

## AXP 50 C AT • Setup Guide



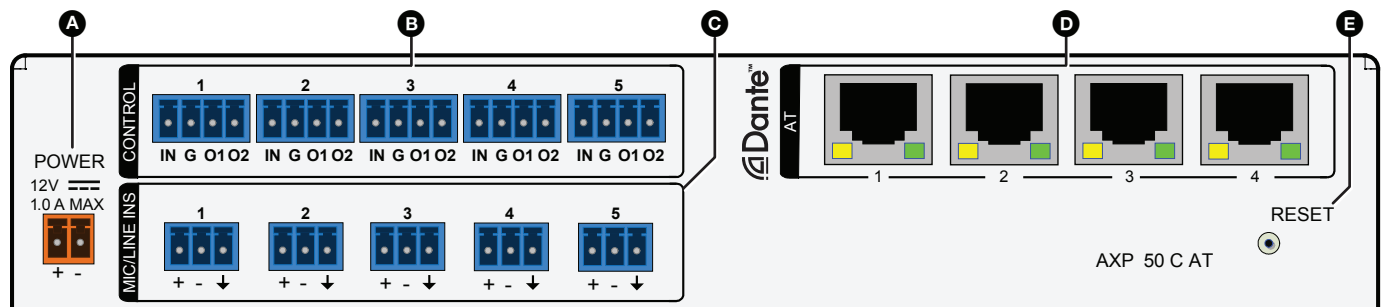
**IMPORTANT:**  
Refer to [www.extron.com](http://www.extron.com) for the complete user guide and installation instructions before connecting the product to the power source.

This guide provides basic instructions for an experienced technician to install the AXP 50C AT Audio Expansion Processor. For additional information and specifications, see the AXP 50 C AT product page at [www.extron.com](http://www.extron.com).

### Disconnect Power and Mount the AXP 50 C AT

Disconnect power to the AXP 50 C AT and turn off all devices that will be connected to it. The AXP 50 C AT is housed in a half rack width, 9.5 inch deep, 1U high metal enclosure that can sit on a table with the provided rubber feet, or mount underneath a conference table, inside a credenza, or anywhere microphones or other sources are located. Select a suitable mounting location, then choose an appropriate mounting option.

Make all external device connections before applying power.

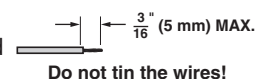


**Figure 1.** AXP 50 C AT Rear Panel

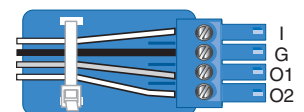
- A** 12 VDC power input.
- B** Five 3.5 mm, 4-pole captive screw connectors for digital I/O trigger and tally back.
- C** Five 3.5 mm, 3-pole captive screw connectors for analog mic or line audio input.
- D** Four RJ-45 Ethernet connectors. The ports are used for both digital audio and control.
- E** Reset button.

### Connections

- B Digital I/O connectors** — Five connectors associated with the mic/line inputs provide digital input and output ports designed to connect to microphones with logic circuits. Each has an input (IN) and two output (O1 and O2) ports. The input port can enable mic mute from a remote source. The two output ports can provide tally back to the mic LEDs to indicate mic status.
- C Mic/Line 1-5 input connectors** — Connect up to five balanced or unbalanced microphone or mono line level devices using the 3-pole, 3.5 mm captive screw connectors. Wire as shown below.



#### Audio Input Wiring



**NOTE:** An input can be analog or digital. Each channel can select either the associated rear panel analog input or the AT digital channel input assigned by Dante Controller (see [Dante Operation](#) on page 9).

- D AT port connectors** — A 4-port Gigabit switch with RJ-45 connectors for digital audio transport and communications. Connect one or more ports to a LAN using standard CAT cable. Connect one or more AXP 50 C ATs to a DMP 128 AT to form a larger matrix system (see [Creating a Physical Dante Network](#) on page 8).
- E Reset button** — The reset button can return the AXP 50 C AT to a default state, see ("AXP 50 C AT Hardware Reset Mode" in the *AXP 50 C AT User Guide*).

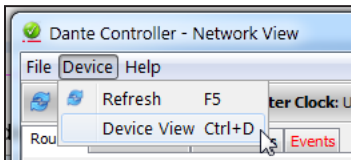
# AXP 50 C AT • Setup Guide (Continued)

## Control Connection

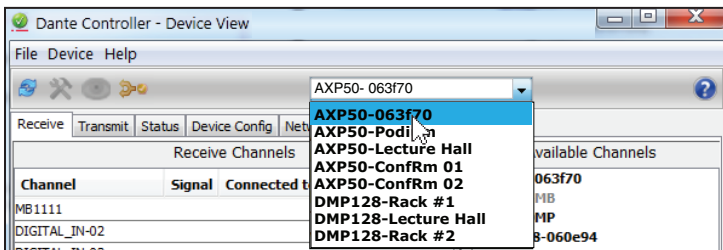
**LAN** — Using a standard Ethernet cable, connect to a network via one of the four AT ports (see [figure 1 D](#) on page 1). The control device must be connected to the same network. One of the four Ethernet ports can be dedicated as a control connection. Communication between the AXP 50 C AT and a controlling device or software such as DataViewer is via a TCP socket using port 4333. Dante controller displays the current IP address.

