Smart Rack Controller® SRC-0100, SRC-0102, SRC-0103, SRC-0800, SRC-0803

Thank you for purchasing Raritan's Smart Rack Controller (SRC). This product provides an ideal rack management solution which features the following functions for data centers and server rooms:

- Support for environmental sensors: https://www.raritan.com/products/power/rack-management/smart-sensors
- Control and detection of cabinet doors: https://www.raritan.com/products/power/rack-management/smartlock-door-access-control
- Asset management: https://www.raritan.com/products/power/rack-management/asset-management-solution

Note: Some models do not support using asset management and SmartLock simultaneously.

For more, access online help from the web interface or go to Raritan's **Support page** (**www.raritan.com/support**).

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Package Contents

The following lists the equipment shipped with SRC. If anything is missing or damaged, contact the local dealer or Raritan Technical Support for help.

- One SRC device
- Bracket pack and screws
- Quick Setup Guide

Optional Accessories

Optional accessories shipped on demand only.

- Asset management strips and asset tags
- Door handles or SmartLock kit
- Environmental sensor packages, DX or DX2 series
- Sensor hubs

Before You Begin

Prepare the installation site. Make sure the installation area is clean and not exposed to extreme temperatures or humidity. Allow sufficient space around the SRC for cabling and equipment connections.

Rackmount

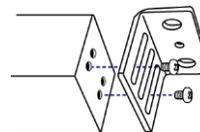There are two ways to mount an SRC device, using the same Raritan rackmount brackets.
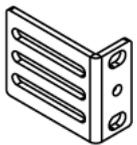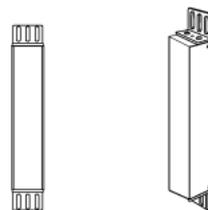

1U Rackmount Method

▶ **To mount SRC like a 1U device:**

1. Align the two edge slots of the L-bracket with two of the screw holes on one end of the SRC device.
2. Screw the L-bracket to the device and ensure the bracket is fastened securely.

3. Repeat Steps 1 to 2 to screw another L-bracket to the other end of the device.
4. After both L-brackets are installed, fasten the device to the rack, using rack screws, through two identical round holes of each L-bracket.

0U Rackmount Method

▶ To mount SRC like a 0U device:

1. Align the two round holes of the L-bracket with two of the screw holes on the top of the SRC device.

2. Screw the L-bracket to the device and ensure the bracket is fastened securely.
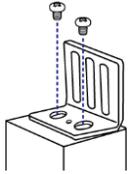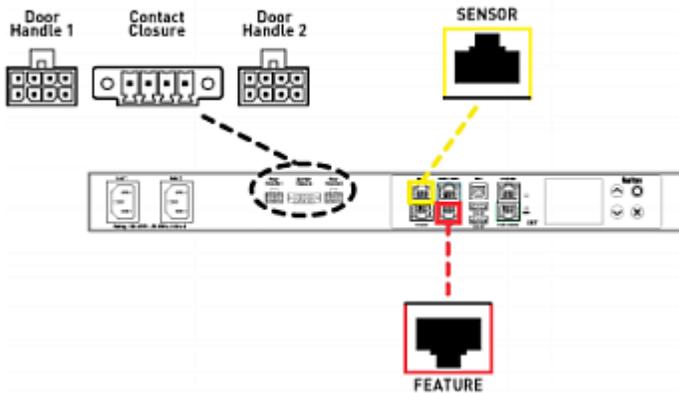
3. Repeat Steps 1 to 2 to screw another L-bracket to the other end of the device.

4. After both L-brackets are installed, fasten the device to the rack, using rack screws, through slots of each L-bracket.

Connection Ports for Sensors, Door Handles, and Assets

If you purchase **Optional Accessories** (on page 1), make sure you connect them to the correct port on the SRC. Connecting to the wrong port may cause damage to SRC and/or connected accessories.

