

C2-2855

The first in a new generation of Universal Scalers



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tvONE's evolutionary development of our renowned CORIO® scaler technology continues to provide commercial integrators with unsurpassed image quality in nearly any installation situation. Now, to further improve upon the core technology, we are introducing the first product in a new generation of scalers that is extremely intuitive and user-friendly and provides greater flexibility.

The C2-2855 Universal Scaler Plus is first in a new generation of high performance scalers that provides best-in-class video scaling and format conversion along with revolutionary, intuitive user interface tools.

This new design has more input/output flexibility than any other previous tvONE scaler. It can be set up and managed using a new, innovative front panel or via computer-based control panel that allows setup in less than 1/3 the time of the previous generation. The interface provides two distinct sections for unrivaled ease of use; one for system setup and another for live, real-time operations. The front panel helps with setup time through color modulated soft-buttons, intuitive categorized menus, and simple recall of up to 12 presets. Control software is available on several Windows platforms & interfaces directly with the C2-2855. IP and RS-232 serial interfaces are also provided for use with 3rd party control systems.

The C2-2855 provides high quality bi-directional conversion between a variety of analog and digital video formats. Inputs and outputs can be SD/HD/3G-SDI, HDMI, DVI, Composite Video, YC, YUV, YPbPr or RGB. An included key feature allows an image to be keyed over another and faded in and out due to the 4:4:4

sampling format for RGB sources, precise keying at the pixel level can be achieved. Five full-frame still images can be stored and switched along with five logos.

Transitions permit Seamless Cut, Fade or Wipe between input sources, and Picture-In-Picture (PIP) functionality allows an input to be inset in a window over a second input or vice versa. Frame lock allows for different resolutions to be used independent of frame rate. The calibration feature automatically sizes and positions computer images to fit exactly on the video display, and the 10X Variable Zoom can enlarge and position any part of any input to fill the entire video output display. Variable Shrink with as much as 90% size reduction allows almost any image to fit on the tiniest screen.

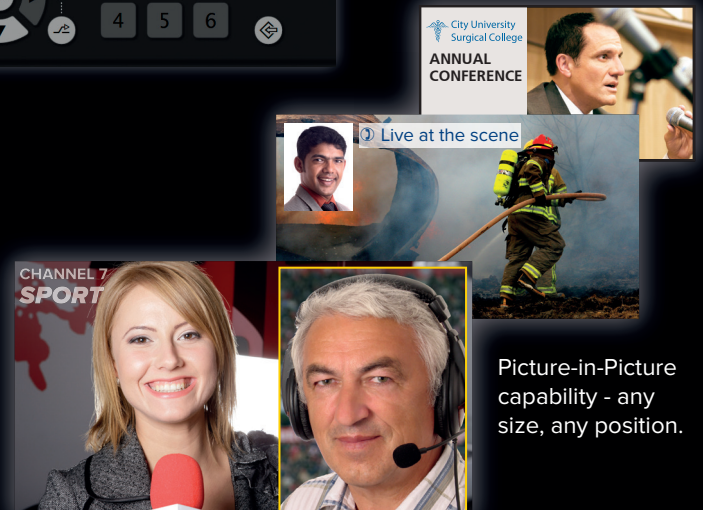
Digital Flicker Elimination circuitry on CV & YC outputs ensure crisp, clear images, while full bandwidth chroma sampling ensures faithfully reproduced, high resolution colors. Motion compensation, diagonal interpolation and a 3:2 pulldown feature for NTSC greatly improve the image quality. Temporal interpolation greatly improves frame-rate conversion by merging successive frames and Pixel Level Motion Adaptive Diagonal Interpolation ensures high quality de-interlacing of PAL and NTSC signals.

The C2-2855 remote control

The computer based remote control enables fast set-up of the unit, ie network connections, transitions, keying etc. Main menus can be accessed via a series of shortcut keys.



Using the 2 step preset setup configurations can be stored to enable quick screen changes at the touch of a button.



Picture-in-Picture capability - any size, any position.

