

Savant® SmartAudio Matrix Switch

SSA-3220/SSA-3220D

Blueprint Deployment Guide

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1. Introduction

1.1. Deployment Guide Overview

This SmartAudio deployment guide outlines the steps required for deploying a SmartAudio Matrix Switch. To ensure successful deployment please read this document in full before proceeding with deploying the system.

While this document contains all the steps required, other information may be needed during the process. Please visit dealers.SavantSystems.com for any additional information that is not found within this document.

1.2. Before You Begin

- Read through this document in its entirety
- Ensure that the following required items are available and on hand:
 - Savant Host (HST-XXXX or SVR-XXXX)
 - RacePoint Blueprint (da Vinci 5.2.3 or higher)
 - Ethernet Network (Enterprise-grade network deployment)
 - SmartAudio Matrix Switch (SSA-3220 or SSA-3220D)
 - Source components to be used in the installation
 - Control devices (iPads, iPhones, Savant or 3rd party remotes)

2. Preparation for Deployment

Follow the steps outlined in this section to ensure that SmartAudio is deployed within a system for optimum performance. Use this list as checklist to ensure that all steps are performed in order.

1. **Perform a Site Survey**
Before any system design or configuration is performed, we recommend that a site survey is conducted to ensure that the system can be installed within the environment. Make note of the locations of the rooms, room names, and wiring distances.
2. **Create a List of Devices**
Before starting the deployment it is important to know what the sources, displays, and controllers will be. This will speed up the process of designing and configuring the system. Be sure to include the device type, and physical location in the list.
3. **Record all Device Information**
Before deploying it is recommended that all serial numbers, mac addresses, Savant IDs, and any other specific information is recorded. This will allow for quick reference during deployment, installation, and in the future for troubleshooting.
4. **Research all Device Specifications**
Knowing the capabilities of the source, display, and switching components is important to ensure that they meet the A/V, and control requirements of the system. Make note of control methods so that the highest level can be used.

Count the number of IR and RS-232 connections to be used, this will come in handy when choosing a Savant controller with the correct amount of control connections for the system.
5. **Determine the Best Connection Type**
Using the data collected in the Site survey, and device research, identify the best connection for the signal being used.
6. **Configure System Control**
Use Blueprint to layout, and configure the system.
See [Deploying SmartAudio](#) for configuration procedure.
7. **Test the System Components**
While this step may add time to the installation up front, it will save installing a device twice, should something not function correctly. Once tested, keep all components of the system together so that they maintain the same functionality.

3. SmartAudio Overview (SSA-3220/SSA-3220D)

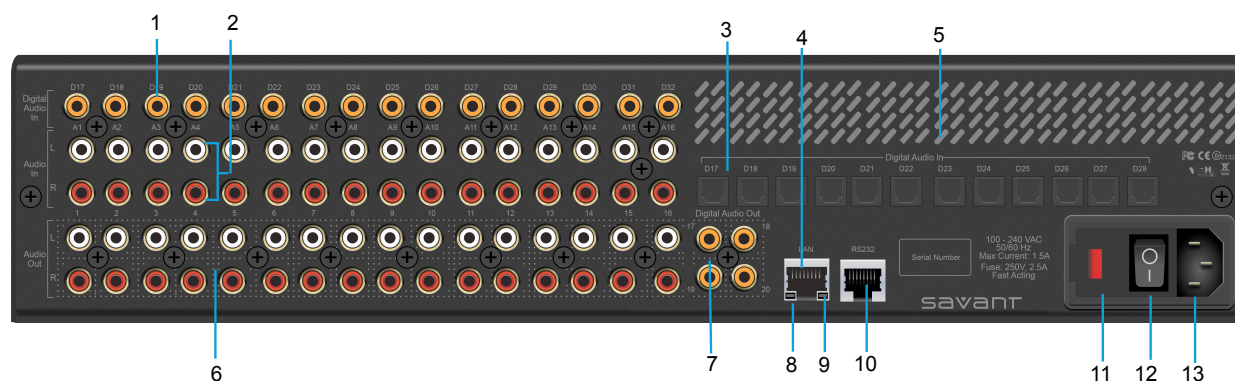
3.1. Box Contents

- (1) SSA-3220 or SSA-3220D
- (1) Installation Kit (075-0075-xx):
 - (4) Phillips Screws for Brackets (M5 x 12MM Flat) (039-0034-xx)
 - (2) 2U Rack Mounting Brackets (071-0113-xx)
 - (1) Power cord C13, (6 feet) (N. America) (064-0079-xx)
or appropriate international power cord
- (1) Quick Reference Guide

3.2. Specifications

Environmental	
Temperature	32° to 104° F (0° to 40° C)
Humidity	10% to 80% Relative Humidity (non-condensing)
Cooling	5 cubic feet per minute (CFM) recommended.
Maximum BTUs	105 BTUs per hour
Dimensions and Weight	
Height	3.46 in / 8.79 cm
Width	17.30 in / 43.94 cm
Depth	12.94 in / 32.88 cm
Weight	14.25 lb / 6.5 kg
Rack Space	2U
Power	
Input Power	100-240V AC, 50/60 Hz 1.5 Amp (uses standard 3 prong IEC C14 connector)
Nominal Power	25 watts
Maximum Power	40 watts
Operational Parameters	
Total Harmonic Distortion+Noise (THD+N)	< 0.004 %, 20 Hz - 20 KHz
Dynamic Range	100 dB, A-weighted
Signal-to-Noise Ratio (SNR)	>100 dB, A-weighted
Frequency Response	20 Hz - 20 kHz (varies +/- 1.5 dB over this range)
Input Impedance	12 K Ohms
Volume Control per Channel	+ 10 dB to -117 dB in 0.5 dB increments
Trim	-10dB to +10dB on every configured audio input
Mute	Individual output channel mute when in processed mode.
Mono	Configurable on every output pair. Each channel will output the combined input signal.
Seven-Band Equalizer (EQ)	On a per channel basis; +/- 12 dB, 0.5 dB steps
Supported Sample Rates	44.1 kHz 48 kHz 96 kHz @ 16-bit or 24-bit resolution
Output Delay Each Channel (SSA-3220D Only)	Adjustable from 0 to 85ms
Analog Output Voltage	2V RMS / 5V max
Compliance	
Safety and Emissions	FCC Part 15 S Mark CE Mark C-Tick
RoHS	Compliant
Supported Audio Output Formats	
Audio Source Signal	Audio Output Connector Type
16 Analog Stereo PCM Inputs	16 stereo outputs with RCA jack connectors, left and right
S/PDIF Inputs: 16 Digital Coax or 12 TosLink —Select between Coax or TosLink (first 12 inputs)	S/PDIF outputs: Four digital coax outputs RCA jack connectors; Coax output level: 500 mV nominal into 75 ohms —Individually selectable pass-through for each digital input Note: A 2ch PCM signal is required in order for a digital source to use pass-through.
Auto-Conversion	Converts Stereo Analog Audio to two-channel PCM S/PDIF (Coax only) or converts PCM S/PDIF Audio (Coax or TosLink) to Stereo Analog audio.
Minimum Supported Release:	
da Vinci 5.2.3	

