SAVANT

Savant[®] ProAV Video 8 or 4 Input IP Transmitter 4K UHD with Control (PAV-VIM8S/PAV-VIM4S) Quick Reference Guide

Box Contents

(1)

- (1) Audio/Video over IP Switch (PAV-VIM8S-00/PAV-VIM4S-00)
 - Installation Kit (075-0192-xx/075-0197-xx)
 - (2) Standard 3U Rack Mounting Brackets (071-0638-xx)
 - (4) M5 x 8 mm Flat-head Phillips Screws (039-0180-xx)
 - 6 ft Power Cord (064-0079-xx N. America) or 6ft Power Cord (International can vary)
- (16 or 8) 3-pin Control Connectors (028-9351-xx)
- (1) Quick Reference Guide (this document)

Specifications

Environmental			
Temperature	32° to 104° F (0° to 4	0° C)	
Humidity	10% to 90% Relative Humidity (non-condensing)		
Cooling	70 cubic feet per minute (CFM) recommended		
BTU	1365 BTU/hr		
Dimensions and V	Veights		
Height	5.21 in (132.3 mm)		
Width	17.30 in (439.4 mm)		
Depth	14.24 in (361.7 mm)		
Weight	Net: 14.5lb (6.59 kg)	Shipping 18.25lb (8.27 kg)	
Rack Space	3U		
Power			
Input Power	100-240V AC 50/60H	z, (5A maximum)	
Nominal Power	N. America - 144VA - (1.2 A @ 120V AC, 60Hz) International - 156VA - (.68 A @ 240V AC 50Hz)		
Maximum Power	N. America - 400VA - (4 A @ 120V AC, 60Hz) International - 432VA - (1.8 A @ 240V AC 50Hz)		
Power Cable	IEC320 C13 three-pole	e detachable power card	
Audio			
Supported Formats	Pass-though of all HD supported.	MI audio formats are	
Video			
HDR	Supported		
Supported Formats	640x480 ⁵ 720x480 ⁵ 720x576 ⁴ 800x600 ⁵ 1024x768 ⁵ 1280x720 ⁴ 1280x720 ⁵ 1280x1024 ⁵ 1920x1080 ¹	1920x1080 ³ 1920x1080 ⁴ 1920x1080 ⁵ 1920x1200 ⁵ 3840x2160 ¹ 3840x2160 ² 3840x2160 ³ 3840x2160 ⁴ 3840x2160 ⁵	
1 = at 24 Hz 2 = at 25 Hz	3 = at 30 Hz 4 = at 50 Hz	5 = at 60 Hz	
Compliance			
Safety and Emissions	FCC Part 15 CE	C-Tick ETL	
RoHS	Compliant		
		· · · · · · · · · · · · · · · · · · ·	

Required Components

Savant Audio/Video over IP Device (PAV-VOMVP1F/PAV-VOMVP1C) Savant System Host Savant qualified 10G Managed Network Switch Savant User Interface Savant Design and Configuration Tools

Front Panel

FIONT Faller	
ABCDE	
	SAVANT
Item	Description
A On / Off Button	Reboots the main board (mcu) and power cycles the IP Video transmit (Tx) cards
(B) Reset Button	 Press and Release - Resets the IP Video transmit (Tx) cards. Press and hold - Clears the network settings. Press and hold button for 5 seconds until Status LED blinks red rapidly; then release.
C Power LED	Off - Device is off. No power applied. Green - Main board is powered
D Status 1 LED	Blinks Twice – Provisioned to the local network and is currently connecting to the Host Rapid Blink (green) – The reset button was pressed and held for five seconds and the A/V over IP unit is performing a factory reset. All network settings are cleared. Short Off Blink – Firmware is updating
E Status 2 LED	Reserved for future use.

Network Configuration

To ensure that the IP Address will not change due to a power outage, Savant recommends using DHCP reservation within the router. By using this method IP Addresses for all devices can be managed from a single UI, avoiding the need to access devices individually.

NOTE: Setting DHCP reservation varies from router to router. Refer to the documentation for the router to configure DHCP reservation.

Network Requirements

The A/V over IP device requires a Savant qualified 10G managed switch. This switch must be configured for the A/V over IP devices. For more information on this see the **Savant Audio/Video over IP Network Configuration Guide** on the **Savant Customer Community**.

Installation

The Savant Audio/Video over IP 8-Port / 4-port Transmitter chassis can be mounted using the included rack mounting ears and hardware in a 3U rack style enclosure and is compatible with all standard 19-inch National Electrical Manufacturers Association (NEMA) rack mounts. For more information see the **Savant Audio/Video over IP Deployment Guide** on the **Savant Customer Community**.

