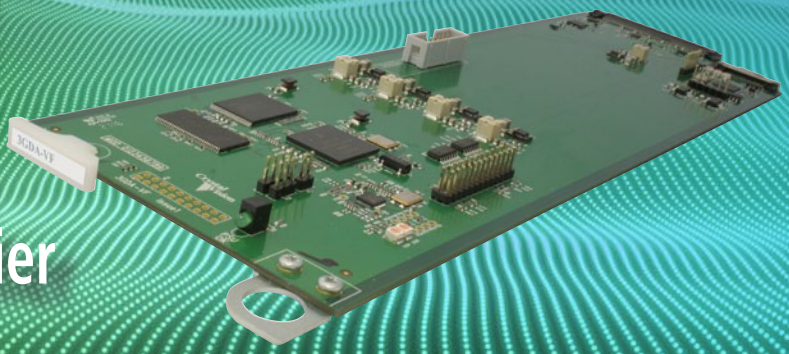
Crystal Vision

Vision SYSTEM

3GDA-VF

3G/HD/SD Video and MADI (AES10) Distribution Amplifier

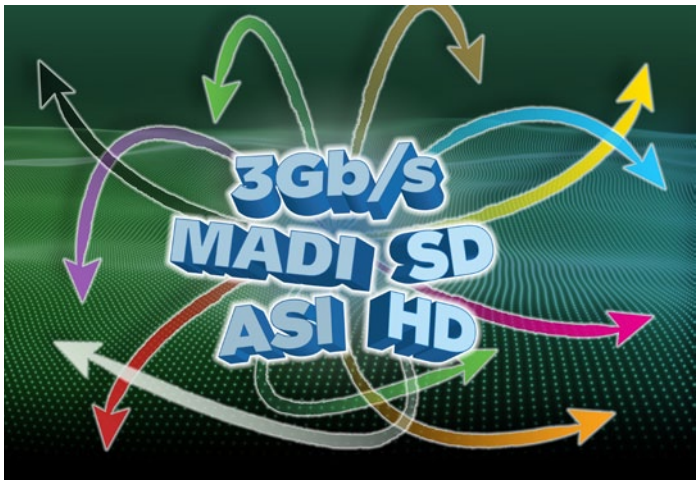


The 3GDA-VF is a very flexible distribution amplifier. You can configure it to be reclocking or non-reclocking, it will distribute any digital video (3Gb/s, HD and SD) as well as being DVB-ASI compatible, you can choose a number of outputs to suit your application and it's not even limited to video with its ability to distribute MADI audio.

With a distribution amplifier it's all about the outputs, and the 3GDA-VF gives our most outputs per slot yet (nine), with a total of up to 12 outputs available. The 3GDA-VF is also our most cost-effective digital video DA with signal reporting to date, as well as the first time we've offered remote monitoring on a MADI DA.

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

- Digital video and MADI (AES10) audio distribution amplifier
- Gives you multiple copies of a signal – choice of six, nine or 12 outputs
- Distributes a wide range of video signals: works with 3Gb/s, HD, SD and DVB-ASI
- Use it as a MADI audio distribution amplifier: get multiple copies of your MADI signal to send to all your audio areas, with different sample rates supported
- High performance distribution with optional signal reclocking, high quality equalisation and excellent jitter performance
- Ideal for big systems: remote monitoring of input present and signal type
- 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 3GDA-VF in 3U



MULTI-STANDARD VIDEO DISTRIBUTION

The 3GDA-VF is designed for the distribution of 3Gb/s, HD or SD video sources. All outputs are DVB-ASI compatible – a useful feature given the wide use of ASI within the broadcast environment.

This ability to distribute so many different signals makes the 3GDA-VF ideal for multi-standard environments or for engineers who want to 'future proof' their installations.

GET ACCESS TO ALL YOUR AUDIO EVERYWHERE

The 3GDA-VF can additionally provide a convenient and inexpensive way to send all your audio channels to all your audio areas, without you having to worry about the details in advance.