3.2.1. Rear Panel Capabilities



1	Digital Audio In (16)	Receives digital (PCM and encoded) signal from S/PDIF inputs: 16 Coax digital audio or 12 digital TosLink connections that are selectable for a total of 16 digital audio inputs
2	Audio In (16)	16 analog audio inputs (16 right and 16 left RCA jacks)
3	Digital Audio In (12)	Receives digital (PCM and encoded) signal from S/PDIF inputs: 12 TosLink digital audio or 16 digital Coax connections that are selectable for a total of 16 digital audio inputs
4	LAN	RJ-45 Ethernet 10/100 base-T, auto-negotiating port with link/activity LEDs
5	Vents	Provide cooling
6	Stereo Out (16)	16 Stereo line-level audio outputs (16 right and 16 left RCA jacks)
7	Digital Audio Out (4)	S/PDIF Out: Four digital Coax audio outputs (RCA jacks)
8	Link/Activity LED (1)	Green indicates an Ethernet link has been established. Green flashing indicates Ethernet activity. Off indicates an Ethernet link has not been established.
9	Speed LED (1)	Green indicates an Ethernet speed of 100 Mb.
10	Debug / RS-232 (1)	RJ-45 female-connector port Typically used for debug or optionally use this serial port for control from a Savant controller or third party control box.
11	Fuse (1)	100-240V, 2.5A—Fast acting fuse. This is field-replaceable.
12	I/O (1)	On/Off switch I is used to power the controller to the <i>On</i> state. O is used to power the controller to the <i>Off</i> state.
13	Input Power (1)	100-240V AC, 50/60 Hz, 1.5 Amp

3.2.2. Front Panel Capabilities



1	Reset (hole)	Press & Hold the reset button for 5+ seconds. Resets to static IP address.
2	Power (LED)	Green indicates the system has adequate power and is operating normally. Red indicates the system is in stand-by mode. In standby most of the Controller circuitry is powered down. Off indicates that the system is getting no power.
3	Status (LED)	Green indicates the host has established communications with the embedded system. Green flashing indicates the embedded system is ready, but no communication has been established with the host. 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. Hardware Failure: If a hardware failure occurs, the Status LED indication will be interrupted every three seconds with a solid red indication. For example, if the LED is flashing green when a hardware failure occurs, the LED will alternate between flashing green and solid red at three-second intervals.
4	On/Off button (hole)	Insert pin into hole for about 10 seconds to place in standby mode. The Power button turns red. Insert the pin again for about one second to take the system out of standby mode. The power button turns green. The I/O power switch on the back of controller must be On (I) to enable this function. To turn the power off for the entire system, use the switch on the rear panel.

4. IP 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.

Connect all Savant devices to the same local area network (LAN), virtual local area network (VLAN), 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.

Network Configuration

To ensure that the IP address will not change due to a power outage, a static IP address or DHCP reservation should be configured. Savant recommends using DHCP reservation within the router. By using this method, static IPs for all devices 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 DHCP reservation.

Matrix IP Settings

Use the Network tab within the Web UI. See [Appendix B - Retrieving and Setting IP Address](#) for details.

Network Changes

The SmartAudio matrix requires rebooting after connecting to a new network, changing routers, or if the IP address range is changed in the current router.

To reboot the matrix:

- **Cycle Power**
Disconnect the controller from the AC power source for 15 seconds and then reconnect.
- **Hot Plug the Ethernet (LAN) Connection**
Disconnect the Ethernet (LAN) connection from the controller for 15 seconds and then reconnect.

NOTE: Resetting the unit via the front panel will set the network connection to DHCP. Keep this in mind for units that are set to a static IP address.

5. System Design Considerations

The SmartAudio matrix has different functionality than other Savant audio switchers. When designing a system, be sure and follow these guidelines in order for the system to function as intended once configured and installed.

- Unlike Savant Pro Switchers, multiple outputs on the SSA-3220/SSA-3220D cannot be combined into a single zone to support multiple speakers. Outputs on the SSA-3220/SSA-3220D are designed to be a single zone only.
- A 2ch PCM signal is required on digital inputs when using the Down-mixing pass-through option. All signals will produce no output when this option is selected.

6. Control Wiring Terminations

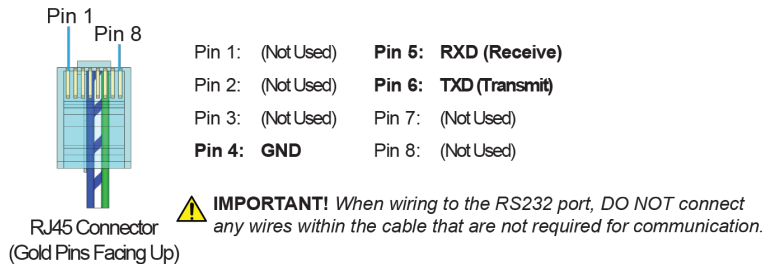
6.1. RS-232 Connections

The RS-232 control port located in the lower right corner on the rear of the unit is used to communicate with the matrix via a computer or 3rd party control system.



RS232 Control Port

Wiring for this port follows the Savant standard where pin 5 is RXD (Receive), pin 6 is TXD (Transmit), and pin 4 is GND (Ground). The diagram below shows the wiring for the Savant side, the opposite side pins will vary based on the device being connected to.



⚠ **IMPORTANT!** When using an RJ45 to DB9 adapter, the cable from the adapter to the SmartAudio should be a straight through cable. Any required crossover should be achieved by using a Null adapter.

6.1.1. RJ45 to DB9 Adapters

Savant uses RJ45 connectors for RS-232, other manufacturers control systems may use the standard DB9. To make connection easy, Savant offers RJ45 to DB9 adapters in a variety of configurations that can be used to connect to SmartAudio for RS-232 control. Be sure and choose the adapter that provides a proper connection to the control systems RS-232 port. Refer to the manufacturers support for the control systems configuration.

