SmartMediaPro (SSP-0600) Quick Reference Guide

009-0404-02
SSP-0600-00

The Savant SmartMediaPro (SSP-0600) Quick Reference Guide provides information necessary to install the SSP-0600, a modular A/V matrix switcher and controller. SSP-0600 is ideal for installations requiring high definition (HD) video switching and audio switching.

Box Contents

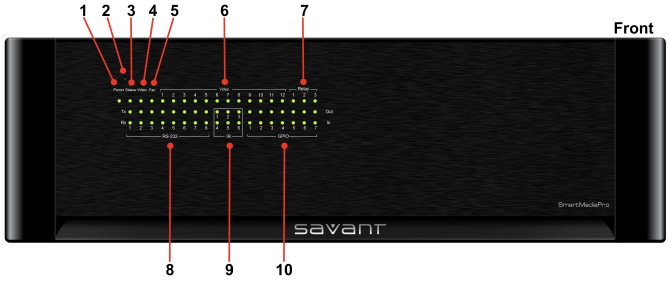
(1) SmartMediaPro (SSP-0600)
(1) Installation Kit (075-0098-xx)
- (4) M5 x 8mm Flat Phillips Screw (039-0180-xx)
- (2) 9-pin Screw Down Plug-In Connector (028-9353-xx)
- (2) 6-pin Screw Down Plug-in Connector (028-9352-xx)
- (1) Power cord C13 (6 feet) (N. America) (064-0079-xx) or appropriate international power cord
- (1) Mini Display Port to HDMI Cable (1 meter) (064-0222-xx)
- (2) Module Removal Tool (071-0268-xx)
- (2) Rack Mounting Bracket (3U) (071-0638-xx)
- (1) HDMI Locking Cable (3 ft) (CBL-3LHDMI-xx)

(1) Quick Reference Guide (this document)

Specifications

Environmental	
Temperature	32° to 104° F (0° to 40° C)
Humidity	10% to 80% RH (non-condensing)
Cooling	25 cubic feet per minute (CFM) recommended. Note that each chassis has fans pushing 36 CFM.
Maximum BTUs	512 BTUs per hour
Noise	Normal Operation condition: 52 dB Average
Dimensions and Weight	
Dimensions (H x W x D)	5.21 in x 17.30 in x 14.16 in (13.23 cm x 43.94 cm x 35.96 cm)
Weight	24.91 lb/11.3 kg (Base Configuration)
Rack Space	3U
Power	
Power Supply	100 – 240V AC 50/60 Hz
Maximum Power	200 Watts
Compliance	
Safety and Emissions	S-Mark/FCC Part 15/CE Mark/C-Tick/CB
RoHS	Compliant

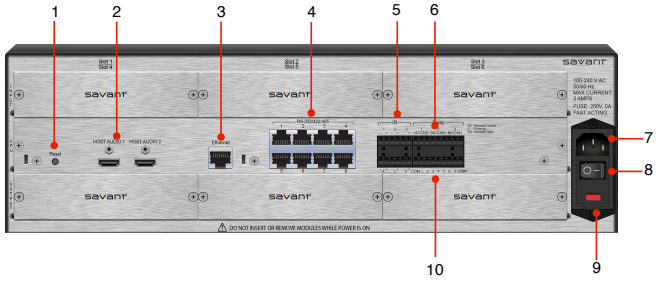
Front Panel



The next table describes the functionality on the front of an SSP-0600.

1	**Power** LED	**Green** indicates the system has adequate power and is operating normally. **Red** indicates the system is in stand-by mode. The Controller hardware has power, but the embedded processor is shut off and in the standby mode. **Off** indicates that the system is not receiving power.
2	Standby Power (hole)	Insert pin into hole for about 5 seconds to place in standby mode. Insert the pin again for about 5 seconds to take system out of standby mode. To turn the power off for the entire system, use the switch on the rear panel.
3	**Status** LED	**Green** indicates the Host has evaluated the firmware currently running and determined it is up to date. **Green flashing** indicates the embedded system is ready (running with DHCP IP address), but the embedded processor has not established communications with the embedded system. **Off** indicates the embedded processor is resetting or is powered up; and is booting the embedded firmware. **Red** indicates the Host has determined the firmware needs to be updated, but a problem occurred during the process that will initiate a reset. **Red flashing** indicates the embedded firmware is running, but has not received a DHCP IP Address. **Amber** indicates the Host is currently updating the embedded firmware. **Amber flashing** indicates the embedded system has a valid link-local IP Address and is waiting to connect to the Host. **Over Temperature or Hardware Failure** If the Controller overheats or has a hardware failure, the Status LED indication will be interrupted every 3-seconds with a solid red indication. For example, if the LED is flashing green when an over temperature or hardware failure occurs, the LED, in 3-second intervals, will flash green, solid red, etc.
4	**Video** LED	**Off** indicates the encrypted video content remains protected. The HDCP keys remain valid. **Red flashing** indicates the HDCP keys are invalid.
5	**Fan** LED	**Green** indicates the fans are operating. **Off** indicates the fans are not operating.
6	**Video** Port LED	**Off** indicates which video output port(s) do not have an error. **Green** indicates which video output port(s) have an error.
7 8 9 10	**Relay** LEDs **RS-232** LEDs **IR** LEDs **GPIO** LEDs	**Green** indicates activity on the associated ports on the rear of the unit. **Off** indicates no activity on the associated ports on the rear of the unit.

