

Dante AV 4K Series

AJA Audinate Dante Controller Guide

Featuring

AJA Dante AV 4K-T and 4K-R Converters



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AJA Audinate Dante Controller Guide

Dante Controller Software (MacOS or Windows)

Dante Controller must be installed on at least one PC or Mac on the Dante network in order to control and route Dante video. Dante Controller software can be downloaded from the Audinate website: www.audinate.com.

Hardware Component Requirements

- Processor 1GHz or better
- Memory 512Mbyte of RAM
- Network Standard wired Ethernet network interface (100Mbps or Gigabit)

Windows

- Hardware Component Requirements (shown above)
- Operating System Windows 10 or 11
- Hardware 64-bit architecture

MacOS

- Hardware Component Requirements (shown above)
- Operating System macOS 10.15, 11, 12 or 13
- Hardware Intel or Apple M1

Installing Dante Controller

Downloading Dante Controller

Dante Controller is available for download from Audinate's website. To download a copy of Dante Controller:

1. Go to the Audinate website: www.audinate.com.
2. Navigate to Products > Dante Controller.
3. Under 'Download', choose your operating system.
4. Click the red download button. This will take you to the appropriate Dante Controller release page for your operating system (Windows or MacOS).
5. You may be asked to create or log into an Audinate user account.
6. Click the link under 'File downloads' to download the Dante Controller installer.

Installing Dante Controller on Windows

Once you have downloaded the self-installing Dante Controller file, navigate to the directory where you have downloaded it (e.g. Desktop). To install:

1. Ensure you are logged on to your PC as an administrator.
2. Navigate to and double-click the Dante Controller installer file.
3. Read the license agreement. If you agree to the terms, select the 'I agree' check box and click Install. If you do not agree to the terms, click Close.
4. Confirm / acknowledge any Windows security prompts that are displayed.
5. Dante Controller will then be installed. Dante Controller will be added to the start menu, under 'Audinate'.

Installing Dante Controller on MacOS

To install Dante Controller on macOS:

1. Double-click the Dante Controller .dmg file. A drive icon will appear on your Desktop Finder window.
2. Double click on this to open.
3. Double click the Dante Controller .pkg. This will run the installer.
4. Read the license text, and if you accept the terms of the agreement, click Agree. If you do not accept these terms, click Disagree to terminate the installation.

Uninstalling Dante Controller

You should not need to uninstall Dante Controller before installing a new version. However, if you wish to uninstall Dante Controller, you may do so.

Uninstalling in Windows

Navigate to Control Panel > Programs and Features, select Dante Controller and click Uninstall.

NOTE: Two other Dante features, 'Dante Control and Monitoring' and 'Dante Discovery', may still be present in the programs list after uninstalling Dante Controller. Do not uninstall these features if they are present - they are required by other Dante software applications (for example, Dante Virtual Soundcard, Dante Updater, and third-party Dante control applications). They will be removed automatically if they are no longer required.

Uninstalling in MacOS

Use the Uninstall tool available in the .dmg file.

Starting up Dante Controller

Launching the Dante Controller Application

Windows

By default Dante Controller will be installed in

`C:\Program Files (x86)\Audinate\Dante Controller\`

It can be started in several ways:

- Using the Start menu: Start > Audinate > Dante Controller > Dante Controller
- Run by going to Start > Run and entering

`C:\Program Files\Audinate\Dante Controller\DanteController.exe` in the dialog box

- Navigate to the directory where it is installed, and double-click the Dante Controller icon.

MacOS

The Dante Controller application will be installed in the Applications folder.

To start:

- Navigate to Applications folder, and double-click the Dante Controller icon.

Or:

- Drag the icon to the Dock and click on it.

Configuring Dante Controller

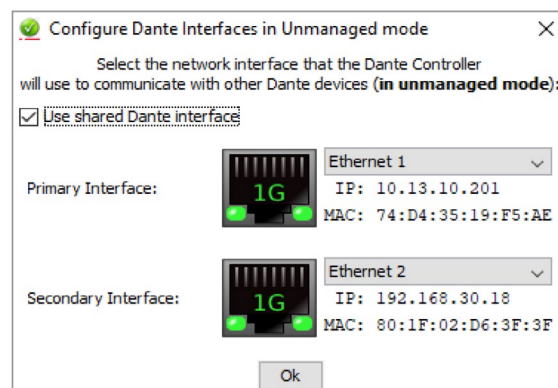
Network Interface Selection

Dante Controller communicates with other Dante devices on the primary network. Dante Controller supports connection to primary Dante networks via Ethernet and Wi-Fi network interfaces.

The first time Dante Controller is run, you may be presented with the Configure Dante Interfaces dialog (shown below). Use this dialog to select the primary Dante interface. Once interface has been selected, it is remembered for future use, and this dialog will not be shown when Dante Controller is run subsequently.






The Secondary Interface should set to None and no cable should be connected to the Ethernet 2 port on the Dante AV 4K-T or 4K-R device.

Figure 1. Network Interface Selection



The icons displayed indicate the selected interface type and status:

Figure 2. Network Interface Icons

	Operational 1Gbps Ethernet interface
	Operational 100Mbps Ethernet interface
	Disabled / disconnected Ethernet interface, or no interface selected
	Operational Wi-Fi interface
	Wi-Fi interface selected with no Wi-Fi network connection

To display this dialog at any other time, click the button in the main toolbar.

Use Shared Dante Interface

With this option selected, the selected primary network interface will be automatically used by other Audinate software applications installed on that computer (including Dante Via, Dante Virtual Soundcard and Dante Updater) when they are started. This helps to ensure that all Audinate applications are connected to the same Dante network. Only wired Ethernet network interfaces are supported in this mode.

With 'Use shared Dante interface' deselected, Dante Controller is able to connect to any available Ethernet or Wi-Fi network interface, and the selection is fully independent of any other Audinate software applications.

Wi-Fi Network Connections

To connect to a Dante network via Wi-Fi, a Wi-Fi access point must be present and enabled on the Dante network - for example, a Wi-Fi router physically connected to a network switch or Dante device in the Dante network.

NOTE: Dante audio and video transmission over Wi-Fi is not supported.

To connect to a Dante network using Wi-Fi:

1. Ensure your Wi-Fi interface is successfully connected to a Wi-Fi network.
2. Ensure 'Use shared Dante interface' is deselected.
3. Select your Wi-Fi network interface in the Configure Dante Interfaces dialog.

Network Interface Configuration Guidelines

*NOTE: Please see the **Network Interface Configuration Guidelines** section in [Audinate's Dante Controller User Guide](#), for full details on this topic, which are beyond the scope of this manual. That section includes several helpful network configuration diagrams.*

NOTE: Also see the "Troubleshooting" section in [Dante AV 4K Series Installation and Operation Guide](#) at www.aja.com.

Renaming a Dante Device

When starting to use Dante Controller a good practice is first to rename the Dante AV 4K-T and 4K-R device(s). The factory device names include six digits at the end (taken from the factory-assigned MAC address). If there are many devices on your network, long device names will cause more window pane scrolling.

A Dante AV 4K-T or 4K-R device name can be chosen to fit the device's location and use. A name also can be more compact, which is helpful when there are many devices on the Dante network. Renaming your device(s) before creating connections (this is a good idea, since doing later takes a little more care).

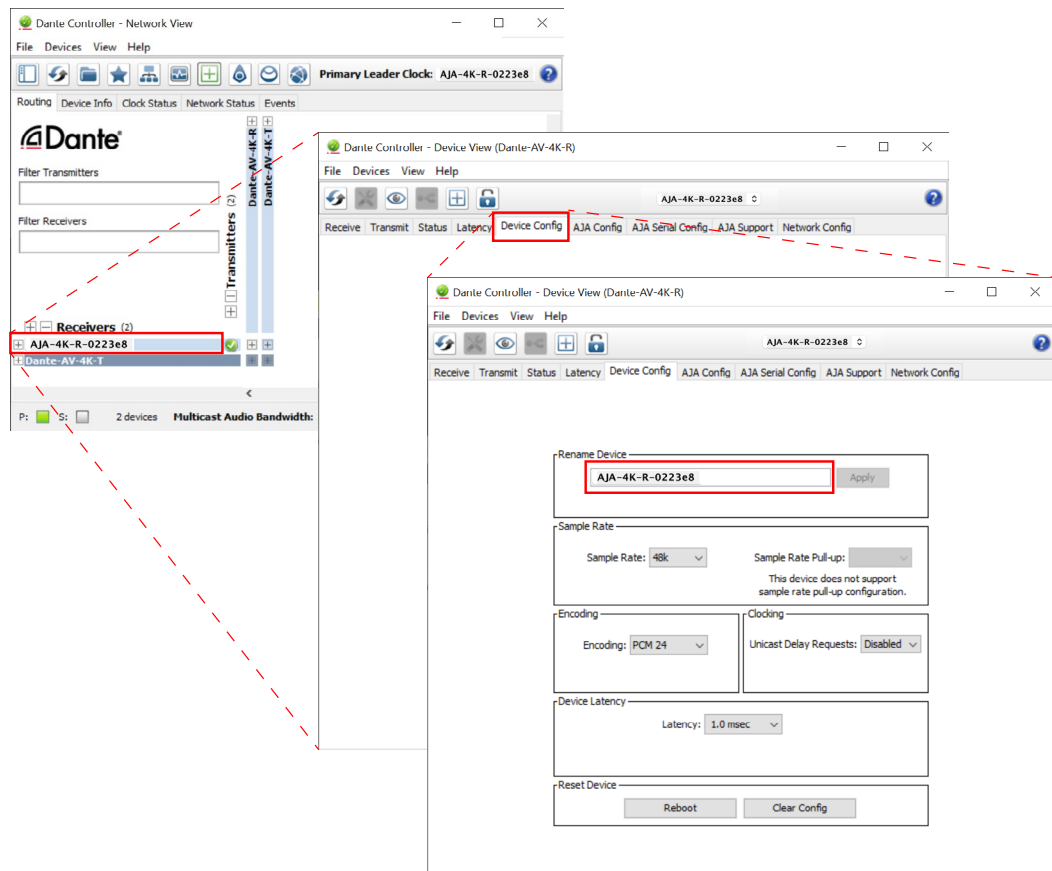
NOTE: *Renaming a Dante device will 'break' (essentially, delete) all existing routes to and from that device (if any). Therefore if routes do exist prior to renaming, having a record of those routes helps in restoring them after the device has been renamed.*

Renaming Devices in Dante Controller

1. Launch Dante Controller, if not already open.
2. In the default Network View Routing Tab, double-click on the Dante Device you wish to rename, to open its Device View.
3. In the Device View window, click on the Device Config tab to open it.
4. In the Rename Device Field, type in the new device name.

NOTE: *Follow the "Rules for Device & Channel Names" on page 9*

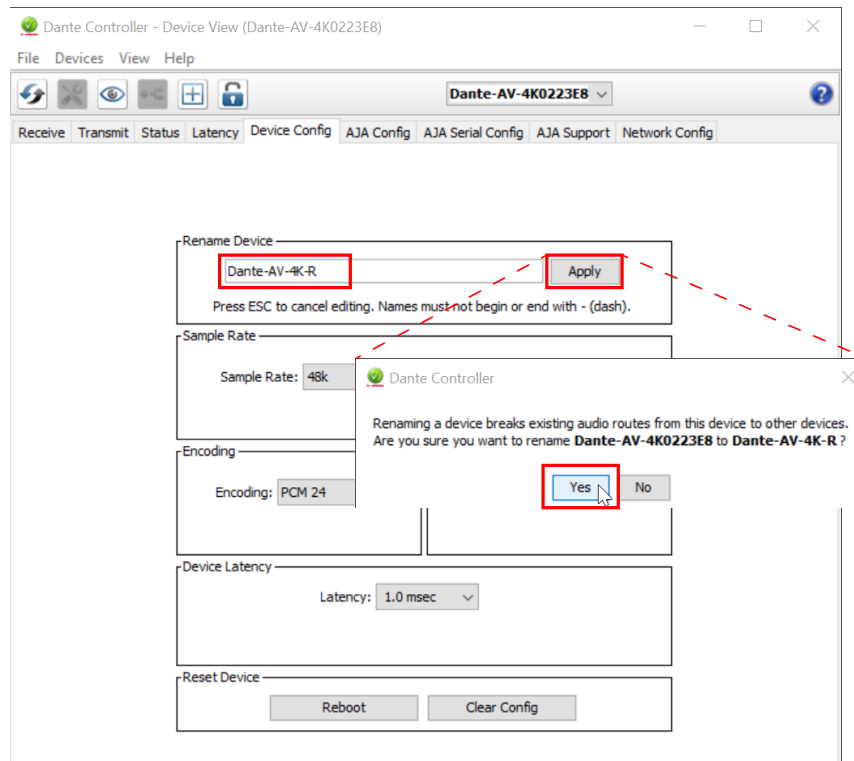
Figure 3. Renaming a Dante AV 4K-R Device



5. Click Apply.

A confirmation dialog appears:

Figure 4. Complete Renaming a Dante AV 4K-R Device



6. If you accept the implications of having to subsequently re-define any previously enabled routes, click 'Yes'.

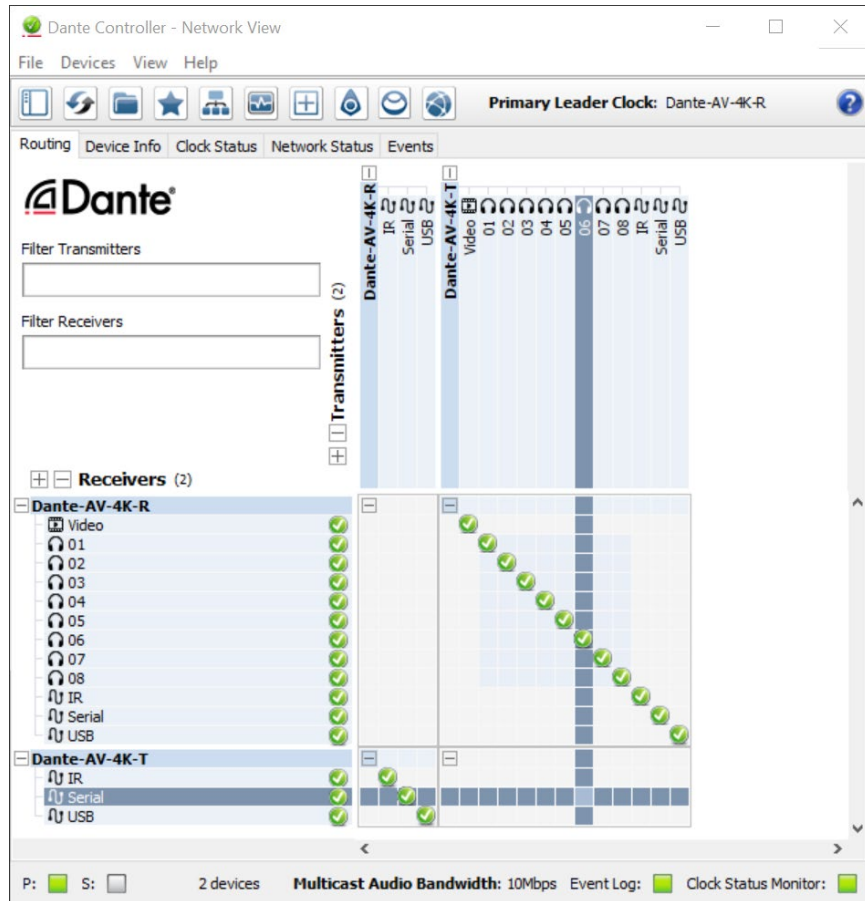
Otherwise, click 'No' in order to provide an opportunity to first make note of your previously existing connections, then return to the beginning of this procedure armed with those notes. This will allow you to easily restore the same connected routes (to the extent that is desired) while using the new device names.

Or, click 'No' if your network is very large and very complex with many devices and many routes, to decide that you do *not* wish to rename the device(s) in order to avoid future connection issues across the network.

NOTE: No reboot of an AJA Dante AV 4K-T or Dante AV 4K-R device is required after the device has been renamed. The Dante Controller application will immediately refresh its windows with the new device names.

7. In the Network View window that is still open, previous channel connections to and/or from the renamed device may now be manually restored (and/or new ones added).

Figure 5. Network View Routing Tab After Renaming a Dante AV 4K-R Device



Repeat the above Steps #2 through #7 for each additional Dante AV 4K-T or Dante AV 4K-R device that you wish to be renamed.

Rules for Device & Channel Names

When renaming a Dante device, be sure to always follow these rules.

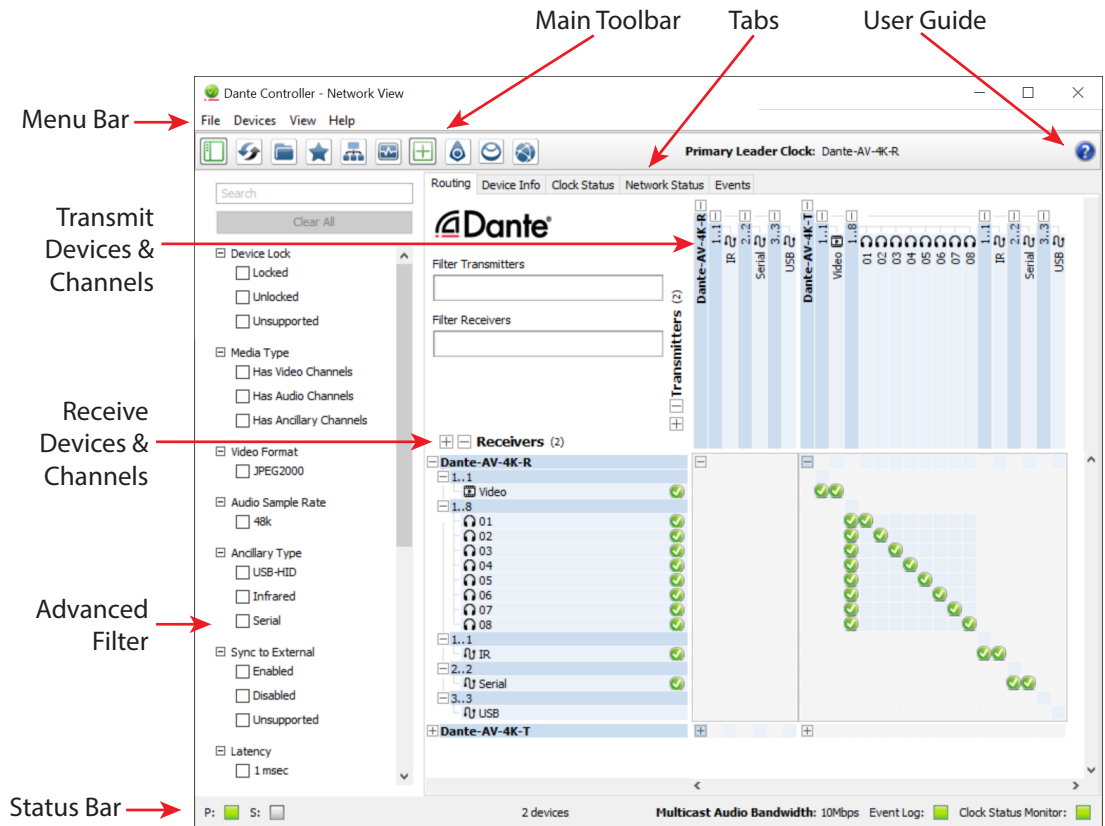
- All Dante names are up to 31 characters in length.
- Name comparisons are case-insensitive: "Guitar" and "guitar" are treated as the same name.
- Unicode and non-roman characters are not supported.
- Device names should follow Domain Name System (DNS) hostname rules. Legal characters are A-Z, a-z, 0-9, and '-' (dash or hyphen).
- Device names cannot begin or end with a hyphen.
- Device names must be unique on the network.
- Transmit channel names may use any character except '=' (equals), '.' (full stop or period), or '@' (at).
- Transmit channel names must be unique on a device. Transmit channel names do not need to be unique on the network, as they are always qualified by device (channel@device).
- Receive channel names follow the same rules as Transmit channel names

NOTE: See the AJA Audinate Dante Controller Guide at <https://www.aja.com/products/dante-av-ultra#support>

Network View (Default Main Window)

When Dante Controller is started, it always displays the Routing Tab within the Network View. In this view the network is shown in the form of a grid. Devices with transmit channels are displayed along the top row of the grid, and those with receive channels are displayed along the left-hand column of the grid.

Figure 6. The Dante Controller User Interface (Network View/Routing Tab)



In the following sections, we show how to use the Menu Bar, Advanced Filter, Main Toolbar and Network View Tabs to view and control a Dante network.

NOTE: See the **Network View** section of [Audinate's Dante Controller User Guide](#) for additional information.

Network View Menu Bar

The menu bar in the Dante Controller Network View includes four menus: File, Device, View and Help.

NOTE: MacOS users: Please note that the key combinations shown are for Windows users. When using Dante Controller on a Mac, use the 'Command' or 'Apple' key instead of the Ctrl key, and substitute standard Mac key combinations where applicable. Function keys behave the same.

File

- Load Preset (Ctrl+L): loads a configuration from a file
- Save Preset (Ctrl+S): saves configuration for currently displayed devices to a file
- Interfaces: Opens the Configure Dante Interfaces dialog
- Exit (Alt+F4): Exits Dante Controller

NOTE: See "User Presets" section in the [Dante AV 4K Series Installation and Operation Guide](#) at www.aja.com for more information.

Devices

- Refresh (F5): Refreshes the displayed network / device data
- Clock Monitoring: Toggles clock monitoring on/off
- Device View (Ctrl+D): Opens a new Device View window

View

- Dante Updater (Ctrl + U)
- Dante Activator (Ctrl + I)
- Language: Select the user interface language. Set to 'Auto' to use the default operating system language.
- Show Filter Pane (Ctrl + Shift + F)
- Show/Hide Channel Groups (Ctrl + Shift + G)
- Show Hidden Devices (Ctrl + E)

Help

- About: Shows the Dante Controller version, and current event log file location
- How License: Displays the license text
- Check for updates: Checks the update server for new Dante Controller versions
- Analytics: Disable / enable analytics data collection
- Online Help (F1): Opens this HTML user guide on the Audinate web server (requires an Internet connection)
- Offline Help: Opens a locally-stored PDF of this user guide (may not be the latest version of the user guide)

Network View Menu & Toolbar











Figure 7. Network View Menu Bar & Main Toolbar



Network View Tool Bar

Below the menu bar there is a tool bar, containing these buttons:

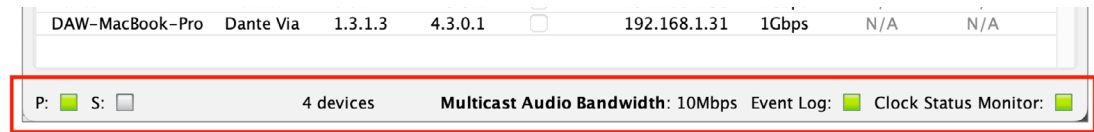
Figure 8. Network View Tool Bar Buttons

	Filter Pane	<i>Shows / hides the advanced filter pane.</i>
	Reload Device Information	<i>Updates the current view with the latest device information from the network. This is useful when a recent change to the network has not yet propagated automatically through to Dante Controller (for example, a new device has been added to the network).</i>
	Load Preset	<i>Loads a previously saved media routing configuration. See "User Presets" section in Dante AV 4K Series Installation and Operation Guide at www.aja.com for more information.</i>
	Save Preset	<i>Saves the current media routing configuration. See "User Presets" section in Dante AV 4K Series Installation and Operation Guide at www.aja.com for more information..</i>
	Choose a Dante Interface	<i>Opens the Configure Dante Interfaces dialog. See "Configuring Dante Controller" section in Dante AV 4K Series Installation and Operation Guide at www.aja.com for more information.</i>
	Clock Monitoring	<i>Activates the Clock Status Monitoring function. See "Clock Status Tab" section in Dante AV 4K Series Installation and Operation Guide at www.aja.com for more information.</i>
	Channel Groups	<i>Activates channel groups. See "Channel Types" in Dante AV 4K Series Installation and Operation Guide at www.aja.com for more information.</i>
	Launches Dante Updater	<i>Launches Dante Updater.</i>
	Launches Dante Activator	<i>Launches Dante Activator.</i>
	Domain Manager Login	<i>Connection to a Dante Domain Manager is currently not supported by Dante AV 4K-T and 4K-R.</i>

Network View Status Bar

The Status Bar displays notifications for network status, general device events, and clock status events, plus the current Dante media multicast bandwidth on the network.

Figure 9. Status Bar



The Status Bar displays the following information:

P:

- The current status of the Primary network. Green indicates that Dante Controller is currently connected to the primary Dante network. Red indicates a problem with the connection.

S:

- The current status of the Secondary Dante network. Reserved for future use.

Devices

- The number of discovered Dante devices currently connected to the network

Audio Multicast Bandwidth

- The current Dante audio multicast bandwidth on the connected networks for unmanaged (un-enrolled) devices.

NOTE: There may be network traffic from other sources that is not included in the multicast bandwidth reading.

Event Log:

- Indicates the current status of the event log. Click the icon to open the Events View.

Clock Status Monitor:

- Indicates the current status of the Clock Status Monitor. Click the icon to open the Clock Status Monitor.

Network View Tabs

Routing

- Intuitive crossbar grid for connecting devices across the network.
- Shows subscription status for all connected audio and video channels in a single customizable view.

Device Info

- Provides a network-wide overview of device configuration and operating information.

Clock Status

- Provides a network-wide overview of the clocking state within the network.
- This view provides a convenient way of quickly scanning the network for clock information.

Network Status

- Provides a range of network-related information across all devices in the network.
- This view includes subscription status, bandwidth and latency information, and can be used to quickly identify any potential network traffic issues.

