Tetra-VIO

LED WALL Application

3G Upgradable

HDCP Compliant

Ref. TVC401

The Universal A/V Computer and HD Solution in Image Cross Conversion with Digital Audio De/Embedder

4 x Inputs

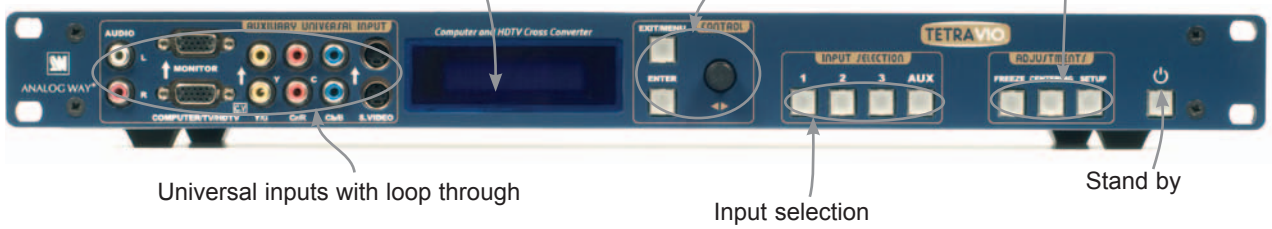
- 3 x Universal
- DVI-I
- SDI SD/HD
- SDTV
- HDTV 1080i/p
- WUXGA Max
- HDCP compliant

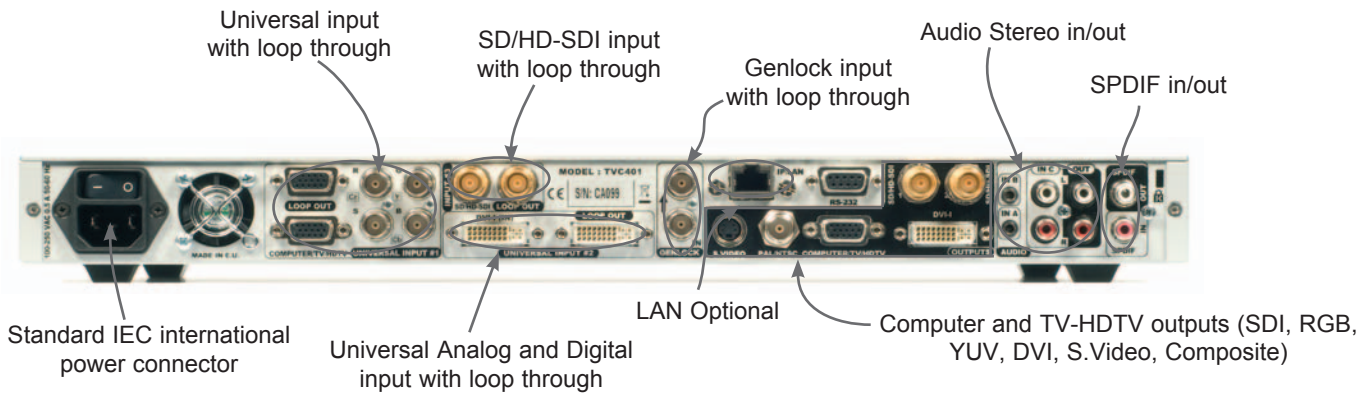
Simultaneous Outputs

- DVI
- SDI SD/HD
- SDTV
- HDTV 1080i/p
- WUXGA Max

Functions

- Genlock
- TBC
- Audio A/D
- Logo Insertion





4 A/V Inputs

- 3 Universal Inputs + 1 HD/SD-SDI
- Converts Virtually any High Resolution up to 2K, TV and HDTV Signals, Analog or Digital (Input/Output)
- Computer : RGB, DVI up to 1600x1200 & 2048x1080
- NTSC, PAL, SECAM, S.Video, RGB, YUV
- HDTV (HD-YUV, HD-RGB)
- SDI / HD-SDI
- Universal connector Interface
- Loop through on each input

Stereo Audio

- 4 inputs with level Trim / 1 output
- Embedded Audio Digital & SPDIF

Genlock

- Multi-format Genlock
- Black Burst PAL, NTSC
- Analog HD Black

Universal Output

- Computer: RGB, DVI up to UXGA & 2K
- NTSC, PAL, Composite, S. Video, RGB, YUV
- HDTV (HD-YUV, HD-RGB)
- SDI, HD-SDI

Effects

- 2 still logo with settable transparency recorded by acquisition or transfer
- Zoom up to 1000%
- The image can be positioned up to 100% anywhere on the screen, vertically, hori zontally and outside the screen
- Image size adjustable to fit any LED wall/ tiles.