To find the IP address of a Dante device, the name of the device must be known (see [Rename an AXP 50 C AT](#): on page 5).

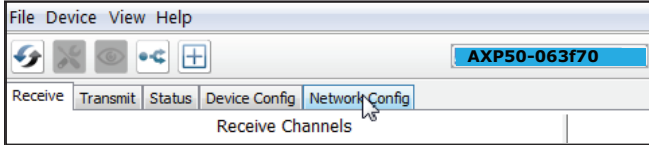
1. Open Dante Controller for Windows (see [Dante Network Setup](#) on page 5).
2. From the toolbar, select **Device>Device View**.



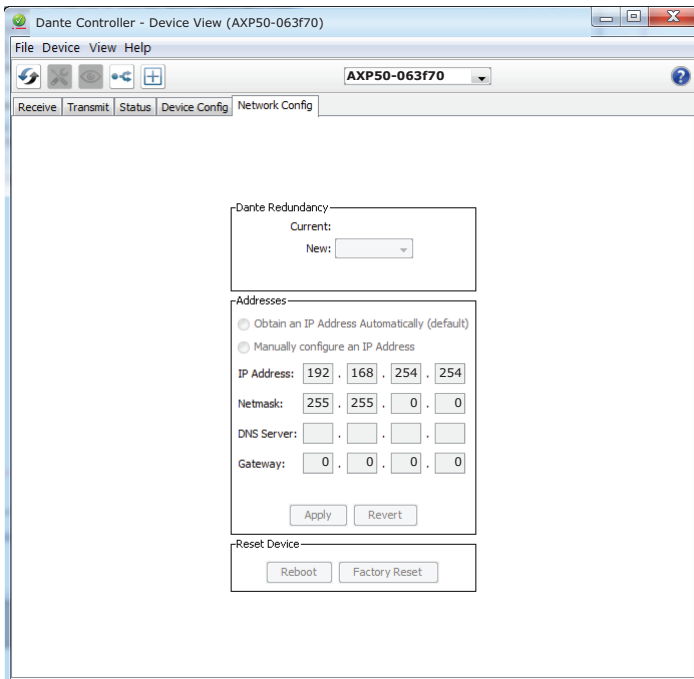
3. The Dante Controller - Device View dialog opens. Select your device from the (**Select a Dante Device...**) drop-down list.



4. Click the **Network Config** tab to open the network configuration page.



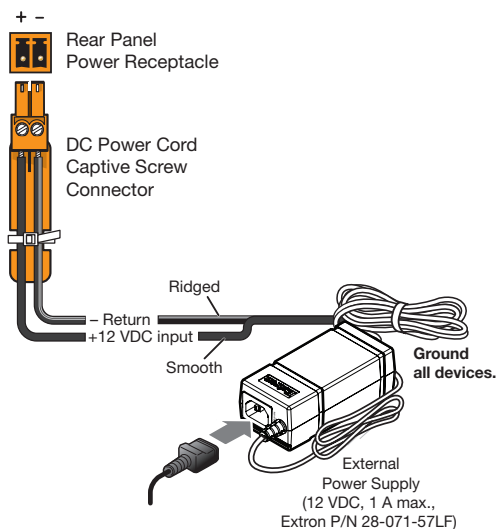
5. The IP address, subnet mask, and gateway are shown.



Write down the address for use in the control device or DataViewer and use port 4443 to connect to the AXP 50 C AT.

## Power Supply Connection

- A 12 VDC power input** – Connect the provided 12 VDC power supply to the rear panel captive screw connector (see figure 2) and plug in the power cord. Verify the front panel power LED lights (see figure 3, below).



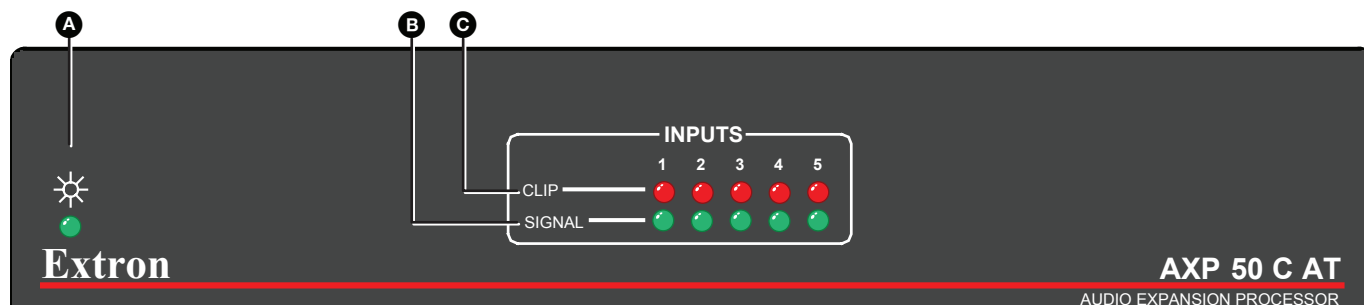
**Figure 2. External Power Supply Connection**

With all connections made, power up the input devices, then apply power to the AXP 50 C AT.

