



DNT-192 Dante Option Card Guide

for VENUE | S6L Systems

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Safety Compliance

Safety Statement

This equipment has been tested to comply with USA and Canadian safety certification in accordance with the specifications of UL Standards: UL60065 7th /IEC 60065 7th and Canadian CAN/CSA C22.2 60065:03. Avid Inc., has been authorized to apply the appropriate UL & CUL mark on its compliant equipment.

Warning



Important Safety Instructions

- 1) Read these instructions.
- 2) Keep these instructions.
- 3) Heed all warnings.
- 4) Follow all instructions.
- 5) Only perform the services explicitly described in the install and or user manual. For services or procedures not outlined in the install or user manual, speak with authorized service personnel.
- 6) Do not use this equipment near water.
- 7) Clean only with dry cloth.
- 8) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- 9) Do not install near any heat sources such as radiators, heat registers, stoves, or other equipment (including amplifiers) that produce heat.
- 10) Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- 11) Protect power cords from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the equipment.
- 12) Only use attachments/accessories specified by the manufacturer.
- 13) For products that are not rack-mountable: Use only with a cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the equipment. When a cart is used, use caution when moving the cart/equipment combination to avoid injury from tip-over.
- 14) Unplug this equipment during lightning storms or when unused for long periods of time.
- 15) Refer all servicing to qualified service personnel. Servicing is required when the equipment has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the equipment, the equipment has been exposed to rain or moisture, does not operate normally, or has been dropped.
- 16) For products that are a Mains powered device:
The equipment shall not be exposed to dripping or splashing and no objects filled with liquids (such as vases) shall be placed on the equipment.

Warning! To reduce the risk of fire or electric shock, do not expose this equipment to rain or moisture.
- 17) For products containing a lithium battery:
CAUTION! Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type.
- 18) The power inlet is the main disconnect device and should remain accessible. Disconnect the power cord before servicing the unit.
- 19) The equipment shall be used at a maximum ambient temperature of 40° C.
- 20) Disconnect power from mains before opening the product

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Overview

This guide shows how to install the DNT-192 Dante Option Card in Stage 64 and Stage 32 I/O racks for Avid® VENUE | S6L systems. The DNT-192 Dante Option Card is a 16-channel audio interface card for communicating with Dante networks. Based on the Brooklyn II, the DNT-192 can be interfaced directly with any Gigabit Dante devices running compatible firmware.

Each DNT-192 Dante Option Card occupies two slots in supported S6L Stage I/O units. Multiple DNT-192 Dante Option Cards can be installed in adjacent input or output slots for maximum input or output from each card.

Stage 64 Each Stage 64 supports installation of up to eight input cards (or up to four DNT-192 cards) providing a maximum of 64 input channels, and up to four output cards (or up to two DNT-192 cards) providing a maximum of 32 output channels. One DNT-192 card can be installed spanning Stage 64 input and output slots for “split” input and output from that single card.

Stage 32 Each Stage 32 supports installation of up to four input and/or output cards (or up to two DNT-192 cards) providing a maximum of 32 input or output channels, or a combination of input and output cards up to the maximum of 32.

DNT-192 Dante Option Card Features and Capabilities

Input and Output

Each DNT-192 card can be installed as an input-only, output-only, or (in Stage 64 only) as and input-and-output interface card. The number of channels of input and output vary with sample rate and Stage I/O unit slot location as shown in the following table.

DNT-192 Dante Option Card IO capabilities and slot requirements, per sample rate

Sample Rate	Input	Output	Stage 64 Slots	Stage 32 Slots
48 kHz	16	0	Slots A through H	Slots A through D*
	8	8	Slots H and J only	n/a
	0	16	Slots J through M	Slots A through D*
96 kHz	16	0	Slots A through H	Slots A through D*
	8	8	Slots H and J only	n/a
	0	16	Slots J through M	Slots A through D*
192 kHz	8	0	Slots A through H	Slots A through D*
	4	4	Slots H and J only	n/a
	0	8	Slots J through M	Slots A through D*

* In Stage 32, any and all input cards must be installed in lower-lettered slots than output cards. For example, a combination of analog inputs and one DNT-192 card could be installed in the following slots on Stage 32:

Example Stage 32 Slot Assignment

Card	Stage 32 Slots
SRI (analog input card)	Slot A
SRI (analog input card)	Slot B
DNT-192 (configured for output)	Slots C and D

When installed following this guideline (inputs first/above, outputs after/below) DNT-192 can be configured within VENUE software to provide either 16 input channels or 16 output channels. If configured for output, all cards below it must also be output cards.

