



Universal Input Seamless Switcher

Models C2-3300, C2-3310, C2-3350, C2-3360

C2-3300 Universal Input Seamless Switcher Series 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 SECAM 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 from 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.

C2-3310 and **C2-3360** models offer 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.

C2-3350 and **C2-3360** models offer a wide variety of additional capabilities, including 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.



C2-3360

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 format, 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 C2-3310 and 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

Additional Features of the C2-3350 and C2-3360

- Unrestricted Single Window PIP
- Genlock, Mix, Chroma/Lumakey, Edge Blending

Flexible Upgrade Path

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

C2-3000 Series Model Overview

C2-3300 - Basic Unit, No Audio or Key/Mix/PIP

C2-3310 - Basic Features plus Audio

C2-3350 - Basic Features plus Key/Mix/PIP

C2-3360 - Basic Features plus Audio and Key/Mix/PIP

The **PIP Mode** is unrestricted and allows any input to be inset in a window over any other input.

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.

Upgradability is taken to a new level in the C2-3000 Series. A basic C2-3300 or C2-3350 may have audio added at any TV One Technical Support Center by adding the Stereo Audio switching board. Adding the Mix/Key/PIP features can be done by firmware upgrade at the user's location in the field. So, the upgrade path is easy from the basic to the most advanced model.

Specifications

Video Inputs (All Models)		Operational Modes	
Universal Analog	8x via HD15 Female	Key	ChromaKey or Lumakey
Video Outputs (All Models)		Mix	Fade, Cut or Effect Transitions
Program Channel (2x)	1x Universal Analog via HD15F 1x DVI-D via DVI-I Connector	PIP (Unrestricted)	Any source over any other source
Preview Channel	1x RGBHV via HD15F	Edge Blending	Top, Bottom, Right or Left Side
Stereo Audio Inputs		Mechanical	
C2-3310, C2-3360	8x Balanced/Unbal via Terminals	Desktop Case (HWD)	44x420x200mm (1.75"x17"x7.9")
Stereo Audio Outputs		With Rack Ears (HWD)	44x482x200mm (1.75"x19"x7.9")
C2-3310, C2-3360	2x Balanced/Unbal via Terminals	Weight (Net)	3.2kg (7.0 lbs)
Audio Characteristics		Warranty	
Type	Analog – Balanced or Unbalanced	Limited Warranty	2 Years Parts and Labor
Frequency Response	180KHz - 3dB	Environmental	
Level and Balance	MUTE, -15dB to +15dB	Operating Temp.	0° to +45° C (+32° to +113° F)
Input/Output Levels	Line Level – all Inputs & Outputs	Operating Humidity	10% to 85%, Non-condensing
Video Characteristics		Storage Temperature	-10° to +70° C (+14° to +158° F)
Video Standards	NTSC, PAL-B, M, N, SECAM	Storage Humidity	10% to 85%, Non-condensing
Composite & YC	NTSC, PAL (Note 1)	Power Requirement	
YUV	NTSC, PAL (Note 1)	Mains	100-240V AC (47-63 Hz), 20W
YPbPr	Up to 1080p @ 60Hz	Regulatory Approvals	
RGBHV, RGBS, RGsB	Up to 2048x2048 60Hz	Video Scaler Unit	EN55103-1 & 2, EN60065, FCC, RoSH
Sync	TTL Level, 10KΩ, Pos or Neg	Power Supplies	UL, CUL, CE, PSE, GS, RoHS
Impedance	75Ω	Product Item Numbers	
R-G-B Level Range	0.5-2.0V p-p	C2-3300	No Audio - No Mix/Key/PIP
Scan Rate Detection	Automatic	C2-3310	With Audio - No Mix/Key/PIP
PC Resolutions	Any up to 2048x2048	C2-3350	No Audio - With Mix/Key/PIP
HDTV Resolutions	Any up to 1080p	C2-3360	With Audio - With Mix/Key/PIP
General		Accessories Included	
Size and Position	Automatic via AutoSet or Manual	1x Operations Manual	C2-3300 Series
Image Size	User-Definable Presets	2x ZCH3000-1	HD15M to BNC Male CV Adapter
Image Freeze	One Video Frame	1x ZSH3000-1	HD15M to 4-Pin Mini-DIN YC
Settings Memory	Non-Volatile	1x Rackmount Kit	Set of attachable ears
Zoom Range	Variable to 10X Zoom	Windows Control Panel	Downloadable form website
Shrink Range	Variable to 10%	Optional Accessories	
Image Mirroring	Horizontal and/or Vertical	ZCH3000-1	Additional HD15M to BNC Male CV Adapt
Horizontal Filtering	Full Digital	ZSH3000-1	Additional HD15M to 4-Pin Mini-DIN YC
Conversion Technology	Proprietary – CORIO®2	CHB1609-2	0.7m (2') HD15M to 3 BNC Female Cable
Color Resolution	24-bit (16.8 Million Colors)	ZHB1870-6	2m (6') HD-5M to 3 BNC Male Cable
Digital Sampling	24-bit, 4:4:4 format	ZHR1720G-6	2m (6') HD15M to 3 RCA Male Cable
Sampling Rate	162MHz	ZHB1719G-6	2m (6') HD15M to 5 BNC Male Cable
Firmware Memory	Flash, Upgradeable via RS-232	CC-300	Hardware Control Panel
Video Decoder	9-bit Digital	RM-110	Rear Rack Rail Support System
De-Interlacing (NTSC-PAL)	Pixel-level Motion Adaptive	Notes	
Comb Filter Decoding	Adaptive	(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.	
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		

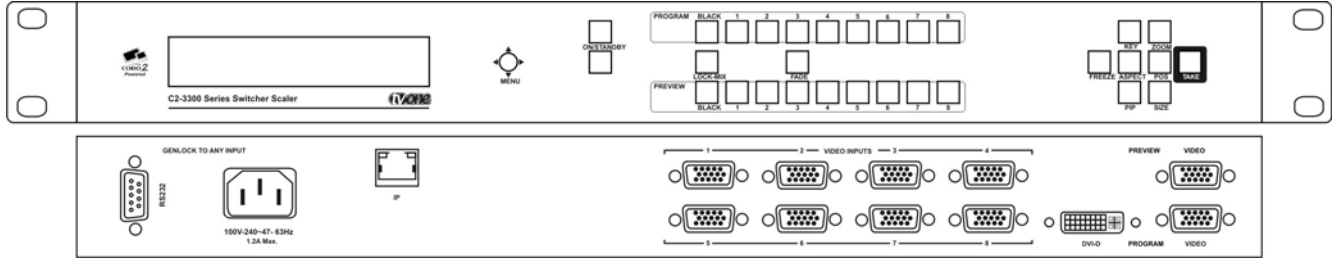


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Panel Drawings

C2-3300 – C2-3350



C2-3310 – C2-3360

