



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.

This Quick Setup Guide explains how to install and configure the KSX II. For additional information on any aspect of KSX II, see the KSX II User Guide, which can be downloaded from the Firmware and Documentation section (<http://www.raritan.com/support/firmware-and-documentation/>) of 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:

Amount included	Item
1	Dominion KSX II device
1	Dominion KSX II 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 Note
1	Warranty Card
1	Phone Line Cable
1	Loopback Adapter

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. The KSX II supports these resolutions:

Resolutions	
640x350 @70Hz	1024x768@85
640x350 @85Hz	1024x768 @75Hz
640x400 @56Hz	1024x768 @90Hz
640x400 @84Hz	1024x768 @100Hz
640x400 @85Hz	1152x864 @60Hz
640x480 @60Hz	1152x864 @70Hz
640x480 @66.6Hz	1152x864 @75Hz
640x480 @72Hz	1152x864 @85Hz
640x480 @75Hz	1152x870 @75.1Hz
640x480 @85Hz	1152x900 @66Hz
720x400 @70Hz	1152x900 @76Hz
720x400 @84Hz	1280x720@60Hz
720x400 @85Hz	1280x960 @60Hz
800x600 @56Hz	1280x960 @85Hz
800x600 @60Hz	1280x1024 @60Hz
800x600 @70Hz	1280x1024 @75Hz
800x600 @72Hz	1280x1024 @85Hz
800x600 @75Hz	1360x768@60Hz

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

Resolutions	
800x600 @85Hz	1366x768@60Hz
800x600 @90Hz	1368x768@60Hz
800x600 @100Hz	1400x1050@60Hz
832x624 @75.1Hz	1440x900@60Hz
1024x768 @60Hz	1600x1200 @60Hz
1024x768@70	1680x1050@60Hz
1024x768@72	1920x1080@60Hz

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 or user guide 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.

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

1. In KSX II, select Device Settings > Port Configuration, then click on the target name to open the Port page.
- Select and then add the USB profile from the Select USB Profiles for Port section of the page, and enter profile description (if needed). Click OK to apply the profile.

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

- To enable remote access to the KSX II, allow network and firewall communication on TCP Port 5000. Alternatively, configure the KSX II to use a different TCP port, then allow communication on that port.
- To access the KSX II via a web browser, your firewall must allow access to TCP Port 443 (Standard HTTPS).
- Access to TCP Port 80 (Standard HTTP) enables 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 KXSX 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 KXSX 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 KXSX 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.
5. Power on the KXSX 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.

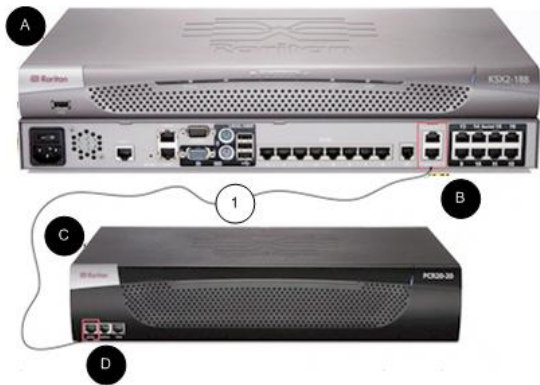


Diagram key

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

Diagram key

C	PX		
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F. Serial Target Ports

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

The following table lists the necessary KXSX II hardware (adapters and/or cables) for connecting the KXSX 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 KXSX II-48 models that have this connector to another KXSX 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

Aside from the initial setup of the IP address, all other KSX II settings can be configured via a web browser over the network using a crossover Ethernet cable and the KSX II's default IP address. This requires the currently supported Java Runtime Environment (JRE) version is installed the workstation.

Change the Default Password

The KSX II ships with a default password. The first time you start the KSX II you are required to change that password.

► To change the default password:

1. Power ON the KSX II using the power switch at the back of the device. Wait for the KSX II device to boot. (A beep signals completion of the boot.)
2. Once the device has booted, the KSX II Local Console is visible on the monitor attached to the KSX II local port. Type the default username (admin) and password (raritan) and click Login. The Change Password screen is displayed.
3. Type your old password (raritan) in the Old Password field.
4. Type a new password in the New Password field; retype the new password in the Confirm New Password field. Passwords can be up to 64 characters long and can consist of English alphanumeric and printable special characters.
5. Click Apply.
6. You will receive confirmation that the password was successfully changed. Click OK. The Port Access page opens.

Assigning an IP Address

► To assign an IP address:

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 characters using valid special characters and no spaces.
3. 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 that 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.
 - 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.
4. If IPv6 is to be used, 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.
 - 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. It is used for neighbor discovery or when no routers are present. **Read-Only**
 - f. Zone ID. This identifies the device with which the address is associated. **Read-Only**
 - g. Select the IP Auto Configuration. The following options are available:
 - None - Use this option if you do not want an auto IP configuration and prefer to set the IP address yourself (static IP). This is the default and recommended option.
If None is selected for the IP auto configuration, 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.
 5. Select Obtain DNS Server Address Automatically if DHCP is selected and Obtain DNS Server Address is enabled. When Obtain DNS Server Address Automatically is selected, the DNS information provided by the DHCP server will be used.
 6. If Use the Following DNS Server Addresses is selected, regardless of whether DHCP is selected or not, the addresses entered in this section will be used to connect to the DNS server.
Enter the following information if the Following DNS Server Addresses option is selected. These addresses are the primary and secondary DNS addresses that will be

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

7. When finished, click OK.

Note: In some environments, the default LAN Interface Speed & Duplex setting Autodetect (autonegotiator) does not properly set the network parameters, which results in network issues. In these instances, setting the KSX II LAN Interface Speed & Duplex field to 100 Mbps/Full Duplex (or whatever option is appropriate to your network) addresses the issue.

Configure Date/Time Settings (Optional)

Optionally, configure the date and time settings. Note that date and time settings impact SSL certificate validation if LDAPS is enabled.

► 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**
6. Click OK.

Naming Target Servers

► To name the target servers:

1. Connect all of the target servers if you have not already done so.
2. From the KSX II Local Console, 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.

Creating User Groups and Users (Optional)

► To add a new user group:

1. Select User Management > Add New User Group or click Add on the User Group List page.
2. Type a descriptive name for the new user group into the Group Name field (up to 64 characters).
3. Select the checkboxes next to the permissions you want to assign to all of the users belonging to this group. See Setting Permissions.
4. Specify the server ports and the type of access for each user belonging to this group. See Setting Port Permissions.
5. Set the IP ACL. This feature limits access to the KSX II device by specifying IP addresses. It applies only to users belonging to a specific group, unlike the IP Access Control list feature that applies to all access attempts to the device (and takes priority). See Group-Based IP ACL (Access Control List). **Optional**
6. Click OK.

► To add a new user:

1. Select User Management > Add New User or click Add on the User List page.
2. Type a unique name in the Username field (up to 16 characters).
3. Type the person's full name in the Full Name field (up to 64 characters).
4. Type a password in the Password field and retype the password in the Confirm Password field (up to 64 characters).
5. Choose the group from the User Group drop-down list.
6. To activate the new user, leave the Active checkbox selected. Click OK.

Step 5: Launch the KSX II Remote Console

Log in to your KSX II 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 the URL: *http://IP-ADDRESS* or *http://IP-ADDRESS/akc* for .NET. This 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). KSX II always redirects the IP address from HTTP to HTTPS.
3. 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. From 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:

- Click the port name of the target you want to disconnect. When Port Action menu appears, click Disconnect.

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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