Getting Started with the SV-4K and DMP-2K Media Player

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This module provides a workflow summary with information about the SV-4K and DMP-2K hardware, software features, and key considerations before deploying these media players.

It is intended for anyone who is responsible for installing and configuring the SV-4K and DMP-2K media player, and for anyone interested in understanding its general operation.

It includes the following topics:

Workflow Summary to Get Started with the SV-4K and DMP-2K Media Player

Note: Before you deploy the SV-4K and DMP-2K media player, be sure that you have already installed Cisco Vision Dynamic Signage Director and that you are familiar with the Cisco Vision Dynamic Signage Director software.

Table 1 on page 12 provides a summary of the tasks and related information to get familiar with the SV-4K and DMP-2K media player.

Table 1   Getting Started Task Summary

Getting Started Task	For more information see:
Understand the DMP-2K hardware.	■ Operating Environment for the SV-4K and DMP-2K Media Player, page 13. ■ Dimensions of the DMP-2K Media Player, page 14. ■ Ports on the DMP-2K Media Player, page 14. ■ Cabling Information for the SV-4K and DMP-2K Media Player, page 18. ■ LEDs on the SV-4K and DMP-2K Media Player, page 20. ■ IR Remote for Cisco Vision Dynamic Signage Director, page 21. ■ Default Settings for the SV-4K and DMP-2K Media Player, page 22.
Understand the SV-4K hardware.	■ Operating Environment for the SV-4K and DMP-2K Media Player, page 13. ■ Dimensions of the SV-4K Media Player, page 16. ■ Ports on the SV-4K Media Player, page 16. ■ Cabling Information for the SV-4K and DMP-2K Media Player, page 18. ■ LEDs on the SV-4K and DMP-2K Media Player, page 20. ■ IR Remote for Cisco Vision Dynamic Signage Director, page 21. ■ Default Settings for the SV-4K and DMP-2K Media Player, page 22.
Understand the SV-4K and DMP-2K features.	■ Cisco Vision Dynamic Signage Director Software Feature Map for the SV-4K and DMP-2K, page 24. ■ Unsupported SV-4K and DMP-2K Hardware Features, page 25.
Understand the Differences Between the SV-4K, DMP-2K, and Cisco DMP 4310G.	Key Considerations for the SV-4K and DMP-2K, page 25.
Review deployment best practices.	Best Practices for SV-4K and DMP-2K Deployment, page 28.
Perform pre-deployment site planning and configuration.	Planning the SV-4K and DMP-2K Media Player Deployment, page 29.

Information About the SV-4K and DMP-2K Media Player Hardware

This section includes the following topics:

Operating Environment for the SV-4K and DMP-2K Media Player

Table 2 on page 13 describes the supported environment for proper operation of the SV-4K and DMP-2K media player.

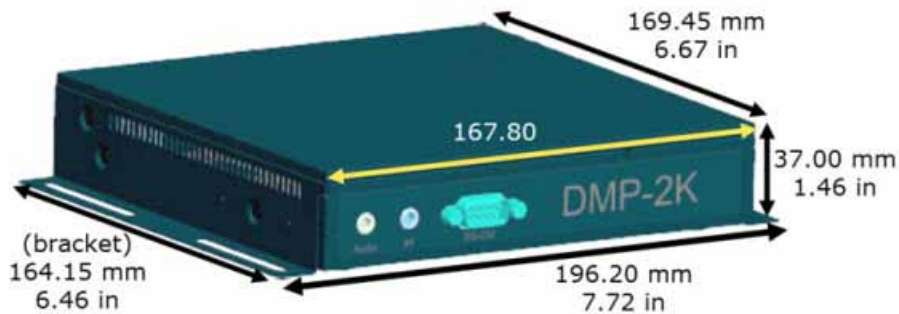**Table 2   Supported Operating Environment for the SV-4K and DMP-2K**

Operating Environment	Supported Conditions
Temperature	0° C to 40° C
Humidity	Up to 90% maximum humidity, non-condensing

Dimensions of the DMP-2K Media Player

The DMP-2K media player is smaller than the SV-4K. Figure 1 on page 14 shows the dimensions of the DMP-2K device.

