch.

Connect to a system port
Emerge can be connected to one of the computer ports of the OutLook switch as if it were a computer. All four (or two) console ports are available for users. This configuration does not require a keyboard and mouse to be attached to the Emerge system. Onsite users can perform maintenance.

To connect to an OutLook multi-user switch

1   Make sure the Emerge system is turned off and unplugged.

2   Place the unit in the desired location.

3   Connect the video, mouse, and keyboard interconnecting cables to their respective jacks on the back panel of the EmergeCard.

4   Connect the other end of the mouse, monitor, and keyboard interconnecting cables to their respective jacks in one of the console ports on the back panel of the OutLook switch.

5   Connect the local mouse and keyboard to the jacks marked with their respective symbols on the back panel of the Emerge system.

6   Plug in your remote access connection to the modem or network connection port.

7   Plug the power cord into its socket on the back panel of the Emerge system.

Connecting to a Viewpoint User Pod

Attaching the Emerge to a user pod allows a remote user to utilize the OSCAR menus to access commands and functionality of the Viewpoint switch. Connect a monitor if you want to perform setup or maintenance locally at the Emerge system, and if you want to access target computers.

Connect to a Viewpoint User Pod

To connect to a user pod

1   Make sure the Emerge system is turned off and unplugged.

2   Place the Emerge system in the desired location. The maximum cable length between the Emerge and the target system should be no longer than 12 feet.

3   Connect the mouse, video, and keyboard interconnecting cables to their respective jacks on the back panel of the EmergeCard.

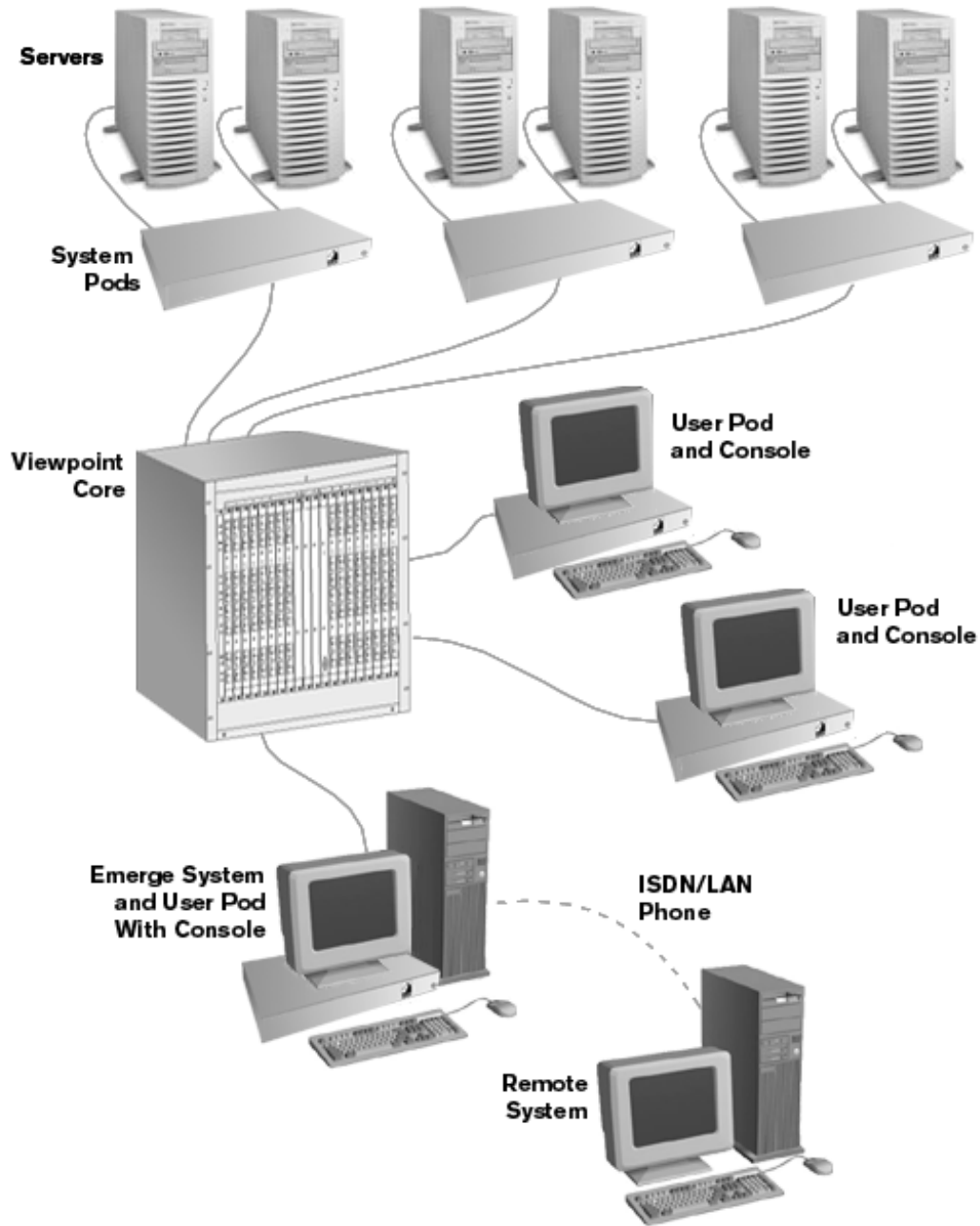4   Connect the other end of the mouse, video, and keyboard interconnecting cables to their respective jacks on the user pod.

5   Connect the local mouse and keyboard to the jacks marked with their respective symbols on back panel of Emerge.

6   Plug in your remote access connection to the modem or network connection port.

7   Plug the power cord into its socket on the back panel of the Emerge system.

Connecting to a Viewpoint User Pod and System Pod

Attaching the Emerge to a system pod and user pod allows a remote user to utilize the OSCAR menus to access the commands and functionality of the Viewpoint switch and perform maintenance on the Emerge system. No keyboard and mouse are needed at the Emerge system because the system pod, instead of the local keyboard and mouse, starts Emerge properly. All other user pods can perform maintenance on the Emerge system.

Connect to a Viewpoint User Pod and System Pod

To connect to a user pod and system pod

1. Make sure the Emerge system is turned off and unplugged.

2. Place the unit in the desired location, no longer than 12 feet from a user pod.

3. Connect the mouse, video, and keyboard interconnecting cables to their respective jacks on the back panel of the EmergeCard.