Events

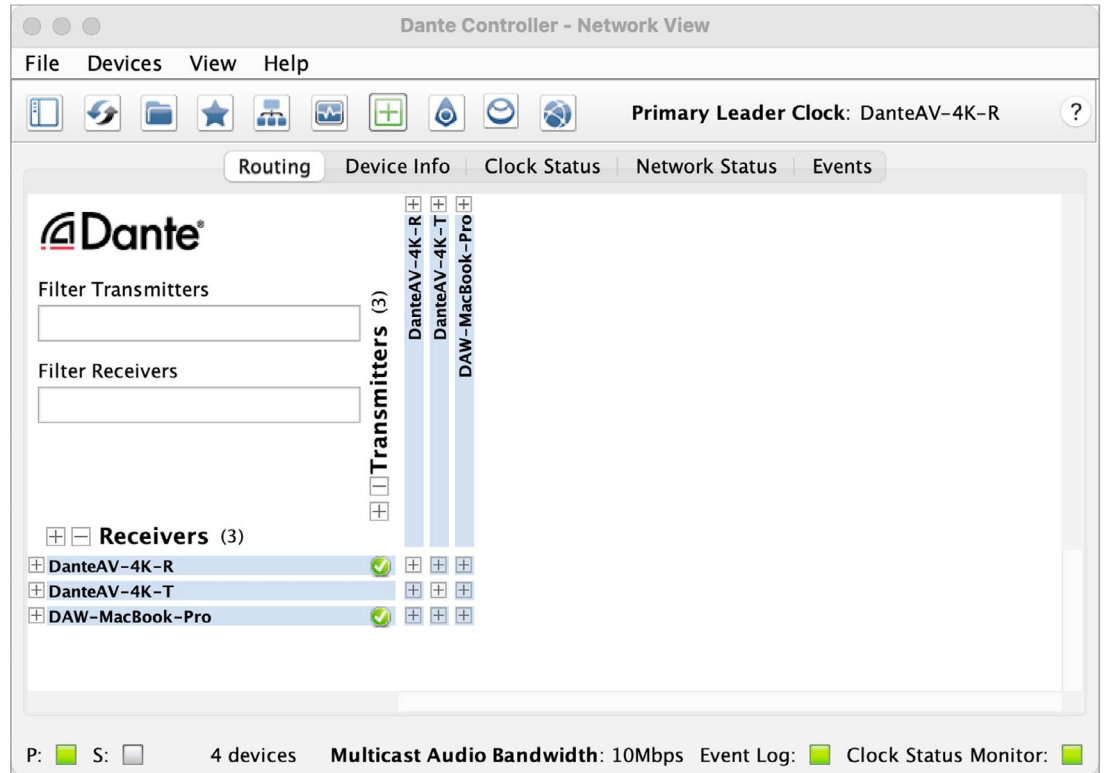
- Provides information on significant changes and failures in the network.
- Dante Controller continually monitors Dante devices and the network as a whole. It is able to watch for problematic configurations, unexpected problems and communication failures between itself and Dante network devices.
- Events are displayed and stored in an event log.

NOTE: See the **Network View** section of [Audinate Dante Controller User Guide](#) for additional information.

Routing Tab

When Dante Controller is started, it always displays the Routing Tab within the Network View. In this view the network is shown in the form of a grid. Devices with transmit channels are displayed along the top row of the grid, and those with receive channels are displayed along the left-hand column of the grid. Initially a collapsed view is presented; individual channels cannot be seen. In the following section we will show how to easily reveal them.

Figure 10. Network View Routing Tab (collapsed view; channel groups hidden)



NOTE: If a device name is shown in red, it means Dante Controller has automatically detected an error condition. Double-click the device name to see more information. Refer to "Automatic Notification of Device Errors" in [Dante AV 4K Series Installation and Operation Guide](#) at www.aja.com for further explanation.

NOTE: If a device has transmit and receive channels, it is shown both along the top row of the grid and also along the left-hand edge.

NOTE: See the **Routing Tab** section of [Audinate's Dante Controller User Guide](#) for additional information.

Routing Tab - Expanded View

Figure 11. Network View Routing Tab (expanded view; channel groups active)

Open the advanced filter pane

Enter text to show only devices with matching device names

Expand all Tx devices

Expand all Rx devices

Click on [-] to collapse the device

Click on [-] to collapse the channel group

Click on [+] to expand the device

The Dante AV 4K-T device is fully expanded; the DAW-MacBook-Pro and Dante AV 4K-R are collapsed

Click to subscribe or unsubscribe all available channels between Tx and Rx devices

Click to subscribe or unsubscribe one available channel between Tx and Rx devices

Click to Configure Dante Interfaces

Click to open the Events Tab

Click to open the Clock Status Monitor

The receive channels associated with any device can be displayed by clicking on the [+] to the left of the device name in the left-hand column of the grid. The transmit channels associated with any device can be displayed by clicking on the [+] above the device name on the top row of the grid. When this action is performed the grid view expands to show each channel of the device, and the [+] becomes a [-]. Clicking on [-] collapses the view. You can also group channels into sets of 16.

The receive channels associated with all devices can be simultaneously expanded by clicking on the [+] of "[+] [-] Dante Receivers" at the top of the left-hand column. Similarly, the transmit channels associated with all devices can be simultaneously expanded by clicking on the [+] of "[+] [-] Dante Transmitters" at the left of the top row. Clicking on [-] will collapse the view.

In the above example Show/Hide Channel Groups is active.

NOTE: See the following page "[Channel Types](#)" on page 17 below for details on the Channel Groups feature.

NOTE: See the **Routing Tab** section of [Audinate's Dante Controller User Guide](#) for additional information.

Channel Types

Audio Channels

Audio channels are represented in Dante Controller by the following icon:

Figure 12. The Audio Channel icon



Audio channels for Dante video devices are treated and managed identically to audio channels for audio-only Dante devices.

Video Channels

Video channels are represented by the following icon:

Figure 13. The Video Channel icon



Video channels contain packeted video data streams, and can be routed in the same way as audio channels. However, they typically use more bandwidth than audio channels, and require 1Gbps (or higher) switch ports.

NOTE: IGMP snooping must be enabled on network switches that will be carrying Dante video on 1Gbps network infrastructure. Refer to your switch manufacturer's documentation for information about enabling IGMP snooping.

Ancillary Channels

Ancillary channels are represented by the following icon:

Figure 14. The Ancillary Channel icon



Ancillary channels are 'custom' channels, defined by the device manufacturer, to carry additional data (not audio or video) between devices. Typically they are used to carry hardware control data, such as USB peripheral or infrared transport control data. Ancillary channels are typically low bandwidth (compared to audio and video channels). Some ancillary channel types cannot be added to multicast transmit flows.

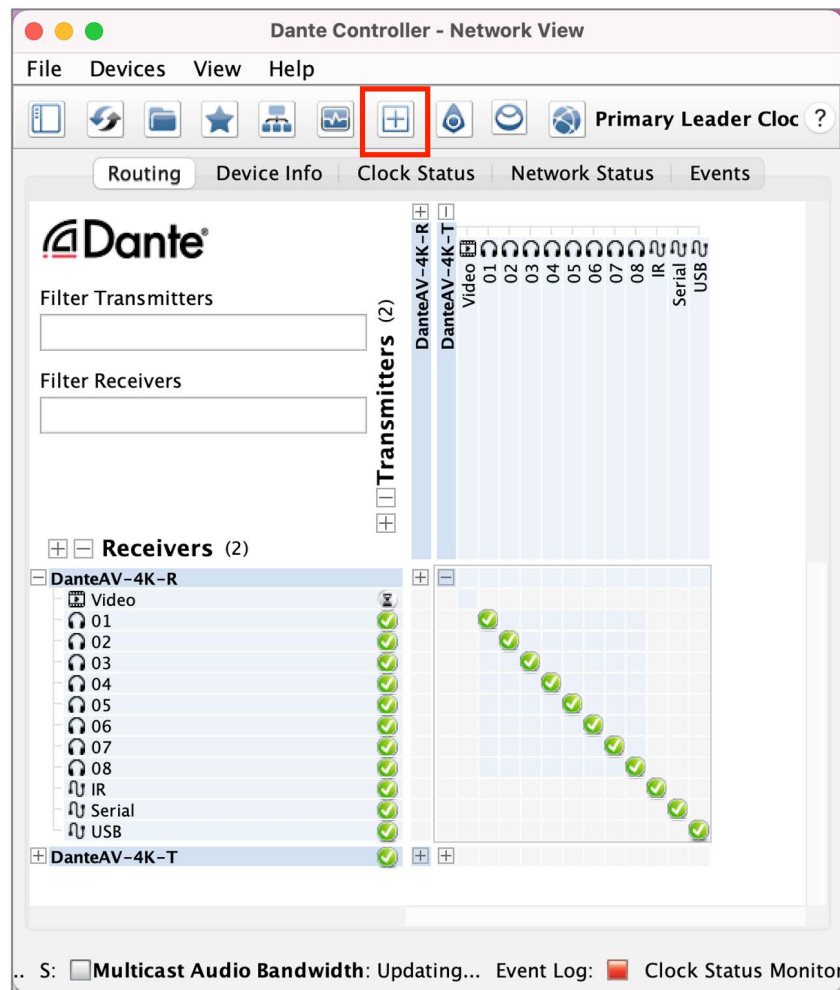
Channel Groups

When Channel Groups is active, device channels in the Network View Routing tab are grouped into sets. This makes it easier to view and make channel subscriptions for devices with large numbers of channels, such as PCIe cards.

NOTE: Also see "[Network View Routing Tab \(expanded view; channel groups active\)](#)" on page 16 above.

Channel Groups Inactive

Figure 15. Network View Routing Tab Channel Groups Inactive



NOTE: Some devices above are shown collapsed.

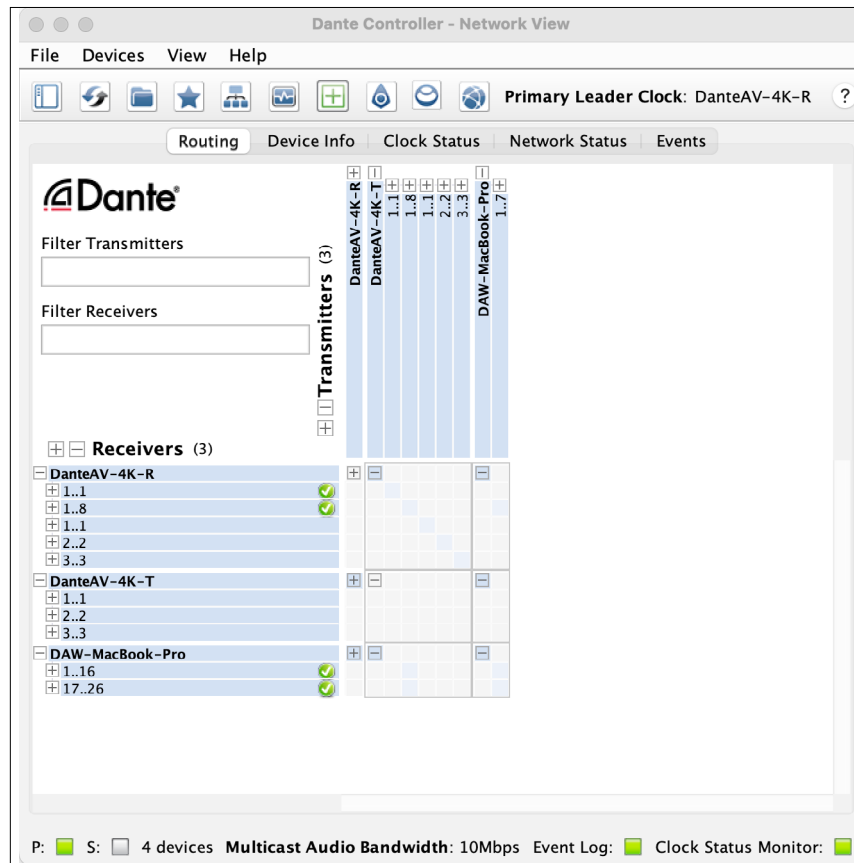
NOTE: If a device has transmit and receive channels, it is shown both along the top row of the grid and also along the left-hand edge.

Channel Groups Active

To activate it, click the Channel Groups button in the Network view toolbar, or select "Show Channel Groups" from the View drop-down menu (Ctrl+Shift+G).

The AJA Dante AV 4K-T and 4K-R devices have separate Channel Groups for Video (1 ch), Audio (8 ch), IR (1 ch), Serial (1 ch) and USB (1 ch). The Channel Groups make it convenient to show only the channels you are working with, as well as showing more devices on your network without having to scroll.