New Features

- 8 Presets memories
- 1 Full Frame
- Cross hatch dynamic Pattern
- Control RGB Tiles Pattern
- Specific Menu LED Wall

Multi-Format Converters

Technical Specifications

4 AV INPUTS: 3 UNIVERSAL and 1 SD/HD-SDI

- Input #1, 2 & Aux.
  - HD-YUV: HD-YCrCb - 0.7Vp/p + Sync. 3 level 75 Ohms or YCrCb; RGsB, RGBS: 0.7Vp/p + Sync. 0.3V - 75 Ohms
  - S.Video: YC - 0.7Vp/p + Sync. 0.3V - 75 ohms
  - NTSC/PAL: Composite Video - 0.7Vp/p + Sync. 0.3V - 75 Ohms
  - Computer: RGBHV, RGBS and RGsB (PC, Mac, Wkst) (130kHz max)
  - DVI Digital Fpx MAX=165MHz TMDS 100 Ohms (input #2 only)
  - Audio: unbalanced stereo, 44kOhms/+18dBu max, adjustable level trim per input
  - Digital Audio SPDIF (fs 48kHz@20/24 bits)
- Input #3
  - HD-SDI YUV 4:2:2 - 10 bits – 1.5 Gb/s - or SDI 270 Mb/s - 75 Ohms

Output

- HD-SDI YUV 4:2:2 - 10 bits – 1.5 Gb/s - or SDI 270 Mb/s - 75 Ohms with embedded audio (fs=48Khz@20/24 bit)
- HD-YUV: HD-YCrCb - 0.7Vp/p + Sync. 3 level - 75 Ohms or YCrCb; RGsB, RGBS: 0.7Vp/p + Sync. 0.3V - 75 Ohms
- S.Video: YC - 0.7Vp/p + Sync. 0.3V - 75 ohms
- NTSC/PAL: Composite Video - 0.7Vp/p + Sync. 0.3V - 75 Ohms
- RGBHV, RGBS RGsB (0.7Vp/p-75ohms + Sync TTL or Analog)
- DVI: Digital FpxMAX=165MHz TMDS 100 Ohms
- Stereo audio analog: Vo=+18dBu, Zo=300 Ohms - G= - to + ∞ 6dB Master Level
- Digital Audio SPDIF (fs 48kHz@20/24 bits)

Genlock

- Black Burst Pal or NTSC: 1 Vp/p
- HD Black - 3 Level sync
- Phase adjustments
- Active loop through output

User Control and Connectors

FRONT PANEL

- Direct access to input selection, image freeze, auto centering, image processing
- Intuitive LCD display menu for easy set up
- Fluorescent display for enhanced viewability
- Aux. Input Connectors:
  - 2 x mini-DIN 4 for S.Video In and loop through
  - 6 x RCA for TV/TVHD In and loop through
  - 2 x HD15F for PC/TV/TVHD In and loop through
  - 2 x RCA for stereo audio in

REAR PANEL

- Input 1 Connectors:
  - 1 x HD15 for Computer/TV/HDTV In
  - 4 x BNC for TV/HDTV In
  - 1 x HD15 for loop through
  - 2 x RCA (stereo audio in)
- Input 2 Connectors:
  - 1 x DVI-I for digital and analog Computer/TV/HDTV
  - 1 x DVI-I for loop through
  - 3.5mm jack for stereo audio in
- Input 3 Connectors:
  - 1 x BNC for SDI/HD-SDI
  - 1 x BNC for loop through
  - 3.5mm jack for stereo audio in
- Output Connectors:
  - 1 x HD15
  - 1 x BNC (PAL/NTSC)
  - 1 x BNC (SDI/HD-SDI)
  - 1 x mini DIN 4 pin
  - 1 x DVI-I digital and analog
  - 2 x RCA (stereo audio)
- Other:
  - 1 x BNC for Genlock input
  - 1 x BNC for Genlock output loop
  - 1 x DB9 for RS232 control and upgrade
  - RJ45 for TCP/IP, optional
  - 2 x RCA for Digital Audio In & Out

