

# SAVANT

## Savant Music Server 1 - Quick Reference Guide

For Product Info



### Box Contents

- (1) Savant Music Server 1 (SMS-1001-xx)
- (1) Installation Kit (075-0189-xx)
  - (1) 5V DC 3A Power Supply (025-0153-xx)  
(includes interchangeable international adapters)
  - (1) Wall Bracket - Chassis Mount (074-0584-xx)
  - (1) Wall Bracket - Wall Mount (074-0585-xx)
  - (2) M3 x 6mm Flat-head Phillips Screw (039-0001-xx)
  - (2) 6-pin Screw Down Plug-in Connector (028-0664-xx)
  - (2) 3-pin Screw Down Plug-in Connector (028-0665-xx)
- (1) Quick Reference Guide (this document)

### Specifications

Environmental	
Temperature	32° to 104° F (0° to 40°C)
Humidity	10% to 90% RH (non-condensing)
Cooling	10 CFM (Cubic Feet per Minute)
Max BTU	34.1 BTU/hr
Dimensions and Weight (Product)	
Height	1.58 in (4.00 cm)
Width	7.86 in (20.00 cm)
Depth	7.65 in (19.40 cm)
Weight	Net: 1.3 lb (.59 kg)   Shipping: 2.1 lb (.95 kg)
Power	
Input Power	5V DC 3A
Max Power	15 Watts
Audio	
Digital to Analog Conversion	24 bit / 96 kHz
Regulatory	
Safety and Emissions	FCC Part 15 CE C-Tick ICES-003
RoHs	Compliant
Minimum Supported Release	
Savant OS	da Vinci 8.3

### Network Requirements

Savant requires the use of business class/commercial grade network equipment throughout the network to ensure the reliability of communication between devices. These higher quality components also allow for more accurate troubleshooting when needed.

When making connections, connect all Savant devices to the same local area network (LAN) or subnet as the Host. Savant recommends not implementing any type of traffic or packet shaping in your network topology for the Savant devices as this may interfere with performance.

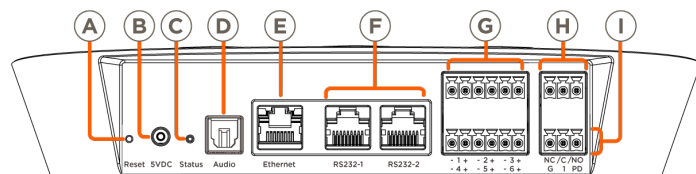
To ensure that the IP Address will not change due to a power outage, a static IP or DHCP reservation should be configured. Savant recommends using DHCP reservation within the router. By using this method, IP Addresses can be managed from a single UI avoiding the need to access devices individually. Setting DHCP reservation varies from router to router. Refer to the documentation for the router to configure.

### Network Changes

If the IP Address range in your network has changed, Savant recommends the following steps to refresh any IP connection and ensure the controller is communicating with the network correctly.

Cycle Power	<ol style="list-style-type: none"><li>1. Disconnect the SMS-1001 from the AC power source.</li><li>2. Wait 15 seconds and then reconnect.</li></ol>
Hot Plug Ethernet (LAN) Connection	<ol style="list-style-type: none"><li>1. Disconnect the Ethernet (LAN) connection from the SMS-1001.</li><li>2. Wait 15 seconds and then reconnect.</li></ol>

