



Dominion® KSX II

Quick Setup Guide

Thank you for your purchase of the KSX II™, the industry's most full-featured, enterprise-class, secure, digital KVM (Keyboard, Video, Mouse) and serial console switch.

For details on using the KSX II, access online help from the application, or download help in PDF format from the [Support page](#) on Raritan's website.

Package Contents

Each KSX II ships as a fully-configured stand-alone product in a standard 1U 19" rackmount chassis.

Each KSX II device ships with the following contents:

- 1 - Dominion KSX II device
- 1 - Quick Setup Guide
- 1 - Rackmount kit
- 1 - AC power cord
- 1 - Cat5 network cable
- 1 - Cat5 network crossover cable
- 1 - Set of 4 rubber feet (for desktop use)
- 1 - Application notes
- 1 - Warranty card
- 1 - Phone line cable
- 1 - Loopback adapter

In Raritan products that require Rack Mounting, please follow these precautions:

- Operation temperature in a closed rack environment may be greater than room temperature. Do not exceed the rated maximum ambient temperature of the appliances. See **Specifications** in online help.
- Ensure sufficient airflow through the rack environment.
- Mount equipment in the rack carefully to avoid uneven mechanical loading.
- Connect equipment to the supply circuit carefully to avoid overloading circuits.
- Ground all equipment properly, especially supply connections, such as power strips (other than direct connections), to the branch circuit.

Rack Mounting

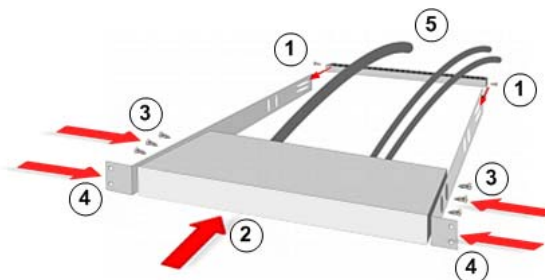
The KSX II can be mounted in 1U (1.75", 4.4 cm) of vertical space in a standard 19" equipment rack.

Note: The Raritan device depicted in the rack mounting diagrams is for example purposes only and may not depict your device. The mounting instructions are specific to your device.

Forward Mount

The steps correspond to the numbers shown in the front rackmount diagrams.

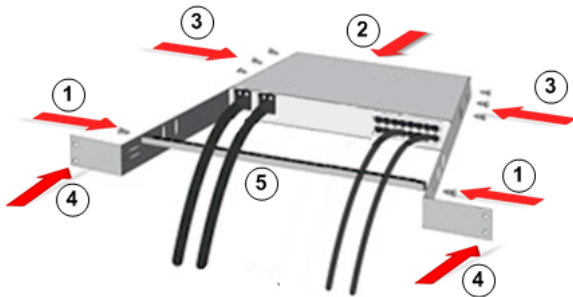
1. Secure the cable-support bar to the back end of the side brackets using two of the included screws.
2. Slide the KSX II between the side brackets, with its rear panel facing the cable-support bar, until its front panel is flush with the "ears" of the side brackets.
3. Secure the KSX II to the side brackets using the remaining included screws (three on each side).
4. Mount the entire assembly in your rack, and secure the side brackets' ears to the rack's front rails with your own screws, bolts, cage nuts, and so on.
5. When connecting cables to the rear panel of the KSX II drape them over the cable-support bar.



Rear Mount

The steps correspond to the numbers shown in the rear rackmount diagrams.

1. Secure the cable-support bar to the front end of the side brackets, near the side brackets' "ears," using two of the included screws.
2. Slide the KSX II between the side brackets, with its rear panel facing the cable-support bar, until its front panel is flush with the back edges of the side brackets.
3. Secure the KSX II to the side brackets using the remaining included screws (three on each side).
4. Mount the entire assembly in your rack and secure the side brackets' ears to the rack's front rails with your own screws, bolts, cage nuts, and so on.
5. When connecting cables to the rear panel of the user station or switch, drape them over the cable-support bar.