Designed for transporting a large amount of audio as a block, MADI (AES10) is an audio signal format used for getting many channels of audio down a single coax cable, with these multiple AES streams packed together and sent with a higher data rate. MADI makes it easy to have a very flexible audio system by providing all your areas with 'raw' audio channels, not just a selected mix or subset. The 3GDA-VF can take in a MADI data stream and create up to 12 copies of this data stream which can then be sent to different places.

When distributing MADI, the 3GDA-VF supports the industry standard payload of 64 channels at a sampling rate of 48 kHz, with sampling rates up to 96 kHz also supported for those requiring fewer channels in return for the cleanest possible sound.

CHOOSE YOUR OUTPUTS

How many outputs do you need? With the 3GDA-VF, the number of outputs you get (and the number of frame slots it uses) is determined by which of the three rear modules you choose.

Using standard BNCs you'll get six outputs with the single slot VR20 rear module and 12 outputs with the double slot VR15. Using Micro BNCs, the VR16 rear module gives you nine outputs in a single slot. The ASI-compatible outputs are all non-inverted.

CHOOSE RECLOCKING OR NON-RECLOCKING

There is no need to buy a different device for when you want to reclock or not reclock your signals. The 3GDA-VF includes user selectable reclocking and non-reclocking, which helps make it suitable for that wide range of signals.

The Reclocker mode has four settings – Auto, Bypass, MADI and DVB/ASI – which are selected remotely based on the input signal. 'Auto' will reclock SDI signals and automatically set the correct output slew rate (as SD or HD/3G). 'Bypass' will bypass the reclocker on SDI signals, with the output slew rate then manually set to SD or HD/3G to match the input signal. For MADI signals you should select 'MADI' to bypass the reclocker and automatically set the output slew rate to SD. Finally selecting 'DVB/ASI' for DVB-ASI signals will force the reclocker into a 270Mb/s mode and set the output slew rate to SD.

The 3GDA-VF will always choose an appropriate cable equaliser for the signal type, ensuring an SD cable length in excess of 250m with Belden 8281 or equivalent, and up to 140m for HD and 100m for 3Gb/s with Belden 1694A.

FLEXIBLE CONTROL

All control is done remotely. The control and monitoring options for the 3GDA-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.

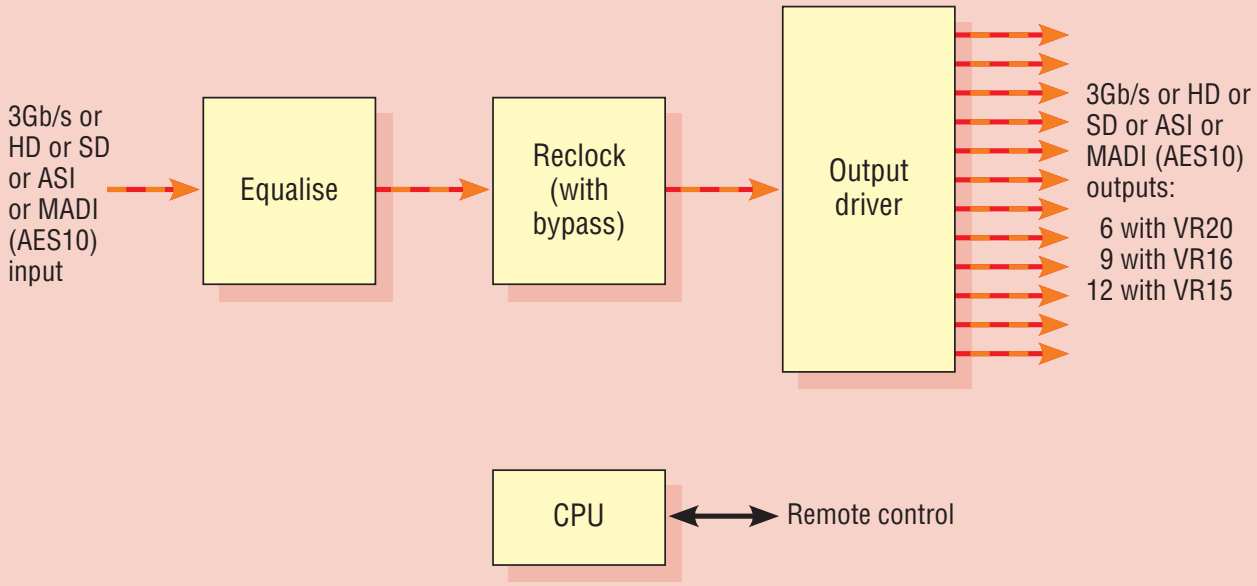
There is remote control of Reclocker mode and slew rate, while your broadcast control system will know whether every DA in the system has got an input thanks to the remote monitoring of input present and 3G/HD or SD signal. SNMP additionally allows alarms to be set on loss of input and change in signal type. The 3GDA-VF is therefore ideal for those seeking information about their signal, especially in big systems.

