



ProScale™ Digital Scaler/Switchers

THE NEW GENERATION - PRODUCING BREATHTAKING IMAGE QUALITY

VP-413xi	VIDEO TO COMPUTER GRAPHICS VIDEO PROSCALE™ DIGITAL SCALER (UP TO WUXGA)
VP-414xi	VIDEO TO COMPUTER GRAPHICS VIDEO/HDTV PROSCALE™ DIGITAL SCALER (UP TO WUXGA/1080P)
VP-418xi	COMPOSITE & S-VIDEO TO HDMI PROSCALE™ DIGITAL SCALER
VP-419xi	VIDEO TO COMPUTER GRAPHICS VIDEO/HDTV PROSCALE™ DIGITAL SCALER
VP-420	COMPUTER GRAPHICS VIDEO & HDTV DIGITAL SCALER
VP-421	COMPUTER GRAPHICS VIDEO & HDTV DIGITAL SCALER (WITH DVI OUTPUT)
VP-422	PROSCALE™ HDMI TO COMPUTER GRAPHICS VIDEO AND HDTV DIGITAL SCALER
VP-423	COMPUTER GRAPHICS VIDEO & HDTV VIDEO-WALL SCALER
VP-725xi	21-INPUT PROSCALE™ PRESENTATION DIGITAL SCALER/SWITCHER
VP-725xiA	21-INPUT PROSCALE™ PRESENTATION DIGITAL SCALER/SWITCHER (WITH BALANCED STEREO AUDIO)
VP-727T	IN-CTRL™ REMOTE CONTROL CONSOLE WITH "T" BAR
VP-435	HDMI, COMPONENT & COMPUTER GRAPHICS VIDEO TO HDMI PROSCALE™ DIGITAL SCALER
VP-436	7-INPUT ANALOG & HDMI PROSCALE™ PRESENTATION DIGITAL SCALER/SWITCHER
VP-728	9-INPUT PROSCALE™ PRESENTATION SCALER/SWITCHER
VP-729	9-INPUT PROSCALE™ PRESENTATION SCALER/SWITCHER WITH ETHERNET CONTROL
VP-730	9-INPUT PROSCALE™ PRESENTATION SCALER/SWITCHER
VP-731	9-INPUT PROSCALE™ PRESENTATION SCALER/SWITCHER WITH ETHERNET CONTROL
VP-747	UNIVERSAL PRESENTATION MATRIX SWITCHER/SCALER



KRAMER ELECTRONICS PROSCALE™ FAMILY OF PRODUCTS OFFERS THE MOST COMPLETE ARRAY OF SCALING SOLUTIONS. FROM THE INCREDIBLY VALUE-ORIENTED VP-747 IN-CTRL™ SEAMLESS SWITCHER AND THE EXTREMELY POPULAR XL FAMILY OF DIGITAL SCALER/SWITCHERS, TO THE HIGH-QUALITY, YET UNIQUELY COMPACT SCALERS IN OUR KRAMER TOOLS™ LINE OF PRODUCTS, KRAMER HAS A SCALING OR SWITCHING PRODUCT FOR EVERY APPLICATION.



THE KRAMER PROSCALE FAMILY OF PRODUCTS

The Kramer ProScale family of products is designed to make the installations of today as easy as possible. Display devices that accept graphics inputs are becoming more and more prevalent in the boardroom, home, and indeed everywhere a screen is used. Kramer scalers smoothly switch and scale video devices such as DVD players, satellite decoders, VHS players, document cameras, and videoconferencing systems to the native resolution of the display device.

The ProScale family of products digitally reprocesses the signal to correct mastering and other errors, and regenerates the video at a higher (or lower) line and pixel rate format, providing native resolution video for LCD, DLP, LCoS, LED and plasma displays. The Kramer ProScale range is specifically designed to improve video quality by reducing artifacts such as block, chroma and mosquito noise.

They are true multi-standard video to RGBHV/YPbPr scalers that convert video, s-Video, component video, VGA through UXGA, and DVI-D/HDMI and HDTV signals to several user selectable pixel rates (see table).



HOLLYWOOD QUALITY VIDEO PROCESSING – HQV

Several newer Kramer scalers and scaler/switchers incorporate scaling chips with HQV® video processing technology from IDT, the state-of-the-art in video processing. With the HQV scaling technology, models like the VP-729 and VP-728 deliver the highest quality de-interlacing, noise reduction, and scaling performance available in the market today for both standard definition and high-definition signals.

With HQV technology, our scaling chips de-interlace on a per pixel level and have the ability to analyze four fields at one time. They analyze the two fields of the current video frame as well as the field before and the field after the current frame. By analyzing the field before and after, the processor is able to determine which pixels are in motion. Since it is able to sense motion in every pixel of the current frame, the progressive image that is created contains minimal artifacts.