Figure 1   DMP-2K Dimensions

Ports on the DMP-2K Media Player

Figure 2   DMP-2K Front Panel

Table 3   DMP-2K Front Panel Port Descriptions

Port Name	Usage	Description
Audio[1]	Required only for connections that do not support audio, such as HDMI-to-DVI connections from device to the TV.	3.5 mm female audio connector for analog stereo signal.
IR	The DMP-2K does not have an internal infrared receiver. You must use the included IR extender cable to support an IR remote.	3.5 mm infrared in/out.
RS-232	Connect to TV serial port for control of the TV via RS-232 commands.	RS-232 serial interface with male DE-9 connector. This connection is used for TV control.

1. The analog audio out port is designed to drive line-level impedances in the higher Ohm range, such as for commercial grade speaker systems. Headphones are typically just a few Ohms and not recommended for use with this port.

Figure 3   DMP-2K Rear Panel

Table 4   DMP-2K Rear Panel Port Descriptions

Port Name	Usage	Description
12V 5A	Not for production use in Cisco Vision Dynamic Signage Director. **Note:** The DMP-2K is qualified for Cisco Vision Dynamic Signage Director using Power over Ethernet (PoE+) via the Ethernet port.	60-watt/12-volt/5-amp power supply.
SPDIF	Provides audio from the primary video routed by Cisco Vision Dynamic Signage Director to the SPDIF port.	Sony/Phillips Digital Interface.
HDMI	Connect to HDMI In port on the TV.	High-Definition Multimedia Interface (HDMI) output connector to transmit digital audio/video content.
USB 3.0	Not supported.	Single USB 3.0 port (backward-compatible).
Ethernet	Connect to switch network for PoE+.	RJ-45 10/100/1000 Base-T Ethernet port.

Dimensions of the SV-4K Media Player

The SV-4K media player is larger than the Cisco DMP 4310G. Figure 4 on page 16 shows the dimensions of the SV-4K device.

Figure 4   SV-4K Dimensions
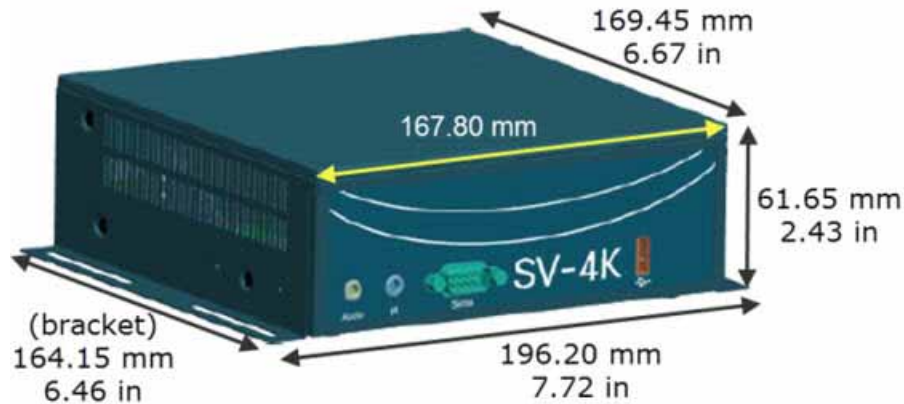
Ports on the SV-4K Media Player

Figure 5   SV-4K Front Panel

Table 5   SV-4K Front Panel Port Descriptions

Port Name	Usage	Description
Audio[1]	Required only for connections that do not support audio, such as HDMI-to-DVI connections from device to the TV.	3.5 mm female audio connector for analog stereo signal.
IR	The SV-4K does not have an internal infrared receiver. You must use the included IR extender cable to support an IR remote.	3.5 mm infrared in/out.
Serial	Connect to TV serial port for control of the TV via RS-232 commands.	RS-232 serial interface with male DE-9 connector. This connection is used for TV control.
USB	Not supported.	USB 2.0 port.

1. The analog audio out port is designed to drive line-level impedances in the higher Ohm range, such as for commercial grade speaker systems. Headphones are typically just a few Ohms and not recommended for use with this port.

