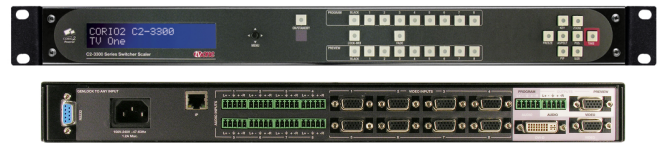**C2-3360**

C2-3350 Universal Input Seamless Switcher is based on TV One's exclusive CORIO®2 technology and provides high quality up, down and cross conversion between standard video formats and Computer or HDTV signals. NTSC, PAL and SECM video standards are supported. Each of the 8x Universal Video inputs on HD15 connectors can accommodate Composite Video, YC (S-Video), YUV, YPbPr, RGBHV, RGBS or RGsB formats. Compact adapters are available that convert from BNC to HD15 or 4-Pin YC to HD15. Incoming video parameters may be adjusted. The output is selectable as any computer resolution up to 2048x2048 at any vertical refresh rate and all HDTV resolutions up to 1080p as well as Composite and YC.

Two Program outputs are provided. One is Universal Analog via an HD15 that can be set to any analog format and resolution form Composite Video through 1080p HD. The second Program out is provided as DVI-D. The Preview output is an analog RGBHV signal that shows the selected input as a full screen image preview; CV and YC inputs are up-converted to RGBHV for viewing.

All the functions can be controlled via the front panel Push Buttons, Infrared, RS-232 or IP. A Windows Control Panel is provided and most third party control systems interface directly with C2-3000 units. Variable Zoom to 10X allows you to enlarge any part of the video image to fill the entire computer screen and position controls allow you to move around to any area desired. Variable Shrink to as little as 10% allows fitting the image to any display. High bandwidth chroma sampling insures faithfully reproduced, high resolution colors.

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. 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.

Advanced Features of the C2-3350 includes scaling of the RGB or YPbPr inputs, Genlock, Unrestricted Picture-In-Picture (any input over any other), Chromakey, Lumakey and Mixing. The **Key Mode** allows computer graphics to be keyed over an external Composite or YC signal or visa versa. 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 **PIP Mode** is unrestricted and allows any input to be inset in a window over any other input.

Key Features of the C2-3300 Series

- Automatic incoming resolution and format detection
- 8x Universal Video Input Seamless Switching
- 1x Program Output (Analog, any format)
- 1x Program Output (DVI-D)
- 1x Preview Output (RGBHV forma, all Sources)
- Universal Scaler (Up, Down & Cross Conversion)
- Video Frame Rate Conversion
- Worldwide TV Standards Conversion
- Aspect Ratio Conversion
- 4:4:4 Full bandwidth Chroma Sampling
- Menu Driven Control via Joystick and LCD
- Remote Controllable via IR, RS-232 or IP
- Rack-mounting ear kit (to fit to 19" rack width)

Additional Features of the C2-3350 and C2-3360
- Unrestricted Single Window PIP
- Genlock, Mix, Chroma/Lumakey, Edge Blending

Additional Features of the C2-3360
- 8x Stereo Differential Stereo Audio Inputs
- Program and Preview Stereo Audio Outputs
- Adjustable Audio Level and Balance
- Audio assignable to any video input

Flexible Upgrade Path
- Audio - Upgradable at TV One Service Centers
- Mix/Key/PIP/Edge Blend - Upgradable at User's site

Edge Blending allows feathering any or all of the edges; multiple images can be aligned vertically, horizontally, or both to create unusual displays. Using multiple units, any number of images can be blended. Gamma correction is employed to compensate for many of the problems faced when blending projectors.

The **C2-3360** model offers Differential Stereo Audio switching provided by an integral 8x1 stereo audio routing switcher. The eight balanced/unbalanced inputs may be set to follow any of the video inputs. The connections are made via terminal blocks on the rear panel. Adjustment of audio volume and balance is possible (MUTE, -15dB to +15dB), plus separate routed outputs for program and preview.

Specifications

Video Inputs

Universal Analog	8x via HD15 Female

Video Outputs

Program Channel (2x)	1x Universal Analog via HD15F
	1x DVI-D via DVI-I Connector
Preview Channel	1x RGBHV via HD15F

Stereo Audio Inputs

C2-3360 Only	8x Balanced/Unbal via Terminals

Stereo Audio Outputs

C2-3360 Only	2x Balanced/Unbal via Terminals (C2-3360)

Audio Characteristics

Type	Analog – Balanced or Unbalanced
Frequency Response	180KHz - 3dB
Level and Balance	MUTE, -15dB to +15dB
Input/Output Levels	Line Level – all Inputs & Outputs