4. Connect the other end of the mouse, video, and keyboard interconnecting cables to their respective jacks on the user pod.
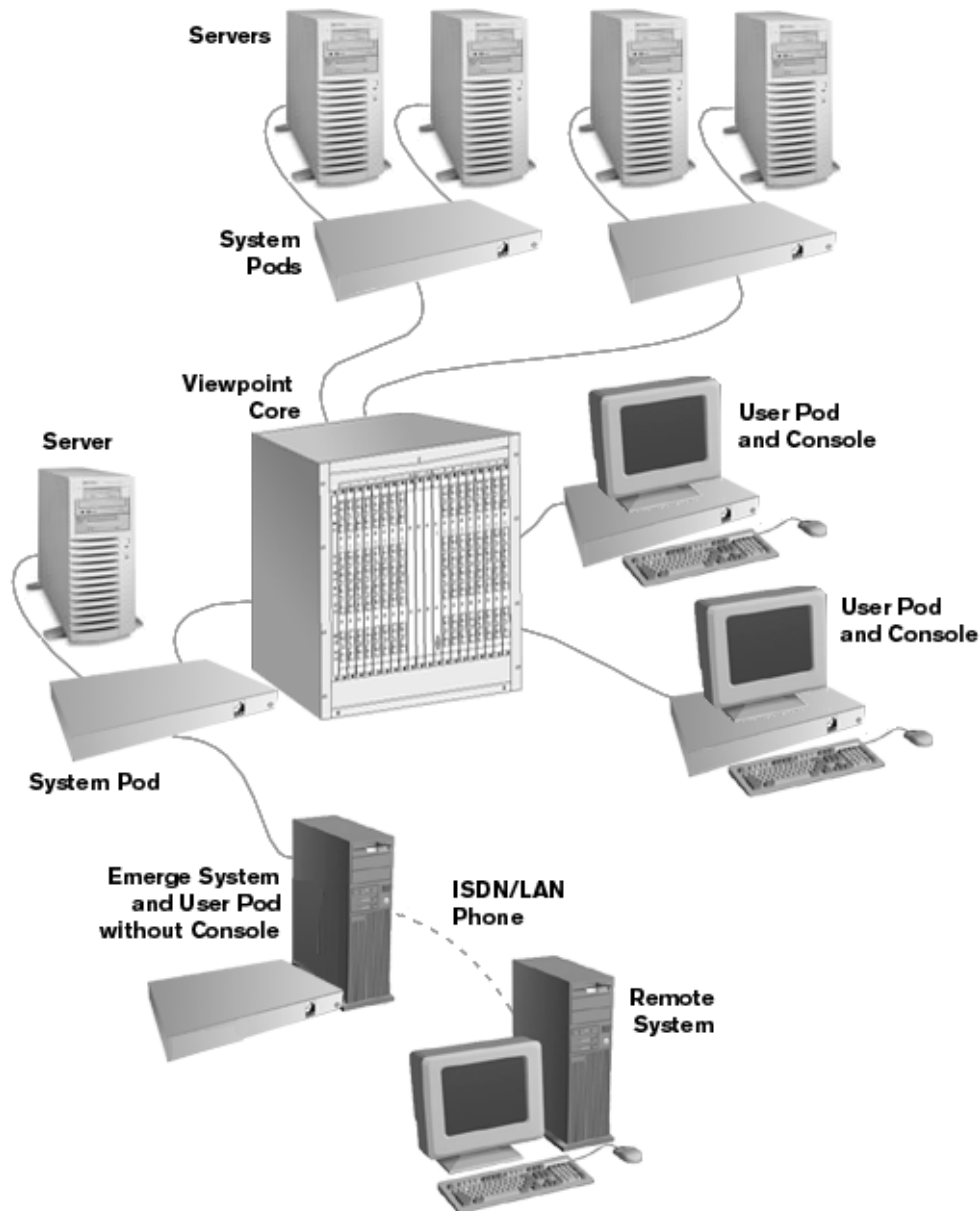
5. Connect the mouse, video, and keyboard cables of the system pod to their respective local KVM jacks on the back panel of the Emerge.

6. Plug in your remote access connection to the modem or network connection port.

7. Plug the power cord into its socket on the back panel of the Emerge system.

3. Configuration

Configuring Your EmergeCard

After installing your EmergeCard, follow the steps listed below in the Configuration Checklist before operating your new system.

Configuration checklist

1 **Install and configure the Emerge software**

2 **Install and configure the remote communication software**

Install and configure your remote communication software on the Emerge system
Install and configure your remote communication software on the remote computer

3 **Access the Emerge**

Ensure network/modem connections are in place
Establish remote control session with the Emerge from the remote computer

Install and Configure the Emerge Software

Once your new EmergeCard is installed you will need to install your Emerge software.

To install and configure your Emerge software

1   Insert the Emerge CD into the System's CD-ROM drive.

2   Open up the folder "Update.xxx."

3   Run Updatexxx.exe.

4   Restart the system.

5   Follow the **Setup Wizard** instructions to complete setup of your EmergeCard.

Note
Running other applications along with the Emerge may affect operation and performance.

Setting up the Target Systems

Prior to operation with the Emerge, set up your target system(s) to ensure optimum results:

Set your target system mouse movement

- Set standard PS/2 mouse drivers to **SLOW**.

- Set Intellimouse mouse driver speed to the center position, set Acceleration to **NONE** and deactivate the mouse snap.

Set your target display

Select a supported resolution for each of the servers to be accessed by Emerge. Emerge supports standard high-resolution VGA video up to 1024 x 768 @ 75Hz refresh rate. Setting your servers at unsupported resolutions may produce undesirable results. Reduce your target system resolution and color depth to improve performance by decreasing the amount of image data passed along to the Emerge.

4. Operation

Using the Emerge Application

This chapter describes how to operate your Emerge software. The following checklist will help you in operating and customizing your Emerge environment. Reference the following pages for details on each topic.

Application operation checklist

1 **Launch the Emerge application** from your desktop (if it doesn't automatically start up.)

2 **Use the Switch Configuration Wizard** to configure Emerge to recognize the switch (or switches) to which the unit is connected.

3 **Start a session** to a target system.

4 **Customize your Emerge application** which might include any of the following:
   • Check Target Resolution
   • Adjust Screen Update and Port Scan Rate
   • Check or Change Function Key Mapping
   • Synchronize or Configure Mouse Movement
   • Adjust Video Display
   • Set Log File Options

Launching the Emerge Application

To gain access from the remote computer through Emerge to the target system

1   Double-click the Emerge icon to open the Emerge application.

   If this is the first time you are running the Emerge, you will use the **Switch Configuration Wizard** to configure Emerge to recognize the connected switch (or switches). (See "Using the Switch Configuration Wizard.")

2   Use the Emerge window to specify settings or make connections to the connected target systems. The Emerge window displays current system information for the target system, including its resolution and activity. You should see that the video is specified as active. (See "Emerge Application Window.")

3   From the **File** menu, select **Start Session**.

4   You can now launch applications, read files, and change system settings on the target system. If you are connected to an Apex switch, you will be able to utilize OSCAR menus to access the commands and functions of the switch.

Note
Emerge has assigned various tasks to function keys. If you use one or more functions key in other applications, you may want to reassign or remove the Emerge function key settings. Review the table "Default Settings for Emerge Function Keys" in Chapter 4, *Operations,* to learn how Emerge function keys are configured.

Using the Switch Configuration Wizard

To use the Switch Configuration Wizard

1   Double-click the Emerge icon on the desktop of the Administrator Remote Control console to open Emerge.

2   If this is the first time you have launched Emerge or if no windows were open the last time Emerge was closed, the **Switch Configuration Wizard** dialog box appears.
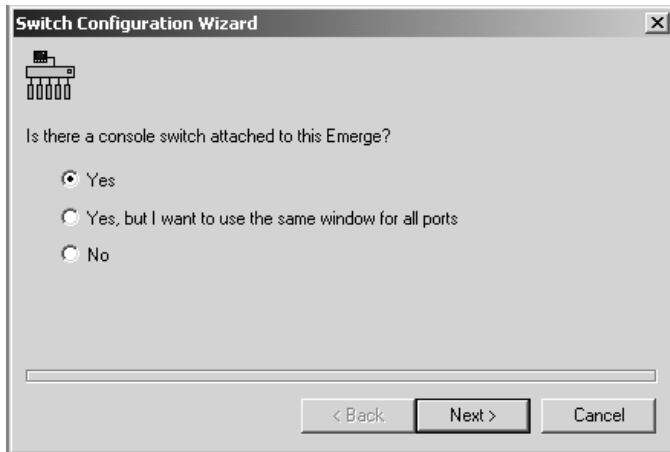
3   If a console switch is attached to your Emerge system, select **Yes** and click **Next** to display a list of switch options.

