

Remote KVM Card User Guide

A Guide for Technically Qualified Assemblers of Intel® Identified Subassemblies/Products

Intel Order Number D96034-001

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Preface

About this Manual

Thank you for purchasing and using the Remote KVM Card.

This document provides a brief overview of the features of the Remote KVM card, software installation instructions and usage instructions. For steps to install your Remote KVM card hardware, see the Product Guide that came with your server system or at <http://support.intel.com/support/motherboards/server/>.

Manual Organization

Chapter 1 provides a brief overview of the Remote KVM Card.

Chapter 2 provides instructions on installing and configuring the Remote KVM Card, the system it is installed into, and the remote system(s) that will be used to manage the server in which the card is installed.

Chapter 3 provides instructions for using the on Remote KVM Card.

Appendices provide troubleshooting information and instructions for installing Red Hat* Linux through the Remote KVM Card.

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1 Remote KVM Card Features and Requirements

The Remote KVM Card is installed in a managed server to provide a way for users to see the server system VGA screen from a management system on the LAN, and to use the keyboard and mouse on the management system to remotely control the server. The Remote KVM Card supports the remote floppy drive (FD) function and remote CD (DVD) function. These functions transmit FD or CD-ROM data images to the Remote KVM Card and provide a way to boot the server with the image.

***Note:** PCI cards cannot be configured from the Remote KVM Application*

To install Red Hat Linux via the Remote KVM Card, text mode operation is required. See the Appendix for installation steps.*

Security

The remote console function uses these security measures to prevent unauthorized access:

- Authenticates the user ID and password at login.
- Checks the IP address for the management system against allowed IP addresses.

Management System Requirements

- Operating system: Microsoft Windows XP* Home Edition, Microsoft Windows XP Professional Edition, or Microsoft Windows 2000* Professional
- Processor: Minimum 1 GHz
- Memory: Minimum 128 MB
- Monitor resolution: Minimum 1024 x 768
- LAN: 100Base-TX

Managed Server Requirements

- Monitor resolution: Minimum 1024 x 768 with a refresh rate of 60 Hz
- Only one management system can be logged in to Remote KVM Card in the managed server at a time.

2 Installing and Configuring Remote Console Application

Remote KVM Card Setup

Use the Remote Console Setup utility, `rkvmcfg`, to configure the IP address and subnet mask for the remote console. The defaults are:

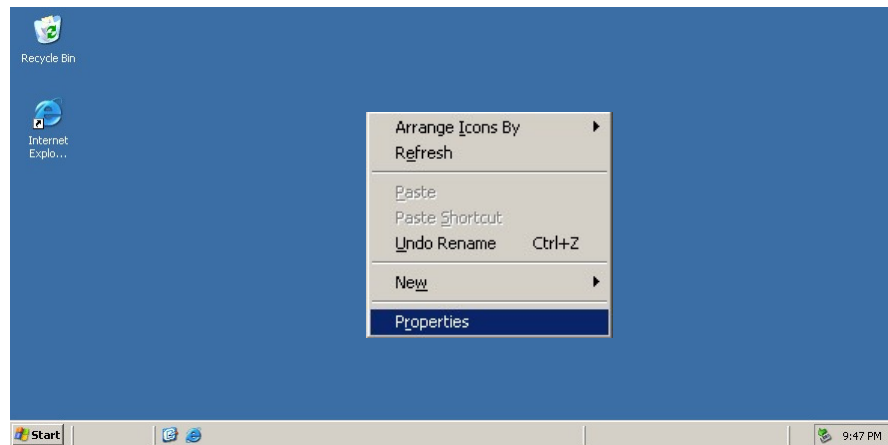
- IP Address: 0. 0. 0. 0
- Subnet Mask: 0. 0. 0. 0

Note: The LAN interface for the Remote KVM Card is not be activated with the default settings.

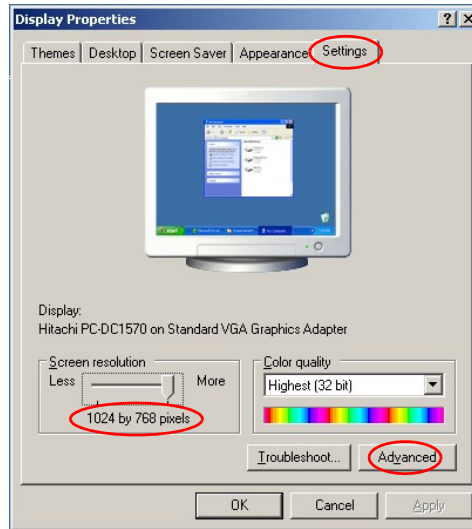
Managed System Video Configuration

Windows

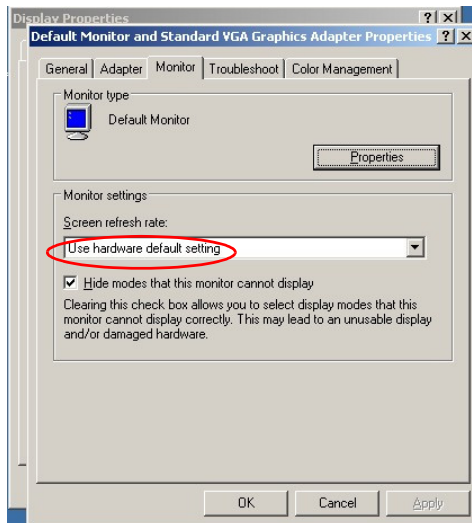
1. On the server system, right-click on the desktop and select “Properties”.



2. On the “Settings” tab, select a screen resolution of 1024 x 768, then click the “Advanced” tab.

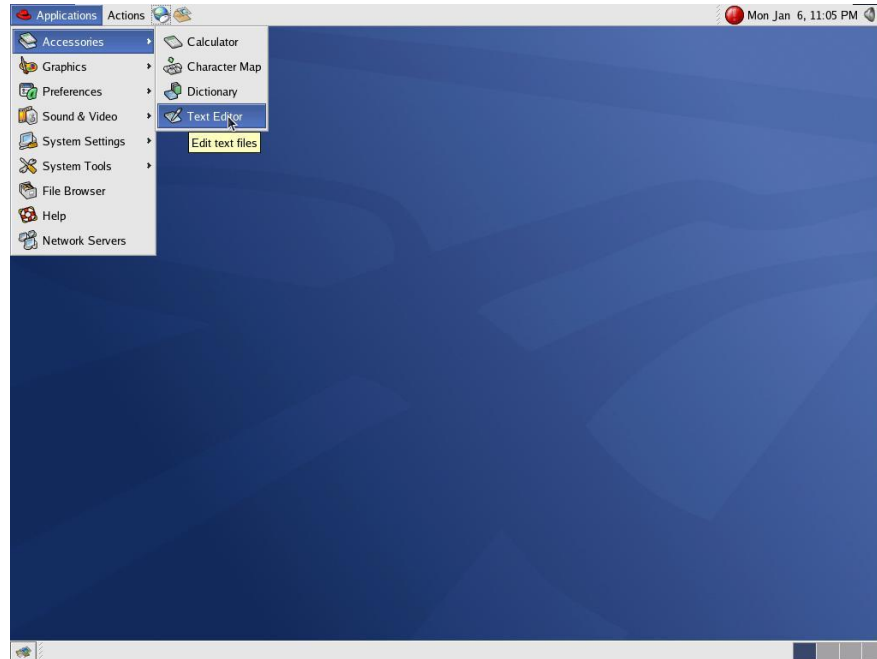


3. Confirm that the screen refresh rate is “Use hardware default setting” or “60 Hertz”. The option you see depends on your system configuration. Save your changes and exit the applet.