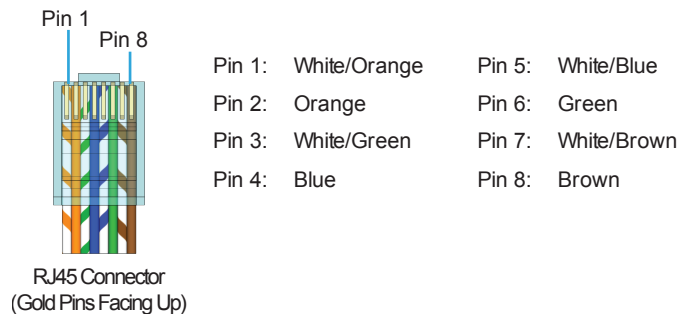
For more information on Savant RJ45 to DB9 adapters, see App Note RS-232 Conversion to DB-9 and RS-422/485 Serial Communication Pinout on dealers.SavantSystems.com.

⚠ **IMPORTANT!** If you are using RJ-45 to DB-9 adapters not supplied by Savant:

- Ensure that any wires required for communication/control are terminated within the adapter.
- Ensure that all wires **NOT** required for communication/control are **NOT** terminated in the connector.
- 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

6.2. Network (LAN) Wiring

Wiring for Network LAN connections follow the EIA 568B standard:



7. Deploying SmartAudio

This section requires the use of RacePoint Blueprint for layout of the system so that control can be established and UIs created. While you have used Blueprint before, it is a good idea to review the basic actions that will be used during the deployment process. See Appendix A - Blueprint Basics for a refresher on Blueprint basics.

⚠ IMPORTANT! Deploying a SmartAudio matrix within a Savant system is different than other Savant components. Follow all instructions, and warnings carefully to ensure a successful deployment of SmartAudio.

7.1. Add the System Backbone (Savant Controller and Switching)

1. Create the rooms for the system

To make placement of components a smooth and quick process, we recommend that all rooms be created as a first step. This will allow for components to be placed in the rooms as they are added to the layout.

2. Add a Savant Controller to the Layout

The SmartAudio matrix does not contain connections for the control of other devices. If any IR or RS-232 controlled devices exist in the layout, a Savant controller must be added to the configuration.

Tip: If the SmartAudio matrix is the only switching component in the system, choose a controller that does not have any switching that would add unnecessary overhead.

Tip: Select a controller that has sufficient control connections for all the components in the system. This will eliminate the need to add controllers for more connections.

3. Add the SmartAudio Matrix to the Layout

Note: The SmartAudio matrix can be controlled via RS-232, however UID control via the LAN connection is the preferred method within a Savant system as it allows access that is not available via RS-232. See section 6 SmartAudio Web UI for more information.

While not shown in BP, the LAN must be physically connected to a switch.

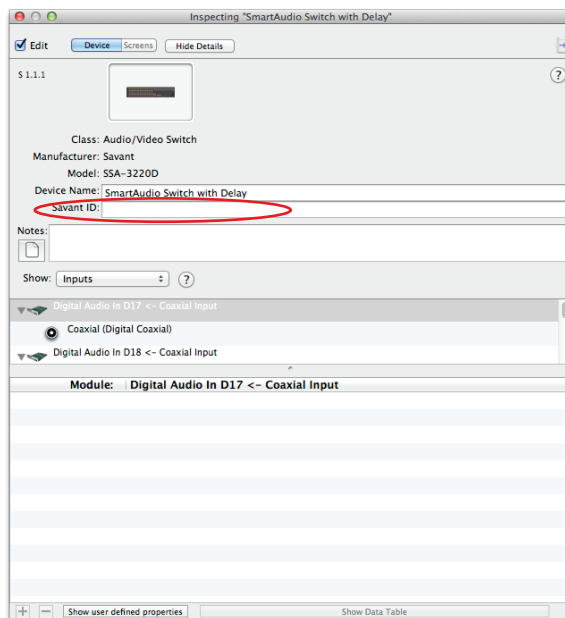
- 3.A. Select the appropriate matrix in the Component Library based on the need for output channel delay.

SSA-3220	No Delay
SSA-3220D	Adjustable Delay

- 3.B. Enter the UID for the matrix by selecting the matrix in the config, and opening the inspector.

Toolbar: View > Show Inspector

Note: The inspector must be closed from the previous step, and reopened for the matrix in order for the Savant ID box to appear.



4. Add an Amplifier to the Layout

The SmartAudio matrix connects to an amplifier (or Powered Speakers) to send audio to the speakers. Up to 8 stereo pairs can be connected to the SmartAudio matrix.

Additionally, 4 digital audio outputs are provided for connection to AV Receivers, DACs, or any other device with a digital coax input.

5. Connect the **Audio Outputs** to the appropriate amplifier, or powered speaker.

Note:

Unlike Savant Pro Switchers, multiple outputs on the SSA-3220/SSA-3220D cannot be combined into a single zone to support multiple speakers. Outputs on the SSA-3220/SSA-3220D are designed to be a single zone only.

6. Add Control Devices to the Layout

Place the Savant remotes, iPads, and iPods that will be used for control on the layout in the appropriate room.



IMPORTANT! The SSA-3220 and SSA-3220D graphic equalizer can only be used on user interfaces with the following themes. The EQ will not be visible using any theme not listed below.

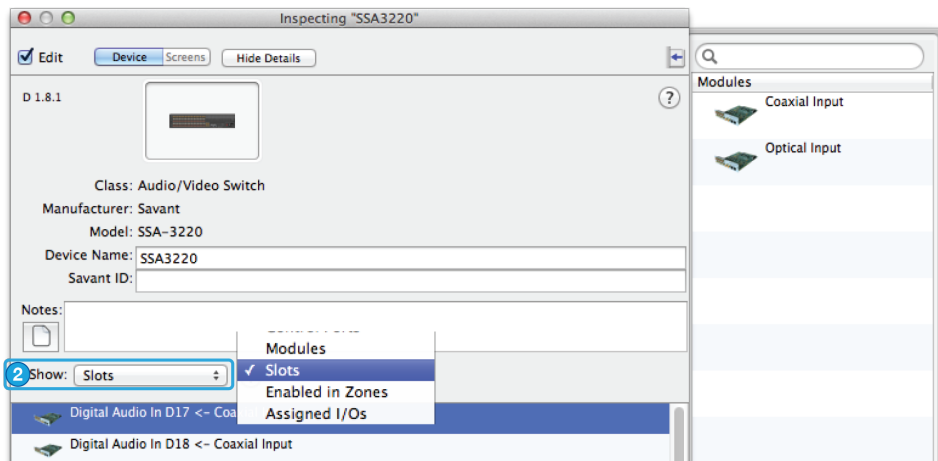
- iPad Retina
- Touch1
- Touch Remote1

7.2. Configuring Digital Inputs

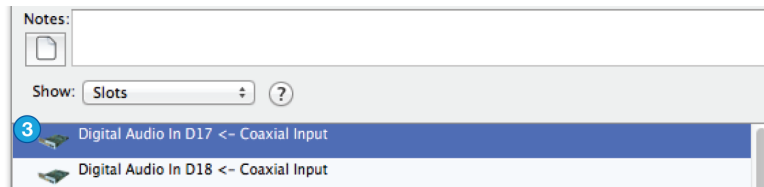
Digital inputs on the SmartAudio matrix can be connected to either digital coax, or optical (Toslink) sources. These inputs numbered 17 to 32, are configured to provide 12 coax, and 4 optical. Inputs 17 to 28 are configurable within Blueprint should the source connections require more optical inputs.