Door Handle Ports (Optional)

SRC models	Connection ports	Supported accessories
All models	SENSOR port (yellow)	• Legrand's DX or DX2 sensors or actuators • SmartLock kit (that is, DX2-DH2C2) Refer to "FEATURE 1" below.
Models with onboard door handle ports. SRC-0102 SRC-0103	Door handle ports, and contact closure terminals	• Door handles • Third-party contact closure detectors (optional) Refer to "FEATURE 2" below.

All models	FEATURE port (red)	• AMS-series asset management strips Refer to "FEATURE 3" below.
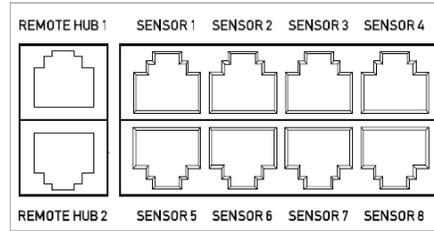
SRC models	Connection ports	Supported accessories
SRC-0800 SRC-0803	Sensor 1 - Sensor 8	DX2 sensors or actuators Refer to "FEATURE 4" below.
SRC-0800 SRC-0803	Remote Hub 1 Remote Hub 2	DX2-REMHUB4 sensor hub Refer to "FEATURE 5" below.

FEATURE 1: Support for DX and DX2 Environmental Sensors/Actuators

DX or **DX2** environmental sensor packages are required for SRC to detect the surrounding conditions like temperature, or to control a system like door handles.

Connecting Environmental Sensors (Optional)

SRC provides the SENSOR port for connecting DX or DX2 environmental sensor packages so that you can remotely monitor environmental factors, such as temperature and humidity, around the rack.

• For detailed information on each sensor package, refer to the Environmental Sensors and Actuators Guide (or Online Help) on the **Support page** (**www.raritan.com/support**).

FEATURE 2: Cabinet Access Control

Door handles or SmartLock kits are required for SRC to control access to a cabinet. Depending on your SRC model, you may have to purchase either only door handles or a full SmartLock kit with handles and a door handle controller.

To detect the cabinet's door status, you need to connect third-party contact closure detectors, which are optional.

Important: It is not guaranteed that all third-party detectors/switches are compatible with the SRC. Test for compatibility after installing them.

Limitations

Read the restrictions below before connecting door handles or a SmartLock kit with DX2-DH2C2.

- Up to one DX2-DH2C2 can be connected per SENSOR port of SRC.
  - SRC-0100 supports a maximum of 2 door handles by connecting one DX2-DH2C2.
  - SRC-0102 and SRC-0103 models have two onboard door handle ports, supporting a maximum of 4 door handles. You can connect two door handles to onboard door handle ports and connect one DX2-DH2C2 to its SENSOR port.
  - NOTE: SRC-0800 only supports DX2-REMHUB4, the remote hub that supports up to 4 DX2-DH2C2, each connected to 2 door handles for a total maximum of 8 door handles. See Using an Optional Remote Hub.
- Only the door handles sold with DX2-DH2C2 are supported.
- No hot plugging or hot swapping with door handles when they are directly or indirectly connected to a *powered* SRC.
  - That is, no connection or disconnection of door handles when they are powered.
- The maximum cabling length for door handles or SmartLock kit is 29 feet (9 meters). For details, refer to the following diagram.
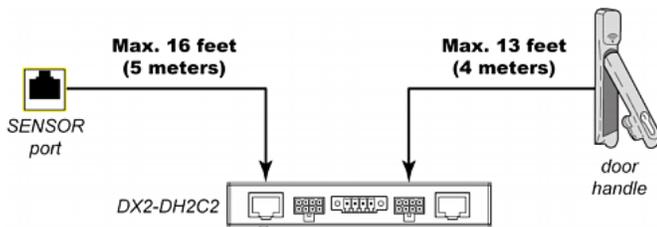
Connecting a SmartLock Kit to DX2-DH2C2

You need a SmartLock kit if your SRC does NOT include a built-in DX2-DH2C2, such as SRC-0100, SRC-0800, and SRC-0803.

