

IQVDA00/01

Analog Video Distribution Amplifier with Remote Control

Provides 14 equalized analog video outputs with full remote control and automatic adjustment of gain and equalization.

The IQVDA00 from Grass Valley provides up to 14 equalized analog video outputs. Features include: adjustable gain and equalization, full remote control and status reporting.

Why should you choose this module?

- Ideal distribution amplifier where input cable configuration is likely to change, such as OB trucks
- Remote control of gain and equalization
- Equalization for 3 different cable types, up to 300 meters for Belden 1694A
- Automatic gain and equalization control mode available
- Sync and burst level warnings provided for low-level signals
- 35 MHz bandwidth allows it to be used with HDTV component signals
- Differential input for excellent common mode rejection

Key Features

- Up to 14 high quality outputs
- Balanced loop-through input
- Terminating input option on single width rear panel allows extra output
- 35 MHz bandwidth
- Adjustable gain and equalization
- Equalization for RG59U/Belden 8263 or PSF1/2/Belden 8281 (link selectable)
- GV Orbit control and monitoring compatible with standard logging and reporting features
- Sync and burst level warnings
- Automatic gain control (AGC) with respect to sync height
- Automatic equalization (ACC) with respect to burst height

Specifications

Inputs and Outputs

Signal Input

Video: 1 balanced loop-through (terminating input option for single width rear panel)

Signal Outputs

Video: Up to 14 unbalanced outputs

Controls

Remote Controls:

Gain: ± 4 dB in steps of 0.05 dB

Typical Equalizer Performance

Belden 1694A:

0-300m +0.1 dB to 10 MHz

0-300m +0.2 dB to 30 MHz

Belden 8281 (PSF1/2):

0-300m +0.1 dB to 10 MHz

0-300m +0.1 dB; -0.4 dB to 30 MHz

Belden 1855A:

0-200m +0.1 dB to 10 MHz

200-300m +0.1 dB; -1.5 dB to 10 MHz

RG59B/U:

0-100m +0.1 dB to 15 MHz

100-300m +0.1 dB; -1.5 dB to 15 MHz

NK 0.6/2.8:

0-150m +0.1 dB to 15 MHz

0-150m +0.1 dB; -0.5 dB to 30 MHz

AGC: [On/Off] – All recognized SD sources

ACC: [On/Off] – Composite sources only

Signal identification: Line standard – PAL, NTSC, 625 MONO, 525 MONO, 1080p24, 1080i50, 1080i60, 720p50, 720p60, 720p25, 720p30, UNKNOWN

Selectable clamp: Off, On (back porch) and sync tip

Signal level: Sync and burst amplitude $\pm 10\%$

Logging signal: Level warning, line standard, burst level warning

Indicators

Power: OK

CPU: OK

Status: OK (Green), Warning (Yellow), Error (Red)

General Specifications

Frequency response (without equalization):

10 kHz – 10 MHz ± 0.1 dB

10 MHz – 30 MHz ± 0.2 dB

35 MHz < -1 dB

Differential gain: Unity gain, better than 0.2%

Differential phase: Unity gain, better than 0.2°

Signal/noise ratio: 10 kHz – 7 MHz, better than -66 dB (unweighted)

Linearity: Better than 0.1%

Line tilt : Better than 0.1%

Output D.C.: < 90 mV

Output return loss: Better than 40 dB to 5.5 MHz, 35 dB to 30 MHz

Maximum output level: 2.4 Vp-p @ 30 MHz into 75 Ω

Insertion delay: 20 ns

Y C gain/ delay inequality: $< 1\%$, < 1 ns

K2T, KPB: Better than 0.1%

Max. input level: +6 dB

CMRR: Better than 60 dB at 50 Hz, 40 dB 50 Hz to 8 MHz

Input return loss (powered): Better than 40 dB to 5.5 MHz, 35 dB to 30 MHz

Input return loss (unpowered): Better than 33 dB to 30 MHz

Input impedance: > 22 k Ω

Headroom: +6 dB

Output impedance: 75 Ω $\pm 1\%$

Gain: Unity $\pm 1\%$ as supplied

Clamp rejection: 8 dB typical at 50 Hz

Power Consumption

Module power consumption:

3W Max (A Frames)

2 PR (B Frames)

Mechanical

Complies with Restriction of Hazardous Substances in Electrical and Electronic Equipment (RoHS) Directive (2002/95/EC).

EMC Performance Information:

Environment: Commercial and light industrial E2

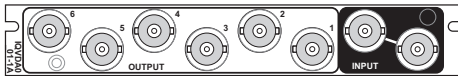
Peak mains inrush current following a 5 second mains interruption: No mains input

Performance information: Immunity to conducted common-mode RF interference (EN 55103 2 immunity phenomenon I6): Interference is just visible on critical picture material when a video input or output is subjected to modulated RF at a level of 3V

Ordering

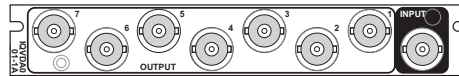
IQVDA0001-1A

Analog video DA with Remote Control. Loop-through input, 6 outputs.