HQV technology provides the best noise reduction technology for scalers. Our scaling chips with HQV technology use a per-pixel motion-adaptive and noise-adaptive temporal filter. This, together with the multi-frame analysis means that only static pixels undergo noise processing, while pixels that are in motion are not adversely affected. This preserves the detail of a moving image and removes static noise to create the most natural looking picture possible.

Detail enhancement is outstanding with HQV technology since HQV-enabled chips detect blurry areas of an image before processing to ensure that trouble spots receive more attention during processing. Scaling chips with HQV are as future proof as possible. The technologies incorporated into these chips are “adaptive” and they work on a per-pixel level, so they can handle formats and video schemes not yet introduced to the industry and since this processing is performed by software, future updates can be loaded into existing chips. For unparalleled image quality and performance, Kramer’s products with HQV technology represent the best scalers in the industry.

K-IIT™ – ULTRA-STABLE PICTURE-IN-PICTURE TECHNOLOGY

Many Kramer ProScale models include K-IIT Image Insertion Technology for displaying a stable and flexible Picture-in-Picture and Picture-and-Picture. Any video source can be inserted into a graphics background and vice versa, as well as allowing the inserted image to be sized and positioned anywhere on the screen. In addition, the PIP can display a split-screen (two images side-by-side). Kramer ProScale models recognize the progressive scan component as a graphics signal, allowing video-in-video insertion.

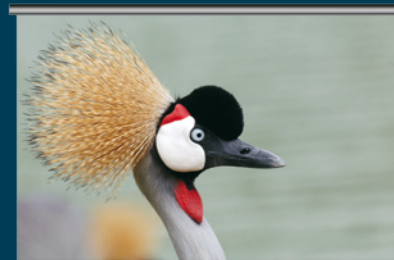
FLEXIBLE CONTROL OPTIONS

Many of the Kramer ProScale models feature multiple control options. All can be controlled via front panel switches. Most models also feature a friendly, on-screen display for making adjustments. Depending on the model, many can be controlled via infrared remote control, RS-232, and Ethernet interface while some of the newer models offer control via the VP-729 iPhone® App available in the Apple® App Store. Some smaller units also have contact closure control for simplicity.

MORE COMPLEX INSTALLATIONS

Kramer’s ProScale covers a range of scaling and switching solutions. In applications where only one image is sent to one display, a single scaler is appropriate. If one image is sent to multiple screens, a scaler and a distribution amplifier are needed. Finally, when different images from multiple sources must be displayed, either on one screen or multiple screens, a Kramer ProScale Seamless Switcher or Digital Scaler/Switcher is required.

THE ULTIMATE IN IMAGE MANIPULATION
& PROCESSING FOR THE PERFECT PICTURE



PROJECTOR ANYWHERE™ TECHNOLOGY SOLVES THE FOLLOWING OFF-AXIS PROJECTOR PLACEMENTS:



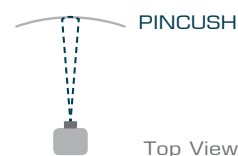
VERTICAL KEYSTONE



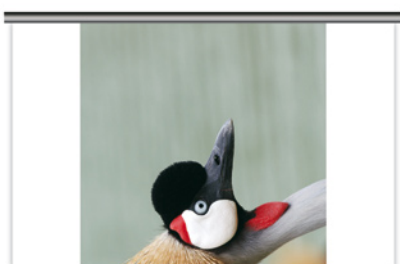
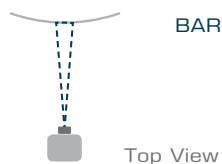
HORIZONTAL KEYSTONE



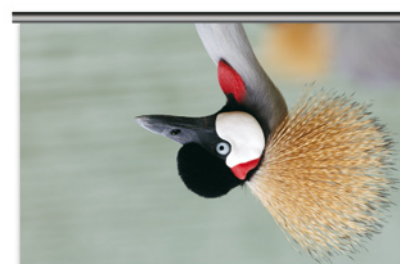
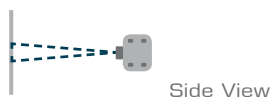
PINCUSHION



