# Dominion SX II

## User Guide

**v2.4.0**

FCC Information

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a commercial installation. This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. Operation of this equipment in a residential environment may cause harmful interference.

VCCI Information (Japan)

この装置は，クラスA情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。　　　　VCCI－A

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# Contents

# CS03 Certification - DSX2-16 and DSX2-48

To avoid potentially fatal shock hazard and possible damage to Raritan equipment:

- Do not use a 2-wire power cord in any product configuration.
- Test AC outlets at your computer and monitor for proper polarity and grounding.
- Use only with grounded outlets at both the computer and monitor.
- When using a backup UPS, power the computer, monitor and appliance off the supply.

NOTICE: This equipment meets the applicable Industry Canada Terminal Equipment Technical Specifications. This is confirmed by the registration number. The abbreviation IC, before the registration number, signifies that registration was performed based on a Declaration of Conformity, indicating that Industry Canada technical specifications were met. It does not imply that Industry Canada approved the equipment.

NOTICE: The Ringer Equivalence Number (REN) for this terminal equipment is 01. The REN assigned to each terminal equipment provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the Ringer Equivalence Numbers of all the devices does not exceed five.

AVIS : Le présent matériel est conforme aux spécifications techniques d'Industrie Canadaapplicables au matériel terminal. Cette conformité est confirmée par le numérod'enregistrement. Le sigle IC, placé devant le numéro d'enregistrement, signifie quel'enregistrement s'est effectué conformément à une déclaration de conformité et indique queles spécifications techniques d'Industrie Canada ont été respectées. Il n'implique pasqu'Industrie Canada a approuvé le matériel.

AVIS : L'indice d'équivalence de la sonnerie (IES) du présent matériel est de 01. L'IESassigné à chaque dispositif terminal indique le nombre maximal de terminaux qui peuvent êtreraccordés à une interface téléphonique. La terminaison d'une interface peut consister en unecombinaison quelconque de dispositifs, à la seule condition que la somme d'indicesd'équivalence de la sonnerie de tous les dispositifs n'excède pas 5.

# Chapter 1      Features and Benefits



## Next-Generation Console Server

**Raritan's Next-Generation Serial Console Server**

The Dominion SX II is Raritan's next-generation Serial Console Server (also known as Terminal 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.     SX II provides convenient and productive access to networking devices, servers, PDUs, telecommunications and other serial devices.

**Ten Years of Serial Console Experience**

For over ten years, thousands of customers have relied on the first generation Dominion SX for access and control of hundreds of thousands of serial devices, representing over 500 million hours of total operation. The SX II builds upon that experience with a wide range of advancements and innovations.

**Dominion Platform, User Interface and Management**

Starting with a powerful, Dominion hardware platform providing performance, reliability and security, the SX II includes virtually all the Serial-over-IP features of its predecessor, Dominion compatible user interfaces and management features, plus exciting new capabilities.

**Full CLI-based Configuration and Auto-Configuration**

The SX II offers complete CLI access and management via SSH, Telnet and web-based user interface, with convenient direct port access.    Two script-based automatic configuration methods are available for a fast installation and for subsequent configuration changes.

**Exciting New Features and Innovations**

The SX II new features include: military grade security features with 256-bit AES encryption and FIPS encryption mode, automatic DTE/DCE serial port detection, innovative at-the-rack access options, wireless modem support, IPv6 networking, script based auto-configuration and Dominion compatible user interfaces and management.

**CommandCenter Management & Scalability**

With Raritan's CommandCenter, organizations can manage hundreds or even thousands of serial devices, spread across multiple locations, including branch offices.

## Powerful Hardware Platform

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| **Powerful New Hardware Platform** | Powerful new hardware platform with 1GHz CPU engine, with an 8-fold increase in RAM.    Increased flash memory, up to 8 GB, for storage and logging.    Front panel LED's show port connection status. |
| **Wide Variety of 1U    Models** | Rackable, 1U models available in 4, 8, 16, 32 and 48 ports.    All have dual power supplies and dual Gigabit Ethernet LAN ports. Models are available with an optional built-in modem.    At-the-rack access includes RJ-45/serial, USB and KVM console. |
| **Powerful Serial Processing Engine** | The Dominion SX II with its powerful hardware platform provides high-powered serial processing for the most extreme use cases.   Up to 10 users can simultaneously connect to a serial device connected to a SX II port.   Up to 200 simultaneous user sessions are supported by a given SX II console server. Port configuration time is up to 23 times faster than the original SX. Connection times are over 50 times faster. |
| **Dual AC Power Supplies** | All models have dual, 100-240 volt AC, auto-switching power supplies with automatic failover for increased reliability. |
| **Dual DC Powered Models** | Dual power and dual LAN, 8, 32 and 48 port DC powered models are available.    These models provide the same features, serial access and performance as the AC powered models. |
| **Dual Gigabit Ethernet LAN on all Models** | Dual gigabit Ethernet LAN ports, which can be configured for simultaneous operation or automatic failover.    Dual stack IPv4 and IPv6 networking. |
| **Five USB Ports** | The Dominion SX II has four USB 2.0 ports, three on the back panel and one on the front panel.    These are available for local keyboard/mouse, 3G/4G cellular modem and for automatic configuration via USB drive.    A USB 2.0 mini-B port is available for local laptop connection. |
| **Optional Telephone Modem** | All models have the option for an internal, 56K telephone modem with RJ11 connection for emergency access and disaster recovery. |
| **Innovative Local Console** | The Dominion SX II's local console provides multiple ways for at-the-rack access.    The console includes a traditional RJ45 serial port, USB mini-B port, and even a DVI/USB KVM console. |
| **Productive Serial-over-IP Access** | |