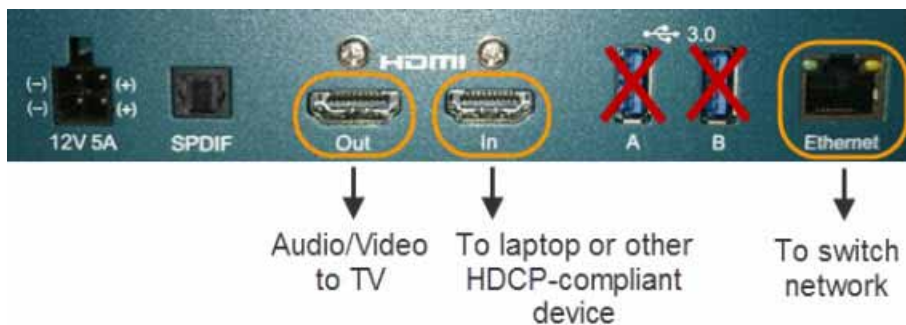**Figure 6   SV-4K Rear Panel**

Table 6   SV-4K Rear Panel Port Descriptions

Port Name	Usage	Description
12V 5A	Required when running the SV-4K over a WiFi connection. **Note:** The SV-4K must first be provisioned over PoE+ with configuration of WiFi completed in Cisco Vision Dynamic Signage Director. See How to Deploy WiFi Network Connectivity on the SV-4K.	60-watt/12-volt/5-amp power supply.
SPDIF	Provides audio from the primary video routed by Cisco Vision Dynamic Signage Director to the SPDIF port.	Sony/Phillips Digital Interface.
HDMI Out	Connect to HDMI In port on the TV.	High-Definition Multimedia Interface (HDMI) output connector to transmit digital audio/video content.
HDMI In	Connect to HDCP-compliant laptop or other device.	HDMI input connector to receive digital audio/video content from an HDMI-enabled source.
USB 3.0 A B	Not supported.	Two USB 3.0 ports (backward-compatible).
Ethernet	Connect to switch network for PoE+.	RJ-45 10/100/1000 Base-T Ethernet port.

Cabling Information for the SV-4K and DMP-2K Media Player

Table 7 on page 18 describes the cables that ship with the hardware.

Table 7   Cables Shipped with Hardware

Cable	Length	Purpose
HDMI-to-HDMI	2 M	(Required) Connects the SV-4K HDMI Out (male) to the HDMI In (male) port on the TV for digital audio and video support. Compliant with HDMI version 1.4.
RS-232 DE-9 DCE/DTE Straight Through	2 M	(Required for TV control over RS-232) Connects the SV-4K serial DTE (male) port to a serial DCE (female) port on the TV.
IR Extender	2 M	(Required for IR Remote) Connects to the IR port on the SV-4K front panel to serve as an infrared signal receiver for the SV-4K.

Other Cabling Considerations

It is important for you to assess the ports available on the TVs at the venue so that you can get any additional adapters or cable types that are needed to connect the SV-4K and DMP-2K to the TV.

Ethernet Cable

Use standard Category 5e or 6 cables up to 100 m in length.

Null Modem (Crossover) Cable

The SV-4K and DMP-2K is a DTE serial device. Therefore, if the TV also has a DTE (male) serial port, then you will need to use a null modem (crossover) cable for the TV control connection.

HDMI-to-DVI Adapter

If the TV does not support HDMI In, then you cannot use the standard HDMI-to-HDMI cable that ships with the SV-4K and DMP-2K. However, if the TV supports a DVI-D connection, then you can acquire a DVI adapter for the HDMI cable to make the HDMI-to-DVI connection.

Since this type of connection only supports video, you will also need to connect the DMP audio port to the audio input ports on the TV if audio support is required.

Other HDMI Cable Adapters

The HDMI cable that ships with the media player is compliant with HDMI version 1.4. If you are using any other cable adapters, be sure that they support HDMI version 1.4 if you plan to support 4K video content.

Audio Cables

Audio cables are not generally needed. However, there are a couple of cases where you might need to make an audio connection to the SV-4K:

- If you need to support an HDMI-to-DVI connection from the SV-4K to the TV since this supports video only.

- If you need to connect to external audio distribution equipment when audio is to be distributed within an area.

RS-232 Serial Pinout

Table 8 on page 19 provides the pinout for the DE-9 serial connector on the front panel of the SV-4K and DMP-2K.