▶ **DX2-DH2C2 ports and terminals:**
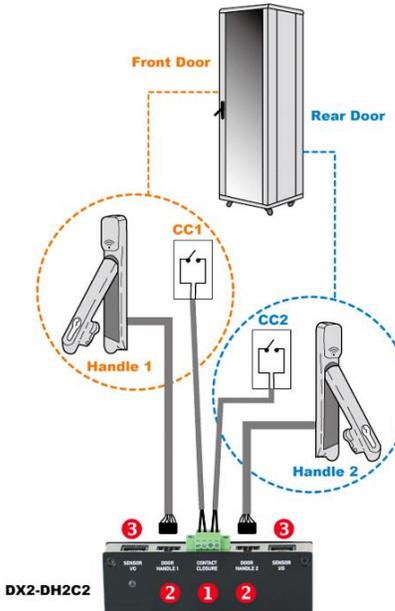
| No.	Component	Function
❶	Two pairs of contact closure sensor terminals	Connect to third-party contact closure detectors/switches for detecting the door open/closed status. Contact closure detectors are OPTIONAL.
❷	Two door handle ports	Connect to the standard category cable of the door handle. The two door handles are usually attached to different doors of the same cabinet.
❸	Two RJ-45 ports	Connect a standard network patch cable to: • Connect to the **SENSOR** port (yellow) Exception: You CANNOT cascade DX2-DH2C2 packages.

▶ **Connection procedure:**

1. Connect supported door handles to DX2-DH2C2.
2. (Optional) Connect contact closure detectors/switches for detecting door status to DX2-DH2C2.
3. Connect DX2-DH2C2 to the SENSOR port of SRC. Always connect DX2-DH2C2 directly to the sensor port. If you are cascading with other sensors, the DX2-DH2C2 must be in the first position, directly connected to the sensor port.

Connecting Door Handles to SRC

You only need to purchase door handles if your SRC has a built-in DX2-DH2C2, such as SRC-0102 and SRC-0103.

▸ **SRC door handle ports and terminals:**
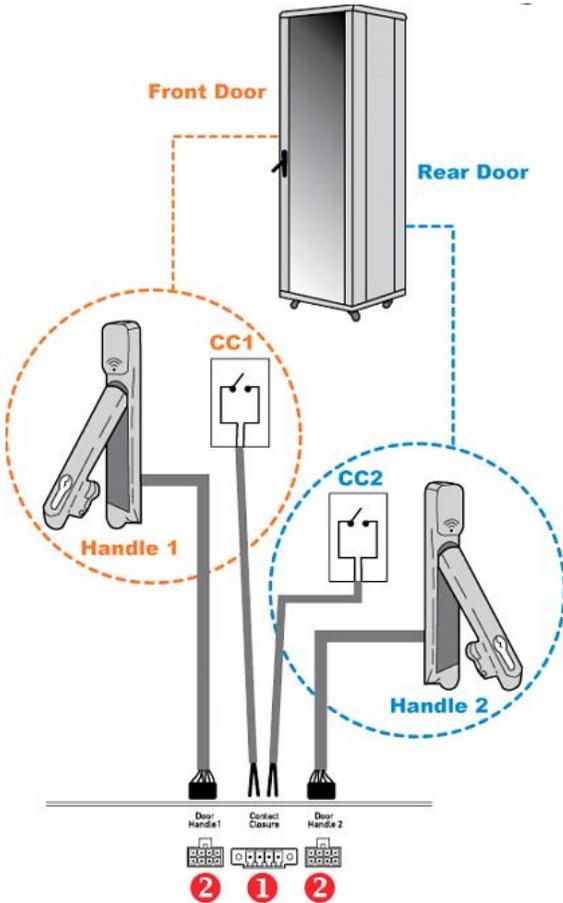
SRC-0102/SRC-0103

▸ **Connection procedure:**

1. Connect supported door handles to onboard door handle ports of SRC.

2. (Optional) Connect contact closure detectors/switches for detecting door status to contact closure terminals of SRC.

