

**C2-2350 Universal Video Switcher/Scaler** is based on TV One's exclusive CORIO2™ technology and provides high quality scaling in any direction between standard video, DVI or Analog computer and HDTV signals. NTSC and PAL standards are supported. Input and Outputs can be Composite Video, S-Video, YUV Component, YPbPr (Progressive Scan) Component or RGB. 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. 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. The high resolution RGB/YPbPr outputs are selectable as any computer resolution up to 2048x2048 at any vertical refresh rate or any HDTV resolution up to 1080p. A wide variety of computer signal formats are available to support PC, Mac and Workstation formats. **C2-2355** provides an SDI Output in addition to all of the features of the C2-2350.

All the functions can be controlled via the front panel Push Buttons, an Infrared Control Remote Unit or via an RS-232 or IP connection. A Windows Control Panel is provided and most third party control systems interface directly with the entire C2 range of products. A front panel LCD makes setup easy.

Variable Zoom to 10X allows you to enlarge any part of the computer screen to fill the entire video screen and position controls allow you to move around 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 insures crisp, clear images, while full bandwidth chroma sampling insures faithfully reproduced, high resolution colors. Motion compensation and a 3:2 Pulldown feature for NTSC greatly improves image quality.

**Stereo Audio** switching is provided by an integral 4x1 audio routing switcher. The four impedance-independent unbalanced inputs follow the video input selection. A rear panel terminal block provides access.

**PIP, Chromakey, Lumakey, Mixing and Genlock** are among the advanced standard features. The Key Mode allows computer graphics to be keyed over an external Composite or S-Video 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 glitch-free mixing between the computer image and external video. The Picture-in-Picture Mode allows either of the computer inputs to be inset in a window over either of the video inputs. The PIP window may be placed anywhere on the screen. The Genlock feature insures precise synchronization of the incoming signals by providing a wide Subcarrier lock range with Subcarrier phase adjustment. C2-2000 series units are housed in desktop cases and rackmount kits are available as an option.



### Key Features of the C2-2350, C2-2355

- Inputs: DVI RGB/YPbPr, Analog RGB via HD-15, YUV/YPbPr via 3-BNC, C-Video via BNC S-Video
- All Input Signals are Scalable
- Automatic incoming resolution detection
- AutoSet® - Automatic picture sizing
- Analog PC to 2048x2048, HDTV to 1080p
- DVI PC to 1280x1024, HDTV to 1080p/30
- Multiple Worldwide Television Standards
- 3:2 Pulldown for NTSC Film Mode
- Video signal parameter adjustments
- Outputs: DVI RGB/YPbPr, Analog RGB/YUV/YPbPr via HD-15, C-Video via BNC and S-Video
- Integral 4x1 Stereo Audio Routing Switcher
- RS-232 & IP Interface w/Windows Control Panel
- IR Remote Control
- Variable Image Zoom to 10X and Shrink to 10%
- Genlock With Subcarrier Phase Adjustment
- Picture-in-Picture
- Chromakey and Lumakey
- Edge Blending
- Optional Single/Dual Rackmount Kit
- Optional Input Expansion with S2 Switchers
- SDI Output (C2-2355)

**Edge Blending** is a standard feature of the C2-2350 and C2-2355. Because of the ability to 'feather' any or all of the edges, multiple images can be aligned vertically, horizontally, or both to create unusual displays. Using multiple C2 units, there is no limit to the number of blended images. Edge Blending is not limited to high resolution RGB computer images, but can be applied to any input. Gamma correction is employed to compensate for many of the problems faced when blending between projectors. Special preparation of the video in advance is not necessary, since all processing is done within the C2 unit.

**Input Expansion** to add additional DVI, RGB, YPbPr, YUV, Composite or S-Video inputs is easy by using any of the optional S2 Series Input Expansion Switchers. The S2 unit links to any C2-2000 series unit via an Options Interconnect Cable and becomes an integral part of scaler from a control and operational standpoint. The routing of these additional inputs is controlled directly from the control system of the C2. Multiple different S2 models may be simultaneously connected to a single C2, providing virtually unlimited input flexibility.