### Rear Panel



- A Reset** - Clears the network settings. Press and hold the Reset button for five seconds until the Status LED blinks red rapidly; then release. See **Rapid Red Blink** below.
- B Input power** - Connect included power supply
  - Off:** The processor is resetting, or system is powered up and is currently booting the embedded firmware.
  - Green:** Connected/Communicating with the Pro System Host.
  - Red:** During the firmware update process, a problem occurred and a reset will be initiated.
  - Orange:** Firmware update is in process.
  - Green Blinking:** Was assigned an IP Address and is communicating with the local network, but not communicating with Pro System Host.
  - Orange Blinking:** A valid link-local IP Address is established and SMS-1001 is trying to connect with the Pro System Host.
  - Red Blinking:** Embedded firmware is running, but SMS-1001 has not received an IP Address.
  - Rapid Red Blink:** The reset button was pressed and held for five seconds and the SMS-1001 is performing a factory reset.
- D Audio** - Toslink (Optical) digital audio output port. Connects to a digital audio input on a switcher chassis for streaming Savant Music. An adapter may be required to connect to ports other than Toslink.
- E Ethernet** - 8-pin RJ-45 female  
10/100/1000 Base-T auto negotiating
- F RS-232** - 8-pin RJ-45 female (2 Ports)  
Transmits and receives serial data to and from a serial controllable device. Supports CTS/RTS handshaking.
- G IR** - 6-pin screw down plug-in connector.  
Transmits IR signals via an IR Flasher (5V tolerant) to devices with an IR input or IR receiver.
- H Relay** - 3-pin screw down plug-in connector.  
Offers both a Normally Open (NO) and Normally Closed (NC) output port to control devices that require a basic On/Off operation. DC Voltage Max: 30V DC 1A.
- I GPIO** - 3-pin screw down plug-in connector. Can be configured as either an input or output control port.
  - GPIO Input** - Processor will look for a low state (< .8 V DC) or high state (> 2.4V DC)
  - GPIO Output** - Can provide a binary output range from 0-12 V DC 150 ma maximum.

The SMS-1001 has a built-in single stream of Savant Music, which includes popular music streaming services powered by Autonomic MirageOS (Streaming service fees may apply).

## Installation

The SMS-1001 can be mounted to a wall or similar, or can be installed on a solid, flat, level surface such as a table, cabinet, or shelf. The location should be dry, well ventilated, and out of direct sunlight.

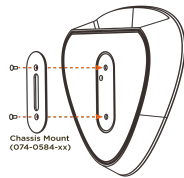
## Flat Surface Installation

When installing onto a flat surface such as a shelf, the wall bracket should not be installed. This will allow for a flat, level installation.

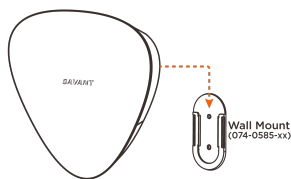
## Wall Bracket Installation

A two-piece wall mount bracket is included for installation to a wall or similar. Wall mount instructions are provided below.

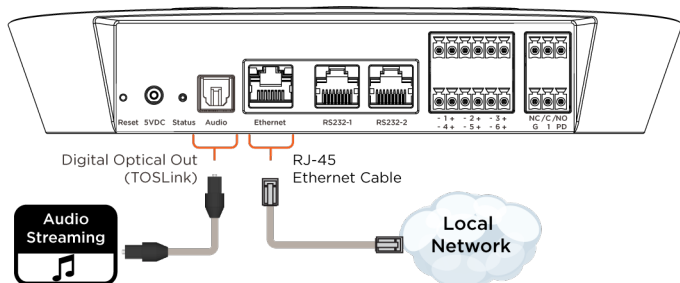
- 1 Attach the bracket that mounts to the bottom of the chassis using the included M3 x 6mm flat-head screws.



- 2 Attach the wall bracket securely to the wall. If mounting to drywall, a sturdy anchor such as a threaded drywall anchor should be used.
- 3 Position SMS-1001 over the wall bracket and gently slide into place. See image.