Rear Panel



The next table describes the functionality on the rear of an SSP-0600.

1	**Reset** Button	Resets the SSP-0600
2	**Host Audio 1, 2**	HDMI input ports used to receive digital audio (iTunes®) from host.
3	**Ethernet**	RJ45 10/100 Base-T, auto-negotiating port
4	**RS-232/422/485** (serial ports 1 – 8)	RJ45 ports used to transmit and receive serial binary data transmission. Ports 1 and 2 support flow control Clear to Send / Ready to Send (CTS/RTS) for RS-232.
5	**IR** Output (1 – 6)	Infrared transmitter output ports
6	**Relay 1, 2, 3 NC/C/NO** (Normally Closed/Common/Normally Open)	These ports provide dry contacts (open/closed) to control devices requiring basic on/off operation.
7	Input power connector	100-240V AC, 50/60 Hz source power to controller from a surge-protected circuit.
8	**I/O**	On/Off button, -I to power the controller to the On state. -O to power the controller to the Off state.
9	Fuse 250V	5 Amp fast acting fuse
10	**GPIO COM, 1 – 7, COM**	General Purpose Input and Output ports The digital GPIO ports are binary I/O ports used for output or input. Each GPIO is individually configured as an input or output trigger. All seven GPIO pins use the COM pins for common ground (at each end of the GPIO block).
	GPIO Inputs	When configured as an input, the GPIO port detects a voltage present (GPIO input). GPIO inputs can safely detect the presence of a voltage of 0-30V DC with a threshold of 2.4V DC.
	GPIO Outputs	When configured as an output, the GPIO port outputs a voltage is 12V DC. The maximum current per port is 150 milliamps. The combined maximum current for all GPIO outputs is 550 milliamps.

Audio and Video Module Slot Information

Important: Before adding any modules to the SSP-0600, remove power from the SSP-0600 chassis by setting the power switch to Off (O) on the rear panel and removing the AC power cord. Failure to do so will result in damage to the equipment.

The audio and video module slots as shown on the previous image of the rear panel are categorized as follows:
- The top three slots (1-3) only accept audio and video **input** modules.
- The bottom three slots (4-6) only accept audio and video **output** modules.

Grounding Procedure

To avoid damage from electrostatic discharge (ESD) when handling modules, use a grounding strap as shown below:

Observe the following precautions to prevent ESD discharge damage:

1. Use an approved ESD wrist or ankle-grounding strap. Ensure the grounding strap makes good skin contact.
2. Before installing or removing a Savant module, connect the clip end of the ground strap to a grounded surface.

Savant Confidential and Proprietary
020712

45 Perseverance Way, Hyannis, MA 02601 Phone 508.683.2500 Fax 508.683.2600 www.SavantSystems.com

SmartMediaPro (SSP-0600) Quick Reference Guide

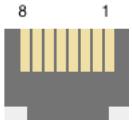
If you plan to return a replaced module to Savant Systems LLC, place it in the clamshell package that it was originally shipped in or a static shielding bag to avoid ESD damage to the card.

NOTE: The wrist strap only protects the component from ESD voltages on the body; ESD voltages on clothing can still cause damage.

Wiring and Connectors

RS-232 Wiring

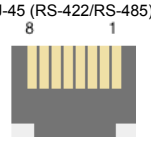
Controller RJ-45 (RS-232) Plug Pinouts



1 (Not Used for RS-232)	5 RXD (RS-232)
2 (Not Used for RS-232)	6 TXD for (RS-232)
3 (Not Used for RS-232)	7 CTS (RS-232) ports 1 and 2 only
4 GND (RS-232)	8 RTS (RS-232) ports 1 and 2 only

RS-422/485 Pinouts

Controller RJ-45 (RS-422/RS-485) Plug Pinouts



1 RX+ (RS-422/485)	5 (Not Used for RS-422/485)
2 RX- (RS-422/485)	6 TX- (RS-422/485)
3 TX+ (RS-422/485)	7 (Not Used for RS-422/485)
4 GND (RS-422/485)	8 (Not Used for RS-422/485)

Important
If you are using RJ-45 to DB-9 adapters not supplied by Savant, be sure to terminate any wires required for communication/control within the adapter. Ensure that all wires required for communication/control are not terminated in the connecter. Also, ensure that the unused wires in the connector are cut to prevent them shorting out, as they are still terminated in the RJ-45 connector on the controller side.

