# ClearOne®

**CONNECT™ Dante™**
Network Audio Bridge for CONVERGE® PRO & SR Products

## Quick-Start Guide

# Table of Contents

# THE CONNECT DANTE

The CONNECT Dante network bridge adds Dante network audio capabilities to CONVERGE PRO and CONVERGE SR products. Up to eight CONNECT units can be attached to a single CONVERGE Pro/SR stack.

The following diagram shows how two CONVERGE Pro/SR stacks within the same site can connect over a LAN network.
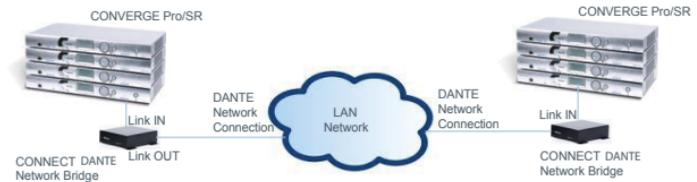


**IMPORTANT:** CONVERGE Pro/SR systems and all connected units must operate at the proper software and firmware versions.

## Software and Firmware Versions Required

- 4.5.x - CONVERGE Console Installer
- 4.4.x - CONVERGE Console Application
- 4.3.x - Firmware for all units including Converge Pro, SR1212, Beamformer, CONNECT Dante and CobraNet.

The latest versions of the software and firmware can be found on the ClearOne website at:

   **http://www.clearone.com/resources#professional_audio**

## QUICK-START OVERVIEW

Installing and using the CONNECT Dante bridges in your CONVERGE Pro/SR site is subject to the following rules:

1. The CONNECT Dante can only be used with CONVERGE Pro/SR systems operating at version 4.3.X or greater, and requires that the firmware on the CONVERGE Pro/SR be updated.

2. You must have a CONVERGE Pro 840T, 880, 880T, 880TA, 8i, TH20, VH20 and/or SR1212, SR1212A in the site.

3. The CONNECT Dante bridge can only interface with the Dante network architecture, but can operate in sites including CONNECT CobraNet™ bridges.

### Quick Start Summary

These steps must be done **in the following order** to use the CONNECT network audio bridge in your CONVERGE Pro Site:

1. Update the CONVERGE Pro Software to version 4.4.X using the software installer version 4.5.X.

2. Update the CONVERGE Pro firmware to version 4.3.X using CONVERGE Console.

3. Update the firmware of all devices on the site to 4.3.X. (CONVERGE Pro units, Beamforming Microphone Arrays, CONNECT CobraNet, etc.)

4. Set the Device ID of the CONNECT Dante network audio bridge using the Device ID rotary selector switch at the back of the device.

5. Connect the CONNECT Dante network audio bridge to the updated CONVERGE Pro/SR via the Expansion bus (E-bus).

6. Configure the CONNECT Dante bridge with CONVERGE Console.

7. Configure the Dante network using the Dante Controller software.

## UPDATE THE CONVERGE PRO FIRMWARE

After updating your CONVERGE Console software, you must update your CONVERGE firmware to version 4.3 or higher. All CONNECT network audio bridges are not recognized by systems running older versions and the 4.3.X versions offer significant upgrades from previous versions.

ClearOne strongly encourages users to upgrade all firmware to the latest release version. Instructions for updating from version 1.X 2.X and 3X are detailed later in this document.

> NOTE: Save the CONVERGE Console site file before performing any firmware upgrade.

1. Download the 4.3.X firmware file to the stack of units.

2. The units will default and reboot after the download of 4.3.X firmware.

3. Units are fully upgraded.

4. Verify units have been upgraded by checking the firmware version on the front panel.

Reconnect all E-bus cables, if needed, to complete the stack of units.

## SET THE DEVICE ID

Set each CONNECT unit to a unique ID using the Device ID selector rotary switch on the back of the unit. (Range 0-7) Each CONNECT unit in any site needs a unique Device ID. Only 8 units are allowed in any site.



Device ID Rotary Selection Switch

## CONNECTING THE CONNECT DANTE UNIT

Connect the CONNECT Dante units to the CONVERGE Pro/SR stack via the E-bus connections using CAT5/CAT6-24AWG solid conductor RJ45 cables. Power to the CONNECT Dante is supplied by a standard power adapter supplied with the unit.