Table 8   SV-4K and DMP-2K Serial DE-9 Pinout

Pin	Description	Pin	Description
1	NC	2	Receive data into the device.
3	Transmit data out of the device.	4	Available 5V@500mA
5	Ground	6	NC
7	RTS	8	CTS
9	NC		

Guidelines for Mounting the SV-4K and DMP-2K

Consider the following guidelines before mounting the SV-4K and DMP-2K:

- Do not fit in Sunbrite cases that might be in use for some Cisco DMP 4310G outdoor deployments.

- Full dimensions (width / height / depth) with mounting brackets:

  DMP-2K

  – 196.20 mm / 37.00 mm / 169.45 mm

  – (7.72 in / 1.46. in / 6.67 in)

  SV-4K

  – 196.20 mm / 61.65 mm / 169.45 mm

  – (7.72 in / 2.43 in / 6.67 in)

  – The bracket length is 164.15 mm / 6.46 in.

- Weight:

  – DMP-2K: 1 lb 14 oz / 850.5 grams

  – SV-4K: 2 lb 4 oz / 1020.6 grams

- Attach to the wall using the brackets on each side of the device using 4 screws (one for each bracket slot) that measure between 3.5 mm and 4.2 mm in diameter.

- Avoid blocking the right side panel so that LEDs can be seen for troubleshooting.

- Ensure all air vents are clear for proper cooling.

- Choose a location that works with the required IR extender cable for infrared support.

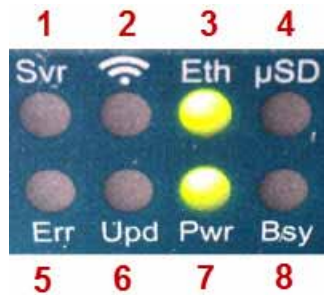- Unlike the DMP 4310G, there is no IR receptor built into the SV-4K device.

  Note: The tested range is about 20 ft. However, to achieve this range you must be sure to have the receiver facing outward. The receiver is enclosed and not visible.

LEDs on the SV-4K and DMP-2K Media Player

The device has 8 LEDs in two banks of 4 on the right panel of the device. Figure 7 on page 20 shows normal operation for the device on a Cisco Vision Dynamic Signage Director network.

Note: Some of the LEDs apply to hardware features that are not enabled for Cisco Vision Dynamic Signage Director Release 5.0.

Figure 7   SV-4K LED Bank

1	**Svr**–Not applicable.	2	**WiFi**–(SV-4K only) Flashes when the player is connecting to the wireless network. Displays when connected.
3	**Eth** (green)–Flashes when connecting to Ethernet network. Displays when connected.	4	**µSD**–Not applicable.
5	**Err** (red)–Flashes a certain number of times to indicate errors (Table 9 on page 20).	6	**Upd** (yellow)–Flashes when the device is being upgraded. The Update and Error LEDs will flash in unison to indicate an error during firmware update (Table 10 on page 21).
7	**Pwr** (green)–Displays when the device is powered on and not in reset mode.	8	**Bsy** (green)–Flashes when there is file-system activity.

Table 9   Error (Err) LED Descriptions

Error LED (number of flashes)	Description
2	Unspecified error.
3	Device is in network recovery mode and using DHCP Option 43 to contact Cisco Vision Dynamic Signage Director for provisioning.
4	No upgrade file found.
5	Failed to load kernel module. or OS initialization failed (Init shell script failed).
6	Board is not capable of running the current firmware version.
7	A piece of on-board hardware is not working correctly.
8	(Not applicable) Problem related to storage device (USB or SD card).
9	Problem related to the registry/NAND.
10	The autorun script encountered a load/run error.

Table 9   Error (Err) LED Descriptions (continued)

| Error LED (number of flashes)	Description
11	WiFi related error.
12	Unable to find a bootable image.
13	The root file system has failed verification, which is used to detect whether the file system has been tampered with. You can recover a unit that is showing this error code by performing an update using safe mode.
14	Boot loader failure.

Table 10   Update (Upd) LED Descriptions

Error LED (number of flashes)	Description
2	Erase failed.
3	Write failed.
4	Verify failed.
5	Failed to find UBI partition.
6	Attempt to write unsigned CFE to unit with secure boot enabled.
7	Failed to find UBI partition.
8	Failed to create/attach UBI partition.
9	Unexpected error.
10	Upgrade script exited abnormally.
11	Upgrade took longer than expected.
12	Update completed but update file could not be deleted.