Video Characteristics

Video Standards	NTSC, PAL-B, M, N, SECAM
Composite & YC	NTSC, PAL (Note 1)
YUV	NTSC, PAL (Note 1)
YPbPr	Up to 1080p @ 60Hz
RGBHV, RGBS, RGsB	Up to 2048x2048 60Hz
Sync	TTL Level, 10KΩ, Pos or Neg
Impedance	75Ω
R-G-B Level Range	0.5-2.0V p-p
Scan Rate Detection	Automatic
PC Resolutions	Any up to 2048x2048
HDTV Resolutions	Any up to 1080p

General

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 – CORIO®2
Color Resolution	24-bit (16.8 Million Colors)
Digital Sampling	24-bit, 4:4:4 format
Sampling Rate	162MHz
Firmware Memory	Flash, Upgradeable via RS-232
Video Decoder	9-bit Digital
De-Interlacing (NTSC-PAL)	Pixel-level Motion Adaptive
Comb Filter Decoding	Adaptive
Film Mode (NTSC)	3:2 Pulldown
Video Adjustments	Contrast, Brightness, Saturation, Hue (NTSC), R-G-B Levels

Control

Local	Push Buttons and LCD
Remote	IR, RS-232, Ethernet IP

Operational Modes

Key	Chromakey or Lumakey
Mix	Fade, Cut or Effect Transitions
PIP (Unrestricted)	Any source over any other source
Edge Blending	Top, Bottom, Right or Left Side

Mechanical

Desktop Case (HWD)	44x420x200mm (1.75"x17"x7.9")
With Rack Ears (HWD)	44x482x200mm (1.75"x19"x7.9")
Weight (Net)	3.2kg (7.0 lbs)

Warranty

Limited Warranty	2 Years Parts and Labor

Environmental

Operating Temp.	0° to +45° C (+32° to +113° F)
Operating Humidity	10% to 85%, Non-condensing
Storage Temperature	-10° to +70° C (+14° to +158° F)
Storage Humidity	10% to 85%, Non-condensing

Power Requirement

Mains	100-240V AC (47-63 Hz), 20W

Regulatory Approvals

Video Scaler Unit	EN55103-1 & 2, EN60065, FCC, RoSH
Power Supplies	UL, CUL, CE, PSE, GS, RoHS

Product Item Numbers

C2-3350	No Audio	- With Mix/Key/PIP
C2-3360	With Audio	- With Mix/Key/PIP

Accessories Included

1x Operations Manual	C2-3300 Series
2x ZCH3000-1	HD15M to BNC Male CV Adapter
1x ZSH3000-1	HD15M to 4-Pin Mini-DIN YC
1x Rackmount Kit	Set of attachable ears
Windows Control Panel	Downloadable form website

Optional Accessories

ZCH3000-1	Additional HD15M to BNC Male CV Adapt
ZSH3000-1	Additional HD15M to 4-Pin Mini-DIN YC
CHB1609-2	0.7m (2') HD15M to3 BNC Female Cable
ZHB1870-6	2m (6') HD-5M to 3 BNC Male Cable
ZHR1720G-6	2m (6') HD15M to 3 RCA Male Cable
ZHB1719G-6	2m (6') HD15M to 5 BNC Male Cable
CC-300	Hardware Control Panel
RM-110	Rear Rack Rail Support System

Notes

(1) Composite, YC and YUV/YPbPr signal may be fed directly via an HD15 cable or via the breakout cable and adapters listed in the Optional Accessories.
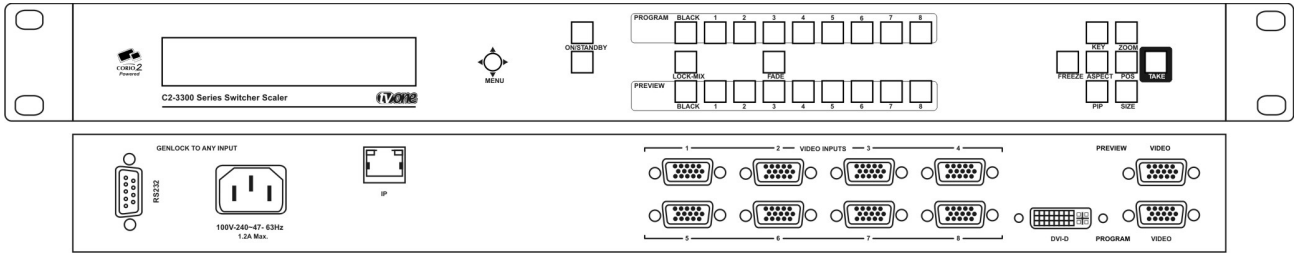
Panel Drawings

C2-3300 – C2-3350

C2-3310 – C2-3360