E-bus LINK IN from Stack

Primary to Dante Network

Device ID Switch

5V DC Power Input

LINK IN

POWER   DID   LINK OUT   PRIMARY   SECONDARY   LAN

E-bus LINK OUT

Secondary to Dante Network

LAN Passthrough - Connects to CONVERGE, PC, or any device requiring Ethernet
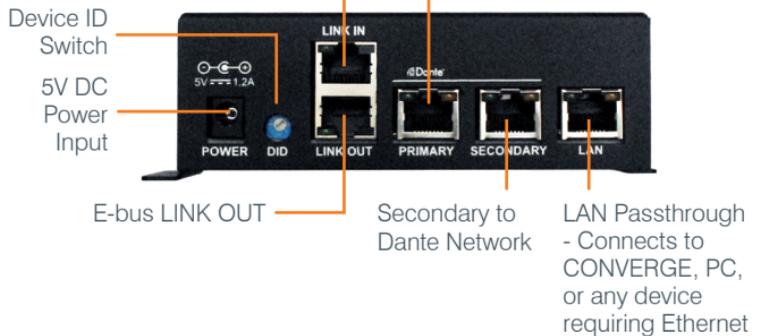
## UPDATING CONNECT AND BEAMFORMING MICROPHONE ARRAY FIRMWARE

NOTE: All CONNECT Dante, CONNECT CobraNet, and Beamforming Microphone Array units in the site must be running the same level of firmware (4.3.X) to be compatible with the CONVERGE Pro/SR units in the site.

1. Connect the E-bus cable between the CONVERGE Pro units and the CONNECT audio network bridge or Beamforming Microphone Array.

2. Connect the CONVERGE Pro units with CONVERGE Console.

3. Open the **Firmware Loader** screen.

4. Browse for the corresponding firmware file:
   **connect_dante.mdo** for the CONNECT AVB
   **cobranet.mdo** for the CONNECT CobraNet
   **bf_mic.mdo** for the Beamforming microphone Array

5. Download the firmware.

6. The CONNECT audio network bridge will default and reboot after the download of the firmware. (Check the **Unit Properties** screen for the device to verify the level.)

7. Units are fully upgraded. (All units connected via the E-bus on the site are simultaneously updated.)

8. Restore the saved site file to the system using CONVERGE Console.

## ADDING CONNECT NETWORK BRIDGES TO SITES

Each CONNECT network bridge must be added to the site using the CONVERGE Console 4.3.X and later software. This software also provides the capability selecting the audio channels and other characteristics. Refer to the online help available with the CONVERGE Pro/SR software for adding devices.

### Adding the Bridge

Using the CONVERGE Console software, **ADD** the CONNECT Dante network bridge to the site using the drop-down menu.
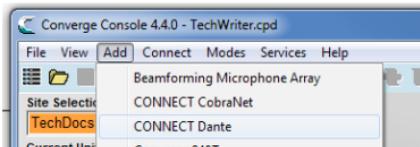


### Editing the CONNECT Network Bridge in Site

Select the CONNECT audio network bridge from the **Site View** tab in Console, and the device appears under the **Site** button on the right-hand portion of the screen.



Click on the device box and the **Unit Properties** appear for the device.

### Dante CONVERGE Console Settings

The next two figures show the **Unit Properties** tabs for the CONNECT Dante bridge.

Under the **General Tab**, set the **Device ID** (DID) to match that of the rotary selection switch of the CONNECT Dante device.
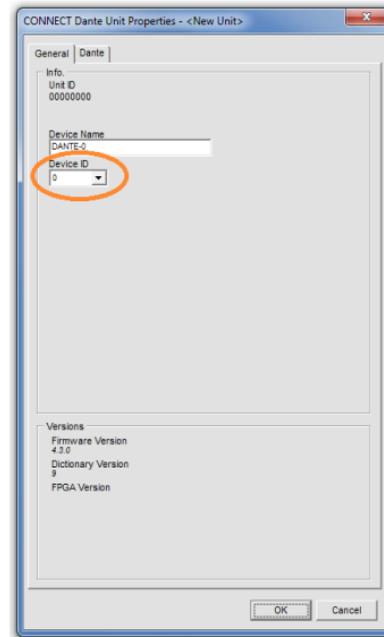
## CONNECT NETWORK BRIDGES

Under the **Dante Tab**, connection information from the Dante network is displayed.
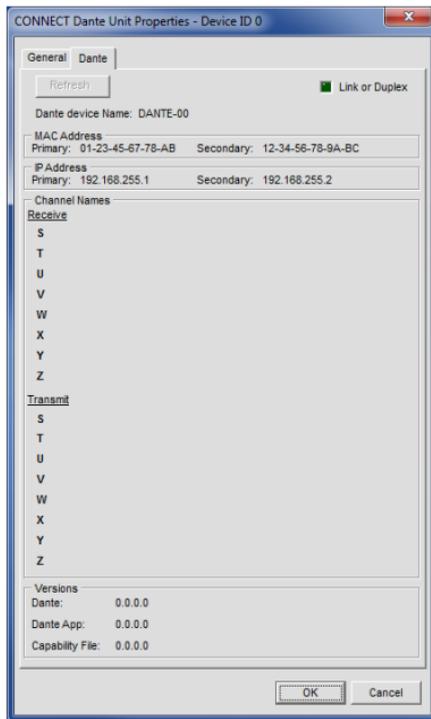
**Refresh** - Click the **Refresh** button to update the information from the CONNECT Dante unit.