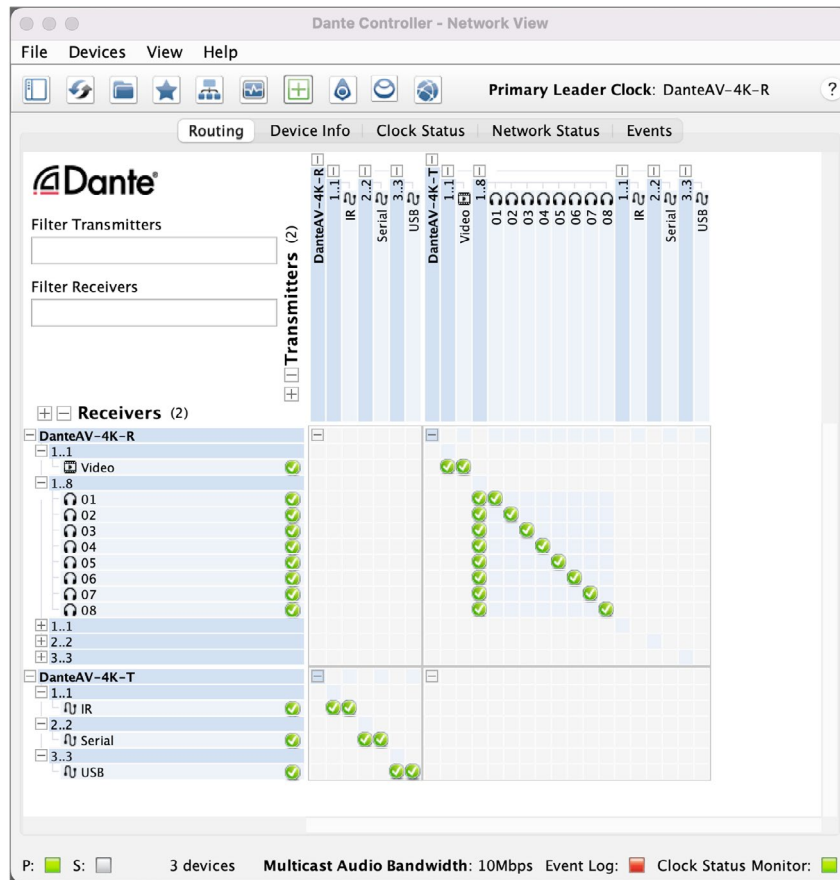
Figure 16. Network View Routing Tab Channel Groups Active (collapsed)



To expand a channel group, click the plus [+] icon. To collapse a channel group, click the minus [-] icon.

Below we show the Routing Tab with some of the channel groups expanded.

Figure 17. Network View Routing Tab Channel Groups Active (expanded)



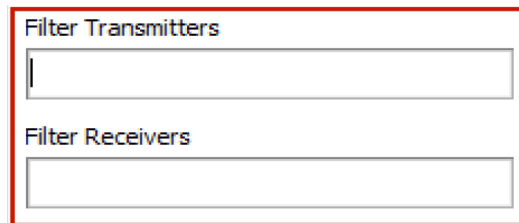
NOTE: See the **Channel Groups** section of [Audinate's Dante Controller User Guide](#) for additional information.

Device List Filtering

The device lists in the Routing view can be filtered using the 'Filter Transmitters' and 'Filter Receivers' boxes, below the Dante logo in the top left-hand corner. Any text string typed into the box will filter the view to only display devices that contain that text string, in either a device name, or channel name.

The filtering is case-insensitive. For example, in the Dante Controller Network view shown here, entering the string "foh" in either of the Filter fields would display only the FOH-Amp and FOH-Console devices, and their channels.

Figure 18. Device List Filter



The image shows a screenshot of the Dante Controller interface. It features two text input fields stacked vertically. The top field is labeled 'Filter Transmitters' and the bottom field is labeled 'Filter Receivers'. Both fields are currently empty. A red rectangular box highlights both input fields.

Routing Tab Advanced Filter

The Advanced Filter can be used to filter the devices displayed in the Network View Routing, Device Info, Clock Status and Network Status tabs.

Use the Advanced Filter to easily locate or display devices with specific names, channel names, states or configuration parameters.

To open the advanced filter, click the sidebar button.

Features available in the Advanced Filter include:

Text Filter

Device State and Configuration Filters

- Device Lock
- Media Type
- Video Format
- Audio Sample Rate
- Video Subtype
- Ancillary Type
- Sync to External
- Latency
- Subscriptions
- Tx Multicast Flows
- AES67
- Sample Rate Pull-up

NOTE: See the **Advanced Filter** section of [Audinate's Dante Controller User Guide](#) for additional information.

Device Info Tab

Use the Device Info tab to view the IP addresses of all the devices on your network. The Primary Address of all devices should follow the same IP address scheme (e.g. 169.254.*.* or 10.12.0.*).

The Device Info tab provides a network-wide overview of device configuration and operating information.

Double-clicking on a listed device opens up the Device View window.

The tabular view presents the following information, in columns from the left:

- Device Name
- Model Name
 - Product Version
- Dante Version
- Device Lock
- Product Version
- Primary Address
- Primary Link Speed
- Secondary Address (reserved for future use)
- Secondary Link Speed (reserved for future use)

Figure 19. Network View Device Info Tab

Device Name	Model Name	Product Version	Dante Version	Device Lock	Primary Address	Primary Link Speed	Secondary Address	Secondary Link Speed
Dante-AV-4K-R	Dante AV 4K-R	0.0.71	4.3.8.1	<input type="checkbox"/>	169.254.190.33	1Gbps	N/A	N/A
Dante-AV-4K-T	Dante AV 4K-T	0.0.71	4.3.8.1	<input type="checkbox"/>	169.254.190.101	1Gbps	N/A	N/A

NOTE: A Dante interface may have a preferred link speed. Where it does, and an interface is not operating at that preferred link speed, the values in the Link Speed columns will be shown in red.

NOTE: Some older Dante devices or devices running older firmware may not show this information.

NOTE: If a device name is shown in red, it means Dante Controller has automatically detected an error condition, such as an IP address configuration issue, or the device has entered failsafe. Double-click the red device name to see more information.

NOTE: See the **Device Info Tab** section of [Audinate's Dante Controller User Guide](#) for additional information

Clock Status Tab

The Clock Status tab provides a network-wide overview of the clocking state within the network. This view provides a convenient way of quickly scanning the network for clock information.

Parameters and information available include:

- Device Name
- Sync
- Mute
- Clock Source
- Primary v1 Multicast
- Primary v2 Multicast
- Secondary v1 Multicast (reserved for future use)
- Secondary v2 Multicast (reserved for future use)
- Preferred Leader
- Enable Sync to External
- Active and Passive Clock Status Monitoring
- Clock Status Monitor Log
- Clock Status History

NOTE: If no clock status information is displayed for a particular device, it can indicate a ConMon (Dante control and monitoring service) failure on the device. The device may need to be reset or restored.

Figure 20. Network View Clock Status Tab

Device Name	Sync	Mute	Clock Source	Domain Status	Primary v1 Multicast	Primary v2 Multicast	Secondary v1 Multicast	Secondary v2 Multicast	Preferred Leader	Enable Sync To External
AJAmacbookpro	<input type="checkbox"/>	<input type="checkbox"/>		N/A		N/A		N/A	<input type="checkbox"/>	N/A
DanteAV-4K-R	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Dante	N/A	Follower	Disabled	N/A	N/A	<input type="checkbox"/>	N/A
DAW-MacBook-Pro	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Dante	N/A	Follower	N/A	N/A	N/A	<input type="checkbox"/>	N/A

P: S: 4 devices Multicast Audio Bandwidth: 10Mbps Event Log: Clock Status Monitor:

NOTE: See the **Clock Status Tab** section of [Audinate's Dante Controller User Guide](#) for additional information.

Network Status Tab

The Network Status tab provides a range of network-related information across all devices in the network.

This view includes subscription status, bandwidth and latency information, and can be used to quickly identify any potential network traffic issues.

The tabular view presents the following information, in columns from the left:

- Device Name
- Subscription Status
- Primary Status
- Secondary Status (reserved for future use)
- Bandwidth Columns
 - Primary Tx B/W
 - Secondary Tx B/W (reserved for future use)
 - Primary Rx B/W
 - Secondary Tx B/W (reserved for future use)
- Latency Setting
- Latency Errors
- Packet Errors

Figure 21. Network View Network Status Tab

Device Name	Subscription Status	Primary Status	Secondary Status	Primary Tx B/W	Secondary Tx B/W	Primary Rx B/W	Secondary Rx B/W	Latency Setting	Latency Status	Packet Errors
AJAmacbookpro	✓	1Gbps	N/A	< 1 Mbps		731 Mbps		1 msec	✓	✓
DanteAV-4K-R	✓	1Gbps	N/A	731 Mbps		< 1 Mbps		1 msec	✗	✓
DAW-MacBook-Pro	✓	1Gbps	N/A					10 msec	✓	

See the **Network Status Tab** section of [Audinate's Dante Controller User Guide](#) for additional information.

Events Tab

The Events tab provides information on significant changes and failures in the network.

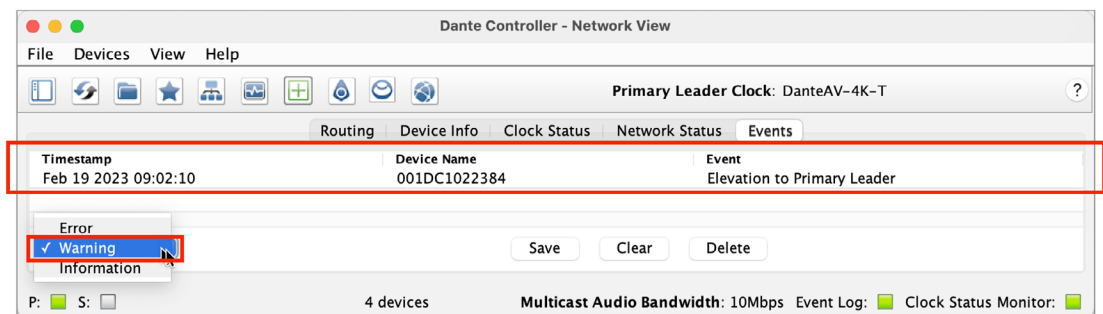
Dante Controller continually monitors Dante devices and the network as a whole. It is able to watch for problematic configurations, unexpected problems and communication failures between itself and Dante network devices. Events are displayed and stored in an event log.

Events fall into one of three categories: Information, Warning and Error. There is a pulldown menu at left for selecting a filter by category type.

Functions available include:

- Filtering the Event List
- Clearing the Event List
- Saving the Event Log
- Automatic Event Logging
- Event Classification

Figure 22. Network View Events Tab



See the **Events Tab** section of [Audinate's Dante Controller User Guide](#) for additional information.

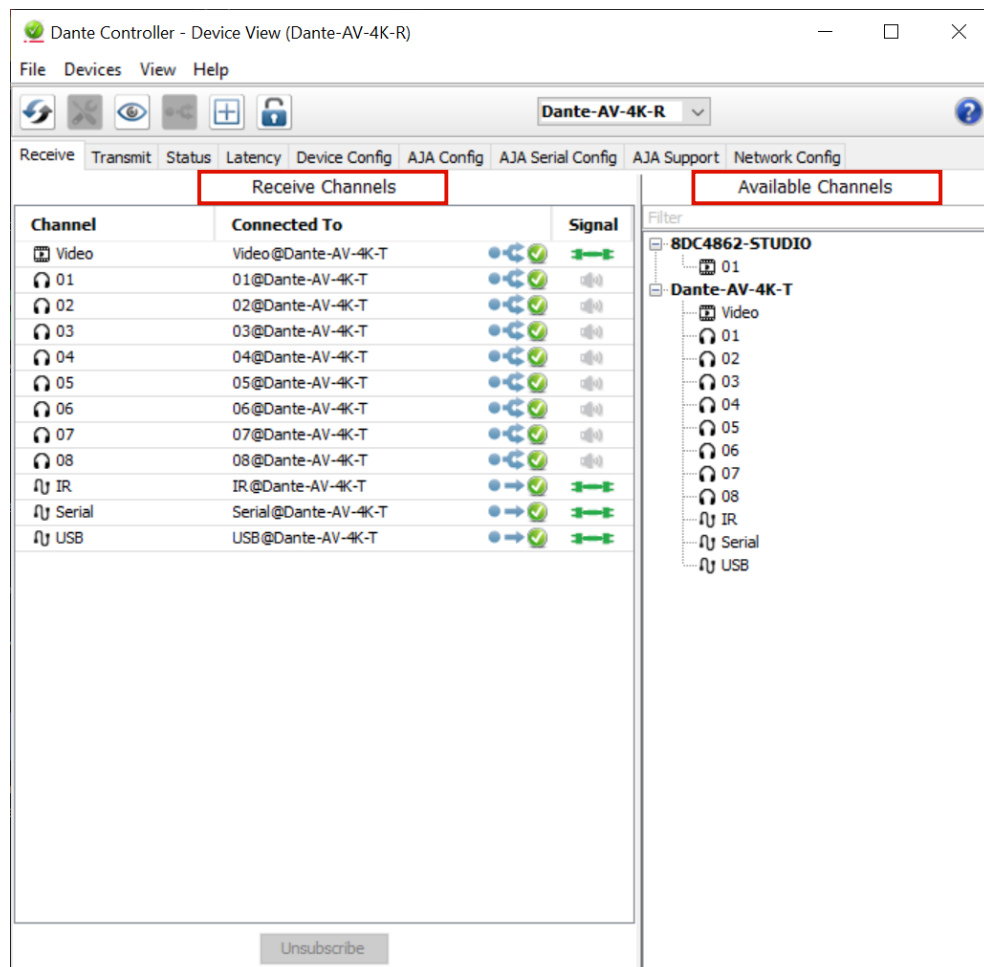
Device View

Double-clicking on any device which appears in the Device Info Tab will open the Device View window for that particular device.