Follow these steps to configure inputs 17 to 28:

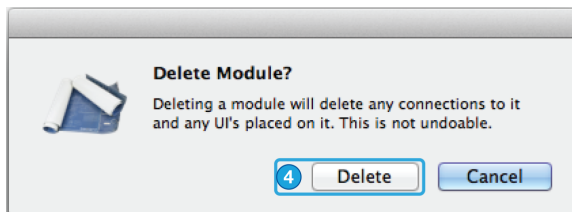
1. Select the SmartAudio matrix within the Blueprint configuration, and open the Inspector.
Toolbar: Tools>Show Inspector
2. On the Device tab, next to Show, select Slots.



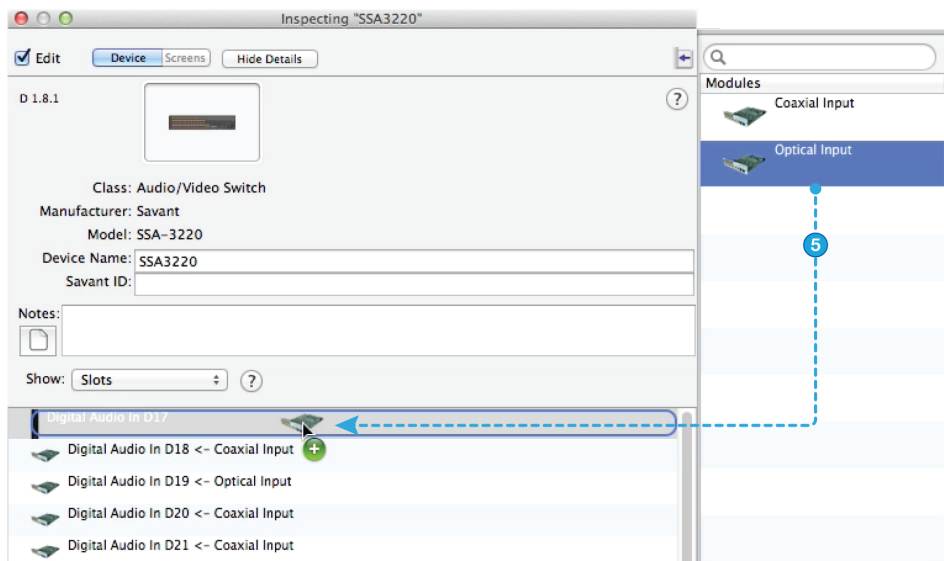
3. Select the slot to change and press Delete (Backspace on Windows keyboard).



4. Verify Delete in the open dialog



5. In the right view pane, select the desired input type under modules, and drag onto the open slot.



6. Repeat steps 3 through 5 for all inputs that require reconfiguring.

NOTE: Changes to input type will not appear in the web UI until a service that uses the reconfigured slot has been activated.

7.3. Add the AV Sources

While the SSA-3220 can be used with sources connected directly, it may also be used with a SmartLink matrix switch utilizing the digital audio outputs. Adding this to the system will expand the capabilities of the system allowing for the highest level of flexibility.

For details on deploying the SmartLink matrix, see the SmartLink Blueprint Deployment Guide found on dealers.SavantSystems.com.

Tip: If a SmartLink matrix is being used, sources for the system may be connected to the SmartLink matrix and will not require connection to the SmartAudio matrix. Be sure and plan out source routing before making any source connections.

Note: Digital inputs 17 to 28 can be configured for either digital coax or optical. See [Configuring Digital Inputs](#) before making any digital input connections.

1. Place the source onto the layout, and select the appropriate room.
2. Connect the Audio output of the source to the an Audio input on the SmartAudio matrix.
3. Connect control for the source to the appropriate type of connection on the controller.
4. Repeat steps 1 to 3 for all sources in the system.

7.4. Add the Speakers

While we have included the addition of speakers to this guide, the choice of speakers and amplifier will determine how they are deployed within the system. Refer to the documentation for the speakers and amplifier used for details on connecting while adding speakers.

1. Place the speakers onto the layout, and select the appropriate room.
2. Connect the Audio input of the speaker to an output from the SSA or the amplifier.
3. Repeat steps 1 to 3 for all speakers in the system.

7.5. Add Other Devices to the Layout

Now that the necessary items for the SmartAudio matrix have been added to the layout, other devices can be added and configured per their documentation.

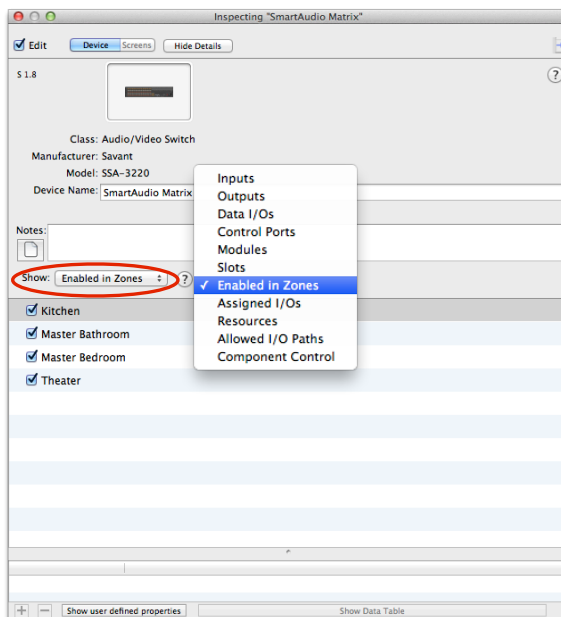
7.6. Configuring Zones and I/O Assignments

While SmartAudio can be operated with default settings, I/O assignments and zones can be configured to bring added functionality to the system.

7.6.1. Enabling or Disabling Zones

By default, all zones are enabled, use the steps below to limit the zones an output will appear in.

1. Select the SmartAudio switch in the Blueprint layout.
2. Open the inspector.
Toolbar: **View > Show Inspector**
3. In the **Show** drop-down, select **Enabled in Zones**.



