Network Audio Interface

16 Channels Of Analogue and AES Audio Across a Dante Audio Network

DARK1616 (line inputs)
DARK1616M (mic/line inputs)
Dante Network Audio Interface

Highlights

- Dante Network Audio Interface
- Sample Rates Up to 192K
- 16 Channels Of Analogue & AES Audio
- Redundancy On Network Links & Power Supplies
- Loop Outputs On Loss Of Link Or Power
- Mic/Line Inputs With 127dB A/D Converters

Overview

Moving audio from A to B is now more flexible than ever. The Dante system allows audio links over networks to be un-compressed, low latency and reliable. The 16 inputs and outputs of the Dark1616 are parallelled in both analogue and AES for maximum flexibility, with the added benefit of exceptional quality mic amplifiers and huge 127dB dynamic range analogue to digital converters (DARK1616M). The Dante Controller software allows simple point to point or point to multipoint routing across a network of DARK1616 units. Glensound adds broadcast grade reliability to the Dante interface with a primary and redundant CAT5 link, a primary and redundant SFP/fibre link, and a primary and redundant power supply, with loops indicating link & PSU states.

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Network Audio Interface

DARK1616
Dante Network Audio Interface

Features

- **Network Audio Link Options**
  Links between DARK 1616s, DARK88s, or Inferno's across a network can be via:

  Network cable - Primary & Redundant
  Two CAT5 network cable connections provide a primary and redundant connection. The maximum range of this link is 100m.

  Fibre - Primary & Redundant
  Two SFP slots provide options for single, multi mode or bi-directional SFP modules, on a primary and a redundant connection. The distance of this link could be over many kilometres depending on the SFP module used.

- **Audio Inputs & Outputs**
  The Dark1616 has 16 analogue inputs and outputs, and 16 AES inputs and outputs All audio input and output connections are presented on DB25 sockets and follow the Tascam wiring convention for ease of sourcing pre made cabling.

- **Option Of Built In Mic Amps**
  The Dark1616M includes selectable mic amps on all analogue inputs making the inputs mic/ line. These are the highest quality remote gain controlled THAT Corporation analogue mic amps currently available, the outputs of which are converted to the digital domain by some of the best analogue to digital converters available, with 127dB of dynamic range. This allows the mic inputs to enter the audio network in the cleanest way possible. +48v phantom power is selectable.

- **Network Or Direct Linking**
  Two DARK1616s can be linked directly or as part of a Dante network.

- **Loop Outputs**
  The status of the fibre and CAT5 links are monitored and produce a closed contact on the rear panel in the event that any link should fail. There are also loop outputs for both power supplies in case there should be a failure. This allows connection to other devices or computers for monitoring of the link and power status of the DARK1616.

- **Remote Control**
  The DARK1616M includes an inbuilt web server for remote network control of the mic input gains. This allows an engineer on a PC in another part of the network to manage the input levels remotely.

- **Local Ethernet Switch**
  Each DARK1616 is a 4 port Ethernet switch. If your primary network link is on fibre using the primary and redundant connections, you can utilise the CAT5 connections for linking multiple units. Only one DARK1616 has to connect to the network, and the rest can daisy chain through any spare CAT5 or copper ports. Each will be presented on Dante Controller as a separate unit.

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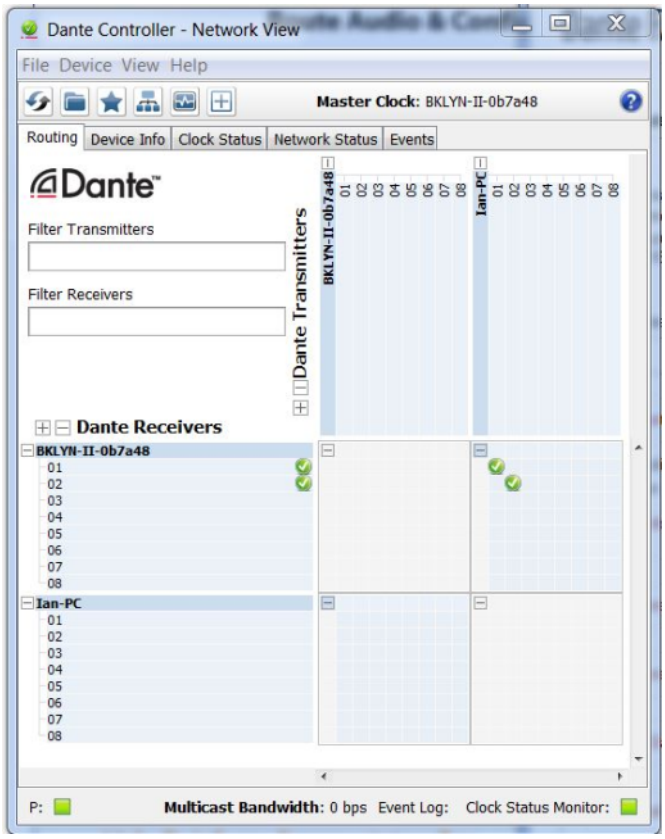
Dante Controller
Route Audio & Configure Devices On A Dante Network

Network Audio Interface

Overview

Dante Controller



Dante Controller is a free software application that enables you to route audio and configure devices on a Dante network. With automatic device discovery, one-click signal routing and user-editable device and channel labels, setting up a Dante network couldn't be easier. See the overview for more detail on Dante audio networking.