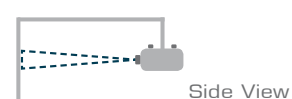
BARREL



ROTATION



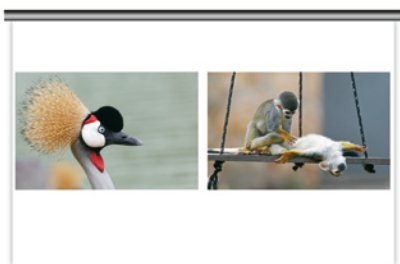
CEILING



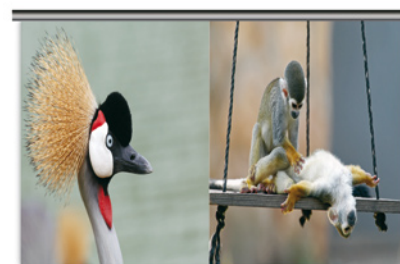
K-IIT XL™ PICTURE-IN-PICTURE IMAGE INSERTION TECHNOLOGY



PICTURE-IN-PICTURE



PICTURE & PICTURE



SPLIT SCREEN



◀ VP-747

INPUTS	SCALED OUTPUTS
8 x 5-wire universal	2 x 5 BNC
1 x 5 BNC	2 x 15-pin HD
2 x DVI/HDMI	2 x DVI/HDMI

The VP-747 In-CTRL Dual Scaler Seamless Switcher is a true multi-standard video to graphics scaler and seamless switcher with 8 universal inputs comprised of 5 BNCs each, any of which can accommodate a composite video, s-Video (Y/C), component video (RGB/YUV), RGBS, or RGBHV signal. Inputs 1 and 2 also can be configured to HDMI/DVI inputs. The unit has dual scalers, one for the preview and the other for the program output. Dual scalers are required to do “true” seamless transitions from one source to another.

FEATURES

- **HQV® Video Processing** - HQV (Hollywood Quality Video) processing represents the state-of-the-art in video processing technology, with the highest quality de-interlacing (with 3:2 & 2:2 pull down), noise reduction, and scaling performance for both standard-definition and high-definition signals.
- **True Seamless Switching with FX** - With the incorporation of two scalers, the unit can switch absolutely seamlessly between two live sources. Transitions include cut and fade plus numerous other effects each with multiple variations and speeds.
- **Dual Scalars with Preview and Program Outputs** - Perfect for live productions. Both preview and program signals are simultaneously output as RGBHV/YUV on sets of 5 BNC connectors, on 15-pin connectors, and as HDMI (on DVI connectors).
- **K-IT™ Picture-in-Picture Image Insertion Technology** - Ultra-stable picture-in-picture image insertion capability. Any video source can be inserted into a computer graphics video source and vice versa with positioning and sizing controls available to the user. A unique split-screen mode is also available.
- **HDTV Compatible.**
- **HDCP Compliant** - The HDCP (High Definition Content Protection) license agreement allows copy-protected data on the HDMI/DVI inputs to pass only to the HDMI/DVI output.
- **Companion Audio Switcher Available** - The VP-727A (unbalanced stereo) and VP-727A-BA (balanced stereo) are 8x2 audio companion switchers for the VP-747. These units switch eight stereo audio inputs to the selected preview and program outputs.
- **Take Button** - Execute preview to program switching (with transition effect).
- **Text Overlay.**
- **8 Universal Video Inputs** - Each input has 5 BNCs which can be configured to accept composite video, s-Video (Y/C), component video (RGB/YUV), RGBS, or RGBHV signals. Inputs 1 & 2 can be switched to the DVH input connectors for HDMI or DVI signals. Embedded audio is passed by the DVH connector.
- **Multiple Computer Graphics Output Resolutions** - Up to WUXGA plus 4 user-definable (custom) output resolutions with selectable refresh rates.
- **HDTV Output Resolutions** - 480p, 576p, 720p, 1080i and 1080p in component format on all output connectors.
- **Multi-Standard** - PAL, SECAM & NTSC (3.58/4.43).
- **Multiple Aspect Ratio Selections** - 4x3 or 16x9, anamorphic, letter box, and user definable settings.
- **Built-In Time Base Corrector** - Stabilizes video sources with unstable sync.
- **Multiple Color Space** - Output RGB or YUV (selectable).
- **Built-In ProcAmp** - Color, hue, sharpness, contrast, and brightness are set individually for each input.
- **Advanced Noise Reduction Features** - Designed to improve video quality by reducing artifacts such as block, chroma and mosquito noise.
- **Front Panel Lockout.**
- **Video Blanking** - Blue or black screen selectable.
- **Freeze Frame.**
- **Zoom** - 100% to 400%.
- **2 USB Ports** - For firmware downloads.
- **Flexible Control Options** - Front panel buttons, IR. Remote (with on-screen menus), Ethernet, RS-232, RS-485, T-bar control via the VP-727T.
- **Worldwide Power Supply** - 100-240V AC.
- **Standard 19" Rack Mount Size** - 3U. Rack `ears" included.