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| **Widest Variety of Serial-over-IP Access** | The Dominion SX II supports the widest variety of serial-over-IP connections via SSH/Telnet Clients, web-browser, CommandCenter, telephony modem, cellular modem and at-the-rack access.    This includes CLI, GUI and multiple Direct Port Access methods. |
| **SSH/Telnet Client Access** | SSH/Telnet client access from a desktop, laptop, or handheld device. Direct Port Access via SSH Client using a username/port string syntax. Customer can upload, view and delete SSH keys for greater security. |
| **Web Browser Access** | Web browser access via Dominion SX II or CommandCenter user interfaces and the Raritan Serial Client (RSC). |
| **Convenient Direct Port Access** | Convenient Direct Port Access methods via SSH, Telnet & HTTP.      IP address and TCP port-based access for Telnet and SSHv2 clients. Independent IP addresses or TCP port numbers can be assigned to access each SX II port.    HTTPS-based direct access via URL.    Com Port Redirection can be supported for third-party software redirectors. |
| **Cellular and Telephone Modem Access** | Optional external Cellular (3G/4G) modem and internal Telephone modem access for emergency access, business continuity and disaster recovery. |
| **Innovative At-the-Rack Access** | With the Dominion SX II, you get multiple types of local access at-the-rack. This includes:    (1) Traditional RJ45 serial port, (2) Mini-USB port for laptop connection, and (3) DVI & USB-based KVM console for connection to a rackmount keyboard tray or even a KVM switch. |
| **Port Keyword Monitoring and Alerting** | Users can define up to 14 keywords per port. The SX II will scan the data coming from the port, and if one of the keywords is detected, it will send an alert via SNMP or e-mail.    Serial devices are monitored, even when no user is connected!    This results in faster notification that reduces Mean Time to Repair (MTTR). |
| **Port Logging to Syslog, NFS and Local File** | Port activity to and from serial devices can be logged to a Syslog server, Network File System (NFS) server or locally to the SX II device with up to 8 Gb of storage. |
| **NFS Logging Features** | Allows logging of all user keystrokes and server/device responses to NFS server(s). Can even be stored on the NFS server with user-defined encryption keys for greater security.    Keep-alive messages in the NFS log allow easy monitoring if the managed server/device goes down. |
| **SecureChat Instant Messaging** | Allows for secure, instant messaging among SX II users.    Enables collaboration of distributed users to increase their productivity, troubleshoot, reduce the time to resolve problems and for training purposes. |
| **Automatic Serial Device Logoff** | Once a user is timed out for inactivity, a user defined "logoff" command can be sent to the target.    Improved security of user sessions results as serial sessions are automatically closed upon time out and not left open for possible un-authorized access. |
| **Comprehensive Serial Device Access** | |

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| **Over Ten Years of Serial Device Management** | The first generation Dominion SX has been serving customers for over ten years, with over 500,000 ports sold.    This represents hundreds of millions of hours of operation across a wide variety of serial devices. |
| **Automatic DTE/DCE Serial Port Detection** | This feature allows for a straight Cat5 connections to Cisco equipment (and other compatible devices), without rollover cables.    It also means that a SX II can replace the first generation SX with its existing serial device connections. |
| **Support for the Widest Variety of Serial Devices** | Supports the widest variety of serial equipment including: networking routers, Ethernet switches, firewalls, UNIX/LINUX servers, Windows Servers, virtual hosts, rack PDU's, UPS systems,    telecom/wireless gear. Supports multiple operating systems including SUN® Solaris, HP-UX, AIX, Linux®, Windows® Server 2012, and UNIX®. |
| **Up to 230,400 Baud Serial Connections** | Supports operating speeds of 1,200 to 230,400 bits-per-second for serial connections. |
| **Flexible Serial Port Options** | Flexible per-port serial options, including BPS, emulation, encoding, parity, flow control, stop bits, character and line delays, always-active connections and more. Can define an exit command when the user times out, as well as enable an in-line menu for port commands and power control. |
| **VT100/220/320/ANSI support** | Increased choice of terminal emulation options, allows support of a broader range of devices.    SX II supports the following code-sets: US-ASCII (ISO 646); ISO 8859-1 (Latin-1); ISO 8859-15 (Latin-9); UTF-8 and others. |
| **Remote Power Control of Raritan PDU's (With Power Control Menu)** | Raritan rack PDU's (PX, PX2, PX3, RPC) can be connected to the Dominion SX II for remote power control of the equipment connected to the PDU. Remote power control can be done via the SX II GUI, SSH/Telnet Client or CommandCenter.    Outlet associations can be created for serial devices with multiple power supplies, such that these outlets can be controlled with a single power command.    The SX II has "Control P" style menu commands for power control available during a serial session. |

**Security - Encryption**

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| **Strong 256 Bit AES Encryption** | The SX II utilizes the Advanced Encryption Standard (AES) encryption for added security. 128- and 256-bit AES encryption is available. AES is a U.S. government-approved cryptographic algorithm that is recommended by the National Institute of Standards and Technology (NIST) in the FIPS Standard 197. |
| **Validated FIPS 140-2 Cryptographic Module** | For government, military and other high security applications, the Dominion SX II utilizes a validated FIPS 140-2 Cryptographic Module for enhanced encryption. Modules tested and validated as conforming to FIPS 140-2 are accepted by federal agencies of the U.S. and Canada for the protection of sensitive information. |
| **Enhanced Encryption Options** | Support more encryption options: web-browser security through 256 and 128-bit SSL encryption; for SSHv2 connections, AES and 3DES are supported (client-dependent). |
| **Security - Authentication** | |
| **External authentication with LDAP, Radius, TACACS & Active Directory** | Dominion SX II integrates with industry-standard directory servers, such as Microsoft Active Directory, using the LDAP, RADIUS and TACACS protocols. This allows Dominion SX II to use pre-existing username/password databases for security and convenience.    SecureID is supported via RADIUS for added security. |
| **Upload Customer-Provided SSL Certificates** | Customers can upload to the Dominion SX II digital certificates (self-signed or certificate authority provided) for enhanced authentication and secure communication. |
| **Configurable Strong Password Checking** | The Dominion SX II has administrator-configurable, strong password checking to ensure that user-created passwords meet corporate and/or government standards and are resistant to brute force hacking. |
| **Configurable Security Banner** | For government, military and other security-conscious customers requiring a security message before user login, the SX II can display a user-configurable banner message and require acceptance before user login. |
| **SSH    Client Certificate Authentication** | In addition to authentication via login/password, on the SSH interface users can be authenticated via SSH certificates. Each local user can be assigned up to 10 SSH keys.    The key authentication takes the place of the login/password |
| **Local Authentication with Users, Groups and Permissions** | In addition to external authentication, the Dominion SX II supports local authentication. Administrators can define users and groups with customizable administration and port access permissions. |
| **Login and Password Security** | The SX II includes multiple login and password security features including password aging, idle timeout, user blocking and login limitations.    Failed login attempts can be result in lockouts and user deactivation. |
| **SHA-2 Certificate Support** | Support for the more secure SHA-2 certificates. |

