

QUICK START GUIDE

VIO 4K - Dante audio expansion interface

Ref. OPT-AUDIODANTE-VIO4K



ANALOG WAY®
Pioneer in Analog, Leader in Digital

OVERVIEW

The Dante audio expansion interface can instantly Dante-enable your VIO 4K multi-format converter. It provides 8 bidirectional audio channels and full Dante network audio redundancy over Gigabit Ethernet.



ABOUT DANTE

Audinate's Dante technology provides high performance digital media networking that meets the quality and performance requirements of professional live sound, AV installations and broadcast and recording systems. Designed to fully exploit the capabilities of today and tomorrow's networking equipment, Dante provides media transport mechanisms that eliminate many traditional audio network design restrictions. Dante makes it easy to set up robust, flexible digital audio networks with virtually unrestricted performance.

A Dante network can be designed with mixed Gigabit and 100Mbps network speeds, simultaneously support audio with different sample rates and bit depths, and even allow the design of network zones with different latencies. Dante is built on Internet Protocols — not just Ethernet. Because it uses standard IP over Ethernet, Dante is capable of running on inexpensive off-the-shelf computer networking hardware, and with the use of standard QoS can share installed networks with other data and computing traffic.

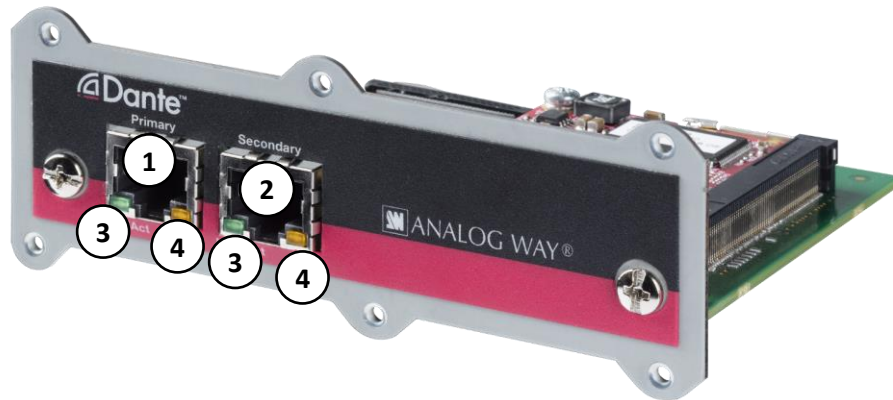
Dante provides sample-accurate synchronization and can deliver the very low latency required by professional audio. Dante's network-centric, audio-independent approach to synchronization allows perfectly synchronized playout across different audio channels, devices and networks, even over multiple switch hops. Dante makes networking a true plug-and-play process, allowing automatic device discovery and system configuration. Dante-enabled devices will automatically setup their network configuration and advertise themselves and their channels on the network, reducing complicated, error-prone set-up procedures. Instead of "magic numbers", networked devices and their input and output signals can be named to make sense to the user.

For more information, please visit the Audinate website at www.audinate.com

SPECIFICATIONS

Audio channels	8 bidirectional
Sampling frequency	44.1 kHz, 48kHz and 96kHz
Sample bit-depth	24 bit PCM
Network	2 x Gigabit Ethernet RJ45 connectors
Dante Operation modes	<i>Switch</i> – Use the Primary and Secondary ports to connect two different Dante devices to your Dante audio expansion interface without the need for an external network switch <i>Redundant</i> – Use the Secondary Port to plug in a second cable as a backup