VP-728/VP-729 9-Input ProScale™ Presentation Scaler/Switchers



◀ VP-728



◀ VP-729

INPUTS	SCALED OUTPUTS
4 x 3-wire universal	1 x 15-pin HD
2 x 15-pin HD	1 x HDMI
2 x HDMI	
1 x USB (JPEG)	

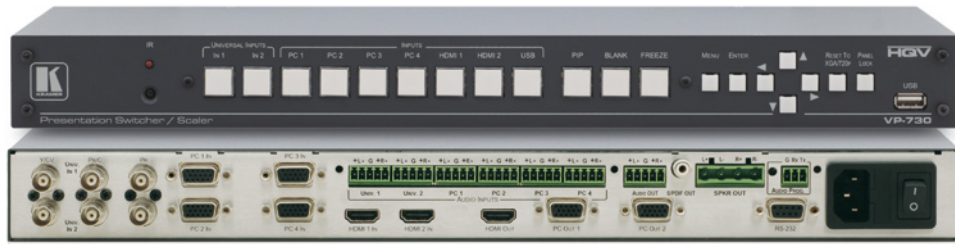
The **VP-728** and **VP-729** are 9-input scaler/switchers for analog and digital video, unbalanced stereo, and S/PDIF audio signals. They scale any composite video, s-Video (Y/C), component video (YUV), HDMI, computer graphics video and JPEG files up or down to a selectable graphics or HDTV output resolution via HDMI and 15-pin HD outputs. The units provide glitch-free switching between sources through FTB™ (fade-thru-black) switching technology.

The **VP-729** includes iPhone® App and Ethernet control.

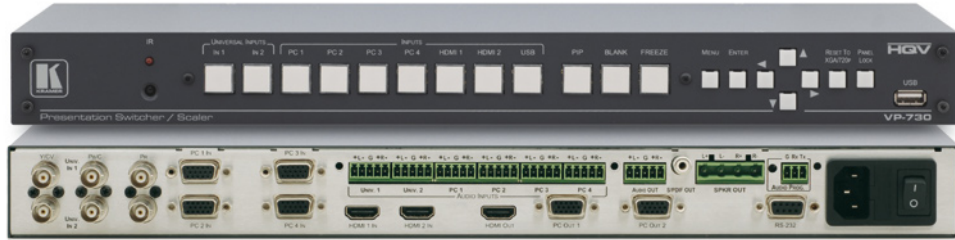
FEATURES

- **HQV® Video Processing** - HQV (Hollywood Quality Video) processing represents the state-of-the-art in video processing technology, with the highest quality de-interlacing (with 3:2 & 2:2 pull down), noise reduction, and scaling performance for both standard-definition and high-definition signals.
- **Fade-Thru-Black (FTB™) Switching**. - The video fades to black and then the new input fades from black for smooth, glitch-free switching. The output signal provides constant sync so the display never glitches.
- **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 a computer graphics video source or vice versa with window positioning and sizing controls.
- **Projector Anywhere™ Technology** - Horizontal & vertical geometry controls to compensate for off-axis projector placement.
- **HDTV Compatible**.
- **HDCP Compliant** - The HDCP (High Definition Content Protection) license agreement allows copy-protected data on the HDMI input to pass only to the HDMI output.
- **Video Inputs (VP-728/VP-729)** - 4 universal video (composite, s-Video, component) each on 3 RCA's, 2 computer graphics video (15-pin HD), 2 HDMI and 1 USB (for JPEG data).
- **Video Inputs (VP-730/VP-731)** - 2 universal video each on 3 RCA (composite, s-Video, component), 4 computer graphics/component video (15-pin HD), 2 HDMI and 1 USB (for JPEG data).
- **Multi-Standard** - Auto, NTSC (3.58/4.43), PAL (M/N/60) & SECAM.
- **HDTV Compatible Component Input**.
- **Scaled Video Outputs** - HDMI & 15-pin HD.
- **HDTV Output Resolutions** - 720p, 1080i, and 1080p.
- **Computer Graphics Output Resolutions** - 23 plus a user definable custom output resolution with selectable refresh rates.
- **Multiple Aspect Ratio Selections**. - 4x3 or 16x9, anamorphic, letter box, and user definable settings.
- **Companion AFV (Audio-Follow-Video) for Every Analog Video Input** - Supports embedded audio on the 2 HDMI inputs and outputs.
- **Audio Inputs** - 4 (S/PDIF or stereo audio on 2 RCA's) for each of the 4 universal video inputs, 2 stereo audio (on 3.5mm mini jack connectors) for the 2 computer graphics video inputs. Each with level adjustment.
- **Audio Outputs** - S/PDIF and stereo audio (RCA's). Transcodes stereo or S/PDIF audio to both stereo and S/PDIF audio and embeds audio onto the HDMI output. Master volume control.
- **Audio Delay** - Adjustable from 0 to 340msec.
- **Built-in Time Base Corrector** - Stabilizes unstable video sources.
- **Built-in ProcAmp** - Color, hue, sharpness, contrast, and brightness are set individually for each input.
- **Text Overlay**.
- **Front Panel Lockout**.
- **Front Panel Freeze Frame**.
- **Video Blanking** - Blue or black screen selectable.
- **Zoom** - 100% to 400%.
- **Flexible Control Options** - Front panel, IR remote (with on-screen menus) & RS-232 (VP-728/VP-729); iPhone® App & Ethernet (VP-729).
- **Worldwide Power Supply** - 100-240V AC.
- **Standard 19" Rack Mount Size** - 1U. Rack "ears" included.