Control and Other Capabilities

- Dante controller software is used to configure the cards, monitor health and status, and perform network routing. Dante Controller is available at <https://www.audinate.com/products/software/dante-controller>.
- The Dante device firmware is field upgradeable, using the Audinate Firmware Update Manager (www.audinate.com).
- Auto-Mute on power up and power down. Outputs can also be manually muted via VENUE software.
- Sample Rate Conversion can be enabled or disabled. SRC supports all Dante sample rates, including pull up and pull down.
- Support multicast and unicast operation, and all other functions and features provided by the Dante card.
- Auto-detection of card presence and I/O (based on slot installation) during Stage 64 initialization.

What's Included

DNT-192 card packages include the following items:

- I/O card (DNT-192 Dante Option Card)
- Health and Safety guide
- Avid Registration card
- Warranty claims card
- This guide (*DNT-192 Dante Option Card Installation*)

System Requirements and Compatibility

Avid can only assure compatibility and provide support for hardware and software it has tested and approved. DNT-192 Dante Option Cards are compatible with Stage 64 I/O racks connected to VENUE | S6L systems running VENUE software 5.2 and higher. DNT-192 cards are also compatible with Stage 32 I/O racks connected to S6L systems running VENUE software 6.0 and higher.

For complete VENUE system requirements and other compatibility information, visit www.avid.com/compatibility.

For information about Dante and Audinate, visit <https://www.audinate.com>.


Conventions Used in This Guide

All of our guides use the following conventions to indicate menu choices and key commands:

Convention	Action
Options > System	In the VENUE software, click Options to display the Options tab, then click the System tab.
File > Save	Choose Save from the File menu.
Control+N	Hold down the Control key and press the N key.
Control-click	Hold down the Control key and click the mouse button.
Right-click	Click with the right mouse button.


The names of Commands, Options, and Settings that appear on-screen are in a different font.

The following symbols are used to highlight important information:

 *User Tips are helpful hints for getting the most from your system.*

 *Important Notices include information that could affect your data or the performance of your system.*

 *Shortcuts show you useful keyboard or mouse shortcuts.*

 *Cross References point to related sections in this guide and other VENUE guides.*

Resources

The Avid website (www.avid.com) is your best online source for information to help you get the most out of your Avid system. The following are just a few of the services and features available.

Account Activation and Product Registration

Activate your product to access downloads in your Avid account (or quickly create an account if you don't have one). Register your purchase online, download software, updates, documentation, and other resources.

<https://www.avid.com/account>

Support and Downloads

Contact Avid Customer Success (technical support); download software updates and the latest online manuals; browse the Compatibility documents for system requirements; search the online Knowledge Base or join the worldwide Avid user community on the User Conference.

<https://www.avid.com/products/venue-s6l-system/learn-and-support>

Training and Education

Study on your own using courses available online, find out how you can learn in a classroom setting at an Avid-certified training center, or view a webinar. For example, check out the live sound webinars hosted by Robert Scovill:

<http://www.avid.com/live-sound-webinars>

Also check out our Live Sound blogs:

<http://www.avidblogs.com/livesound/>

Get started learning the ins and outs of S6L using the many [Avid Live Sound](#) videos on YouTube.

Products and Developers

Learn about Avid products; download demo software or learn about our Development Partners and their plug-ins, applications, and hardware.

<https://www.avid.com/Products/index.html>

DNT-192 Dante Option Card Hardware Overview

This section provides an overview of the connectors and indicators on the DNT-192 card.

DNT-192 Option Card Front Panel

The DNT-192 Option Card front panel provides the following indicators and connectors.