Select **Yes** if you are attached to a switch and want integrated control.
-or-
Select **Yes, but I want to use the same window for all ports** if you are connected to a switch but want to maintain manual controls. (If you select this, proceed to step 15.)
-or-
Select **No** if you are connected to a server rather than a switch. (If you select this, proceed to step 17.)

4   Select the type of switch being used. Click **Next**.
     -or-
     Select (Other) if you are using an Apex compatible switch and select the associated switch model.
     Click **Next**.
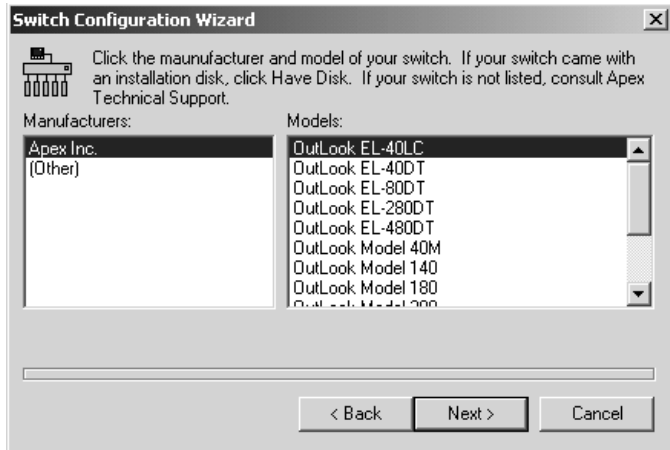
5   A dialog box appears asking if additional switches are tiered from this switch. Select **Yes** or **No**.
     Click **Next**.

6   **Yes** brings up a dialog box asking which ports the tiered switches are attached to. Select **All** or **Ports.** (If you select **Ports**, proceed to Step 10.) Click **Next**.
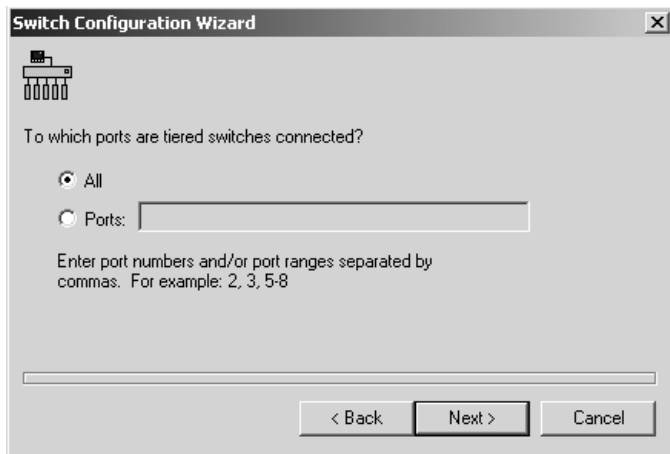
7   If you select **All**, you are asked if all the switches are the same type. Select **Yes** or **No** and click **Next**. (If you selected **No**, proceed to step 15.)

8	Selecting **Yes** brings up a dialog box that asks you to identify the tiered switch type.
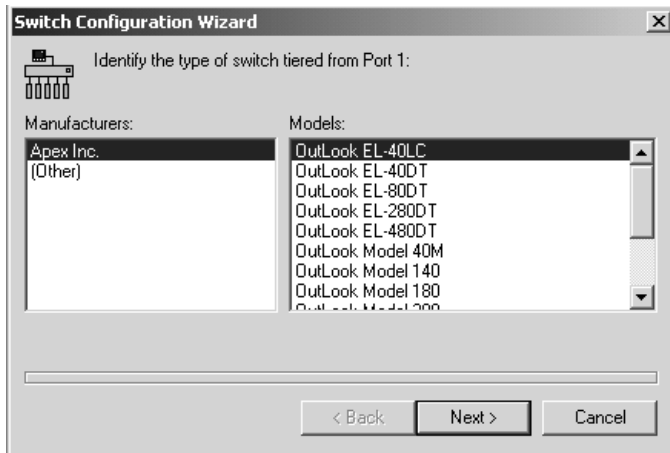
9	Select the tiered switch and click **Next**. A dialog box appears where you enter the name you want associated with each Port. Select how you want the window for each Port to appear on **Start up** and click **Next** to access the next Port. When you have entered all the Port names, click **Finish** to complete configuration and begin a session.
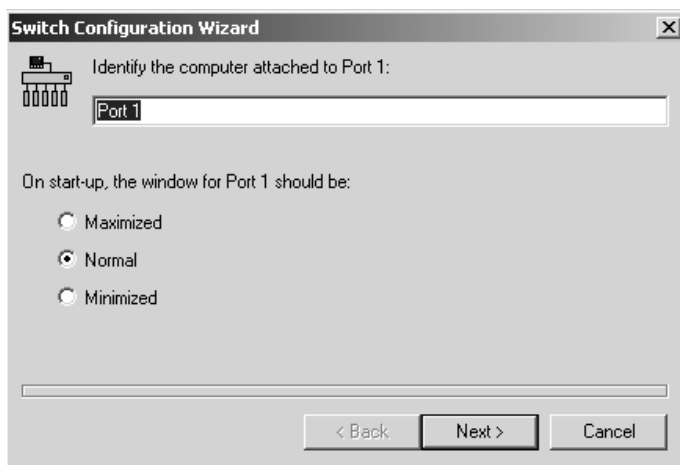
10 If you select **Ports**, a dialog box appears asking you to enter the port numbers and/or port ranges, separate port numbers and/or ranges with commas.
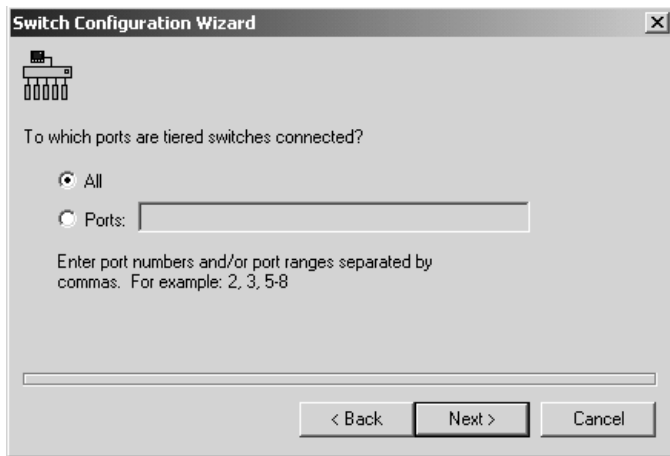
11 Selecting **Next** brings up a dialog box asking if all tiered Switches are the same type. Select **Yes** or **No**.

12 Selecting **No** and clicking **Next** brings up a dialog box asking you to identify the type of switch being used.

13 Enter the name of the computer attached to Port 1 and select how you want the window to appear on **Start up** (Maximized, Normal, Minimized, or Hidden).

14 Click **Next** to enter the names of the computers attached to Ports 2, 3, etc. When you have entered all the names of the computers attached to the ports, click **Finish** to begin a session.

15 If you select **Yes, but I want to use the same window for all ports** when you first encounter the **Switch Configuration Wizard** dialog box and click **Next**, a dialog box appears asking you to enter a title for the **Target System Window.**
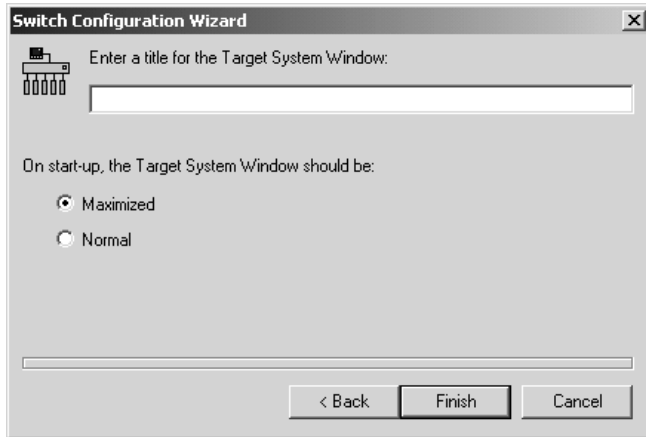
16 Enter the title you want for the Target System Window and select whether the window should be maximized or normal on **Start up**. Click **Finish** to complete the Switch Configuration and begin a session.