For Product Info

 B C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C D O C O C O C O D O C D D O D O	Rear Panel	
Image: Control Point State State Image: Control Point State State Image: Control Point State State State State Image: Control Point State State State State Image: Control Point State State State State Image: Control Point State State State Image: Control Point State State Image: Control Point State State Image: Control Point State State Image: Control Point State State Image: Control Point State State Image: Control Point State State Image: Control Point State State Image: Control Point State State Image: Control Point State State Image: Control Point State State Image: Control Point State State Image: Control Point State State Image: Control Point State State Image: Control Point State State Image: Control Point State State Image: Control Point State State Image: Control Point State State Image: Control Point State State Image: Control Point State State		E
I Gigabit 1G of reserved network data bandwidth commonly used to connect any network compliant device to transmit its data onto the Ethernet network by sharing the IOG network link. 8-Pin RJ-45 female connection. IMPORTANT: Do not connect these ports to a network switch. IB 10 Gigabit SFP+ Housing; Used for connectivity to the IOG Ethernet Network Switch. IPORTANT: For all IOG connections, use only Savant certified SFP+ Direct-Attach Copper (DAC) cables, or Savant certified SFP+ modules. IC Rx/Tx LEDs Rx - Link Activity LED indicator for all data received on the IOG connection Tansmitted from the IOG connection IP-Pin Type A HDMI female digital audio/video input. Supports HDMI 2.0a HDMI In Supports HDMI 2.0a HDMI 2.0 compliant cable is required for 4K content. IO-240V AC 5A 50/60Hz power input module with On/Off switch. I - Applies power to the device. O - Removes power sei al data to and from serial controllable devices. For pi		
(A) 1 Gigabit commonly used to connect any network compliant device to transmit its data onto the Ethernet network by sharing the IOG network link, 8-Pin RJ-45 female connection. IMPORTANTI: Do not connect these ports to a network switch. (B) 10 Gigabit Ethernet SFP+ Housing; Used for connectivity to the 10G Ethernet Network Switch (C) Rx/Tx LEDs SFP+ Housing; Used for connections, use only Savant certified SFP+ Direct-Attach Copper (DAC) cables, or Savant certified SFP+ modules. (C) Rx/Tx LEDs Rx - Link Activity LED indicator for all data received on the 10G connection Tx - Link Activity LED indicator for all data transmitted from the 10G connection 19-Pin Type A HDMI female digital audio/video input. (D) HDMI In Supports HDMI 2.0a HDMI female digital audio/video input. (E) Power Input Module 10-240V AC 5A 50/60Hz power input module with On/Off switch. (F) RS-232 Control Port Rs232 - 3-pin Screw down plug-in connection. (F) RS-232 Control Port Rs232 - 3-pin Screw down plug-in connection. (F) RC-232 Control Port IR - 3-pin Screw down plug-in connection. (F) RC-232 Control Port RcA nalog Audio Output. (F) Analog RCA Analog Audio Output. (F) Analog RCA Analog Audio Output. (F) Analog RCA Analog Audio	Item	Description
B 10 Gigabit Ethernet Ethernet Network Switch IMPORTANTI: For all 10G connections, use only Savant certified SFP+ Direct-Attach Copper (DAC) cables, or Savant certified fiber and fiber connectors along with Savant certified SFP+ modules. C Rx/Tx LEDs (10 GbE) Rx - Link Activity LED indicator for all data received on the 10G connection Tx - Link Activity LED indicator for all data transmitted from the 10G connection D HDMI In Supports HDMI 2.0a HDMI 2.0 compliant cable is required for 4K content. E Power Input Module 100-240V AC 5A 50/60Hz power input module with On/Off switch. I - Applies power to the device. O - Removes power to the device. O - Removes power to the device. NOTE: Includes a field replaceable 5A 250V Fast acting fuse. F RS-232 Control Port Rs232 - 3-pin Screw down plug-in connection. Transmits and receives serial data to and from serial controllable devices. For pin-out informa- tion, refer to the RS-232 Wiring section below. G IR Control Port IR - 3-pin Screw down plug-in connection. Transmits R signals via an IR Flasher (SV tolerant) to devices with an IR input or IR receiver. For pin-out information, refer to the IR Wiring section below. (H) Analog Audio Out RCA Analog Audio Output. Requires HDMI input stereo PCM audio format. Direct Line Level 2.1-V _{RMS} Output (I) Push Buttons Push buttons - Reserved for future use. (J) Ethernet 8-Pin RJ-45 female connection; Reserved for future u		commonly used to connect any network compliant device to transmit its data onto the Ethernet network by sharing the 10G network link. 8-Pin RJ-45 female connection. IMPORTANT!: Do not connect these ports to a