## Specifications

### Video Inputs

Television Standards NTSC, PAL, PAL-M, PAL-N, SECAM  
 Composite Video 1x via BNC  
 S-Video (Y/C) 1x via 4-Pin Mini-DIN Connector  
 YUV /YPbPr 1x via 3-BNC

### Computer Inputs (2)

Signal Type 1x Analog via HD15 Connector  
 1x DVI-D via DVI-I Connector  
 Format RGBHV, RGBS, RGSB, YPbPr  
 Sync TTL Level, 10KΩ, Pos or Neg  
 Termination Auto-terminating into 75Ω  
 R-G-B Level Range 0.5-2.0 Vp-p  
 Scan Rate Detection Automatic  
 Analog Signals PC to 2048x2048, HD to 1080p  
 DVI Signals PC to 1280x1024, HD to 1080p/30  
 Max Horiz Scan Rate 150KHz  
 Computer Compatibility PC, Macintosh, Workstations

### Video Outputs

Television Standards NTSC, PAL, PAL-M, PAL-N, SECAM  
 Impedance 75Ω  
 Composite Video 1x via BNC  
 S-Video (Y/C) 1x via 4-PIN Mini-DIN  
 YUV, YPbPr 1x via 3-BNC (shared w RGB Out)

### Computer Outputs (2x)

Signal Type 1x Analog via HD15 Connector  
 1x DVI-I via DVI-I Connector  
 Format RGBHV, RGBS, RGSB, YPbPr  
 R-G-B Level 0.7 Vp-p  
 Analog Signals PC to 2048x2048, HD to 1080p  
 DVI Signals PC to 1280x1024, HD to 1080p/30  
 Vertical Refresh Rate Any to 250Hz  
 Size and Position Automatic via AutoSet or Manual  
 Image Size User-Definable Presets  
 Image Freeze One Video Frame  
 Settings Memory Non-Volatile  
 Zoom Range Variable to 10X Zoom  
 Shrink Range Variable to 10%  
 Image Mirroring Horizontal and/or Vertical  
 Horizontal Filtering Full Digital  
 Conversion Technology Proprietary – CORIO2™  
 Color Resolution 24-bit (16.8 Million Colors)  
 Sampling Rate 108MHz  
 Digital Sampling 24-bit, 4:4:4 format  
 Firmware Memory Flash, Upgradeable via RS-232  
 Video Encoder 8-bit Digital  
 Video Decoder 9-bit Digital  
 De-Interlacing (NTSC-PAL) Pixel-level Motion Adaptive

### General (Continued)

Comb Filter Decoding Adaptive  
 Film Mode (NTSC) 3:2 Pulldown  
 Video Adjustments Contrast, Brightness, Saturation, Hue (NTSC), R-G-B Levels

### Audio Input/Output

Inputs 4x Unbalanced via Terminals  
 Output Unbalanced via Terminals

### Operational Modes

Key Chromakey or Lumakey  
 Mix PC to/from Video  
 PIP Variable Window Size & Position

### Genlock Adjustments

Subcarrier Lock Range +/- 200Hz for NTSC Operation  
 (+/- 250Hz for PAL Operation)  
 Subcarrier Phase +/- 180° Adjustment

### Control Methods

Local via Front Panel Buttons & OSD  
 RS-232 Interface via D9 Female Connector  
 IP Interface RJ45 Connector  
 Infrared Remote via IRC-4 Remote Unit  
 Input Expansion Control via D-15 Options Connector

### Warranty

Limited Warranty 2 Years Parts and Labor

### Regulatory Compliance

Main Units FCC, CE, RoHS  
 Power Supplies UL, CE, CSA, RoHS

### Mechanical

Size (H-W-D) 1.6"x8.6"x5.8" (41.5x218x147mm)  
 Weight (Net) 2.6 lbs (1.2 kg)

### Environmental

Operating Temperature +4° to +45° C (+40° to +113° F)  
 Operating Humidity 10% to 85%, Non-condensing

### Power Requirement

External Power Supply 12VDC@1A

### Accessories Included

1x C-Video Cable 6' (2m) BNC to BNC  
 1x VGA Cable 6' (2m) HD15 Male to Male  
 1x DVI Cable 6' (2) DVI Male to Male  
 1x Serial Cable 6' (2m) D9 Male to Male  
 1x IR Remote IRC-4  
 1x Operations Manual C2-2000 Series  
 1x In-Plug Power Supply US, UK or Euro

### Product Item Numbers

C2-2350 Universal Video Switcher/Scaler  
 C2-2355 w/SDI Out

### Optional Accessories

RM-220 Single/Dual Rackmount Kit  
 S2 Series Input Expansion Switchers

## Panel Drawings