SYSTEM LED Indicates the status of the Dante system on this card.

System LED color and indication

Color	Indicates
Green	All OK, sync achieved
Amber	Booting up, awaiting sync
Not lit	No power / fault

SYNC LED Indicates the clock synchronization status of the Dante device.

SYNC LED color and indication

Color	Indicates
Green, solid	Dante network clock slave, sync achieved
Green, flashing	Dante network clock master, sync achieved
Amber	Error achieving sync
Not lit	No power / fault

ERROR LED Indicates status of the Dante Identify function.

Error LED color and indication

Color	Indicates
Green, flashing	Identify function activated
Not lit	Identify function not activated (normal state)

CONTROL Port For connection to Windows or Mac computer running Dante Controller, for advanced card configuration options, status/monitoring and audio network routing.

LED	Status	Indicates
Link/Act LED	Lit, solid	Valid link detected
	Lit, flashing	Network traffic present
	Not lit	No valid link detected
Gigabit	Lit, solid	Gigabit connection detected
	Not lit	No Gigabit connection detected

PRIMARY Dante Port Ethercon connector with integrated LEDs for connecting to other Dante network devices.

LED	Color	Indicates
Link/Act LED	Lit, solid	Valid link detected
	Lit, flashing	Network traffic present
	Not lit	No valid link detected
Gigabit	Lit, solid	Gigabit connection detected
	Not lit	No Gigabit connection detected

SECONDARY Dante Port Ethercon connector with integrated LEDs for connecting to other Dante network devices. At the time of this writing the SECONDARY port is not supported in VENUE configurations and should not be used.

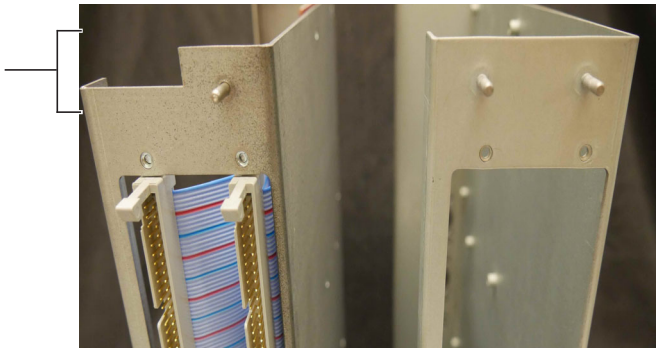
DNT-192 Option Card Back Panel

The back of the DNT-192 Dante Option Card features two ribbon connectors with latches. These receive Stage 64 / Stage 32 ribbon cables for each bank of DNT channels (whether input or output).

The back also has two threaded holes that align with the Stage 64 / Stage 32 thumbscrews, to secure the back of the card to the interior of the Stage 64.

Important Note for Stage 32

If you plan to install a DNT-192 card into a Stage 32, make sure the DNT-192 has the correct bracket. The Stage 32-compatible bracket can be identified by its notch on the back, as shown below.



Stage 32 and Stage 64-compatible DNT-192 bracket (shown at left) and original, Stage 64-only (shown at right)

Replacement brackets are available to retrofit original DNT-192 cards for installation into a Stage 32. To request a bracket, contact your dealer or Avid Customer Support.

Installing and Confirming DNT-192 Dante Option Cards

This section shows how to install a DNT-192 Dante Option Card in a Stage 64 or Stage 32 I/O rack and confirm installation.

Prepare the I/O Rack Unit

Do the following to prepare your Stage 64 or Stage 32 for IO card installation:

- 1 Shut down your VENUE system and power down your Stage 64 or Stage 32.
- 2 Disconnect all cables from your Stage 64 or Stage 32.
- 3 Remove the back panel:

Stage 64 4 Loosen the eight captive thumbscrews completely, using a #2 Phillips screwdriver if necessary, and set the panel aside.

