VP-460

3−Input Analog & 3G HD−SDI ProScale™ Presentation Switcher/Scaler

CV	VGA/HD	HDMI	SDI	STEREO	AUDIO	S/PDIF	RS-232

The VP−460 is a high−quality presentation switcher and scaler with PIP for computer graphics, composite video and 3G HD−SDI signals. It scales the video, embeds the audio and outputs the signal to the HDMI output, as well as to the SDI output together with a digital audio output.

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FEATURES

- **K-IIT XL™ Picture-in-Picture Image Insertion Technology** - Ultra−stable picture−in−picture, picture−and−picture, and split screen capability. Any video source can be inserted into or positioned next to an SDI video source or vice versa with window positioning and sizing controls.

- **K-Storm™ Scaling Technology** - Kramer's extremely high performance scaling technology for converting the incoming video signal with a minimum of motion artifacts. Up− and down−scaling of computer graphics video signals is possible.

- **Ultra-Fast Fade-Thru-Black (FTB™) Switching** - Video switching transitions are clean and ultra−fast. The video fades to black and the new input fades from black for smooth, glitch−free switching. The output signal provides constant sync so the display never glitches.

- **HDTV Compatible.**

- **Multi-Standard Operation** - SDI (SMPTE 259M), HD−SDI (SMPTE 292M) and 3G HD−SDI (SMPTE 424M).

- **Video Inputs** - 1 computer graphics on a 15−pin HD connector, 1 composite video on an RCA connector, 1 SD/HD/3G HD−SDI with loop on BNC connectors.

- **Scaled Outputs** - 1 HDMI, 1 SD/HD/3G HD−SDI on a BNC connector.

- **40 Output Resolutions** - Up to WUXGA, 1080p and 2K.

- **HDMI Deep Color Support** - For inputs and outputs.

- **Luma Keying** - Via PIP window.

- **Vertical Keystoning.**

- **Built-in ProcAmp** - Color, sharpness, contrast, brightness and gamma are set individually for each input.

- **3D Comb Filtering** - Provides the best quality color separation for composite video inputs.

- **Built-in Time Base Corrector** - Stabilizes unstable video sources.

- **Powerful Noise Reduction Filters** - Temporal, block, mosquito and combing.

- **Picture Zooming** - From 100% to 1600% on both main and PIP picture.

- **De-interlacing** - 3:2 and 2:2 pull−down; 24sf handling.

- **Multiple Aspect Ratio Selections** - Follow input, follow output, best fit, letterbox and overscan.

- **Dual Window Display** - Preset picture−in−picture, picture−and−picture and split screens, as well as customized window layouts.

- **Audio Inputs** - 1 computer graphics on a 3.5mm mini−jack connector, 1 CV on RCA connectors; embedded audio (user selectable) on the SDI input.

- **Audio Outputs** - 1 S/PDIF on an RCA connector, embedded audio on the HDMI and SDI outputs.

- **Power Save Modes** - Options for efficient energy use.

- **Advanced EDID Management** - For each input and each output.

- **Non-Volatile Memory** - Saves final settings.

- **Firmware Upgrades** - Via RS−232.

- **Flexible Control Options** - Front panel buttons, OSD (on−screen display) via front panel buttons or IR remote (remote control included), Control Application software for use via RS−232.

- **Desktop Size** - Compact size. 2 units can be rack mounted side−by−side in a 1U rack space with an optional RK−1 adapter.

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TECHNICAL SPECIFICATIONS

INPUTS:	1 computer graphics on a 15−pin HD connector, 1 composite video, 1Vpp @75Ω on an RCA connector, 1 SD/HD/3G HD−SDI on a BNC connector, 1 unbalanced stereo audio on a 3.5mm mini jack connector, 1 unbalanced stereo audio on 2 RCA connectors.
OUTPUTS:	1 SD/HD/3G HD−SDI on a BNC connector, 1 HDMI (deep color) connector, 1 S/PDIF digital audio on an RCA connector.
COMPLIANCE WITH HDMI STANDARD:	Supports HDMI Deep Color.
OUTPUT RESOLUTIONS:	640x480@60, 640x480@75, 800x600@50, 800x600@60, 800x600@75, 1024x768@50, 1024x768@60, 1024x768@75, 1280x768@50, 1280x768@60, 1280x800@60, 1280x1024@50, 1280x1024@60, 1280x1024@75, 1360x768@60,1366x768@50, 1366x768@60, 1400x1050@50, 1400x1050@60, 1600x900@60, 1600x1200@50, 1600x1200@60, 1680x1050@60, 1920x1200@60, 480i60, 480p60, 576i50, 576p50, 720p50, 720p59.94, 720p60, 1080p23.976, 1080p24, 1080p25, 1080p29.97, 1080p30, 1080p50, 1080p59.94, 1080p60, 2K50, 2K60.
CONTROLS:	Front panel buttons, OSD, IR remote control, RS−232 on a 9−pin D−sub connector.
OPERATING TEMPERATURE:	0° to +40°C (32° to 104°F).
STORAGE TEMPERATURE:	−40° to +70°C (−40° to 158°F).
HUMIDITY:	10% to 90%, RHL non−condensing.
POWER CONSUMPTION:	5V DC, 2.90A.
DIMENSIONS:	21.5cm x 16.3cm x 4.4cm (8.5" x 6.4" x 1.7") W, D, H.
WEIGHT:	0.9kg (1.98lbs) approx.
ACCESSORIES:	Power supply, IR remote control.
OPTIONS:	RK−1 rack adapter.

VGA

Computer
Graphics Source

CV

DVD Player
(Composite)

SDI

Digital
Camera

HDMI

Plasma
Display

SDI

Display

RS-232

SDI

Display
with Speakers