

Release Notes for Dominion[®] LX II Software Version 3.0.0

Date: December 2019

Applicability: LX II Switches:
DLX2-108, DLX2-116, DLX2-216

Dominion LX II Overview

Dominion LX II is Raritan's new, economical, Java-free KVM-over-IP solution targeted at small and medium businesses (SMB). These second-generation KVM-over-IP switches (and integrated switch / LCD drawer models) give one/two remote users and one local user, Java-free, BIOS-level access and control of 8 or 16 servers. Productivity features such as virtual media, absolute mouse synchronization, directory server authentication and PC Share are included.

LX II models have a single LAN port and single power supply. Optional management of 2 to 8 serial devices is also available via the Dominion Serial Access Modules (DSAM).

LX II enables IT, data center, lab and network administrators to economically manage computer and serial devices to maximize uptime, avoid travel and quickly resolve issues.

Release 3.0.0 Firmware Overview

Release 3.0.0 is the original, factory installed firmware release for the Dominion LX II.

Dominion LX II Release 3.0.0 Features

- For product information on the Dominion LX II, refer to the Dominion LX II product page and data sheet on raritan.com.
- Release Notes and documentation is available on the Dominion LX II Support page on raritan.com.

Dominion LX II Documentation:

The following user documentation is available for the Dominion LX II:

Dominion LX II User Guide – guide to the LX II's user interfaces and general usage.

Dominion LX II Quick Setup Guide –for the initial setup of the LX II.

The Dominion LX II documentation is available from the LX II web-based user interface and on the Raritan.com website: www.raritan.com. Go to the Support section and select Dominion LX II. Click on the appropriate release.

Dominion LX II 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 LX II User guide is available, including text and images, with an extensive set of links. Online help for the Raritan products is available on <http://www.raritan.com/support/online-help/>

Computer Interface Module (CIM) Overview

Dominion LX II 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.

D2CIM-DVUSB-DVI, D2CIM-DVUSB-HDMI & D2CIM-DVUSB-DP: DVI, HDMI and DisplayPort dual USB CIMs.

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.

D2CIM-VUSB-USBC: new *single* USB virtual media CIM supporting a single USB-C connection to the target computer, required for the virtual media and absolute mouse synchronization features.

KX I DCIMs: Older DCIM-PS2, DCIM-USBG2, and DCIM-SUN CIMS without virtual media and absolute mouse.

DCIM-USBG2: the DCIM-USBG2 is the recommended basic USB CIM for LX II. 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.

MCUTP Cables: the LX II does not support these end-of-life cable/CIMs.

Paragon CIMs: these end-of-life CIMs are not supported.

Release 3.0.0 Compatibility Information

- As an economical solution, LX II does not support many of the advanced features of the Dominion KX III and KX IV switches, including SmartCard authentication, FIPS 140-2 encryption, audio, blade servers, remote power control, IP access control, SDK/API, etc.

LX II does not have support for the Raritan CommandCenter, Dominion User Stations or MCUTP cables. Contact the documentation for the supported features.

- Computers connected to LX II switches can be remotely accessed by three KVM remote clients:

KVM Client	Description
HTML KVM Client (HKC)	Java-free KVM Client that runs in the browser. For Linux and Mac users. Can force launch by <IP Address>/hkc
Active KVM Client (AKC)	Java-free, Microsoft .NET-based Client for Windows platforms. Can force launch by <IP Address>/akc
Virtual KVM Client (VKC)	Java-based client invoked from web browser. For Windows, Linux and Mac users. Can force launch by <IP Address>/vkc Use <IP Address>/vkcs on Chrome & Edge

3. Java is needed to use the Virtual KVM Client (VKC). Oracle Java™ Runtime Environment (JRE) version 8 is supported up to 1.8.0_231. Version 7 is no longer supported. The Windows-based AKC and HTML5-based HKC KVM Clients do not require Java.

These were the current Java versions at release time. Future Java versions should work correctly assuming no incompatible changes are made by the Java developers. For any issues, please contact Tech Support who can provide workaround solutions or patch releases, if available.

- 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 LX II switch.
4. Customers need to affirmatively click through all security warnings for the Raritan Java applets to load.
 5. Supported browser versions include: Internet Explorer 11; Microsoft Edge 44; Firefox 68; Chrome 76; and Safari 12.1.1.
 6. The Active KVM Client (AKC), the native Windows Client, requires Internet Explorer 11 or above and Microsoft .NET Framework versions: 4.5 and above.
 - Windows 7/8/10 desktops are supported

Important Notes and Information

1. The Dominion LX II does not have many of the features of the enterprise-class Dominion KX III. This includes hardware features such as dual-power supplies and dual-LAN ports, broadcast features such as high-performance video and audio, security features such as FIPS 140-2 and SmartCard, and integration with CommandCenter, KX DSK/API, PX PDU's and the Dominion User Stations. Contact the user documentation for more information.
2. Java-Free HTML KVM Client (HKC). Virtual media is supported, although the types of virtual media are different from the other KVM Clients. Please be aware that due to browser resources, virtual media file transfer with HKC may be slower than the other KVM Clients. For the fastest speed with HKC, use the Remote ISO virtual media.
3. HKC will be automatically launched on non-Windows platforms when Java is not installed. Otherwise use <LX2 IP Address>/hkc to launch it.
4. Dominion Serial Access Modules (DSAM). A maximum of two DSAM's can be connected to the LX II. There are limits on the number of USB devices that can be connected to a LX II. The DSAM supports a "true" serial connection, but certain SX II features are not available. See the Online Help for more details.
5. 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.

6. VGA Local Port. The LX II local port outputs VGA video. Connect to a VGA monitor or to Raritan's T1700-LED or T1900-LED rackmount keyboard trays.
7. Extending the LX II Local Port. Use Raritan's Cat5 Reach DVI product to extend the LX II local port outside the data center. At-the-rack access is also available.

For the best possible video quality, adhere to these distance guidelines from the CIM to the LX II:

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 page and click on Dominion LX II in the “Choose a Product” button, or go directly to:

<https://www.raritan.com/support/product/dominion-lx-ii>

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 LX II 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 LX II device must be a member of the default Admin Group to have sufficient administrator-level privileges to update the Dominion LX II 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 LX II.
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 LX II using the “Backup / Restore” function on the Maintenance menu on the Remote Console before starting the upgrade.
6. Close any remote or local LX II sessions to all devices connected to the Dominion LX II unit – servers 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. 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 LX II device should be re-booted before the firmware upgrade is applied. This will ensure no users are logged in or sessions active.
2. In a supported browser, type in the IP Address of your Dominion LX II 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 LX II 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 LX II 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 LX II 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. LX II CIMs connected to the LX II at the time of the upgrade will be upgraded also.
12. 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.
13. If you have any questions or issues during the update, call Raritan Technical Support for assistance.