17 If you select **No** when you first encounter the **Switch Configuration Wizard** dialog box and click **Next**, this same dialog box appears asking you to enter a title for the **Target System Window.** (See item 13 above.)

18 Enter the title you want to use for the Target System Window and select whether the window should be maximized or normal on **Start up**. Click **Finish** to complete the switch configuration and begin a session.

Note

When you begin a session, the individual screens for selected computers or ports will cascade on the Emerge screen. To change the arrangements of the windows, click **Window>Title** to tile the windows.

Beginning a Host Session

Once you have configured your Emerge to recognize the attached switches, you can begin a host session by double-clicking the Emerge icon on the desktop to launch Emerge.

To Begin a Host Session

1   Double-click the Emerge icon on the desktop to launch the application.

2   Click **File>Start Session** or press the Start/Stop Session function key **F5** or click the **Start Session** icon on the Session toolbar.

3   The Desktop for the target system appears. When Emerge first opens, you will see information on the current system(s) connected to Emerge. To gain access to this window later, press F5.

Emerge Application Window
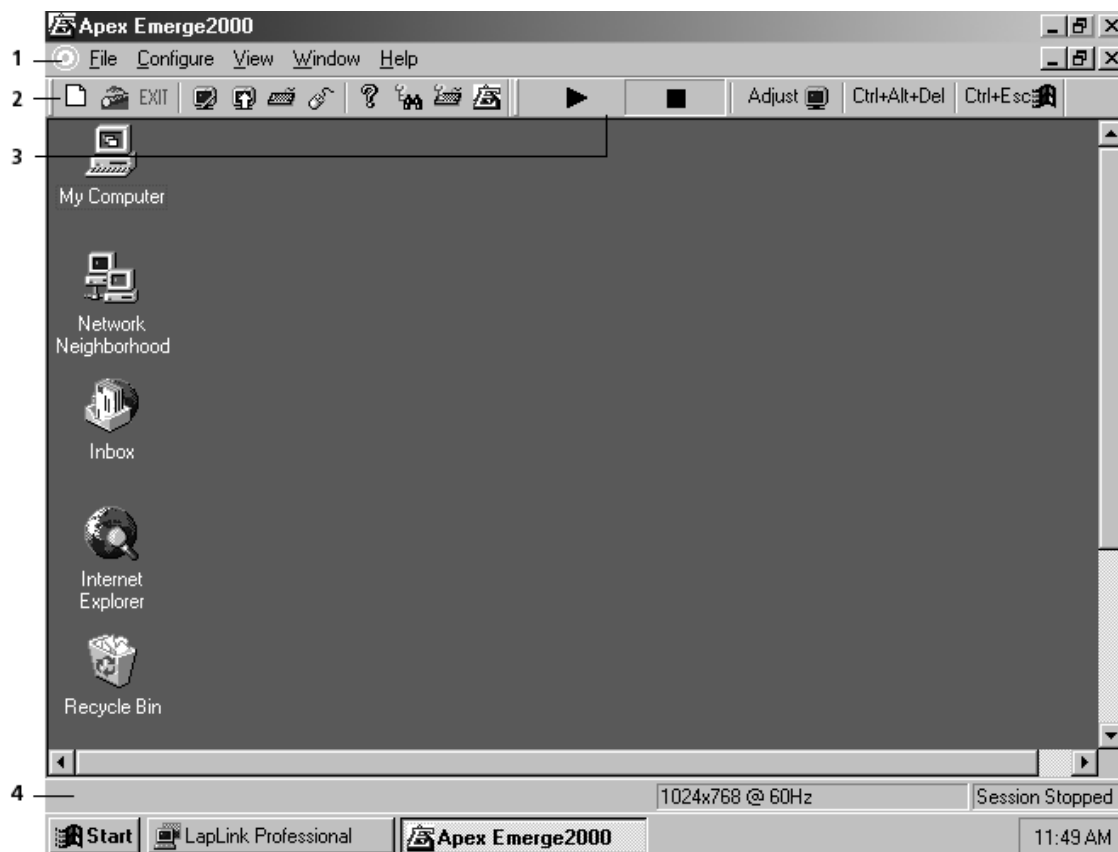
1   Menu Bar (See "Menu Items in the Emerge Window" on page 30 for details)

2   Tool Bar (See "Emerge Application Tool Bar" on page 28 for details)

3   Target System Toolbar (See "Target System Tool and Status Bars" on page 29 for details)

4   Target System Status Bar (See "Target System Tool and Status Bars" on page 29 for details)

Emerge Application Tool Bar

The following toolbar appears at the top of your Emerge application window.

	This Icon	Represents This
1	New Target Window	Opens the New Target System dialog box to initiate another session window or the Switch Wizard.
2	Log File Options	Contains logging options per session, including the type of events logged and the location of the log files. Used for troubleshooting.
3	Exit	Quit the Emerge application.
4	Resolution Table	Lists supported video resolutions and associated values. Current resolution is highlighted.
5	Screen Update Rates	Allows user to adjust the screen update rate based on the bandwidth of the connection.
6	Configure Function Keys	Configures the alternate key mapping and function key settings to nondefault values.
7	Mouse Pointers	Focuses synchronization of the mouse pointer of the target system and the remote computer to the upper left corner of the image display. Use if having problems with mouse synchronization. (Default setting synchronizes mouse pointers wherever EmergeCard crosshairs are located.)
8	Emerge Help	Launches online help.
9	Emerge Help Topics	Provides a list of help topics.
10	Current Function Key Settings	Displays the current function key mapping that has been set up.
11	About Emerge	Displays version information.

Target System Tool and Status Bars

The following target system window will appear for each of the port windows you have open.
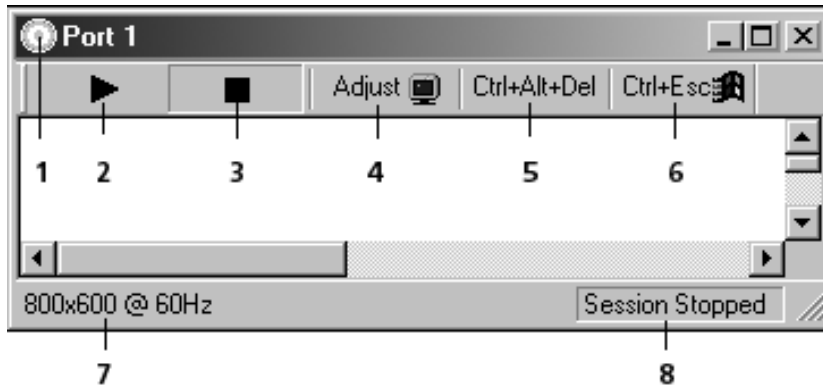
	This Icon	Represents This
1	Port Name/Number	Port name/number of target system is displayed.
2	Start Session	Starts a session with the active target system.
3	Stop Session	Stops a session with the active target system.
4	Adjust Target Video Display	Automatically adjusts video alignment.
5	Send **Ctrl+Alt+Del**	Sends these keystrokes to the target system when in the Emerge application.
6	Send **Ctrl+Esc**	Sends these keystrokes to the target system when in the Emerge application.
7	Current Target Resolution	Current target system resolution is displayed.
8	Target System Session Status	Session status with target system is displayed.

