Smart-1 Installing and Removing AC Power Supply Units

This document is for appliance models Smart-1 525, Smart-1 5050, and Smart-1 5150.

Safety Instructions

- Lift the appliance with assistance. To avoid injury, do not attempt to lift the appliance by yourself.
- Opening or removing the appliance cover, while the appliance is powered on may expose you to a risk of electric shock.
- Do not operate the appliance without the cover for more than five minutes. Operating the appliance without the cover can result in component damage.
- Many repairs may only be done by a certified service technician. Only perform troubleshooting and simple repairs as authorized in your product documentation, or as directed by the technical support.
- We recommend that you always use an antistatic mat and antistatic strap on your wrist, while working on components inside the appliance.
- To ensure proper operation and cooling, all bays in the appliance and cooling fans must be always populated with a component or a blank.

For more information, see the Enterprise Products Safety, Environmental, and Regulatory Information booklet supplied in the original appliance shipping carton.
Important - We recommend that only experienced personnel install or remove hardware components. Installing or removing components incorrectly can permanently damage the Security Management Appliance.

Important - Make sure that you are electromagnetically grounded when working with hardware components of the appliance. ESD (electrostatic discharge) can damage the appliance.

AC Power Supply Unit (PSU)

Smart-1 525, Smart-1 5050 and Smart-1 5150 Security Appliances support up to two AC redundant power supply units (PSUs).

<table>
<thead>
<tr>
<th>Security Management Appliance</th>
<th>Output power and efficiency of each PSU</th>
<th>Supported Input AC Voltage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smart-1 525</td>
<td>350 W (Platinum)</td>
<td>100-240 V AC, 50/60 Hz</td>
</tr>
<tr>
<td>Smart-1 5050</td>
<td>495 W (Platinum)</td>
<td>100-240 V AC, 50/60 Hz</td>
</tr>
<tr>
<td>Smart-1 5150</td>
<td>750 W (Titanium)</td>
<td>100-240 V AC, 50/60 Hz</td>
</tr>
</tbody>
</table>

Notes:

- The appliances support PSU redundancy. One PSU is sufficient for the normal appliance operation.
- Installing AC PSU and DC PSU together is not supported and triggers a mismatch event - the AC PSU handle flashes green five times and turns off.
- When only one working PSU is installed, it must be installed in the first PSU bay - see the markings on the appliance cover.

To ensure proper appliance cooling, leave the failed PSU in place until you get the replacement PSU. This prevents the cooling air from escaping.
• When two PSUs are installed, and the appliance is powered on, you must remove and replace only one PSU at a time.
• When two PSUs are installed, they must be the same type and have the same maximum output power.
• When two PSUs are installed, they must receive the same input AC voltages.
• When two identical PSUs are installed, power to the appliance is supplied equally from both PSUs to maximize efficiency.

**AC PSU**

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Release latch</td>
</tr>
<tr>
<td>2</td>
<td>External power connector (to connect the power cable)</td>
</tr>
<tr>
<td>3</td>
<td>Internal power connector (to insert into the appliance)</td>
</tr>
<tr>
<td>4</td>
<td>Translucent handle that illuminates with different colors</td>
</tr>
</tbody>
</table>
Indicator lights for AC PSU

Each AC PSU has a translucent handle. This handle shows different colors to indicate if AC power is received, or a PSU fault occurred.

<table>
<thead>
<tr>
<th>Indicator handle light</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>•</td>
<td>A valid AC power source is connected to the AC PSU. The AC PSU is operational.</td>
</tr>
<tr>
<td>✨</td>
<td>When you hot-add an AC PSU, the AC PSU handle flashes green five times at 4 Hz rate and turns off. This indicates that there is a mismatch between this hot-plugged AC PSU and the other installed AC PSU. The mismatch is in any of these PSU characteristics: efficiency, feature set, health status, or supported voltage. Make sure that both AC PSUs are the same.</td>
</tr>
</tbody>
</table>

Notes:

- When correcting a PSU mismatch, replace only the AC PSU with the flashing indicator. Swapping the other AC PSU to make a matched pair can result in an error condition and unexpected appliance shutdown.

- When two identical AC PSUs receive different input voltages, they can output different wattages, and trigger a mismatch event.

- Installing AC PSU and DC PSU together is not supported and triggers a mismatch event.
<table>
<thead>
<tr>
<th>Indicator handle light</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>🌞 Flashing amber</td>
<td>Indicates a problem with the AC PSU.</td>
</tr>
<tr>
<td>⬜ Off</td>
<td>AC power is not connected to the AC PSU.</td>
</tr>
</tbody>
</table>

## Removing an AC PSU

**Important Note** - If you do not install the replacement PSU at this time, leave the failed PSU in place to ensure proper appliance cooling. This prevents the cooling air from escaping.

1. You must follow the Safety instructions (on page 1).
2. Disconnect the power cable from the power source.
3. Open the retention strap that secures the power cable to the PSU.
4. Disconnect the power cable from the PSU.
5. Remove the hook-and-loop straps that hold and secure the system cables, if they interfere with PSU removal.
6. Press and hold the release latch on the PSU.
7. Pull the PSU out from the appliance.
**Important** - The appliance needs one working PSU for the normal operation. When two PSUs are installed, and the appliance is powered on, remove and replace only one PSU at a time.

**Important** - When only one working PSU is installed, it must be installed in the first PSU bay - see the markings on the appliance cover.

**Installing an AC PSU**

**Note** - When you install, hot-swap, or hot-add a new PSU, wait for 10-15 seconds for the appliance to recognize the PSU and determine its status. The PSU redundancy may not occur until discovery is complete. Wait until the new PSU is discovered and enabled before you remove the other PSU. The PSU status indicator turns green to signify that the PSU is functioning properly.

1. You must follow the Safety instructions (on page 1).
2. Make sure that both PSUs are of the same type and have the same maximum output power.
   **Note** - The maximum output power (in Watts) is listed on the PSU label.
3. Slide the new PSU into the appliance until the PSU is fully seated, and the release latch snaps into place.
4. If you opened the hook-and-loop straps, close them to secure the system cables.
5. Connect the power cable to the PSU.
6. Make a loop and secure the power cable to the PSU using the retention strap.

7. Plug the power cable into a power outlet.