The Device View is used to view and modify detailed information and settings for a specific device. Device view can be activated by double-clicking a device name in any of the Network View tabs (except Events), or by selecting Device View from the Device menu (Ctrl + D, or Command + D) in the Network View window. The Device View opens in a new window. Multiple device views can be open simultaneously.

NOTE: MacOS users: Please note that the key combinations shown are for Windows users. When using Dante Controller on a Mac, use the 'Command' or 'Apple' key instead of the Ctrl key, and substitute standard Mac key combinations where applicable.

Figure 23. Device View (Receive Tab example)



The name of the device being viewed is displayed in the middle of the toolbar. In the screenshot above, Dante AV 4K-R is the device being displayed in the drop-down list box. The device viewed can be changed by selecting another device from the drop-down list.

Multiple Device View windows may be opened from the Network View, so that several devices can be examined simultaneously.

See the **Device View** section of [Audinate's Dante Controller User Guide](#) for additional information.

Device View Menu Bar

The menu bar in the Device View contains the following menus - File, Devices, View and Help (see "[Device View Menu and Toolbar](#)" on page 27).

File

- Close Window

Devices

- Refresh: Refreshes the displayed network / device data
- Create Multicast Flow
- Identify: Identify the current device by, for example, causing its LEDs to flash.
- Lock / Unlock
- Clear Domain Credentials

View

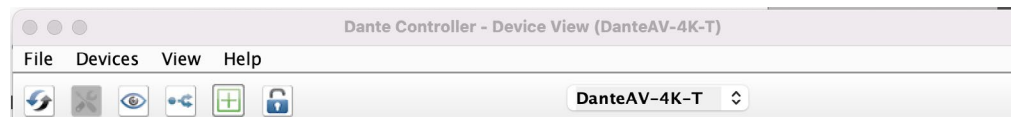
- Show/Hide Channel Groups
- View Flow Information

Help

- About: Shows Dante Controller version and current log file
- License: Displays the license text
- Online Help: Opens this HTML user guide on the Audinate web server (requires an Internet connection)
- Offline Help: Opens a locally-stored PDF of this user guide (may not be the latest version of the user guide)







Device View Menu & Toolbar

Figure 24. Device View Menu and Toolbar



Device View Toolbar Buttons

Figure 25. Device View Toolbar Buttons

	Refresh	<i>Re-load routing and configuration information for the current device.</i>
	Web Config (not supported)	<i>Some Dante devices can be configured via web interface. This button is grayed out when viewing a Dante AV 4K-T or 4K-R device because this feature is not supported.</i>
	Identify	<i>Identify the current device by, for example, causing its LEDs to flash. Note that this feature is not supported on all Dante devices, but it is supported by Dante AV 4K-T and 4K-R devices.</i>
	Multicast	<i>Configure multicast transmit flows on the current device. See "Multicasting" section in Dante AV 4K Series Installation and Operation Guide at www.aja.com.</i>
	Channel Groups	<i>Activate / deactivate (show/hide) Channel Groups. See "Channel Types" in Dante AV 4K Series Installation and Operation Guide at www.aja.com.</i>
	Device Lock	<i>Lock / Unlock the device. See Device Lock Section in Audinate's Dante Controller User Guide for additional information.</i>

Introduction to Device View Tabs

When a Dante AV 4K-T or 4K-R device is selected, Device View shows the following tabs:

Receive Tab Summary

- Names and types of channels, shows connection signal status, and allows custom re-naming of the device's receive (Rx) channels.

Transmit Tab Summary

- Names and types of channels, shows connection signal status, and allows custom re-naming of the device's transmit (Tx) channels including Multicast Flows.

Status Tab Summary

- Manufacturer information, Dante information, clock synchronization information and network interface(s) status.

Latency Tab Summary

- The Dante AV 4K-T and 4K-R supports a latency histogram feature.

Device Config Tab Summary

- Rename device, change sample rate, encoding, clocking, device latency and reset device.

AJA Config Tab Summary

- Audio configuration, video configuration, video format status, clock capture status, system information, and log data.

Serial Config Tab Summary

- Baud rate, data bits, parity and stop bits.

Network Config Tab Summary

- View and edit network configuration including switch configuration, addresses, and Reset device.

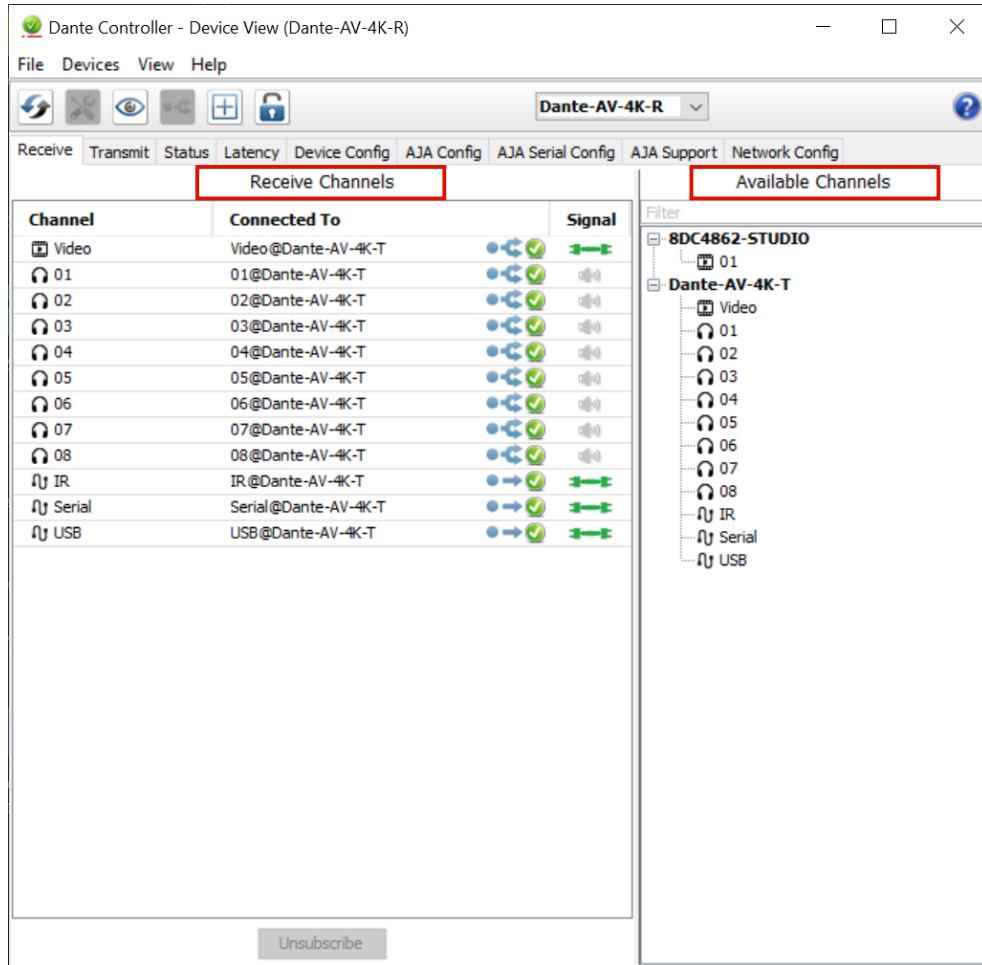
We show examples for each of these Device View tabs in the following sections.

NOTE: See the **Device View Tabs** section of [Audinate's Dante Controller User Guide](#) for additional information.

Receive Tab

The Receive tab displays a list of all subscribed and dormant receive channels on the current device, plus subscription information for the subscribed channels. It also allows the creation of subscriptions from the Available Channels list.

Figure 26. Device View Receive Tab



Receive Tab Panes






The Receive Tab is split into two panes: Receive Channels and Available Channels.

Receive Channels Pane

The Receive Channels pane contains three columns: Channel, Connected To, and Signal.





- **Channel:** Lists the receive channel names for the current device. These can be edited here to rename the channel.
- **Connected To:** Lists the transmit channels that the receive channel is currently subscribed to, plus the status of the primary subscription, using the following icons:

Figure 27. Subscription Icons

	Subscription is OK and media should be flowing
	Subscription is unresolved - usually because the transmitting device has been removed from the network, or is switched off
	No subscription, or a subscription error
	Subscription is via unicast connection
	Subscription is via multicast connection




Subscriptions can show several symbols in the Status column. Common status icon combinations and their meanings are as follows:

Figure 28. Subscription Status Icons

	Unicast device successfully subscribed to a transmitter
	Redundant device successfully subscribed on both primary and secondary via unicast
	Redundant device successfully subscribed on both primary and secondary via multicast
	Redundant device successfully subscribed on primary only via unicast. This is typically seen when the secondary interface is not connected




- **Signal:** Supported devices will also show the following channel metering icons, indicating the presence of audio on subscribed channels:



Figure 29. Channel Metering Icons

	Channel is either muted, or receiving audio at less than -61 dbFS
	Channel is receiving audio between -61 dbFS and 0 dbFS
	Channel is clipping

For video, ancillary and privately-encoded audio channels, supported devices may also show variations of the following status icons in the Signal Column:

Figure 30. Signal Status Icons

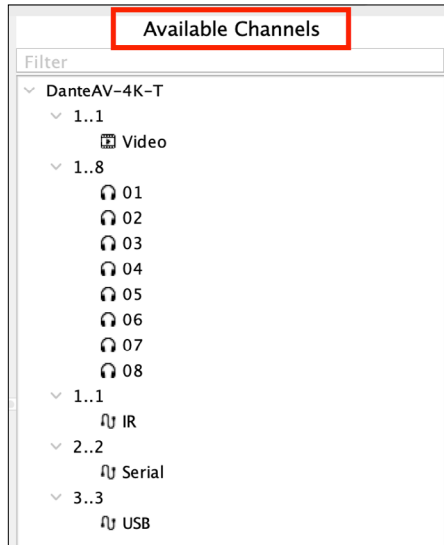
	The signal path (across the network) is good, and there are no external connectivity problems detected
	The signal path is good, but Dante Controller cannot ascertain if there are any external connectivity problems
	The signal path is good, but the receive device does not support the signal (for example, because the signal is HDCP and transmit device is not HDCP-enabled)

	<i>Indicates a signal problem such as an incompatible video codec, or the Dante subscription is unresolved. Refer to the subscription status icon for further information</i>
	<i>The signal path is good, and the signal is encrypted</i>

Available Channels Pane

The Available Channels pane lists the devices and advertised channels available on the network.

Figure 31.



Devices that are grayed-out (if any) indicate that this receiver cannot subscribe to those channels or devices (from a mismatch in parameters such as sample rate incompatibility etc.), or because a device cannot route media to itself.

For the Dante AV 4K-T and 4K-R devices you may click the Channel Groups buttons at left to group the video, audio and auxiliary channels as shown above. This is helpful if you have many devices on the network to view.

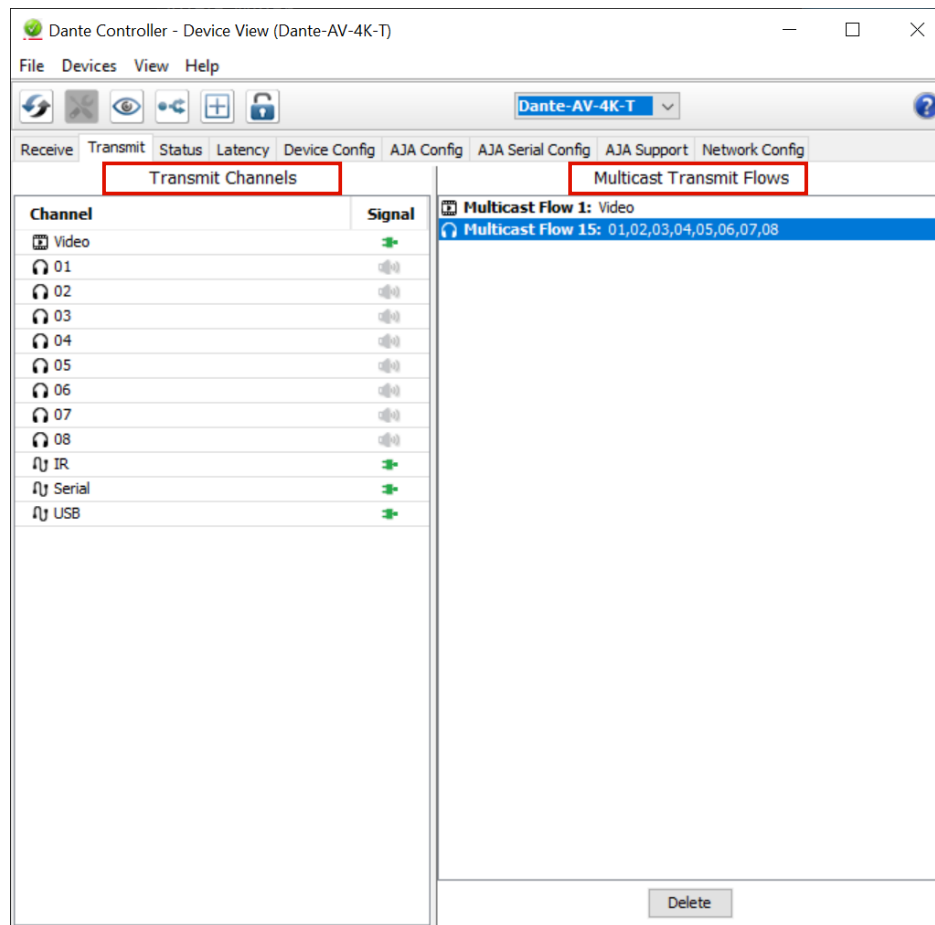
NOTE: See the **Available Channels** section of [Audinate's Dante Controller User Guide](#) for additional information.