For more details on RS-232, RS-422 and RS-485 connectors, go to **SavantSystems.com** **>Dealer Login > Knowledge Base > Products**

- Refer to the **RS-232/RS Conversion to DB-9, and RS-422/485 Pinout Application Note**

IR Port Layout and Pinouts (two 6-pin 3.81mm screw down connectors)

1		2		3	
-	+	-	+	-	+
4		5		6	
-	+	-	+	-	+

Relay and GPIO Port Pinouts (9-pin 3.81mm screw down connectors)

Relay 1			Relay 2			Relay 3		
NC	C	NO	NC	C	NO	NC	C	NO
GPIO								
COM	1	2	3	4	5	6	7	COM

Interconnect the Network

The SSP-0600 Controller requires business class/commercial grade network equipment in order to handle the IP traffic between Savant Network Equipment. When configuring the network ensure that all of the connected Savant units (SSP-0600 Controller, host, etc.) are on the same local area network (subnet or LAN). Being on the same subnet allows the Savant units to locate each other using the Bonjour® network protocol.

Network Changes Require Rebooting the SSP-0600 Controller

The embedded processor used in the SSP-0600 Controller, needs to be rebooted after switching to a new network with a new IP address range. If you do not reboot, the Controller will not sense the network and IP address changes. The **Status** LED on the front panel of the Controller will start to flash. Logs will be reported in System Monitor.

Replacing or Checking Fuse

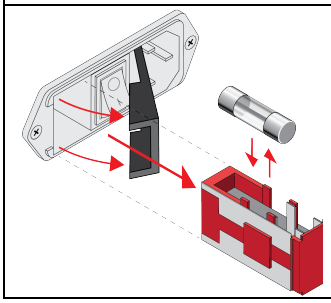
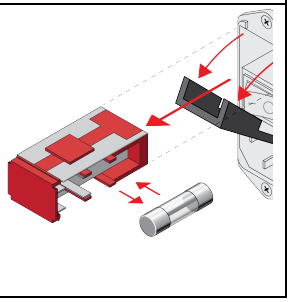
ELECTRIC SHOCK: The 100-240V AC, 50-60 Hz source power poses an electric shock hazard that has the potential to cause serious injury to installers and end-users. Before replacing the fuse, turn the SSP-0600 off and remove the AC power cord.

To replace or check the fuse on the SSP-0600, do the following:

1. On the input power block, open the cover (hinged) to access the fuse cartridge. Refer to the illustrations below.
2. Using a thin, flat tool remove the red fuse cartridge.

Important: Before removing the fuse, note how and where the fuse is mounted in the cartridge. The fuse must be replaced at the same location. Refer to the illustrations below.

3. Remove the 250V, 5A fuse and replace with a new one.
4. Re-install the cartridge. Note that the cartridge fits in only one direction.

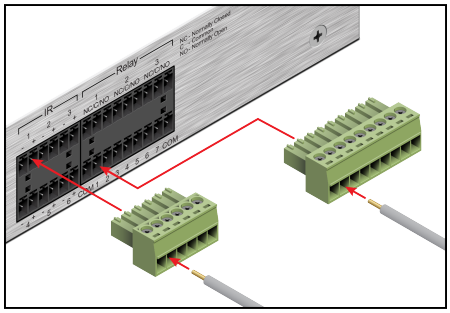
Horizontal Mounting	Vertical Mounting
	

Restoring System Defaults

This procedure will clear a static IP address, which has been set up in the embedded scanner, RPMembscanner— a Savant specific program located in the RacePoint Blueprint™ folder and installed when you load RacePoint Blueprint™ on your computer.

To restore the default state of the SSP-0600 do the following.

1. Using a wire (for example, a strand from a Cat-5 cable), connect **IR 1+** to **GPIO 1**. See the next figure.



2. Power up or reset the system.
3. The status LED will blink green briefly while the firmware clears the static IP address.
4. The system will then reboot and come back up with the status LED blinking green, if the system received an IP address from the DHCP server. If the system has a self-assigned address, the LED is blinking amber.

You can confirm your embedded processor has an IP address by opening the **Embedded Scanner** window from RacePoint Blueprint™ by entering *rpmembscanner* in Spotlight. For more information on the embedded scanner, access the dealer portal described in the last section.

Additional Documentation

Additional documentation for the SSP-0600 is available at: **SavantSystems.com** and navigate as follows:
>Dealer Login > Knowledge Base > Products

- Refer to the **Savant SmartMediaPro (SSP-1200/1200R & SSP-0600) Deployment Guide** for additional installation and configuration information.
- Refer to the **GPIO Hardware Setup Guide** for information on input and output triggers and GPIO input and outputs to Savant Controllers.
- Refer to the **RacePoint Blueprint™ Programming Guide** to configure the SSP-0600 into a Savant System.

45 Perseverance Way, Hyannis, MA 02601 Phone 508.683.2500 Fax 508.683.2600 www.SavantSystems.com