



# FWD8000

## Dante™ enabled four wire box



by  
CTP Systems



## **Product warranty**

This unit is guaranteed for a period of one year from dispatch of the goods. This guarantee is a return to base warranty. In the unlikely event of a fault the goods should be returned to CTP Systems in the UK or your local dealer.

This equipment is CE marked and conforms to the following directives:

Low Voltage Directive: EN60065

Emissions: EN55103.1

Immunity: EN55103.2

### **WEEE**

CTP Systems are registered for Business to Business sales of WEEE in the UK. Our registration number is WEE/DF0509VR. This is why our product has a ridiculous picture of a dustbin on the back.

### **RoHS**

The product conforms to the RoHS Directive 2002/95/EC for restriction of the use of hazardous substances in electrical and electronic equipment.

This unit was designed and manufactured in the UK by CTP Systems Limited, Unit 4, Clinton Business Centre, Lodge Road, Staplehurst, Kent TN12 0QF.  
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**Dante** is a trademark of Audinate Pty Ltd.



## **Overview**

The FWD8000 is a network eight input eight output four wire unit with eight IFB inputs in a 1RU case. In addition to the Dante ports the first four 4 wire circuits are mirrored on the rear of the unit as analogue XLRs as are the first two IFB inputs. Many parameters such as IFB dim level and 'all talk' functions may be programmed into the unit using the front panel controls.

There are both primary and secondary network connections to allow for redundancy or an additional switch connection for daisy chaining units. The FWD8000 is suitable for Gigabit network operation which is highly recommended.

When using network four wire units in combination with Dante Controller the user effectively has a peer to peer programmable talkback system.

## **Power**

The FWD8000 may be powered PoE, by 12 volts DC or mains powered 110-240 VAC 50/60 Hz. Two or more power sources may be used at once effectively providing power supply redundancy.

## **Setting Up**

The FWD8000 should be used in conjunction with Dante Controller software available from <https://www.audinate.com/products/software/dante-controller>. As supplied the FWD8000 will appear in Dante Controller as FWD8000-nnn.

Connect the primary RJ45 to your router. If redundant operation is required connect the secondary RJ45 to the redundant network router. Alternatively the secondary RJ45 may be used as a router output for forwarding on to additional Dante equipment. This function should be configured in Dante Controller.

When the unit is powered and after successful network connection the LEDs by the RJ45 connectors will illuminate. The red LED will illuminate if you have a successful connection. The green LED will blink to show activity on the port or will be off if no link has been established.

## **Analogue Inputs/Outputs**

The FWD8000 has four analogue 4w inputs, four analogue 4w outputs and two analogue IFB inputs. These mirror network inputs and outputs 1 to 4 and network IFB inputs 1 and 2. The analogue I/O may be used in conjunction with the network connections, for example you can connect an analogue IFB input locally and use that four wire as a network output. The four wire outputs connect simultaneously to the analogue and network outputs. If both the analogue and network inputs to a given four wire are connected then the inputs will be mixed together.



## **Talk keys**

Press the 4w talk key down for momentary operation or up to latch it on. The red LED will illuminate. The 4w audio input will dim the incoming loudspeaker audio for that channel (this may be defeated or adjusted via setup, more of that later). When the talk key is pressed the IFB input, which is normally routed to the four wire output, will be dimmed in level or cut as required (again selected via setup).

## **Vox lights**

These will illuminate green when incoming audio above -36dBFS (or -18dB ref. PPM 0) is present on the four wire input. When audio is removed they will remain illuminated for approximately 8 seconds.

## **IFB mon**

The IFB monitor button enables the user to listen to the incoming IFB audio, especially useful as a confidence check. The button will illuminate blue when monitoring the IFB.

When selected the incoming audio monitoring for that channel is switched away from the four wire input to the IFB input. Press again to switch back to incoming audio.

## **Group talk**

This key enables the user to talk to a selection or all of the four wire outputs. The selection may be programmed in the setup menu. When selected all programmed keys will illuminate when Group Talk is activated. Any keys that are latched to 'talk' but not programmed to the group will switch off while group talk is active.

## **Mic cut and Hot mic output, loudspeaker cut.**

There is a 'hot mic' output that is normally on (regardless of the talk key positions) available as a network output. Selecting Mic cut will kill the microphone output to all the four wire circuits and to the 'hot mic' output. The switch will illuminate blue when the mic is cut.

The internal speaker will automatically cut when a headset connector is plugged in.



## Programming

Many features of the FW8000 may be adjusted to suit the user.

To put the unit into programming mode press and hold the cut button on channels 1 and 8. Keep the buttons pressed for around 5 seconds until all the cut buttons start flashing, then release both buttons. The unit is now in program mode.

Press the required cut button to select the function and press the IFB mon key to select the value as listed below. Press cut button channel 6 at any time to save settings and exit program mode. Either unit may be reset to factory default settings by powering the unit up while pressing the mic cut button.