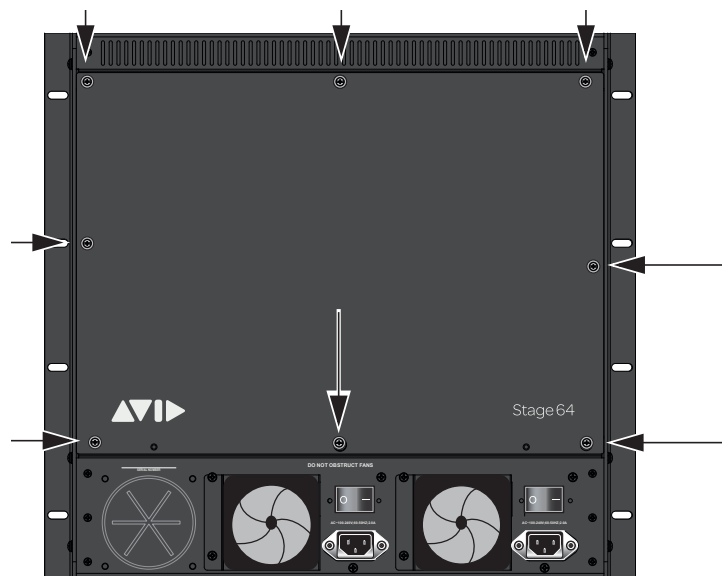


Figure 1. Stage 64 back panel captive thumbscrews

Stage 32 Loosen the four captive thumbscrews completely, using a #2 Phillips screwdriver if necessary, and set the panel aside.



Stage 32 back panel captive thumbscrews

- 5 Make sure your work area provides access to the front and back of the Stage IO unit.

6 For Stage 32 (only), do the following:

- Facing the front, set the unit onto its right end as shown below. This position makes it easier to slide cards in and out.



Stage 32 positioned for IO card installation

Installing DNT-192 Cards

After preparing the Stage IO unit you are ready to install cards.

To install a DNT-192 card:

1 On the front of the Stage IO unit, locate the slots where you want to install the input or output card.

Each slot is lettered, and corresponds to the card slot shown along the top of the VENUE Patchbay patching grid. DNT-192 Dante Network cards can be installed in any two adjacent slots and configured in software as 16-in or 16-out.

If configured for Dante output, all I/O cards below the DNT-192 card must be output cards.

Observe the following requirements when installing the DNT-192 in Stage 64 or Stage 32:

Stage 64 Slots are lettered left-to-right A–M.

- Input Cards must be installed in slots A–H. For 16 channels of Dante input, DNT-192 cards must be installed in pairs of slots A–H (A+B, B+C, C+D, D+E, E+F, F+G, G+H).
- Output Cards must be installed in slots J–M. For 16 channels of Dante output, DNT-192 cards must be installed in pairs of slots J–M (J+K, K+L, L+M)
- Input and Output (Stage 64 only): For 8 channels of Dante input and 8 channels of Dante output, a DNT-192 card must be installed in slots H+J.

Stage 32 Slots are lettered from top-to-bottom A–D (when the unit is positioned in its standard orientation, with the AVID logo across the bottom).

- Input cards are installed in lower lettered slots (physically above output cards).
- Output cards are installed in higher lettered slots (physically below input cards).

For example, if a DNT-192 card is installed in slots A and B and configured in VENUE software for 16 channels of Dante input, slots C and D can be filled with either input or output cards. If that same DNT-192 card is configured for 16 channels of Dante output, then slots C and D can only be filled with output cards. In Stage 32, DNT-192 cards cannot provide 8 in/8 out channels of Dante.

2 Do either of the following, as appropriate:

- If the desired slot has a blank slot cover, remove the slot cover by unscrewing the two Philips head screws that secure the cover to the Stage IO unit. In the following image, the slot covers in slot G and H of a Stage 64 are highlighted..