Up/Down/Cross Conversion

Up conversion enables scaling to higher resolutions ie 576i analog to 720p digital

Down (Scan) conversion is the process of decreasing a video's resolution ie XGA 60Hz to 576i



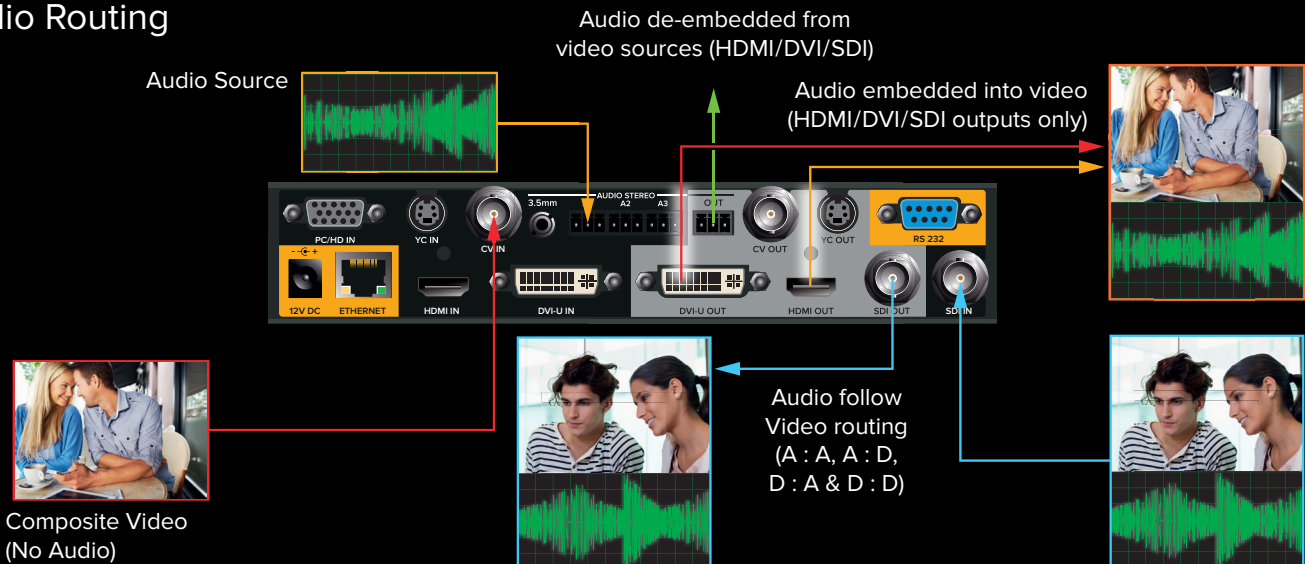
Cross conversion enables scaling between different resolutions ie 720p to 1080p

Please note these are only examples of Up, Down and Cross Conversion. In usage only a single output resolution is possible at one time.