### ATTENTION:

- Always use a power supply provided by or specified by Extron. Use of an unauthorized power supply voids all regulatory compliance certification and may cause damage to the supply and the end product.
- Utilisez toujours une source d'alimentation fournie par Extron. L'utilisation d'une source d'alimentation non autorisée annule toute conformité réglementaire et peut endommager la source d'alimentation ainsi que l'unité.
- Unless otherwise stated, the AC/DC adapters are not suitable for use in air handling spaces or in wall cavities. The power supply is to be located within the same vicinity as the Extron AV processing equipment in an ordinary location, Pollution Degree 2, secured to the equipment rack within the dedicated closet, podium, or desk.
- Sauf mention contraire, les adaptateurs AC/DC ne sont pas appropriés pour une utilisation dans les espaces d'aération ou dans les cavités murales. La source d'alimentation doit être située à proximité de l'équipement de traitement audiovisuel dans un endroit ordinaire, avec un degré 2 de pollution, fixé à un équipement de rack à l'intérieur d'un placard, d'une estrade, ou d'un bureau.
- The installation must always be in accordance with the applicable provisions of National Electrical Code ANSI/NFPA 70, article 725 and the Canadian Electrical Code part 1, section 16. The power supply shall not be permanently fixed to building structure or similar structure.
- Cette installation doit toujours être en accord avec les mesures qui s'applique au National Electrical Code ANSI/NFPA 70, article 725, et au Canadian Electrical Code, partie 1, section 16. La source d'alimentation ne devra pas être fixée de façon permanente à une structure de bâtiment ou à une structure similaire.

## Front Panel Features



**Figure 3. AXP 50 C AT Front Panel**

- A Power LED** – Lights solid green when the AXP 50 C AT is powered. Blinks green during bootup or a firmware update.
- B Input Signal indicators** — Light when there is an active source on the corresponding input.
- C Clip indicators** — Light when the corresponding input signal exceeds -3 dBFS. The clip indicator remains on for 200 ms after the input signal drops below that level.

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## Dante Controller for Windows and DSP Configurator Software Installation

There are no hardware controls for the AXP 50 C AT. Dante Controller from Audinate is required to select and route digital inputs and outputs to connected Dante-compatible devices. DSP Configurator is used for configuration.

Install DSP Configurator and Dante Controller on a PC running Microsoft® Windows® 7® or newer. For full details about computer requirements, see the product page on the Extron website. Dante Controller must be installed to rename the connected AXP 50 C AT to assist identification on the network.

### Dante Controller for Windows Download

Both software applications are available from the Extron Electronics web page at [www.extron.com](http://www.extron.com).

1. From the Extron Electronics web page at [www.extron.com](http://www.extron.com), enter AXP 50 C AT in the search field and press <Enter>. The AXP 50 C AT product page opens.

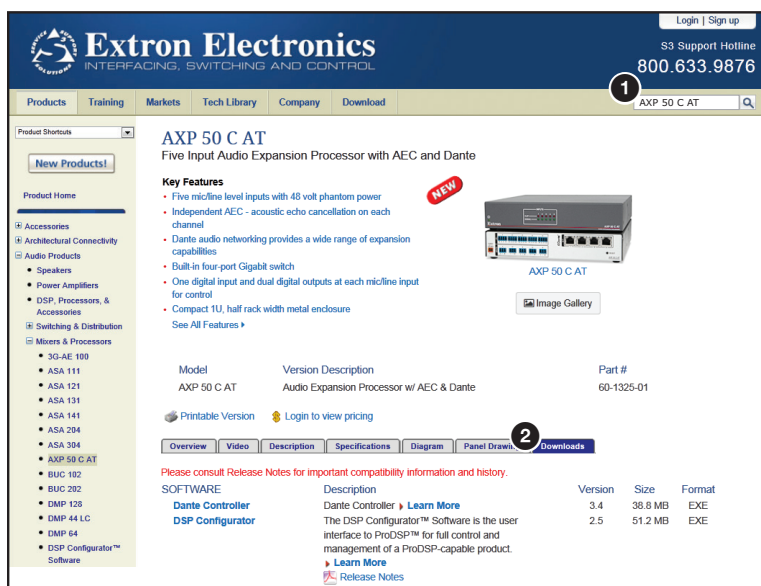
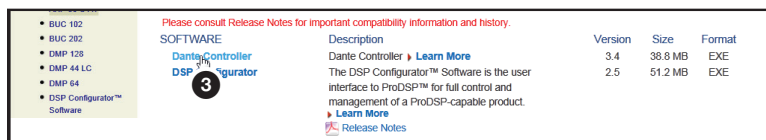


Figure 4. AXP 50 C AT Product Page

2. Click **Downloads** (2). The Downloads panel opens. Dante Controller and DSP Configurator are listed.
3. Click **Dante Controller** (3).



