

This guide applies to Dante Release 1 (firmware 3.4.x). Some features will become available with Release 2 (firmware 3.5.x) due for release soon.



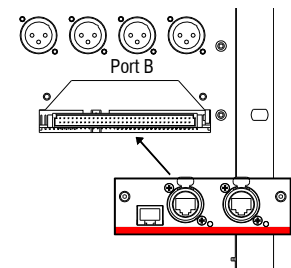
M-DANTE is one of several plug-in card options available from Allen & Heath that may be fitted to the iLive Series. It provides a multi channel digital audio and control network that can distribute signals between iLive, computers and 3rd party Dante™ enabled equipment.

Dante™ is a high performance, AVB ready industry standard digital media transport system developed by Audinate that runs over standard IP networks. Its main benefits for iLive are:

- 64 channel bi-directional audio plus control over CAT5
- Uses standard off-the-shelf computer networking equipment
- Easy to add, name, remove and rearrange devices
- Wide range of Dante enabled equipment becoming available
- Secondary port for redundant connection option (page 5 **Note 1**)
- Control port to bridge iLive or other network over Dante (**Note 2**)
- Sample accurate playback synchronisation
- Very low latency
- Gigabit ports
- Direct connection to computer for multitrack recording
- Dante Virtual Soundcard (DVS) software
- Dante Controller software for setting up the network

M-DANTE is supplied with **one Dante Virtual Soundcard licence** to enable a single computer. More can be purchased from Audinate if required. The token below is needed to obtain your licence Id. Please read the instructions provided within this guide.

Dante Virtual Soundcard Licence ID token:



Fitting to the fixed format iLive

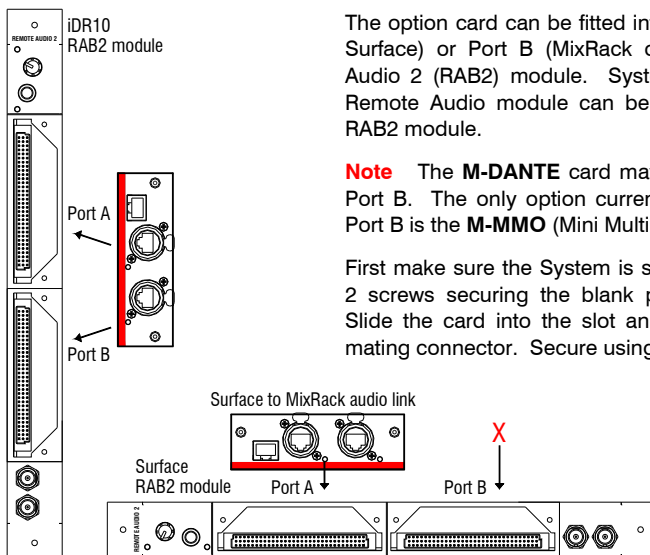
The **M-DANTE** card option may be fitted to Port B in the iDR-16, iDR-32, iDR-48 or iDR-64 MixRack, or the xDR-16 expander. First make sure the MixRack is switched off. Remove the 2 screws securing the blank panel over Port B. Slide the card into the slot and press it firmly into the mating connector. Secure the card using the 2 screws.

Fitting to the modular iLive

The option card can be fitted into the Port A (MixRack or Surface) or Port B (MixRack only) slot in the Remote Audio 2 (RAB2) module. Systems fitted with the older Remote Audio module can be upgraded with the new RAB2 module.

Note The **M-DANTE** card may not be fitted in Surface Port B. The only option currently supported in Surface Port B is the **M-MMO** (Mini Multi Out) card.

First make sure the System is switched off. Remove the 2 screws securing the blank panel over the port slot. Slide the card into the slot and press it firmly into the mating connector. Secure using the 2 screws.



Note The **M-DANTE** card requires iLive firmware **V1.71** or higher.

For further information on **M-DANTE** hardware refer to **Allen & Heath**:

www.allen-heath.com

For further information on Dante software, application and recommended networking components refer to **Audinate**:

www.audinate.com



This product complies with the European Electromagnetic Compatibility directive 2004/108/EC.