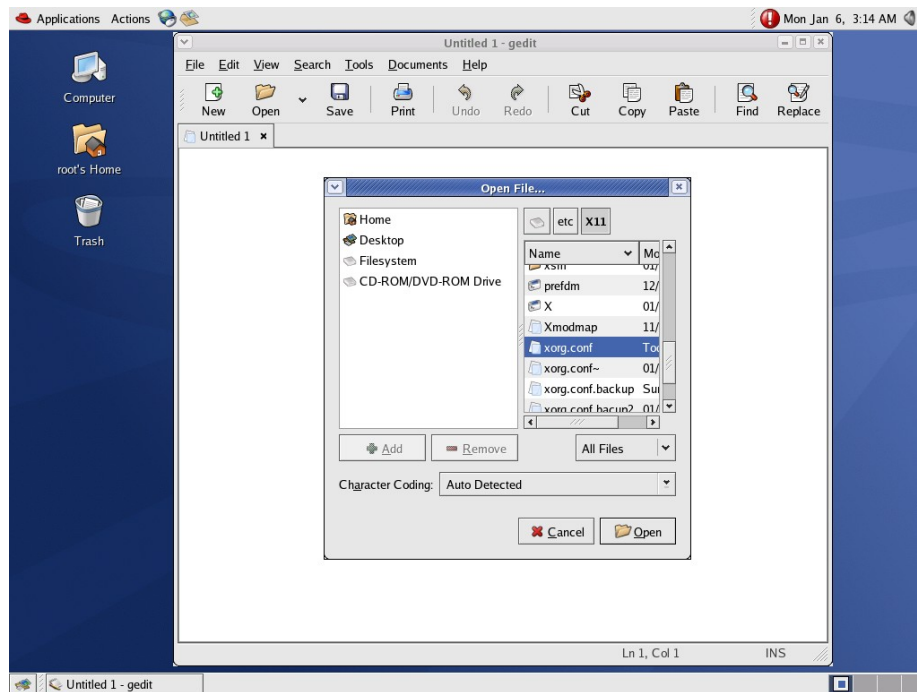


Linux

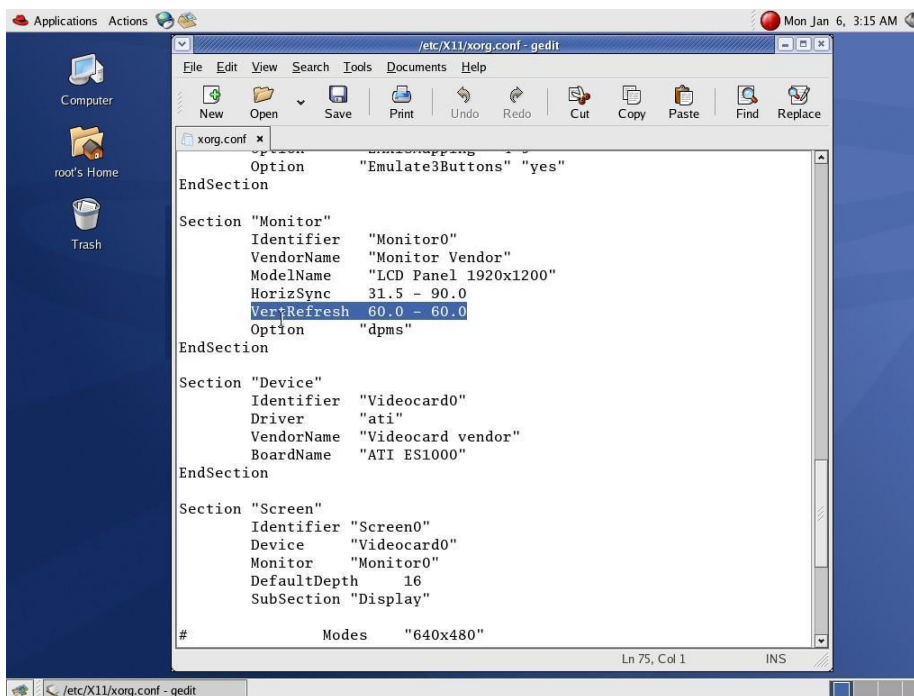
1. On the server system, select Applications > Accessories > Text Editor.



2. Open `\etc\x11\xorg.conf`.



- Under “Section “Monitor””, confirm that the VertRefresh value is 60.0-60.0. If not, change the value and save the new refresh rate.



- Add a “ModeLine” entry to set the synchronous timing value, using this information:
ModeLine "1024x768" 64.11 1024 1080 1184 1344 768 769 772 795 -HSync +Vsync