The interactive VisionWeb GUI for the 3GDA-VF is available at www.crystalvision.tv and allows you to explore the full functionality of the product.

SAVE RACK SPACE

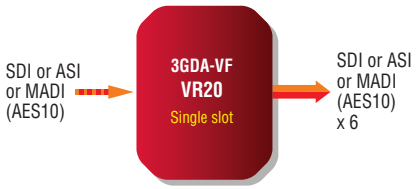
Housed in the Vision frames, the 3GDA-VF is a space-saving 96mm x 325mm card that sits in one frame slot – allowing up to 20 distribution amplifiers in 3U, depending on the rear module fitted.

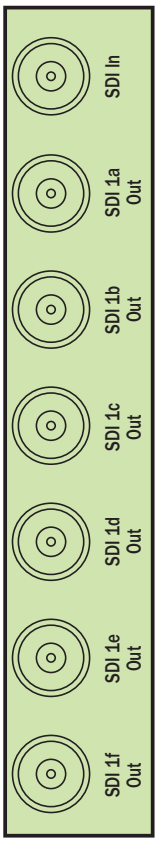
THE INPUTS AND OUTPUTS



REAR MODULE CONNECTIONS

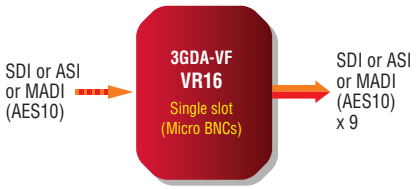
For six outputs

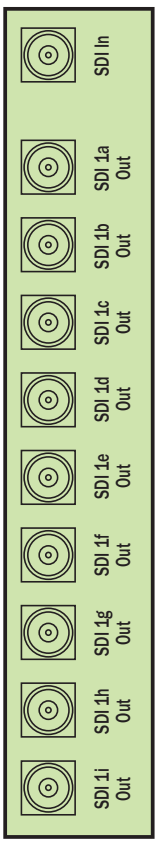




VR20

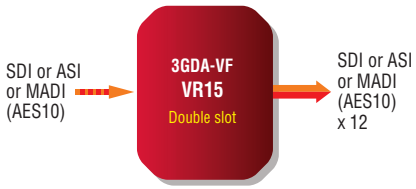
For nine outputs

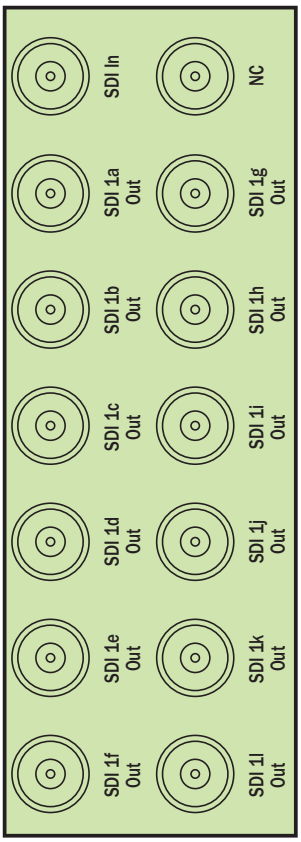




VR16

For 12 outputs





VR15

SPECIFICATION

MECHANICAL

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

Weight: 150g

Power consumption: 4 Watts

VIDEO INPUT (Not available if input is MADI)