NOTE: Any changes or modifications to the equipment not approved by Allen & Heath could void the compliance of the equipment. Whilst we believe the information in these instructions to be reliable we do not assume responsibility for inaccuracies. We also reserve the right to make changes in the interest of further product development.

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Dante Virtual Soundcard (DVS) is a software application that turns your PC or Mac into a Dante enabled device allowing up to 64 channels of bi-directional audio for recording, processing and playback via a standard computer Ethernet port, either direct from the **M-DANTE** card or via an Ethernet switch. No additional hardware is required.

Note For minimum system requirements and support information please visit the Support section at: www.audinate.com

Note Install Dante Virtual Soundcard on the computer you intend to use for recording. **Once registered the licence cannot be transferred to another computer.**

Note Computer based recording applications use a lot of processing power and memory. For best results we recommend that you do not run other applications on the computer while recording. Use a different computer to run iLive Editor or other sound mixing applications you want to use at the same time.

Windows The DVS uses Steinberg's ASIO audio interface and can be used with any audio application that supports ASIO.

Mac OSX The DVS uses the standard Core Audio interface.

Please read the [Dante Virtual Soundcard User Guide](#) for information on how to install, configure and use the software.

To obtain your DVS Licence ID

- Locate your DVS token on the label on the front of this guide. This is of the format: XXXXX – XXXXX – XXXXX – XXXXX – XXXXX
- Go to the Dante page on the Allen & Heath web site and follow the link to the Audinate site. www.allen-heath.com/ilive/dante.
- If not already logged in you will be asked to log in or register before continuing.
- Enter your token string in the field provided. Once validated a page will be displayed with your Dante Virtual Soundcard Licence ID.
- Follow the links to download the Dante Virtual Soundcard software and User Guide. Choose the version you require – Mac OSX or Windows.
- Download the Dante Controller software and User Guide. Choose the version you require – Mac OSX or Windows.
- Install both applications and activate Dante Virtual Soundcard.

Note The DVS Licence ID is not the same as your token. Your token cannot be used to activate the software.

Dante Controller is a software application provided by Audinate which allows users to configure and route audio across Dante networks. It is available as a free download to registered users, and can be installed on the same computer that is running the Dante Virtual Soundcard.

Using Dante Controller you can view and configure all Dante enabled audio devices and their Dante audio channels.

Note To install Dante Controller on a PC you will need to download 'Bonjour' for Windows. A link is provided in the installer package.

Note You must have Dante Controller installed on a PC or Mac on your Dante network to control and route audio. Once your network is configured and audio set up you can remove the PC or Mac if required.

Please read the [Dante Controller User Guide](#) for system requirements and information on how to install, configure and use the Dante Controller software.

Setting up the network

Before starting you need to set up an Ethernet network connecting your iLive M-DANTE cards, a PC or Mac running Dante Controller and Dante Virtual Soundcard software, and any other Dante enabled audio devices you want to access on the network.

Note The ilive M-DANTE card handles 64x64 channels of high quality 24bit/48kHz audio together with control traffic over a single link. **For full routing capability and glitch-free reliable operation it is important to use network switches, components and recording computers that support Gigabit Ethernet and are of a high specification.** Refer to the Audinate web site for more information on system requirements.

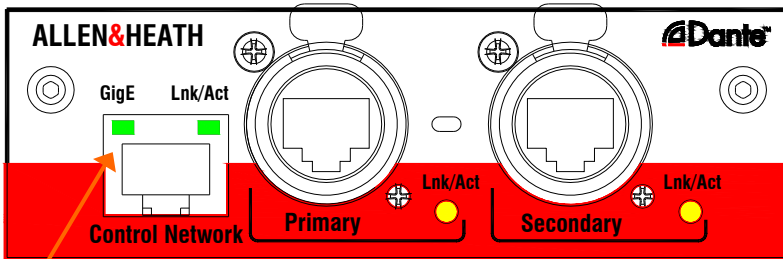
Cables Use CAT5e or CAT6 cable up to 100m (330'). For longer distances use an optical fibre interface. Allen & Heath can supply an 80m drum of touring grade Neutrik Etherflex cable (AH7000).

Network switch Dante connects to multiple devices via a star topology using a switch. Use a good quality multicast capable Gigabit switch which supports Diffserv (DSCP) Quality of Service (QoS) with strict priority and 4 queues.