VP-730/VP-731 9-Input ProScale™ Presentation Scaler/Switchers



◀ VP-730

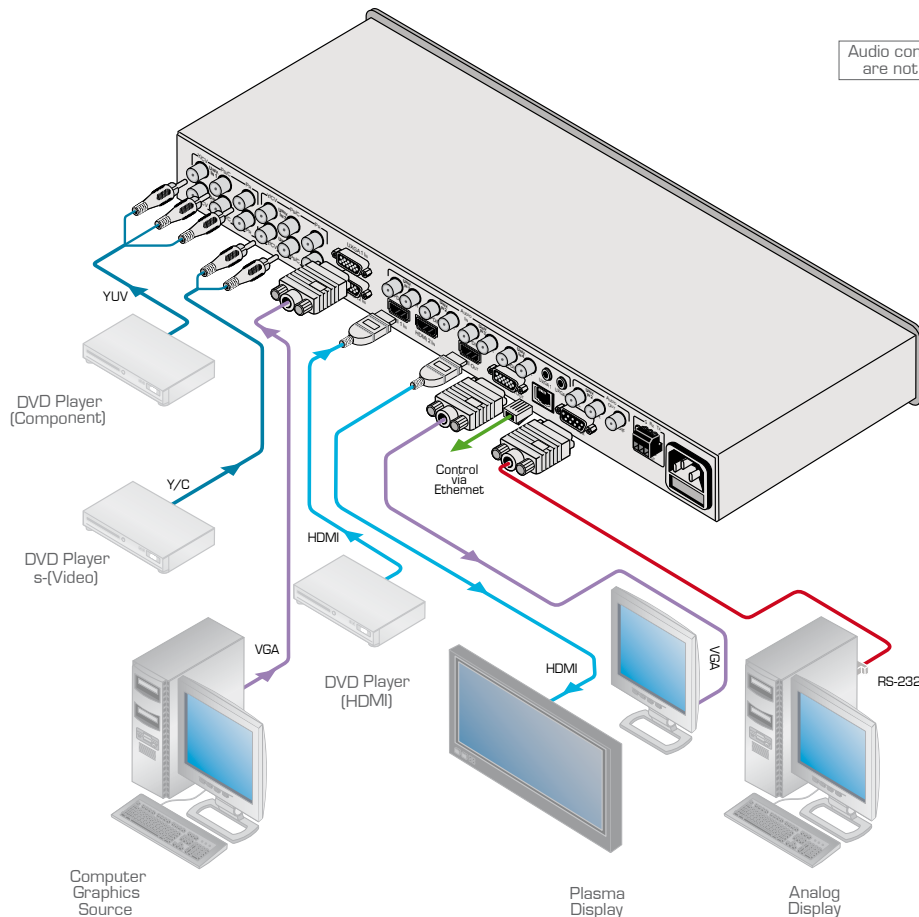


◀ VP-731

INPUTS	SCALED OUTPUTS
2 x 3-wire universal	2 x 15-pin HD
4 x 15-pin HD	1 x HDMI
2 x HDMI	
1 x USB (JPEG)	

The VP-730 and VP-731 are 9-input scaler/switchers for analog video, digital video and unbalanced stereo audio signals. They up or down-scale composite, s-Video (Y/C), component video (YUV), HDMI, computer graphics video and JPEG files to a selectable computer graphics video or HDTV output resolution on one HDMI and two 15-pin HD outputs. They provide glitch-free switching between sources through FTB™ (fade-thru-black) switching technology.

The VP-731 includes iPhone® App and Ethernet control.



VP-729
9-Input
ProScale™
Presentation
Scaler/Switcher
with Ethernet
Control



◀ VP-725xl

INPUTS	SCALED OUTPUTS	GROUP OUTPUTS
4 x composite	1 x 5 BNC	1 x composite
4 x s-Video (Y/C)	1 x 15-pin HD	1 x s-Video (Y/C)
4 x Component (YUV)	1 x HDMI	1 x Component (YUV)
4 x 15-pin HD		1 x 15-pin HD
4 x HDMI		1 x HDMI
1 x USB (jpeg)		

The VP-725xl and VP-725xA are presentation scaler/switchers with multiple signal format sections. The units have five independent 4x1 video sections: composite, s-Video (Y/C), component (YUV), computer graphics, and HDMI, plus a single USB input. They also scale any video input up or down to a selectable graphics or HDTV output resolution and provide glitch-free switching between sources through FTB™ (fade-thru-black) switching technology.

