DANTE-12GAM

Series Quick Start Guide

Figure 1. DANTE-12GAM and DANTE-12GAM Rear I/O Panel (above)

Overview

The DANTE-12GAM Series of standalone 12G-SDI converters send and receive SDI embedded audio to and from a Dante audio ecosystem.

The DANTE-12GAM Series provide a simple method of bridging audio to and from the Dante domain to source and destination equipment containing SDI I/O with embedded audio.

For more Dante information see https://www.getdante.com/meet-dante/.

The complete DANTE-12GAM Series User Guide may be found on the aja.com website: https://www.aja.com/products/dante-12gam#support.

Product Configurations

DANTE-12GAM

Standalone Mini-Converter with 12G-SDI Input and Output that can disembed 16 channels of audio in and embed 16 channels of audio out for a total of up to 32 channels of audio.

DANTE-12GAM-TR-LC

Standalone Mini-Converter with Dual 12G-SDI channel for a total of up to 64 channels of audio. The first 12G-SDI channel uses the BNC I/O connector, and the second SFP channel uses the Video SFP Cage with a FiberLC-TR-12G Dual LC 12G Fiber Transceiver SFP Module.

DANTE-12GAM-TR-BNC

Standalone Mini-Converter with Dual 12G-SDI channel for a total of up to 64 channels of audio. The first 12G-SDI channel uses the BNC I/O connector, and the second SFP channel uses the Video SFP Cage with a BNC-TR-12G Dual Coax Transceiver SFP Module.

NOTE: For instructions on how to add a second channel to a DANTE-12GAM using its SFP port, please see "Adding Second Video Channel to DANTE-12GAM" on page 7.

Front Panel

DANTE-12GAM's front panel display and control buttons are used for viewing status information and direct control of some features. A direct connection to a computer will be required to configure a Static IP Address and to access Dante Controller for routing and additional options.

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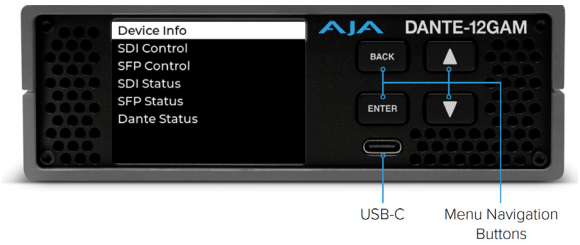
Figure 2. DANTE-12GAM Front Panel



Device Info - provides device information including IP configuration, hardware and software status, unit serial number, MAC address, application version and alarm status.

SDI Control - provides SDI control options for HANC Data, 3G-SDI Level B, Audio Embed/Pass and Internal Signal Generator.

SFP Control - provides SFP control options for HANC Data, 3G-SDI Level B, Audio Embed/Pass and Internal Signal Generator.

SDI Status - provides SDI signal lock status, data rate, video format, SDI 3G Level-B, color space, bit depth, EOTF and colorimetry information.

SFP Status - provides SFP signal lock status, data rate, video format, SDI 3G Level-B, color space, bit depth, EOTF and colorimetry information.

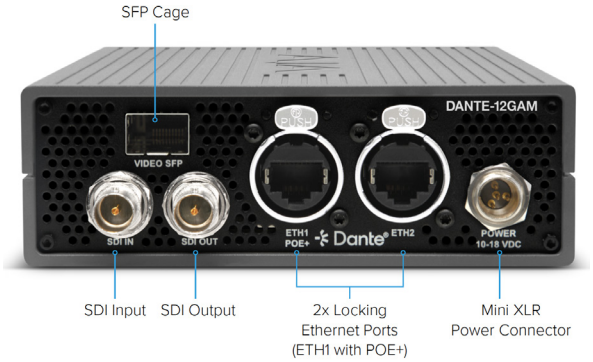
Dante Status - provides Dante audio channels status.

On any display screen:

- Navigate to the desired tab using the **Up Arrow** and **Down Arrow** buttons.
- Press the **Enter** button to open that tab's controls.
- Press the **Back** button returns to the previous screen.