Video Layering with Keying



Audio Routing





C2-2855 Specifications

Video Input	
Television Standards	NTSC, PAL
Composite Video	1x via BNC & 1x via DVI-U*
YC (S-Video)	1x via 4-Pin Mini-DIN & 1x via DVI-U*
HDTV	1x via HDMI (DVI 1.0, HDCP 1.4) & 1x via DVI-U*
SD/HD/3G-SDI	1x via BNC
Computer Inputs	
Signal Type	1x Analog via PC/HD HD15, 1x DVI-U*
Format	RGBHV, RGBS, RGsB, YPbPr, YUV
Sync	TTL Level, 10K, Pos or Neg
Termination	75 Ω
R-G-B Level Range	0.5-2.0 Vp-p
Scan Rate Detection	Automatic
Analog Signals	PC to 1920x1080, HD to 1080p/60
DVI & HDMI signals	PC to 1920x1200, HD to 1080p/60
Max Horiz Scan Rate	150kHz
Computer Compatibility	PC, Mac, Workstations
Video Outputs	
Television Standards	NTSC, PAL
Impedance	75 Ω
Composite Video	1x via BNC
YC (S-Video)	1x via 4-PIN Mini-DIN
YUV, YPbPr	1x via DVI-U*
HDTV	1x via HDMI CEC pass-through for HDMI In to Out
SD/HD/3G-SDI	1x via BNC
Maximum Latency	1-2 Frames
Computer Outputs	
Signal Type	1x DVI-U* & 1x HDMI
Format	RGBHV, RGBS, RGsB, YPbPr
R-G-B Level	0.7 Vp-p
Analog Signals	PC to 1920x1080, HD to 1080p/60
DVI & HDMI Signals	PC to 1920x1200, HD to 1080p/60
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
Framerate Conversion	Temporal
Color Resolution	24-bit (16.8 Million Colors)
Sampling Rate	162MHz
Digital Sampling	24-bit, 4:4:4 or 4:2:2 format subject to input source
Firmware Memory	Flash upgradeable via RS-232 or IP
Video Encoder & Decoder	8-bit Digital
De-Interlacing (NTSC-PAL)	Pixel-Level Motion Adaptive, Diagonal Interpolation
Film Mode (NTSC)	3:2 Pulldown
Maximum Latency	1-2 frames
Video Adjustments	CV/YC: Contrast, Brightness, Saturation, Hue (NTSC),
Audio Input/Output	
Inputs	3x Unbalanced via Terminals, 1x Unbalanced via 3.5mm jack, 1x HDMI, 1x DVI-U*, 1x SDI
Outputs	Unbalanced via Terminals, 1x HDMI, 1x DVI-U*, 1x SDI

Audio Input/Output continued	
I/O Impedance	Impedance-Independent
De-embedding support	1 stereo pair at 32 kHz, 44.1 kHz, 48kHz from HDMI, 48kHz SDI
Embedded support	1 stereo pair at 48kHz
Operational Modes	
Key	Chromakey or Lumakey
Mix	PC to/from Video and SIS
PIP	Variable Window Size & Position
SDI Jitter	
SMPTE259M-C (SD-SDI)	(270Mbps: 525/625Line) Jitter < 0.1 UI
SMPTE292M (HD-SDI)	(1.485/1.4835Gbps: 720p, 1035i, 1080i, 1080p) Jitter < 0.2 UI
SMPTE424M (3G-SDI)	(2.97/2.967Gbps: 1080p50/60) Jitter < 0.3 UI
SDI Input Cable Equalization (under optimal conditions)	
SMPTE259M-C (SD-SDI)	300m
SMPTE292M (HD-SDI)	166m
SMPTE424M (3G-SDI)	100m
I/O Vertical Rates - SMPTE259M-C (SD-SDI)	
525i (720x487)	59.94Hz
625i (720x576)	50Hz
I/O Vertical Rates - SMPTE292M (HD-SDI)	
720p (1280x720)	23.98, 24, 25, 29.97, 30, 50, 59.94, 60Hz
1080i (1920x1080)	50, 59.94, 60Hz
1080p (1920x1080)	23.98, 24, 25, 29.97, 30Hz
I/O Vertical Rates - SMPTE424M (3G-SDI)	
1080p (1920x1080)	50, 59.94, 60Hz
Control Methods	
Local	via Front Panel Buttons & OLED
RS-232 Interface	via D9 Female Connector
IP Interface	RJ45 Connector
Control Software included	
Warranty	
Limited Warranty	5 Years Parts and Labor
Regulatory Compliance	
Main Units	FCC Class B, CE, RoHS, UL, cUL
Power Supplies	UL, cUL, CE, PSE, GS, RoHS
Mechanical	
Size (H-W-D)	42 x 218 x 189mm (1.63" x 8.6" x 7.4")
Weight (Net)	1.26 Kg (2.78 lbs) excluding PSU
Environmental	
Operating Temperature	0° to +40°C (+32° to +104°F) Ambient
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	
External Power Supply	12V DC @ 1.5A
Accessories Included	
	1x Operations Manual on USB stick
	1x PC Control Software (Microsoft Vista and above)
	1x Quick Start Guide
	1x Universal Power Supply ('brick' type)
	1x Regional Power Cable
Product Item Number	
	C2-2855
Optional Accessories	
RM-220	Single/Dual Rackmount Kit

Specifications subject to change