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| Security - Networking | |
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| Dual Stack IP Networking – IPv4 and IPv6 | The Dominion SX II provides dual-stack IP networking with simultaneous support of IPv4 and IPv6. |
| IPTables Firewall support | Fully configurable "iptables" firewall support.    User selectable and customizable system security levels catering to wide range of security needs. |
| Selective Static Routing Support | Supports connections between modem and LAN 1, modem and LAN 2 or LAN 1 and LAN 2. This allows users to utilize two different networks (Public and Private) and modem access to KVM or Ethernet controlled devices. When used with the firewall function, secure access can be enabled. |
| TCP/IP Port Management | Can disable TELNET and SSH access if desired.    Ability to change these ports in addition to HTTP, HTTPS and discovery ports |
| Prevent Man In The Middle Attacks | Enhanced security of communication channels by using client and server SSL certificates. |
| Modem Dial-Back Security | For enhanced security, Dominion SX supports modem dial-back. |
| Rejects SSHv1 Requests | Due to the many known security vulnerabilities of the SSHv1 protocol, the Dominion SX will automatically reject SSHv1 connections. |

| End User Experience | |
| --- | --- |
| Multiple User Interfaces | The SX II supports multiple user interfaces giving the user the freedom to use the interface best suited for the job at hand.    This includes remote access via Raritan or third party serial client via CLI, Raritan graphical user interface (GUI), Admin-only GUI,    at-the-rack access or via CommandCenter.    Convenient direct port access methods available. |
| Full Modern CLI – GUI Equivalence | Full CLI management and configuration, thereby allowing scripting of any command. |
| Broad Range of Supported Browsers | Offers broad range of browsers: Firefox, Safari, Internet Explorer, Chrome, Edge. |
| International Language Support | The web-based user interface supports English, Japanese and Chinese languages. The Raritan Serial Console can support four languages: English, Japanese, Korean and Chinese |
| PC Share Mode | Up to ten users can connect and remotely access each connected serial device up to a maximum of 200 serial sessions. Sharing feature is very useful for collaboration, troubleshooting and training. |

| Easy to Install and Manage | |
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| **Full CLI-based Configuration and Management** | The SX II offers complete CLI administration and management via SSH, Telnet and web-based user interface.   Two script-based automatic configuration methods are available for a fast installation and for subsequent configuration changes. |
| **Automatic Configuration via USB Drive** | The SX II can be optionally configured via a CLI script on a USB drive connected to one of its USB ports.   This can be used for initial configuration or subsequent updates. |
| **Automatic Configuration via TFTP Server** | The SX II can be optionally configured via a second method, i.e. via a CLI script contained in a TFTP server.   This can be used for initial configuration or subsequent updates.   The TFTP server address can be retrieved via DHCP or set by the administrator. |
| **Dominion-Compatible Management** | Dominion-compatible management features are available via a web-based user interface or CLI.   This includes Dominion-style User Management, Device Settings, Security, Maintenance, Diagnostic and Help features. Firmware update via web browser without the use of an FTP server. |
| **Easy to Install** | Installation in minutes, with just a web browser, CLI or automatic configuration. Some competitive products require burdensome editing of multiple files to complete a basic installation. |
| **Configurable Event Management and Logging** | The SX II generates a large variety of device and user events including: device operation, device management changes, security, user activity and user administration.   These can be selectively delivered to:   SNMP, Syslog, email (SMTP) as well as stored on the SX II in the audit log. Support for SNMP v2 and v3, |

**Raritan CommandCenter® Management and Scalability**

**Raritan's CommandCenter Centralized Management**

Like the rest of the Dominion series, Dominion SX II features complete CommandCenter Secure Gateway integration, allowing users to consolidate all Dominion SX II and other Raritan devices into a single logical system, accessible from a single IP address, and under a single remote management interface.

**Manage Hundreds of Serial Devices**

When deployed with CommandCenter Secure Gateway, hundreds of Dominion SX II devices (and thousands of serial devices) can be centrally accessed and managed.

**Single IP Address for Administration and Device Connection**

Administrators and users can connect to a single IP address via CommandCenter Secure Gateway to manage the SX II or access the attached serial devices. This connection can be via web browser or through SSH. Option for SX II at-the-rack access while under CC-SG management.

**Bulk Firmware Upgrades**

Administrators can schedule firmware upgrades (and other operations) for multiple SX II devices from CommandCenter.

**Remote Power Control via CommandCenter Secure Gateway**

CommandCenter supports remote power control of Raritan PX rack PDU's connected to serial ports on the Dominion SX II. For equipment with multiple power feeds, multiple power outlets can be associated together to switch equipment on or off with a single click of the mouse.

# Chapter 2    Configure SX II for the First Time

SX II can be configured from the Remote Console or command line interface (CLI).

# Chapter 3     Access and Use Remote Console Features

The Remote Console is a browser-based interface accessed when you log in to SX II via a network connection. See. Log In to SX II and HSC



## Administrator Functions in the Remote Console

Administrators perform SX II configuration and maintenance functions from the Remote Console, such as configuring network access, adding and managing users, managing device IP addresses and so on.

Administrators can also use a version of the Remote Console that does not include any target access. See Log In to SX II Admin-Only Interface.

## End User Functions in the Remote Console

From the Remote Console, end users access targets, change passwords and so on. End users can choose from two Serial Clients: HTML Serial Client, and Raritan Serial Client. See HTML Serial Console (HSC) Help and Raritan Serial Console (RSC) Help.

Note that these functions can also be performed via command line interface.

# Chapter 4  Connect a Rack PDU to SX II and Configure Power Control Options

SX II provides the following options when connecting a Raritan PX PDU to a SX II:

- Connect SX II to the PX PDU Serial port.

  In this configuration, access to the PX PDU is done through the PX PDU command line interface (CLI).

- Connect the SX II to the Feature port on the PX PDU.

  In this configuration, the PX PDU is managed from the SX II interface like any other power strip.

Go to https://www.raritan.com/support/product/px for support on PX PDUs.

## In This Chapter

## Connecting the SX II to the PX PDU Serial Port

In this configuration, after the PX is connected to the SX II, *access the PX using the PX CLI*.

Note that the appliances used in the diagram may not match your specific models. However, the connections and ports used are the same across models.

▶ **To connect the SX II to the PX:**

1. Connect an ASCSDB9F adapter to the PX2 DB9 console/modem port.

   *Note: The adapter is purchased from Raritan. It does not come with PX or SX II appliances.*

2. Plug a Cat5 cable into the ASCSDB9F adapter, then plug the other end of the cable in to the    port on the SX II.

3.  Power on the PX (if it is not already). The command line interface (CLI) interface appears.



| | |
|---|---|
| Ⓐ | PX appliance |
| Ⓑ | SX II |
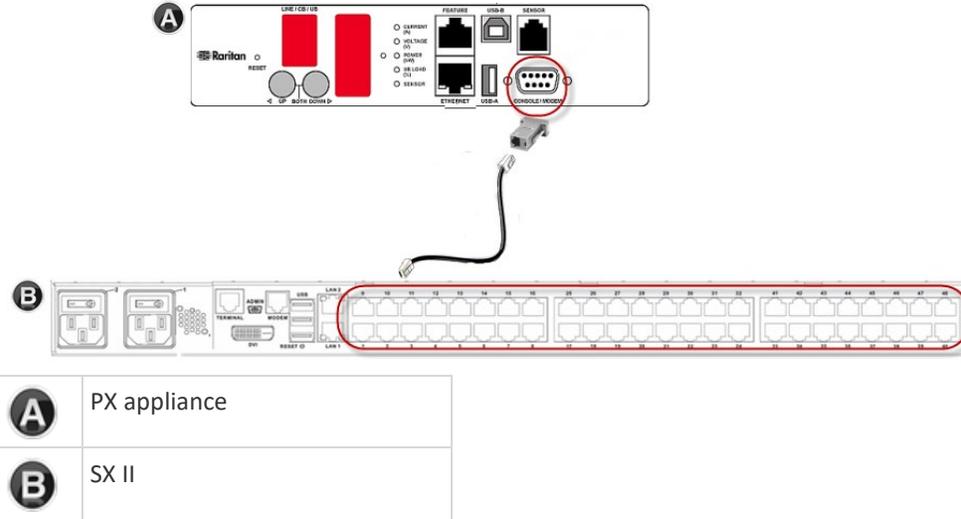
## Connecting the SX II to the PX PDU FEATURE Port

In this configuration, the PX is managed from the SX II interface like any other powerstrip. See Power Control.