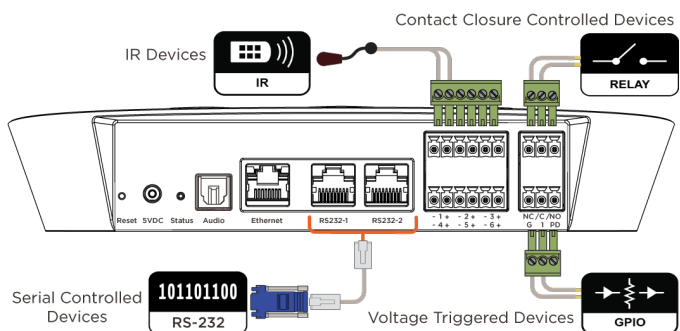
## Audio and Ethernet Connections



- Connect a Cat 5e/6/7 Ethernet cable between SMS-1001 and the local network router.
- Connect a Digital Optical (Toslink) cable between the **Audio** output port on the SMS-1001 and an audio input port on a Savant SmartAudio chassis or amplifier. An adapter or convertor (not included) may be required to connect to non-Toslink type input ports.
- Connect the power cable to the 5V DC port and apply power to the system. Savant recommends a pure sine wave uninterruptible power supply when connecting to an AC power source. The SMS-1001 will automatically obtain an IP Address through DHCP.

## Control Port Connections

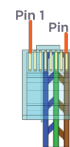
Connections for the Control ports are shown below. More information on each port, can be found in the **SMS-1001 Savant Music Server 1 Deployment Guide** located on the **Savant Customer Community**.



## RS-232

- Pins 7 and 8 are only required for CTS/RTS handshaking.
- Wire color is included to identify pins and do not represent any wiring standard.
- Refer to the **RS-232 Conversion to DB9 and RS-422/485 Pinout Application Note** located on the **Savant Customer Community** for more information on RJ-45 to DB-9 adapters offered through Savant.
- The SMS-1001 does not support the RS-422 or RS-485 standards.

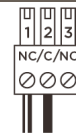
Pin 1: -----	Pin 5: Rx D
Pin 2: -----	Pin 6: Tx D
Pin 3: -----	Pin 7: CTS
Pin 4: GND	Pin 8: RTS



## Relay

- Both Normally Closed and Normally Open outputs are available.

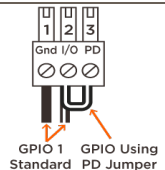
Pin 1: NC
Pin 2: Common
Pin 3: NO



## GPIO - General Purpose Input/Output

- GPIO's configured as an output can be used to trigger an action within the system such as switching on a device.
- GPIO configured as an input can detect a state change and trigger a workflow.
- GPIO pins configured as an input are pulled high to (+12V) during the booting process. To force the GPIO signal low during boot up, connect the PD pin to the GPIO pin. This forces the GPIO output to (< .8V) during the processor boot times.

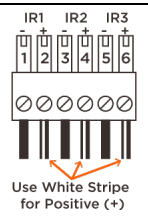
Pin 1: GND
Pin 2: GPIO 1
Pin 3: PD (Pulldown)



## IR (Infrared)

- Ensure all IR emitters are within 15 feet (4.6 meters) from the controller's location.
- Use of 3<sup>rd</sup> party flashing IR emitters with Talk Back is not recommended. These types of emitters can draw voltage away from the IR signal that can degrade performance.
- IR connections 4 to 6 (not shown in diagram) follow the same wiring as connections 1 to 3.

Pin 1: IR1 -
Pin 2: IR1 +
Pin 3: IR2 -
Pin 4: IR2 +
Pin 5: IR3 -
Pin 6: IR3 +



## Additional Documentation

Additional Documents are available on the **Savant Customer Community**.

- Savant Music Server 1 Deployment Guide (009-1473-xx)
- Relay and General Purpose Input/Output Profiles: Application Note
- RS-232 Conversion to DB-9 and RS-422/485 Pinout: Application Note

## Regulatory

15.19. This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interferences that may cause undesired operation.

15.21. The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

15.105. This equipment has been tested and found to comply with the limits for CLASS B digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving circuit different from that to which receiver is connected.
- Increase the separation between the equipment and the receiver.
- Consult the dealer or experienced radio/TV technician for help.

## IC Regulations

RSS-Gen 7.1.3. This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) This device may not cause interference, and (2) This device must accept any interference, including interference that may cause undesired operation of the device.

RSS-21- Annexe 9: A 9.4. Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes: (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

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