The VP-725xA includes balanced stereo audio.

FEATURES

- **HQV® Video Processing** - HQV (Hollywood Quality Video) processing represents the state-of-the-art in video processing technology, with the highest quality de-interlacing (with 3:2 & 2:2 pull down), noise reduction, and scaling performance for both standard-definition and high-definition signals.
- **De-interlacing and Scaling** - High-quality 3:2 and 2:2 pull down, de-interlacing and full up and down scaling of computer graphics video input signals.
- **HDTV Compatible.**
- **HDCP Compliant** - The HDCP (High Definition Content Protection) license agreement allows copy-protected data on the HDMI input to pass only to the HDMI output.
- **Fade-Thru-Black (FTB™) Switching (Scaled Output)** - The video fades to black and then the new input fades from black for smooth, glitch-free switching. The output signal provides constant sync so the display never glitches.
- **K-IITXL™ 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 a computer graphics video source or vice versa with window positioning and sizing controls.
- **Projector Anywhere™ Technology** - Horizontal & vertical geometry controls compensate for off-axis projector placement.
- **Multi-Format** - Auto, NTSC (3.58/4.43), PAL (M/N/60) & SECAM.
- **6 Switchers in 1** - Five dedicated signal formats: 4x1 composite, 4x1 s-Video (Y/C), 4x1 component (RGB/YUV), 4x1 computer graphics (15-pin HD), 4x1 HDMI and one 2:1x1:3 scaled output.
- **USB Port** - For importing JPEG files.
- **Scaled Computer & HDTV Outputs** - A single output signal in 3 formats (15-pin HD, 5 BNCs, and HDMI) simultaneously.
- **HDTV Compatible Component Input.**
- **Scaled Video Outputs** - RGBHV, HDMI & 15-pin HD.
- **HDTV Output Resolutions** - 720p, 1080i, and 1080p.
- **Computer Graphics Output Resolutions** - 23 plus a user definable custom output resolution with selectable refresh rates.
- **Multiple Color Space** - RGB or YUV output.
- **Audio Inputs** - Balanced stereo audio inputs, one for each of the 16 analog video inputs (VP-725xA only).
- **Audio Outputs** - Balanced stereo audio outputs for all 4 dedicated analog video formats and one for the scaled output. Embeds audio onto the scaled HDMI output (VP-725xA only).
- **Mic Input** - Condenser or dynamic with talk over, mix and override controls (VP-725xA only).
- **Audio Level Control** - Each input and output (VP-725xA only).
- **Flexible Control** - Front panel, IR Remote (with on-screen menus), Ethernet & RS-232.
- **Standard 19" Rack Mount Size** - 3U. Rack "ears" included.

VP-435 HDMI, Component & Computer Graphics Video to HDMI ProScale™ Digital Scaler



◀ VP-435

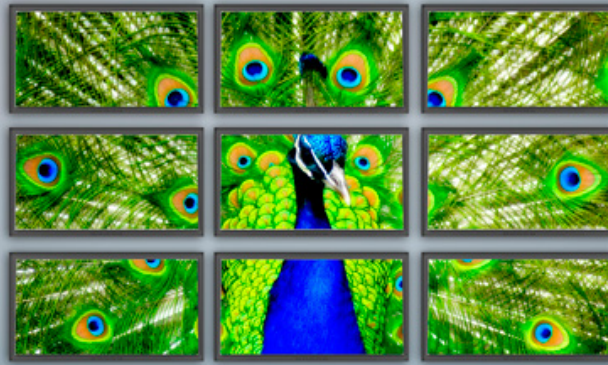
INPUTS	SCALED OUTPUT
1 x component (YPbPr)	1 x HDMI
1 x 15-pin HD	
1 x HDMI	

The VP-435 is a high-quality format converter for component video, computer graphics video, HDMI video and unbalanced stereo audio signals. It scales the selected video signal to a computer graphics or HDTV output resolution, embeds the audio and outputs an HDMI signal.