The Download Center page opens.

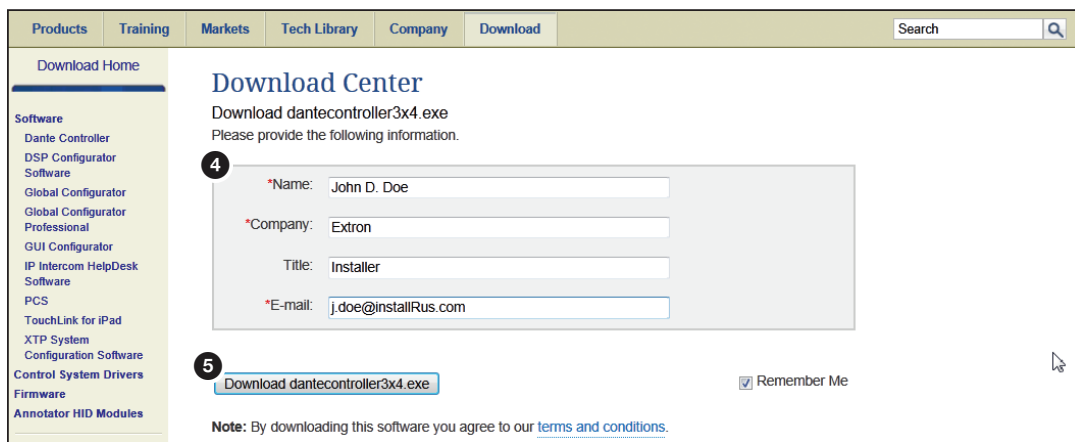
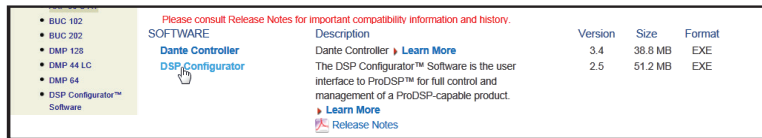


Figure 5. Download Center - Dante Download

4. Fill in the required fields.

5. Click **Download**.
6. Save the file to your desktop (or other known location).
7. If the Download Center page has closed, repeat step 1 and step 2. The **Download Center** page opens.
8. Click **DSP Configurator**.



9. Fill in the required fields, then click **Download**.
10. Save the file to your desktop (or other known location).
11. Locate and double-click the saved Dante controller file to begin installation.
12. Follow the onscreen instructions. When the installation completes, close the installation dialog.
13. Locate and double-click the DSP Configurator file to begin installation.
14. Follow the onscreen instructions to install the program.

**NOTE:** On the first installation of DSP Configurator, a USB driver automatically loads. Follow the on-screen instructions. Once the USB driver loads, installation continues.

By default, the program installs in the folder C:\Program Files\Extron\DSP Configurator .

## Dante Network Setup

Dante Controller auto-discovers all Dante devices on the network and advertises itself to allow other Dante-enabled devices to communicate with it. The default device name is the model number followed by the last six digits of the MAC address of the device. Multiple devices on the same network can present difficulty identifying inputs and outputs. To avoid confusion, each device must be renamed to a unique identifier.