Step 1: Configure the KVM Target Servers

For optimal bandwidth efficiency and video performance, KVM target servers running graphical user interfaces such as Windows®, Linux®, X-Windows, Solaris™, and KDE may require configuration.

The desktop background does not need to be completely solid, but desktop backgrounds featuring photos or complex gradients might degrade performance.

Target Server Video Resolutions

For optimal bandwidth efficiency and video performance, KVM target servers running graphical user interfaces such as Windows®, Linux®, X-Windows, Solaris™, and KDE may require configuration.

The desktop background does not need to be completely solid, but desktop backgrounds featuring photos or complex gradients might degrade performance.

Ensure that the server video resolution and refresh rate are supported by KSX II and that the signal is non-interlaced.

See the **KSX II Online Help** for a list of supported target server video resolutions.

Mouse Settings

Following are the mouse settings for various operating systems.

These settings are configured on your target operating system unless otherwise indicated.

See the **KSX II Online Help** for details on configuring these mouse settings.

Windows 7 and Windows Vista Mouse Settings

► Configure these mouse settings in Windows 7® and Windows Vista®:

Configure the motion settings:

- Set the mouse motion speed setting to exactly the middle speed
- Disable the "Enhanced pointer precision" option

Disable animation and fade effects:

- Animate controls and elements inside windows
- Animate windows when minimizing and maximizing
- Fade or slide menus into view
- Fade or slide ToolTips into view
- Fade out menu items after clicking

Windows XP, Windows 2003, Windows 2008 Mouse Settings

► Configure these mouse settings in Windows XP®, Windows 2003® and Windows 2008®:

Configure the Motion settings:

- Set the mouse motion speed setting to exactly the middle speed
- Disable the "Enhance pointer precision" option
- Disable the Snap To option

Disable transition effects:

- Deselect the "Use the following transition effect for menus and tooltips" option

Windows 2000 Mouse Settings

► Configure these Windows 2000® mouse settings:

Configure the Motion settings:

- Set the acceleration to None
- Set the mouse motion speed setting to exactly the middle speed

Disable transition effects:

- Deselect the "Use the following transition effect for menus and tooltips" option

Apple Mac Mouse Settings

► Configure these Apple Mac[®] mouse settings:

Absolute Mouse Synchronization is required for proper mouse synchronization on KVM target servers running a Mac[®] operating system.

In order for Absolute Mouse Synchronization to work, a virtual media CIM is required. For a list of supported CIMs, see Supported Computer Interface Module (CIMs) Specifications.

Once you have completed your KSX II installation, set the Mac USB profile. If you do not set this profile, the mouse does synch in OS X.

To do this, do one of the following:

1. Connect to the Mac target from the Raritan KVM Client.
 2. Select USB Profile > Other Profiles > Mac OS-X (10.4.9 and later).
 - Or
 3. In KSX II, select Device Settings > Port Configuration, then click on the target name to open the Port page.
 4. Expand 'Select USB Profiles for Port' section.
 5. Select 'Mac OS-X (10.4.9) and later' from the Available box, then click Add to add it to the Selected box.
 6. Click on 'Mac OS-X (10.4.9) and later' in the Selected box. This automatically adds it to the Preferred Profile drop-down.
 7. Select 'Mac OS-X (10.4.9) and later' from the Preferred Profile drop-down, then check the checkbox under 'Set Active Profile As Preferred Profile'.
- Click OK to apply.

Linux Mouse Settings

► Configure these Linux[®] mouse settings:

- (Standard Mouse Mode only) Set the mouse acceleration to exactly 1 and set the threshold to exactly 1. Enter the following command: `xset mouse 1 1`. This should be set for execution upon login.

