



Product Information

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. The crystal clear OLED display intuitively guides users through setup and control using color-modulated, backlit buttons. Alternatively, a graphic user interface for Windows can be used to set up and control the unit remotely via IP. RS232 is also provided as a direct control interface for 3rd party control systems. The video performance of the C2-2855 is based on tvONE's exclusive CORIO®2 technology, which provides high quality bi-directional conversion and switching between a wide variety of analog and digital video formats. Living up to its designation as a "Universal Scaler" the C2-2855 supports SD/HD/3G-SDI, HDMI, DVI, Composite Video, YC, YUV, YPbPr or RGB, on both inputs and outputs, and the signal parameters of the incoming video may be adjusted. The high resolution RGB/YPbPr output is selectable at virtually any PC or HDTV resolution and NTSC, PAL, PAL-M, and PAL-N standards are all supported. Crisp, clear images are ensured by a high sampling rate and advanced Digital Flicker Elimination circuitry on CV & YC outputs, while full bandwidth chroma sampling ensures faithfully reproduced, high resolution colors. Motion compensation, diagonal interpolation and a 3:2 Pull-down feature provide for the best possible NTSC image quality, while temporal interpolation refines frame-rate conversion by merging successive frames.

Key Features

- Up/Down/Cross Conversion
- Digital Inputs: SD/HD/3G-SDI, Universal DVI*, HDMI (DVI 1.0, HDCP 1.4)
- Analog Inputs: YUV/YPbPr, RGB/YPbPr, CV, YC
- Digital Outputs: SD/HD/3G-SDI, Universal DVI*, HDMI (DVI 1.0, HDCP 1.4)
- Analog Outputs: Universal DVI* (RGB/YPbPr/YUV), CV, YC
- Analog: PC to 1920x1080, HDTV to 1080p/60
- HDMI & DVI : PC to 1920x1200, HDTV to 1080p/60
- Supports: NTSC, PAL, PAL-M, PAL-N
- Motion Compensation & 3:2 Pulldown
- Temporal Interpolation & Diagonal Interpolation
- Automatic Incoming Resolution Detection
- Calibrate - Automatic picture sizing of PC inputs
- 4:4:4 Full bandwidth Chroma Sampling for RGB sources. 4:2:2 for SDI, YC and CV sources. HDMI YUV support for either 4:4:4 or 4:2:2 sampling
- Video signal parameter adjustments
- Integral 4x1 Stereo Analog Audio Routing Switcher, fully integrated with digital audio
- Stereo Audio Embedding on capable outputs (Universal DVI*, HDMI, SDI)
- RS-232 and IP Interface for Control Software
- Variable Image Zoom to 10X and Shrink to 10%
- Genlock
- Framelock
- PIP, Chromakey and Lumakey

Disclaimer: Changes in the data may have been made by the manufacturer without notice.

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Technical Information

Video Input

Television Standards NTSC, PAL, PAL-M, PAL-N, SECAM

Composite Video 1x via BNC & 1x via Universal DVI *

YC (S-Video) 1x via 4-Pin Mini-DIN & 1x via Universal DVI *

HDTV 1x via HDMI (DVI 1.0, HDCP 1.4) & 1x via Universal DVI *

SD/HD/3G-SDI 1x via BNC

Computer Inputs

Signal Type 1x Analog via PC/HD HD15, 1x Universal DVI *

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

Technical Information

Video Outputs

Television Standards NTSC, PAL, PAL-M, PAL-N

Impedance 75 Ω

Composite Video 1x via BNC

YC (S-Video) 1x via 4-PIN Mini-DIN

YUV, YPbPr 1x via Universal DVI *

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 Universal DVI * & 1 x 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

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Image Processing Features

Size and Position Automatic via Calibrate 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 depending on 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), Analog
 RGB/YPbPr levels

Technical Information

Audio Input/Output

Inputs 3x Unbalanced via Terminals,
 1x Unbalanced via 3.5mm jack,
 1x HDMI, 1x Universal DVI *, 1x SDI
 Outputs Unbalanced via Terminals,
 1x HDMI, 1x Universal DVI *, 1x SDI
 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 Still Image
 PIP Variable Window Size & Position

SDI Jitter

SMPTTE259M-C (SD-SDI) (270Mbps: 525/625Line) Jitter < 0.1 UI
 SMPTTE292M (HD-SDI) (1.485/1.4835Gbps: 720p, 1035i, 1080i, 1080p) Jitter < 0.2 UI
 SMPTTE424M (3G-SDI) (2.97/2.967Gbps: 1080p50/60) Jitter < 0.3 UI

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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) 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 - SMPTE425M-A (3G-SDI)

1080p (1920x1080) 50, 59.94, 60Hz

Control Methods

Local via Front Panel Buttons & OSD

RS-232 Interface via D9 Female Connector

IP Interface RJ45 Connector

Technical Information

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

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