

# IQSDA35

## Dual-channel 3G/HD/SD-SDI Reclocking Distribution Amplifier with Selectable Outputs

Provides emergency changeover functionality and the flexible selection of inputs allows single- or dual-channel operation.

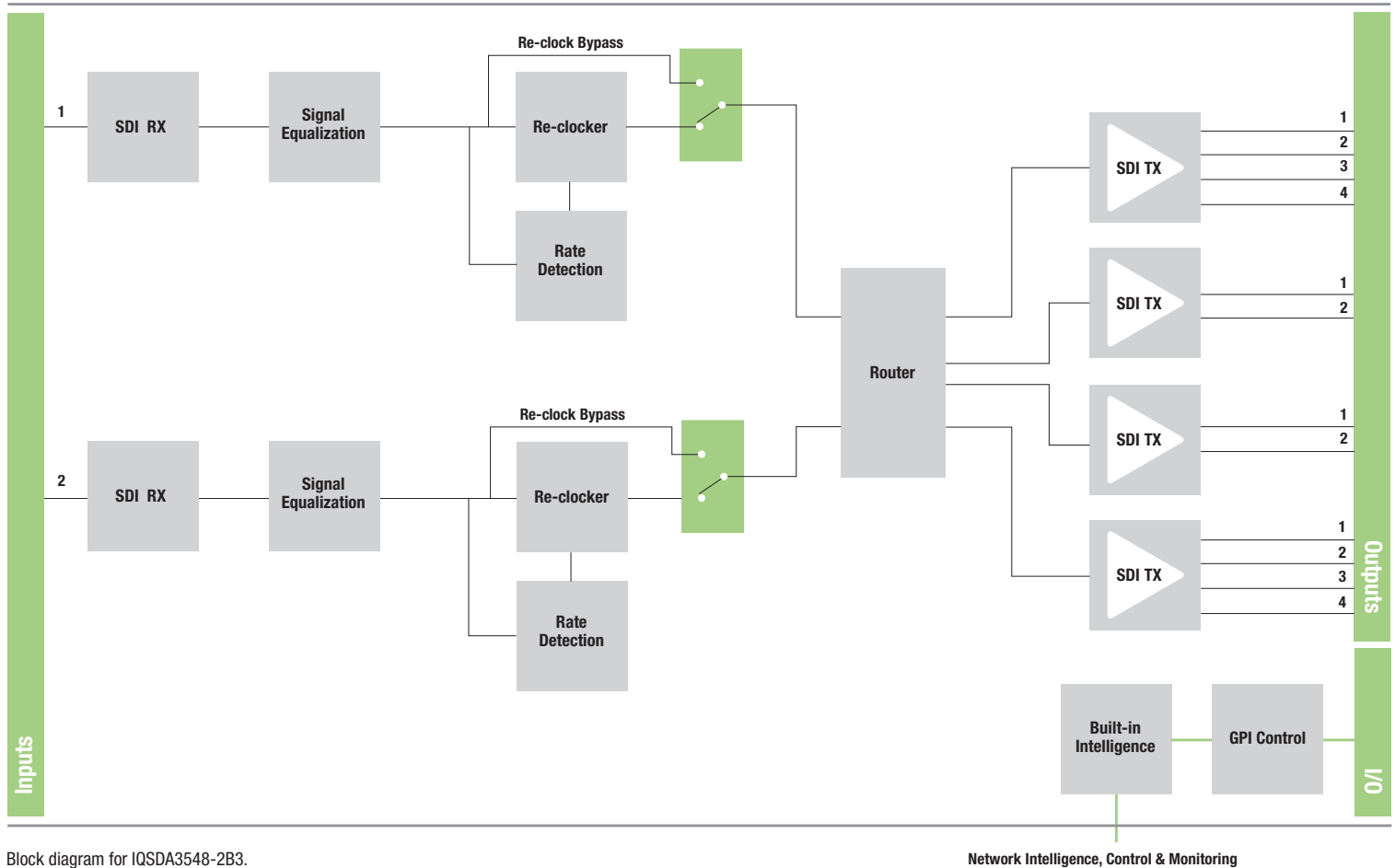
The IQSDA35 from Grass Valley provides dual-channel distribution for HD-SDI 3 Gb/s, 1.5 Gb/s or 270 Mb/s SD-SDI signals with flexible routing of inputs to outputs. Input signal loss detection enables switching from a main to back-up feed automatically, providing emergency changeover functionality. Flexible output selection enables the IQSDA35 to be used either as a single-channel DA with 12 outputs, or in dual-channel mode with six outputs per input.

### Why should you choose this module?

- Outputs can be grouped for selection from either input allowing flexibility for expansion or changes in distribution requirements
- Input loss detection enables automatic switching between inputs to provide emergency back-up changeover functionality
- Can be used for current HD/SD systems that will later upgrade to 1080p50/60 workflows
- Emergency input to output bypass option allows added protection for critical signal paths or 24/7 operations

### KEY FEATURES

- Single- or dual-channel 3 Gb/s SDI, HD-SDI and SD-SDI re-clocking distribution amplifier
- Flexible selection of inputs allows single- or dual-channel operation
- Input signal monitoring allows auto-changeover functionality to provide emergency switching
- Equalizes up to 70m at 3 Gb/s, 140m at 1.5 Gb/s and 350m at 270 Mb/s when using Belden 1694A cable
- Standards supported:
  - 3G-HD to SMPTE ST 424
  - HD-SDI to SMPTE ST 292
  - SD-SDI to SMPTE ST 259-C
- Emergency input bypass option enables the SDI input signal to be passed through to SDI output 1 in the event of frame power failure or module removal
- RollCall monitoring allows all signal paths to be managed



Block diagram for IQSDA3548-2B3.

