DATASHEET

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.

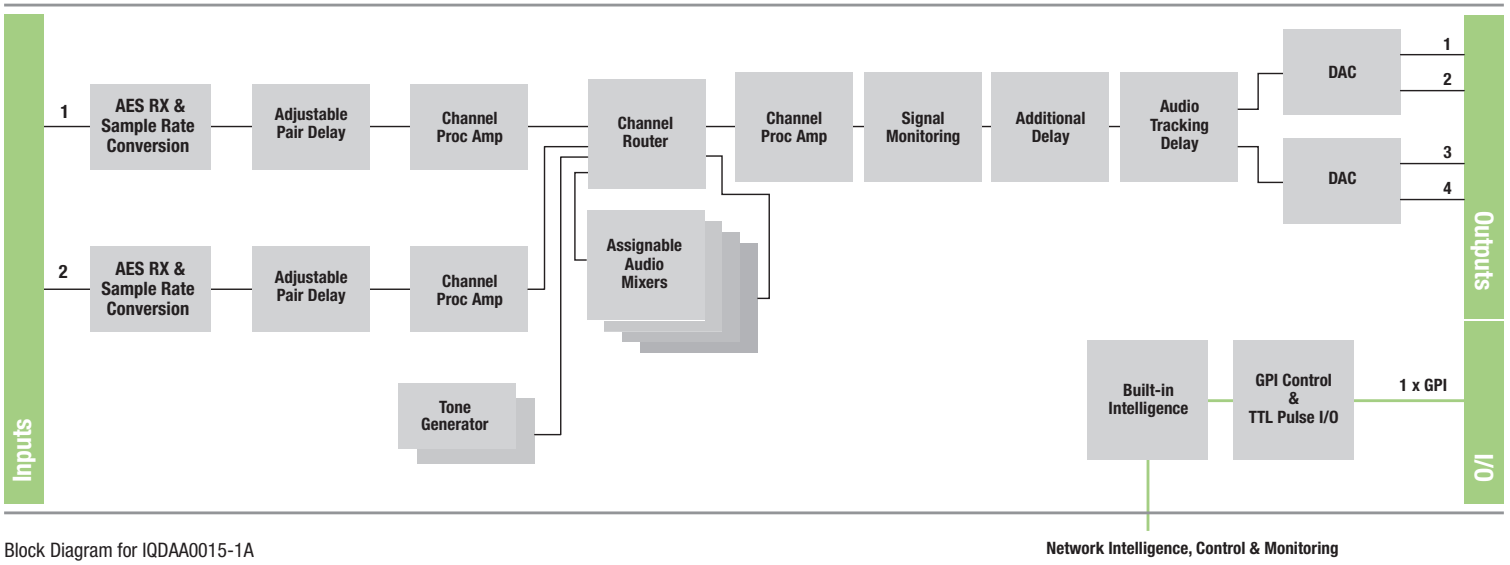
The IQDAA00 from Grass Valley converts two AES/EBU digital audio streams into two analog stereo pairs, or four analog mono channels. The AES streams are converted to analog with 24-bit resolution, and the IQDAA00 also provides proc amp control, channel routing and mixing, up to 0.5s of tracking audio 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
- Full GV Orbit compatibility provides an all-inclusive remote configuration, control and monitoring solution
- Comprehensive SNMP support allows easy integration with third-party Network Management Systems

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)
- GV Orbit control and monitoring compatible



Block Diagram for IQDAA0015-1A

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 Remote Controls

Card Edge Controls

NONE

Card Edge Indicators

Input present: 1x LED per pair

CPU running/power: One green LED, flashing = OK

Remote Control 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.