

Release Notes for Dominion® KX III Software Version 3.0.1

Version: Revision 1.0
Date: April 21, 2014
Effective: Release 3.0.1 Firmware available immediately.

Applicability:

Dominion KX III models:

DKX3-108, DKX3-116, DKX3-132, DKX3-216, DKX3-232, DKX3-416, DKX3-432, DKX3-464
DKX3-808, DKX3-832, DKX-864

Release Status: General Availability.

Dominion KX III Hardware Overview:

The KX III is the next generation version of the KX II. Featuring a modern hardware design with increased computing power and storage, the KX III provides KVM-over-IP access for IT administration, as well as high performance IP access for streaming video and other dynamic applications. KX III includes virtually all KX II hardware and software features with the following advancements:

- The KX III's new video processing engine supports a broad range of applications from traditional computer applications to the most dynamic broadcast applications requiring 30 frames-per-second 1920x1080 video, 24 bit color, digital audio, dual monitors and DVI, HDMI, DisplayPort and VGA video.
- With the industry's first DVI-based local port, the KX III's common user interface provides new levels of productivity and performance for at-the-rack administration and server access.
- All KX III models feature a tiering port to connect multiple Dominion KX III switches together and access the attached servers.
- KX III supports all Dominion CIMs and select Paragon II CIMs.
- The Dominion KX III supports both analog and digital video (DVI, HDMI and DisplayPort) through a single KVM-over-IP switch without adapters.

Release 3.0.1 Firmware Overview:

Release 3.0.1 is a small maintenance release to fix the "Heartbleed" security vulnerability in the OpenSSL cryptographic software library used by the Dominion KX III. A few small enhancements are also included.

Dominion KX Release 3.0.1 Enhancements:

1. **Heartbleed Vulnerability Fix.** Patch and fix the "Heartbleed" security vulnerability (CVE-2014-0160) in the OpenSSL cryptographic software library used by the Dominion KX III. See "heartbleed.com" for information on this vulnerability. Raritan recommends that customers consult their security experts and take appropriate actions to recover from this vulnerability including installing new SSL certificates and changing passwords.
2. **Additional Display Native Resolutions.** The following additional video resolutions can be set for target servers connect to the D2CIM-DVUSB-xxx digital CIMs. This instructs the target server to use the specific video resolution.
 - 1152x864@60Hz, 1280x720@60Hz, 1280x960@60Hz, 1360x768@60Hz
 - 1400x1050@60Hz, 1680x1050@60Hz, 1920x1200@60Hz
3. **Maximum Remote Video Resolution of 1920x1200.** The maximum remote video resolution of the KX III is increased to 1920x1200. The server or PC's video signal requires "reduced blanking," a digital CIM must be used and the user should set the port's Display Native Resolution to 1920x1200@60Hz.

Dominion KX III Documentation:

The following user documentation is available for the Dominion KX III:

Dominion KX III User Guide – user guide to the KX III's local and remote browser based user interfaces and general KX III usage.

Dominion KX III Quick Setup Guide –for the initial setup of the KX III.

KVM and Serial Client Access Guide – reference for the remote clients for the Raritan products

Dominion KX III CIM Guide – reference for the Dominion KX Computer Interface Modules (CIMs). Which CIM to use, etc.

Dominion KX III Blade Configuration Guide –contains detailed instructions and screenshots for Dell and IBM blade servers.

The Dominion KX III documentation is available from the KX III web based user interface and on the Raritan.com website:

www.raritan.com. Please go to the **Support** section, go to **Firmware and Documentation** and then select **Dominion KX III**. The documentation is shown by release, so click on the appropriate release.

Dominion KX III Online Help:

An **Online Help System** is available. Click on **Help – Online Help** in the left hand information panel and the Online Help system will launch. You can browse to the appropriate topic via the Contents, Index and Search tabs. The entire Dominion KX III User guide is available, including text and images, with an extensive set of links.

Online help for the Raritan products is now available on raritan.com:

<http://www.raritan.com/support/online-help/>

Computer Interface Module (CIM) Overview:

Dominion KX III can use the following CIMs:

D2CIM-DVUSB: *dual* USB, VGA-based virtual media CIM, required for virtual media, absolute mouse synchronization, and the advanced KVM features. This CIM is recommended for customers planning to access virtual media drives at the OS/BIOS levels as well as the Smart Card, tiering and audio features.

D2CIM-DVUSB-DVI, D2CIM-DVUSB-HDMI & D2CIM-DVUSB-DP: New DVI, HDMI and DisplayPort versions of the D2CIM-DVUSB.

D2CIM-VUSB: *single* USB virtual media CIM, required for the virtual media and absolute mouse synchronization features. This CIM is recommended for customers planning to access virtual media drives only at the OS level.