Sun Solaris Mouse Settings

► Configure these Sun[®] Solaris[™] mouse settings:

- Set the mouse acceleration value to exactly 1 and the threshold to exactly 1
- Ensure that your video card is set to a supported resolution and that its output is VGA, not composite sync

IBM AIX Mouse Settings

► Configure these IBM AIX[®] mouse settings:

- Go to the Style Manager, click on Mouse Settings and set Mouse Acceleration to 1.0 and Threshold to 3.0

Step 2: Configure Network Firewall Settings

TCP Port 5000

Allow network and firewall communication on TCP Port 5000 to enable remote access to the KSX II.

Alternatively, configure the KSX II to use a different TCP port, then allow communication on that port.

TCP Port 443

Allow access to TCP Port 443 (Standard HTTPS) so you can access KSX II via a web browser.

TCP Port 80

Allow access to TCP Port 80 (Standard HTTP) to enable automatic redirection of HTTP requests to HTTPS.

Step 3: Connect the Equipment

Connect the KSX II to the power supply, network, local PC, local video display, keyboard and mouse, KVM target servers, and serial targets.



A. AC Power

► To connect the power supply:

1. Attach the included AC power cord to the KSX II and plug into an AC power outlet.

B. Network Port

The KSX II provides two Ethernet ports for failover purposes (not for load-balancing). By default, only LAN1 is active and the automatic failover is disabled. When enabled, if the KSX II internal network interface or the network switch to which it is connected becomes unavailable, LAN2 will be enabled using the same IP address.

Note: Because a failover port is not activated until after a failover has actually occurred, Raritan recommends that you either not monitor the failover port or monitor it only after a failover occurs.

► **To connect the network:**

1. Connect a standard Ethernet cable (included) from the network port labeled LAN1 to an Ethernet switch, hub, or router.
2. To make use of the optional KSX II Ethernet failover capabilities:
 - Connect a standard Ethernet cable from the network port labeled LAN2 to an Ethernet switch, hub, or router.
 - Enable Automatic Failover on the Network Configuration page.

Note: Use both network ports only if you want to use one as a failover port.

C. Local User Port (Local PC) and Local Admin Port

For convenient access to KVM target servers and serial devices while at the rack, use the KSX II Local Access port. While the local port is required for installation and setup, it is optional for subsequent use. The local port provides the KSX II Local Console graphical user interface for administration and target server access.

► **To connect the Local User port:**

- Attach a multi-sync VGA monitor, keyboard, and mouse to the respective Local User ports using a USB keyboard and mouse.
- Monitor - Attach a standard multi-sync VGA monitor to the HD15 (female) video port
- Keyboard - Attach either a standard keyboard to the Mini-DIN6 (female) keyboard port, or a standard USB keyboard to one of the USB Type A (female) ports
- Mouse - Attach either a standard mouse to the Mini-DIN6 (female) mouse port or a standard USB mouse to one of the USB Type A (female) ports

You can use the Local Admin port to connect the KSX II directly to a workstation to manage your serial targets and configure the system with a terminal emulation program such as HyperTerminal. The Local Admin port requires the use of a standard null modem cable.

Note: When local Authorization and Authentication is set to None, logging in to serial admin console requires username input.

D. KVM Target Server Ports

The KSX II uses standard UTP cabling (Cat5/5e/6) to connect to each target server.

► **To connect a KVM target server to the KSX II:**

1. Use the appropriate Computer Interface Module (CIM).
2. Attach the HD15 video connector of your CIM to the video port of your KVM target server. Ensure that your target server's video has already been configured to a supported

resolution and refresh rate. For Sun servers, also ensure that your target server's video card has been set to output standard VGA (H-and-V sync) and not composite sync.

3. Attach the keyboard/mouse connector of your CIM to the corresponding ports on your target server. Using a standard straight-through UTP (Cat5/5e/6) cable, connect the CIM to an available server port on the back of your KSX II device.