C Rx/Tx LEDs (10 GbE) received on the 10G connection Tx - Link Activity LED indicator for all data transmitted from the 10G connection Image: D HDMI In 19-Pin Type A HDMI female digital audio/video input. Supports HDMI 2.0a HDMI 10 Supports HDMI 2.0a HDMI 2.0 compliant cable is required for 4K content. Image: D Power Input Module 100-240V AC 5A 50/60Hz power input module with On/Off switch. Image: Applies power to the device. 0 - Removes power to the device. Image: O - Removes power to the device. 0 - Removes power to the device. Image: NOTE: Includes a field replaceable 5A 250V Fast acting fuse. Image: RS-232 Control Port RS232 - 3-pin Screw down plug-in connection. Transmits and receives serial data to and from serial controllable devices. For pin-out informa- tion, refer to the RS-232 Wiring section below. Image: RS-232 Control Port Image: RS-232 Wiring section below. Image: RC - Transmits IR signals via an IR Flasher (SV tolerant) to devices with an IR input or IR receiver. For pin-out information, refer to the IR Wiring section below. Image: Audio Out RCA Analog Audio Output. Requires HDMI input stereo PCM audio format. Direct Line Level 2.1-V _{RMS} Output Image: Push Buttons Push buttons - Reserved for future use. Image: Push Buttons 8-Pin RJ-45 female connection; Reserved for future use Image: Push Buttons 8-Pin RJ-45 fe		Ethernet Network Switch IMPORTANT!: For all 10G connections, use only Savant certified SFP+ Direct-Attach Copper (DAC) cables, or Savant certified fiber and fiber connectors along with Savant certified SFP+
Image: Power Input input. Supports HDMI 2.0a HDMI 2.0 compliant cable is required for 4K content. Image: Power Input 100-240V AC 5A 50/60Hz power input module with On/Off switch. Image: Power Input I - Applies power to the device. Module O - Removes power to the device. NoTE: Includes a field replaceable 5A 250V Fast acting fuse. Image: RS-232 RS232 - 3-pin Screw down plug-in connection. Transmits and receives serial data to and from serial controllable devices. For pin-out information, refer to the RS-232 Wiring section below. Image: RS-232 Image: RS-232 Wiring section below. Image: RS-232 I		received on the 10G connection Tx - Link Activity LED indicator for all data
Image: Power Input Modulewith On/Off switch. I - Applies power to the device. O - Removes power to the device. NOTE: Includes a field replaceable 5A 250V Fast acting fuse.Image: RS-232 Control PortRS232 - 3-pin Screw down plug-in connection. Transmits and receives serial data to and from serial controllable devices. For pin-out informa- tion, refer to the RS-232 Wiring section below.Image: RS-232 Control PortImage: RS-232 - 3-pin Screw down plug-in connection. Transmits and receives serial data to and from serial controllable devices. For pin-out informa- tion, refer to the RS-232 Wiring section below.Image: RS-232 Control PortImage: RS-232 - 3-pin Screw down plug-in connection. Transmits and receives serial data to and from serial controllable devices. For pin-out informa- tion, refer to the RS-232 Wiring section below.Image: RS-232 Control PortImage: RS-232 Control PortRC- 3-pin Screw down plug-in connection. Transmits IR signals via an IR Flasher (SV tolerant) to devices with an IR input or IR receiver. For pin-out information, refer to the IR Wiring section below.Image: RCA Analog Audio OutRCA Analog Audio Output. Requires HDMI input stereo PCM audio format. Direct Line Level 2.1-V _{RMS} OutputImage: Push Buttons Image: Push buttons - Reserved for future use.8-Pin RJ-45 female connection. Used to communicate with the Savant System Host.Image: Reserved Image: Reserved for future use8-Pin RJ-45 female connection; Reserved for future use	D HDMI In	input. Supports HDMI 2.0a HDMI 2.0 compliant cable is required for 4K
FRS-232 Control PortTransmits and receives serial data to and from serial controllable devices. For pin-out informa- tion, refer to the RS-232 Wiring section below.GIR Control PortIR - 3-pin Screw down plug-in connection. Transmits IR signals via an IR Flasher (5V tolerant) to devices with an IR input or IR receiver. For pin-out information, refer to the IR Wiring section below.HAnalog Audio OutRCA Analog Audio Output. Requires HDMI input stereo PCM audio format. Direct Line Level 2.1-V _{RMS} OutputIPush ButtonsPush buttons - Reserved for future use.JEthernet8-Pin RJ-45 female connection; Reserved for future useKReserved8-Pin RJ-45 female connection; Reserved for future use		with On/Off switch. I – Applies power to the device. O – Removes power to the device. NOTE : Includes a field replaceable 5A 250V Fast
G IR Control Port Transmits IR signals via an IR Flasher (5V tolerant) to devices with an IR input or IR receiver. For pin-out information, refer to the IR Wiring section below. H Analog Audio Out RCA Analog Audio Output. Requires HDMI input stereo PCM audio format. Direct Line Level 2.1-V _{RMS} Output I Push Buttons Push buttons - Reserved for future use. J Ethernet 8-Pin RJ-45 female connection. Used to communicate with the Savant System Host. K Reserved 8-Pin RJ-45 female connection; Reserved for future use		Transmits and receives serial data to and from serial controllable devices. For pin-out informa-
(H) Analog Audio Out Requires HDMI input stereo PCM audio format. Direct Line Level 2.1-V _{RMS} Output (I) Push Buttons Push buttons - Reserved for future use. (J) Ethernet 8-Pin RJ-45 female connection. Used to communicate with the Savant System Host. (K) Reserved 8-Pin RJ-45 female connection; Reserved for future use		Transmits IR signals via an IR Flasher (5V tolerant) to devices with an IR input or IR receiver. For pin-out information, refer to the IR
J Ethernet 8-Pin RJ-45 female connection. Used to communicate with the Savant System Host. K Reserved 8-Pin RJ-45 female connection; Reserved for future use		Requires HDMI input stereo PCM audio format.
J Ethernet communicate with the Savant System Host. K Reserved 8-Pin RJ-45 female connection; Reserved for future use	D Push Buttons	Push buttons – Reserved for future use.
Reserved for future use	J Ethernet	
(L) Grounding Chassis Ground (optional)	K Reserved	
	(L) Grounding	Chassis Ground (optional)