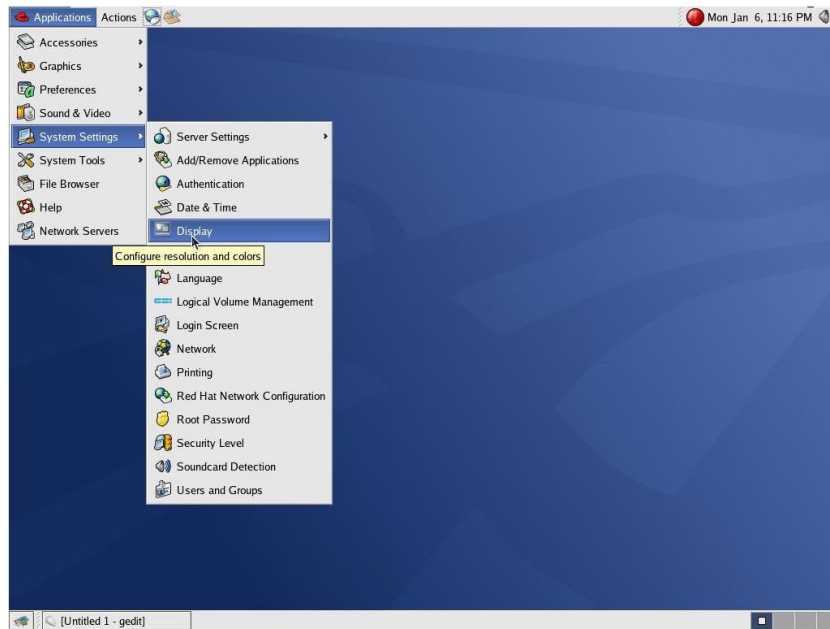
The result in the monitor section of “xorg.conf” looks like this:

```

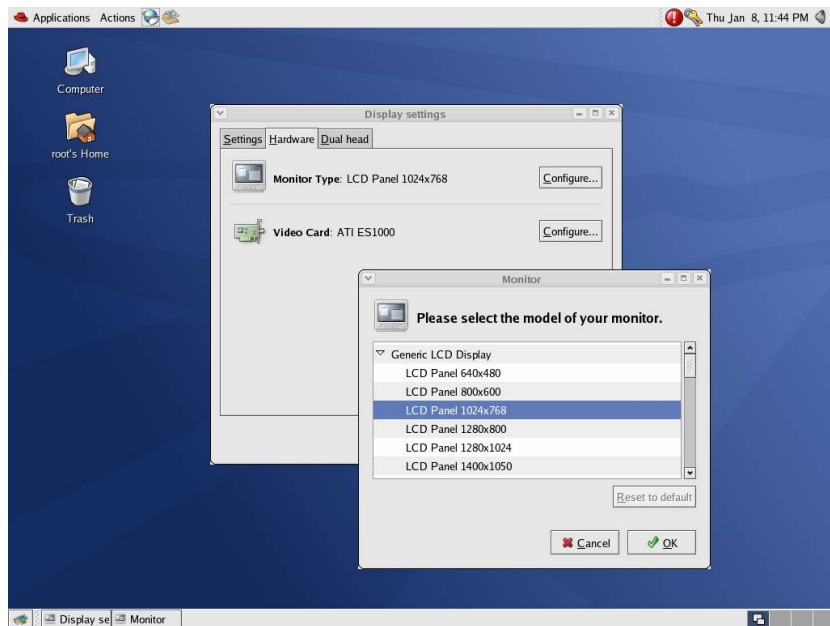
Section "Monitor"
ModeLine "1024x768" 64.11 1024 1080 1184 1344 768 769 772 795 -
HSync +Vsync
Identifier "Monitor0"
VendorName "Hitachi"
ModelName "1234"
HorizSync 31.5 - 120.0
VertRefresh 60.0 - 60.0
Option "dpms"
EndSection

```

5. To set the resolution, boot Xwindow: Select Applications > System Setting > Display.



6. Click “Hardware”, select an appropriate display, and click “Configure”. If using the remote console functions, select the resolution of 1024 x 768 on the monitor window.



7. Click “OK” until the applet closes.

Installing the Software on the Management PC

1. Boot to Windows on the management system.
2. Drag and drop `FDDUMP.exe` and `reclient.exe` from `\reclient_EN` on the Remote Console application CD to the management system desktop.

Configure Management System(s) and User(s)

You must register authorized users and management systems before they can remotely access the managed server through the remote control function. Up to four IP addresses and up to four users can be registered.

The Remote Console Setup utility provides a way to:

- Add and delete the IP address for the management system. If no management system IP address is registered, then the Remote KVM Card does not check the IP address at connection and any system is allowed to login, as long as the user ID and password are valid.
- Set a port number when using the remote console.
- Set a user ID and password.

Note: If you forget a password, you must delete the user ID and add it again.

The configuration is saved in the Remote KVM Card and, except for the password, can be viewed later by again using the Remote Console Setup utility. Passwords cannot be viewed or retrieved if lost.

The basic steps to configure a management system and user to connect to the Remote KVM Card are:

1. Connect a keyboard, mouse, and VGA monitor to the server system.
2. Boot to EFI, insert the Remote Console Setup CD, and load the Remote Console Setup utility from the CD. See [“Load the Remote Console Setup Utility” on page 11](#).
3. Register an IP address and Subnet Mask for the Remote KVM Card. See [“Configure the IP Address, Subnet Mask or Default Gateway for the Remote KVM Card” on page 12](#).
4. Register an IP address for the management system. See [“Configure or Delete the IP Address for a Management System” on page 12](#).
5. Configure a user ID and password for the server module and remote console. See [“Configure or Delete a User ID and Password” on page 13](#).
6. Set a port number if it is required. See [“Configure a TCP/IP Port Number for the Remote Console” on page 13](#).
7. Save the configuration. See [“Save the Configuration” on page 13](#).

At the bottom of each screen of the Remote Console Setup utility are a Message line and a Key line. The message line displays one of these messages, depending on the task you are performing:

Table 1. Remote Console Setup Utility Messages

Message	Definition
Time Out Error.	The Remote KVM Card is not responding.
New IP Address OK!!	You successfully entered the IP address.
It has already been registered!!	All input data have already saved.
Invalid Data!!	You typed an invalid entry.
Invalid Key!!	You pressed an invalid key.
Please select Number!!	Type the number of the item you want to select.
Please Input New User ID!!	Type a new user ID.
It is necessary by 6 characters or more!!	Your entry was too short. User names and passwords must be at least six characters long.
Please input New Password!!	Type a new password.
Please input Check Password!!	Type the authentication password.
New User OK!!	You successfully added a new user.
Password is different!!	You entered an incorrect password.
Please Input Old Password!!	Type the previous password / the password you want to change.
Change Password OK!!	You successfully changed the password.
Please Input Port Number!!	Type the port number.
New Port OK!!	You successfully added the port number.
It is not possible to add it more than this!!	You have reached the maximum allowed entries. You can enter up to four management IP addresses and up to four users.
It is not possible to delete it more than this!!	You cannot delete this selection.
Now Saving. Please Wait...	The setup is being saved to the Remote KVM Card.
Setup Finish.	The save to the Remote KVM Card is successfully completed.
The Changed Data Is Not Written. Do you save?	Do you want to save the change? Type Y for yes, or N for no.
Please Input IP Address!!	Type the IP Address for the Remote KVM Card.
Please Input Subnet Mask Address!!	Type the subnet mask address for the Remote KVM Card.

Table 1. Remote Console Setup Utility Messages

Message	Definition
Please Input Default Gateway Address!!	Type the default gateway address for the Remote KVM Card.
New Subnet Mask OK!!	You successfully entered the subnet mask address.
New Default Gateway OK!!	You successfully entered the default gateway address.
Do You Exit?	Do you want to exit to the previous screen or exit the application? Type Y for yes, or N for no.
There is not Password that You can change!!	You can only change previously defined passwords. No password is defined.
17 or more characters cannot be inputted.	The maximum entry size is reached. The password must be between 6 and 16 characters long.
13 or more characters cannot be inputted.	The maximum entry size is reached. The user name must be between 6 and 12 characters long.

