C2-2205A HD/SD to DVI-I Converter is based on TV One's exclusive CORIO®2 technology and provides high quality conversion from SD/HD-SDI, DVI, YUV, YPbPr, YC or Composite Video to DVI and analog RGB/YPbPr, scaled to virtually any resolution or refresh rate. NTSC, PAL, PAL-M, PAL-N, SECAM standards are supported.

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. All the functions can be controlled via the front panel Push Buttons, an Infrared Remote Control Unit or via an RS-232 or IP connection. Windows Control Panel software is provided and most third party control systems interface directly with the entire C2 range of products. A front panel LCD makes setup easy. The unit is housed in a desktop case and an optional rackmount kit holds one or two units.

Variable Zoom to 10X enlarges any part of the computer screen to fill the entire video screen and position controls allow movement to any area desired. Variable Shrink to as little as 10% allows fitting the image onto most displays. The high sampling rate insures crisp, clear images, while full bandwidth chroma sampling insures 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 analyzing and merging successive frames. Pixel Level Motion Adaptive Diagonal Interpolation insures high quality de-interlacing of PAL and NTSC signals.

C2-2255A Advanced Features – In addition to all standard C2-2205A features. The **Key Mode** allows computer graphics to be keyed over an external Composite or YC 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 Seamless Cut, Fade or Wipe transitions between input sources. The **PIP Mode** allows either of the computer inputs to be inset in a window over the other inputs.The PIP window may be placed anywhere on the screen. The **Edge Blending** feature 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. The **Genlock** feature insures precise synchronization of the incoming signals.

Input Expansion is possible by using the optional S2 Series Input Expansion Modules for SD/HD-SDI, DVI, RGB, YPbPr, YUV, Composite or YC. These units link to C2-2205A/2255A unit via an OPTIONS Interconnect Cable and become an integral part of the main unit from a control and operational standpoint. The routing of these additional inputs is controlled directly from the control system of the C2-2205A/2255A and multiple different S2 models may be simultaneously connected.

Key Features of the C2-2205A, C2-2255A

- HD/SD to DVI/PC Conversion
- Digital Inputs: SD/HD-SDI, DVI-D
- Analog Inputs: YUV/YPbPr, 2xCV, 2xYC
- Digital Outputs: DVI-I
- Analog Outputs: DVI-I (RGB/YPbPr/YUV)
- Analog: PC to 2048x2048, HDTV to 1080p/60
- DVI: PC to 1920x1200, HDTV to 1080p/60
- Supports: NTSC, PAL, PAL-M, PAL-N, SECAM
- Motion Compensation & 3:2 Pulldown
- Temporal Interpolation & Diagonal Interpolation
- Automatic Incoming Resolution Detection
- 4:4:4 Full bandwidth Chroma Sampling
- Video signal parameter adjustments
- Integral 4x1 Stereo Audio Routing Switcher
- RS-232 and IP Interface
- Windows Control Panel
- Variable Image Zoom to 10X and Shrink to 10%
- Genlock With Subcarrier Phase Adjustment
- PIP, Chroma/Lumakey, Edge Blending (C2-2255A)
- Optional Single/Dual Rackmount Kit
- Optional Input Expansion with S2 Switchers

Basic Integral Stereo Audio switching is provided by an integral 4x1 audio routing switcher. The four impedance-independent unbalanced inputs, via a rear panel terminal block, follow the video input selection.

Advanced Stereo Audio is available via the optional S2-106AD Input Expansion Switcher, providing six differential audio inputs, which can be used for low impedance balanced or high impedance unbalanced sources. The user controls audio level, audio sampling frequencies and up to 999ms of adjustable audio delay independently for each input. The unit has numerous choices for audio I/O connectors, including a terminal block. The S2-106AD connects to the C2-2205A/2255A via the OPTIONS interconnect cable and is then fully integrated into the control system of the host unit.

