

IQBRK00/01

AES Break Out Module with Audio DAC

The IQBRK00 is designed to take up to two embedded audio streams, break them out to AES and then re-embed the resultant signals. The end result being the ability to insert a pure audio device into an embedded stream. It can take its audio input on a channel-by-channel basis from either the dual AES, the embedded sources or a combination of both. At the heart of this module is a comprehensive processing block that provides a powerful audio manipulation solution. The processed audio can be embedded into the SDI output as well as being fed to the AES outputs. Each audio output can be fed with a separate audio combination as necessary. The audio sources are protected by a firewall that ensures breaks in the incoming signal do not effect the output. Video proc. amp. control and a video delay of up to three frames make this a powerful solution for the video stream. Audio features include fixed and tracking delays, channel-level shuffling, proc. amp controls and assignable four-input mixers for combining audio sources. The user can choose to combine audio channels from any of the input sources - embedded streams and AES inputs. Bypass paths allow for the passing, embedding or de-embedding of non-PCM audio such as Dolby E. Analog audio outputs are also provided to enable analog audio de-embedding.

Applications:

- De-embed audio output to external dedicated audio unit (e.g. Graphic EQ, reverb, chain of audio boxes, etc.), then re-embed its output into the video stream.
- De-embed Dolby E audio stream, pass through Dolby E decoder, re-embed resulting AES audio.
- De-embed AES audio, pass through Dolby E encoder, re-embed Dolby E stream.
- Analog audio de-embedding

Does this module suit your application?

- Combine AES and embedded source channels
- Produce embedded, AES and analog audio outputs
- Handles 2 AES streams or any eight embedded input channels to total eight output channels
- Handles up to 24 bit embedded audio present on the incoming SDI stream, and embeds/de-embeds to 20 bits
- Channel-level (Sub-frame) routing for selected sources
- 4 off 4 channel assignable audio mixers
- Flexible audio delay including per pair fixed delay, common fixed delay and tracking delay

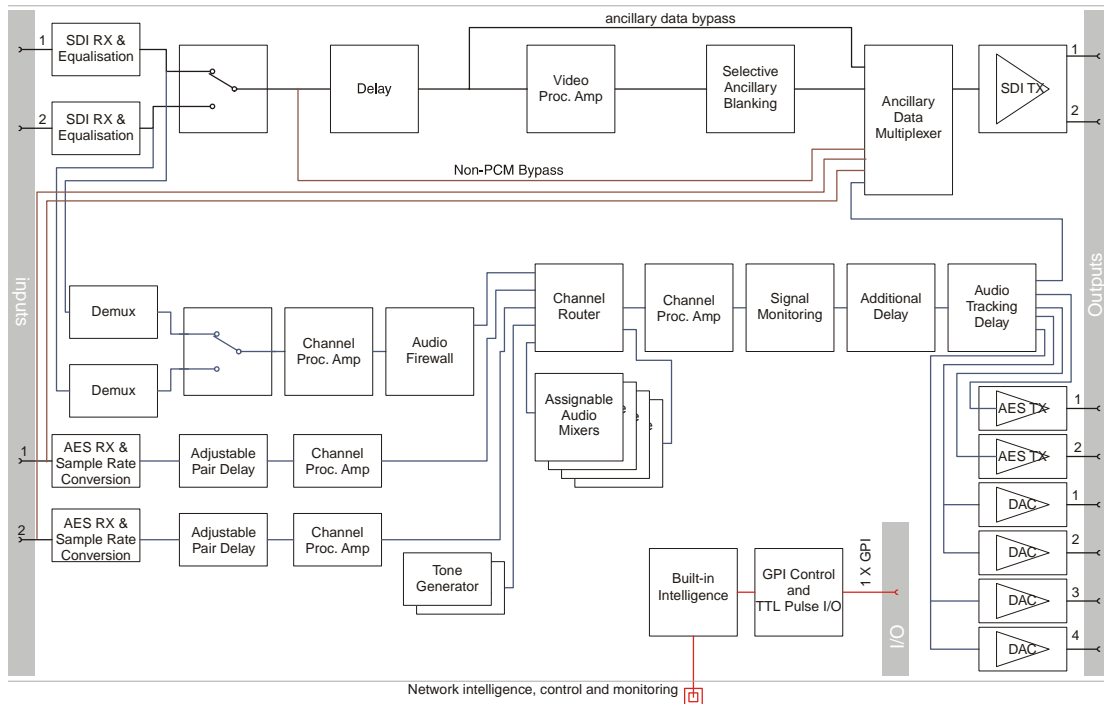
- Up to 3 frames of video delay
- Firewall for processed PCM audio to provide a continuous output

Why should you choose this module?

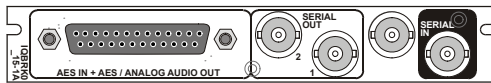
- Allows the use of mixed AES and embedded audio where both must be accommodated or combinations may be required
- A complete AV solution for incoming lines with firewall, proc. amp, audio shuffling and delay
- Can be used to break out embedded audio for AES processing and then return the audio to the embedded domain, with analog monitoring for added confidence

IQBRK00/01

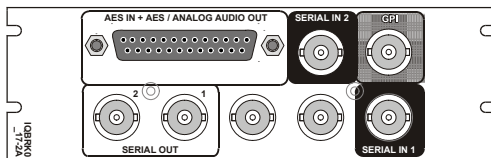
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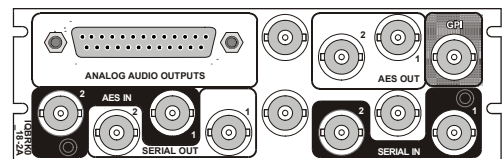
Order codes for IQH3A/1A enclosures



IQBRK0115-1A AES Break out module with audio DAC. Balanced audio connection. 1 SDI input, 2 AES inputs, 2 SDI outputs, 2 AES outputs, 4 analog audio outputs.