*Note: Make sure that the PX PDU's Feature Port is configured to the PowerCIM setting.*

Note that the appliances used in the diagram may not match your specific models. However, the connections and ports used are the same across models.

► **To connect the SX II to the Feature port on the PX:**

1.  Connect the gray end of the CSCSPCS crossover Cat5 cable into the Feature port on the PX.

2.  Connect the yellow end of the CSCSPCS crossover Cat5 cable into a port on the SX II.

3.  Power on the PX (if it is not already).

You can now add the PX as a managed power strip to the SX II. See Configure Power Strips from the Remote Console or Configure Power Strips Using CLI..



| | |
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| Ⓐ | PX appliance |
| Ⓑ | SX II |
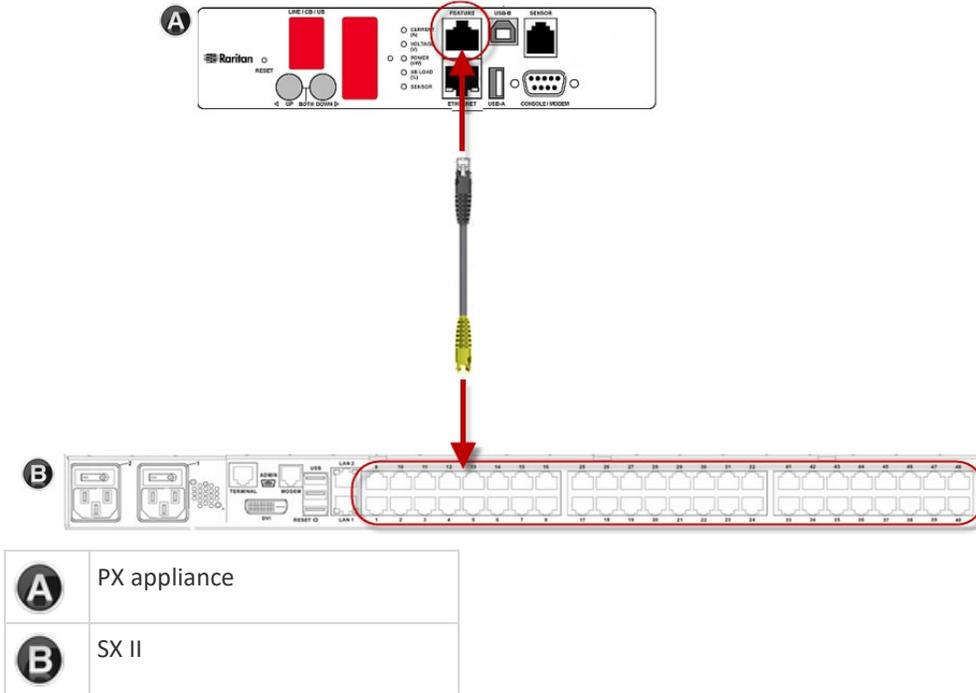
# Appendix A    Specifications

## In This Chapter

## SX II Dimensions and Physical Specifications

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| **Form factor** | 1U, rack mountable |
| **Dimensions** | 17.3" W x 13.15'' D x 1.73'H '; (440mm x 334mm x 44mm) |
| **Weight** | 9.08 lbs; (4.12 kg) |
| **Power** | 100/240VAC auto-switching: 50-60 Hz, .35A, 36-72VDC auto-switching |
| **Max power consumption** | 4-Port SX: 21W    \|    8-port SX: 21W    \|    16-port SX: 22W    \|    32-port SX: 23W    \| 48-port SX: 25W |
| **Temperatures** | Operating: 0°C – 50°C. Non-Operating: 0°C – 55°C |
| **Humidity** | Operating: 20% – 85%. Non-Operating: 10% – 90% |
| **Altitude** | Operates properly at any altitude from 0 to 2,000 meters |

## Supported Remote Connections

Network

- 10BASE-T
- 100BASE-T
- 1000BASE-T (Gigabit) Ethernet

Protocols

- TCP/IP
- HTTP
- HTTPS
- RADIUS
- LDAP/LDAPS
- SSH
- Telnet
- TACACS+
- UDP
- SNTP

## Supported Number of Ports and Remote Users per SX II Model

| Model | Number of ports |
|-------|----------------|
| SX2-04 and SX2-04M | 4 |
| SX2-08 and SX2-08M | 8 |
| SX2-16 and SX2-16M | 16 |
| SX2-32 and SX2-32M | 32 |
| SX2-48 and SX2-48M | 48 |

## Maximum Number of Users Session

A maximum of 200 users can access a single SX II at the same time.

This applies to the Remote Console access, Direct Port Access and command line interface access via SSH/Telnet.

## Maximum Number of Support Users Per Port

A maximum of 10 users can access the same port and the same time.

This applies to the Remote Console access, Direct Port Access and command line interface access via SSH/Telnet.

## Port Access Protocol Requirements

| Protocol | Port | Communication direction |
|---|---|---|
| HTTP | Ports 80, 443 and 5000 must be open in the firewall for the appliance to operate.<br><br>**Port 80**<br>This port can be configured as needed. See HTTP and HTTPS Port Settings.<br><br>By default, all requests received by the SX II via HTTP (port 80) are automatically forwarded to HTTPS for complete security.<br><br>The SX II responds to Port 80 for user convenience, relieving users from having to explicitly type in the URL field to access the SX II, while still preserving complete security.<br><br>**Port 443**<br>This port can be configured as needed. See HTTP and HTTPS Port Settings.<br><br>By default, this port is used for multiple purposes, including the web server for the HTML client, the download of client software onto the client's host, and the transfer of data streams to the client.<br><br>**Port 5000**<br>This port is used to discover other Dominion devices and for communication between Raritan devices and systems, including CC-SG for devices that CC-SG management is available.<br><br>By default, this is set to Port 5000, but you may configure it to use any TCP port not currently in use. For details on how to configure this setting, see Network Settings. | Both |
| HTTPS SSL only | **Port 443**<br>TCP port 443 must be open.<br>Port 80 can be closed. | Both |
| SSH | **Port 22**<br>TCP port 22 must be open.<br>Port 22 is used for the SX II command line interface (CLI). | Both |
| Telnet | **Port 23**<br>TCP port 23 must be open. | Both |
| TACACS+ | **Port 49**<br>Port 49 must be open. | Outgoing |

