# Release Notes for Dominion® SX II Software Version 2.0

**Date:**    August 24, 2015

## Applicable SX II models:

| | |
|---|---|
| No Telephone Modem: | DSX2-4, DSX2-8, DSX2-16, DSX2-32, DSX2-48 |
| Internal Telephone Modem: | DSX2-4M, DSX2-8M, DSX2-16M, DSX2-32M, DSX2-48M |
| DC Powered Models: | DSX2-8M-DC, DSX2-32M-DC, DSX2-48M-DC |

**Release Status:**    General Availability.

## Dominion SX II Overview:

The Dominion SX II is Raritan's next-generation Serial Console Server that provides IT and network administrators secure IP access and control of serial devices, anytime, anywhere.   The new SX II is the most powerful, secure, reliable, easy-to-use and manageable serial-over-IP console server on the market.   Release 2.0 is the initial firmware release for the Dominion SX II.   The Release 2.0 firmware is factory loaded on each SX II model.

## Dominion SX II Documentation:

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

**Dominion SX II User Guide** – guide to the SX II's local and remote browser based user interfaces and general usage.

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

The Dominion SX II documentation is available from the Raritan.com website:    **www.raritan.com**.   Please go to the **Support** section and then select **Dominion SX II**.

## Dominion SX II Online Help:

An **Online Help System** is available.   Click on **Help – Online Help** in the left hand information panel on the SX II web based user interface and the Online Help system will launch.   You can browse to the appropriate topic via the Contents, Index and Search tabs. The entire Dominion SX II 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/landing/product-online-help**

## Dominion SX II Serial Adapters:

Dominion SX II can use the following serial adapters to connect to serial devices with DB9/DB25 ports and Raritan PDU's.

| | |
|---|---|
| ASCSDB9F | RJ-45(F) TO DB9(F) serial adapter |
| ASCSDB9M | RJ-45(F) TO DB9(M) serial adapter |
| ASCSDB25F | RJ-45(F) TO DB25(F) serial adapter |
| ASCSDB25M | RJ-45(F) TO DB25(M) serial adapter |
| CSCSPCS-1 | 1' Cat5e RJ-45(M) to RJ-45(F) adapter to connect to Raritan PX or RPC rack PDUs |
| CSCSPCS-10 | 10' Cat5e RJ-45(M) to RJ-45(M) cable to connect to Raritan PX or RPC rack PDUs |

## Release 2.0 Compatibility Information:

1. **A new CommandCenter Release 6.1, to be available in October 2015, is required for the Dominion SX II.**

2. **The now current CommandCenter Releases 5.x and 6.0.x do not support the Dominion SX II.**

3. **SUN Java™ Runtime Environment (JRE) versions 7 and 8 are supported.**   Java version 6 is <u>not</u> supported by the SX II.

4. The following table shows the latest Java versions system tested with this release.   The SX II should work with future Java versions. The SX II firmware may need to be updated if the Java developers make incompatible changes to new Java versions.

   If you have any Java issues, please check the SX II and main Support Pages on raritan.com and/or call Raritan Technical Support.

   | JRE | Latest Tested Update |
   |---|---|
   | Java 7 | Update 79 |
   | Java 8 | Update 51 |

   Java usage recommendations:

   - For best results, we recommend that Java Plug-in Caching is <u>**not**</u> enabled.

   - For greater security and fewer Java and browser warning messages, Raritan recommends customers upload their own SSL certificate to each SX II switch.

   - Customers need to affirmatively click through all security warnings for the Raritan Java applets to load.

   - The above JRE version information applies to the Dominion SX II when used standalone.   When used with CC-SG, please consult the CC-SG Release Notes and Compatibility Matrix

5. Serial devices connected to the SX II can be accessed via web User Interface via:

   | Remote Client | Description |
   |---|---|
   | **Raritan Serial Client (RSC)** | **Java-based client invoked from the browser-based remote user interface. Version 3.0.0** |

6. The following table shows the latest browser versions system tested with this release.   The SX II should work with future browser versions, although the SX II firmware may need to be updated if incompatible changes are made to the browsers.   If you have any issues, please check the SX II and main Support Pages on raritan.com and/or call Raritan Technical Support.

   | Browser | Latest Tested Version |
   |---|---|
   | **Internet Explorer** | 11 |
   | **Firefox** | 39 |
   | **Chrome** | 43 |

7. **Security Information.   Openssl version v1.0.1m** is used in this release.   The SX II does not support SSLv2 or SSLv3. For highest security it only supports TLS.   Supported versions include TLS v1.0, v1.1 and v1.2.