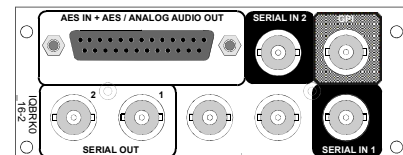


IQBRK0117-2A AES Break out module with audio DAC. Balanced audio connection. 2 SDI inputs, 2 AES inputs, 2 SDI outputs, 2 AES outputs, 4 analog audio outputs.



IQBRK0018-2A AES Break out module with audio DAC. Unbalanced audio connection. 2 SDI inputs, 2 AES inputs, 2 SDI outputs, 2 AES outputs, 4 analog audio outputs.

Order codes for other enclosures



IQBRK0116-2 AES Break out module with audio DAC. Balanced audio connection. 2 SDI inputs, 2 AES inputs, 2 SDI outputs, 2 AES outputs, 4 analog audio outputs.

For more details on enclosure types please refer to the Frames/Enclosures section

Inputs & Outputs

Signal Inputs

- Digital Video 2 x SDI (BNC)
- Video Reference Composite video (BNC)
- Unbalanced digital audio 2 x AES/EBU, AC3, Dolby E (BNC)
- Balanced digital audio 2 x AES/EBU, AC3, Dolby E (25 Way D-Type)

Signal Outputs

- Digital Video SDI x 2

- Unbalanced digital audio 2 x AES/EBU, AC3, Dolby E (BNC)
- Balanced digital audio 2 x AES/EBU, AC3, Dolby E (25 Way D-Type)
- Balanced analog audio 4 channels (25 Way D-Type)

Control Interface

- GPI 1x Closing contact I/O interface (BNC)

IQBRK00/01

AES Break Out Module with Audio DAC

Card Edge & RollCall Controls

Card Edge Controls

NONE

Card Edge Indicators

SDI Input Loss..... Loss = Off, Good = Green

SDI Input Error..... Yellow = Unused input not at current operating standard

AES Input Present 1 x LED per pair

CPU running / Power..... One green LED, flashing = OK

RollCall Functions

Audio Controls

Audio extraction select SDI input 1/2/Follow Video Control

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 and low levels, time delay

External input audio 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 de-embedded and input channels. ±18 dB in 0.1 dB steps.

Channel routing Output channels routed from AES pairs 1 to 4, test tone and silence, SDI 8 embedded channels from any group

Output side control proc. - gain and polarity
Independent Gain, Mute, & Polarity control over embedded and AES output channels. ±18 dB in 0.1 dB steps.

Global delay offset up to +1.5 s in 1 ms steps, common to all processed audio.

Variable audio delay control source
Up to 0.5 s from RollTrack + GPI

Tone frequency, amplitude & Ident
2-channel tone generator. 100 Hz to 15 kHz in 100 Hz steps.

Tone Setup:

Frequency 100 Hz to 15 kHz in 100 Hz steps

Channel Ident 0.5 s interruption every 2 s

Video Controls

Select primary input..... 1/2

Black Level ± 100 mV in 0.8 mV steps

Y/C Timing ± 592 ns in 148 ns steps

Picture position ± 592 ns in 148 ns steps

Luminance Gain ± 6 dB

Chrominance Gain..... ± 6 dB

Genlock H Phase ± 32 µs in 74 ns steps

Genlock V Phase..... ± 262/312 lines in 1 line steps

Video Horizontal Delay +1 Line in 37 ns steps

Video Vertical Delay +1 Frame in 1 line steps

Video Delay Frames..... 0 to +2 frames

Other Controls

Pass vertical data On/Off (lines selectable 7/11 to 23/21 & 320/274 to 335/283)

Preset Unit..... Returns all settings to default

Pattern Select 100%/75% Bars, Multiburst, Black, Animated Bars

User Memories Name, clear, save and read 8 user memories

Default Video Output pattern / freeze/ run through

Default Audio Output Silence

Caption Output On/Off (default and pattern output only)

Caption Generator Programmable up to 19 characters

GPI/O set-up May be attached to any memory function/polarity

Reporting (* also Logged)

EDH (for selected input) *Presence, *Error-Time, *Error-Seconds

No SDI *No input present

Input ancillary error ANC error, ANC error-seconds

Input error Unused input not at current operating standard

Report Embedded Audio Data
Report audio data pairs on input and output SDI

Audio Silence, High Level, Low Level, Overflow
For processed audio channels only

RollTrack Input

Delay Audio delay – Fixed, RollTrack + fixed

RollTrack Output

Delay Current video/audio delay

Input state Selected Input: Input Present, Input Missing, Standard 525, Standard 625
Input 1: Input Present, Input Missing, Standard 525, Standard 625
Input 2: Input Present, Input Missing, Standard 525, Standard 625

Embedded Audio state Pair present

External AES Audio state Pair present

