

Universal Scaler PLUS

Model C2-2375A



C2-2375A Universal Scaler PLUS is based on TV One's exclusive CORIO®2 technology and provides high quality bi-directional conversion between a variety of analog and digital video formats. Input and Outputs can be SD/HD/3G-SDI, DVI, Composite Video, YC, YUV, YPbPr or RGB. Signal parameters of the incoming video may be adjusted. All settings are stored in non-volatile memory and are retained even when power is switched off. Ten user defined presets are also available to customize settings for various applications.

The high resolution RGB/YPbPr output is selectable as virtually any PC or HDTV resolution. Our exclusive AutoSet feature takes the hassle out of setup by automatically sizing and positioning the computer image to fit exactly on the video screen. NTSC, PAL, PAL-M, PAL-N, SECAM standards are supported. The 2nd DVI and Analog output can be set to be a different video format and resolution.

All the functions can be controlled via the front panel Push Buttons, an RS-232/422/485 or IP connection. Windows Control Panel software is provided and most third party control systems interface directly with the entire C2 range of products. A front panel LCD makes setup easy. The unit is housed in a standard 1U rack mount case and features an optional redundant internal PSU and power inlet.

Variable Zoom to 10X enlarges any part of the computer screen to fill the entire video screen and position controls allow movement to any area desired. Variable Shrink to as little as 10% allows fitting the image onto most displays. The advanced Digital Flicker Elimination circuitry and high sampling rate ensures crisp, clear images, while full bandwidth chroma sampling ensures faithfully reproduced, high resolution colors. Temporal interpolation greatly improves framerate conversion by analyzing and merging successive frames. Pixel Level Motion Adaptive Diagonal Interpolation and Noise Reduction ensures high quality de-interlacing of PAL, NTSC and 1080i signals. 3:2 Pull-down ensures proper 24 fps film extraction from NTSC and 1080i sources.

Advanced Features - The Key Mode allows computer graphics to be keyed over an external Composite, YC, or SDI signal. The keyed image may be faded in and out. Due to the 4:4:4 sampling format, precise keying at the pixel level can be achieved. The Mix Mode permits Seamless Cut, Fade or Wipe transitions between input sources. The PIP Mode allows either of the computer HD15/DVI inputs to be inset in a window over any of the CV/Y C/SDI video inputs or vice versa. The PIP window may be placed anywhere on the screen. The Genlock feature is SD and HD compatible and ensures precise synchronization of the incoming signals by providing a wide Subcarrier lock range with Subcarrier phase adjust

Key Features of the C2-2375A

- Up-Down-Cross Conversion
- SDI inputs: 1x SD/HD/3G-SDI with re-clocked out
- DVI inputs: 2x DVI
- Analog inputs: 2x CV/YC/YUV/YPbPr
- Genlock inputs: 1x Tri/Bi with loop-through
- SDI outputs: 2x SD/HD/3G-SDI (duplicated)
- DVI outputs: 2x DVI
- Analog outputs: 2x CV/YC/YUV/YPbPr
- 2nd DVI / Analog output can be different format
- Analog: PC to 2048x2048, HDTV to 1080p/60
- DVI: PC to 1920x1200, HDTV to 1080p/60
- Supports: NTSC, PAL, PAL-M, PAL-N, SECAM
- Motion Compensation & 3:2 Pulldown
- Temporal Interpolation & Diagonal Interpolation
- Noise Reduction for PAL, NTSC and 1080i inputs
- Automatic Incoming Resolution Detection
- AutoSet Automatic picture sizing of PC inputs
- 4:4:4 Full bandwidth sampling
- Video signal parameter adjustments
- · Audio de-embed / embed for SDI and DVI
- Closed-caption de-embed / embed for CV / SDI
- AFD and VP packet support for SDI
- Integral Audio Routing
- User-defined Logo insertion
- · Borders with variable size and colour
- IP Interface
- Variable Image Zoom to 10X and Shrink to 10%
- Optional Audio Module with AES break-out and adjustable delay
- Optional Tally Module
- Optional Redundant Power Supplies
- Optional Rear Rack mount supports
- RS-232/422/485 interface

Integral Audio switching is provided to route audio from the (HDMI-compatible) DVI input or SDI input to the DVI and SDI outputs. An optional Audio Module can provide AES I/O abilities and audio delay and can link to our A2-7300 range of audio break-out units.