Rear Panel Connections

Figure 3. DANTE-12GAM Rear Panel



- Connect the Primary Ethernet port using suitable CAT cable to an appropriate Managed Network PoE+ or PoE++ switch.
- Connect the approved DC Power Supply when not connected to a PoE+ or PoE++ switch.
- Connect a SDI video source (if one is available) to the SDI Input (SDI In).
- Install an SFP module for second video channel (optional).

NOTE: See "Adding Second Video Channel to DANTE-12GAM" on page 7.

- Connect an SDI video source (if one is available) to the second channel Video SFP module (BNC or LC Fiber).
- Connect your SFP video output to your fiber or other SDI equipment, depending on which SFP module is installed.

Overview of Operation

DANTE-12GAM control is done by three software apps and a front panel display:

- AJA's **eMini-Setup** application is used primarily for initial Static IP configuration. However, eMini-Setup is typically only needed when Static IP addressing is required for the DANTE-12GAM, for compatibility with the Dante Network.

NOTE: See https://www.aja.com/products/aja-emini-setup.

- AJA's **WebUI** (built-in web server) provides an intuitive browser-based interface for use of all DANTE-12GAM features and controls.

NOTE: For in-depth information about using the WebUI, consult the full DANTE-12GAM user manual: https://www.aja.com/products/dante-12gam#support.

- Audinate's **Dante Controller** application is used for channel(s) routing of Dante Audio Transmitters to Dante Audio Receivers, and signal configurations.

NOTE: A USB cable connection and a Windows or macOS host computer is required for eMini-Setup, WebUI and Dante Controller applications.

- The **Front Panel Display** works seamlessly with the same information displayed in the software applications. The Front Panel provides quick reference to status and settings at the device, when away from the computer.

AJA WebUI

WebUI Quick Start Launch

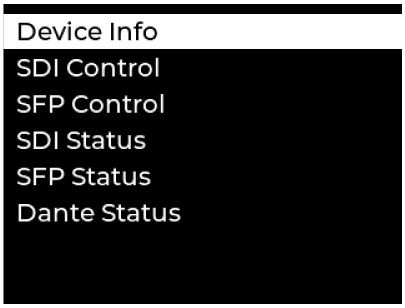
By reading the IP address on the DANTE-12GAM Front Panel Display after power-up, you have the option to immediately launch the DANTE-12GAM WebUI simply by entering the DANTE-12GAM's (default DHCP) IP address into a web browser.

The Front Panel Display and Control Buttons are self-evident enough that most users will intuitively navigate to the IP address. For convenience the procedure to display the IP Address is detailed below.

Copy Front Display IP Address to Browser

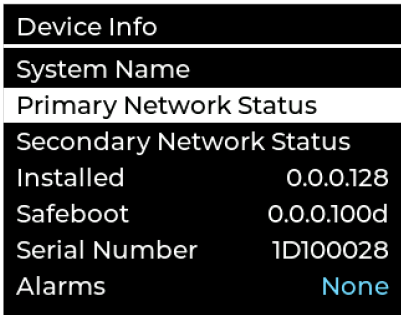
1. On the Home Screen of the DANTE-12GAM's Front Panel Display, use the Up and Down buttons to highlight the Device Info Tab.

Figure 4. Device Info Tab Selected



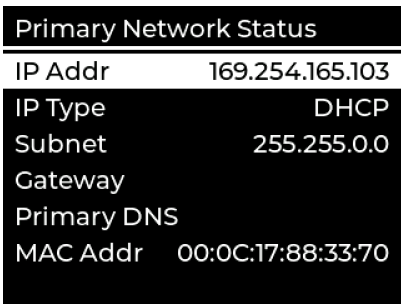
2. Press the Enter button to open the Device Info Screen.
3. Use the Up and Down buttons to highlight Primary Network Status.

Figure 5. Primary Network Status Selected



4. Press the Enter key to open the Primary Network Status Screen:

Figure 6. Primary Network Status Screen



5. Note down the default DHCP-assigned IP address ('IP Addr').
6. Open a web browser on your host computer and type that IP Address into the browser's URL field.
7. The DANTE-12GAM WebUI will immediately open.
8. You may bookmark (or 'favorite') that DANTE-12GAM IP Address URL in your browser, for future access.