Menu Items in the Emerge Window

This Key	Represents This	Which Does This
FILE		
	Start/Stop Session	Starts or stops a session with the active target system.
	New Target Window	Opens the New Target System dialog box to initiate another session window or the Switch Wizard.
	Log File Options	Contains logging options per session, including the type of events logged and the location of the log files. Used for troubleshooting.
	Update Firmware	Contains three options for updating firmware to the latest versions: microprocessor, PCI FPGA, or DSP FPGA.
CONFIGURE		
	Resolution Table	Lists supported video resolutions and associated values. Current resolution is highlighted.
	Screen Update Rate	Allows user to adjust the screen update rate based on the bandwidth of the connection.
	Function Keys	Configures the alternate key mapping and function key settings to nondefault values.
	Mouse Pointers	Focuses synchronization of the mouse pointer of the target system and the remote computer to the upper left corner of the image display. Use if having problems with mouse synchronization. (Default setting synchronizes mouse pointers wherever EmergeCard crosshairs are located.)
	Adjust Video	Automatically adjusts video alignment.
	Reset keyboard/Mouse	Resets the keyboard and mouse to re-establish functions if lost.
VIEW		
	Toolbar	Select or deselect to enable or disable the toolbar.
	Status Bar	Select or deselect to enable or disable the status bar.
	Switch Port Scan	Allows you to automatically scan from port to port. You can set the scan time in the "Screen Update Rate" Menu item.
	Changed-segment grid	Identifies where on the screen there is activity.
	Full Screen	Overwrites the target window so it displays over the entire EmergeCard desktop.
	Properties	Allows you to change the name, port and tiering status for whichever port is in focus.
	Refresh	Repaints the screen of the port that is currently in focus.

This Key	Represents This	Which Does This
WINDOW		
	New Target Window	Allows you to select a different target system.
	Cascade	Allows you to cascade multiple sessions on the screen.
	Tile Horizontally/Vertically	Allows you to tile multiple sessions on the screen.
	Order by Port Number	Allows you to arrange individual target windows by Port number when tiling or cascading. When "Order by Port Number" is disabled, target windows are ordered by last input focus.
	Arrange Minimized Windows	Arranges minimized target system windows at the bottom of the main Emerge window.
HELP		
	Contents	Provides a list of help topics.
	Help Topics	Launches online help.
	Function Key Help	Displays the current function key mapping that has been set up.
	About Emerge	Displays version information.

Resolution Table

The Resolution Table lists the supported video resolutions and associated values. Your current resolution is the selected value.
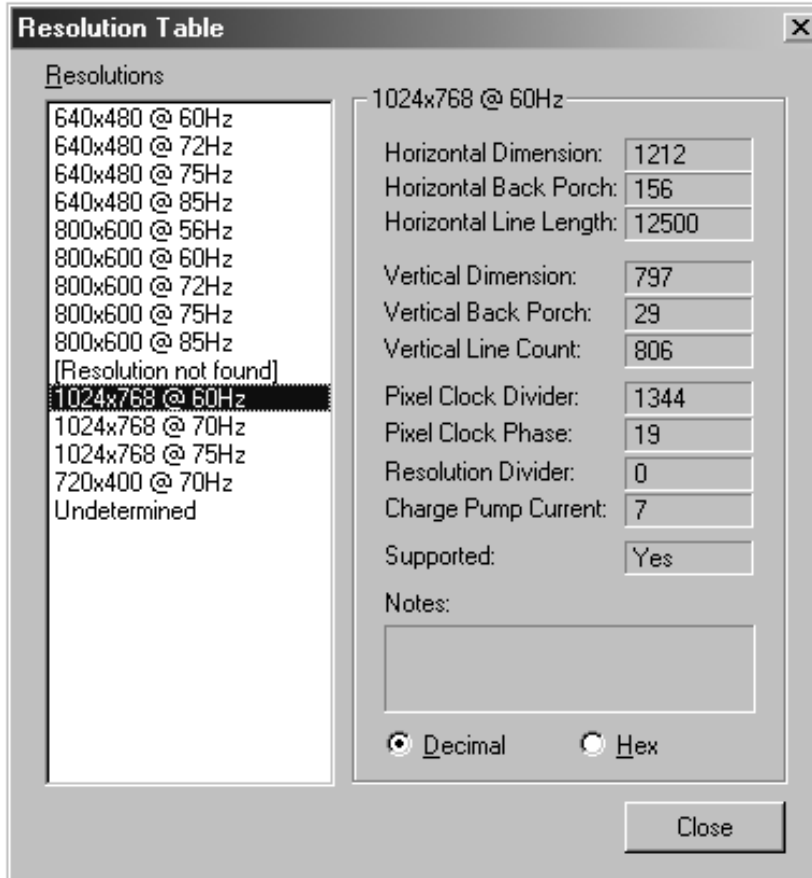
Optimizing Your Connection Performance

Screen Update Rate

The Screen Update Rate allows you to set the video update rate between 2 seconds and 200 milliseconds to adjust to the type of connection you are using to access your target system.
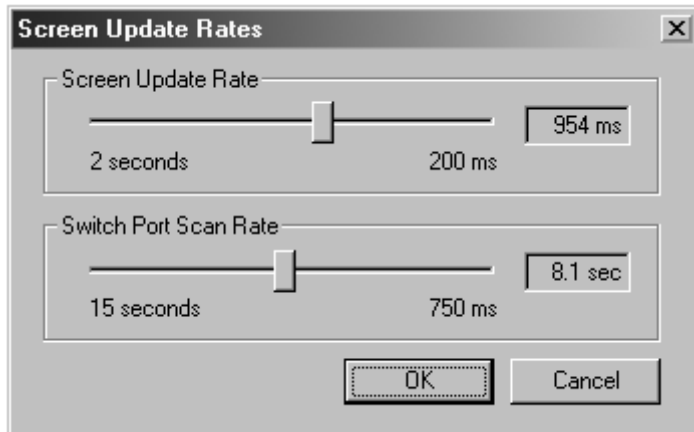
If you are accessing your target system over a slower link or if you have a great deal of screen activity, you may be able to increase performance by slowing the Screen Update Rate. When this option is set to 2 seconds, the Emerge sends video updates to the remote system less frequently so the bandwidth will be available for communications.

If you are working over a LAN connection, you may want to set this to 200 milliseconds to allow for more frequent video refresh while still retaining appropriate communication rates.

Note

To optimize performance, you may also want to reduce the number of colors being used for the video image on the target system. For example, a video image that uses 16 million colors will have more color changes than a video image with 256 colors. More color choices will cause the pixel matrix to update more frequently and consume bandwidth that could otherwise be used for keyboard and mouse communication.

Changed-Segment Grid

The Changed-Segment Grid identifies the presence and location of any screen activity. This feature is important for helping you to improve the performance of your connection. If the phase is out of adjustment, you may have screen activity that you aren't aware of that will impact your performance over a slower connection.
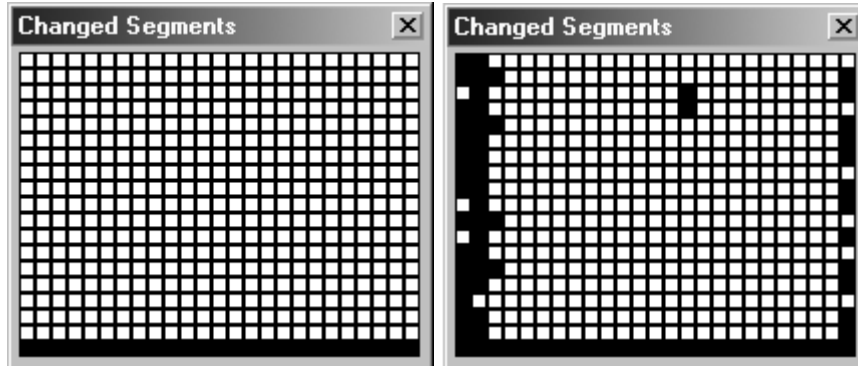
No Screen Activity **Screen Activity Identified**

To optimize screen activity

1   Select the **Changed-Segment Grid** from under the View menu.

2   With a static screen image, stop any mouse movement and check the Changed Segment grid. White boxes indicate no screen activity. If you have black boxes, Emerge is recognizing screen activity.