One 3Gb/s or HD or SD input

DVB-ASI compatible

270Mb/s or 1.5Gb/s or 3Gb/s serial compliant to SMPTE 259 or ASI data, SMPTE 292-1 and SMPTE 424/425-A

Works with the following video standards: 625i, 525i, 720p50, 720p59.94, 720p60, 1080i50, 1080i59.94, 1080i60, 1080p23.98, 1080p24, 1080p25, 1080p29.97, 1080p30, 1080p50, 1080p59.94, 1080p60, 1080PsF23.98, 1080PsF24, 1080PsF25, 1080PsF29.97, 1080PsF30, 2048x1080p23.98*, 2048x1080p24*, 2048x1080p25*, 2048x1080p29.97*, 2048x1080p30*, 2048x1080PsF23.98*, 2048x1080PsF24*, 2048x1080PsF25*, 2048x1080PsF29.97*, 2048x1080PsF30* (*= YUV 4:2:2 10 bit)

3Gb/s cable equalisation up to 100m with Belden 1694A or equivalent

HD cable equalisation up to 140m with Belden 1694A or equivalent (approx. 100m with Belden 8281)

SD cable equalisation >250m Belden 8281 or equivalent

VIDEO OUTPUTS (Only available if input is video)

Up to 12 reclocked or non-reclocked 3Gb/s, HD or SD outputs depending on frame rear module used: six outputs with VR20, nine with VR16 and 12 with VR15

DVB-ASI compatible, with all outputs non-inverted

270Mb/s or 1.5Gb/s or 3Gb/s serial compliant to SMPTE 259 or ASI data, SMPTE 292-1 and SMPTE 424/425-A. Output follows the input format

AUDIO INPUT (Not available if input is video)

One MADI (AES10) input

Sampling rates supported (as specified in AES10-2008): 32 kHz to 48 kHz +/- 12.5%, 56 channels; 32 kHz to 48 kHz nominal, 64 channels; 64 kHz to 96 kHz +/- 12.5%, 28 channels

MADI cable equalisation up to 250m using Belden 1694A or equivalent

AUDIO OUTPUTS (Only available if input is MADI)

Up to 12 non-reclocked MADI (AES10) outputs depending on frame rear module used: six outputs with VR20, nine with VR16 and 12 with VR15

RECLOCKER MODE AND SLEW RATE

The Reclocker mode has four settings – Auto, Bypass, MADI and DVB/ASI – which are selected based on the input signal

Select 'Auto' for SDI signals to automatically set the correct output slew rate (as SD or HD/3G)

Select 'Bypass' for SDI signals to bypass the reclocker and manually set the output slew rate to SD or HD/3G using the 'Slew Rate' control

Select 'MADI' for MADI signals to bypass the reclocker and automatically set the output slew rate to SD

Select 'DVB/ASI' for DVB-ASI signals to force the reclocker into a 270Mb/s mode and automatically set the output slew rate to SD

DELAY THROUGH BOARD

50ns max

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 control of Reclocker mode and slew rate

Remote monitoring of input present and 3G/HD or SD or unknown signal

ORDERING INFORMATION

3GDA-VF	3G/HD/SD video and MADI (AES10) audio distribution amplifier with up to 12 outputs and signal reporting
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
VR15	Two slot frame rear module. Allows ten 3GDA-VF in 3U. Gives access to one 3Gb/s, HD, SD, DVB-ASI or MADI input and 12 3Gb/s, HD, SD, DVB-ASI or MADI outputs
VR16	Single slot frame rear module. Allows 20 3GDA-VF in 3U. Uses Micro BNCs. Gives access to one 3Gb/s, HD, SD, DVB-ASI or MADI input and nine 3Gb/s, HD, SD, DVB-ASI or MADI outputs
VR20	Single slot frame rear module. Allows 20 3GDA-VF in 3U. Gives access to one 3Gb/s, HD, SD, DVB-ASI or MADI input and six 3Gb/s, HD, SD, DVB-ASI or MADI outputs
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

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