NOTE: The bookmark will endure until DHCP assigns a different address to the DANTE-12GAM; if that occurs, the bookmark may result in a "Server not Found" error in the browser.

IMPORTANT: The DHCP-assigned DANTE-12GAM IP address may not be compatible with other Dante devices on your Dante Network. If that is the case, Dante Controller will show the DANTE-12GAM in its Device View and Network View windows, but the other Dante devices will not be found.

IMPORTANT: The DANTE-12GAM and other devices must be on a compatible subnet (typically 169.254.nnn.nnn) in order to appear in the Dante Controller application, and to be available therein for audio channel routing, multicasting as well as embedding and disembedding using the DANTE-12GAM.

Using the WebUI

Obtain the DANTE-12GAM's IP address either by:

- Using the Quick Start procedure.
  See "WebUI Quick Start Launch" on page 3.

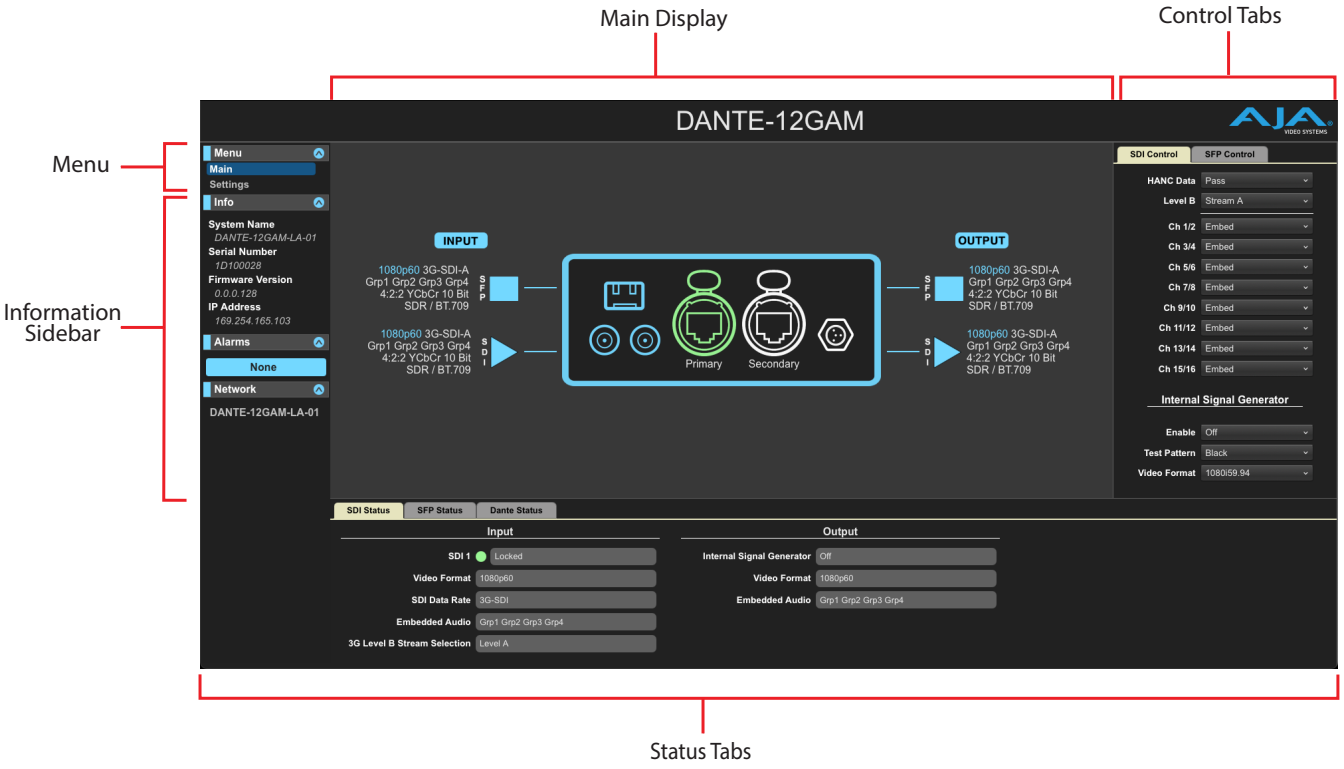
  - or by -

- Assigning the DANTE-12GAM a Static IP address using the eMini-Setup application. *See https://www.aja.com/products/aja-emini-setup.*

Open the WebUI by simply entering the *DANTE-12GAM* IP address into a web browser's URL address field.