3   If there should be no screen activity, open the **Adjust Video** dialog box under the **Configure** menu.

4   With the **Changed Segment** grid visible, adjust the **Phase** slider or **Color Offsets** sliders until the grid contains the fewest black boxes.

Using Function Keys

Emerge comes configured with helpful function keys that allow you to select menu items quickly. Click the Function Key Help icon on the Tool bar or look under the Help menu item to find the Function Key that has been configured for the keystrokes you want to send.
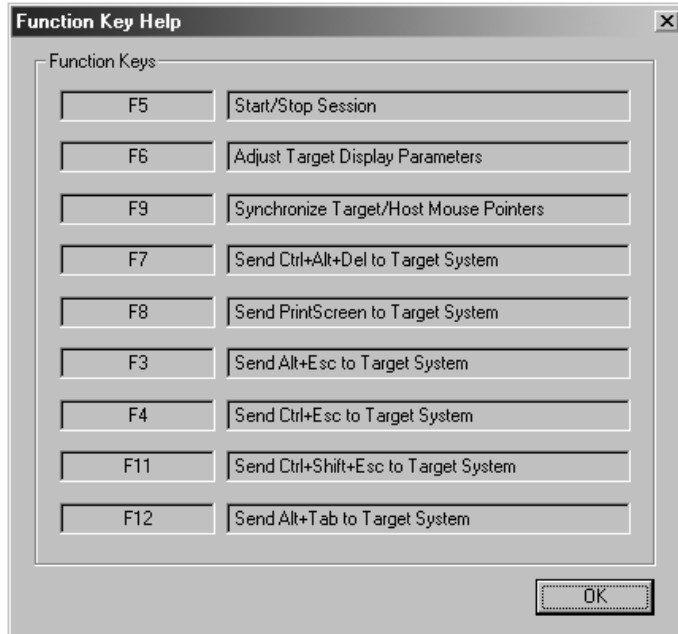
Default Settings for Emerge Function Keys

| This Key	Represents This	Which Does This
F1	Help Menu	Opens Emerge Help. If you are in an active target window, <F1> opens Windows Help. If you want Emerge Help instead, simply stop the current session.
F2	OSCAR Advanced Menus	Displays OSCAR Menu screen if attached to an Apex switch.
F3	ALT+ESCAPE	Sends these keystrokes to the target system.
F4	CTRL+ESCAPE	Sends these keystrokes to the target system.
F5	Start/Stop Session	Starts or stops a session with the target system.
F6	Adjustments menu	Adjusts video alignment and color through an on-screen display dialog box.
F7	CTRL+ALT+DELETE	Sends these keystrokes to the target system when in the Emerge application.
F8	PRINT SCREEN	Sends this keystroke to the target system.
F9	Synchronize Mouse Pointers	Synchronizes the mouse pointer of the target system with the mouse pointer of the user computer.
F12	ALT+TAB	Sends these keystrokes to the target system.

Note

If you want to establish a session with an Apex OSCAR-compatible switch, open OSCAR menus by using the function key F8 or press PRINT SCREEN.

Setting Alternate Function Key Mapping

You can change the current function key configurations or remove Emerge assignments entirely to match your existing system usage.
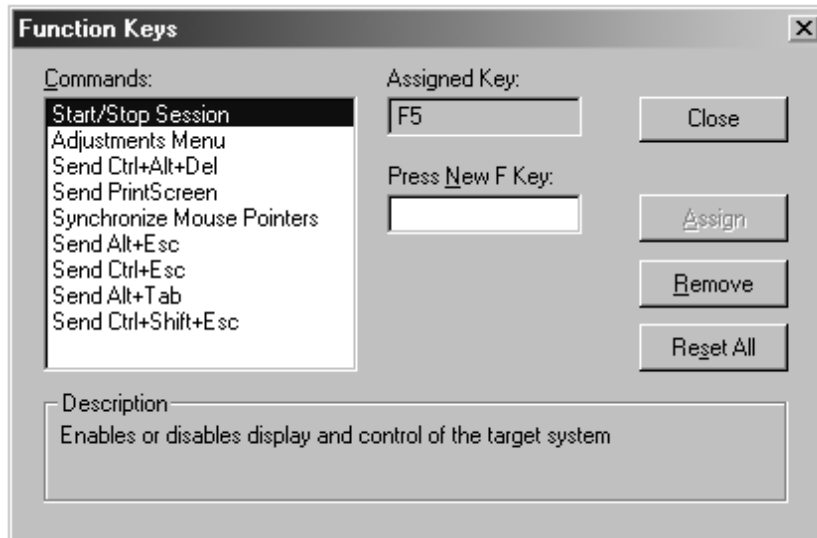
To set alternative key mapping and function keys

1   From **Configure**, select **Function Keys**. The Function Keys dialog box appears, allowing you to view the current key functions.

2   Select a function from the Commands list and you will see the current assigned key with a description of that function.

3   Type in a new F key assignment in the **New F key** box if you wish to set an alternate F key for that function.

## To remove an Emerge Function Key assignment

1   Select a function key from the Commands list.

2   Select **Remove** to free up that function key for use by another application.

Note

Certain keystrokes are reserved, for example **<F1>** is reserved for Windows. Do not use **<F2>** if you are connected to an Apex switch because **<F2>** is used to gain access to OSCAR Advanced Menus screen.

Configuring Mouse Pointers

Emerge offers you the ability to configure your mouse pointers for unique operating environments.
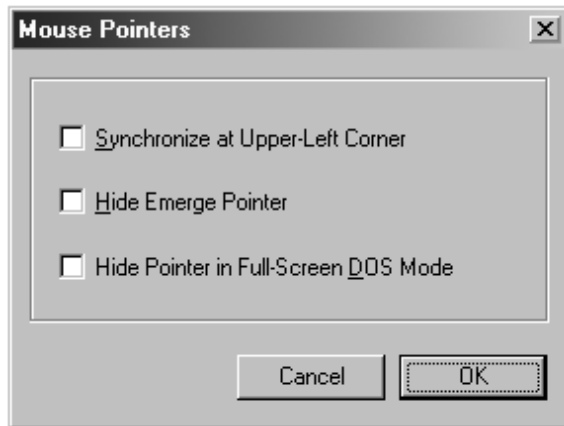
Synchronize at Upper-Left Corner

This option focuses the synchronization of the mouse pointer of the target system and the remote computer to the upper left corner of the image display. Use this option if you are having problems with standard mouse synchronization. (The default setting synchronizes mouse pointers wherever Emerge crosshairs are located.)

Hide Emerge Pointer

If you are accessing your target system on the Emerge through a very fast LAN connection, you may want to turn off the Emerge crosshairs.

Hide Pointer in Full-Screen DOS Mode

If you operate in full-screen DOS mode, you may want to hide the Emerge crosshair pointer by clicking the **Hide Pointer in Full-Screen DOS Mode** option.