FEATURE 3: Asset Management

Both asset management strips and asset tags are required for SRC's asset management feature.

> Limitation: Do NOT connect door handles or SmartLock kit to SRC while asset strips are connected to SRC.

Introduction to Regular Asset Strips

Each tag port on the regular asset strips corresponds to a rack unit and can be used to locate IT devices in a specific rack (or cabinet).

For each rack, you can attach asset strips up to 64U long, consisting of one PRIMARY and multiple EXPANSION asset strips.

The difference between the primary and expansion asset strips is that the primary asset strip has an RJ-45 connector while the expansion does not.

The following diagram illustrates some asset strips. Not all available types are pictured.
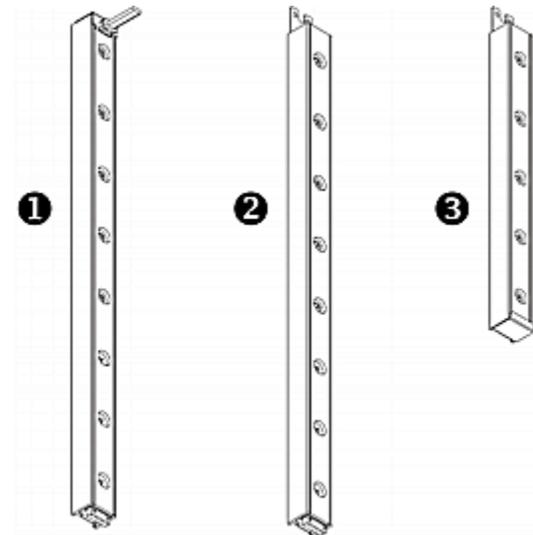
❶	8U PRIMARY asset strip with 8 tag ports
❷	8U EXPANSION asset strip with 8 tag ports
❸	5U "ending" EXPANSION asset strip with 5 tag ports

Note: Unlike general EXPANSION asset strips, which have one DIN connector respectively on either end, the ending EXPANSION asset strip has one DIN connector on only one end. An ending asset strip is installed at the end of the asset strip assembly.

Introduction to Asset Tags
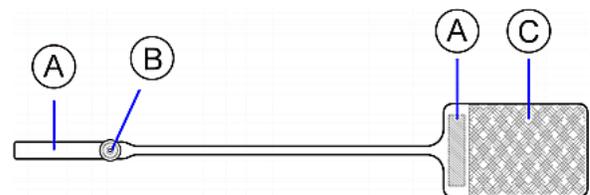
A	Unique Barcode (ID number), which is available on either end of the "non-programmable" asset tag and in the web interface of the managing device
B	Tag connector
C	Adhesive area with the tape

Assembling Regular Asset Strips

Before connecting asset strips, you must assemble them.

▸ **To assemble regular asset strips:**

1. Connect all asset strips up to 64U.
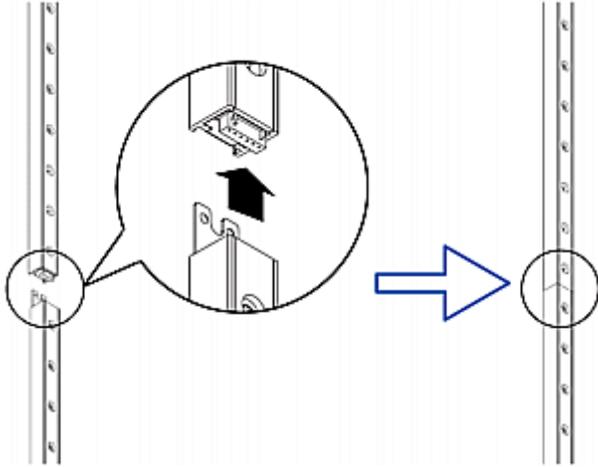
   a. The PRIMARY asset strip is installed as the first one in the asset strip assembly.
   b. All EXPANSION asset strips are connected following the PRIMARY asset strip.
   c. The "ending" expansion asset strip is installed as the final one.