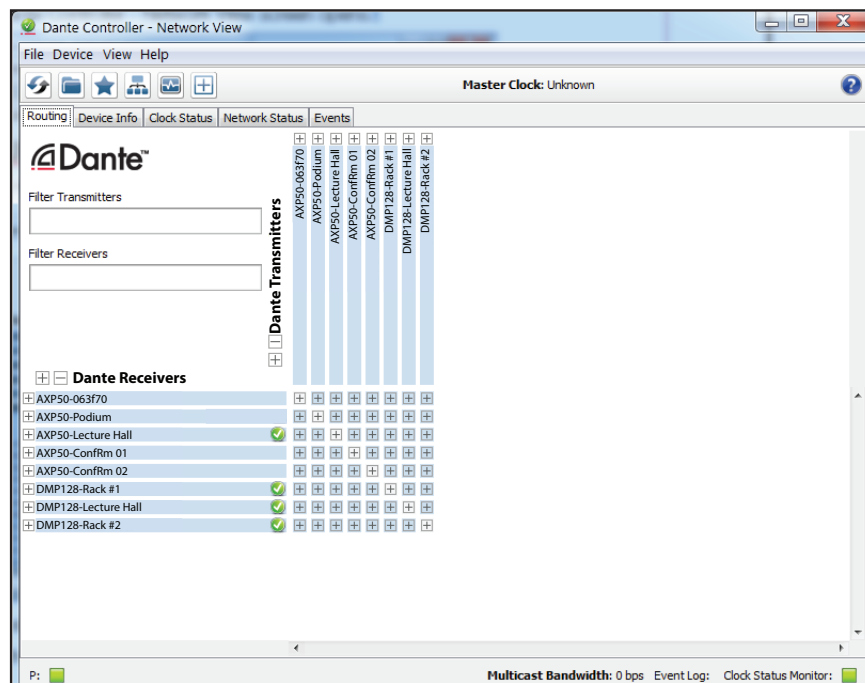
**NOTE:** To simplify renaming, connect only one Dante device to the network at a time. As each device is renamed, it can remain connected.

### Rename an AXP 50 C AT:

Ensure the control computer and a single AXP 50 C AT are connected to the same network (see [Control Connection](#) on page 2).

1. From the start menu select **All Programs > Audinate > Dante Controller > Dante Controller**.

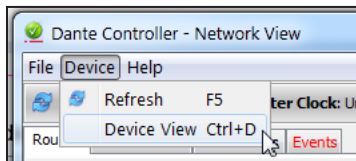
The Dante Controller - Network View screen opens.



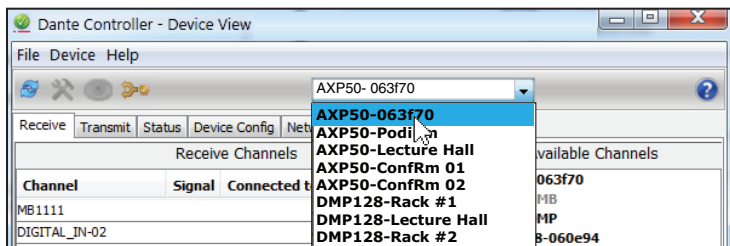
All Dante devices on the network are discovered and listed.

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- From the toolbar, select **Device>Device View**.

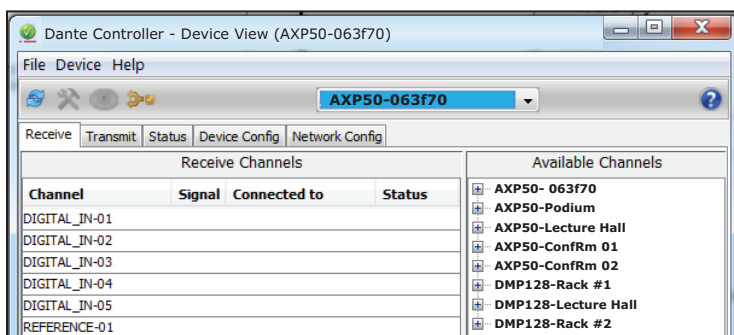


- The Dante Controller - Device View dialog opens. Select your device from the (**Select a Dante Device...**) drop-down list.

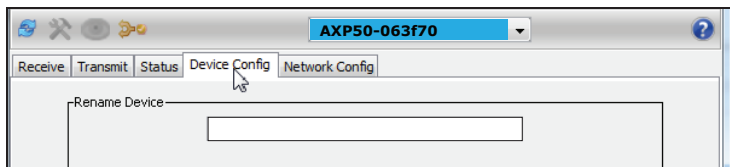


**NOTE:** If there are multiple AXP 50s connected to the network that have not been renamed, to identify an individual device you must obtain the MAC address of the desired device from the label on the rear panel.

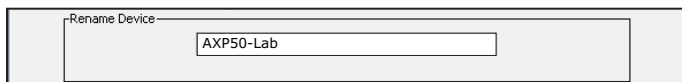
The Device View dialog populates with the selected AXP 50 C AT information.



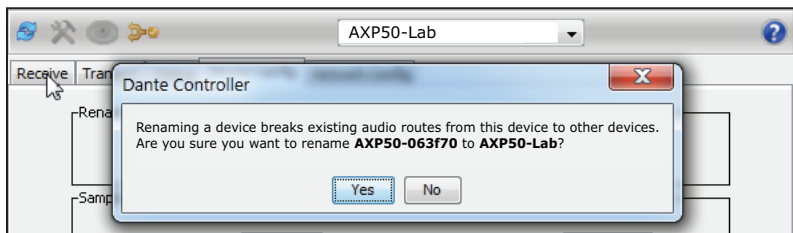
- Click the **Device Config** tab to open the device configuration page.



- In the Rename Device panel, type the new name of the device in the text field. No spaces are allowed in the name.



