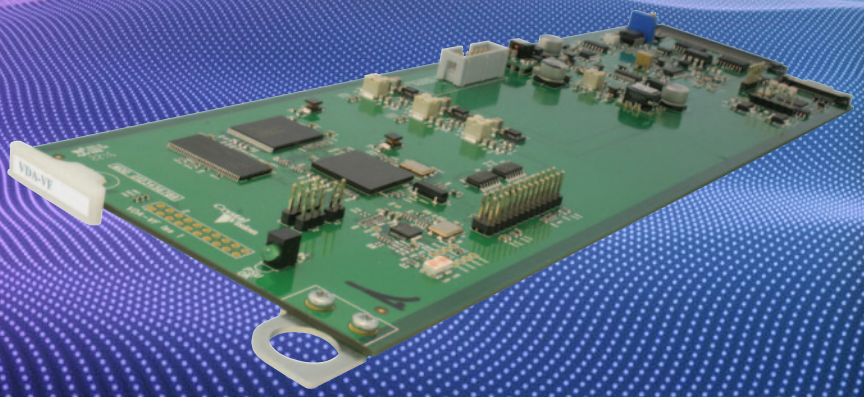
Crystal Vision

Vision SYSTEM

VDA-VF

HD/SD Analogue Video Distribution Amplifier

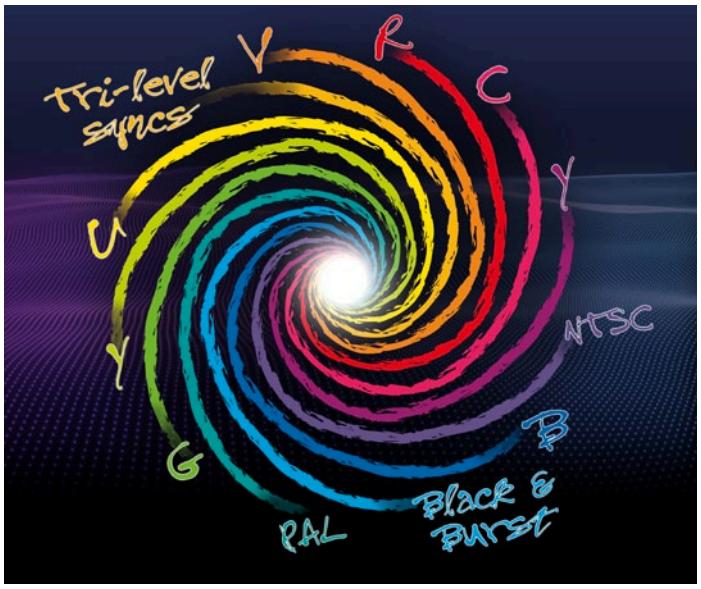


The VDA-VF analogue video distribution amplifier can be used to distribute any analogue source – whether HD or SD, reference or video. With its most popular application being for the distribution of SD Black and Burst or HD tri-level syncs reference, it can also be used to create multiple copies of composite and component video.

The VDA-VF gives the most outputs yet on a Crystal Vision analogue video DA (up to 12), while you'll get useful gain, equalisation and clamp adjustments, which are all controllable remotely.

With up to 20 cards fitting in the Vision 3 frame, the VDA-VF saves you rack space and can be housed alongside any other cards from the Vision range.

- **Gives you multiple copies of an analogue source – choice of five or 12 outputs, plus loop-through of the differential input**
- **Use it to distribute SD Black and Burst or HD tri-level syncs analogue references, or SD or HD analogue video (composite and component)**
- **Suitable for long cable runs: correct distortion to the analogue signal with high quality equalisation for up to 300m cable length**
- **Gain adjustments of +/-3dB in 0.1dB steps**
- **Use the clamp to compensate for differences in ground voltage and remove hum on the signal**
- **Flexible remote control and monitoring using frame integrated control panel, VisionPanel remote control panel, ASCII and JSON protocols, SNMP and the web browser-based VisionWeb Control**
- **Save rack space: 96mm x 325mm card allows up to 20 VDA-VF in 3U**



DISTRIBUTE ANY ANALOGUE SOURCE

The VDA-VF video distribution amplifier has been designed to provide multiple outputs of analogue sources.

Its main application is to distribute SD Black and Burst or HD tri-level syncs reference. With the Vision 3 frame including a common dual reference, the VDA-VF can be used to distribute the station reference to the frame itself – with one VDA-VF able to supply a reference feed to up to 12 Vision frames and the frame then distributing that reference via the backplane to each card that needs it.

The VDA-VF can also be used to distribute SD analogue composite and HD or SD analogue component video. Should you need to distribute RGB, YUV and Y/C video, multiple VDA-VF will be required (one for each component).

GET UP TO 12 OUTPUTS

The VDA-VF gives a maximum of 12 analogue outputs.

Decide how many outputs you need and how many cards you'd like to fit in a frame, and then select the rear module that meets those criteria. Using the single slot VR18 gives five analogue outputs, while 12 outputs are possible with the dual slot VR17.