2. Vertically attach the asset strip assembly to the rack, next to the IT equipment, making each tag port horizontally align with a rack unit.

   The asset strips are automatically attracted to the rack because of magnetic stripes on the back.

Connecting Regular Asset Strips to SRC

SRC supports a cabling distance up to 10 meters for each connected asset strip assembly.

▸ **To connect regular asset strips to SRC:**

1. Affix the adhesive end of an asset tag to each IT device through the tag's tape.
2. Plug the connector of each asset tag into the corresponding tag port on the asset strip.
3. AMS series asset strips (AMS-M8, AMS-S8 and AMS-E[2-8]): Connect the primary asset strip's RJ-45 connector to the **FEATURE** port, using a network patch cable (CAT5e or higher).
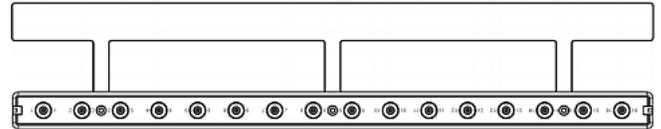
(A)	Primary asset strip
(B)	Asset tags
(C)	IT devices
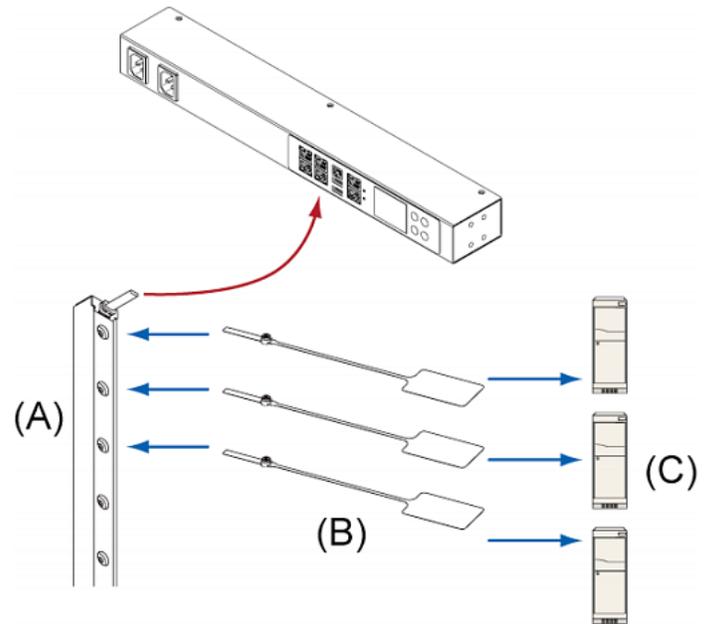
Other Types of Asset Strips

▸ **Blade extension strips:**

- For blade servers, which are contained in a single chassis, you can use a blade extension strip to track individual blade servers.
- A blade extension strip contains 4 to 16 tag ports. Below shows a blade extension strip with 16 tag ports.

- The blade extension strip is connected to a tag port on an asset strip via a Raritan's tag connector cable.

FEATURE 4: Environmental Sensors - 8 Ports

In addition to the standard Sensor port, the SRC-0800 and 0803 models provide the Sensor 1 - Sensor 8 ports for connecting DX and DX2 series environmental sensors packages.

FEATURE 5: Support for 2 Remote Hubs

The SRC-0800 and 0803 include 2 Remote Hub ports that enable connection of two DX2-REMHUB4 sensor hubs.

▸ **DX2-REMHUB4 Sensor Hub Features:**

- 4-port sensor hub
- Compatible with DX2 series supported sensors

Connecting SRC to Power

SRC supports redundant power with two inlets on all models ending in zero.

You can connect only one or both inlets to proper power sources.

1. Connect each SRC to an appropriately rated branch circuit. Refer to the label or nameplate affixed to your SRC for appropriate input ratings or range of ratings.

