

# IQDAA00

## 4 Channel Digital to Analog Audio Converter

The IQDAA00 converts two AES/EBU digital audio streams into two analog stereo pairs, or four analog mono channels. The AES streams are converted to analog with 24-bit resolution, and the IQDAA00 also provides proc. amp control, channel routing and mixing, up to 0.5s of tracking audio delay and additional fixed delay of up to 3s adjustable in 1 ms steps.

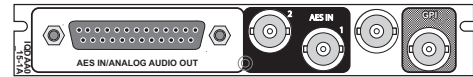
### Features

- Converts two AES/EBU digital audio streams into four analog audio channels
- Channel-Level (Sub-frame) routing
- 4 off 4 channel assignable audio mixers
- Flexible audio delay including per pair fixed delay, common fixed delay and tracking delay
- Variable audio delay of up to 0.5s which seamlessly tracks an external video delay via RollTrack / GPI input
- Audio proc. amp (gain, mute, polarity)
- RollCall control and monitoring compatible

### Why should you choose this module?

- Converts two AES/EBU digital audio streams into four analog audio channels, useful for monitoring multi-lingual systems
- Balanced or unbalanced input configurations enables use in all environments
- A comprehensive audio conversion solution with proc. amp, audio shuffling and delay

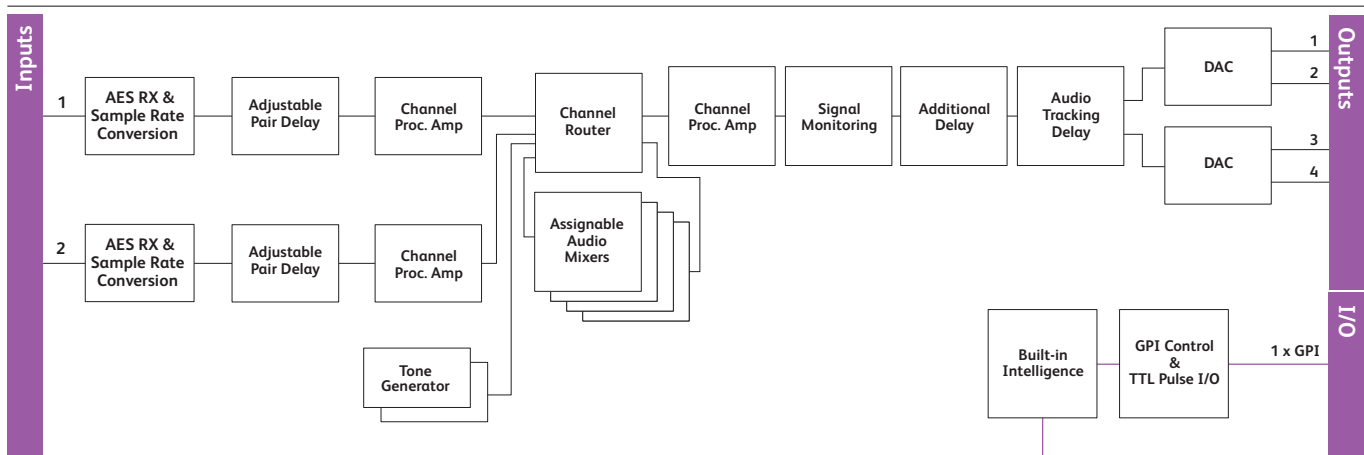
### Order codes



#### IQDAA0015-1A

Analog Audio DAC. 2 unbalanced/balanced AES/EBU inputs, 4 balanced analog audio outputs, 1 GPI.

For more details on enclosure types please refer to Frames and Hardware section.



Block Diagram for IQDAA0015-1A

Network Intelligence, Control & Monitoring

### Technical Specification

#### Inputs and Outputs

##### Signal Inputs

Unbalanced digital audio	2 x AES/EBU (BNC)
Balanced digital audio Standards	2 x AES/EBU (25 Way D-Type) AES3 - 1992

##### Signal Outputs

Analog audio	4 Channels (2 Stereo Pairs) (25Way D-Type)
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##### Control Interface

GPI	1 x Closing contact I/O interface
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#### Card Edge and RollCall Controls

##### Card Edge Controls

NONE

##### Card Edge Indicators

Input present	1 x LED per pair
CPU running / power	One green LED, flashing = OK

#### RollCall Functions

##### Audio Controls

Set line up level	+20 to -20 dBu in 1 dB steps
Set headroom	4 to 24 dB in 1 dB steps
Set audio detector thresholds	High/low levels, silence, overload, time delay
Audio input delay	Up to 1.5 s additional delay in 1 ms steps
Input side control proc. - audio gain and polarity	Independent Gain, Mute, Polarity control over input channels. +18 dB to -18 dB in 0.1 dB steps
Channel routing	Output channels routed from AES pairs 1 and 2, test tone and silence
Output side control proc. - gain and polarity	Independent Gain, Mute, and Polarity control over output channels. +18 dB to -18 dB in 0.1 dB steps
Global delay offset	Up to +1.5s in 1 ms steps, common to all processed audio
Variable audio delay control source	Up to 0.5s from RollTrack + GPI
Tone frequency, amplitude and ident	2 channel tone generator. 100 Hz to 15 kHz in 100 Hz steps

##### Tone Setup

Frequency	00 Hz to 15 kHz in 100 Hz steps
Channel ident	0.5s interruption every 2s

##### Other Controls

Preset unit	Returns settings to factory defaults
User memories	Name, clear, save and read 8 user memories
GPI/O set-up	May be attached to any memory function/polarity

#### Reporting (\* also Logged)

Audio silence, high level, low level, overflow	For processed audio channel only
Input AES audio state	Pair present

#### RollTrack Input

Delay	RollTrack + fixed
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#### RollTrack Output

Delay	Current audio delay
Audio state	PCM, Non-PCM, LOST
GPI	High, Low, Inactive

#### Specifications

##### Digital Audio Input (Balanced)

Connector / format	25 W D
Sample frequency	25 - 96 kHz
Input cable length	>150 m of AES3 cable
Impedance	110 Ω

##### Digital Audio Input (Unbalanced)

Connector / format	BNC
Sample frequency	25 - 96 kHz
Input cable length	>500 m of RG59 cable
Impedance	75 Ω

#### Analog Audio Outputs

Output impedance	~25 Ohms
THD+N	-92 dB @ 23 dBu typical, at 1 kHz
Conversion	24-bit - Min 105 dB dynamic range
Sampling	48 kHz

#### Power Consumption

Module power consumption	8.5 W max (A Frames) 6.5 PR (B Frames)
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