### Cut button 1 – Mic gain

IFB mon button

- 1 – Auto (default)
- 2 - +60dB
- 3 - +54dB
- 4 - +48dB
- 5 - +42dB
- 6 - +36dB

### Cut button 2 – IFB Programme dim level

IFB mon button

- 1 – -6dB
- 2 - -12dB
- 3 - -18dB (default)
- 4 – 24dB
- 5 - -30dB
- 6 - off

### Cut button 3 – LS dim level

IFB mon button

- 1 – -6dB
- 2 - -12dB
- 3 - -18dB (default)
- 4 – 24dB
- 5 - -30dB
- 6 - off

### Cut button 4 – Talk latch defeat

IFB mon buttons toggle on and off. Illuminated IFB buttons will defeat the talk latch on the relevant channel. Default is all off.

### Cut button 5 – All talk

IFB mon buttons toggle on and off. Illuminated IFB buttons will be included in the 'group' talk. Default is all on.



## Sample rate

The FWD8000 can to operate at sample rates of 44.1 and 48kHz. 16 or 24 bit.

## Power

PoE class 4

12 volts DC 1A

100-240VAC 50/60 Hz

Mains consumption <15 Watts

Actual power consumption will normally be far less than detailed above. The values shown allow for high level loudspeaker audio monitoring.

## Mechanical

1RU case 200mm deep.

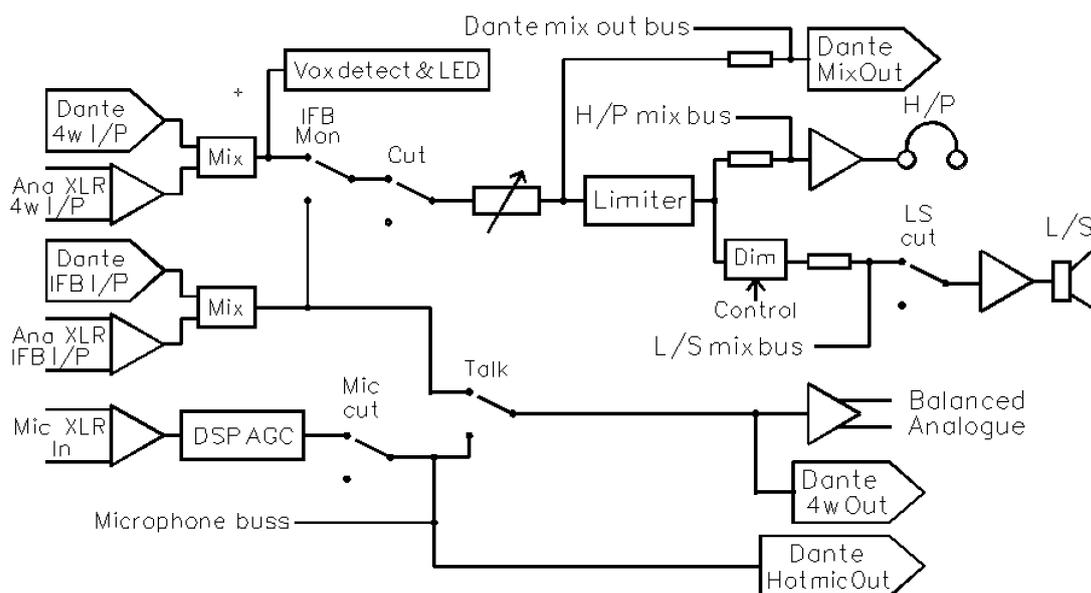
Weight 2kilos

All aluminium case.

## Block Schematics

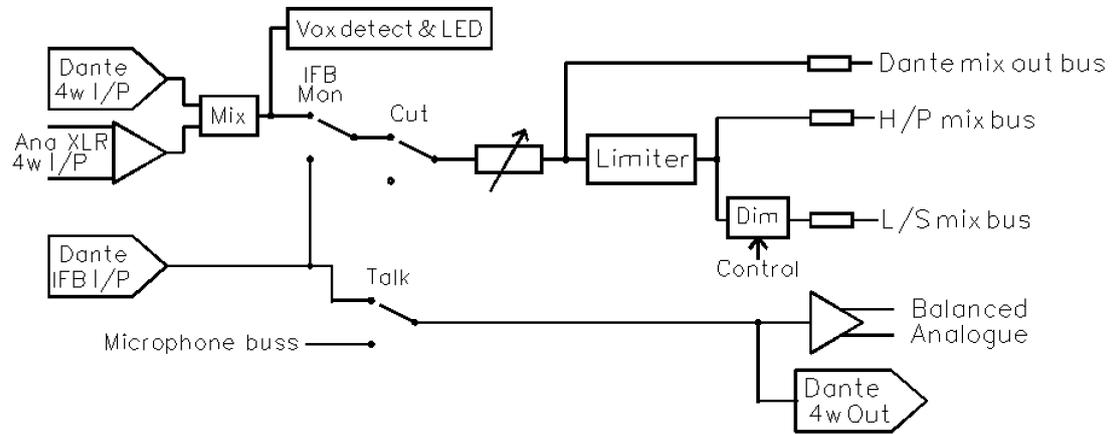
These are simplified diagrams of the signal path. The majority of processing takes place in the digital domain.

Simplified block schematic channels 1 and 2





+ Simplified block schematic channels 3 and 4



Simplified block schematic channels 5–8