4. Uncheck the box next to the zone to disable the switch in.

7.6.2. Assigning I/Os

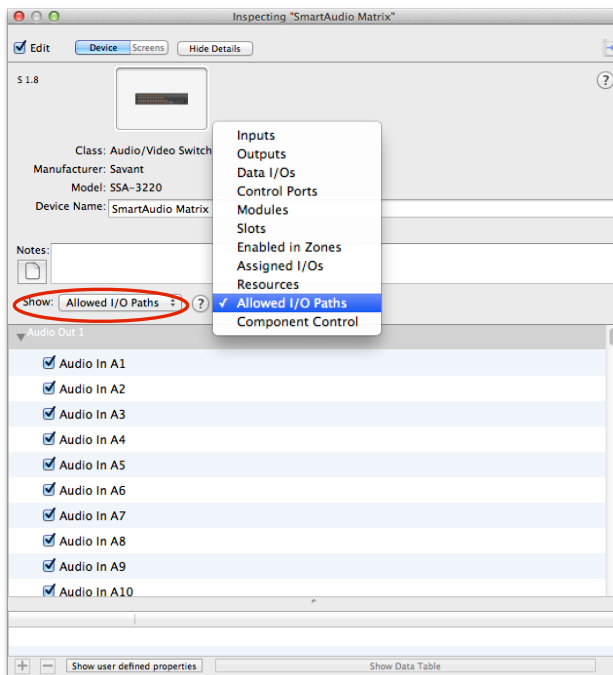
In addition to assigning zones, inputs can be configured to appear only on certain outputs. This is useful to limit access to a source that may not be desired to be accessible from all zones.

1. Select the SmartAudio switch in the Blueprint layout

1.A. Open the inspector

Toolbar: View > Show Inspector

1.B. In the Show drop-down, select **Allowed I/O Paths**



2. Under each output, uncheck the box for the input that is not desired to appear.

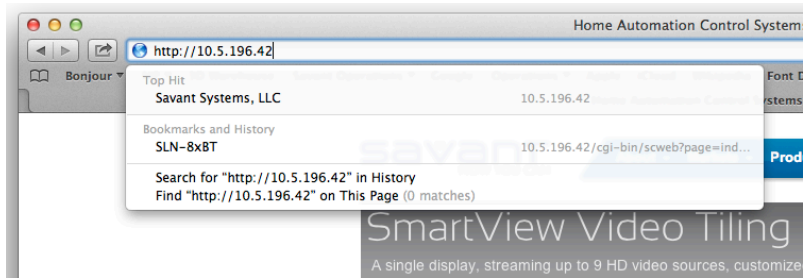
8. SmartAudio Web UI

In addition to Blueprint, SmartAudio may also be configured via a built in web UI. Through the web UI the IP address, zone, and I/O assignments can be configured.

8.1. Accessing the Web UI

In order to access the web UI, the IP address of the SmartAudio switch is needed. To retrieve the IP address of the switch, follow the steps in Appendix B.

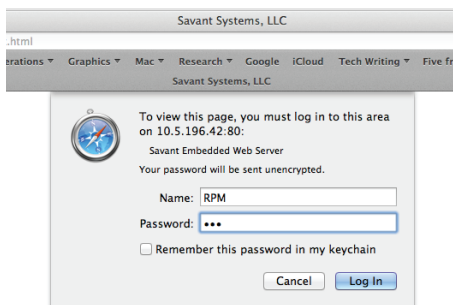
1. On the master host, open Safari and enter the address of the switch in the address bar:
Syntax: `http://[IP Address of Switch]`
Example: `http://10.5.196.42`



2. Once opened, login credentials will be required.

User: **RPM**

Password: **RPM**



8.2. SmartAudio Status

Status

Network

Logging

Firmware

Inputs & Outputs

Status

Savant ID 001AAE00B65B0000

IP Address 10.5.201.29

Firmware Version 7.11:403 2/4/2014

FPGA Version 7

Uptime 0 days 0 hours 44 minutes

Restart

A

B

C

D

E

F

A. Savant ID

UID of the SmartAudio Matrix

B. IP Address

Currently assigned IP address

C. Firmware Version

Current firmware version

D. FPGA Version

Current FPGA version

E. Uptime

Amount of time unit has been powered on without a restart.

F. Restart

Select to restart the matrix

8.3. Network Configuration

Status

Network

Logging

Firmware

Inputs & Outputs

Network

☒ DHCP

☐ Static

IP Address

10.5.201.29

Subnet Mask

255.255.255.0

Router

10.5.201.1

Revert

Apply & Restart

E

F

A

B

C

D

A. IP Address Configuration

DHCP or Static.

B. IP Address

Displays the current IP address and allows for entry. This is automatically assigned when item A is set to DHCP.

C. Subnet Mask

Subnet mask of the network. This is automatically assigned when item A is set to DHCP.

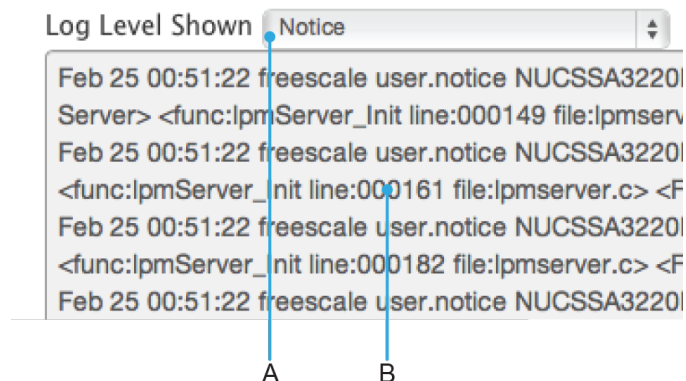
D. Router

IP address of the network router. This is also known as Gateway or Default Gateway

- E. Revert**
Press to erase entered settings and revert back to saved settings.
- F. Apply & Restart**
Press to apply entered settings, and restart the matrix.

8.4. SmartAudio Operation Logs

Logging



- A. Log Level Shown**
Selection of type of log to view.

Logs are separated into levels based on the severity of the event.

Log Level	Description
Emergency	A severe condition that requires an immediate system restart. This system is probably not functioning at all.
Alert	A severe condition that requires an immediate system restart. This system is probably not functioning at all.
Critical	A condition that indicates that the system is probably only partially functional due to some failure.
Error	Something didn't work. The system may not have been able to complete a request or task.
Warning	Unusual condition. Something unexpected or bad happened, but the system is fine.
Notice	Normal, but significant conditions occurred.
Info	Informational events. Indicates normal operational events.

- B. Log Display Area**
Displays the the selected log information.