- Click <Enter>. A warning opens.



- Click **Yes** to enter the new name, then close the Device Configuration dialog.

The new name is written to the AXP 50 C AT. Repeat as necessary for all AXP 50 C AT devices.

**NOTE:** After the AXP 50 C AT is renamed, it can remain connected to the network. However, subsequent devices must be connected one at a time and renamed before the next device is connected.

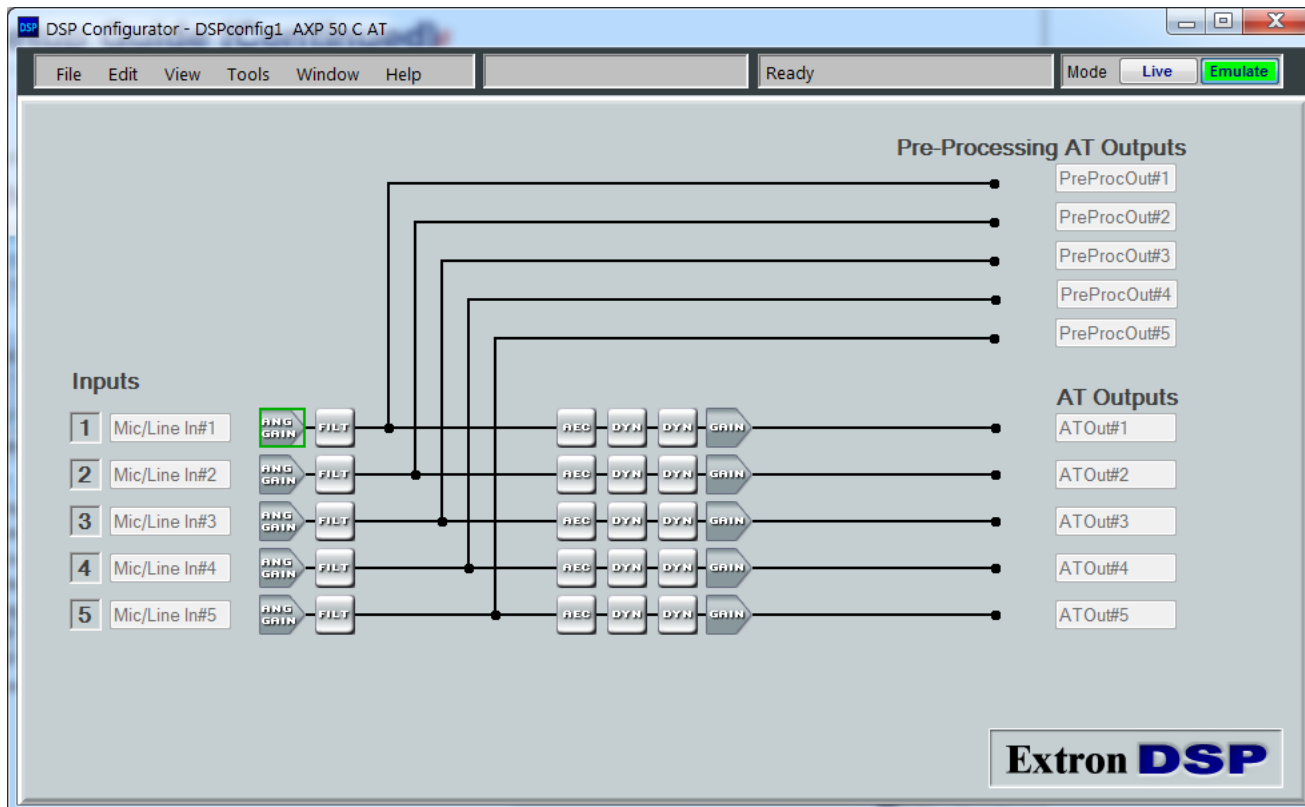


## To Configure the AXP 50 C AT:

After the name of the device is changed, DSP Configurator can configure the AXP 50 C AT.

1. Ensure the control computer and AXP 50 C AT are connected to the same network (see [Control Connection](#) on page 2) and the AXP 50 C AT is renamed for identification (see [Rename an AXP 50 C AT](#) on page 5).
2. Start the DSP Configurator software. From the drop-down list on the splash page, select **AXP 50 C AT** and press **OK**.

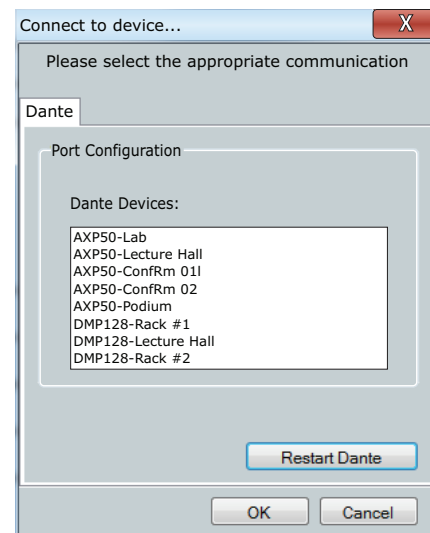
The main screen opens.



