DIO816AES
Dante™ enabled AES Audio Interface

Firmware version 2.1

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 and EN62368-1: 2014
Emissions: EN55032: 2015
Immunity: EN55035: 2017

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. ctpsystems.co.uk. Telephone +44 (0)1580 891114

Firmware change from 2.0 to 2.1 adds support for 44.1kHz sample rate.

Dante is a trademark of Audinate Pty Ltd.

This manual assumes a degree of familiarity with Dante controller. If you are not familiar please see this document:

https://dev.audinate.com/GA/dante-controller/userguide/pdf/latest/AUD-MAN-DanteController-4.1.x-v1.0.pdf

Overview

The DIO816AES is an inexpensive way to get your AES audio into and out of the Dante or AES67 network. The unit has eight stereo AES inputs and eight stereo AES outputs with remote network level control. It can handle 44.1k, 48k and 96k sample rates and includes a secondary port for Dante Redundancy or a switch output. Both ports include network activity LEDs. Level and operational adjustments may be made using the DIO816AES's web page.

Setting Up

The DIO816AES should be used in conjunction with Dante Controller software available from https://www.audinate.com/products/software/dante-controller .

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 feature may be configured in Dante Controller.

When the unit is powered and after successful network connection the LEDs on the RJ45 connectors will illuminate. The right LED will be amber if you have a gigabit connection or green if operating at 100 Mbps. The left LED will blink green to show activity on the port or will be off if no link has been established.

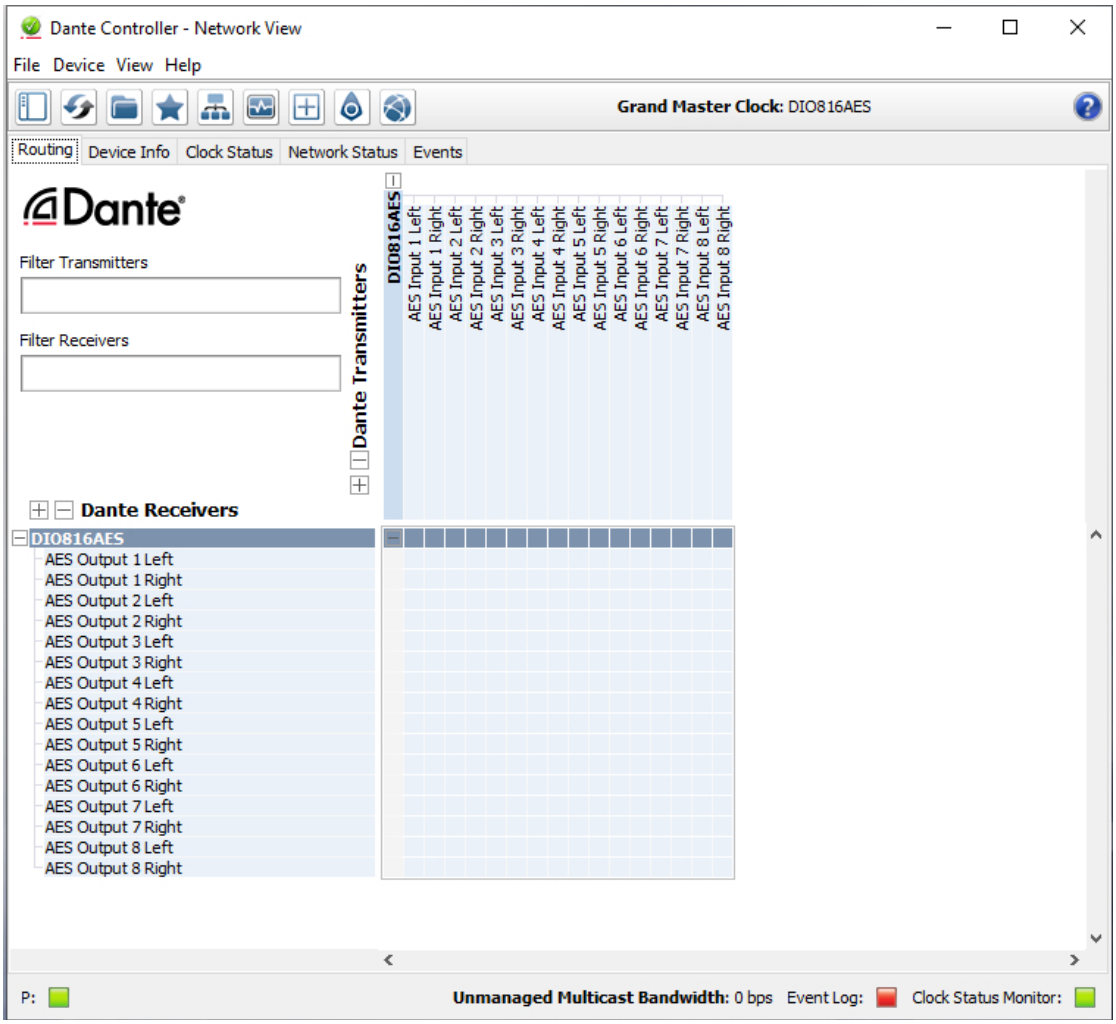
It takes the unit some 10 seconds from application of power to be ready to operate.