KX I DCIMs: DCIM-PS2, DCIM-USBG2, and DCIM-SUN.

DCIM-USBG2: the DCIM-USBG2 is the recommended basic USB CIM for KX III. There is a small switch on the DCIM-USBG2, which should be set to the "S" position for use with SUN servers with USB ports.

D2CIM-PWR: required to connect a remote power strip to the KX III.

Select Paragon II CIMs: P2CIM-AUSB, P2CIM-PS2, P2CIM-USB, and P2CIM-SUSB.

Paragon Dual CIMs: the P2CIM-APS2DUAL and P2CIM-AUSB DUAL

P2CIM-SER, which can be connected to serial devices

Release 3.0.1 Compatibility Information:

1. The above Dominion KX III models and Release 3.0.1 have been certified for use with the CommandCenter[®] Secure Gateway (CC-SG) Releases 6.0 and above.
2. **The CommandCenter 5.x Releases were developed before KX III and therefore do not support the Dominion KX III.**
3. KX III devices can be remotely accessed by two KVM remote clients. The MultiPlatform Client (MPC) is no longer supported.

Remote Client	Description
Virtual KVM Client (VKC)	Java-based client invoked from the browser-based remote user interface. KX II and KX III switches only.
Active KVM Client (AKC)	Microsoft .NET-based Windows client invoked from the browser-based remote user interface. KX II and III switches only.

4. **SUN Java™ Runtime Environment (JRE) version 7 is supported up to 1.7 update 51 (7u51).** Java version 6 is not supported by KX III.
 - For best results, we recommend that Java Plug-in Caching is **not** enabled.
 - For greater security and fewer Java and browser warning messages, Raritan recommends customers upload a SSL certificate to each KX III switch.
 - Customers need to affirmatively click through all security warnings for the Raritan Java applets to load.
5. Internet Explorer versions 8, 9, 10 and 11 supported. Firefox versions include 21, 24 and 25. Chrome version 31. Safari 6.1.
6. The Active KVM Client (AKC), the native Windows Client, requires Internet Explorer 8 or above and Microsoft .NET Framework versions: 3.5, 4.0 or 4.5.
 - Use a URL of the following form to use AKC: `http[s]://<KX III address>/akc/`
 - Windows XP, Vista and Windows 7/8 desktops are supported.
7. The above JRE version information applies to the Dominion KX III when used standalone. When used with CC-SG, please consult the CC-SG Release Notes and Compatibility Matrix.

Release 3.0.1 Important Notes and Information:

1. **Video Bandwidth and Quality.** To minimize network bandwidth for lower bandwidth situations, set the “Noise Filter” and “Video Mode” to the right towards “Least Bandwidth” on the Connection Properties panel. For higher image and video quality, set to the left towards “Best Quality.” To further increase video speed and responsiveness, you can disable encryption if your security requirements allow for this.

On the same panel, use “Text Readability” for general computer applications and “Color Accuracy” for higher performance applications such as watching videos or dynamically changing screens.

2. **Digital Local Port.** The KX III local port outputs DVD-D video. Connect this to a DVI-D monitor or to Raritan’s T1700-LED rackmount keyboard tray. To connect to an analog video monitor, an adapter must be used.

On the local port, the KX III will generally use the native video resolution of the monitor or keyboard tray connected to it. If the video resolution is too small, the monitor may not be properly reporting this. If so, try another monitor or Raritan’s T1700-LED keyboard tray.

We have seen some lower video resolutions not scale properly to the native video resolution. In this case the KX III will automatically scale to a slightly smaller resolution and may not completely fill the screen. This is normal.

3. **Extending the KX III Local Port.** Use Raritan’s Cat5 Reach DVI to extend the KX III local port outside the data center. At-the-rack access is also available.
4. **Tiering Port.** KX II switches can be tiered to a KX III base unit, but KX III switches cannot be tiered to a KX II base unit.
5. **Java.** Recent Java releases have increased security resulting in more security warnings, blocking of Java applets and expiration dates for specific versions. Contact the KX III on-line help and Raritan tech support for more information

Raritan recommends customers upload a SSL certificate to each KX III switch.

Windows customers can use the .NET based Active KVM Client(AKC) which does not use Java – use this with URL:
<https://<KX III IP Address or Hostname>/akc>.

6. **Modem.** Modem connections are not supported in Release 3.0. They will be supported in a future release.

For the best possible video quality, adhere to these distance guidelines from the CIM to the KX III:

Server Video Resolution	Distance
1024x768 (and below)	150 feet
1280x1024	100 feet
1280x720	75 feet
1600x1200, 1920x1080	50 feet

Firmware Upgrades:

Raritan provides new firmware upgrade releases that contain software enhancements, new features, and improvements. These upgrades are available on the Raritan Website: www.raritan.com. Please go to the Support section and click on Firmware Upgrades and then Dominion KX III in the left navigation panel, or go directly to:

<http://www.raritan.com/support/firmwareupgrades/dominionkxiii>

Locate the entry for the new firmware release. Release Notes are available with: (a) brief descriptions of new features/enhancements, (b) important operating instructions, and (c) firmware upgrade instructions. Follow the Release Notes instructions to upgrade the device.