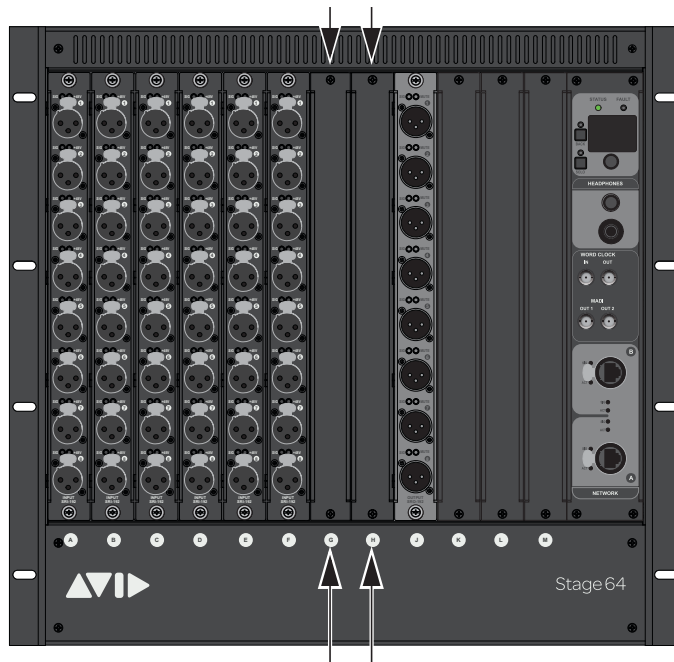


Figure 2. Blank Input slot covers on the front of a Stage 64

If the desired slots already have IO cards installed, do the following to remove them:

- From the front of the Stage IO unit, remove the thumbscrews securing each card to be removed.
- From the back of the Stage IO unit, disconnect the ribbon cable connected to each card being removed by pushing the pair of latches outward (away from the connector) and then disconnecting the ribbon cable (see Figure 8).
- From the back of the Stage IO unit, remove the captive thumbscrew(s) securing each card to the chassis (see Figure 7).
- From the front of the Stage IO unit, gently slide the card(s) out.

3 Remove the new I/O card from its packing material and hold the card by its edges.

4 Make sure the latches on the ports on the back of the card are pushed inward (closed).

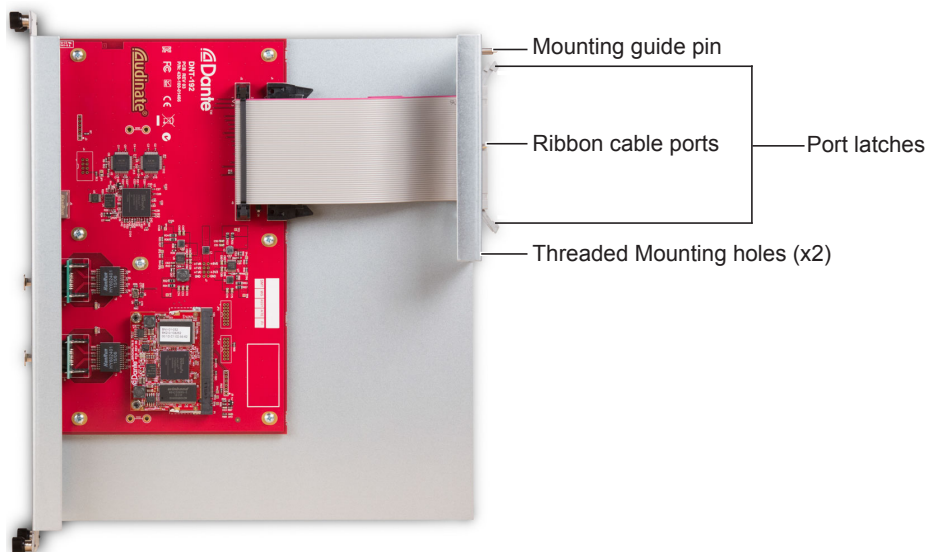


Figure 3. DNT-192 Dante Option Card showing brackets and connector

5 Gently slide the card into the slot (Figure 4):

- Make sure that the card is oriented correctly in the unit, with the mounting guide pin and port at the top.
- Make sure to insert the card straight so that it fits along the slot channel built into the unit.