Note: The DCIM-USB G2 provides a small slide switch on the back of the CIM. Move the switch to P for PC-based USB target servers. Move the switch to S for Sun USB target servers. Power-cycle the CIM by removing the USB connector from the target server, then plugging it back in a few seconds later in order to apply the new switch position.

E. Power Strip

► **To connect the Dominion PX to the KSX II:**

1. Plug one end of a Cat5 cable into the Serial port on the front of the Dominion PX.
2. Connect the other end of the Cat5 cable to either the Power Ctrl. 1 or Power Ctrl. 2 ports on the back of the KSX II.
3. Attach an AC power cord to the target server and an available rack PDU outlet.
4. Connect the rack PDU to an AC power source. Power on the KSX II device.

Important: When using CC-SG, the power ports should be inactive before attaching rack PDUs that were swapped between the power ports. If this is not done, there is a possibility that the number of power outlets will not be correctly detected, especially after swapping 8 and 20 outlet rack PDU models.

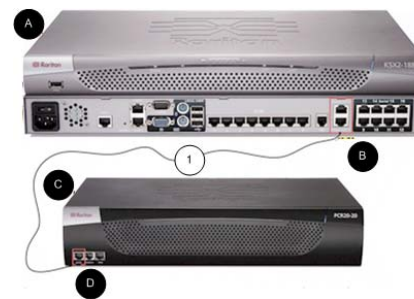


Diagram key

A	KSX II	D	PX serial port
B	KSX II Power Ctrl. 1 Port or Power Ctrl. 2 Port	1	Cat5 cable
C	PX		

F. Serial Target Ports

To connect a serial target to the KSX II, use a Cat5 cable with an appropriate serial adapter.

The following table lists the necessary KSX II hardware (adapters and/or cables) for connecting the KSX II to common vendor/model combinations.

Vendor	Device	Console connector	Serial connection
Checkpoint	Firewall	DB9M	ASCSD9F adapter and a CAT 5 cable
Cisco	PIX Firewall		
Cisco	Catalyst	RJ-45	CRLVR-15 rollover cable; or CRLVR-1 adapter cable and a CAT5 cable CRLVR-1 cable for connecting a terminal port (RJ-45 Connector type) of KSX II-48 models that have this connector to another KSX II.
Cisco	Router	DB25F	ASCSD25M adapter and a CAT 5 cable
Hewlett Packard®	UNIX® Server	DB9M	ASCSD9F adapter and a CAT 5 cable
Silicon Graphics	Origin		
Sun™	SPARCStation	DB25F	ASCSD25M adapter and a CAT 5 cable
Sun	Netra T1	RJ-45	CRLVR-15 cable; or CRLVR-1 adapter and a CAT5 cable
Sun	Cobalt	DB9M	ASCSD9F adapter and a CAT 5 cable
Various	Windows NT®		

Go to the Support page on Raritan's website (www.raritan.com) to obtain a list of commonly used cables and adapters.

Step 4: Configure the KSX II

For the following steps, you must change the default password and assign the KSX II its IP address at the Local Console.

All other steps can be performed from either the Local Console, or from the KSX II Remote Console via a supported web browser using the KSX II's default IP address.

Java 1.7™ is required to use the Java-based KSX II Virtual KVM Client (VKC) and Multi-Platform Client (MPC)..

Microsoft .NET® 3.5 (or later) is required to use KSX II with the Microsoft Windows®-based Active KVM Client (AKC).

Change the Default Password

The first time you start the KSX II, you are required to change the default password.

► To change the default password:

1. Once the unit has booted, enter the default username *admin* and password *raritan*. Click Login.
2. Enter the old password *raritan*, then enter and reenter a new password.
Passwords can be up to 64 characters in length consisting of English, alphanumeric and special characters.
3. Click Apply. Click OK on the Confirmation page.

