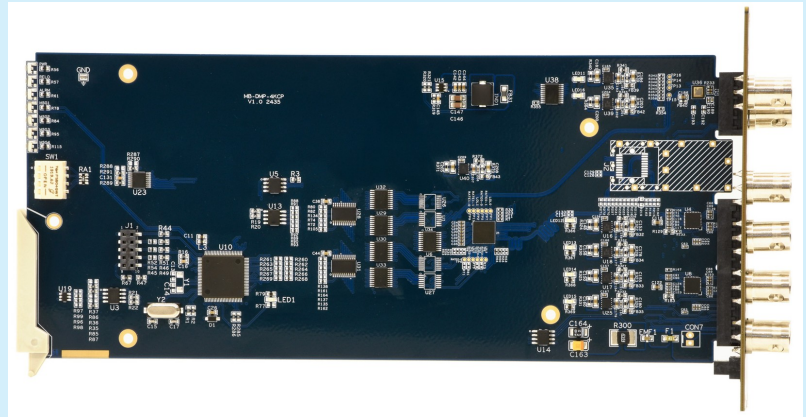# DVD-4214

12G-SDI Video Distribution Amplifier with Built-in Crosspoint
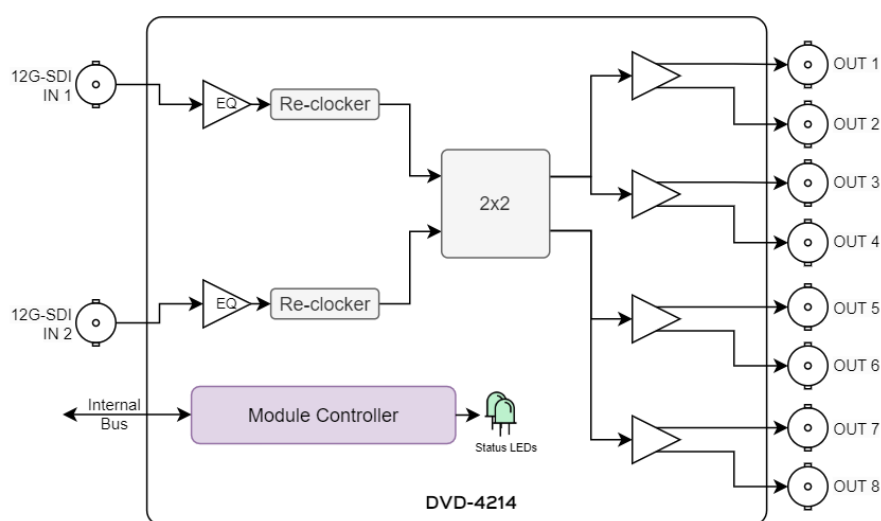
2025 Datasheet

The DVD-4214 is a reliable and versatile video distribution amplifier that supports various video signal formats such as 12G, 6G, 3G, HD, SD-SDI, and DVB-ASI. It can be configured as either a single channel 1-to-8 or a dual channel 1-to-4 module. The built-in 2x2 crosspoint adds to its flexibility, allowing users to select which input they desire in single channel mode or swap inputs of two channels in double channel mode. Moreover, the device features automatic carrier-sensitive change-over, which provides high reliability at an affordable cost.

The module is equipped with re-clocker to remove jitter and equalizers to compensate for cable loss, which are its essential features. Optionally, to ensure signal continuity in case of power failure, each input signal is routed to one of the outputs via bypass relays.

The module can be easily monitored and controlled using onboard DIP switches or the web-based user interface. The front edge of the module has LED indicators that provide information about its operational status.

Key Features

- Independent dual-channel operation
- Supports 270 Mbps to 12 Gbps formats
- SMPTE ST 2082, ST 2081, 424M, 292M, 259M compatible
- Web-based user interface
- Auto input signal detection
- Jitter removal with re-clocking
- Cable loss compensation
- Hot-swappable
- HDR and Dolby-compliant, preserves audio and ancillary data
- Status LEDs

Block Diagram

Specifications

Digital Video Input	
Signal type	12G/3G/HD/SD-SDI and DVB-ASI
Standards	SMPTE ST 2082, ST 2081 SMPTE 292M, SMPTE 259M, SMPTE 424M
Number of inputs	2
Connector	BNC
Impedance	75Ω
Cable length	Automatic loss compensation up to: 12G: 85m (Belden 4794R) or 55m (Belden 1694A) 3G: 170m (Belden 1694A) HD: 185m (Belden 1694A) SD: 360m (Belden 1694A)

Digital Video Outputs	
Signal type	12G/3G/HD/SD-SDI and DVB-ASI
Standards	SMPTE ST 2082, ST 2081 SMPTE 292M, SMPTE 259M, SMPTE 424M
Number of outputs	8
Connector	BNC
Impedance	75Ω
Voltage level	800 mv ± 10%
Timing Jitter	< 0.2 UI (SD, HD) < 0.5 UI (3G, 12G)
Alignment Jitter	< 0.15 UI (SD, HD) < 0.2 UI (3G) < 0.3 UI (12G)
Rise and fall time	0.4 to 1.5 ns (SD) <270 ps (1.5G) <135 ps (3G) <45 ps (12G)
Overshoot	<5% Amplitude
DC-Offset	0 ± 0.5 V

Mechanical	
Dimensions	230 mm × 100 mm (for Samim frames)

Environmental (Operating)	
Temperature	5 °C to 45 °C
Humidity	0% to 90%

Electrical	
Voltage	+12VDC (supplied from frame)
Power	<6W

System Requirements

Type	Product	Description
Frame	SRM-0655	3RU Frame with Controller

Ordering Information

Product	Description	Type
DVD-4214	12G-SDI Video Distribution Amplifier with Built-in Crosspoint Main Board	Main Board
DVD-4214-3DRP	Double Slot Back-panel for DVD-4214 (compatible with SRM-0655)	Back-panel
DVD-4214-3SRP-H	Single Slot Back-panel for DVD-4214 (compatible with SRM-0655) On this back panel, outputs are HD-BNC connectors.	Back-panel

With over two decades of extensive experience in the broadcast and media industry, Samim Group has emerged as a rapidly growing manufacturer and developer of professional-grade hardware and software solutions that cater to Broadcast Production Infrastructure, Intercom Systems, and Media Business Automation. We remain attuned to the latest technological advancements, ensuring we deliver high-standard solutions and products that can be marketed globally.

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