NOTE: See the **Receive Tab** section of [Audinate's Dante Controller User Guide](#) for additional information.

Transmit Tab

The Transmit tab is used to inspect and modify the transmit configuration of a device.

Figure 32. Device View Transmit Tab



Transmit Tab Panes

The Transmit Tab is split into two panes: Transmit Channels and Multicast Transmit Flows.

Transmit Channels Pane

Shows all available channels on the Dante AV 4K-T device, which includes: one (1) video, eight (8) audio, and three (3) auxiliary channels.

Multicast Transmit Flows Pane

Shows all available audio and video Multicast Transmit Flows. In the above example we show a video multicast and an 8-channel audio multicast from a Dante AV 4K-T on the network.

NOTE: See the **Transmit Tab** section of [Audinate's Dante Controller User Guide](#) for additional information.

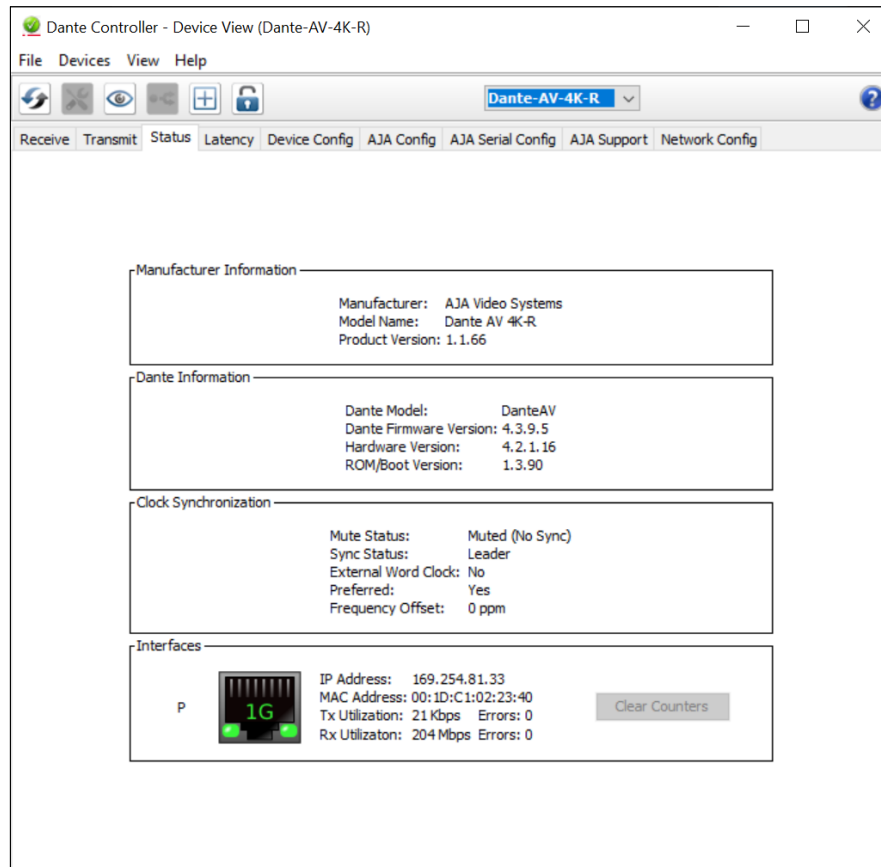
Status Tab

The Status tab is used to obtain current information about a Dante device. The tab is divided into sections. The information presented on this tab can be very useful when investigating networking or clocking issues in the system. The Refresh button can be used to update this information if required.

Status Information

- Manufacturer Information
- Dante Information
- Clock Synchronization
- Interfaces

Figure 33. Device View Status Tab



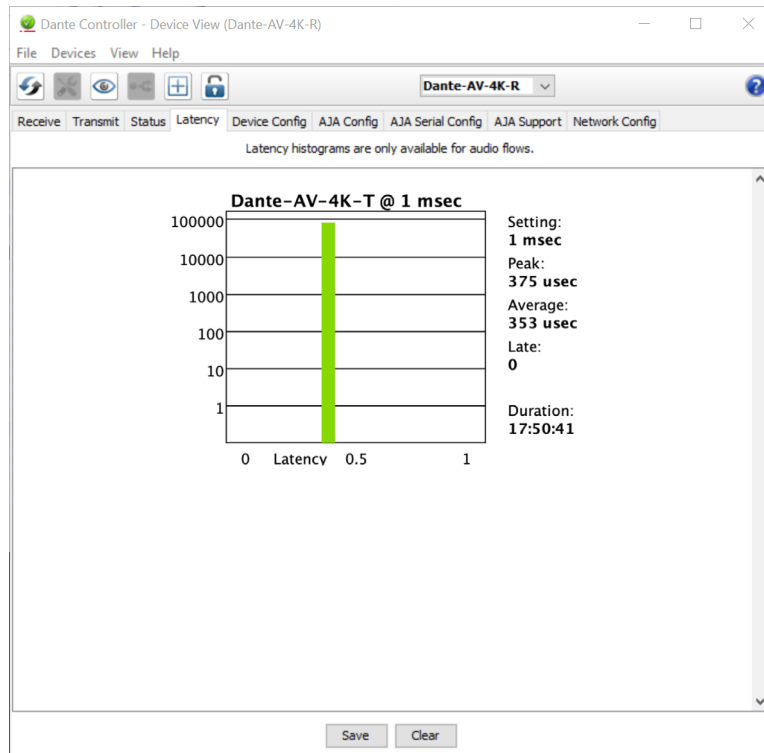
NOTE: See the **Status Tab** section of [Audinate's Dante Controller User Guide](#) for additional information.

Latency Tab

For supported devices, the Latency tab displays histograms of audio packet latency for each transmitter that the device is subscribed to.

NOTE: For video (Dante AV) devices, latency settings made in Dante Controller apply only to the audio channels.

Figure 34. Device View Latency Tab: Histogram Example



NOTE: See the **Latency Tab** section of [Audinate's Dante Controller User Guide](#) for additional information.

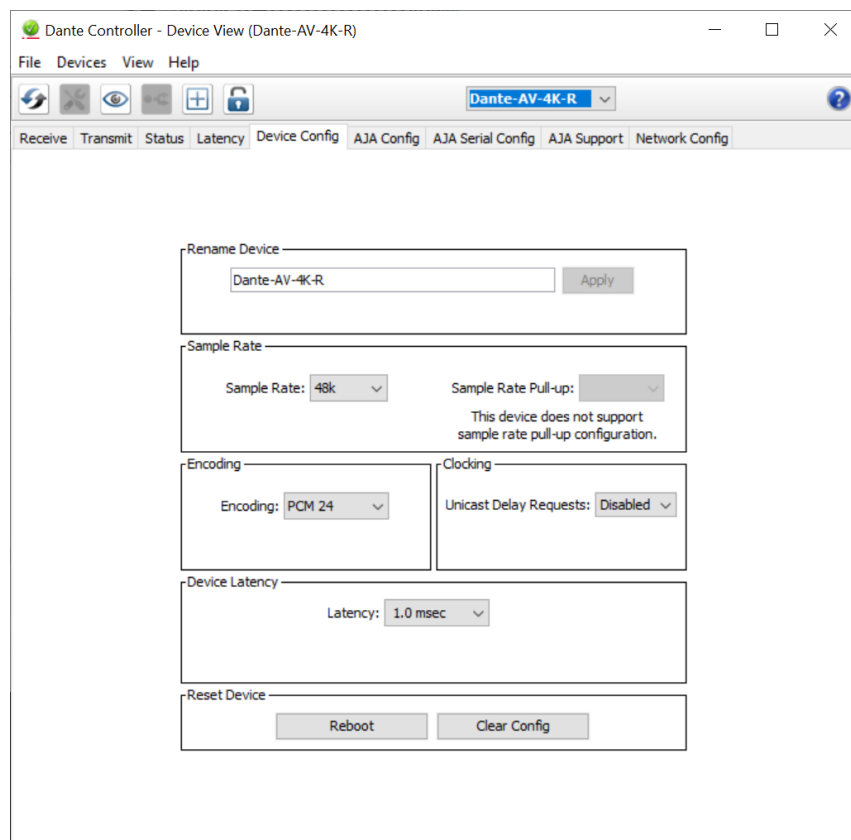
Device Config Tab

This tab on the device view window allows you to configure device specific parameters. The specific options available will depend on the capabilities of the device. In the case where a device does not support configuration via Dante Controller, the tab will be disabled.

Configuration Controls

- Rename Device
- Sample Rate
- Encoding
- Device Latency
- Audio/Video Sync
- Reset Device

Figure 35. Device View Device Config Tab



NOTE: See the **Device Config Tab** section of [Audinate's Dante Controller User Guide](#) for additional information.

AJA Config Tab

Use the AJA Config Tab in Dante Controller to adjust and save audio and video controls for the Dante AV 4K-T and 4K-R units, and to view status and other information.

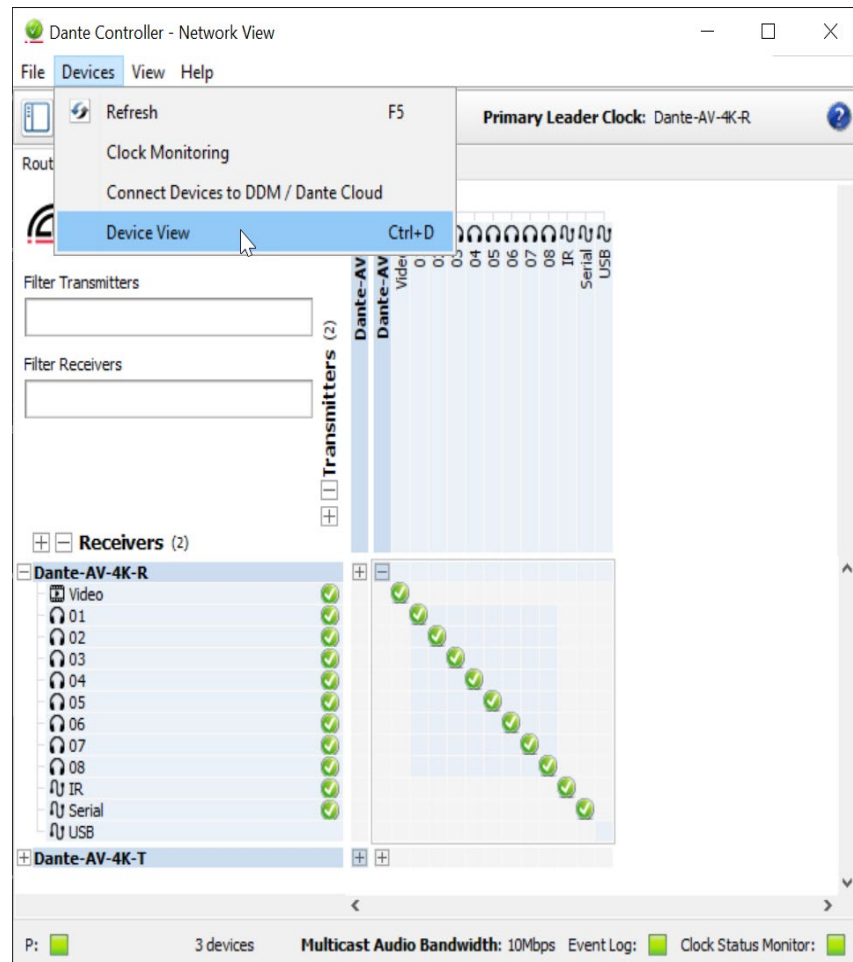
The AJA Config tab appears differently for Dante AV 4K-T vs. Dante AV 4K-R devices. Once you have navigated to either unit's AJA Config screen, you can easily switch back and forth between them.