8.5. Firmware Updates

[Status](#) [Network](#) [Logging](#) [Firmware](#) [Inputs & Outputs](#)

Firmware

Current Firmware: 7.11:403 2/4/2014 A

Server Address: B

Filename: C

D

Current FPGA: 7 E

Server Address: F

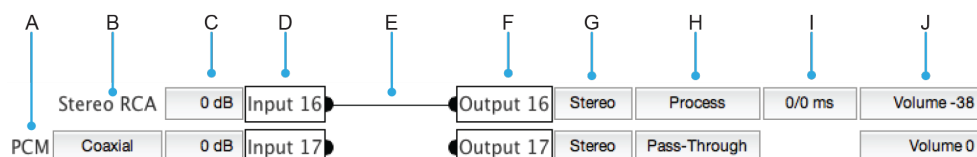
Filename: G

H

- A. Current Firmware version**
- B. Server Address**
Address of the tftp server containing the firmware update file
- C. Filename**
Name of the firmware file to load
- D. Update Firmware**
Select to update the matrix firmware
- E. Current FPGA version**
- F. Server Address**
Address of the tftp server containing the FPGA update file
- G. Filename:**
Name of the FPGA file to load
- H. Update FPGA**
Select to update the matrix FPGA

For details on how to update firmware, see section 8 Updating Firmware.

8.6. Input & Output Configuration



A. Digital Signal Type (Digital Inputs Only)

Display the digital signal type (PCM or Encoded).

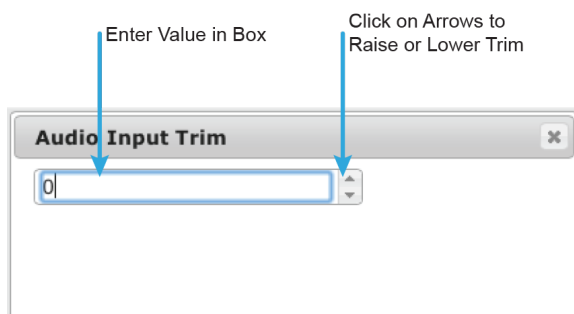
B. Connector Type

Analog Inputs: Stereo RCA

Digital Inputs: Selectable Coaxial or Toslink (Inputs 29 to 32 are Coaxial Only)

C. Channel Trim

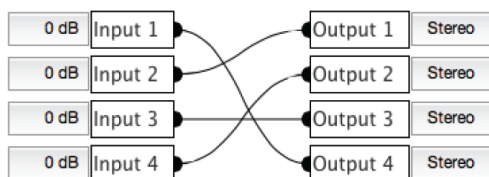
Adjusts the gain of the input from -10 dB to +10 dB



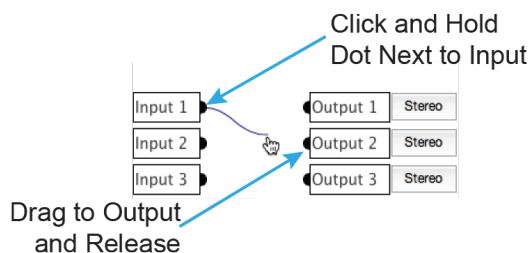
D. Input List

E. I/O Connection Indicator

When an input is connected to an output, a line will appear between them showing that there is a connection. Inputs with no connection will have a black dot with no line.



The dots can also be used to connect an input to an output. Simply click & hold the mouse on the dot next to the desired input, and drag the line to desired output dot, and release.



F. Output List

G. Output Channels

Stereo or Mono

H. Down-mixing

Note:

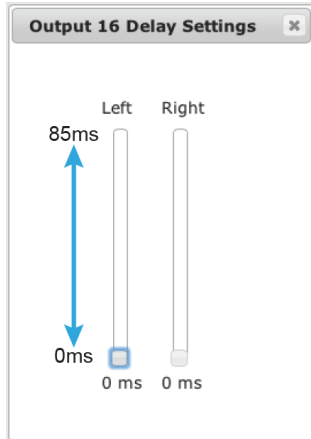
A 2ch PCM signal is required on digital inputs when using the Down-mixing pass-through option. All signals will produce no output when this option is selected.

Process: **Enables** Delay, Volume, and Mute

Pass-Through: **Disables** Delay, Volume, and Mute

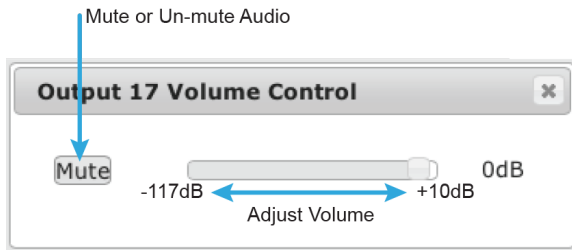
I. Channel Delay (Analog Inputs on the SSA-3220D Only)

Adjustable delay per analog channel from 0 - 85ms



J. Volume Level

Adjusts the output level of the channel from + 10 dB to -117 dB in 0.5 dB increments, or mutes audio.



9. Updating Firmware

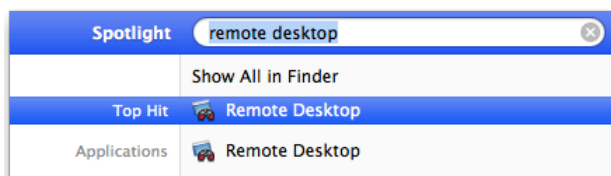
Follow the procedures below to update the chassis firmware, and FPGA.

⚠️ IMPORTANT! Prior to da Vinci 5.2.3 matrix profiles in Blueprint did not have a UID entry field. Any chassis, and host running da Vinci 5.2.3, or higher with a UID assigned in Blueprint does not require this procedure as firmware and FPGA is updated automatically.

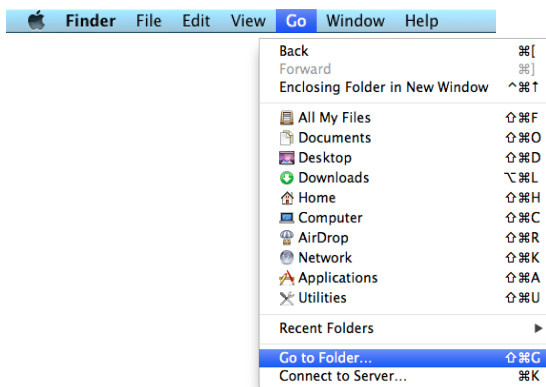
Note: To perform these procedures you will need to know IP address of the Master Host, and the Switch. Gather this information and have it on hand before performing the procedure below.

9.1. Setting Up the TFTP Server

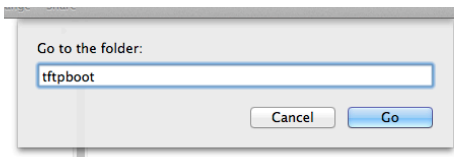
1. Download the chassis firmware, or FPGA from www.SavantSystems.com
2. Access the master Host via Remote Desktop:
 - 2.A. From the SDE, select Spotlight 🔍 on the Mac OS X bar in the upper right hand corner. Enter: **Remote Desktop**, and then select it in the drop-down list.