CONNECTORS AND INDICATORS



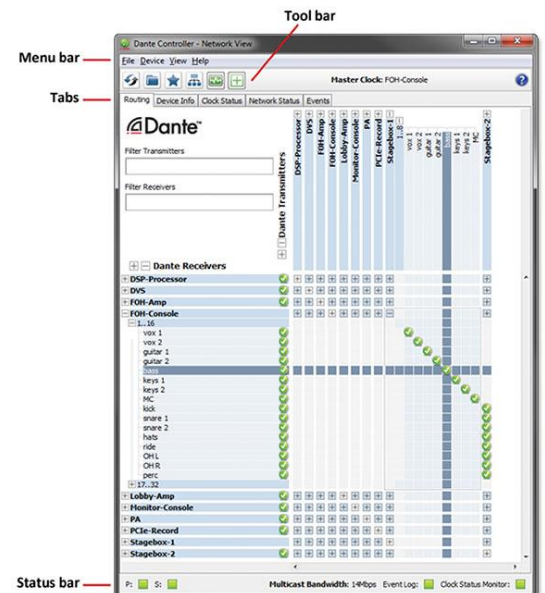
- 1 Primary RJ45 Gigabit Ethernet connector. Always used
- 2 Secondary RJ45 Gigabit Ethernet connector (Switch or Redundancy mode)
- 3 Link status / activity LED. Green indicates an established link; flashing indicates link activity
- 4 Gigabit link status LED. Orange indicates an established Gigabit Ethernet link.

DANTE CONTROLLER

Dante Controller is a software application provided by Audinate which allows users to configure and route audio around Dante networks. It is available for PCs running Windows (7, 8, and 8.1), and Apple Macs running OS X (10.7.5, 10.8.5 and 10.9).

Once you connect Dante Controller to a Dante network, you can:

- View all Dante-enabled audio devices and their Dante audio channels
- View device clock and network settings
- Set up audio channels (subscriptions) between channels on these devices, and view the state of existing subscriptions
- Change the labels of transmitted audio channels from numbers to names
- Customize the device latency (latency before playout) for either individual devices or groups of devices
- Save and reapply audio routing presets
- Edit presets offline, and apply as configurations for new network deployments
- View device latency statistics, for supported devices (including the OPT-AUDIODANTE-VIO4K card)
- View clock status statistics
- View multicast bandwidth across the network, and transmit and receive bandwidth for each device
- Inspect advanced configuration options including:
 - Changing the device name
 - Changing sample rate and clock settings
 - Viewing detailed network information
 - Viewing firmware and license information

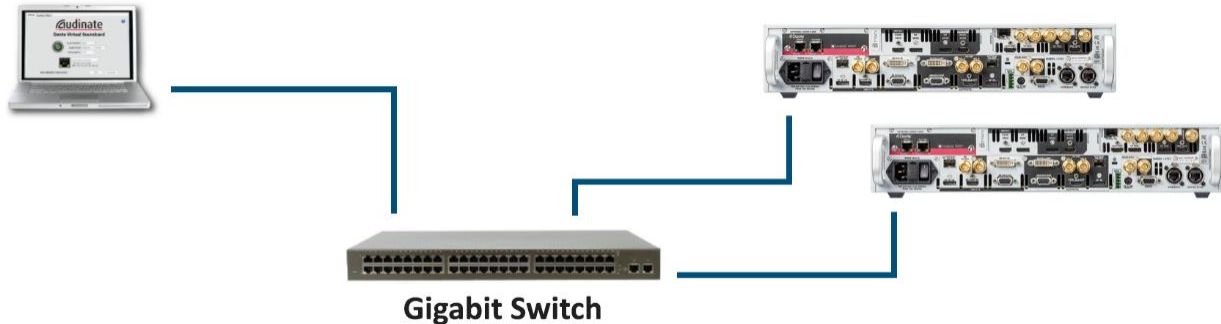


Please read the Dante Controller User Guide for information describing how to install, configure and use the Dante Controller software.

CONNECTION VIA A GIGABIT SWITCH

This configuration is applicable if you have more than just one Dante audio expansion interface and one PC or Mac. You will need to use a switch to connect the additional devices to the same network.