3. The program starts in Emulate mode.
  - a. To create a configuration offline and upload (push) it to the AXP 50 C AT at a later time, remain in **Emulate** mode.
  - b. To push a configuration to the device, pull a configuration from the device, or to make immediate changes to the configuration or operation, select **Live** mode.

**NOTE:** Changing from Emulate to Live mode opens the **Connect to device...** dialog. Select the connection and follow the on-screen prompts.

The main screen provides access to all the features of the AXP 50 C AT. Full details about using the software are found in the *AXP 50 C AT User Guide* on the Extron website or in the DSP Configurator help files.



## Building Blocks

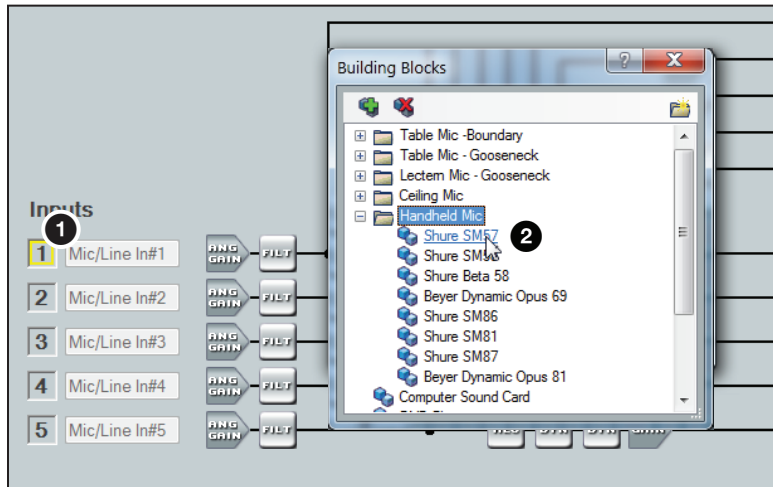
The discrete signal paths can be individually loaded with pre-configured, modular templates called building blocks. These blocks are designed for specific microphones, source devices, analog and digital inputs, and can streamline initial configuration. The building blocks contain configuration parameters tailored to a selected input device.

Loading a building block configures each block in the signal path with pre-determined parameters to match the selected device characteristics. Although tailored for the specific device, the processing blocks can still be customized, if necessary.

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## To load a building block:

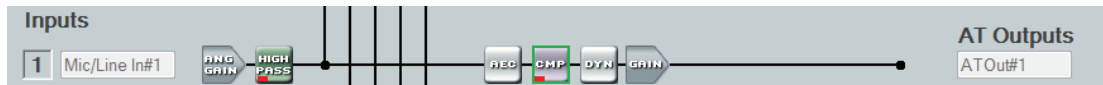
1. Click the input number.



The Building Blocks dialog opens.

2. Choose a building block that best describes the connected input device. As the pointer moves over the selection, the text changes color and is underlined. Click the selection to load the block.

The building block loads pre-configured processor and gain block parameters. Processor blocks are initially bypassed.



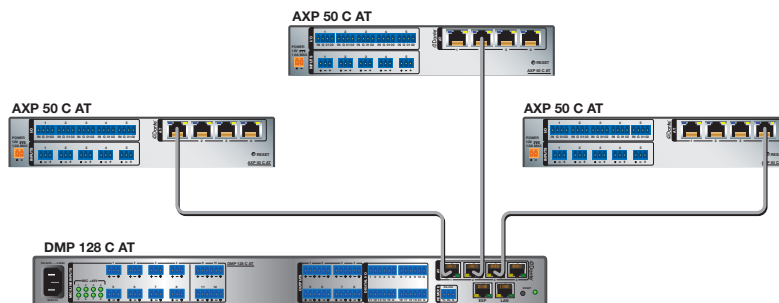
3. If necessary, further customize the processor blocks according to the requirements of the system (see the *AXP 50 C AT User Guide* on the Extron website).

## Creating a Physical Dante Network

A physical network is required to share Dante audio channels between AXP 50 C AT devices and a DMP 128 AT. Both the AXP 50 C AT and DMP 128 AT contain a 4-port Gigabit switch with four RJ-45 connectors located on the back panel that accepts standard network cables.

A DMP 128-based Dante network can be configured in a daisy-chain or star network topology using the four port switch and the Dante Controller in switched mode.

Star network topology places one DMP 128 AT as the central unit, which connects directly to up to three more units. Alternatively, a larger network switch in place of the central DMP 128 AT, allows more than four AXP 50 C ATs to connect in the star configuration (see figure 7).