Sample Rates

The AES inputs are fitted with asynchronous sample rate converters and will accept unlocked sample rates of 44.1kHz, 48kHz and 96kHz with no adjustment. This is on a per input basis, each AES input may have a different sample rate.
The AES outputs may be selected to either 44.1kHz, 48kHz or 96kHz in two groups, 1-4 and 5-8. The network sample rate may also be selected to 44.1kHz, 48kHz or 96kHz.

Using with Dante Controller

Below is a picture of how the DIO816AES will appear in Dante Controller.



Dante Transmitters

These are the AES inputs from the XLR connections on the rear of the unit.

Dante Receivers

These feed the AES outputs from the XLR connections on the rear of the unit.

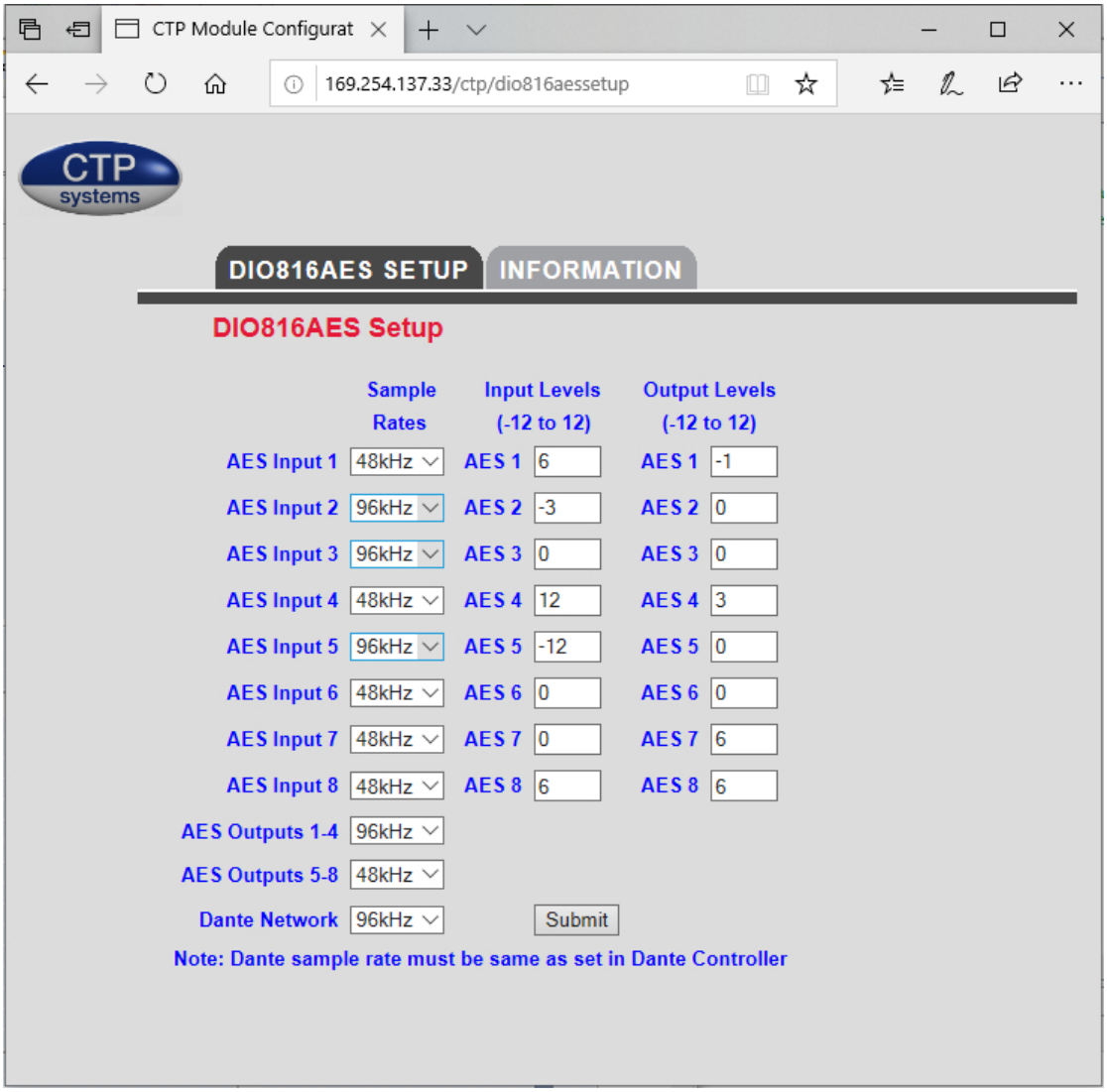
Accessing the DIO816AES web page

The Dante web page may be accessed using the Dante assigned IP address of the DIO816AES. If you are using a fixed IP address then you already know what the IP address is. If you are using DHCP the address may be found using Dante Controller and selecting Device Info. Dial this address (ie. 169.254.34.217) into your web browser and the webpage will appear.
If your network is suitably set up it is also possible to access the web page using the following:

http://dantename.local/

where dantename is the name that appears for the DIO816AES in Dante Controller. If this does not work it is outside the scope of this document and down to your network setup, please ask your IT guy/gal or use the IP address.

Any number of DIO816AES units may be viewed at once in multiple browsers or tabs. It is important to note that the web page information will not be valid until after some 20 seconds after the DIO816AES is powered up, it takes this time for the first full network update.



Adjusting Input Sample rates

To adjust the AES input sample rates use the pull down boxes to select 44.1kHz, 48kHz or 96kHz, then press ‘submit’. These sample rates may be mixed as required.

Adjusting Output Sample rate

Use the pull down boxes to select 44.1kHz, 48kHz or 96kHz, then press ‘submit’. These sample rates may be applied to outputs, 1-4 or 5-8.

Adjusting Dante Sample rate

It is important this is set to match your Dante system sample rate, 44.1kHz, 48kHz or 96kHz.

Adjusting Levels

AES input and output levels may be adjusted in 1dB steps from -12dB to +12dB. Simply type the required levels into the web page boxes, then press ‘submit’. Negative values should be entered as, for example, ‘-10’. Positive levels should be input without the plus sign as in standard mathematical notation, for example, ‘10’.

Mechanical

All aluminium case 1RU, 200mm deep excluding connectors.

Power

The DIO816AES should be powered by 110-240 VAC 50/60Hz. The power supply is auto switching, no adjustment is required.