Assign the KSX II an IP Address

► To assign an IP address to the KSX II:

1. Choose Device Settings > Network. The Network Settings page opens.
2. Specify a meaningful Device Name for your KSX II device.
Up to 32 alphanumeric and valid special characters, no spaces between characters.
3. Next, configure the IPv4, IPv6 and DNS settings.

Configure the IPv4 Settings

1. In the IPv4 section, enter or select the appropriate IPv4-specific network settings:
 - a. Enter the IP Address if needed. The default IP address is 192.168.0.192.
 - b. Enter the Subnet Mask. The default subnet mask is 255.255.255.0.
 - c. Enter the Default Gateway if None is selected from the IP Auto Configuration drop-down.
 - d. Enter the Preferred DHCP Host Name if DHCP is selected from the IP Auto Configuration drop-down.
 - e. Select the IP Auto Configuration. The following options are available:
 - None (Static IP) - This option requires you manually specify the network parameters.

This is the recommended option because the KSX II is an infrastructure device, and its IP address should not change.

Select this option if you want to ensure redundant failover capabilities should the primary Ethernet port (or the switch/router to which it is connected) fail. If it fails, KX III fails over to the secondary network port with the same IP address, ensuring there is not interruption.

- DHCP - Dynamic Host Configuration Protocol is used by networked computers (clients) to obtain unique IP addresses and other parameters from a DHCP server. With this option, network parameters are assigned by the DHCP server.

If DHCP is used, enter the Preferred host name (DHCP only). Up to 63 characters.

2. Next, configure IPv6 and/or DNS settings.

Configure the IPv6 Settings

1. If using IPv6, enter or select the appropriate IPv6-specific network settings in the IPv6 section:
 - a. Select the IPv6 checkbox to activate the fields in the section and enable IPv6 on the device.
 - b. Enter a Global/Unique IP Address. This is the IP address assigned to the KSX II.
 - c. Enter the Prefix Length. This is the number of bits used in the IPv6 address.
 - d. Enter the Gateway IP Address.
 - e. Link-Local IP Address. This address is automatically assigned to the device, and is used for neighbor discovery or when no routers are present. **Read-Only**
 - f. Zone ID. Identifies the device the address is associated with. **Read-Only**
 - g. Select an IP Auto Configuration option:
 - None (Static IP) - this option requires you manually specify the network parameters.

This is the recommended option because the KSX II is an infrastructure device, and its IP address should not change.

Select this option if you want to ensure redundant failover capabilities should the primary Ethernet port (or the switch/router to which it is connected) fail. If it fails, KX III switches to the secondary network port with the same IP address, ensuring their is no interruption.

If None is selected, the following Network Basic Settings fields are enabled: Global/Unique IP Address, Prefix Length, and Gateway IP Address allowing you to manually set the IP configuration.

- Router Discovery - use this option to automatically assign IPv6 addresses that have Global or Unique Local significance beyond that of the Link Local, which only applies to a directly connected subnet.

2. Next, configure DNS settings.

Configure the DNS Settings

1. Select Obtain DNS Server Address Automatically if DHCP is selected and Obtain DNS Server Address is enabled. When Obtain DNS Server Address Automatically, the DNS information provided by the DHCP server will be used.
2. If Use the Following DNS Server Addresses is selected, whether or not DHCP is selected, the addresses entered in this section is used to connect to the DNS server. Enter the following information if the Following DNS Server Addresses is selected. These addresses are the primary and secondary DNS addresses used if the primary DNS server connection is lost due to an outage.
 - a. Primary DNS Server IP Address
 - b. Secondary DNS Server IP Address
3. When finished, click OK.

Your KSX II device is now network accessible.

Name Your Target Servers

► To name the target servers:

1. Connect all of the target servers if you have not already done so.
2. Select Device Settings > Port Configuration, then click the Port Name of the target server you want to name.
3. Enter a name for the server up to 32 alphanumeric and special characters. Click OK.