Power Supply

- Internal, universal, automatic, 100-250 VAC; 50/60 Hz (40 W) (UL, CSA, GS, CE) ON/OFF AC Main switch

Supplied with

- 1 x DVI-I/HD15 adaptor
- 1 x HD15 to 5BNC adaptor cable
- 1 x Power cable
- 1 x Remote control software
- 1 x User manual

Dimensions: 19'', 1U

- D 10.4'' x W 19'' x H 1.74''
- D 265 mm x W 482 mm x H 44 mm

Weight: 3.8 kg / 8.4 lbs

3 year warranty on parts and labor back to factory

Specifications subject to change without prior notice

*RB: Reduced Blanking

Tetra-VIO by Analog Way is a highly versatile A/V Switcher / Converter / Interface with 3 universal Inputs and 1 SD/HD-SDI Input. It accepts a large range of formats, from Computer to Video and HDTV, in Analog or Digital format, and provides a large range of connectors: BNC, HD15, DVI, mini DIN4, Cinch, RCA. The output provides the same diversity of formats, and the same type of signals and connectors.

4 A/V Inputs: 3 Universal + 1 HD/SD-SDI

Each of the 3 universal inputs features an active loop through (monitoring) for easy control of the sources and accepts the following formats:
- TV: NTSC/PAL/SECAM, S.Video, RGB or YUV, HDTV in HD-YUV or HD-RGB analog,
- Computer formats: RGB up to UXGA and 2K. Input 2 also accepts digital DVI signal. The 3rd input is dedicated to SDI & HD-SDI 10 bits with embedded stereo audio.

Genlock

Equipped with an Analog Genlock input with an active loop through. Tetra-VIO offers a choice between SDTV Black Burst and Black HD-YUV. It allows genlocking of HDTV output signal on an SDTV Black Burst. User phase adjustments are available for a perfect result.

Formats I/O

Tetra-VIO supports numerous input and output formats and signal types. These formats are:

HDTV • 720p @ 60, 59.94 & 50 Hz
• 1080i @ 60, 59.94 & 50 Hz
• 1035i @ 60 Hz & 59.94 Hz,
• 1080sF @ 30, 29.97 & 25 Hz,
• 1080p @ 30, 29.97, 25, 24, 23.98 Hz

SDTV • NTSC – 525i @ 60 & 59.94 Hz – 15.735 kHz
• PAL – 625i @ 50 Hz – 15.625 kHz
• Progressive NTSC - 31.471 kHz@60/59.94Hz
• Progressive PAL - 31.250kHz@50Hz

COMPUTER • up to 2048x1080RB* & 1600x1200 @60Hz in both analog RGB & DVI

Output

The same format is available simultaneously on different outputs. For example: Computer formats are delivered in RGB and in DVI-D at the same time, SD-TV formats are available in Composite, S.Video, YUV and SDI, etc.

Tetra-VIO features 4 Analog Audio Stereo In and 1 Out and also one Digital SPDIF audio In/Out. It allows embedding Analog and SPDIF Digital Audio stereo signal into SD/HD-SDI with A/V delay compensation. (Fs: 48kHz – 20/24 bits). It also extracts and outputs SPDIF digital Audio stereo signal from the SD/HD-SDI embedded stream.

Tetra-VIO offers a high quality image thanks to:
- its new high performance true 10 bit video path processing with automatic 3:2 and 2:2 pull down circuitry,
- de-interlaced SD and HD TV format,
- auto adaptative pixel per pixel level motion compensation,
- auto centering, clock, time base corrector,
- frame rate converter and follower and
- multi-level anti-flicker.

The image adjustments and device setup are recorded in a non-volatile memory.

Tetra-VIO is a universal device with six functions in one: Scan Converter, Scaler, Standard converter with TBC, Audio De/Embedder, Switcher and Interface. Its high flexibility makes it essential in complex installations. It is extremely useful in solving signal compatibility issues at the last minute. In addition to a powerful multi-format Converter, Tetra-VIO is also a smooth and fast Audio / Video Switcher offering many useful features such as a1000% Zoom, a user programmable EDID for DVI input, etc… The standard RS232 connection and GUI allow a full remote control of the device and upgrade capability to maintain the high value of your equipment throughout time. Optional RJ45 is available for TCP/IP control.

Tetra-VIO is your accurate "all in one" versatile Input/Output tool.

Reference

> TVC401: Tetra-VIO

Option

> OPT-LAN: TCP/IP Control Interface

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