IR Remote for Cisco Vision Dynamic Signage Director

All media players use the same IR Remote device shown in Figure 8 on page 22. Generally, the IR Remote is used for TV control. However, even if you are not using the IR Remote for TV control, it is important to realize that the IR Remote also allows you to get information to troubleshoot the media player.

Note: The IR Remote is not automatically shipped with the Cisco Vision Dynamic Signage Director media players and must be ordered separately.

Figure 8 on page 22 shows the description for each of the buttons on the Cisco Vision Dynamic Signage Director IR Remote.

Figure 8   Cisco Vision Dynamic Signage Director IR Remote Button Descriptions
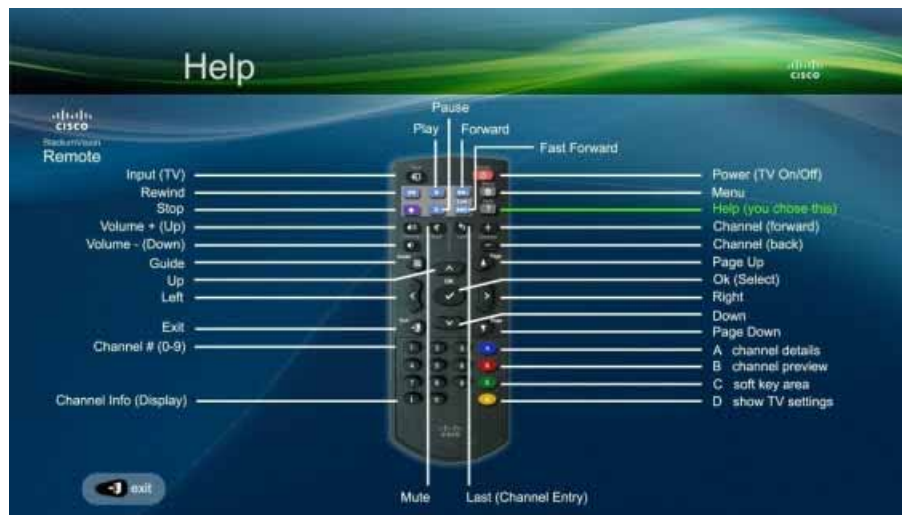
IR Remote Sensor and IR Extender

Unlike for the Cisco DMP 4310G, the IR extender is required for the SV-4K and DMP-2K media player because the SV-4K and DMP-2K device does not have its own IR receiver. For more information, see Guidelines for Mounting the SV-4K and DMP-2K, page 19.

The IR remote also is a critical troubleshooting tool so it is important to ensure that all media players can be IR-controlled even if it is not needed during normal operation.

Default Settings for the SV-4K and DMP-2K Media Player

The SV-4K and DMP-2K device ships from the factory with certain default settings. Upon running the start-up sequence and in communication with Cisco Vision Dynamic Signage Director, the SV-4K and DMP-2K default settings are changed.

RS-232 Default Settings on the SV-4K and DMP-2K

After processing the HTML run-time module from Cisco Vision Dynamic Signage Director, the SV-4K and DMP-2K is set to the following RS-232 default settings:

Note: The SV-4K and DMP-2K use the same defaults as the Cisco DMP 4310G, which matches the default settings of most TVs.

- Baud—9600 (factory default is 115200)

- Parity—None

- Data Bits—8

- Stop Bits—1

- Flow Control—None (factory default is hardware flow control only)

For information about the new RS-232 commands for the SV-4K and DMP-2K, see Appendix B: Display Parameters for the SV-4K and DMP-2K Media Player, page 63.

Other Default Settings

By default, the following functionality is disabled on the SV-4K and DMP-2K media player:

- Secure Shell (SSH)

Feature Summary for the SV-4K and DMP-2K Media Player

This section includes the following topics:

Cisco Vision Dynamic Signage Director Software Feature Map for the SV-4K and DMP-2K

provides an at-a-glance view of the supported software features in Cisco Vision Dynamic Signage Director for the SV-4K and DMP-2K
.