**Figure 7.** Star Network Topology

A daisy chain configuration can also be used. Each unit is connected to both the previous unit and the next unit in the chain.



**Figure 8.** Daisy Chain Topology



Hybrid versions combining the star and daisy chain topologies can be built, but a ring topology, or any topology that creates a duplicate connection causes a connection failure in Dante Controller.

**NOTE:** Connections between ports in either a star or daisy chain network do not need to be sequential (1 to 2, 2 to 3, 3 to 4), nor do they need to be made between the same port numbers (1 to 1, 2 to 2, 3 to 3, 4 to 4).

## Dante Operation

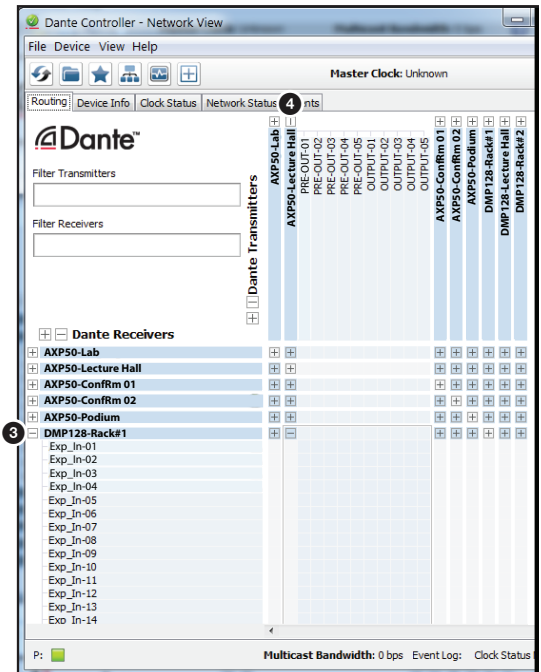
### Select Devices

After the inputs of the AXP 50 C AT are configured, they must be routed to the other Dante devices on the audio network. Dante Controller is required.

1. Ensure the control computer and AXP 50 C AT are connected to the same network (see [Control Connection](#) on page 2).
2. From the start menu select All Programs > Audinate > Dante Controller > Dante Controller.  
The Dante Controller - Network View screen opens.

Dante Controller auto-discovers Dante devices on the network and advertises itself to allow other Dante-enabled devices to communicate with it. Device inputs are Dante receivers (listed vertically on the left) and device outputs are Dante transmitters (listed horizontally across the top). Transmitters (outputs) connect to receivers (inputs) using the connection matrix.

3. Click the + box next to the DMP 128 in the Dante Receivers column to show all device inputs.
4. Click the + box next to the AXP 50 C AT in the Dante Transmitter row to show all device outputs.



### Route Inputs and Outputs:

1. Click the + box next to the input channels (receivers) on another Dante device (DMP128-Rack#1 in the example below).  
All device outputs (transmitters) display horizontally.

2. Click the junction of the desired connection  
(Example: AXP 50-Lecture Hall OUTPUT-01 to DMP128-Rack#1-DIGITAL\_IN-01).

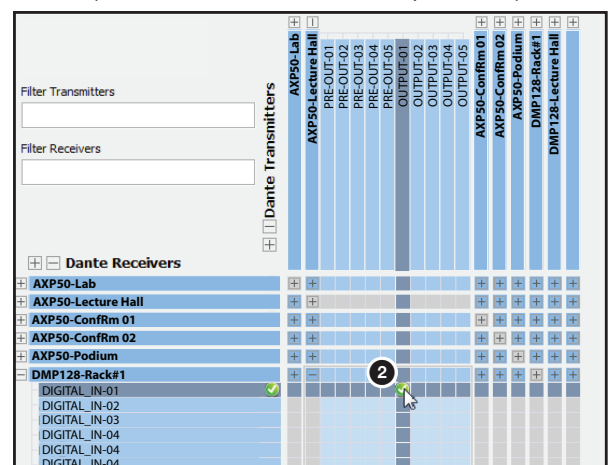
A checkmark at the junction indicates the connection is made. A checkmark is also placed next to the receiver channel.

**NOTE:** An input (receiver) can only connect to one output (transmitter). An output (transmitter) can connect to multiple inputs (receivers).

3. Click the junction again to disconnect the input from the output.

Additional AXP 50 C AT outputs (Dante transmitters) connect to or disconnect from other Dante device inputs (Dante receivers) using the same method.

See the Dante Controller section of the *AXP 50 C AT User Guide* for information on Dante Controller operation.



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<b>Extron USA - West</b> +1.714.491.1500 +1.714.491.1517 FAX	<b>Extron USA - East</b> +1.919.850.1000 +1.919.850.1001 FAX	+31.33.453.4040 +31.33.453.4050 FAX					+91.80.3055.3777 +91.80.3055.3737 FAX