The Key line provides information about your entry options on the screen. For example, on the Root Menu, you are prompted to type the numbers 1, 2, or 3, the letter Q, or to press the Esc key.

```

#### Remote KVM Parameter Setup Utility VerXX-XX ####

1:Remote KVM Card Information

2:Remote Console Information

3:User Information

4:Port Information

Q:Quit Setup(Save Data)

Message :
Key [1]:Client Info,[2]:User Info,[3]:Port,[Q]:Quit,[Esc]:Escape
>

```

On the Add User screen, you are prompted to enter a user ID and are provided with the allowed entries for this screen: the Enter key, or the characters [0-9 a-z A-Z ! # \$; . < > / ?] .

```
#### Remote KVM Parameter Setup Utility  VerXX-XX ####

----- User List -----

[1]:

[2]:

[3]:

[4]:

Message :Please Input New User ID.!!
Key [Ent] [0-9,a-z,A-Z,!#$;.<>/?]
>
```

Load the Remote Console Setup Utility

Boot to EFI and insert the Remote Console Setup CD. Type `rkvmc fg` and press [Enter] to display the Root Menu. Select an appropriate menu option:

1. Remote KVM Card Information: Access the “Remote KVM Information Menu” to add or delete the Remote KVM Card IP address, subnet mask, or default gateway.
2. Remote Console Information: Access the “Address Menu” to add or delete a management system IP address.
3. User Information: Access the “User Menu” to add or delete a user.
4. Port Information: Access the “Port Menu” to configure a port number.
- Q. Quit Setup (Save Data): Save the configuration and exit.

Configure the IP Address, Subnet Mask or Default Gateway for the Remote KVM Card

Select option 1 from the Root Menu. The Remote KVM Information Menu displays. To initially configure your system, select each item to assign the correct value:

1. Change IP Address: Access the “IP Address” screen. After selecting this option, type the IP address, and then press [Enter].
 2. Change Subnet Mask: Access the “Subnet Mask” screen. After selecting this option, type the subnet mask, and then press [Enter].
 3. Change Default Gateway: Access the “Default Gateway” screen. After selecting this option, type the default gateway, and then press [Enter].
- Q. Return to the previous screen.
Esc.-Go to the “Save Setup” screen.

Confirm the information is correct, and then press [Q] to return to the Root Menu.

Configure or Delete the IP Address for a Management System

If no management system IP address is registered, then the Remote KVM does not check the IP address when the management system attempts to connect, and if the user name and password are valid, then the connection is allowed. Configuring an IP address for the management system(s) provides greater security.

Select option 2 from the Root Menu. The Address Menu displays. Select the appropriate menu option. Use option 1 to initially configure your system.

1. Add Remote Console IP Address: Access the “Add Address” screen to add an IP address for a management system. Up to four IP addresses can be registered. After selecting this option, type an IP address, and then press [Enter].
 2. Delete Remote Client IP Address: Access the “Delete Address” screen to remove access from a management system. After selecting this option, select the IP address to delete, and then press [Enter].
- Q. Return to the previous screen.
Esc.-Go to the “Save Setup” screen.

Confirm that the address has been added to the list, and then press [Q] to return to the Root Menu.

Configure or Delete a User ID and Password

You can register up to four users. User IDs must be between 6 and 12 characters long. Passwords must be between 6 and 16 characters long. Allowed characters for both the User ID and password are [0-9 a-z A-Z ! # \$; . < > / ?]

Select option 3 from the Root Menu. The User Menu displays. Select the appropriate menu option. Use option 1 to initially configure your system.

1. Add User: Access the “User ID Addition” screen. After selecting this option, type the user ID, and then press [Enter].
 2. Delete User: Access the “User ID Deletion” screen. After selecting this option, select the user to delete, and then press [Enter].
 3. Change Password: Access the “Password Change” screen. After selecting this option, select the user that needs the password and press [Enter]. Then type the password and press [Enter].
- Q. Return to the previous screen.
Esc.-Go to the “Save Setup” screen.

Confirm that the information is correct, and then press [Q] to return to the Root Menu.

Configure a TCP/IP Port Number for the Remote Console

On the port menu, you can set a port number for the communication between the Remote KVM Card and management system when using the remote console.

Select option 4 from the Root Menu. The port menu displays. If needed, select option 1 to configure the port number. The port number can be anything from 5001 to 65535, except for 21001.

1. Change Port: Access the “Port Number Change” screen. After selecting this option, type the port number, and then press [Enter].
- Q. Return to the previous screen.

Confirm that the port number is correct, and then press [Q] to return to the Root Menu.

Save the Configuration

Select [Q] from the Root menu. The "Setup Save" screen displays. Choose the appropriate option.

- Y. Enable the setup
N. Do not enable the setup.
Esc.-Go to the Root Menu.

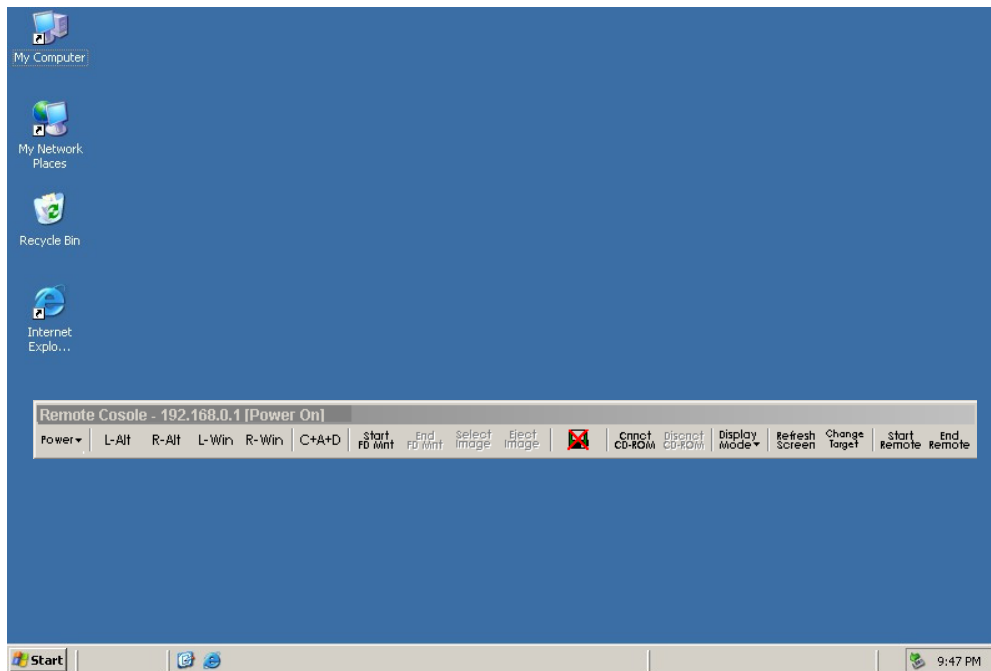
It takes about one minute to complete the setup saving after [Y] is selected. “Setup Finish” is displayed after the save completes.