Synchronizing Mouse Movement

You may need to periodically synchronize the mouse movement of both your remote and target system. You will see a circular target that represents the mouse location on your remote system, while the target system's mouse location is represented by the pointer tool.

To synchronize mouse movements

Press F9 to bring the mouse of the target system into alignment with the mouse on the remote computer.

–or–

Move the mouse outside the Emerge application window and then move it back into the window. This action forces the target mouse to align with the position of the mouse for the remote computer.

Optimizing Mouse Performance

Apex recommends that all servers controlled by the Emerge system be adjusted as follows prior to installation.

To adjust Standard PS/2 mouse drivers

Access via **Control Panel>Mouse>Motion tab>Pointer Speed**
The mouse motion rate needs to be set all the way to SLOW. The EmergeCard device then can use a calculation matrix to move the mouse at the target server the appropriate distance and speed to match the remote client.

To adjust Intellimouse drivers

Access via **Control Panel>Mouse>Pointer Options>Pointer Speed**
The Pointer Speed needs to be set at the center (or fifth) position. Advanced – Pointer Acceleration needs to be turned off and any mouse snap features need to be deactivated.

Improving the Video Display

The Emerge gathers system information from the target system through observation. Because it has an unobtrusive presence, it cannot obtain specific system information. When it obtains the video image from the target system, it digitizes the analog signal. Because its video output is based on information gathered through observation and the sampling of color bits, you may need to make slight adjustments to improve video display.

Other factors that affect video display are slight variations in signal levels and timing, which may cause grainy colors, dithering, ghosting, or misalignment. Such factors should be corrected as they can affect the performance of your system.

Connection to a switch introduces a delay in the transmission of the video signal for each tier of computers. You can optimize the video by making adjustments in the **Adjustments** menu.
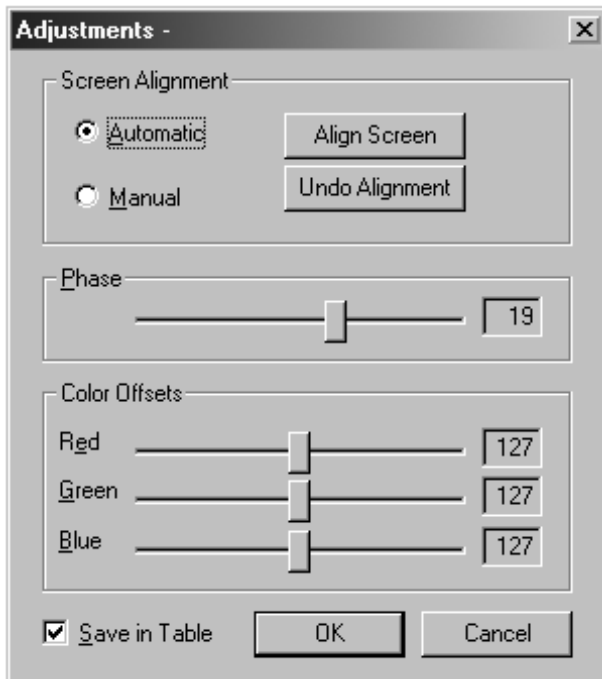
This Adjustment	Has This Effect
Screen Alignment	Adjusts the displayed image of the target system either horizontally or vertically. **Automatic** allows the Emerge system to align the target window for you. **Manual** allows you to make adjustments yourself. If your background is black, you will need to manually adjust because the **Automatic** configuration looks for the first nonblack pixel to align the screen. If your background is black, the automatic screen adjustment will incorrectly align your screen.
Phase	Sharpens the displayed image from the target computer. Select a value from 0-31. Changes in settings are immediately reflected on the monitor.
Color Offsets	Changes the color of the displayed image from the target computer to correct untrue colors or to correct snow on solid colors. Display colorful windows on the monitor for graphical reference when selecting values.

To adjust the displayed video image of the target system

1   Click the Video icon on the toolbar for the console switch screen to open the **Adjustments** dialog box or Press F6, the Adjust Settings function key, to bring up the Emerge **Adjustments** menu.

2   Select **Automatic** and the Emerge system will make changes to the screen to attempt to align the target window in the Emerge window.

Note

If your background is black, you will need to manually adjust because the Automatic configuration looks for the first nonblack pixel to align the screen. If your background is black, the automatic screen adjustment will incorrectly align your screen.

Select **Manual** to adjust your settings manually. The Manual selection allows you to click on the alignment boxes to move the screen left, right, up, or down.

3   Adjust Phase by moving the slide bar left (to decrease) or right (to increase) the sharpness of the image.

4   Adjust Color Offsets by moving the slide bars associated with the colors to increase or decrease tones.

5   Click **OK** to save the settings or **Cancel** to return to the Default settings.

Setting Your Switch Port Scan Rate

If you have set Emerge to automatically scan from port to port, you can set how long it stays at each port by setting the slider on the Switch Port Scan Rate.
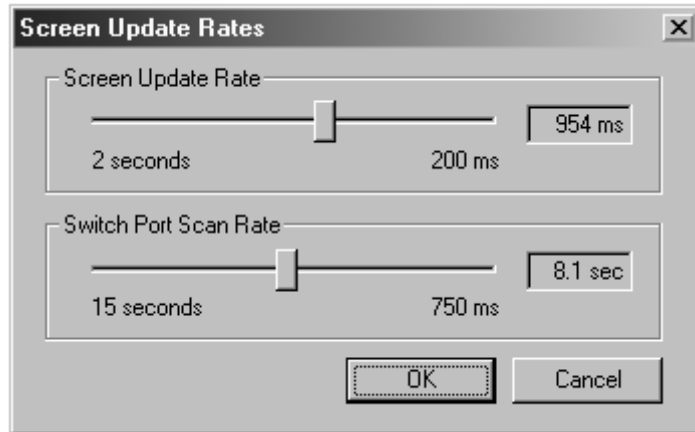
Adjusting the Target Window Properties

The Properties dialog box allows you to control various attributes of your target system including the Name, Switch Port number, and Tiered Port number.
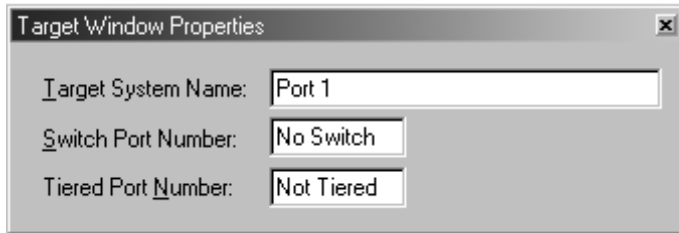
To change Target Window Properties

1   Open the **Target Window Properties** dialog box under the **View** menu item.

2   Type in the Name, Switch Port or Tiered Port number in the appropriate box. Select **Enter** to implement the changes.

Maintaining Log Files

The Emerge system maintains an application log file that can be reviewed by Apex Customer Support for servicing problems. The log file settings can be modified to record specific types of information, although maintaining the default settings will help Customer Support assess operation problems.
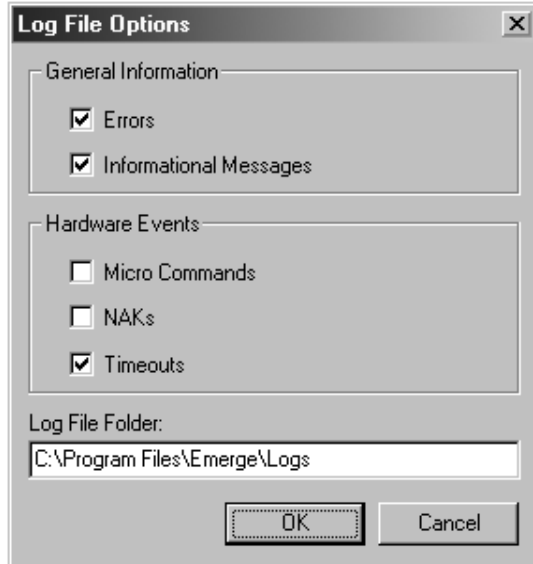

To modify log file settings

1 Click **File>Log File Options** in the Emerge window.

2 Check the log options that you want to have recorded.

3 Click OK to save changes.

Adjusting Log File Options

The following chart describes each of the options that you can have recorded in your log files.