Configure Date/Time Settings (Optional)

Optionally, configure the date and time settings.

The date and time settings impact SSL certificate validation if LDAPS is enabled.

Use the Date/Time Settings page to specify the date and time for the KSX II. There are two ways to do this:

- Manually set the date and time.
- Synchronize the date and time with a Network Time Protocol (NTP) server.

► To set the date and time:

1. Choose Device Settings > Date/Time. The Date/Time Settings page opens.
2. Choose your time zone from the Time Zone drop-down list.
3. Adjust for daylight savings time by checking the "Adjust for daylight savings time" checkbox.
4. Choose the method to use to set the date and time:
 - User Specified Time - use this option to input the date and time manually. For the User Specified Time option, enter the date and time. For the time, use the hh:mm format (using a 24-hour clock).

- Synchronize with NTP Server - use this option to synchronize the date and time with the Network Time Protocol (NTP) Server.
5. For the Synchronize with NTP Server option:
- a. Enter the IP address of the Primary Time server.
 - b. Enter the IP address of the Secondary Time server.
- Optional**
-
- Note: If DHCP is selected for the Network Settings on the Network page, the NTP server IP address is automatically retrieved from the DHCP server by default. Manually enter the NTP server IP address by selecting the Override DHCP checkbox.
-
6. Click OK.

Step 5: Launching the KSX II Remote Console

Log in to your KSX II Remote Console from any workstation with network connectivity that has Microsoft .NET® and/or Java Runtime Environment™ installed.

► To launch the KSX II Remote Console:

1. Launch a supported web browser.
2. Enter either:
 - The URL - *http://IP-ADDRESS* to use the Java-based Virtual KVM Client
 - Or**
 - *http://IP-ADDRESS/akc* for the Microsoft .NET-based Active KVM Client

IP-ADDRESS is the IP address assigned to your KSX II

You can also use HTTPS, or the DNS name of the KSX II assigned by your administrator (if applicable).
3. You are always redirected to the IP address from HTTP to HTTPS.
4. Enter your username and password. Click Login.

Access and Control Target Servers Remotely

The KSX II Port Access page provides a list of all KSX II ports, as well as the connected target servers, their status, and availability.

Accessing a Target Server

► To access a target server:

1. On the KSX II Port Access page, click the Port Name of the target you want to access. The Port Action Menu is displayed.
2. Choose Connect from the Port Action menu. A KVM window opens with a connection to the target.

Switching between Target Servers

► To switch between KVM target servers:

1. While already using a target server, access the KSX II Port Access page.
2. Click the port name of the target you want to access. The Port Action menu appears.
3. Choose Switch From in the Port Action menu. The new target server you selected is displayed.

Disconnecting a Target Server

► To disconnect a target server:

- On the Port Access page, click the port name of the target you want to disconnect from, then click Disconnect on Port Action menu when it appears.

Step 6: Create and Install an SSL Certificate

Raritan strongly recommends you install your own SSL Certificate in each KSX II device.

This security best practice reduces the number of Java™ warning messages, and avoids man-in-the-middle attacks.

It also prevents future Java versions and browser versions from blocking access to your KSX II device. For information creating and installing SSL certificates, see **KSX II Online Help**.

Resetting the Device (Optional)

Use the reset feature only if you want to reset the device to its original factory settings.

Note: It is recommended that you save the audit log prior to performing a factory reset. The audit log is deleted when a factory reset is performed and the reset event is not logged on the audit log.

► To reset the device:

1. Power off the KSX II.
2. Use a pointed object to press and hold the Reset button.
3. While continuing to hold the Reset button, power the KSX II device back on.
4. Continue holding the Reset button for 10 seconds.

Additional Information

For more information about the KSX II® and the entire Raritan product line, see Raritan's website (www.raritan.com). For technical issues, contact Raritan Technical Support. See the Contact Support page in the Support section on Raritan's website for technical support contact information worldwide.

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