- 2.B. Select the master host and login.
3. Copy the .bin file to the master host:
 - 3.A. On the master host Select: **Finder > Go > Go to Folder**



- 3.B. Enter in **/tftpboot** and select **GO**.



- 3.C. Copy the Firmware, and FPGA update files from the SDE to the **tftpboot** folder on the Host.

9.2. Updating Chassis Firmware

1. Setup the TFTP server following the steps in [Setting Up the TFTP Server](#).
2. Access the matrixes Web UI following the steps outlined in [Accessing the Web UI](#).
3. Select Firmware from the left side navigation menu.



Firmware

Current Firmware: 7.11:403 2/4/2014

Server Address:

Filename:

Current FPGA: 7

Server Address:

Filename:

4. Under Current Firmware on the right hand side, enter the following:
TFTP Server IP Address: [Master Host IP Address]
Firmware File Name: [Name of the .bin Firmware File]
Example: "ulmageR3Flash<date>_7_11_xxx.bin"

Firmware

Current Firmware: 7.11:403 2/4/2014

Server Address:

Filename:

← TFTP Sever (Master Host) IP
← .bin Firmware Copied to Host
← Select to Start Upgrade

5. Select Update Firmware
Upon completion an **In Process** screen should appear within 5 to 10 seconds. After an Upgrade Complete notification appears, follow the prompts.
- Note:** If a countdown is not displayed please reboot manually.
6. Repeat steps 1 -5 for FPGA using the Current FPGA section and selecting the .mcs file.

Appendix A: Blueprint Basics

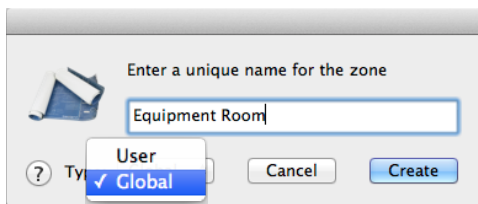
Note: The following steps assume that a blank project is open within Blueprint and has been omitted as a step.

Creating Rooms

When a new project is started, a room is created with the name Room 1. Change the name to one of the rooms in the system before adding more rooms.

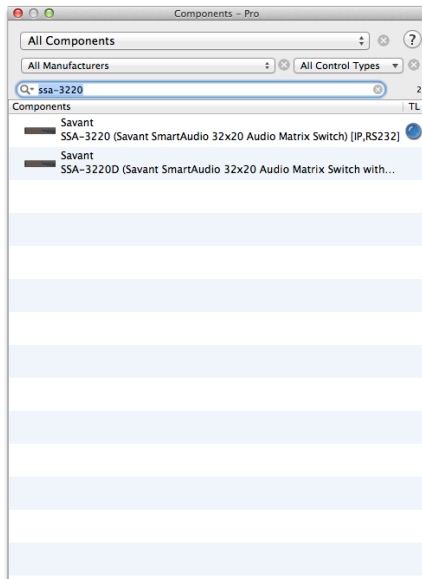
1. Click the plus at the bottom of the left hand room list.
2. Enter a name for the room, and a room type.

- User:**
- Room (Zone) contains an end-point to control.
 - Sources placed in user rooms are controllable only from that room.
 - Room (Zone) is selectable for control on UIs.
- Global:**
- Room (Zone) does not contain an end-point to control.
 - Sources placed in global rooms are controllable from any room.
 - Room (Zone) is not selectable for control on UIs.



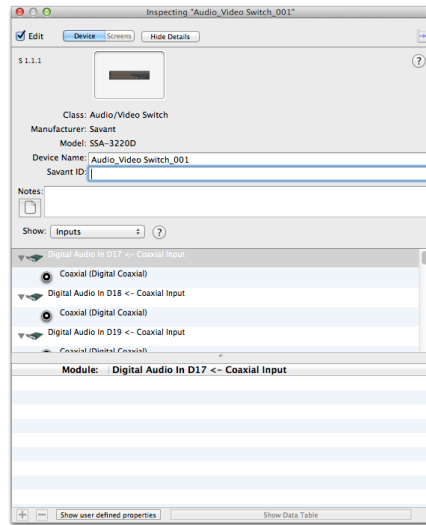
Adding Components

1. Open the Component library.
Toolbar: **View> Show Component Library**
2. Use the Component Type, Control Type, and manufacturer selection boxes to locate the component, or use the search box to locate by manufacturer or model number.
3. Select the component from the list and drag onto the layout.
If a room selection box appears, select the room to place the component into.



Viewing / Editing Component Parameters

1. Select the component under the room, or in the layout.
2. Open the Inspector to view the parameters.
Toolbar: **View> Show Inspector**



Connecting Components

1. Expand the components connection list by clicking on the green circle button at the top of the component in the layout.
2. Right click on a connector, and select a connector to connect to from the drop down list on the appropriate component.

Note: Only connections that can be made will appear. Different type, or already occupied connections will not be shown.

Appendix B: Retrieving and Setting IP Address

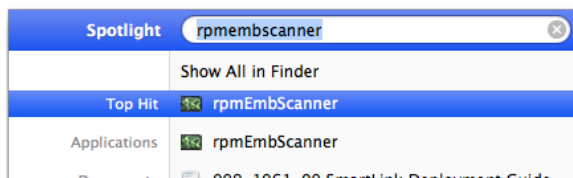
The release of the Savant Application Manager with da Vinci 5.2.2, how the rpmEmbScanner is accessed varies based on the method used to install Blueprint on the Savant Development Environment (SDE). Follow the steps below based on the method used to install Blueprint.

Note: You will need to know the UID of the unit in order to retrieve the IP address. Record the UID from the sticker located on the rear of the unit before performing the steps below.

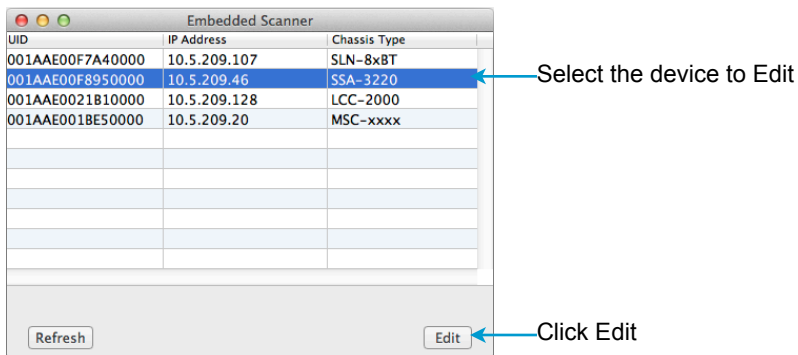
⚠ IMPORTANT! The SDE must be connected to the same network as the Savant system in order to for the devices to appear in the rpmEmbScanner. Ensure that the SDE and system are connected to the same network before proceeding.