FEATURES

- HDTV Compatible.
- HDCP Compliant.
- Output Resolutions (Front Panel) - 480p, 576p, 720p, 1080i, and 1080p.
- Output Resolutions (On-Screen Menu) - 1080i, 1080p, 720p, 576i, 576p, 480i, 480p, WXGA, WSXGA, WUXGA, VGA, SVGA, XGA, SXGA, UXGA, & Native.
- ProcAmp Controls - Brightness, contrast, hue, saturation & sharpness.
- HDMI Input - Embedded audio or 3.5mm connector for stereo audio.
- HDTV Compatible Component Input.
- Computer Graphics Video Input - 15-pin HD connector and 3.5mm connector for stereo audio.
- Multiple Aspect Ratio Selections - Full, overscan, underscan, letter box & panscan.
- Control - Front panel and contact closure switching. Front panel and IR remote (included) for on-screen menu.
- Desktop Size - Compact size. 2 units can be rack mounted side-by-side in a 1U rack space with the optional RK-1 rack kit.





VP-436/VP-437xl 7-Input Analog & HDMI ProScale™ Presentation Digital Scaler/Switcher



◀ VP-437xl

◀ VP-436

INPUTS	SCALED OUTPUTS
1 x composite	1 x 5 BNC
1 x s-Video (Y/C),	1 x 15-pin HD
2 x component,	1 x HDMI
1 x 15-pin HD	
2 x HDMI	

The **VP-436** and **VP-437xl** are 7-input scaler/switchers for composite video, s-Video (Y/C), component video, computer graphics video and HDMI with unbalanced stereo and S/PDIF audio signals. They scale the selected video signal to a computer graphics or HDTV output resolution, embed the audio and output an HDMI signal.

The **VP-437xl** includes Ethernet control.

FEATURES

- **K-Storm™ Scaling Technology** - Kramer's extremely high-performance scaling technology. High-quality 3:2 and 2:2 pull down de-interlacing and full up and down scaling of computer graphics video input signals.
- **HDTV Compatible.**
- **HDCP Compliant** - The HDCP (High Definition Content Protection) license agreement allows copy-protected data on the HDMI input to pass only to the HDMI output.
- **Video Inputs** - 1 composite video, 1 s-Video, 2 component video, 1 computer graphics (15-pin HD) & 2 HDMI.
- **Scaled Outputs** - A single output signal simultaneously available in 3 formats: HDMI, 5 BNC, & 15-pin HD connectors.
- **18 Output Resolutions** - Up to WUXGA & 1080p.
- **Audio Inputs** - 7 unbalanced on terminal blocks, individual level control.
- **Audio Output** - S/PDIF and stereo audio (RCAs), transcodes stereo or S/PDIF audio to both stereo and S/PDIF audio and embeds audio onto the HDMI output, master volume control.
- **Multi-Standard** - PAL & NTSC.
- **Audio Delay** - 40ms, 110ms, 150ms, or disable.
- **Companion AFV (Audio-Follow-Video)** - Stereo audio for every input.
- **Built-in ProcAmp** - Color, hue, sharpness, noise, contrast, and brightness.
- **Front Panel Control** - Audio mute, video blanking & freeze frame.
- **Front Panel Lockout.**
- **Multiple Aspect Ratio Selections** - Full, overscan, underscan, letter box & panscan.
- **Flexible Control Options** - Front panel buttons, IR remote with OSD (on-screen display) & RS-232; Ethernet (VP-437xl only).
- **Worldwide Power Supply** - 100-240V AC.
- **Standard 19" Rack Mount Size** - 1U. Rack "ears" included.

VP-413xl Video to Computer Graphics Video ProScale™ Digital Scaler (up to WUXGA)



◀ VP-413xl

INPUTS	SCALED OUTPUTS
1 x composite	1 x 15-pin HD
1 x s-Video (Y/C)	

The VP-413xl is a high-performance digital scaler for composite video and s-Video (Y/C) signals. The unit scales a video signal to a selectable computer graphics video on a 15-pin HD connector.

FEATURES

- Multi-Standard - PAL-B & NTSC (3.58).
- Input - Composite video and s-Video.
- Output - 1 computer graphics video on a 15-pin HD connector.
- Computer Graphics Output Resolutions - VGA (640x480), SVGA (800x600), XGA (1024x768), WXGA (1366x768), SXGA (1280x1024), UXGA (1600x1200) & WUXGA (1920x1200 PAL only).
- 3D De-Interlacer.
- 3D Comb Filter.
- Control - Front panel input source and output resolution buttons with LED status.
- Compact Kramer TOOLSTM™ - 3 units can be rack mounted side-by-side in a 1U rack space with the optional RK-3T rack adapter.

VP-414xl Video to Computer Graphics Video/HDTV ProScale™ Digital Scaler (up to WUXGA/1080p)



◀ VP-414xl

INPUTS	SCALED OUTPUTS
1 x composite	1 x 15-pin HD
1 x s-Video (Y/C)	

The VP-414xl is a high-performance digital scaler for composite video and s-Video (Y/C) signals. The unit scales a video signal to a selectable computer graphics video or HDTV output signal on a 15-pin HD connector.