Specifications

Video Inputs

Television Standards	NTSC, PAL, PAL-M, PAL-N, SECAM
Composite Video	2x via BNC
YC (S-Video)	2x via 4-Pin Mini-DIN
YUV /YPbPr	1x via 3-BNC
SD/HD-SDI	1x via BNC

Computer Inputs

Signal Type	1x Analog via HD-15 Female 1x DVI-D via DVI-I Connector
Format	RGBHV, RGBS, RGsB, YPbPr
Sync	TTL Level, 10KΩ, Pos or Neg
Termination	75Ω
R-G-B Level Range	0.5-2.0 Vp-p
Scan Rate Detection	Automatic
PC Resolutions	Any up to 2048x2048
HDTV Resolutions	Any up to 1080p
Max Horiz Scan Rate	150KHz
Computer Compatibility	PC, Macintosh, Workstations

Computer Outputs

Signal Type	1x Analog via HD-15 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/60
DVI Signals	PC to 1920x1200,HD to 1080p/60
Vertical Refresh Rate	Any to 250Hz

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
Frame Rate Conversion	Temporal
Color Resolution	24-bit (16.8 Million Colors)
Sampling Rate	162MHz
Digital Sampling	24-bit, 4:4:4 format
Firmware Memory	Flash, Upgradeable via RS-232
Video Decoder	9-bit Digital
De-Interlacing (NTSC-PAL)	Pixel-level Motion Adaptive, Diagonal Interpolation
Comb Filter Decoding	Adaptive
Film Mode (NTSC)	3:2 Pulldown
Video Adjustments	CV/YC: Contrast, Brightness, Saturation, Hue (NTSC). Analog RGB/YPbPr levels (Note 1)

Audio Input/Output

Inputs	4x Unbalanced via Terminals
Output	Unbalanced via Terminals
I/O Impedance	Impedance-Independent

Operational Modes (2255A)

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

Input Vertical Rates - SMPTE259M-C (SD-SDI)

525i (720x488)	59.94Hz
625i (720x576)	50 Hz

Input Vertical Rates - SMPTE292M (HD-SDI)

720p (1280x720)	23.98, 24, 25, 29.97, 30, 50, 59.94, 60Hz
1035i (1920x1035)	59.94, 60Hz
1080i (1920x1080)	50, 59.94, 60Hz
1080p (1920x1080)	23.98, 24, 25, 29.97, 30Hz

Control Methods

Local	via Front Panel Buttons & OSD
RS-232 Interface	via D9 Female Connector
IP Interface	RJ45 Connector
Infrared Remote	via IRC-5 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, CUL, CE, PSE, GS, RoHS

Mechanical

Size (H-W-D)	41.5x218x150mm(1.63"x8.6"x5.9")
Weight (Net)	1.32kg (2.90 lbs)

Environmental

Operating Temperature	0° to +50° C (+32° to +122° 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

External Power Supply	12VDC@1.5A (Note 2)

Accessories Included

1x Operations Manual	
1x Power Adapter	US, UK or Euro

Product Item Numbers

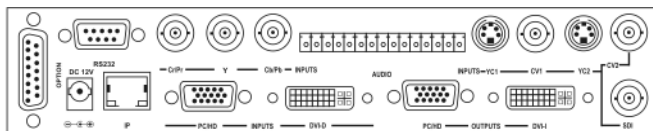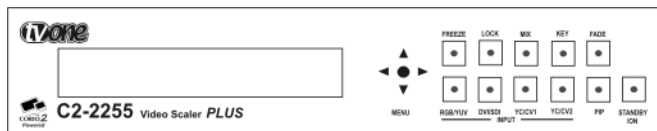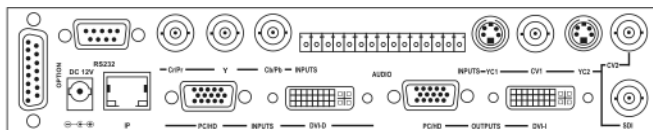|	
C2-2205A	Basic Version
uptuC2-2255A	PLUS Version with Key, Mix, PIP

Optional Accessories

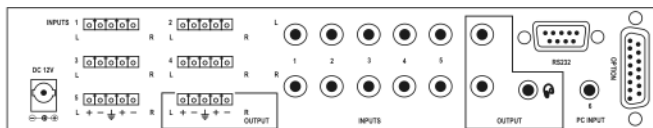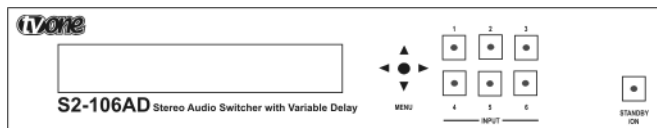|	
RM-220	Single/Dual Rackmount Kit
S2 Series	Input Expansion Switchers
Control Software	Downloadable form Website

Notes

(1) Balanced Audio (6-inputs) and Audio Delay is available via the S2-106AD accessory.

(2) The C2 unit uses less than 1A, however, if an S2 unit is powered via the OPTIONS connector, 1.5A is required.

Panel Drawings

S2-106AD Advanced Audio Processor Module

Typical S2 Input Expansion Modules