## Release 2.0 Important Notes and Information:

1. **Automatic DTE/DCE Detection**.   When connecting to serial devices that perform Automatic DTE/DCE Detection, it may be necessary to force SX II serial port to DTE or DCE.   This can be done via the Serial Port Settings.

2. **Dual LAN Ports.**   The default behavior for the two SX II LAN ports is for two independent LAN ports, <u>not</u> automatic failover.   If you would like automatic failover instead, then change the settings on the Network Settings page or use the admin > Config > Network command.   The SX II's default IP Address for LAN1 is set for 192.168.0.192 to support initial configuration via crossover cable.

3. **Factory Reset Button.**   For best results when using the Reset Button on the back panel, remove the USB plug from the lower USB slot if present.   A buzzer will sound when the Reset Button is pressed while the device is booting.

4. **Extending the SX II Local Port.**   Use Raritan's Cat5 Reach DVI product to extend the SX II local port outside the data center. At-the-rack access is also available using the Raritan T1700-LED and T1900-LED rackmount keyboard drawers using the SX II's DVI-D and USB ports.

5. **3G/4G Wireless Modem**.   The Sierra Wireless GX440 Broadband modem is the supported modem for emergency wireless access.   This is currently the only officially supported modem; additional modems may be supported in the future.   The modem is connected to the SX II via USB connection.   A SIM Card is required from your wireless carrier, as well as a static IP Address for the modem.   Check the User Guide or Online Help for modem configuration instructions.

   Use the SX II Firewall "iptables" feature to secure access or use the modem's own firewall features.   For increased security we recommend changing the name of the default "admin" account.

6. **FIPS 140-2 Encryption Module.**   FIPS 140-2 Mode is only supported when using the Raritan Serial Client (RSC).   It is not supported for other Serial Clients, e.g. Putty.

7. **Security Recommendations**.   Utilize an SSH Client, instead of Telnet which does not encrypt sessions.   When not using FIPS mode, set the Encryption mode to AES.   Install a custom certificate on the SX II from a trusted Certificate Authority.   Disable TLS v1.0 on the connecting clients and use TLS v1.2 for tighter security.

8. **RC4 Encryption.**   The latest Java versions are stopping support for the weaker RC4 encryption; this will stop the Raritan Serial Client from launching.   Some browsers, Firefox in our testing, do not support RC4.   Use the AES or Auto encryption modes.

9. **Automatic Configuration**.   For security reasons (avoid un-authorized configuration), Automatic Configuration via USB stick or TFTP must be first enabled by the SX II administrator.

10. **Firmware Upgrade.**   SX II firmware upgrade is done the same way as the other Dominion products, i.e. from the web-based GUI.   The old SX FTP-based method is still available via the CLI.

11. **Distance Guidelines**.   For reliable serial connections, adhere to these distance guidelines from the serial device to the SX II (Cat5/6 cable):

| Baud Rate | Distance( feet) |
|-----------|-----------------|
| 2,400 | 300 |
| 4,800 | 200 |
| 9,600 | 100 |
| 19,200 | 50 |
| 38,400 | 25 |
| 57,600 | 16 |
| 115,200 | 8 |
| 230,400 | 4 |

## 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 SX II in the "Choose a Product" button.

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.   Note that a FTP Server is no longer required to do the Firmware Update, although this method is still available from the CLI.

## 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 (web-based user interface):

1. **Note: for best results, the SX 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 SX II device must be a member of the default Admin Group to have sufficient privileges to do the upgrade.

3. Up to twenty minutes is required for the complete update procedure.

4. We recommend backing up the SX II using the "Backup / Restore" function on the Maintenance menu before starting the upgrade..

5. Close any remote or local SX II sessions to all devices connected to the Dominion SX II unit – servers, power strips, and serial devices.

6. If doing the firmware upgrade over a VPN, ensure that the connection is stable and that no inactivity timeouts have been set.

7. The detailed, step-by-step instructions to perform the upgrade are given below.

8. 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.

9. The SX II firmware can be upgraded by CC-SG; consult the CC-SG documentation for more information.

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 SX 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 Internet Explorer (or other supported web browser), type in the IP Address of your Dominion SX 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 SX 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.

               **DO NOT REBOOT OR POWER CYCLE THE SX 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 SX 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, CLI or the local port.    Use the "Upgrade History" report" on the "Maintenance" menu to check the upgrade status.

11. If you have any questions or issues during the update, call Raritan Technical Support for assistance.