IP addressing As with any Ethernet network, each Dante devices including the iLive M-DANTE cards needs a unique IP address. Dante makes this very easy by using Audinate's 'Zen' Zero Config auto addressing protocol.

Recording computer Choose a high specification PC or Mac with a Gigabit Ethernet interface. It should be set for DHCP to obtain its address automatically (typical default). Install both the Dante Virtual Soundcard and the Dante Controller applications.

Connections and indicators



Link status One LED indicates network activity. The other indicates that a Gigabit Ethernet link has been established.

Primary Port Gigabit Ethernet, Locking EtherCon RJ45 connector. The **main port**. Connect to the Primary port on another Dante equipped device to link the devices directly. Connect to a Gigabit switch to connect multiple Dante enabled devices. Connect to the Ethernet port on a PC or Mac to allow audio recording or playback via the Dante Virtual Soundcard.

Link status Flashes to indicate network activity.

Control Network Gigabit Ethernet, RJ45 connector. Can be used to connect a computer running Dante Controller for setting up the network. See **Note 2** below.

Secondary Port Gigabit Ethernet, Locking Ethercon RJ45 connector. Independent network that can be used for **dual redundant connection**. See **Note 1** below.

Important Notes regarding Release 1 Dante firmware (version 3.4.x):

Note 1 Release 1 does not currently support the Secondary connection dual redundant link. This feature will be introduced in Release 2 due shortly.

Note 2 Release 1 does not currently support a mix of Gigabit and Fast Ethernet (100 Mbit) on its ports. Use Gigabit network devices including the switch and computers throughout the Dante network. Do not bridge the 100 Mbit iLive Network to Dante using Release 1 firmware.

Note 3 Do not use the Control Network port for recording. This port is intended for connecting a computer running Dante Controller. Use the Primary port or a port on a Gigabit switch for the recording as shown in the diagrams later in this guide.

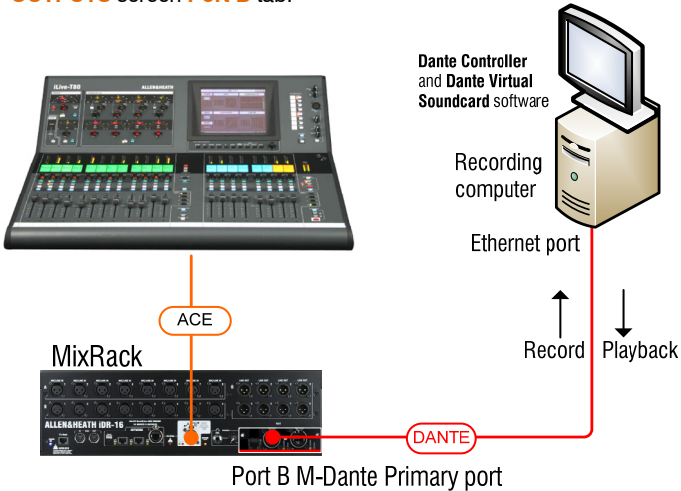
A Firmware Update application will become available from Audinate when the Release 2 firmware is ready.

For more information on the current version of Audinate Dante firmware running on M-DANTE please read the **Brooklyn II Release Notes** at:

www.audinate.com/allen-heath/M-DANTE/BrooklynII

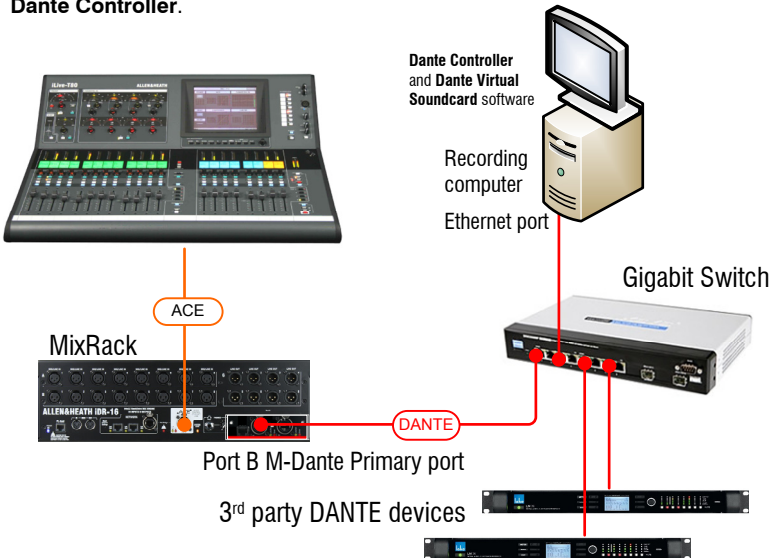
Connecting to a single device

This example shows connection to a PC or Mac for multitrack recording. Use the M-Dante Primary port. Route signals to the device using the iLive **OUTPUTS** screen **Port B** tab.



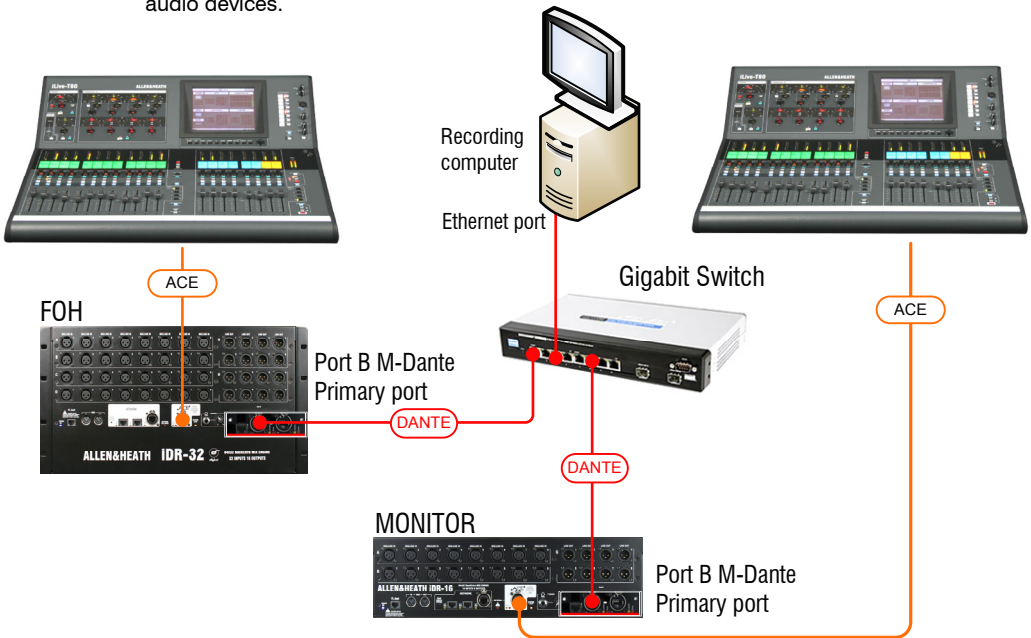
Connecting to multiple devices

This example shows connection to a PC or Mac for multitrack recording as well as two other Dante equipped devices such as signal processors or amplifiers. Route signals to Port B using the iLive **OUTPUTS** screen **Port B** tab. Route signals from the Dante channels to the devices using **Dante Controller**.



Linking iLive systems for FOH/Monitor

This example shows two iLive system using Dante as a digital mic splitter to share the Mic Preamps for FOH and Monitor mixing. The Gigabit switch is needed if you want to add recording and other Dante equipped audio devices.



Routing and clocking signals

Route signals to the 64 channels of Port B using the iLive **OUTPUTS** screen **Port B** tab. Route signals from the Dante channels to the devices using **Dante Controller**.

Return signals from the Dante network to the iLive channels using the **PREAMP** screen Source menu. To route a range of channels use the Remote (Port B) option in the **MIXRACK / Mixer Pref / Quick Input Source Setup** screen.

Remember to set the iLive **Audio Clock Source** to **Internal** on the Master MixRack, and to **Remote Port B** on the Slave MixRack. Use **Dante Controller** to set only the Master MixRack as the 'Preferred master', and 'Slave to external wordclock'.

For further information on setting up and using the Dante network please refer to the user guides that come with **Dante Controller** and **Dante Virtual Soundcard**. Also refer to the 'Understanding M-DANTE' document at www.allen-heath.com, and to further information at www.audinate.com.