3 Using the Remote Console Application

Logging in to the Server System and Navigating the Remote Console Application

1. Double-click the remote console application icon shown on the desktop in the figure below.
2. In the “Connect to target” dialog, type the:
 - User ID
 - Password
 - IP address: The IP address for the Remote KVM Card
 - Port number
3. Click “OK”.

The server system screen displays with the remote console toolbar. The toolbar options are as follows.



Toolbar Option	Description	
Power	Power on	Power on the target system
	Forced power off	Power off the target system. Use this after you shut down the operating system. At power off the screen is not cleared and the last image remains. The screen is redrawn at the next boot.
	Reset	Reset the target system. At reset the screen is not cleared and the last image remains. The screen is redrawn at the next boot.
	NMI	Initiate on operating system dump. Operating system dependent
L-Alt	Use the "Left Alt" key. Once selected, this key remains active until it is clicked again.	
R-Alt	Use the "Right Alt" key. Once selected, this key remains active until it is clicked again.	
L-Win	Use the "Left Windows" key. Once selected, this key remains active until it is clicked again.	
R-Win	User the "Right Windows" key. Once selected, this key remains active until it is clicked again.	
C+A+D	Use the "Ctrl+Alt+Del" keys.	
Start FD Mnt	Mount the virtual floppy drive.	
End FD Mnt	Unmount the virtual floppy drive.	
Select Image	Select floppy drive image data to be used in the virtual floppy drive.	
Eject Image	Eject the floppy drive image data used in the virtual floppy drive.	
	Indicates the status of the virtual floppy drive.	
Connect CD ROM	Mount the remote CD-ROM drive.	
Discnct CD ROM	Unmount the remote CD-ROM drive.	
Display Mode	Full Color	24-bit color mode. 8-bit per red, green, and blue.
	Decrease Color	12-bit color mode. 4-bit per red, green, and blue.
	Gray Scale	8-bit brightness for mono color.
Refresh Screen	Redraw the management system screen.	
Change Target	Return to the login screen.	
Start Remote	Start the remote console functions.	
End Remote	Terminate the remote console functions.	

Reducing the color mode decreases the network bandwidth. If you change the color mode, click “Refresh Screen” to immediately apply the change.

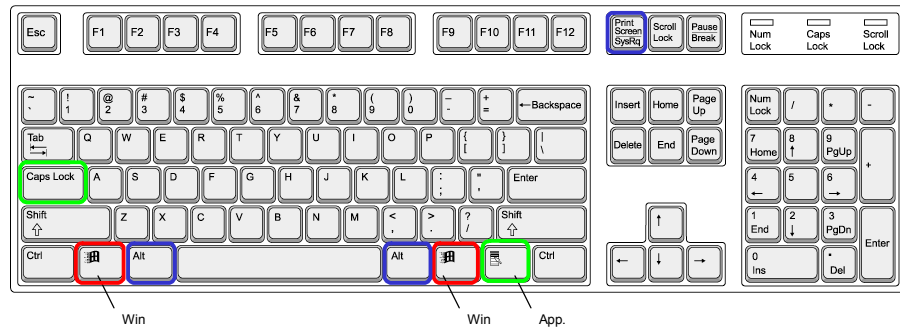
To begin using remote control functions, click “Start Remote” on the toolbar. The remote mouse and keyboard are activated. The toolbar disappears and actions you take occur on the remote system.

To redisplay the toolbar, press [Alt] + [G]. The remote mouse and keyboard are deactivated.

To terminate remote control, click “End Remote” on the toolbar.

Keyboard Restrictions

When using remote console functions, keyboard input from the management system can be transmitted to the Remote KVM Card. Restricted keys are as shown below.



- = Operates the management system, but not the remote server system
- = Does not work the same as the remote server system key
- = Do not use

Table 2. Restricted Keys

Restricted Key	Restrictions	Alternatives
Caps Lock Key	The Caps Lock key cannot be used by itself from the management system. Only the “Shift+Caps Lock” key combination is allowed.	Change the mode directly on the IME toolbar with the mouse, and the “Caps Lock” key can be enabled.

Table 2. Restricted Keys

Restricted Key	Restrictions	Alternatives
Left Alt Key Right Alt Key	When either the left Alt key or the right is used from the management system, the Alt key operates only the management system, not the system equipment. Both keys are used for shortcut keys of the remote console function. (Refer to p.69.)	Click "R-Alt" or "L-Alt" on the Remote Console Application toolbar.
Print Screen Key	The key performs a screen capture on the management system, not on the remote server system.	Terminate the Remote Console function before using this key.
Left Windows Key Right Windows Key	Do not use these keys. When either of these keys is pressed on the management system, the Windows* Start menu is displayed on the management system. The key remains pressed on the server system. If you accidentally press one of these keys, terminate and restart the Remote Console Application.	Click the "L-Win" or "R-Win" key on the Remote Console application toolbar.
App. Key	This keystroke is not transmitted to the remote server system.	Right-click the mouse.

- Pressing more than one key at a time: Except for the left or right shift key, the left or right Ctrl key, and the left or right Alt key, two keys cannot be pressed at once.
- Recovering from pressing an unallowed key: Terminate the remote console application once, and then reboot the remote console application to be recovered.
- Pressing an input key with a Windows key or the Alt key: The system enters a status where keys are held in the pressed state if the Windows key or the Alt key is pressed at the same time. Press Esc to recover.

Shortcut Keys

These shortcut keys work on the management system.

Table 3. Shortcut Keys

Key Input	Description
Alt + Z	Use this combination to click and hold the left Alt key on the server. Use this key combination again to release the Alt key on the server.
Alt + M	Use this combination to click and hold the right Alt key on the server. Use this key combination again to release the Alt key on the server.
Alt + T	Transmit a FD image file to the server to execute the remote FD.
Alt + C	Disconnect the remote FD and delete the FD image file from the Remote KVM Card.
Alt + L	Simulates pressing and releasing the left Ctrl + left Alt + Delete keys.
Alt + G	Change modes between local mode (toolbar is displayed) and remote mode (toolbar is hidden).
Alt + E	Terminate the remote console.
Alt + X	Simulates pressing and holding the left Windows key. Use this key combination again to release the Windows key on the server.
Alt + N	Simulates pressing and holding the right Windows key. Use this key combination again to release the Windows key on the server.

Display and Transition States

The client console supports only a full-screen mode that displays the the target server system screen. The client console has four states:

- The icon state before start-up.
- The login waiting state while the Remote KVM Card accepts the connection destination and authentication information.
- The local mode state operating specific keys or a remote floppy drive.
- The remote mode state transmitting keyboard or mouse operation without modification.

In the local mode state, the client console displays a toolbar that indicates supported keys. When it detects a session close in the local mode or remote mode state, the client console displays a message, “Communication has been disconnected” and shifts to the login waiting state.

The Virtual Floppy Drive (FD)

The remote FD function activates the Remote KVM Card as a virtual FD that can be used from the server. The virtual FD is recognized as a USB read-only FD.