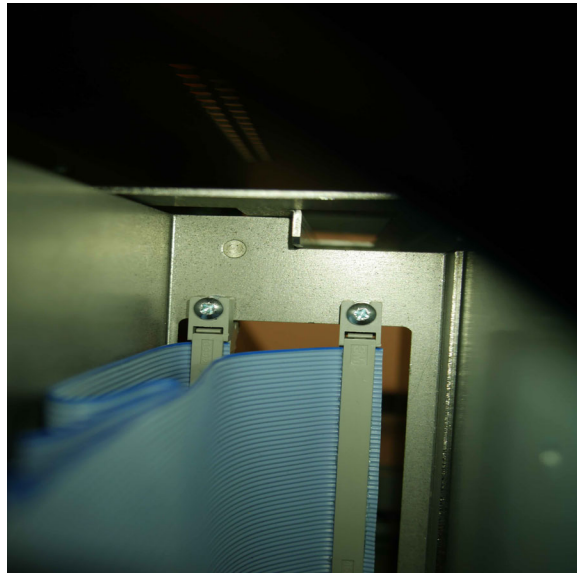


Figure 4. Sliding the card into a Stage 64 (shown at left) and a DNT-192 card aligned with the interior channel in a Stage 32 (shown at right)

- Inside the back of the unit, make sure the pin at the top of the card aligns with the corresponding chassis guide hole (Figure 5).

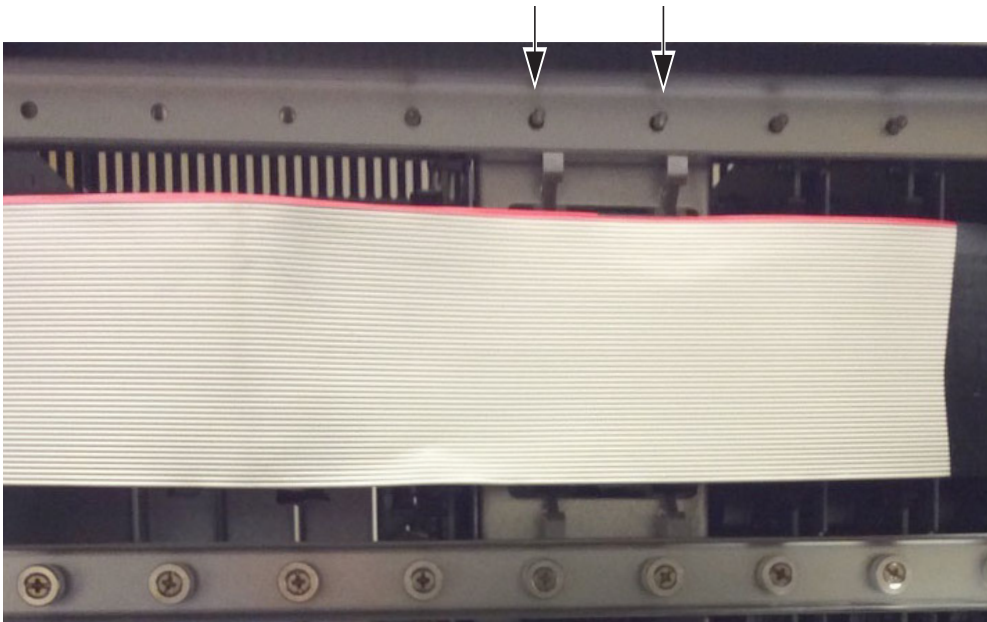


Figure 5. Guide pins and guide holes inside a Stage 64

- 6 Push the card into the slot so it is flush with the front panel, and tighten the four captive thumbscrews on the front of the card to secure it to the Stage unit.

💡 *If the card does not slide all the way into the slot, make sure the latches on the ports of the card are pushed fully inward.*



Figure 6. Tightening one of the four front captive thumbscrews (Stage 64 shown)

- 7 Inside the back of the Stage unit, tighten the two captive thumbscrews to secure the card to the chassis. Make sure the thumbscrews align with the threaded mounting holes on the back of the DNT-192 card.