Additional Information

Refer to the following documents located on the Savant Customer Community for additional information.

Savant Audio/Video over IP Deployment Guide (009-1551-xx) Savant Audio/Video over IP Network Configuration Guide (009-1552-xx)

Wiring and Connections

IR Wiring

IR connections are made using a 3-pin Control Connector supplied with the device. The wire slips into the hole and locks with a screw located at the top of the connector.

○ 0ut 2 ○ 0ut 2 ○ 0 0 3	

PIN 1	Not Used
PIN 2	IR +
PIN 3	IR -

IMPORTANT: IR Wiring Precautions

Ensure that all IR emitters are within 15 feet (4.6 meters) from the controller's location. Use of 3rd party blinking IR emitters with

Talk Back is not recommended. These types of emitters can draw voltage away from the IR signal that can degrade IR performance.

RS-232 Wiring

Serial control connections are made using a 3-pin Control Connector supplied with the device. The wire slips into the hole and locks with a screw located at the top of the connector.

Rx 222			
PIN 1	Receive	_	
PIN 2 Transmit			
PIN 3	Ground		

SFP+10 GbE

Enhanced small form-factor pluggable connection. Use a Savant certified Direct Access Copper (DAC) SFP+ cable to connect the chassis to the 10G switch, or Savant certified fiber and fiber connectors along with Savant certified SFP+ modules.

Transport Distance DAC cable OM3 multi-mode Fiber

10 ft (3 m) 1000ft (300 m)

Replace the Fuse

ELECTRIC SHOCK HAZARD: Disconnect the unit from AC power by removing the power cord from the AC outlet and the unit before replacing the fuse.

IMPORTANT: The orientation of the cartridge within the unit and location of the fuse within the cartridge are crucial to proper operation. Make note of the orientation of the cartridge and the fuse location within the cartridge before removing.

Disconnect the unit from AC power by removing the power cord. 1.

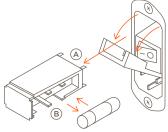
2. Open the fuse cover on the AC power input using a flat head screwdriver or similar thin flat head tool. This will allow access to the fuse cartridge.

Using a flat head screwdriver or similar thin flat head tool, gently 3 loosen the cartridge and pull the cartridge out of the unit slowly. As the cartridge is removed, make note of the orientation, as it is important to proper operation.

TIP: Mark the chassis and fuse holder with a marker in order to align when replacing.

Remove the old fuse from the cartridge and discard. 4.

5 Gently place the new fuse in the cartridge and place the cartridge part way into the receptacle aligning it as defined in the diagram.



(A) Connection Pins Towards Unt

(B) Open Side of Cartridge Towards Power Switch

6. Gently press on the cartridge the rest of the way until it seats into the terminals at the rear of the slot.

NOTE: If any resistance is encountered during seating the cartridge, DO NOT apply more pressure. Stop pressing on the cartridge, remove it, verify the orientation, and repeat step.