NOTE: For complete information about the DANTE-12GAM WebUI see the full DANTE-12GAM user manual. View or download the PDF manual at: https://www.aja.com/products/dante-12gam#support.

Figure 7. DANTE-12GAM WebUI Control Groups (Panels)



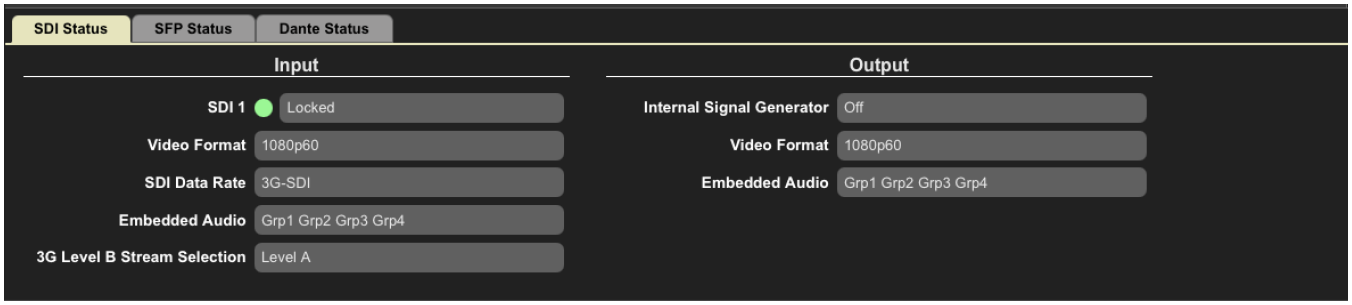
The **Information** pane at left shows system name, unit serial number, firmware version, and the currently assigned IP address.

The **SDI Control** and **SFP Control** tabs at right provide full control of signal configuration, as well as audio channel embedding (in eight two-channel pairs.) Also included are controls for configuration of the **Internal Signal Generator**.

The three **Status** tabs in the bottom pane indicate the status of SDI signal, SFP signal and Dante Audio channel presence, respectively.

The **SDI Status** and **SFP Status** tabs show (respectively) signal presence including SDI 1 (or SFP) Lock, SDI (or SFP) Signal Type, SDI (or SFP) Input Signal, SDI (or SFP) Output Signal, and which groups are present in the ingoing and outgoing embedded audio.

Figure 8. DANTE-12GAM WebUI SDI Status Tab



The **Dante Status** tab indicates which audio channels are being actively routed to the DANTE-12GAM through the Dante network, for the following four channel groups: (1-8); (9-16); (17-24); (25-32). The higher two channel groups require an SFP Module to be installed in the DANTE-12GAM.

Audinate Dante Controller

Dante Controller is available as a free download from the Audinate website:

https://www.getdante.com/products/software-essentials/dante-controller/.

Audinate provides a comprehensive online guide for Dante Controller:

https://dev.audinate.com/GA/dante-controller/userguide/webhelp/content/front_page.htm.

NOTE: Link above is for Dante Controller version 4.15.x. Inside Dante Controller is a link which will open the latest online guide for that specific version of the application.