2. When a SRC powers up, it proceeds with the power-on self test and software loading for a few moments.

3. When the software has completed loading, the front panel display illuminates.

DC Power Connection for SRC-0103 and SRC-0803

SRC-0103 and 0803 include redundant (Input 1 and Input 2) DC power inputs for typical DC48V power inputs. Each input is capable of powering the system. If one fails, the SRC will not shut down.
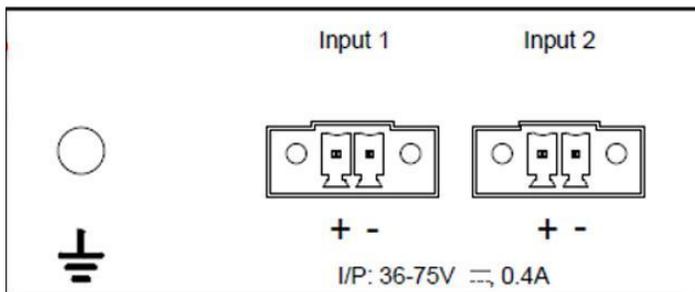
⚠ Turn off power source before wiring the connection.

1. Strip the insulation around 12 mm from the end of each wire of the power source.

2. Using provided connectors (not shown), fully insert each wire into the correct termination point. Make sure DC48V(+) wire is connected to "+" of Input (1 or 2) and DC48V(-) connects to "-" of Input (1 or 2).

3. Use a screwdriver with a 2.5 mm wide shaft to tighten the screws above each termination point to secure the wires, using a torque of 0.196 N·m (2 kgf·cm).

4. GND symbol marks the protective earth connection. The fixed screw for PE is included with the product.

Connecting SRC to Your Network

SRC can be connected to a wired or wireless network.

▸ **To make a wired connection:**

1. Connect a standard network patch cable to either or both Ethernet ports on the SRC.

2. Connect the other end of the cable to your LAN.

Note: The "green" Ethernet port labeled "ETH①10/100/1000" supports up to 1000 Mbps so it is highly recommended for network connection. If connecting both ports to the LAN, you must connect them to two "different" subnets. If you are not sure whether the device is connected to the same or different subnets, contact your IT department.

▸ **To make a wireless connection:**

1. Connect an appropriate USB wireless LAN adapter to the SRC.

2. Make sure the wireless LAN configuration is supported by your SRC. See Wireless LAN Information.

Using a Web Browser

Step 1: Retrieve the IP Address

After connecting to a DHCP IPv4 network, an IPv4 address is automatically assigned to your SRC. You can operate the front panel display to retrieve the IPv4 address. See *Using the Front Panel Display* (on page 6).

Tip: You can also retrieve the IPv4 address by connecting an iOS or Android mobile device to SRC. See *Appendix A: Configuration via a Mobile Device or PDView* (on page 6).

Using the Front Panel Display

▸ **To retrieve the IP address:**

1. Press ⊗ or ◎ to show the "Main Menu."

2. Press ⌃ or ⌄ to select "Device Info," and press ◎.

3. Press ⌃ or ⌄ until the device's IP address is displayed.

Step 2: Log in to the SRC Web Interface

1. In a web browser, enter the PDU IP address and login with the default user credentials, accepting any security warnings.

   ▪ Default login: admin/raritan

   Password change is enforced at first login.

Step 3: Configure SRC

After logging in to the SRC web interface, you can:

- Choose Asset Strips for configuring connected asset strips.
- Choose Peripherals for configuring connected environmental sensor packages.
- Choose SmartLock for configuring connected door handles or SmartLock kit.
- Choose Device Settings > Date/Time to configure the SRC with the proper date and time or synchronize it with an NTP server. The SRC device's time must be in sync with the LDAP server to use LDAP authentication.
- Choose other menu commands for configuring user profiles, privileges, security, and more.

Appendix A: Configuration via a Mobile Device or PDView

An iOS or Android mobile device, such as a smartphone or tablet, can function as a local display. Android devices must support USB "On-The-Go" (OTG).