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| Protocol | Port | Communication direction |
|---|---|---|
| RADIUS | **Port 1812**<br><br>If SX II is configured to remotely authenticate user logins via the RADIUS protocol, port 1812 is used and must be open.<br><br>However, but the system can also be configured to use any port of your designation. **Optional**<br><br>**Port 1813**<br><br>If the SX II is configured to remotely authenticate user logins via the RADIUS protocol, and it also employs RADIUS accounting for event logging, port 1813 or an additional port of your designation is used to transfer log notifications. | Outgoing |
| LDAP | **Ports 389 and 636**<br><br>Port 389 or 636 must be open.<br><br>If the SX II is configured to remotely authenticate user logins via the LDAP/LDAPS protocol, ports 389 or 636 will be used, but the system can also be configured to use any port of your designation. **Optional** | Outgoing |
| SNMP | **Ports 161 and 162**<br><br>Port 161 is used for inbound/outbound read/write SNMP access.<br><br>Port 162 must be open. Port 162 is used for outbound traffic for SNMP traps. | Both (Port 161)<br><br>Outgoing (Port 162) |
| For FTP upgrades | **Port 21**<br><br>Port 21 must be open. | Outgoing |
| SYSLOG on Configurable UDP Port | **Port 514**<br><br>By default UDP port 514 is used. Configurable to a port of your choice. | Outgoing |
| SNTP (Time Server) on Configurable UDP | **Port 123**<br><br>The SX II offers the optional capability to synchronize its internal clock to a central time server.<br><br>This function requires the use of UDP Port 123 (the standard for SNTP), but can also be configured to use any port of your designation. **Optional** | Both |

You may have to open additional ports when NFS logging, using LDAP servers, and so forth.

These ports may vary from installation-to-installation depending on network topologies, virtual Local Area Networks (VLANs), and firewall configurations.

Contact your network administrator for site-specific information and settings.

## SX II Port Pins

| Local Terminal Port | | |
|---|---|---|
| pin | Definition | Direction |
| pin 1 | RTS | Output |
| pin 2 | N/A | |
| pin 3 | TXD | Output |
| pin 4 | Ground | |
| pin 5 | Ground | |
| pin 6 | RXD | Input |
| pin 7 | N/A | |
| pin 8 | CTS | Input |

| DTE Mode on Server Port | | |
|---|---|---|
| pin | Definition | Direction |
| pin 1 | RTS | Output |
| pin 2 | DTR | Output |
| pin 3 | TXD | Output |
| pin 4 | Ground | |
| pin 5 | Ground | |
| pin 6 | RXD | Input |
| pin 7 | DSR | Input |
| pin 8 | CTS | Input |

| DCE Mode on Server Port | | |
|---|---|---|
| pin | Definition | Direction |
| pin 1 | CTS | Input |
| pin 2 | DSR | Input |
| pin 3 | RXD | Input |
| pin 4 | Ground | |
| pin 5 | Ground | |
| pin 6 | TXD | Output |

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| DCE Mode on Server Port | | |
| --- | --- | --- |
| pin 7 | DTR | Output |
| pin 8 | RTS | Output |

## Port Ranges

The port range for internal port configuration - CSC, HTTP, HTTPS, SSH, Telnet, DPA SSH , DPA Telnet - is 1 to 64510. The configurable port range for socket creation is limited to 1024 to 64510.

External port configuration - LDAP, RADIUS, TACACS+ and SNMP - is not affected by a port range limitation.

## Network Speed Settings

| SX II network speed setting | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Network switch port setting | | Auto | 1000/Full | 100/Full | 100/Half | 10/Full | 10/Half |
| | Auto | Highest Available Speed | 1000/Full | SX II: 100/Full Switch: 100/Half | 100/Half | SX II: 10/Full Switch: 10/Half | 10/Half |
| | 1000/Full | 1000/Full | 1000/Full | No Communication | No Communication | No Communication | No Communication |
| | 100/Full | SX II: 100/Half Switch: 100/Full | SX II: 100/Half Switch: 100/Full | 100/Full | SX II: 100/Half Switch: 100/Full | No Communication | No Communication |
| | 100/Half | 100/Half | 100/Half | SX II: 100/Full Switch: 100/Half | 100/Half | No Communication | No Communication |
| | 10/Full | SX II: 10/Half Switch: 10/Full | No Communication | No Communication | No Communication | 10/Full | SX II: 10/Half Switch: 10/Full |
| | 10/Half | 10/Half | No Communication | No Communication | No Communication | SX II: 10/Full Switch: 10/Half | 10/Half |

Legend:
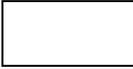
|  | Does not function as expected |
|---|---|
|  | Supported |
|  | Functions; not recommended |
|  | NOT supported by Ethernet specification; product will communicate, but collisions will occur |
|  | Per Ethernet specification, these should be "no communication," however, note that the SX II behavior deviates from expected behavior |

*Note: For reliable network communication, configure the SX II and the LAN switch to the same LAN Interface Speed and Duplex. For example, configure the SX II and LAN Switch to Autodetect (recommended), or set both to a fixed speed/duplex such as 100MB/s/Full.*

## Default User Session Timeouts

- SX II interface - 5 minutes (to change this, select Security > Settings and update the "Idle Timeout (minutes)" field)
- SSH - 16 minutes
- Telnet - 2 hours

## SX II Supported Local Port DVI Resolutions

Following are the resolutions supported when connecting to a DVI monitor from the SX II local port.

- 1920x1080@60Hz
- 1280x720@60Hz
- 1024x768@60Hz (default)
- 1024x768@75Hz
- 1280x1024@60Hz
- 1280x1024@75Hz
- 1600x1200@60Hz
- 800x480@60Hz
- 1280x768@60Hz
- 1366x768@60Hz
- 1360x768@60Hz
- 1680x1050@60Hz
- 1440x900@60Hz

## SX II Appliance LED Status Indicators

LEDs are used to indicate power status, appliance status and target connection status.

**There are LEDs located on the front panel and rear panel of the SX II. Front Panel LED Status Indicators**

- When SX II boots up, only the Power LED turns on. The power LED turns both red and blue.
- Port Channel LEDs are off the whole time SX II boots up.
- Once SX II is fully powered on, the Power LED remains on.
  - If a single power supply is plugged in, the Power LED is **Red**.
  - If both power supplies are plugged in, the Power LED is **Blue**.
- When you physically connect a powered-on target to a port on SX II via a CAT5 cable, the Port channel's LED turns on.

  The LED remains on until the target is disconnected.