Since this is the primary control window for Dante AV 4K-T and 4K-R devices, we include the exact steps below to open it without any prior experience with Dante Controller.

Opening AJA Config Tab for Dante AV 4K-T

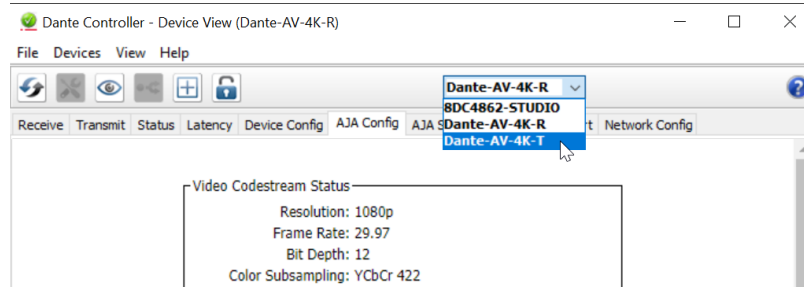
1. Launch Dante Controller. The Network View window opens.
2. Select "Device view" from the Devices drop down menu (Ctrl+D).

Figure 36. Select Device View



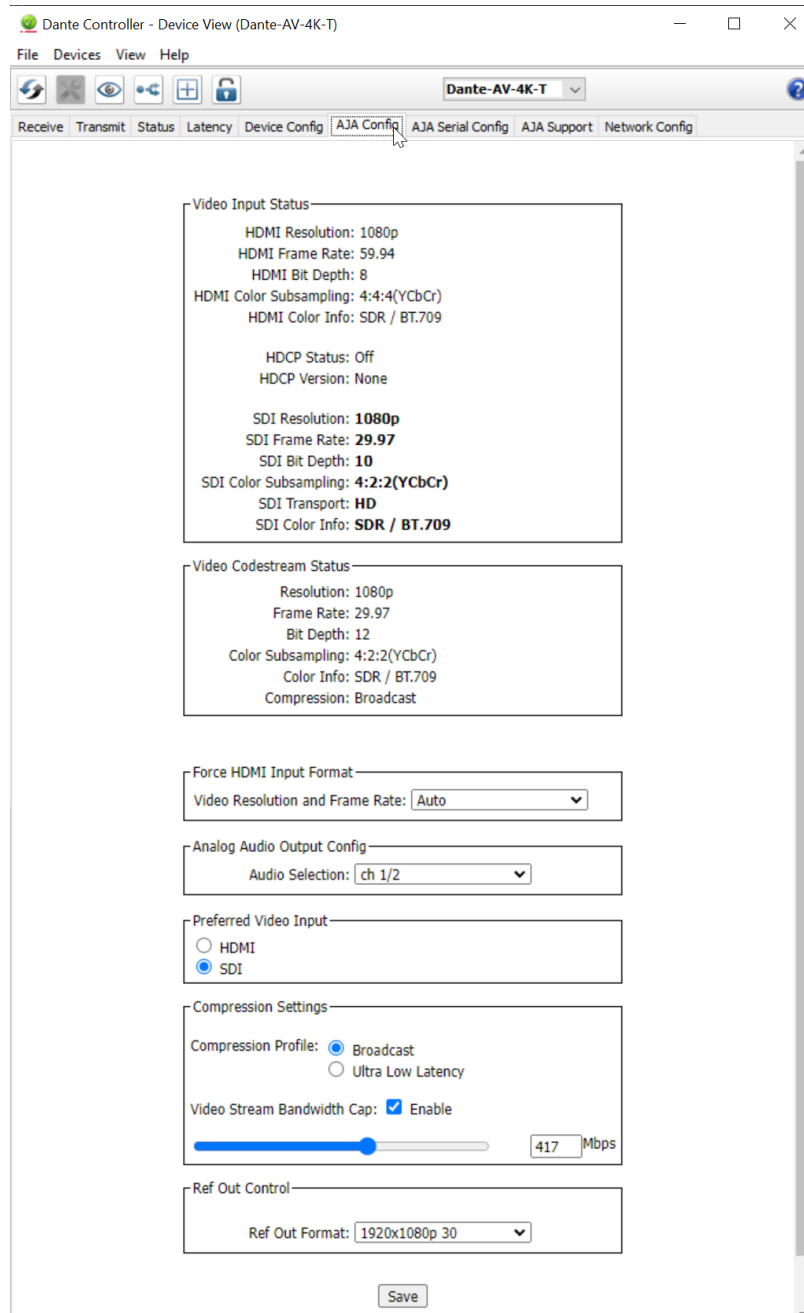
3. From the Change Device Menu, select the AJA 4K-T Series device that you would like to configure.

Figure 37. Select the Device



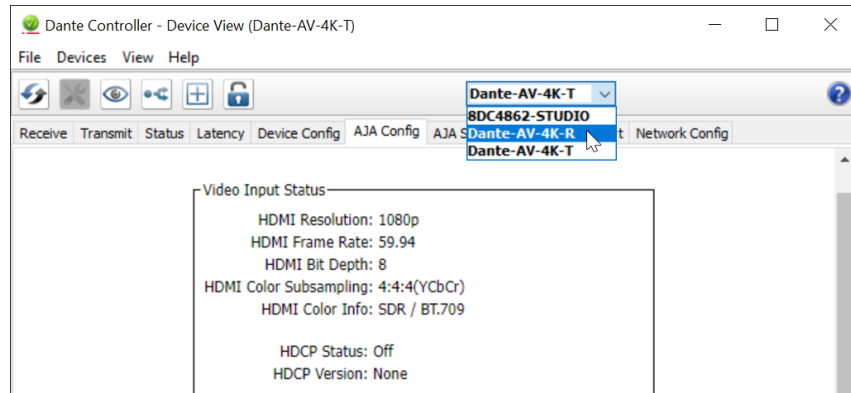
4. In the Device View window that opens, select the AJA Config Tab.

Figure 38. Select the AJA Config Tab



NOTE: Use the Change Device menu to switch back and forth between Dante AV 4K-T devices on your network while keeping the AJA Config Tab open.

Figure 39. Change Devices Keeping AJA Config Tab Open



Dante AV 4K-T AJA Config Controls

- **Video Input Status:** The Video Input Status will provide you with various information that is very helpful for integrating these units into a Dante AV workflow to confirm compatibility with other devices. It also will confirm that a valid signal is being sent to the Dante AV-4K-T. When an active signal is being sent to both the HDMI & SDI inputs, the preferred device will be indicated by the bold font of the status information.

NOTE: Real time HDMI HDR InfoFrame data reporting is provided. HDR InfoFrame decoder as defined in CTA-861.3 and HDMI v2.0b are supported.

- **Video Codestream Status:** The Video Codestream Status will display how the signal will be received by the JPEG 2000 Codec. This may or may not match the exact bit depth or color subsampling that is output from the Receiver's Codestream Status or Video Output Status due to the expected behavior of the codec being applied to the passing of the video signal.
- **Force HDMI Input Format:** The Force HDMI Input can be used to force the desired Resolution and Frame rate to the 4K-T if the original source is sending out an undesirable format and the settings can't be changed at the source.
- **Analog Audio Output Config** - Select Analog Audio Channels (1/2; 3/4; 5/6; 7/8). The Audio Config allows you to select a pair of audio channels from the eight possible channels of audio from the SDI or HDMI input source (4K-T) that can be monitored from RCA audio output connectors on the device.
- **Preferred Video Input** - (HDMI/SDI) The Preferred Video Input is used to determine which source should be used when both an HDMI and an SDI signal are being inputted into the device. The default will be HDMI unless the user selects SDI or only a valid SDI Input is detected.

Compression Settings - The factory default setting is 250Mbps. Dante AV 4K-T Units are shipped with the default setting set to 250 Mbps. We recommend setting this in the range of 150-250 for HD signals and in the range of 400-500 for 4K/UHD signals.

Ref Out (Reference Out) Control - For future use.

Figure 40. Device View AJA Config Controls (for a Dante AV 4K-T)

Auto

- 720p50 (1280x720) 16:9
- 720p60 (1280x720) 16:9
- 1080p50 (1920x1080) 16:9
- 1080p24 (1920x1080) 16:9
- 1080p25 (1920x1080) 16:9
- 1080p30 (1920x1080) 16:9
- 1080p60 (1920x1080) 16:9
- 2160p24 (3840x2160) 16:9
- 2160p25 (3840x2160) 16:9
- 2160p30 (3840x2160) 16:9
- 2160p50 (3840x2160) 16:9
- 2160p60 (3840x2160) 16:9
- 4Kp24 (4096x2160)
- 4Kp25 (4096x2160)
- 4Kp30 (4096x2160)
- 4Kp50 (4096x2160)
- 4Kp60 (4096x2160)
- 768p60 (1024x768)
- 1024p60 (1280x1024)**
- 1200p60 (1600x1200)
- 1200p60 (1920x1200)
- 1200p60 RB (1920x1200) Reduced Blanking.

ch 1/2

- ch 3/4
- ch 5/6
- ch 7/8

NTSC 525i 59.94

- PAL 625i 50
- 1280x720p 50
- 1280x720p 59.94
- 1280x720p 60
- 1920x1080i 50
- 1920x1080i 59.94
- 1920x1080i 60
- 1920x1080p 23.98
- 1920x1080p 24
- 1920x1080p 25**
- 1920x1080p 29.97
- 1920x1080p 30

Dante Controller - Device View (Dante-AV-4K-T)

File Devices View Help

Dante-AV-4K-T

Receive Transmit Status Latency Device Config **AJA Config** AJA Serial Config AJA Support Network Config

Video Input Status

- HDMI Resolution: 1080p
- HDMI Frame Rate: 29.97
- HDMI Bit Depth: 12
- HDMI Color Subsampling: 4:2:2(YCbCr)
- HDMI Color Info: PQ / BT.2020
- HDCP Status: Off
- HDCP Version: None
- SDI Resolution: **1080p**
- SDI Frame Rate: **29.97**
- SDI Bit Depth: **10**
- SDI Color Subsampling: **4:2:2(YCbCr)**
- SDI Transport: **HD**
- SDI Color Info: **PQ / BT.2020**

Video Codestream Status

- Resolution: 1080p
- Frame Rate: 29.97
- Bit Depth: 12
- Color Subsampling: 4:2:2(YCbCr)
- Color Info: PQ / BT.2020
- Compression: Broadcast

Force HDMI Input Format

Video Resolution and Frame Rate: Auto

Analog Audio Output Config

Audio Selection: ch 1/2

Preferred Video Input

- HDMI
- SDI

Compression Settings

- Compression Profile: Broadcast Ultra Low Latency
- Video Stream Bandwidth Cap: Enable
- 417 Mbps

Ref Out Control

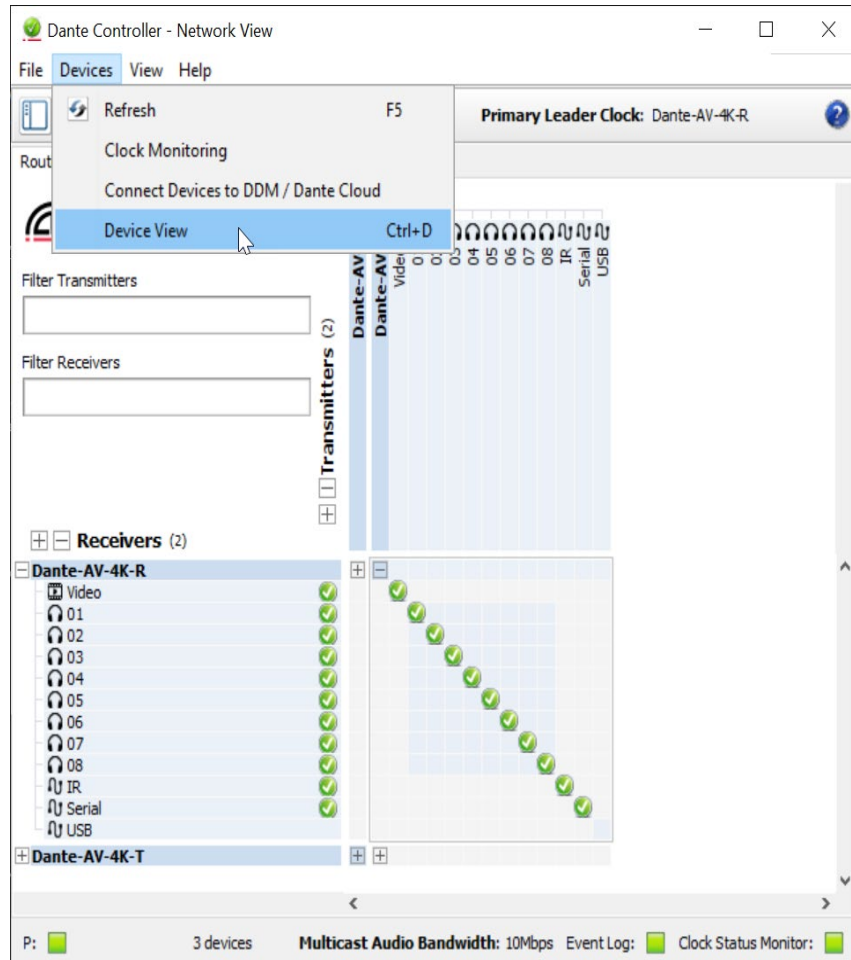
Ref Out Format: 1920x1080p 30

Save

Opening AJA Config Tab for Dante AV 4K-R

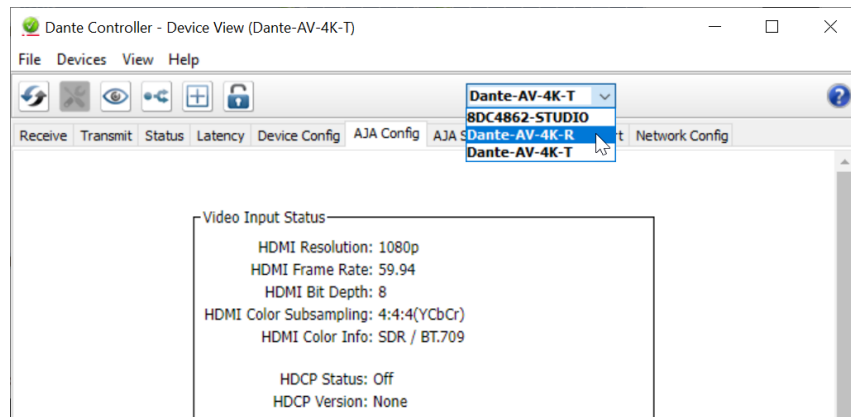
1. Launch Dante Controller. The Network View window opens.
2. Select "Device view" from the Devices drop down menu (Ctl+D).