Installed on SDE using Runtime Package

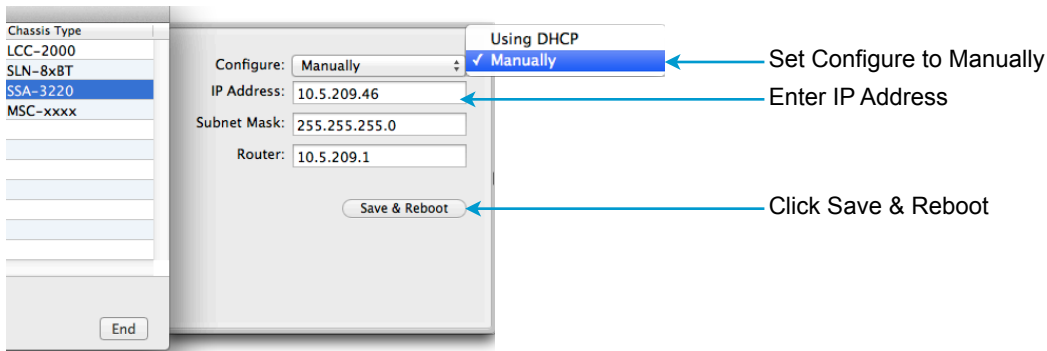
1. On the SDE, select **Spotlight** on the Mac OS X bar in the upper right hand corner.
2. Enter: **rpmEmbScanner**, and then select it in the drop-down list.



3. Select the device to edit in the list, and click **Edit**.



4. In the open settings tray, set **Configure** to Manually, enter the IP address, and press the tab key. The Subnet Mask, and Router will populate automatically.

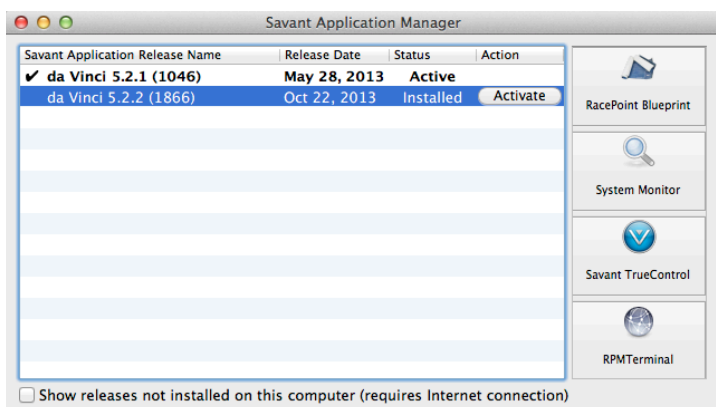


5. Click **Save & Reboot**. After a short period of time, the controller will come back online with the new IP Address.

Installed on SDE using Savant Application Manager (SAM)

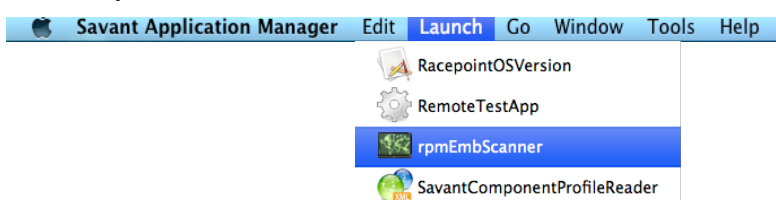
1. On the SDE open the Savant Application Manager.
2. In the list of available da Vinci versions, select the version that matches the Blueprint configuration running on the host. Select **Activate** to make it the active version.

Note: If the version running on the host is not in the list, see the SAM Deployment Guide for information on how to install it before proceeding.

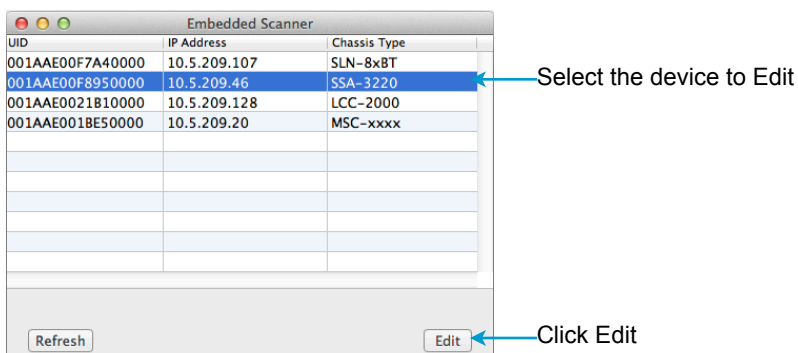


3. Open the rpmEmbscanner using the toolbar:

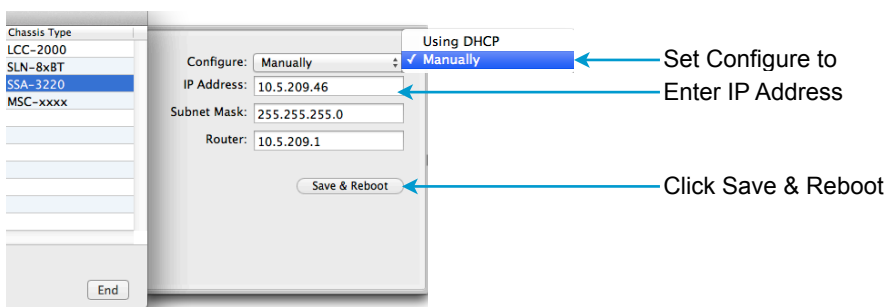
Launch>rpmEmbscanner



4. Select the device to edit in the list, and click **Edit**.



5. In the open settings tray, set **Configure** to Manually, enter the IP address, and press the tab key. The Subnet Mask, and Router will populate automatically.



6. Click **Save & Reboot**. After a short period of time, the controller will come back online with the new IP Address.

Appendix C: Document Revision History

009-1067-03 - August 2014

Section	Update
3.2	Added analog output to specifications table
5	New section: System Design Considerations
7	Added note to step 5 regarding not being able to combine outputs like on Pro Switchers.
8.6	Added note regarding the requirement of 2ch PCM on digital inputs when selecting pass-through.
Appendix C	Added section to list Document Revision History

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4. Select the check box to accept the **Terms and Conditions**.
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7. Select **Support Request** box.
8. The **Submit a Ticket** window opens.
9. Complete the information and click **Finish**.

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