*Note: The target must be powered on in order for the SX II Port channel LED to turn on and the SX II to detect the target.*

- When you physically disconnect a target from a port on an SX II, the port channel's LED turns off.

- When you log in to SX II and connect to a target via either Raritan Serial Console (RSC), SSH or the Local Console, the port channel's LED blinks.

   The LED blinks until you end the your connection to the target.

   If you are connected to more than one target at the same time, all LEDs blink in unison.

- When you press the SX II's Reset button to reset the appliance or when you perform a reboot from the SX II GUI, the Power LED(s) blinks as the appliance powers down and turns off.

   While the appliance powers back up, the Power LED(s) continue to blink.

   Once the appliance is powered on, the Power LED(s) stop blinking and the LED remains on.

## Target Cable Connection Distances and Rates

SX II supports the following connection distances using a CAT5 cable between its Serial port and a target.

| Distance | Bits per second |
| --- | --- |
| 300ft/91m | 1,200 |
| 300ft/91m | 1,800 |
| 300ft/91m | 2,400 |
| 200ft/60m | 4,800 |
| 100ft/30m | 9,600 |
| 50ft/15m | 19,200 |
| 25ft/7.5m | 38,400 |
| 16ft/5m | 57,600 |
| 8ft/2.5m | 115,200 |
| 4ft/1.2m | 230,400 |

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## BSMI Certification

| 設備名稱：串列控制伺服器<br>Equipment name | | 型號（型式）：DSX2系列 (系列型號參見次頁)<br>Type designation (Type) | | | | |
|---|---|---|---|---|---|---|
| 單元Unit | 限用物質及其化學符號<br>Restricted substances and its chemical symbols | | | | | |
| | 鉛Lead<br>(Pb) | 汞Mercury<br>(Hg) | 鎘Cadmium<br>(Cd) | 六價鉻<br>Hexavalent chromium<br>($Cr^{+6}$) | 多溴聯苯<br>Polybrominated biphenyls<br>(PBB) | 多溴二苯醚<br>Polybrominated diphenyl ethers<br>(PBDE) |
| 電路板 | — | ○ | ○ | ○ | ○ | ○ |
| 電源供應器 | — | ○ | ○ | ○ | ○ | ○ |
| 機殼 | ○ | ○ | ○ | ○ | ○ | ○ |
| 面板 | ○ | ○ | ○ | ○ | ○ | ○ |
| 其他配件 | ○ | ○ | ○ | ○ | ○ | ○ |

備考1. "超出0.1 wt %" 及 "超出0.01 wt %" 係指限用物質之百分比含量超出百分比含量基準值。

Note 1 : "Exceeding 0.1 wt %" and "exceeding 0.01 wt %" indicate that the percentage content of the restricted substance exceeds the reference percentage value of presence condition.

備考2. "○" 係指該項限用物質之百分比含量未超出百分比含量基準值。

Note 2 : "○" indicates that the percentage content of the restricted substance does not exceed the percentage of reference value of presence.

備考3. "—" 係指該項限用物質為排除項目。

Note 3 : The "—" indicates that the restricted substance corresponds to the exemption.

系列型號

| | | |
|---|---|---|
| DSX2-4 | DSX2-4M | DSX2-8 |
| DSX2-8M | DSX2-8M-DC | DSX2-16 |
| DSX2-16M | DSX2-16M-DC | DSX2-32 |
| DSX2-32M | DSX2-32M-DC | DSX2-48 |
| DSX2-48M | DSX2-48M-DC | |

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# Appendix B    FAQs

**Dominion SX II Overview**

**Dominion SX II Overview**

| | |
|---|---|
| **What is the Dominion SX II?** | The Dominion SX II is Raritan's next-generation Serial Console Server that provides 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.    SX II provides convenient and productive access to networking devices, servers, PDUs, telecommunications and other serial devices. |
| **How is SX II different from the current SX?** | The SX II is the next-generation version of the current SX.    SX II has an entirely new hardware and software design that is substantially more powerful and capable than the current SX.    The SX II provides virtually all of the features of the SX, plus exciting new capabilities.    Unlike the current SX, all SX models come with dual power supplies, dual LAN connections and multiple local connection options. The SX II comes in 4, 8, 16, 32 and 48 models, available with and without an internal telephone modem.    Many of the management features are the same as those on the Dominion KX III. |
| **What are the SX II's new features?** | New features include:    Gigabit Ethernet, IPv6 networking, direct connection to Cisco devices with no rollover cables, FIPS 140-2 encryption, automatic configuration via USB stick or TFTP, 3G/4G cellular modem support, up to 8 gigabytes of flash space, multiple at the rack access options and Dominion compatible user interfaces and management. |
| **Does the SX II have all of the current SX's features?** | Virtually all of the current SX's features are included in the SX II.    Several features (firmware update, fixed user groups have been replaced by more powerful Dominion style features and a few infrequently used features have been removed. |
| **What is the pricing for SX II?** | While you might expect a significant price increase for the SX II, it is priced similarly to the current SX. The exact price difference varies model by model. Some SX II models are even less expensive than the current SX models! |
| **What are the end-of-life plans (lifecycle) for the current SX?** | The Dominion SX II will replace the current Dominion SX.    In the 4th quarter of 2015, Raritan will announce the end-of-sales for the current SX models, with opportunities for last-time-buys for a few months.    Raritan will continue software |

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**Dominion SX II Overview**

| | support for the current SX for two years from the end-of-sales announcement date; after that there will be no more firmware releases for the current SX.   CommandCenter support will likely continue past the end-of-support date.   Existing hardware warrantees will be honored. |
|---|---|
| **Is there a trade-in program for the SX II?** | Yes, you will have the opportunity to trade in the current SX and/or competitor serial console servers. |

**Dominion SX II Hardware Platform**

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| | |
|---|---|
| **What are some of the hardware improvements?** | There are many:   more powerful CPU,   memory and flash space, dual power supplies (AC & DC), dual gigabit LAN ports, port status LED's, 4 USB ports, autosensing DTE/DCE ports, USB laptop access, DVI/USB access, and modem option for all models. |
| **How does the SX II's performance compared to the current SX?** | The SX II hardware platform is substantially more powerful with a 1GHz CPU, an 8-fold increase RAM, and up to 8 Gb of flash space.   SX II supports up to 10 sessions per port and up to 200 total serial sessions.   Port configuration is 15 to 23 times faster, with order of magnitude improvements in simultaneous connections, connection speed and serial processing. |
| **What type of network connections does the SX II have?** | The SX II has two Gigabit Ethernet LAN ports that are auto-sensing to support 10/100/1000 Megabit connections.   These LAN ports can be configured for (1) single LAN connection, or (2) dual LAN connections; the latter with (a) failover or (b) simultaneous operation.     Both IPv4 and IPv6 are supported. |
| **Are all SX II models 1U?     Even the 48 port model?** | Yes, all models are 1U and include a rackmount kit. Like, the current SX, the 48 port model has 48 ports on the back panel; to make room for this, the dual power outlets are on the front panel. |
| **How much flash space is available for logs?** | More than you could ever possibly use!!   Four and eight port SX II's have 2 Gigabits of flash space. The other models have 8 Gigabits of flash space. |
| **Does the SX II support remote power control?** | Yes, the SX II supports remote power control for serial devices via connection to Raritan PX intelligent rack PDU's. |
| **What is the pin definition for the SX II's local admin port?** | The SX II local admin port is an RJ-45 port with the following DTE pinout (Pin/ Signal):   1/RTS,   3/TXD, 4/GND, 5/GND, 6/RXD, 8/CTS.   You can connect to a DB9 port on a laptop using the Raritan ASCSDB9F RJ-45(female) to DB9 (female) adapter with a Cat5 cable. |
| **Does Dominion SX include a 19" rack mount kit?** | Yes.   Dominion SX II comes standard with a complete ready-to-install 19" rack mount kit. |