💡 *You might need to disconnect some or all ribbon cables to access the thumbscrews.*

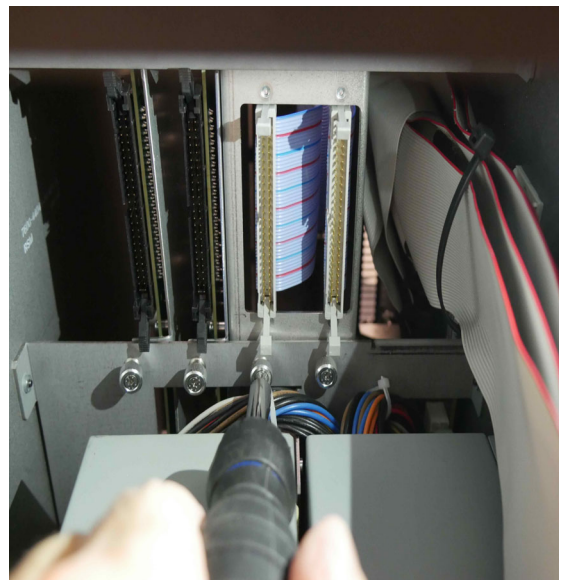
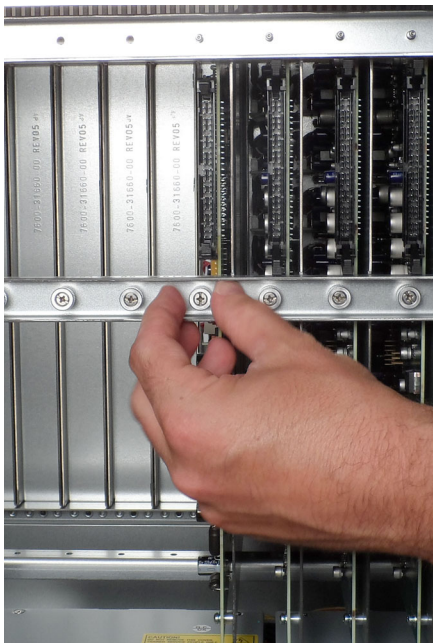


Figure 7. Securing a card to a Stage 64 chassis (shown at left) and a Stage 32 (shown at right)

- 8 Inside the back of the unit, push the latches on the newly installed card outward (open).

9 Connect (or reconnect) ribbon cable(s).

- Locate the corresponding ribbon cable (all ribbon cables are cut to length), and push the cable connector into the port on the card so that the latches on the port move inward and lock the connector to the port on the card. Double-check to make sure the card is connected securely.
- If you had to disconnect other ribbon cables, re-connect them starting with the first (shortest) ribbon cable.

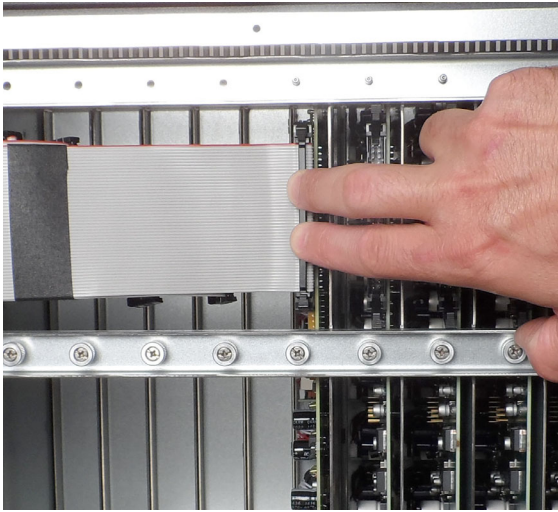


Figure 8. Connecting ribbon cable in a Stage 64 (shown at left) and Stage 32 (shown at right) Your installation may appear differently depending on the slots used for the DNT-192 card

10 Replace the back panel on the Stage 64 or Stage 32:

Stage 64 Make sure to properly orient the panel, align the back panel guide pins to the guide holes, and secure it to the Stage 64 by tightening the captive thumbscrews.

Stage 32 Align the back panel and secure it to the Stage 32 by tightening the captive thumbscrews.