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Specifications

V	ideo	Input	•

Television Standards Composite Video YC (S-Video) YUV /YPbPr SD/HD/3G-SDI **Computer Inputs**

Analog Analog format Digital DVI Analog Sync **Analog Termination** R-G-B Level Range Scan Rate Detection

Analog Signals **DVI Signals** Max Horiz Scan Rate Computer Compatibility

Video Outputs

Television Standards Impedance Composite Video YC (S-Video) YUV /YPbPr SD/HD/3G-SDI **Computer Outputs**

Analog Analog format R-G-B Level Analog Signals **DVI Signals** Vertical Refresh Rate Size and Position Image Size Image Freeze **Settings Memory**

Zoom Range Shrink Range Image Mirroring Conversion Technology Frame-rate Conversion Color Resolution

Sampling rate / type Firmware Memory De-Interlacing

(NTSC, PAL, 1080i) Video Comb Filter Film (NTSC, 1080i)

Video Adjustments

Audio support De-embed / embed Delay / mixing **Closed Captions**

De-embed / embed **Genlock Adjustments**

Subcarrier Lock Range

+/- 200Hz for NTSC Operation (+/- 250Hz for PAL Operation)

Subcarrier Phase +/- 180° Adjustment **SDI Jitter**

NTSC, PAL, PAL-M, PAL-N, SECAM

2x via DVI-U or 1x via BNC b/o*1

2x via DVI-U or 1x via BNC b/o*1

2x via DVI-U or 1x via BNC b/o*1

1x via BNC, with reclocked output

2x via DVI-U or 1x via BNC b/o*1

PC to 2048x2048, HD to 1080p/60

PC to 1920x1200, HD to 1080p/60

NTSC. PAL. PAL-M. PAL-N. SECAM

2x via DVI-U or 1x via BNC b/o*1

PC to 2048x2048, HD to 1080p/60

PC to 1920x1200, HD to 1080p/60

Automatic via AutoSet or Manual

User-Definable Presets

Variable to 10X Zoom

Horizontal and/or Vertical Proprietary - CORIO®2

24-bit (16.8 Million Colors)

Flash, Upgradeable via RS-232

Pixel-level Motion Adaptive,

Diagonal Interpolation, Noise

CV/YC: Contrast, Brightness,

Saturation, Hue (NTSC). Analog RGB/YPbPr levels

SDI (608 & 608 in 708)

162MHz 24-bit 4:4:4

One Video Frame

Variable to 10%

RGBHV, RGBS, RGsB, YPbPr

2x via BNC (identical)

PC, Macintosh, Workstations

RGBHV, RGBS, RGsB, YPbPr

2x via DVI-U (DVI-I connector)

TTL Level, $10K\Omega$, Pos or Neg

 75Ω

0.5-2.0 Vp-p

Automatic

150KHz

0.7 Vp-p

Any to 250Hz

Non-Volatile

Temporal

Reduction.

3:2 Pulldown

DVI & SDI

Optional

Adaptive

SMPTE259M-C (270Mbps:525/625Line) (SD-SDI) Jitter < 0.1 UI (1.485/1.4835Gbps: SMPTE292M 720p, 1035i, 1080i, 1080p) (HD-SDI)

Jitter < 0.2 UI (2.97/2.967Gbps: SMPTE424M 1080p 60/59.94) (3G-SDI) Jitter < 0.3 UI

I/O Vertical Rates - SMPTE259M-C (SD-SDI)

525i (720x488) 59.94Hz 625i (720x576) 50 Hz

I/O Vertical Rates - SMPTE292M (HD-SDI)

23.98, 24, 25, 29.97, 30, 50, 720p (1280x720) 59.94, 60Hz

1035i (1920x1035) 59.94, 60Hz 1080i (1920x1080) 50. 59.94. 60Hz 23.98, 24, 25, 29.97, 30Hz 1080p (1920x1080)

I/O Vertical Rates - SMPTE425M -A (3G-SDI) 1080p (1920x1080) 50, 59.94, 60Hz

Control Methods

via Front Panel Buttons & LCD Local RS-232/422/485 via D9 Female Connector

IP Interface **RJ45 Connector**

Warranty

Limited Warranty 5 Years Parts and Labour

Regulatory Compliance

Main unit FCC, CE, UL, RoHS

Mechanical

Size (H-W-D) Standard 1U

Weight (Net) 4.8KG (with redundant PSU option)

Environmental

Operating Temperature 0° to +55° C (+32° to +131° F) Operating Humidity 10% to 85%, Non-condensing Storage Temperature -10° to $+70^{\circ}$ C (+14° to +158° F) 10% to 85%, Non-condensing Storage Humidity MTBF (C2-2375A-DP2) 35,000 hours

Power Requirement

External Power Supply 110v to 240v auto-detecting Optional redundant internal PSU

Redundancy Accessories Included

1x Operations Manual 1x Front Rack Fars 1x Power cable

Product Item Number C2-2375A

Optional Accessories

Tally module Factory fitted *2 Redundant PSU Factory fitted Factory fitted *2 Redundant PSU + inlet Rack Support Rails(24")

Rack Support Rails(32") Control Software

Downloadable from Website

Notes

(1) BNC break-out splits the DVI-U's analog signals into 5x BNC connectors for ease of use.

US, UK, Euro or AU

Each of these uses one of the 2 spare module slots.



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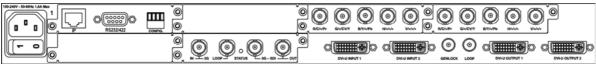
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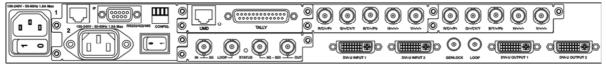
Panel Drawings



(Front panel with front rack supports fitted)



(Rear panel)



(Rear panel shown with optional Tally module and Redundant Power Supply & Inlet fitted)