**Serial-over-IP Sessions and Access**

| **Serial-over-IP Sessions and Access** | |
| --- | --- |
| What types of serial access are available? | The SX II has the widest variety of serial access. This includes: SSH, Telnet and web browser serial connections. Web browser access is available via the Raritan Serial Client and through Raritan CommandCenter. Convenient Direct Port Access (DPA) methods are available. At-the-rack access is available via serial cable, USB and via a KVM console. Emergency modem access is available via optional internal modem or external 3G/4G cellular modem. |
| What is Direct Port Access ? | Direct Port Access provides direct and convenient access to a specific serial device connected to the SX II. Multiple Direct Port Access (DPA) methods are available via SSH, Telnet and HTTP/URL. |
| Does the SX II support TELNET? | TELNET is supported, but is disabled by default for security reasons as TELNET does not support encrypted sessions. We recommend that SSH is used instead of TELNET. |
| What about emergency access via modem? | There are two types of modem access supported. First, an internal telephone modem is optional for each SX II model (DSX2-...M models). Second, for 3G/4G cellular modem access, you can connect one of the supported Sierra Wireless modems to the SX II's USB port and access the SX II via the modem's IP address. |
| How can I secure the Sierra Wireless modem? | You can use the SX II's Firewall feature to create Linux-style "iptable" rules to secure the connection to the wireless modem. In addition the modem itself has a firewall capability. |
| How can I access the SX II when I am in the data center? | The Dominion SX II provides multiple types of at-the-rack access. To connect to a laptop or PC you can connect to its RJ45 serial port or USB mini-B port. You can connect a crash cart or rackmount keyboard tray to the SX II's DVI and USB KVM ports. To access the SX II's web-based user interface, connect a crossover Ethernet cable to the SX II's LAN port. |
| How can I get consolidated access to the local ports of multiple SX II's? | There are two ways to do this. First you can connect the serial admin ports of multiple SX II's to another SX II with straight Cat5 cables. Second you can connect the DVI/USB local ports of the SX II's to a KVM switch like the Dominion KX III. This can give you access to multiple SX II's in and around the |

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| Serial-over-IP Sessions and Access | |
| --- | --- |
| | data center. |
| What baud rates are supported? | Multiple baud rates are supported:    1200, 1800, 2400, 4800, 9600 (default), 19200, 38400, 57600, 115200, and 230400 bits per second.    Can set this on a per port basis from the Port Configuration page or CLI. |
| What code-sets does the terminal emulator in Dominion SX II support? | Dominion SX release 3.0 or higher supports VT100/VT220/VT320 and ANSI with the following code-sets: default, US-ASCII, ISO-8859-1, ISO-8859-15, UTF-8, Shift-JIS, EUC-JP, EUC-CN, and EUC-KR. |
| How many serial devices can be simultaneously accessed through a given SX II? | A group of users can simultaneously access all the serial devices connected to a SX II.    For example, with a 48 port SX II, users can simultaneously connect to and access all 48 serial devices connected to it! |
| How many users can simultaneously access a single serial device connected to a SX II | Up to ten users can access a single serial device at the same time, up to a limit of two hundred simultaneous accesses per SX II.    For example, on a 32 port SX II, six users could each simultaneous access each of the 32 serial devices connected to it for a total of 192 user sessions.    This would not be a typical user scenario, but illustrates the powerful serial processing capacity of the SX II. |
| Is the Dominion SX unit SUN® "break-safe" | All Dominion SX units are SUN "break-safe" for use with SUN Solaris. |
| Connecting to Serial Devices | |

| Connecting to Serial Devices | |
| --- | --- |
| What type of devices can the SX II connect to? | The SX II can connect to a wide variety of serial devices including network routers, Ethernet switches, firewalls, UNIX/LINUX servers, Windows Servers, virtual hosts, rack PDU's, UPS systems and telecom/wireless gear.    The SX II connects via Cat5 cable to these device's RJ-45, DB9 or DB25 serial console ports. |
| Are rollover cables required? | No.    SX II serial connections are auto-sensing, so that they can connect to both DTE (data terminal equipment) and DCE (data communications equipment) console ports without rollover cables. The SX II can connect to Cisco and other compatible devices with RJ-45 console ports without rollover cables. |
| What is DTE/DCE and why is it important? | An RS-232 serial port is either DTE or DCE.    DTE ports are typically used on a computer or terminal, i.e. male DB9 COM port. And DCE is used on a modem, CSU/DSU, multiplexer or peripheral.    A DTE port is typically cabled to a DCE port. Connections between like ports must be connected by a specific rollover cable.    Since SX II is auto-sensing, it can connect to either DTE or DCE ports. |
| Are adapters required? | To connect to RJ45 console ports, a regular Cat5 cable can be used with no adapter.    Raritan also sells male and female DB9 and DB25 adapters for devices with these types of serial ports.    Adapters are also available to connect to Raritan PX intelligent Rack PDU's. |
| What is the maximum distance from the SX II to a serial device? | The distance varies according to the baud rate that is used.    This can range from 4 feet for 230K baud to over 300 feet for 2.4K baud. |
| What are some sample connections to serial devices? | The below table shows how to connect the SX II to standard networking and computer equipment. This is based on the type of serial port (RJ45, DB9 & DB25) and its gender (male or female).    The required Raritan adapter is shown. |