The VDA-VF includes a loop-through of its differential input, which is independent of the VDA-VF and so allows you to remove the card without losing the looped-through source – and potentially your station syncs feed.

MAXIMISE THE QUALITY OF YOUR SIGNAL

The VDA-VF ensures a high quality signal with the differential input removing waveform distortion as well as protecting against crosstalk from the mains.

Further signal improvements can be achieved using the gain adjustments of +/-3dB in 0.1dB steps, along with high quality equalisation which will correct any distortion to the analogue signal caused by up to 300m of cable length, making the VDA-VF suitable for applications involving long cable runs.

The inclusion of a very effective clamp means it can compensate for differences in ground voltage by removing hum already on the signal. The clamp can be switched off should you not want anything to change your signal or if your signal is not standard analogue video.

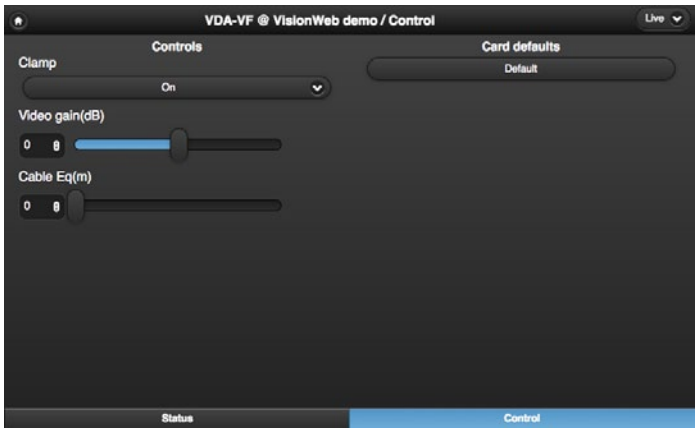
An automatic sync filter removes chroma information from the sync separator input on SD signals to prevent large negative excursions adversely affecting the DC restoration.

FLEXIBLE CONTROL

All control is done remotely. The control and monitoring options for the VDA-VF include an integrated control panel on the Vision frame, the VisionPanel remote control panel, our ASCII and JSON protocols, SNMP and the VisionWeb web browser control. In addition to the remotely adjustable gain, equalisation and clamp, there is remote indication of input present and input format.

The interactive VisionWeb GUI for the VDA-VF is available at www.crystalvision.tv and allows you to explore the full functionality of the product.

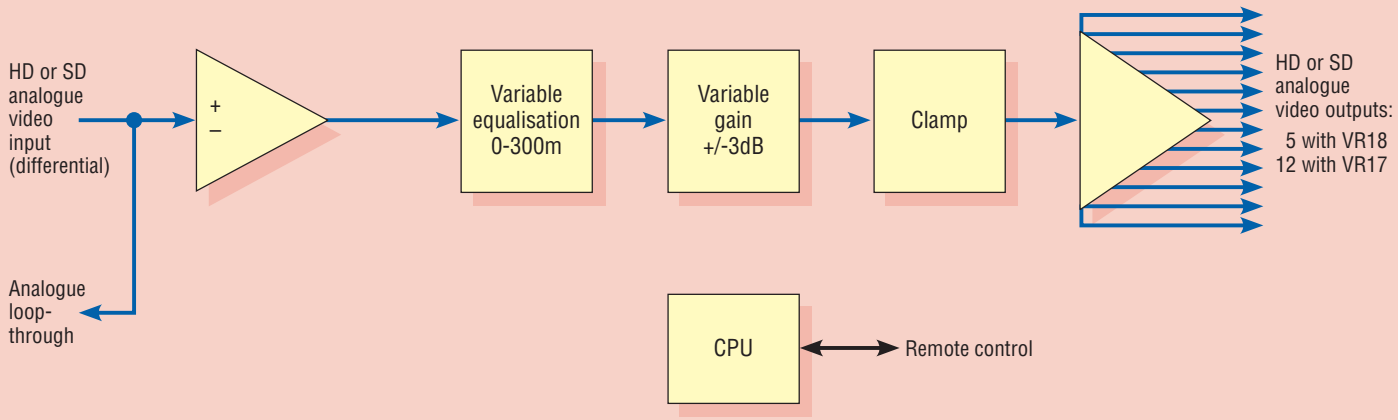
VisionWeb



SAVE RACK SPACE

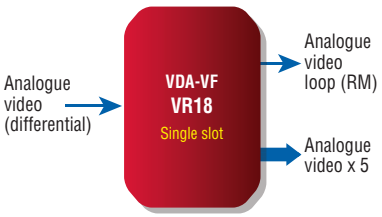
Housed in the Vision frames, the VDA-VF is a space-saving 96mm x 325mm card that sits in one frame slot – allowing up to 20 distribution amplifiers in 3U, depending on the rear module fitted.