**Link or Duplex Indicator** - Shows if a link is present on either the Primary or Secondary port.

**MAC Address** - The Primary and Secondary MAC Addresses.

**IP Address** - The IP Addresses of each network port.

**Dante Device Name** - Name of the CONNECT Dante unit set by the Dante Controller.

**Channel Names** - The fixed E-bus Channels (S through Z) and their correlating transmit and receive channel names as set by the Dante Controller .

**Versions** - The Dante version information.
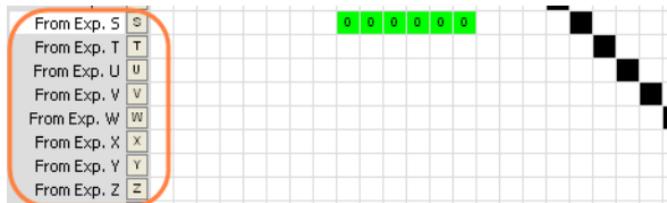
Note: These channels will not appear in the Matrix if the CONVERGE Console has Digital Microphone Input Processing enabled in the Site Properties, Management tab.

### Dante Controller Settings

The Dante Controller software, provided by Audinate™, is used to discover, control, and configure all devices and services on the Dante network including the CONNECT Dante network bridges. This software and its documentation can be obtained from the ClearOne website:

**http://www.clearone.com/resources#professional_audio**

### Configuring CONNECT Dante with Dante Controller

Using the Dante Controller software, perform the following:

1. Connect a PC with Dante Controller Software installed to the Dante Network.

2. Connect the Primary ports of the CONNECT Dante units to the Dante Network.

3. Use the Dante Controller Software to discover the CONNECT Dante units

4. Use the **Routing** tab on the Dante Controller Software to route audio between the CONNECT Dante units

5. Use the **Matrix Screen** on the CONVERGE Console software to route audio to/from Expansion Bus S-Z. Dante channels 1-8 are associated with Expansion Bus channels S-Z on both the input and output cells.

Note: You are unable to route audio across two Dante units without the Audinate Controller software

### Digital Microphone Input Processing

Beginning with CONVERGE Console 4.4.X, Digital Microphone Input Processing is included to enable processing CONNECT Dante or CONNECT CobraNet audio through the input stage instead of the audio on the analog inputs. This feature disables the rear panel analog Mic/Line inputs and instead the uses the audio coming in from a CONNECT Dante or CobraNet Bridge. This allows microphones on a Dante or CobraNet network to be processed using AEC, Noise Suppression, AGC, Filtering, Gating, etc.

With this enabled, the analog output audio is mirrored to the digital outputs on the CONNECT Dante or CobraNet Bridge.

Details for these controls will be detailed in the CONVERGE Console 4.4.X documentation.

## UPGRADING FROM OLDER VERSIONS OF CONVERGE FIRMWARE

Please follow the steps listed below to upgrade your firmware:

NOTE: Save the CONVERGE Console site file before performing any firmware upgrade.

### Upgrading from CONVERGE Pro 3.X firmware

1. Remove any 1.X, 2.X and 4.X units from the stack by disconnecting the expansion bus link cable from the 3.X units.

2. Re-connect to the 3.X stack with CONVERGE Console.

3. Download the 4.3.X firmware file to the stack of units.

4. The units will default and reboot after the download of 4.3.X firmware.

5. Units are fully upgraded.

6. Verify units have been upgraded by checking the firmware version on the front panel.

Reconnect all E-bus cables, if needed, to complete the stack of units.

### Upgrading from CONVERGE Pro 2.X firmware

1. Remove any 1.X, 3.X and 4.X units from the stack by disconnecting the expansion bus link cable from the 2.X units.

2. Re-connect to the 2.X stack with CONVERGE Console.

3. Download the 4.3.X firmware file to the stack of units.

4. The units will default and reboot after the download of 4.3.X firmware. The 2.X to 4.3.X upgrade requires the firmware to be loaded twice to complete the version upgrade.

5. Units are fully upgraded.

6. Verify units have been upgraded by checking the firmware version on the front panel.

Reconnect all E-bus cables, if needed, to complete the stack of units.

### Upgrading from CONVERGE Pro 1.X firmware

1. Remove any 2.X, 3.X and 4.X units from the stack by disconnecting the expansion bus link cable from the 1.X units.

2. Re-connect to the 1.X stack with CONVERGE Console.

3. Download the 4.3.X firmware file to the stack of units.

4. The units will default and reboot after the download of 4.3.X firmware. The 1.X to 4.3.X upgrade requires the firmware to be loaded twice to complete the version upgrade.

5. Reconnect to the stack with CONVERGE Console. Download 4.3.X a second time to the units. The units will reboot.

6. Units are fully upgraded.

7. Verify units have been upgraded by checking the firmware version on the front panel.

Reconnect all E-bus cables, if needed, to complete the stack of units.

# CONNECT NETWORK BRIDGES

## PART NUMBERS

910-151-807    CONNECT Dante Network Bridge

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