Dante Controller is much more than just a configuration and routing matrix. Dante Controller provides essential device status information and powerful real-time network monitoring, including device-level latency and clock stability stats, multicast bandwidth usage, and customized event logging, enabling you to quickly identify and resolve any potential network issues. You can also quickly and easily backup, restore, move, and reuse Dante network configurations using Presets, and edit Dante routing configurations offline.

Dante Controller is available for Windows and Mac OS X.

Features

- View all Dante-enabled audio devices and their channels on the network
- View and edit device clock and network settings
- Route audio between devices, and view the state of existing audio routes
- Rename devices and channels using your own friendly names
- Customize the receive latency (latency before playout)
- Save and reapply audio routing presets
- Edit presets offline, and apply as configurations for new network deployments
- Change sample rates and clock settings
- View multicast bandwidth across the network
- View transmit and receive bandwidth for each device
- View device performance information, including latency stats, clock stability stats and packet errors
- View comprehensive, configurable event logs

Dante overview

DANTE
The DANTE Audio Network Overview

Overview

Based on industry standards, Dante is an uncompressed, multi-channel digital media networking technology, with near-zero latency and synchronization. Dante is the preferred audio networking solution that has been adopted by more pro-audio AV manufacturers than any other networking technology. Interoperability is not a dream of the future, but a reality today. Hundreds of Dante-enabled products are available from the world's leading manufacturers, enabling you to mix devices from multiple manufacturers.

Economical and Versatile

One cable does it all. Dante does away with heavy, expensive analog or multicore cabling, replacing it with low-cost, easily-available CAT5e, CAT6, or fiber optic cable for a simple, lightweight, and economical solution. Dante integrates media and control for your entire system over a single, standard IP network.

Dante systems can easily scale from a simple pairing of a console to a computer, to large capacity networks running thousands of audio channels. Because Dante uses logical routes instead of physical point-to-point connections, the network can be expanded and reconfigured at any time with just a few mouse clicks.

Outstanding Quality

Since audio is transmitted digitally, you don't have to worry about the common analogue challenges of interference from other electrical equipment, crosstalk between cables, or signal degradation over long cable runs.

Easy To Install

Setting up Dante networks couldn't be easier. You no longer have to shudder when considering the deployment of an audio network. Even the most complex networks can be set up and configured quickly and easily with Dante, making system integration simple. Dante automatically handles the technical complexities for you.

Signal routing and system configuration with Dante is fast, simple, and incredibly flexible. Dante Controller is a powerful software application that manages devices on the network. Setting up a Dante network is typically just a matter of plugging devices into an Ethernet switch and connecting a computer to the network. All Dante devices are automatically discovered and displayed in Dante Controller, so you can be up and running in seconds. channels; multicast sends an audio stream to multiple devices simultaneously.

DANTE

The DANTE Audio Network Overview

Dante overview

Overview (cont...)

Easy to Use

With Dante Controller you can easily edit device names and channel labels, control sample rates, and set device latencies. There is no longer any need to remember device IDs or channel numbers. Instead, a single audio channel is referred to just like an email address: “commentatorA @ studio or ”news_mic @ voboothA”. Set it and forget it. Once the network is configured, the computer running Dante Controller can be removed from the network, and reconnected only if changes are required or system monitoring is desired. Signal routing and other system settings are stored safely in the Dante devices themselves, so they are automatically restored if a device is power-cycled.

Network Health and Management

Real-time information about the health of your network is essential for a proper understanding of its performance. There are a rich suite of diagnostic tools within Dante Controller, providing visibility into the network health status through features such as device latency monitoring, active clock health monitoring, packet error reporting, and bandwidth usage statistics.

Glitch-Free Redundancy

Many Dante-enabled devices support 'glitch–free' redundancy, enabling a secondary physical network to be provided, duplicating the audio traffic on the primary network. This automatically prevents any audio loss or interruption in the event of a connectivity problem on the primary network.

Unicast or Multicast

Dante audio channels can be configured as unicast or multicast as appropriate, to make best use of available bandwidth. Unicast provides a direct point-to-point stream for unique channels; multicast sends an audio stream to multiple devices simultaneously.

Fully Integrated with Windows and Mac OS X

With Dante Virtual Soundcard, your computer becomes a Dante audio interface for multitrack recording and media playback, using the computer’s existing Ethernet port — no additional hardware is required. Digital Audio Workstations, software-based media players, Skype, iTunes, Pandora, Spotify and other applications are easily integrated into your network via Dante Virtual Soundcard.

DARK1616

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