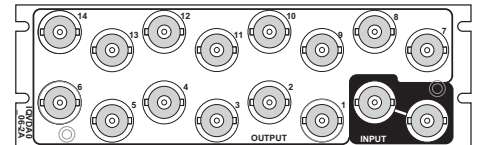
IQVDA0101-1A

Analog video DA with Remote Control. Terminating input, 7 outputs.

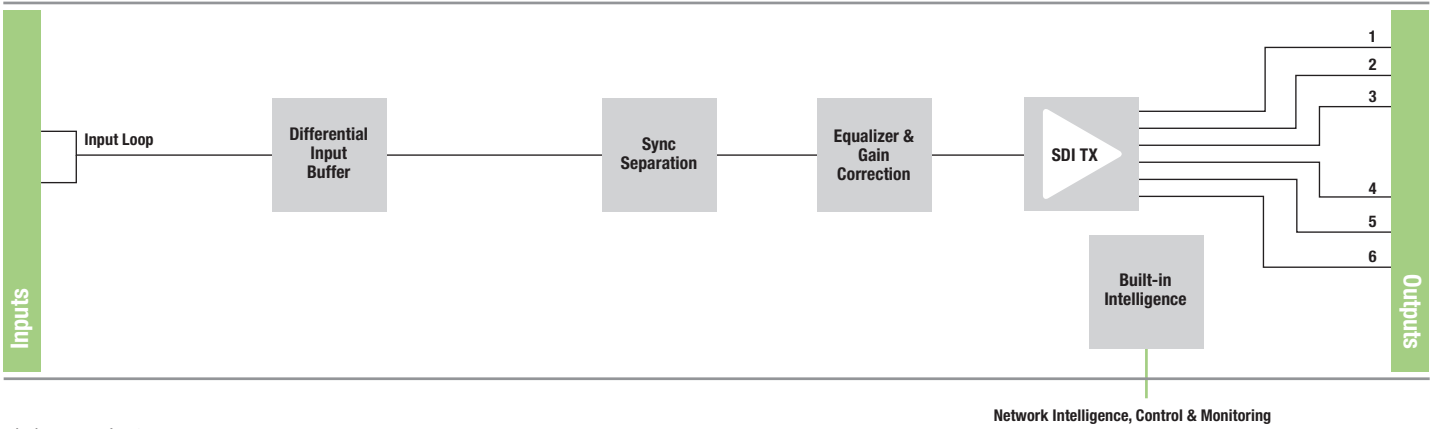


IQVDA0006-2A

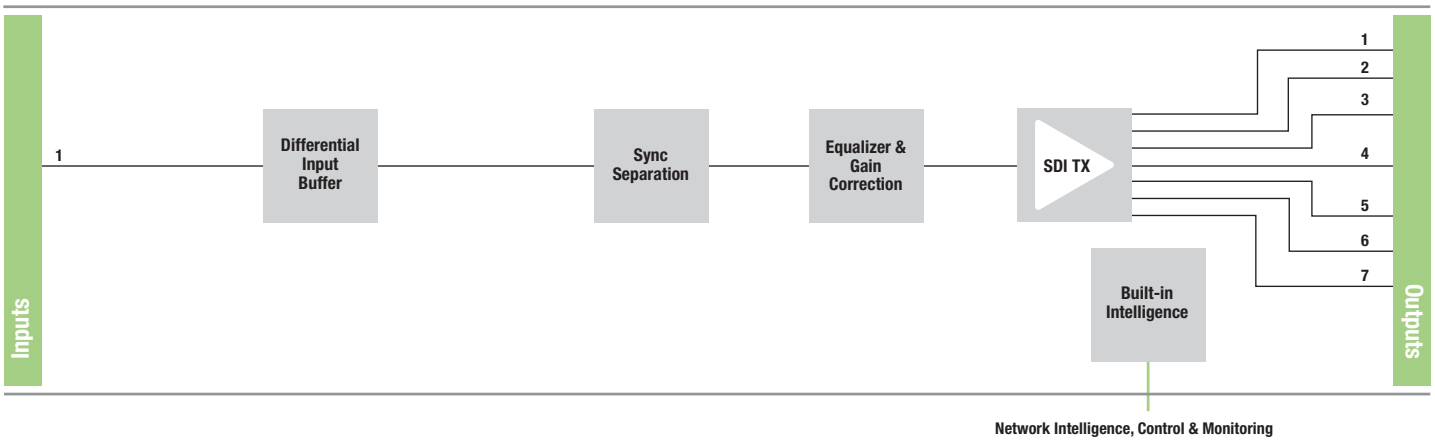
Analog video DA with Remote Control. Terminating input, 7 outputs.



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



Block Diagram for IQVDA0001-1A



Block Diagram for IQVDA0101-1A

This product may be protected by one or more patents. For further information, please visit: www.grassvalley.com/patents

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