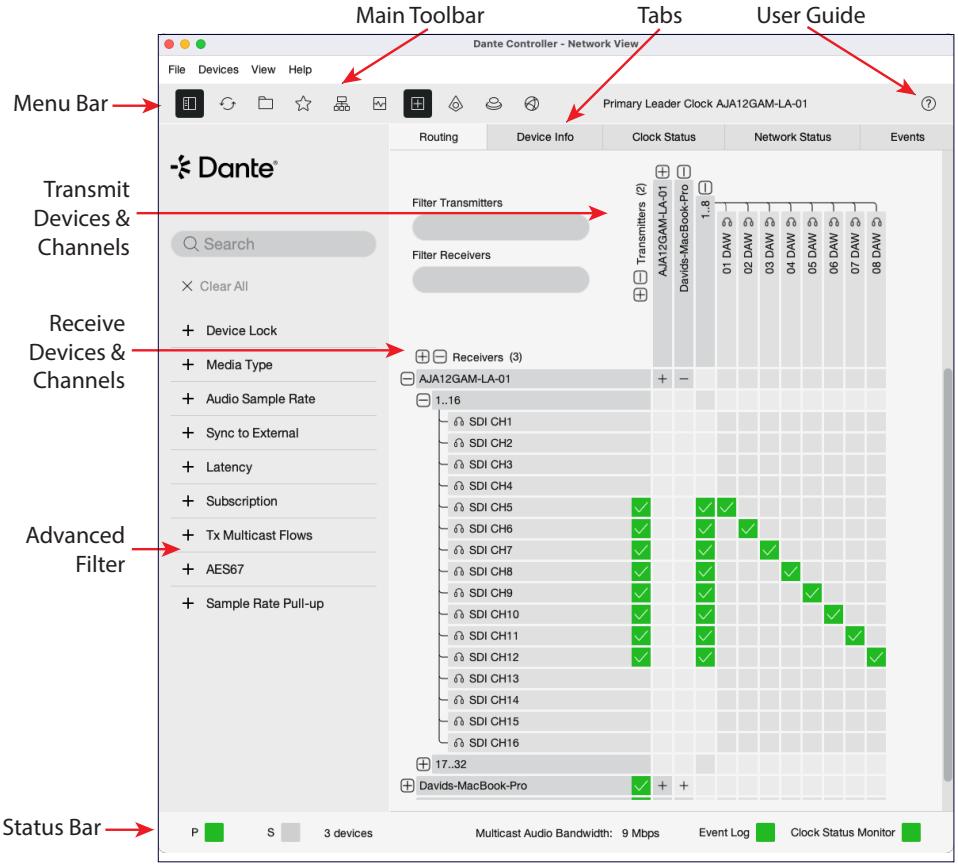
Using Dante Controller

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.

Click the '+' icons to view the channels, and click the '-' icons to collapse them. Transmitters and Receivers are shown below with Channel Groups enabled. Green check marks denote a connection is established and is fully functional.

On the left pane is a configurable advanced Filter, which is useful for large networks having many devices and many channels connected. For example, you can use the Filter to only show devices at a given audio sample rate, which is very helpful for troubleshooting subscription issues.

Figure 9. The Dante Controller User Interface (Network View/Routing Tab)



Tooltip: Hovering your mouse over a Subscription in the matrix will reveal a small popup showing live information about that Subscription route including the Dante devices connected, the type of Subscription, and the connection status.

Adding Second Video Channel to DANTE-12GAM

NOTE: See "Product Configurations" on page 1 for how these SFP Modules are used.

Figure 10. FiberLC-TR-12G Dual LC 12G Fiber Transceiver SFP Module by AJA

Figure 11. BNC-TR-12G Dual Coax Transceiver SFP Module by AJA

If you have initially purchased a single channel DANTE-12GAM but would like to later upgrade to the dual channel version, this can be accomplished by purchasing the unlock license directly from AJA or from an AJA authorized reseller.

Obtain License from AJA or an AJA Authorized Reseller

1. Confirm the specific SFP Fiber module(s) which is compatible with your DANTE-12GAM, by using AJA's SFP Configuration tool: https://www.aja.com/software/configurator
2. Order the License from the AJA online Shop: https://www.aja.com/products/dante-12gam/license;

-or-

from an AJA Authorized Reseller: https://www.aja.com/where-to-buy.

3. Obtain the unlock license required by DANTE-12GAM firmware to permit the second channel of video (including for embedded Dante audio).
4. Purchase that specific AJA approved SFP Fiber module from an AJA authorized reseller. To locate an authorized reseller, see "Where to Buy" link: https://www.aja.com/where-to-buy
5. Purchase that specific AJA approved SFP Fiber module from an AJA authorized reseller.

AJA Technical Support

AJA Technical Support is free and available to help you answer questions or resolve issues with any of your AJA products. To contact AJA Technical Support:

Email: support@aja.com

Phone: +1-530-271-3190

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

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