Errors	Records any errors processed by the Emerge and the time the error occurred. Leave this option enabled at all times.
Information Messages	Provides additional error information, such as start-up/stop times, version numbers and other actions that help Customer Support identify the cause of an error.
Micro Commands	Details the device communications between the Emerge application and the EmergeCard hardware.
NAKs	Details device communication between the Emerge application and the EmergeCard hardware when the hardware cannot process a command issued by the application.
Timeouts	Details information on specific timeouts that have occurred.
Log File Folder	Allows the user to change the location of the log file. By default, the log file is located in the Log subdirectory of the Emerge.

Viewing Emerge Versions

You can access a window displaying the current versions of the Emerge application and components that you are running.
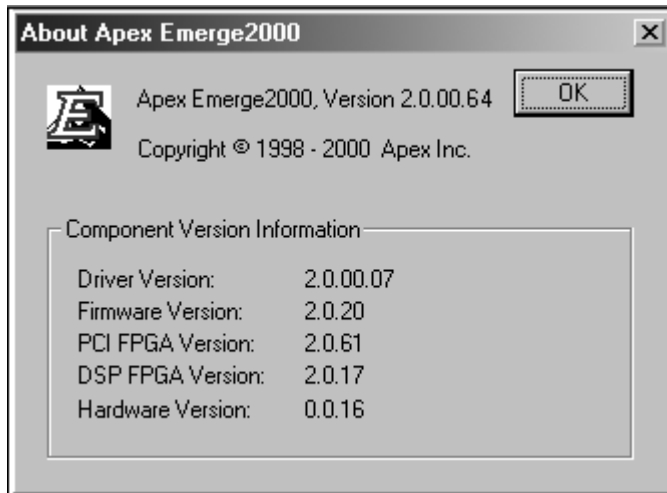
To verify the current version of the Emerge

1   Click **Help>About Apex Emerge** or select the Emerge icon on the Emerge application tool bar.

2   View all the version numbers to verify the current application and component information for your EmergeCard.

5. Troubleshooting

Symptom	Probable Cause	Recommended Solution
Emerge host mouse loses synchronization with target mouse	Method that mouse movements are processed and transferred	Press Align Mouse Pointers hotkey <F9>.
	Speed/acceleration settings incorrect on target system	Set mouse settings to recommended values on target system. See section Synchronizing Mouse Movement in the Operation chapter.
Mouse displays erratic behavior	Processing with target computer left mouse in indeterminate state	Reset the mouse by using the menu item Configure> Reset Keyboard and Mouse.
Slow video transmission	Large video images at high resolution	Choose a lower video resolution. In the LapLink software, select Optimize for low speed connection.
Video dithered (pixels in a solid region flicker) or snowy, ghosting, or untrue colors	Problems digitizing analog video from target computer into an 8-bit format (3-bits red, 3-bits green, 2-bits blue)	Press Emerge Adjustments function key <F6> and select Video Phase to sharpen the image. -or- Adjust Red, Green, or Blue Offset to correct color.
	Poor quality cables or long cables	Use short (7 feet or less) high-resolution cables.
		If using Viewpoint or SwitchBack with Cat 5 cabling, adjust cable compensation.
Video image jitters	Problems with video horizontal synchronization signal	If using Viewpoint or SwitchBack with Cat 5 cabling, adjust cable compensation.
	Other factors to consider: the target system's video card and tiering of switches that introduces a delay to the horizontal synchronization signal for each tier.	Press Emerge Adjustments function key <F6> and adjust Video Phase.
Problems in video feedback	Interlaced resolution	Interlaced resolutions not supported. Change to a supported video resolution.

Appendices

Getting Help

Where to Go for Assistance

Visit our Web site for the latest technical information and to download updates. www.apex.com

Contact your distributor or reseller

E-mail Apex Customer Support: support@apex.com

Phone Apex Customer Support: **800 861-5858**
Monday through Friday between 6 am and 6 pm Pacific Time

What Information to Provide to Apex Customer Support

Unit model number and serial number

Make and model of keyboard and mouse attached to the unit. These numbers are on the underside of each unit.

Make and model of computers used

Name and version of operating systems used

Note

If anything is missing or was damaged during shipment, contact the Apex Customer Support group. If you need to return any product, you will need a return materials authorization (RMA) number from Customer Support. Apex Inc. will not accept any returned materials without first issuing a RMA number. Please call Customer Support for details.

Note

Apex Inc. packages and ships your product in a manner designed to protect the system during shipping and handling. We recommend that you save the carton and packing materials until after your equipment is fully installed and operational.

Communications Regulation Information

ENGLISH

Federal Communications Notice (Class A Equipment)

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable interference when the equipment is operated in a commercial environment.

Radio Interference

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at personal expense.

DOC Class A Compliance

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus as set out in the interference-causing equipment standard entitled "Digital Apparatus," ICES-003 of the Department of Communications.

FRANÇAIS

Observation des normes—Classe A

Cet appariel numérique respecte les limites de bruits radioélectriques applicables aux appariels numérique de Classe A prescrites dans la norme sur le matériel brouilleur: "Appariels Numérique," NMB-003 édictée par le ministre des Communications.

DEUTSCH

BZT Hinweis

Hiermit wird bescheinigt, daß dieses Gerät in Übereinstimmung mit den Bestimmugen der BMPT-AmtsblVfg 243/1991 funk-entstört ist. Der vorschriftsmäßige Betrieb mancher Gerät (z.B. Meßsender) kann allerdings gewissen Einschränkungen unterliegen. Beachten Sie deshalb die Hinweise in der Bedienungsanleitung.

Dem Bundesamt für Zulassungen in der Telekommunikation wurde das Inverkehrbringen dieses Geräts angezeigt und die Berechtigung zur Überprüfung der Serie auf die Einhaltung der Bestimmugen eingeräumt.

Limited Warranty

Apex Inc. warrants that the Emerge remote access card (Product) will be free from defects in materials and workmanship under normal use and service for a period of one year from the date of receipt. Any implied **warranty on the switch is limited to one year.**

Customer Remedies

Apex's entire liability and your exclusive remedy shall be, at Apex's option, either (a) return of the price paid or (b) repair or replacement of the Product that does not meet Apex's Limited Warranty and which is returned to Apex with a copy of your receipt. THIS LIMITED WARRANTY IS VOID IF FAILURE OF THE PRODUCT HAS RESULTED FROM ACCIDENT, ABUSE, OR MISAPPLICATION. Any replacement Product will be warranted for the remainder of the original warranty period or six months, whichever is longer.

No Other Warranties

Apex Inc. disclaims all other warranties, either expressed or implied, including but not limited to implied warranties of merchantability and fitness for a particular purpose, with respect to the Product and the accompanying product manual and written materials. This Limited Warranty gives you specific rights, and you may have other rights which vary from state to state.

No Liability for Consequential Damages

In no event shall Apex be liable for any other damages whatsoever (including, without limitation, damages for loss of business profits, business interruption, loss of business information, or other pecuniary loss) arising out of the use of or inability to use the Product, even if Apex has been advised of the possibility of such damages. In any case, Apex's entire liability under any provision of this agreement shall be limited to the amount actually paid by you for the Product.

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