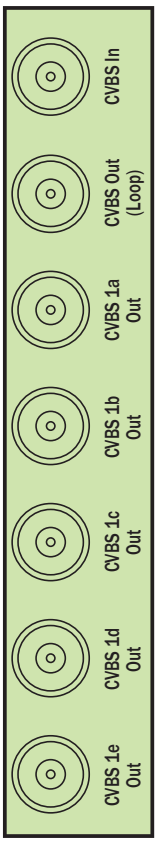
THE INPUTS AND OUTPUTS



REAR MODULE CONNECTIONS

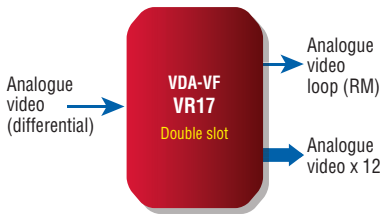
For five outputs

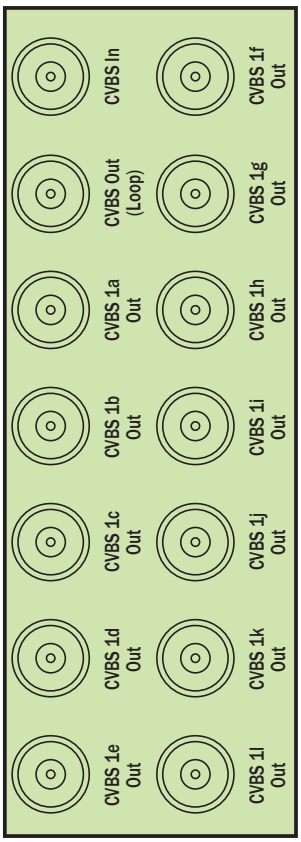




VR18

For 12 outputs





VR17

SPECIFICATION

MECHANICAL

Standard Vision card 96mm x 303mm (96mm x 325mm including finger pull)

Weight: 150g

Power consumption: 4 Watts

ANALOGUE VIDEO INPUT

One differential SD or HD analogue input

SD composite video input, 1 volt with syncs. SD or HD component video up to 30MHz bandwidth. SD Black and Burst or HD tri-level syncs reference

Analogue composite video formats: PAL 625i/50 and NTSC 525i/59.94 and 525i/60

Analogue component video formats: SD 625i/50, 525i/59.94 and 525i/60. HD 720p50, 720p59.94, 720p60, 1080i 50, 1080i59.94, 1080i60, 1080p23.98, 1080p24, 1080p25, 1080p29.97 and 1080p30

Passive loop-through does not require VDA-VF to be fitted. Loop-through requires external 75 ohm termination

ANALOGUE VIDEO OUTPUTS

Up to 12 analogue outputs depending on frame rear module used: five outputs with VR18 and 12 with VR17

PERFORMANCE

Input Return Loss: >31dB to 10MHz

Output Return Loss: >42dB to 10MHz

Frequency Response: +/-0.1dB 0 to 6MHz, +/-0.2dB 6 to 10MHz, +/-1.5dB 10 to 30MHz

Differential Gain: <0.3% at 5MHz

Differential Phase: <0.6 degrees at 5MHz

Signal to Noise Ratio: >66dB to 6MHz

Cable equalisation: Belden 8281 adjustment up to 300m

Gain adjustment: +/-3dB adjustment in 0.1dB steps

Adaptive clamp can be switched on (DC-coupled) or off (AC-coupled)

Automatic sync filter removes chroma information from the sync separator input on SD signals (only) to prevent large negative excursions adversely affecting the DC restoration

DELAY THROUGH BOARD

20ns

LED INDICATION OF:

Power okay

REMOTE CONTROL

Control from integrated control panel on Vision frames and remote panel

VisionWeb Control is available via the web server on the frame and allows control and monitoring using a standard web browser on a computer, tablet or phone

SNMP monitoring and control available as standard

Control using ASCII and JSON protocols

Remote indication of input present and input format (HD, SD or unknown) and remote adjustment of gain, equalisation and clamp

ORDERING INFORMATION

VDA-VF	Analogue video distribution amplifier with up to 12 outputs
Vision 3	3U frame with active front panel featuring smart CPU and integrated control panel for up to 20 Crystal Vision cards from the Vision range
VR17	Two slot frame rear module. Allows ten VDA-VF in 3U. Gives access to one differential HD or SD analogue input, 12 HD or SD analogue outputs and an analogue loop-through (NB. Passive loop still available when VDA-VF removed)
VR18	Single slot frame rear module. Allows 20 VDA-VF in 3U. Gives access to one differential HD or SD analogue input, five HD or SD analogue outputs and an analogue loop-through (NB. Passive loop still available when VDA-VF removed)
VisionPanel	3U Ethernet remote control panel with touch screen
VisionWeb Control	VisionWeb web browser control included within frame software
SNMP	SNMP monitoring and control included in frame

Crystal Vision

Crystal Vision Ltd. Lion Technology Park, Station Road East, Whittlesford, Cambridge CB22 4WL, England.
Tel: +44 (0)1223 497049 Fax: +44 (0)1223 497059 E-mail: sales@crystalvision.tv @crystalvisionuk www.crystalvision.tv