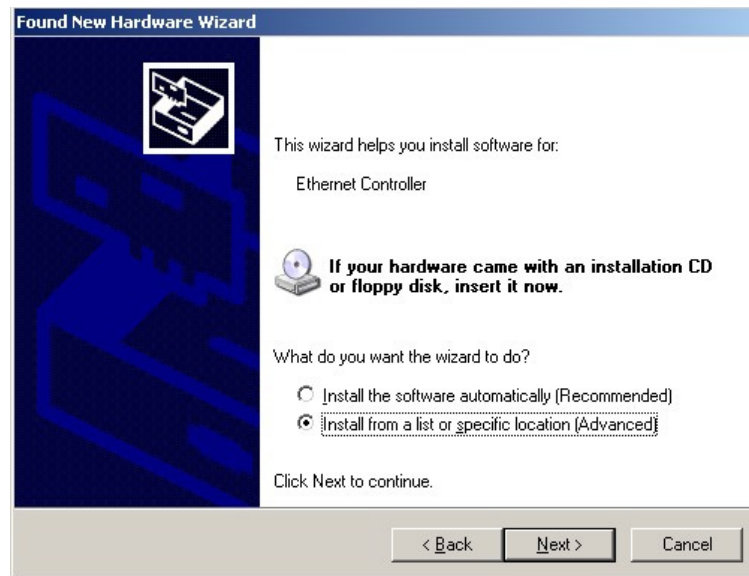
Installing SVPFD.inf (Windows* only)

The first time the remote FD function is used on a Windows* system, the “SVPFD.inf” installation wizard starts. To install “SVPFD.inf”:

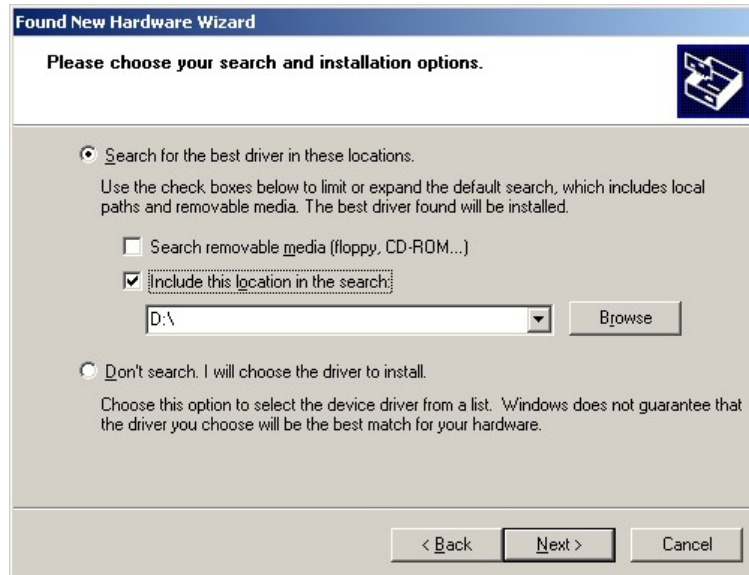
1. Click “Start FD Mnt” button. The Welcome screen displays. Click “Next”.



2. Select “Install from a list or specific location (Advanced)”, and click “Next”.



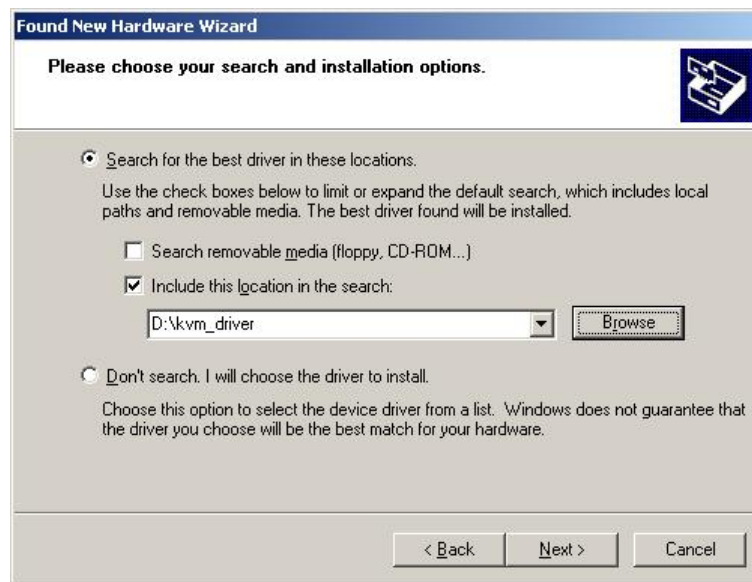
3. Select “Search for the best driver in these locations” and “Include this location in the search”. Select the appropriate drive for the CD-ROM and click “Browse”.



4. Open the “kvm_driver” folder.
5. If using Windows Server 2003 x64 or Windows Server 2003 Enterprise x64 Edition open the 64bit folder. Otherwise, open the 32bit folder. Click "OK".



6. The folder name displays on the screen. Confirm it is correct and then click “Next”.



7. The installation begins. A screen may display stating that the software has not passed Windows Logo testing. This is not an error. Click “Continue Anyway”.
8. You are prompted to click “Finish” to close the wizard when the installation completes. Click “Finish”.

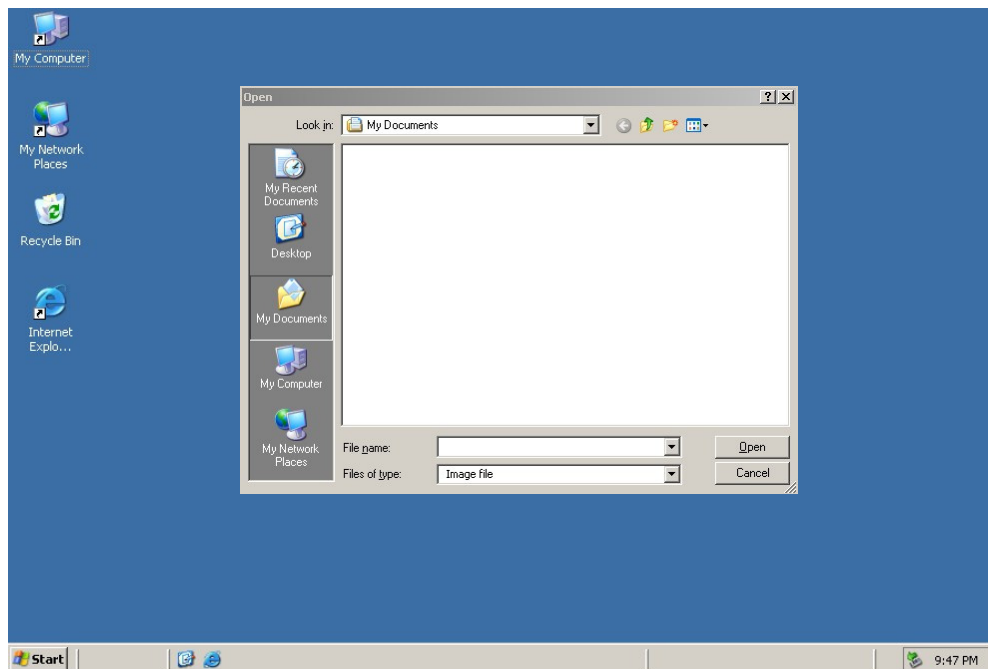
FD Image File

The FD content must be turned into an image file before you can use the Remote FD function. To make the image file:

1. Double-click the “FDDUMP” icon on the management system desktop. If FDDUMP is not on the desktop, see [“Installing the Software on the Management PC” on page 8](#).
2. You are prompted by a screen that asks for the drive letter and file. Select drive A: and click “Browse”.
3. Browse for the filename and then click “Save”.
4. Click “Start”. A progress box displays as the image file is created.
5. When the image file is completed, click “Exit” to terminate FDDUMP.