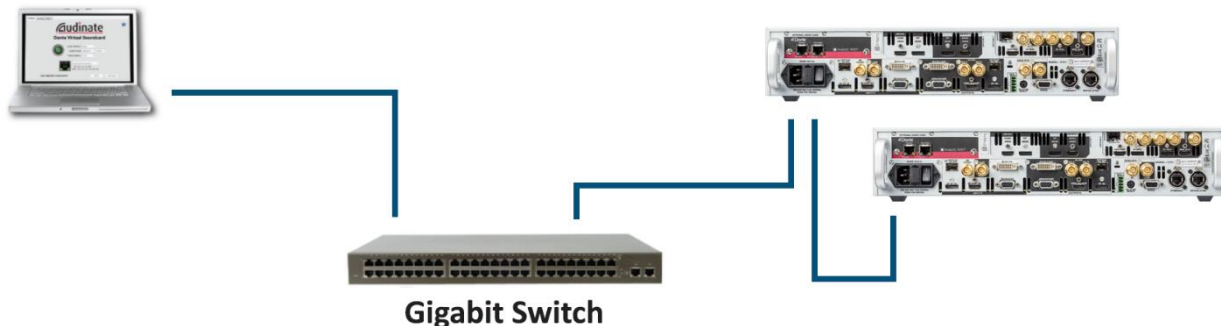
In this case, you should connect your PC or Mac(s), your Dante audio expansion interface and any other Dante-enabled equipment using a Gigabit switch:



DAISY CHAIN CONFIGURATION

You can connect multiple Dante audio expansion interfaces to each other in a daisy chain configuration. Daisy chaining requires that upstream Dante audio expansion interfaces are configured (using Dante Controller) to use Switched mode.

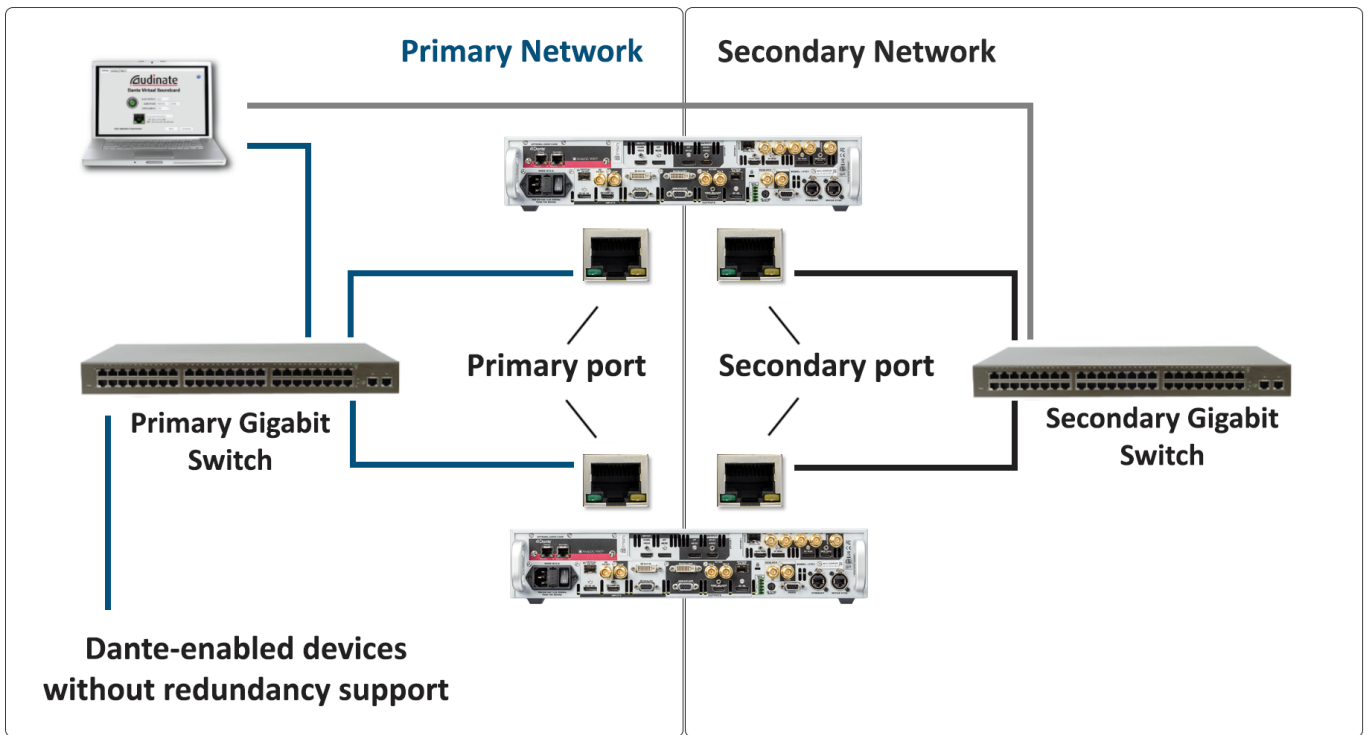
Daisy chain connections between Dante audio expansion interfaces are counted as network switch hops – the receive latency for the cards may need to be adjusted in Dante Controller (using the same guidelines as for independent network switches) if many cards are daisy-chained together.