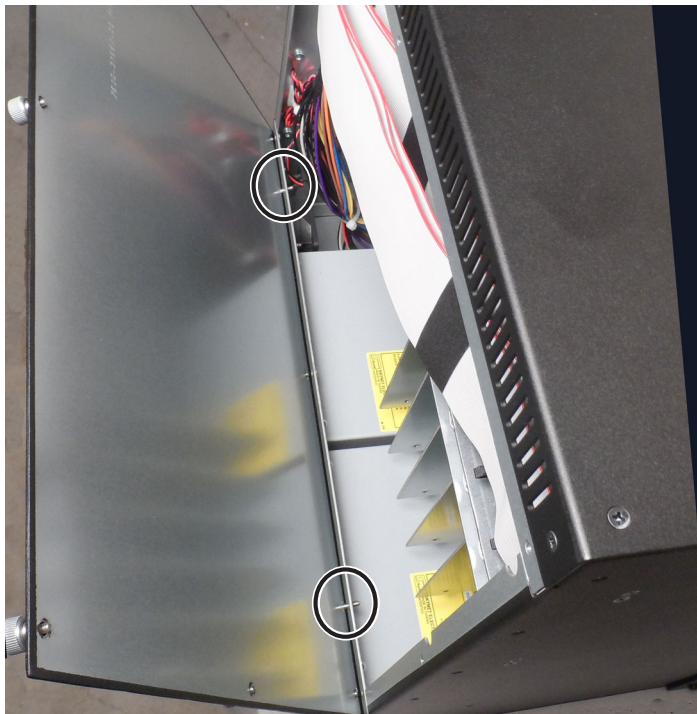


Figure 9. Back panel guide pins (Stage 64 only)

11 Proceed to “Confirming Installation” on page 13.

Confirming Installation

After you have installed an I/O card, you should confirm that you have installed it properly.

To complete and confirm installation:

- 1 Connect the power cables to the Stage unit and to a power source.
- 2 Connect the Stage unit to the rest of your S6L system.
- 3 Power on your Stage unit and the rest of the components of your S6L system.
- 4 In the VENUE software screen, go to the Options > Devices page.
- 5 In the Available Devices or Connected Devices columns, tap the icon of the Stage 64 or Stage 32 in which you installed the DNT-192 card so it is highlighted in blue.
- 6 Under Information, tap Settings. The card slots of the selected Stage unit are listed, showing the cards that are currently installed. Slots without cards are indicated as **empty**.

The newly installed Stage I/O card should appear in the slot in which you installed the card.



For instructions on using the Stage 64 and Stage 32, including how to designate DNT-192 cards in a Stage 32 for input or output, see the VENUE | S6L System Guide.pdf, included with the S6L system software in your Avid account.

Compliance Information

Environmental Compliance

Disposal of Waste Equipment by Users in the European Union



This symbol on the product or its packaging indicates that this product must not be disposed of with other waste. Instead, it is your responsibility to dispose of your waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city recycling office or the dealer from whom you purchased the product.

Proposition 65 Warning

⚠ *This product contains chemicals, including lead, known to the State of California to cause cancer and birth defects or other reproductive harm. Wash hands after handling.*

Perchlorate Notice

This product may contain a lithium coin battery. The State of California requires the following disclosure statement: "Perchlorate Material – special handling may apply, See www.dtsc.ca.gov/hazardouswaste/perchlorate."

Recycling Notice



EMC (Electromagnetic Compliance)

This model complies with the following standards regulating interference and EMC:

- FCC Part 15 Class B
- EN 55022 Class B
- EN 55024 Class B
- AS/NZS CISPR 22 Class B
- CISPR 22 Class B

FCC Compliance for United States

Radio and Television Interference

Communication Statement

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. 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 and correct the interference by one or more of the following measures:

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

Any modifications to the unit, unless expressly approved by Avid, could void the user's authority to operate the equipment.

Australian Compliance



Canadian Compliance

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

CE Compliance

(EMC, Safety, and ROHS)



Avid is authorized to apply the CE (Conformite Européenne) mark on this compliant equipment thereby declaring conformity to EMC Directive 2004/108/EC, Low Voltage Directive 2006/95/EC and RoHS Directive 2011/65/EC..

Korean EMC Compliance

이 기기는 가정용 (B 급) 전자파적합기기로서 주로 가정에서 사용하는 것을 목적으로 하며, 모든 지역에서 사용할 수 있습니다.



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