Table 11   Software Feature Map

Cisco Vision Dynamic Signage Director Feature	SV-4K	DMP-2K	DMP 4310G
4K Local Video	**Yes**	No	No
2.1 AC3/AC3+ (Dolby Digital audio decode)	**Yes**	**Yes**	No
Auto-Registration	**Yes**	**Yes**	**Yes**
Bulk Administration Tool (BAT)	**Yes**	**Yes**	**Yes**
Cisco Vision Dynamic Signage Director Remote Server	No	No	**Yes**
Closed Caption	**Yes**	**Yes**	**Yes**
Command Center Monitoring	**Yes**	**Yes**	**Yes**[1]
Content Replacement[2]	**Yes**	**Yes**	**Yes**
Content Synchronization (between same media player models only)	**Yes**	**Yes**	**Yes**[3]
Custom Applications using GAR	No	No	**Yes**
Custom Fonts (through Software Manager)	**Yes**	**Yes**	**Yes**
Dual Video Regions	**Yes**	**Yes**	No
External Content Integration	**Yes**	**Yes**	**Yes**
Event Script Scheduler	**Yes**	**Yes**	**Yes**
Flash Content	No	No	**Yes**
Group/Zone Configuration	**Yes**	**Yes**	**Yes**
HDMI-In as a Video Source	**Yes**	No	No
Luma key support for second video region	**Yes**	**Yes**	No
Management Dashboard Commands[4]	**Yes**	**Yes**	**Yes**
Management Dashboard Firmware configuration	**Yes**	**Yes**	**Yes**
Management Dashboard Model Filtering	**Yes**	**Yes**	**Yes**
Management Dashboard Monitoring	**Yes**	**Yes**	**Yes**
Multicast Video Scaling[5]	**Yes**	**Yes**	No
Network Time Protocol (NTP) configuration	**Yes**	**Yes**	**Yes**
Portrait Mode content renditions[5]	**Yes**	**Yes**	No
POS Integration with Dynamic Menu Board (DMB) GAR application	No	No	**Yes**
POS Integration with DMB Using Widgets	**Yes**	**Yes**	**Yes**
Precision Time Protocol (PTP) configuration	**Yes**	**Yes**	No
Proof of Play (PoP)	**Yes**	**Yes**	**Yes**
Proxy device support	No	No	**Yes**
Self-Service Content (SSC)	No	No	**Yes**
Suite Ordering	No	No	**Yes**
Ticker (legacy) from Control Panel Setup	No	No	**Yes**
Ticker (RSS in External Content Integration)	**Yes**	**Yes**	**Yes**
Touchscreen	No	No	**Yes**

Table 11   Software Feature Map (continued)

Cisco Vision Dynamic Signage Director Feature	SV-4K	DMP-2K	DMP 4310G
TV Control using RS-232 and IR Remote	**Yes**	**Yes**	**Yes**
TV Control using HDMI CEC[5]	**Yes**	**Yes**	No
Video Encoding as a Channel	**Yes**	No	No
Video Streaming through HDMI-Out	**Yes**	No	No
Video Upload Support for Files Up to 4 GB in Size[5]	**Yes**	**Yes**	No[6]
Widgets tool	**Yes**	**Yes**	**Yes**
WiFi support[5]	**Yes**	No	No

1. Status monitoring is available in CCM for the Cisco DMP 4310G. However, the Thumbnail view (where CCM displays a snapshot of content playing on the DMP) is not supported.

2. Content replacement for the SV-4K and DMP-2K is only supported through an update of the playlist. Performing content replacement from the Control screen using the content replacement icon is not supported.

3. The Cisco DMP 4310G does not support PTP. Therefore, there will be more variance across these DMPs when playing the same video file.

4. The SV-4K and DMP-2K support a subset of original Dashboard commands. See the "Appendix: Management Dashboard Commands for the SV-4K Player" in the Cisco StadiumVision SV-4K and DMP-2K Media Player Deployment Guide.

5. Introduced in Cisco Vision Dynamic Signage Director Release 5.0.

6. Although you can upload video files up to 4 GB in size in Cisco Vision Dynamic Signage Director Release 5.0, the Cisco DMP 4310G does not support files larger than 2 GB.