Network Intelligence, Control &amp; Monitoring

## SPECIFICATIONS

### Inputs and Outputs

#### Signal Input

SDI input: 2x

Input cable length:

- Up to 70m Belden 1694A @ 3 Gb/s
- Up to 140m Belden 1694A @ 1.5 Gb/s
- Up to 350m Belden 1694A @ 270 Mb/s

Note: When using mixed HD and SD inputs it is recommended that cable lengths do not exceed the HD specification of 140m.

#### Signal Outputs

SDI outputs: 12x group selectable per input

ASI compatible outputs:

- IQSDA3547-1A/B – Serial out 1/1, Serial out 2/1, 2/2
- IQSDA3548-2A/B – Serial out 1/1, 1/4, Serial out 2/1, 2/2, Serial out 3/1, Serial out 4/2
- IQSDA3562-2B – Serial out 1/4, Serial out 2/2, Serial out 3/1, Serial out 4/2

#### Control Interface

GPI: Up to 2x GPI (I/O configurable)

Electrical: TTL compatible, active low driven

Connector/format: BNC/75Ω panel jack on standard Grass Valley connector panel

#### Controls

##### Indicators

Power: OK (Green)

CPU: OK (Green flashing)

Input 1: OK (Green), Bypass (Orange), Loss (Red)

Input 2: OK (Green), Bypass (Orange), Loss (Red)

RollCall functions: Input 1 (2) rate select 3G, HD, SD, other

Reclock bypass: On/Off

Output 1 select: Input 1, 2

Output 2 select: Input 1, 2

Output 3 select: Input 1, 2

Output 4 select: Input 1, 2

Input status: Present, Loss, Unknown, Data Rate

Logging:

- Input 1 (2) Type
- Input 1 (2) Data Rate
- Input 1 (2) Present
- Input 1 (2) Error
- Input 1 (2) Loss

RollTrack controls: On/Off, Index, Source, Address, Command, Status, Sending

RollTrack outputs:

- Unused
- Input 1 (2) Present
- Input 1 (2) Rate Unknown
- Input 1 (2) Error
- Input 1 (2) Loss
- Input 1 (2) 3G
- Input 1 (2) HD
- Input 1 (2) SD

### Other Controls

GPI input: Activates on contact closure – select config 1 or 2

GPI output: Produces an output for:

Config 1 selected, Config 2 selected, Input 1 error, Input 2 error

User memories: Name, save and recall 16 user memories

### General Specifications

Electrical:

- 3 Gb/s SDI, SMPTE ST 424
- 1.5 Gb/s HD-SDI, SMPTE ST 292
- 270 Mb/s SDI, SMPTE ST 259-C / DVB-ASI

Connector/format: BNC/75Ω panel jack on standard Grass Valley connector panel

Return loss:

- >-15 dB (270 Mb/s, 1.5 Gb/s)
- >-10 dB (3 Gb/s)

Output jitter:

- SD-SDI 0.2 UI (10 Hz) / 0.2 UI (1 kHz)
- 3G/HD-SDI 1.0 UI (10 Hz) / 0.2 UI (100 kHz)

### Power Consumption

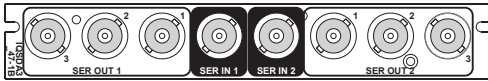
Module power consumption:

- 4W max. (A Frames)
- 4 PR (B Frames)
- With relay rear: 5W (PR) max.

**ORDERING**

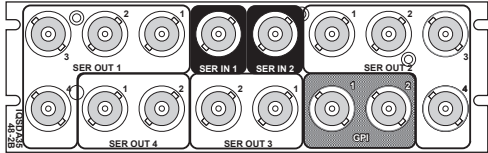
**IQSDA3547-1A3, IQSDA3547-1B3**

Dual-channel 3G/HD/SD-SDI distribution amplifier with selectable outputs. 2 inputs, 6 outputs selectable per input.



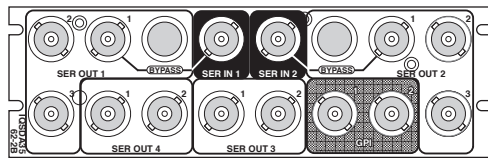
**IQSDA3548-2A3, IQSDA3548-2B3**

Dual-channel 3G/HD/SD-SDI distribution amplifier with selectable outputs. 2 inputs, 12 outputs selectable per input.



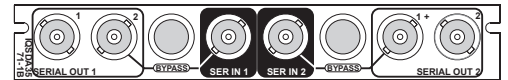
**IQSDA3562-2B3**

Dual-channel 3G/HD/SD-SDI distribution amplifier with selectable outputs and relay bypass. 2 inputs, 10 outputs selectable per input.



**IQSDA3571-1B3**

Dual-channel 3G/HD/SD-SDI distribution amplifier with selectable outputs and relay bypass. 2 inputs, 4 outputs selectable per input.



For more details on enclosure types please refer to the IQ Modular Enclosures datasheet.



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