CONNECTION VIA A REDUNDANT NETWORK

Your Dante audio expansion interface can also work in a redundant mode. When this mode is enabled, two separated Dante network are created. These networks are usually called “Primary” and “Secondary” networks. This mode allows you to reach the maximum security in a Dante network.

Important note: When in redundant mode, Primary and Secondary networks should **NEVER** be connected together. If so, the whole network will fail! Please always ensure that your devices are in the right mode and properly wired before adding them to the network.



SETTING IP ADDRESS

Your Dante audio expansion interface will automatically obtain an IP address from the network. To do so, a DHCP server MUST run inside the network. This server will give IP addresses to all devices automatically.

If no DHCP server is running on your network, Dante devices will start with a default IP address (typically “169.254.x.y”, with netmask “255.255.0.0”). Please ensure that your computer network interface card is properly configured to have access to this address range.

If you do not have a DHCP server in your network, or if you want to manage yourself all IP addresses to match your needs, you can switch the device to a “fixed” IP address mode.

Further information on IP setup for an audio system using Dante can be found in the FAQ’s on the Audinate website (<https://www.audinate.com/resources/faqs>).

UPDATING THE FIRMWARE

Dante Firmware Update Manager is a software application provided by Audinate that allows you to:

- Select a firmware update file for a particular Dante module type
- Discover matching Dante-enabled audio devices on your network
- Manage the firmware upgrade for these devices
- Restore Dante-enabled modules in failsafe mode

The latest firmware update file for your Dante audio expansion interface can be downloaded from the Analog Way website (VIO4K_1.0.2.0_bklyn2-3.10.0.19_fpga-4.0.2.1_vcxo-4.0.2.1.dnt)

Please read the Dante Firmware Update Manager User Guide for information describing how to install and use the Dante Firmware Update Manager software.



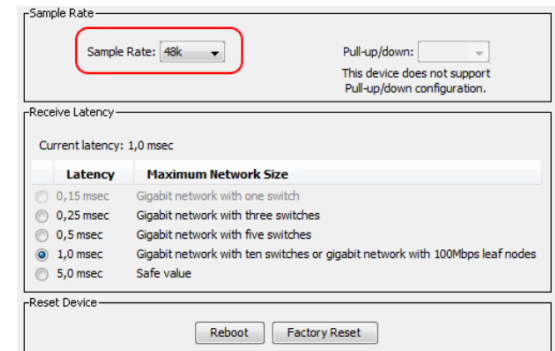
SAMPLE RATE

Dante audio expansion interface can work at 44.1kHz, 48kHz or 96 kHz sample rate frequency. The working sample rate can be easily changed using Dante Controller software. To do so, go to "Device -> Device View" in Dante Controller software. A new window will open. Select your device, and go to "Device Config" Tab.

To adapt the sample rate to fit your needs, simply use the Sample Rate combo box to choose desired frequency. It is mandatory to reboot the device after changing this setting (Sample rate can't be changed via the VIO 4K menu).

Please keep in mind that only device with the same sample rate can be patched together.

Note that the Dante audio expansion interface sample rate is independent from the VIO 4K internal sample rate.



WARRANTY AND SERVICE

This Analog Way product has a 3 year warranty on parts and labor, back to factory. This warranty does not include faults resulting from user negligence, special modifications, electrical surges, abuse (drop/crush), and/or other unusual damage. In the unlikely event of a malfunction, please contact your local Analog Way office for service.

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