Unsupported SV-4K and DMP-2K Hardware Features

The following SV-4K and DMP-2K hardware features are not supported:

- SD (and microSD)

- USB (2.0 and 3.0)

Note: The SV-4K and DMP-2K do not support content import and/or playback using the SD or USB ports.

Key Considerations for the SV-4K and DMP-2K

When you deploy an SV-4K and DMP-2K, there are several things that you should know about its operation. This section highlights some of the important differences from the Cisco DMP 4310G that you should be aware of when deploying the SV-4K and DMP-2K media player.

This section includes the following topics:

- Storage and Memory on the SV-4K and DMP-2K, page 27

- Synchronization on the SV-4K and DMP-2K, page 27

- Switch Communication on the SV-4K and DMP-2K, page 28

- WiFi Network Connectivity on the SV-4K, page 28

Firmware Provisioning on the SV-4K and DMP-2K

The SV-4K and DMP-2K firmware is not provisioned the same way as the Cisco DMP 4310G. The primary difference is that the SV-4K and DMP-2K firmware upgrade cannot be manually launched by Management Dashboard DMP command, but is done automatically when the SV-4K and DMP-2K device boots.

Caution: Before you power on the SV-4K and DMP-2K device for the first time, be sure that you have completed the following configuration and tasks:

- **For initial deployment of a DMP-2K, be sure that:**

  - **No other accessories are attached to the DMP-2K.**

  - **You are using standard Category 5e or 6 cables up to 100 m in length.**

- **Switch configuration, including the required LLDP for proper PoE+ operation.**

- **DHCP server configuration.**

- **Firmware upload for your Cisco Vision Dynamic Signage Director release.**

- **Auto-registration settings for the SV-4K and DMP-2K to properly provision its firmware.**

Table 12 on page 26 provides a summary of the firmware provisioning tasks for the SV-4K and DMP-2K and DMP 4310G in the Management Dashboard.

Table 12   Summary of Firmware Provisioning Tasks on the Media Players

Firmware Provisioning Task	SV-4K and DMP-2K	DMP 4310G
Upload firmware to Cisco Vision Dynamic Signage Director in the Management Dashboard	Yes	Yes
Configure "Firmware image to use" and "init.version" under Auto Registration Settings.	Yes	Yes[1]
Upgrade the firmware from the Management Dashboard by selecting DMPs and running the Firmware Upgrade command to push the firmware to the device.	**No**	Yes

1. The DMP 4310G also uses the "init.build" property which does not apply to the SV-4K and DMP-2K media player.

Auto-Provisioning on the SV-4K and DMP-2K

- The SV-4K and DMP-2K are automatically provisioned with global configuration settings from Cisco Vision Dynamic Signage Director—but not in the same way as occurs for the Cisco DMP 4310G.

- As part of the start-up sequence, the device retrieves the Cisco Vision Dynamic Signage Director configuration, which includes all of the global settings for the SV-4K and DMP-2K, such as NTP configuration, jitter settings, and so on.

- The SV-4K and DMP-2K global settings are configured in the Management Dashboard by going to:

  Dynamic Signage Director Configuration > **Global DMP Settings** > **SV-DMP Common Settings**.

■ The SV-4K and DMP-2K configuration in Cisco Vision Dynamic Signage Director is provisioned each time that the SV-4K and DMP-2K device boots.

Caution: If you are running Cisco Vision Dynamic Signage Director on a virtual server, then you should reference a reliable NTP server running on a bare metal server, rather than relying on a clock from a VM environment that can drift and is not accurate. NTP for Cisco Vision Dynamic Signage Director is configured using the TUI, and can be the same external server as is used for the Cisco DMP 4310G devices. For more information, see Cisco Vision Administration Guide: Dynamic Signage Director Release 5.0.

HDCP Support on the SV-4K and DMP-2K

The SV-4K and DMP-2K natively support content that uses Intel's High-bandwidth Digital Content Protection (HDCP) through the installation of a protection key on the media player.

■ From the HDMI Out port, the SV-4K and DMP-2K support HDCP versions 1.4 and 2.2.

■ From the HDMI In port, the SV-4K can receive HDCP 1.4 and send as HDCP 2.2.

IR Receiver for the SV-4K and DMP-2K

There is not an embedded IR receiver on the SV-4K and DMP-2K. You must use the IR extender cable to use the IR Remote.