Starting the Remote FD (Windows)

1. Click “Start FD Mnt” on the remote console toolbar.
2. Click “Select Img”. The Open screen displays.



3. Select the FD image to be used and then click “Open”. The FD image is transmitted to the server.

Starting the Remote FD (Linux)

1. Select “Start FD Mnt” and then “Select Image” on the remote console toolbar.
2. When an icon “1.5M Removable Media” appears on the desktop, click the icon.
3. In the Hardware Browser window, that appears, select “Floppy Disks” and then “Hitachi SVPMASS”. The mounted file displays.



Starting the Remote FD (EFI Shell)

A virtual FD is recognized from the EFI shell at boot-up, when the EFI shell is entered and when “map -r” is executed. To use the FD device from the EFI shell:

1. Power on or reset the management system.
2. Before starting the EFI shell, select “Start FD Mnt” and then “Select Image” on the remote console toolbar.
3. Select “EFI shell” from the EFI boot menu. The virtual FD is activated after the EFI shell is booted.

If virtual FD is started from “Start FD Mnt” after entering the EFI shell, then the device is recognized from the EFI shell by the shell command “map -r”.

The Remote CD / DVD

The Remote CD / DVD function activates the Remote KVM Card as a virtual CD drive that can be used from the server. The target server system uses the management system's CD-ROM or DVD-ROM drive.

1. Open the management system's CD-ROM drive.
2. Click “Connect CD ROM” on the Remote Console toolbar. To avoid conflicts with the system auto-run function, close CD-ROM drive *after* clicking “Connect CD ROM”.
3. The list of management system CD-ROM drives is displayed. Select the drive to mount to the Remote KVM Card.
4. Insert the CD-ROM disk and close the CD-ROM drive. The virtual CD is added to the target system.

On-screen Messages

These messages may be displayed on the management system:

Table 4. Management System Messages

Message	State	Description / Correction
No image signals have arrived.	No Sync	The screen goes black, except for the message. When the image signals are recovered, this message is clears.
Communication with the server was disconnected	Session Error	The display does not change. Click “OK” to return to the login screen.
ID or password is not correct.	ID / Password Error	Click “OK” to return to the login screen.
Provided client does not match the preset client	Address Error	Click “OK” to return to the login screen.
Remote console has already been operating. To newly start the remote console, terminate the remote console program currently operating.	Start Error	Click “OK” to return to the login screen.
Remote console has already been operating on this server	Busy	Click “OK” to return to the login screen.
No server exists.	No Connect	Click “OK” to return to the login screen.

Appendix A: Red Hat* Linux Install through Remote KVM Card

Preparation and Requirements

- Format your hard drive from the SAS utility on EFI before you begin.
- Do not cancel the OS-image loading after the process is started on the EFI screen.
- Use Red Hat Enterprise Linux 4 Advanced Server (RHEL4 AS), update 3 or later.

Installation

1. Open the management system CD-ROM drive, and then click “Connect CD ROM” on the Remote Console toolbar.
2. Insert the first install medium into CD drive and power on the remote system.
3. Boot to EFI and select EFI Shell from the EFI menu
4. Select the CD. (CD=fs0 in the example below).
5. Type `EFI Shell>fs0:`, and then `fs0:\> elilo linux text..`

```
EFI Boot Manager ver 1.10 [14.62]

Please select a boot option

EFI Shell [Built-in]
Boot option maintenance menu

Use ^ and v to change option(s). Use Enter to select an option
Loading.: EFI Shell [Built-in]

EFI Shell version 1.10 [14.62]
Device mapping table
fs0  : Acpi(PNP0A03,0)/Pci(1D|1)/Usb(0, 0)/CDROM(Entry0)

Shell> fs0:

fs0:\> elilo linux text
```

6. On the CD media check screen, select “Skip”.

```

Welcome to Red Hat Enterprise Linux

+-----+ CD Found +-----+
|
| To begin testing the CD media before
| installation press OK.
|
| Choose Skip to skip the media test
| and start the installation.
|
|         +-----+         +-----+
|         | OK |           | Skip |
|         +-----+         +-----+
|
+-----+

<Tab>/<Alt-Tab> between elements | <Space> selects | <F12> next
screen

```

7. Configure the following items:.

Table 5. Configuration Options

Configuration	Screen Menu	Default Value and Notes
Select the installation language.	Language Selection	English
Select a keyboard to configure.	Keyboard Configuration	U.S. English
Set up disk partitioning.	Disk Partitioning Setup	Automatically partition When the Warning screen displays, select “Yes” if there is no problem. You cannot configure LVM by a manual operation.
	Automatic Partitioning	Remove all partitions. When the Warning screen displays, select “Yes” if there is no problem.
	Disk Setup	no default

Table 5. Configuration Options

Configuration	Screen Menu	Default Value and Notes
Configure network settings.	Network Configuration	IP address: DHCP Host name: automatically via DHCP You must configure host names for all recognized network ports . (eth0, eth1...ethn)
	Firewall Configuration	Firewall Configuration: Enable Firewall When selecting "No firewall", the Warning screen displays. Select "Proceed" if there is no problem. Enable SELinux: Active
Select another language to use.	Additional Language Support	English (USA)
Select a time zone.	Time Zone Selection	Location: America/New_York Description: Eastern Time
Configure a root password.	Set Root Password	no default
Select packages to install.	Package Installation Defaults	Install default software packages. To choose packages to install, select "Customize software packages to be..."
	Package Group Selection	To install all packages, select "Everything in Miscellaneous" at the bottom of the menu. When this is selected, there is a delay while the information is processed. This is not an error. Do not attempt to proceed before the system is ready.

8. Follow the steps under ["Linux" on page 5](#) to change the vertical refresh rate and add the additional "ModeLine" entry.