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| Vendor | Models | Serial Port | How to Connect |
|---|---|---|---|
| Cisco | Catalyst | RJ45 | Cat5 cable |
| Cisco | Catalyst | DB25F | ASCSDB25M adapter and CAT5 cable |
| Cisco | Router | RJ45 | Cat5 cable |
| Cisco | Router | DB25F | ASCSDB25M adapter and CAT5 cable |
| Cisco | UCS | RJ45 | Cat5 cable |
| Cisco | PIX Firewall | DB9M | ASCSDB9F adapter and CAT5 cable |
| HP | Servers | DB9M | ASCSDB9F adapter and CAT5 cable |
| Dell | Servers | DB9M | ASCSDB9F adapter and CAT5 cable |
| IBM | Servers | RJ45 | Cat5 cable |
| Checkpoint | Firewall | DB9M | ASCSDB9F adapter and CAT5 cable |
| Silicon Graphics | Origin | DB9M | ASCSDB9F adapter and CAT5 cable |
| Sun | SPARCStation | DB25F | ASCSDB25M adapter and CAT5 cable |
| Sun | Netra T1 | RJ45 | Cat5 cable |
| Sun | Cobalt | DB9M | ASCSDB9F adapter and CAT5 cable |
| Various | Windows | DB9M | ASCSDB9F adapter and CAT5 cable |
| Raritan | PX | RJ45 | CSCSPCS-1 or CSCSPCS-10 cable |

**Installation, Management & Configuration**

| Installation, Management & Configuration | |
| --- | --- |
| How do I initially configure the SX II? | Initial configuration can be done manually from the SX II local console or automatically via USB stick or TFTP server.    Manual configuration can be done via CLI by connecting your laptop via (1) USB , (2) serial cable, or (3) by connecting a KVM console.    You can also (4) use the web GUI connecting a laptop via a crossover cable.    A Quick Setup Guide (QSG) is included. |
| Can the SX II be completely managed by CLI?    Where is the CLI defined? | Yes, the SX II can be completely managed via CLI commands.    The CLI is defined in the on-line help, user guide and available from the CLI itself. |
| Tell me more about the automatic configuration options. | There are two ways to automatically configure the SX II.    First, it can be configured by a script of CLI commands, plugged into a USB port on the SX II. Second, a script of CLI commands can be stored on a TFTP server available via DHCP Server or configured into the SX.    For security, both of these automatic configuration methods must be enabled by the administrator. |
| Does the SX II require a FTP Server for firmware upgrades like the current SX? | No, the SX II firmware upgrade process is like that of the KX III.    No FTP server is required.    The user browses to an encrypted firmware file downloaded from the Raritan website.    Many of the management functions are the same as with the KX III.    Note that the FTP option still exists via CLI to upgrade the device in this manner. |
| Can I copy my current SX configuration to the new SX II?" | With the extensive software and hardware changes, the configuration backups of the current SX are unfortunately not compatible with the new SX II. |
| Where can I get a copy of the SNMP MIB for Dominion SX? | The SX II SNMP MIB is available from the Dominion SX II Support Page on raritan.com.      It is also available from the Event Management - Settings page on the web GUI. |
| Does the SX II work with Raritan's Command Center? | Yes.    The Dominion SX II requires CommandCenter Secure Gateway Release 6.1 and above, available in September 2015.    Using CommandCenter, users can connect to thousands of serial (and KVM) devices, connected to the Dominion SX, SX II, KX III and other Raritan devices. |
| Security | |

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**Security**

| | |
|---|---|
| **Is the Dominion SX II secure?** | Yes, the Dominion SX II has rock-solid security with military grade security features such as 256 bit AES encryption with a FIPS 140-2 mode and encryption module.    The SX II has a long list of security features and each release is tested with a vulnerability scanner.     Security patches will be made available from the Raritan website. |
| **Is the Dominion SX II FIPS 140-2 certified?** | The Dominion SX II uses an embedded FIPS 140-2 validated cryptographic module running on a Linux platform per FIPS 140-2 implementation guidelines. This cryptographic module is used for encryption of serial sessions when using the Raritan Serial Client (RSC). |
| **Is ActiveDirectory authentication supported?** | Yes,    ActiveDirectory, LDAP, Radius and TACACS authentication are supported.    In addition the SX II administrator can create local users with their passwords. |
| **Which ports need to be open for SX II connections?** | Port 443 (for https); optionally port 80 (http) for user sessions. When using SSH, port 22 needs to be open. The TCP ports for HTTP, HTTPS, Telnet, SSH are all user configurable. These user configured ports will need to be open for access.      Also, TCP port 5000. |
| **What type of logging is available?** | The SX II supports many types of events generated for user access, security events as well as administrative actions.    Multiple logging methods are available including SNMP, Syslog, Email, NFS and internal log file. |
| **Is the serial port data logged?** | Yes, data from the serial devices can be logged to a local file on the SX II, Syslog or NFS server. |
| **What is the default login and default password?** | The default login is "admin" and the default password is "raritan".    You are forced to change the password when you first log in to the SX II.    We recommend that you also change the default "admin" name for security reasons.    Also recommended is strong passwords for your local accounts, which can be enabled on the Security Settings panel. |
| **I have lost the Admin password to the Dominion SX.    What can I do?** | You can restore the unit to its factory default settings.    A factory reset function to restore the unit to factory default settings is provided.    This reset function has several configurable options. |

**User Interface & Documentation**

| User Interface & Documentation | |
| --- | --- |
| **What type of web-based user interface does the Dominion SX II have?** | The Dominion SX II Graphical User Interface is similar to the other Dominion products, providing a common look-and-feel across the Dominion SX II, KX, KSX and KX2-101-V2.    In addition, similar management features are available including firmware update, backup and restore, security options and diagnostics. |
| **Does the SX II require Java?** | For web browser access by the Raritan Serial Console software, Java is required.    Java is not required for CLI access to the SX II via SSH, Telnet or an at-the-rack connection. |
| **Where can I get documentation (user guide, etc.) for the Dominion SX II?** | The Data Sheet, available on the SX II Product Page, provides a good overview of the SX showing the available models, adapters and features.    The Features and Benefits document, also available on the SX II Product Page, provides a list of the SX II features.    The SX II Support Page provides detailed technical information including the Release Notes, User Manual, On-line Help, SX II MIB and firmware releases. |

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# Appendix C    SX II Support

In addition to Raritan Technical Support and Customer Support, the following resources are available.

## In This Chapter

## SX II Release Notes and Help

### SX II Release Notes

Release notes come with the SX II appliance and are available on the Support page of *Raritan's website* (*http://www.raritan.com/support/firmware-and-documentation*).

Review the release notes for important information before you begin using the appliance.

### SX II Quick Setup Guide

Online help is accompanied by the **SX II Quick Setup Guide**, which is included with your SX II and can be found on the Support page of *Raritan's website* (*http://www.raritan.com/support/firmware-and-documentation*).

### SX II Online Help

SX II online help is considered your primary help resource.

Access client help is provided as part of SX II online help.

To use online help, Active Content must be enabled in your browser.

### SX II Users Guide and Administrators Guide

A PDF version of help topics specific to end users is contained in the SX II User Guide and topics specific to SX II administrators are contained in the SX Administrators Guide.

Both PDFs are available on the Support page of *Raritan's website* (*http://www.raritan.com/support/firmware-and-documentation*).

# Index