Figure 41. Select Device View



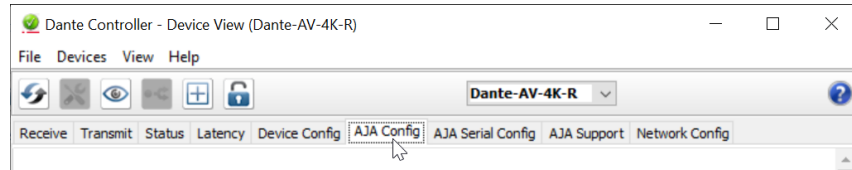
3. From the Change Device Menu, select the AJA 4K Series device that you would like to configure.

Figure 42. Select the Device



4. In the Device View window that opens, select the AJA Config Tab.

Figure 43. Select the AJA Config Tab



Dante AV 4K-R AJA Config Controls

Video Codestream Status - The Video Codestream Status will display how the signal will be received by the JPEG 2000 Codec. This may or may not match the exact bit depth or color subsampling that is output from the Receiver's Codestream Status or Video Output Status due to the expected behavior of the codec being applied to the passing of the video signal.

Video Output Status - Displays format of HDMI and SDI video signals including Resolution, Frame Rate, Color Space (HDMI/SDI Color Subsampling), Bit Depth and Compression. Displays HDCP status and version. Displays Connection Status.

NOTE: The Dante AV 4K-R can generate HDR metadata in accordance with HDMI v2.0 and CTA-861-G.

Video Output Control:

Crop/Scale Selection - Select Auto, Native, or Crop 4K to UHD/Scale UHD to HD.

SDR/HDR - Default is set to Auto. Select SDR, PQ, or HLG to override HDR Metadata output.

NOTE: HDR signaling metadata pass-through and optional override with compatible devices are supported.

Colorimetry - May be set to Auto, BT.709 or BT2020.

NOTE: HDR VPID generation with pass-through or override for Colorimetry and Transfer Characteristic HDR InfoFrame generation with pass-through are supported.

Ref In - Ref in includes support for Dante AV 4K-R 4K (in broadcast mode only.) The checkbox option to select a Reference In will only appear if a Reference signal has been connected to the Ref Input connection on the device. The Reference In signal rate should match the same rate as the incoming video signal. For example; a Ref In signal of 1080i59.94, would support raster of video with a 59.94 or 29.97 field rate.

NOTE: If Ref In is selected and its rate does not match the signal rate, the device will report the following message: "Mismatched Ref In Rate Not Supported."

NOTE: Only the Broadcast compression profile is compatible with using the Reference in feature. If the transmitted signal is using the Ultra Low Latency compression profile, the following message will be reported: "ULL Mode Not Supported".

Analog Audio Output Config - Select Analog Audio Channels (1/2; 3/4; 5/6; 7/8). The Audio Config allows you to select a pair of audio channels from the eight possible channels of audio from the SDI or HDMI Output (4K-R) that can be monitored from RCA audio output connectors on the device.

Figure 44. Device View AJA Config Controls (for a Dante AV 4K-R)

The screenshot displays the Dante Controller software interface for a Dante-AV-4K-R device. The 'AJA Config' tab is active, showing various configuration sections:

- Video Codestream Status:** Resolution: 1080p, Frame Rate: 29.97, Bit Depth: 12, Color Subsampling: YCbCr 422, Color Info: PQ / BT.2020, Compression: Broadcast.
- Video Output Status:** HDMI Resolution: 1080p, HDMI Frame Rate: 29.97, HDMI Bit Depth: 12, HDMI Color Subsampling: YCbCr 422, HDMI Color Info: PQ / BT.2020, HDMI Connection Status: Connected, HDMI HDCP Status: Off, HDMI HDCP Version: 1.4, SDI Resolution: 1080p, SDI Frame Rate: 29.97, SDI Bit Depth: 10, SDI Color Subsampling: YCbCr 422, SDI Transport: HD, SDI Color Info: PQ / BT.2020.
- Video Output Control:** Crop/Scale Selection: Auto, SDR/HDR: PQ, Colorimetry: BT2020, Ref In: 1080i59.94, Lock to Ref In: .
- Analog Audio Output Config:** Analog Selection: ch 1/2.

Four callout boxes on the left side of the image highlight specific controls in the interface:

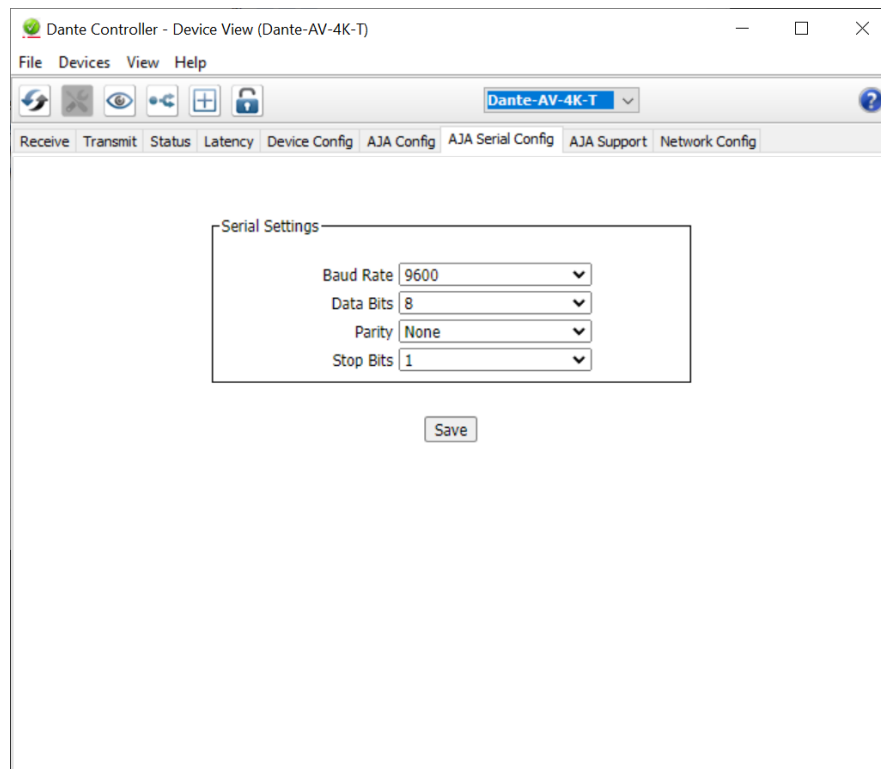
- Callout 1: 'Auto', 'Native', 'Crop 4K to UHD/Scale UHD to HD' (highlighted).
- Callout 2: 'Auto', 'SDR', 'PQ', 'HLG' (highlighted).
- Callout 3: 'Auto', 'BT.709', 'BT2020' (highlighted).
- Callout 4: 'ch 1/2', 'ch 3/4', 'ch 5/6', 'ch 7/8' (highlighted).

Serial Config Tab

Serial Settings

- Baud Rate (1200 to 230400)
- Data Bits (7/8)
- Parity (none/even/odd)
- Stop Bits (1/2)

Figure 45. Device View Serial Config Tab



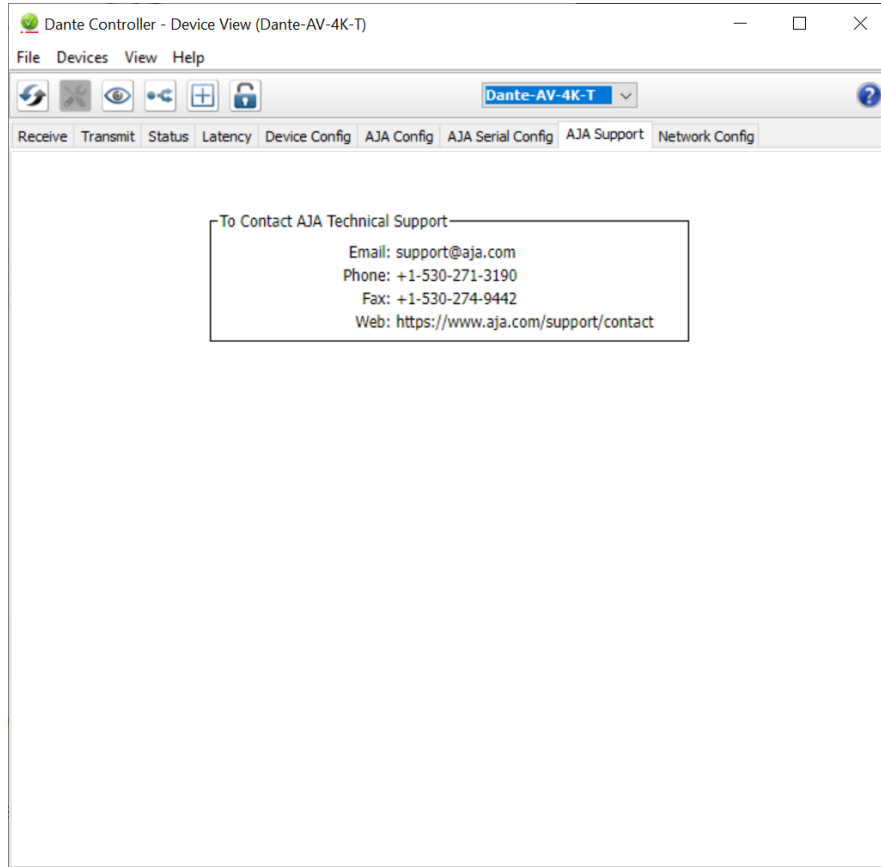
NOTE: See the **Serial Config** section of [Audinate's Dante Controller User Guide](#) for additional information.

AJA Support Tab

Support Settings

There are no user settings on this tab. It is purely informational.

Figure 46. Device View AJA Support Tab



Network Config Tab

Use the Network Config Tab to manually configure an IP Address or to obtain an IP Address automatically (default).

NOTE: Note: When using Dante AV devices, the Switch Configuration should always be set to "Switched" as Dante AV does not support the use of Redundant networks.

Configuration Parameters

- Switch Configuration
- Addresses
- Reset Device
 - Reboot
 - Clear Config

Figure 47. Device View Network Config Tab

Dante Controller - Device View (Dante-AV-4K-T)

File Devices View Help

Receive Transmit Status Latency Device Config AJA Config AJA Serial Config AJA Support Network Config

Switch Configuration

Current: Switched

New: Switched

Addresses

Obtain an IP Address Automatically (default)

Manually configure an IP Address

IP Address: 169 . 254 . 81 . 101

Netmask: 255 . 255 . 0 . 0

DNS Server: 0 . 0 . 0 . 0

Gateway: 0 . 0 . 0 . 0

Apply Revert

Reset Device

Reboot Clear Config

NOTE: See the **Network Config Tab** section of [Audinate's Dante Controller User Guide](#) for additional information.

Contacting AJA Support

AJA Technical Support is free and available to help you answer questions or resolve issues with any of your AJA products. When calling for support, please have all relevant information at hand prior to calling.

To contact AJA for sales or support, use any of the following methods:

Email: support@aja.com

Phone: +1-530-271-3190

Web: <https://www.aja.com/support/contact>

Shipping: 180 Litton Dr. Grass Valley, CA 95945 USA