Storage and Memory on the SV-4K and DMP-2K

The SV-4K and DMP-2K devices have different sizes of solid-state storage and RAM (Table 13 on page 27):

Table 13   Storage and Memory on the SV-4K and DMP-2K

DMP Model	Total SSD	Available for Content	RAM
SV-4K	120 GB (minimum)	100 GB	3 GB
DMP-2K	64 GB	65536 MB	2 GB

Note: The amount of RAM can make a difference in how the same content might play on different media player models. This difference might more likely be seen when playing HTML pass-through (URL) content.

To find information about available storage:

1. From the Management Dashboard, select an SV-4K or DMP-2K device.

2. In the Device Details area of the dashboard, go to:

   Settings > **Storage**

Note: The amount of available storage shown in the Management Dashboard reflects the total amount of space available on the SSD, not the actual storage pool available for content.

You also can find information about available storage if you view device details from thumbnail view in CCM.

Synchronization on the SV-4K and DMP-2K

The SV-4K and DMP-2K supports synchronization of content played among a group of SV-4K and DMP-2K devices using the Network Time Protocol (NTP) and Precision Time Protocol (PTP). NTP and PTP settings are provisioned globally for all SV-4K and DMP-2K media players.

The Cisco Vision Dynamic Signage Director server is provisioned as the default NTP source for all media players. When PTP is configured, only the SV-4K and DMP-2K PTP master derives its clock using NTP.

Caution: If you are running Cisco Vision Dynamic Signage Director on a virtual server, then you should reference a reliable NTP server running on a bare metal server, rather than relying on a clock from a VM environment that can drift and is not accurate. NTP for Cisco Vision Dynamic Signage Director is configured using the TUI, and can be the same external server as is used for the Cisco DMP 4310G devices. For more information, see Cisco Vision Administration Guide: Dynamic Signage Director Release 5.0.

Switch Communication on the SV-4K and DMP-2K

The SV-4K and DMP-2K communicates with the Cisco Connected Stadium switch using the required Link Layer Discovery Protocol (LLDP) rather than MediaNet. The SV-4K and DMP-2K determines available power (when using PoE+) over LLDP.

WiFi Network Connectivity on the SV-4K

Wireless network connectivity to the SV-4K is supported over an 802.11a, 802.11b, or 802.11n wireless network in the Cisco Vision Dynamic Signage Director venue.

Note: For initial deployment of an SV-4K with WiFi connectivity, you will need both a PoE+ network connection in addition to connection of the SV-4K using the DMP power supply adapter. After the DMP is deployed for WiFi, a PoE+ connection is no longer needed for the DMP. In fact, the DMP will not route packets over the WiFi connection while the Ethernet port is connected and operational.

The wireless network SSID and passphrase is configured globally for all SV-4Ks in the system. The SV-4K firmware automatically tries to connect with WEP (if the passphrase is of a suitable length), WPA1 or WPA2.

For configuration information, see How to Deploy WiFi Network Connectivity on the SV-4K.

Note: The wireless network must support multicast traffic for communication over the Cisco Vision Dynamic Signage Director network. However, multicast video is not supported due to bandwidth limitations over a wireless network.

Best Practices for SV-4K and DMP-2K Deployment

Using Bar Code Scanners and TV Labels at Installation Time

Note: This practice requires that you have already defined your Location names in Cisco Vision Dynamic Signage Director.

To increase the speed and accuracy of media player deployment:

- Prepare TV labels with the Cisco Vision Dynamic Signage Director Location name in bar code format.

- Obtain a bar code scanner to record the Location bar code and MAC address from the media player.

- Use the BAT tool to upload data to Cisco Vision Dynamic Signage Director.

Installer Workflow Example

An installer can follow these steps to use a bar code scanner with TV labels:

1. Mount the TV and media player.

2. Connect the TV and media player cables.

3. Attach a pre-printed label to TV.

4. Scan the Location bar code on the TV.

5. Scan the MAC address bar code on the media player.

6. Provide scanner to the supervisor or network administrator who downloads the data and formats it to be compatible with the Cisco Vision Dynamic Signage Director BAT TSV format.

7. For more information, see the Cisco StadiumVision Director Bulk Administration Tool guide.

Best Practices for SV-4K and DMP-2K Deployment