Firmware Upgrade Prerequisites:

If you have any questions, or do not meet the pre-requisites listed below, please STOP and contact Raritan Technical Support for further instructions. Please read the entire instructions (this document) before proceeding.

General Upgrade Instructions (standalone upgrade from the browser based user interface):

1. **Note: for best results, the KX III device should be re-booted before the firmware upgrade is applied.** This will ensure no users are logged in or sessions active.
2. The user upgrading the KX III device must be a member of the default Admin Group to have sufficient administrator-level privileges to update the Dominion KX III unit.
3. Twenty minutes or more are required for the complete update procedure. The update and subsequent reboot time will vary according to the number and type of CIMs connected to the KX III.
4. The system provides an estimated time for the firmware upgrade to complete. It may possibly take more time to do the update based on networking conditions and other factors.
5. We recommend backing up the KX III using the "Backup / Restore" function on the Maintenance menu on the Remote Console before starting the upgrade..
6. Close any remote or local KX III sessions to all devices connected to the Dominion KX III unit – servers, power strips, and serial devices.
7. If doing the firmware upgrade over a VPN, ensure that the connection is stable and that no inactivity timeouts have been set.
8. The detailed, step-by-step instructions to perform the upgrade are given below.
9. The software upgrades are written to flash memory, and this takes time to complete. Please do not power-off the unit, or disconnect the Ethernet connection while the upgrade is going on.
10. The KX III firmware can be upgraded by CC-SG; consult the CC-SG documentation for more information.
11. Should you experience any difficulties with the upgrade, call Raritan Technical Support for assistance.

Step-by-Step Upgrade Instructions:

1. **Note: for best results, the KX III device should be re-booted before the firmware upgrade is applied.** This will ensure no users are logged in or sessions active.
2. In Internet Explorer (or other supported web browser), type in the IP Address of your Dominion KX III unit, and wait as the web based interface loads.
3. Logon as an administrative user "admin" (or other member of the Admin Group).
4. Click on the "Firmware Upgrade" command on the "Maintenance" menu.
5. Browse to locate the .rfp file containing the update. Click the "Upload" button. The current and future versions will be displayed. Click the "Upgrade" button to start the upgrade.

6. The firmware upgrade will then proceed:
 - a. You cannot operate the KX III during the upgrade.
 - b. The upgrade panel will inform you of the progress of the upgrade. This upgrade step will take up to 15 minutes or more.

DO NOT REBOOT OR POWER CYCLE THE KX III DURING THE UPGRADE OR THE REBOOT!
 - c. You will see a completion message when the upgrade completes.
7. The device will now reboot and reset, which may take up to 5 minutes.
8. Close your web browser session and log back in after the reboot completes.
9. The KX III will beep when the upgrade is complete and the login screen will appear on the local console port.
10. Log back in via web browser or the local port. Use the “Upgrade History” report” on the “Maintenance” menu to check the upgrade status.
11. Any KX III CIMs (D2CIM-VUSB, D2CIM-DVUSB, D2CIM-DVUSB-XXX and D2CIM-PWR) connected to the KX III at the time of the upgrade will be upgraded also.
12. To support the Smart Card feature, the DVUSB CIM must have firmware version 3A6E (or greater) loaded on it. Use the “CIM Firmware Upgrade” menu on the “Maintenance” menu to check the CIM version(s) and to upgrade any additional D2CIM-DVUSB CIMs inserted after the upgrade.
13. You cannot upload a KX II firmware release (2.x) to a KX III.
14. In certain tiered configurations, when doing a firmware upgrade on the Base Switch, the user may see a message instructing them to reboot device. If the warning message is seen again, then the user should disable tiering on the device, upgrade the firmware and then re-establish tiering.
16. If you have any questions or issues during the update, call Raritan Technical Support for assistance.

This note is intended for Raritan customers only; its use, in whole or part, for any other purpose without the express written permission from Raritan, Inc. is prohibited.

Copyright ©2014 Raritan, Inc. CommandCenter, Dominion, and the Raritan company logo are trademarks or registered trademarks of Raritan, Inc. All rights reserved. Solaris and Java are trademarks of Oracle, Inc. Windows, Windows Vista, and .Net are trademarks or registered trademarks of Microsoft Corporation. Apple, Mac, Safari, iPad, and iPhone are trademarks or registered trademarks of Apple Inc. All other marks are the property of their respective owners.