

# IQDAA00

## Four-channel Digital to Analog Audio Converter

Converts two AES/EBU digital audio streams into four analog audio channels, including proc amp control, audio shuffling and flexible audio delay.

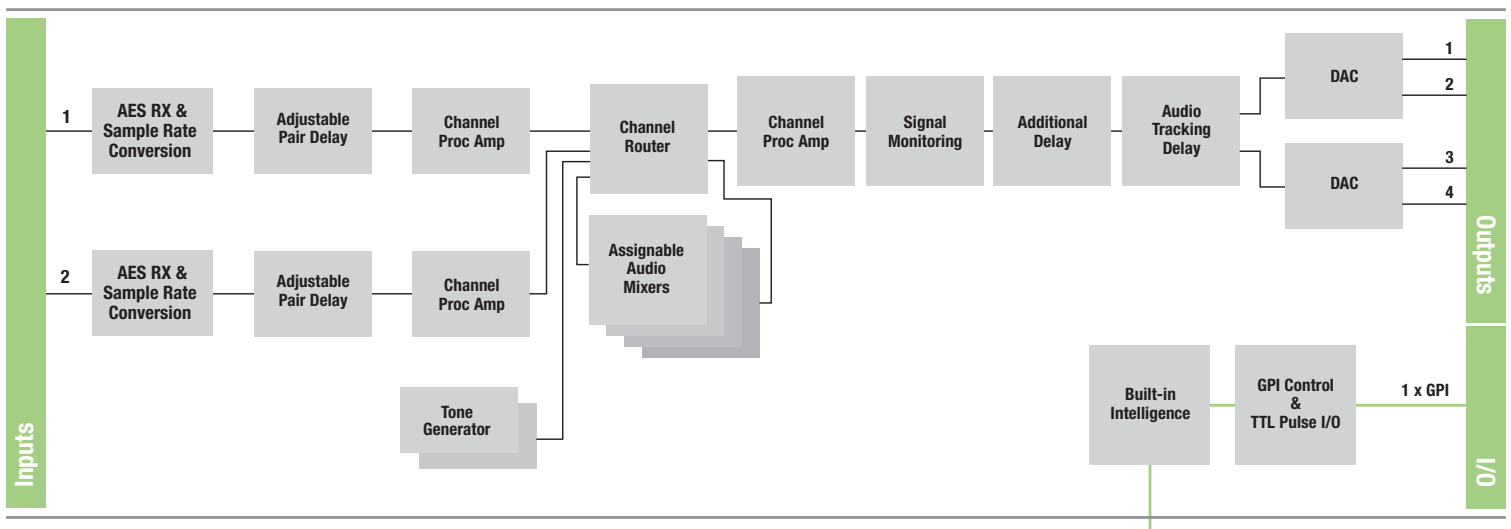
The IQDAA00 from Grass Valley converts two AES/EBU digital audio streams into two analog stereo pairs, or four analog mono channels. The AES streams are converted to analog with 24-bit resolution, and the IQDAA00 also provides proc amp control, channel routing and mixing, up to 0.5s of tracking audio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

### Why should you choose this module?

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

### KEY 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



Block Diagram for IQDAA0015-1A

Network Intelligence, Control & Monitoring

## SPECIFICATIONS

### Inputs and Outputs

#### Signal Inputs

Unbalanced digital audio: 2x AES/EBU (BNC)  
Balanced digital audio: 2x AES/EBU (25-way D-type)  
Standards: AES3 - 1992

#### Signal Outputs

Analog audio: 4 channels (2 stereo pairs) (25-way D-type)

#### Control Interface

GPI: 1x Closing contact I/O interface

### Card Edge and RollCall Controls

#### Card Edge Controls

NONE

#### Card Edge Indicators

Input present: 1x 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

#### Logging

Audio silence, high level, low level, overflow: For processed audio channels only

Input AES audio state: Pair present

#### RollTrack Input

Delay: RollTrack + fixed

#### RollTrack Output

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

### General Specifications

#### Digital Audio Input (Balanced)

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

#### Digital Audio Input (Unbalanced)

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

#### Analog Audio Outputs

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

#### Power Consumption

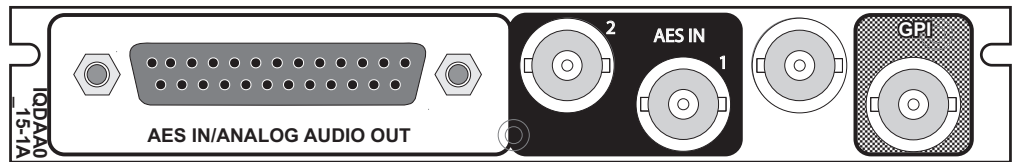
Module power consumption:  
8.5 W max (A Frames)  
6.5 PR (B Frames)

## ORDERING

### 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 the IQ Modular Enclosures datasheet.



GVB-2-0849A-EN-DS



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