Step 1: Download the "PDView" App

Raritan's free app "PDView" is required for the mobile device to function as a local display.

▸ **To download PDView:**

1. Visit either Apple App or Google Play Store.
   - *https://itunes.apple.com/app/raritan-pdview/id780382738*

   - *https://play.google.com/store/apps/details?id=com.raritan.android.pdview*

2. Install PDView.

Step 2: Connect the Mobile Device to SRC

The USB cable and USB port to connect are determined by your mobile operating system.

▸ **To connect your mobile device to SRC:**

1. Get an appropriate USB cable for your mobile device.
   - *iOS*: Use the regular USB cable shipped with your iOS mobile device.
   - *Android*: Use an **USB OTG** adapter cable.
2. Connect the mobile device to the appropriate USB port on the product.
   - *iOS*: USB-A port.
   - *Android*: USB-B port
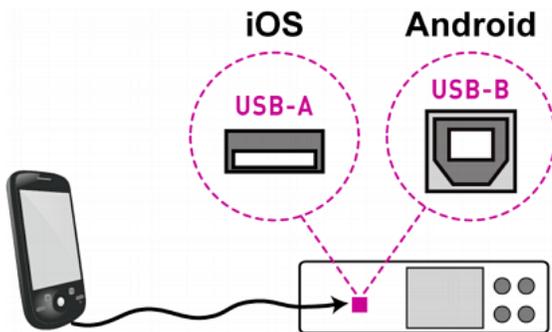
Step 3: Launch PDView

▸ **To access the SRC web interface:**

1. Launch PDView on your mobile device.
2. Wait until PDView detects the connected SRC and shows the word "Connected" in green.

   Connected

3. If the factory-default login credentials remain unchanged, or if PDView has been configured with accurate login credentials, PDView automatically logs in to the web interface of SRC.

   If PDView can't login automatically, the login screen displays instead and you must enter appropriate user credentials for login.

4. For initial login, you are prompted to change the password.

Appendix B: Wireless Configuration

▸ **USB Wireless LAN Adapters**

The SRC supports the following USB Wi-Fi LAN adapters.

Wi-Fi LAN adapters	Supported 802.11 protocols
SparkLAN WUBR-508N	A/B/G/N
Proxim Orinoco 8494	A/B/G
Zyxel NWD271N	B/G
Edimax EW-7722UnD	A/B/G/N
TP-Link TL-WDN3200 v1	A/B/G/N
Raritan USB WIFI	A/B/G/N

▸ **Supported Wireless LAN Configuration**

If wireless networking is preferred, ensure that the wireless LAN configuration of your SRC matches the access point.

- Network type: 802.11 a/b/g/n.
- Protocol: WPA2 (RSN).
- Key management: WPA-PSK, WPA-EAP with PEAP and MSCHAPv2 authentication, WPA-EAP with TLS authentication, or WPA-EAP with PEAP and TLS authentication.
- Encryption: CCMP (AES)

Tip: Supported 802.11 network protocols vary according to the wireless LAN adapter being used.

▸ **Making a Wireless Connection**

- Plug a supported USB wireless LAN adapter into the USB-A port on your SRC.

   OR

- Connect a USB hub to the USB-A port on the SRC. Then plug the supported USB wireless LAN adapter into the appropriate USB port on the hub.

Appendix C: More Information

RJ-45 Cap in the EXPANSION Port

SRC has a cap plugged into its EXPANSION port when shipping out of the factory. This port is reserved for future use and does NOT function. It is suggested to keep the cap plugged continuously.
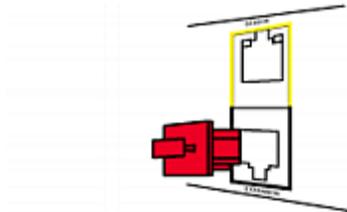
Additional Information

For more information about SRC and the entire Raritan product line, see Raritan's website (www.raritan.com). For technical issues, contact Raritan Technical Support. See the Contact Support page in the Support section on Raritan's website for technical support contact information worldwide.

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