Appendix B: Troubleshooting

Symptom	Solutions, in Priority Order
User ID / password cannot be registered.	<p>Up to four user IDs can be configured. Make sure the user is registered.</p> <p>The user ID must be between 6 and 12 characters long. The password must be between 6 and 16 characters long.</p> <p>Display the Remote KVM Card information to confirm the configuration.</p> <p>Replace the Remote KVM Card.</p>
Unable to login with the remote console application.	<p>Check LAN cable connections.</p> <p>Make sure the user ID and password configured in the Remote KVM Card are correct.</p> <p>Make sure the network configuration is correct, including the IP address and subnet mask.</p> <p>Display the Remote KVM Card information to confirm the configuration.</p> <p>Replace the Remote KVM Card.</p>
The mouse moves slowly and screens appear slowly when the remote console function is used.	<p>It is normal for the mouse and screens to appear slightly slower than when working on the local system.</p> <p>If the speed seems excessively slow or the screen does not display correctly, make sure the the refresh rate is correct.</p> <p>If another application is heavily using CPU time, close the other application or wait until it completes its processing task to see if the speed improves.</p> <p>Heavy LAN traffic can cause slower rates. It is recommended that you reserve more than 40 Mbps of LAN traffic for Remote KVM Card.</p> <p>Try a different mouse.</p> <p>Try a different management system.</p> <p>Issue a ping command from the management system to confirm the LAN connection. If a timeout occurs, verify the IP address and LAN connector, cable, router switch, or another device for LAN connection.</p> <p>Display the Remote KVM Card information to confirm the configuration.</p> <p>Replace the Remote KVM Card.</p>

Symptom	Solutions, in Priority Order
The mouse or keyboard cannot be used from the remote console function.	<p>Make sure:</p> <ul style="list-style-type: none"> Both Alt keys and both Windows keys do not remain pressed. The network environment (the fire wall, etc.) is correctly set up. Close and restart the Remote Console. Try a different mouse. Display the Remote KVM Card information to confirm the configuration. Replace the Remote KVM Card.
The HID mouse device or HID keyboard device is indicated with "!" symbol in the device manager.	<ul style="list-style-type: none"> Terminate the Remote Console Application, shut down the server system, and unplug / plug in the server power cable. Try a different mouse or keyboard.
The keyboard operates abnormally. For example, the Alt key remains pressed when the remote console function is used.	<ul style="list-style-type: none"> Terminate and restart the Remote Console Application. Try a different keyboard.
A message is displayed: "This is not a fixed client."	<ul style="list-style-type: none"> The management system is not configured in the Remote KVM Card. Configure the IP address for this management system in the Remote KVM Card or log in from a configured system. Display the Remote KVM Card information to confirm the configuration. Replace the Remote KVM Card.
A message is displayed: "The remote console function is in execution. If using another remote console function, terminate the current one."	<ul style="list-style-type: none"> More than one remote console function is trying to attach to the managed server. Only one management system can access the server at a time.
A message is displayed: "The remote console is in execution on this server."	<ul style="list-style-type: none"> More than one remote console function is trying to attach to the managed server. Only one management system can access the server at a time.
A message is displayed: "The server does not exist."	<ul style="list-style-type: none"> Check the IP address and port of the managed server. Issue a ping command from the management system to confirm the LAN connection. If a timeout occurs, verify the IP address and LAN connector, cable, router switch, or another device for LAN connection. Display the Remote KVM Card information to confirm the configuration. Replace the Remote KVM Card.
"CapsLock" cannot be set from the management system.	<ul style="list-style-type: none"> The CapsLock key alone is disabled. Instead, use [Shift] + [CapsLock]. If you are already using [Shift] + [CapsLock], try a different keyboard.

Symptom	Solutions, in Priority Order
PCI cards cannot be setup from the Remote KVM Application	Key inputs from the Remote KVM Application are ignored if you try to use them to configure a remote PCI card. Use a local USB keyboard or use the console redirection function (serial port terminal) to setup a PCI card.
Unable to install Red Hat* Linux from the Remote KVM Application	Install Red Hat* Linux via the Remote KVM Card by text mode.

Appendix C: Getting Help

World Wide Web

<http://support.intel.com/support/motherboards/server/>.

Telephone

All calls are billed per incident, levied in local currency at the applicable credit card exchange rate plus applicable taxes. (Intel reserves the right to change the pricing for telephone support at any time without notice).

Before calling, fill out an Issue Report Form. For the fastest service, please submit your form via the Internet.

For an updated support contact list, see <http://www.intel.com/support/9089.htm/>

U.S. and Canada

See <http://support.intel.com/support/motherboards/server/>.

Europe

Belgium 02 714 3182
Denmark ... 38 487077
Finland 9 693 79297
France..... 01 41 918529
Germany ... 069 9509 6099
Holland 020 487 4562
Italy..... 02 696 33276
Norway 23 1620 50
Spain 91 377 8166
Sweden..... 08 445 1251
UK..... 870 6072439

In Asia-Pacific Region

Australia.... 1800 649931
Cambodia.. 63 2 636 9797 (via Philippines)
China 800 820 1100 (toll-free)
..... 8 621 33104691 (not toll-free)
Hong Kong 852 2 844 4456
India..... 0006517 2 68303634 (manual toll-free. You need an IDD-equipped telephone)
Indonesia ... 803 65 7249
Korea 822 767 2595
Malaysia 1 800 80 1390
Myanmar... 63 2 636 9796 (via Philippines)
New Zealand 0800 444 365
Pakistan.... 632 63684 15 (IDD via Philippines)
Philippines 1 800 1 651 0117
Singapore .. 65 6213-1311
Taiwan 2 2545-1640
Thailand 1 800 631 0003
Vietnam 632 6368416 (IDD via Philippines)

Japan

Domestic.... 0120 868686
Outside country 81 298 47 0800

Latin America

Argentina .. Contact AT&T USA at 0-800 222 1288. Once connected, dial 800 843 4481
Brazil 001-916 377 0180
Chile
Easter Island. Contact AT&T USA at 800 800 311. Once connected, dial 800 843 4481
Mainland and Juan .. Contact AT&T USA at 800 225 288. Once connected, dial 800 843 4481

Colombia... Contact AT&T USA at 01 800 911 0010. Once connected, dial 800 843 4481

Costa Rica . Contact AT&T USA at 0 800 0 114 114. Once connected, dial 800 843 4481

Ecuador

(Andimate) Contact AT&T USA at 1 999 119. Once connected, dial 800 843 4481

(Pacifictel) Contact AT&T USA at 1 800 225 528. Once connected, dial 800 843 4481

Guatemala. Contact AT&T USA at 99 99 190. Once connected, dial 800 843 4481

Mexico Contact AT&T USA at 001 800 462 628 4240. Once connected, dial 800 843 4481

Miami 1 800 621 8423

Panama..... Contact AT&T USA at 00 800 001 0109. Once connected, dial 800 843 4481

Paraguay ... 001 916 377 0114

Peru 001 916 377 0114

Uruguay..... 001 916 377 0114

Venezuela... Contact AT&T USA at 0 800 2255 288. Once connected, dial 800 843 4481