FEATURES

- Multi-Standard - PAL-B & NTSC (3.58).
- HDTV Compatible.
- Input - Composite video or s-Video.
- Output - 1 computer graphics/HDTV video on a 15-pin HD connector.
- Computer Graphics Output Resolutions - VGA (640x480), SVGA (800x600), XGA (1024x768), WXGA (1366x768), SXGA (1280x1024), UXGA (1600x1200) and WUXGA (1920x1200 PAL only).
- HDTV Output Resolutions - 480p, 576p, 720p, 1080i, and 1080p in component format on the 15-pin HD output connector.
- Control - Front panel input source and output resolution buttons with LED status & contact closure for input selection.
- 3D De-Interlacer.
- 3D Comb Filter.
- Compact MegaTOOLS® - 2 units can be rack mounted side-by-side in a 1U rack space with the optional RK-T2B rack adapter.

VP-420/VP-421 Computer Graphics Video & HDTV Digital Scalers



▲ VP-420

▲ VP-421

INPUTS	SCALED OUTPUTS
1 x component (YPbPr)/VGA	1 x 15-pin HD
	1 x DVI-D

The **VP-420** and **VP-421** are high-performance digital scalers for computer graphics video and HDTV signals. They scale the input up or down to a selectable computer graphics video or HDTV output signal on a 15-pin HD connector.

The **VP-421** includes a DVI output connector.

FEATURES

- Max Resolution - WUXGA & 1080p.
- HDTV Compatible.
- Multiple Formats - Supports component (YPbPr) and VGA inputs and outputs.
- Built-in ProcAmp - Color, sharpness, brightness, contrast, etc.
- Digital Noise Reduction - On/Off.
- Controls - Front panel buttons, on-screen menus.
- Multiple Aspect Ratio Selections.
- Compact MegaTOOLS™ - 2 units can be rack mounted side-by-side in a 1U rack space with the optional RK-T2B universal rack adapter.

VP-422 ProScale™ HDMI to Computer Graphics Video and HDTV Digital Scaler



◀ VP-422

INPUTS	SCALED OUTPUTS
1 x component (YPbPr)/VGA	1 x 15-pin HD
1 x HDMI	

The **VP-422** is a high-performance digital scaler for HDMI signals. It scales the input up or down to a selectable computer graphics video or HDTV output signal on a 15-pin HD connector and de-embeds the audio to an unbalanced stereo signal.

FEATURES

- Max Resolution - WUXGA & 1080p.
- Input - Non-HDCP encrypted HDMI or DVI signal on an HDMI connector.
- Outputs - RGBHV & component video (selectable) on a 15-pin HD connector, and stereo unbalanced audio on RCA connectors.
- Built-in ProcAmp - Color, sharpness, brightness, contrast, etc.
- Controls - Front panel with On-Screen Display (OSD).
- Compact MegaTOOLS™ - 2 units can be rack mounted side-by-side in a 1U rack space with the optional RK-T2B universal rack adapter.

VP-423 Computer Graphics Video & HDTV Video-Wall Scaler



◀ VP-423

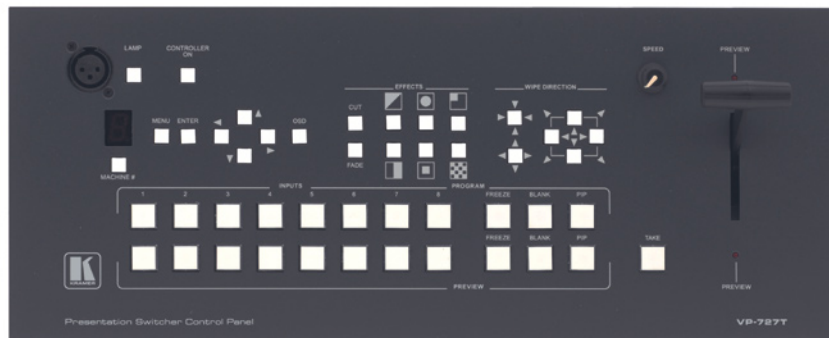
INPUTS	SCALED OUTPUTS
1 x DVI-D	1 x 15-pin HD

The **VP-423** is a high-performance digital scaler for computer graphics signals up to WUXGA and 1080p. The units can be used to create a video wall of up to 4x4 displays. Each display in a **VP-423** video wall requires a dedicated **VP-423**.

FEATURES

- **Max Resolution** - WUXGA & 1080p.
- **Input/Output** - RGBHV on a 15-pin HD.
- **Looping Input** - For chaining the source input to the next VP-423 unit.
- **Video Wall Size** - Menu selectable up to 4x4. One VP-423 is required for each display of the video wall matrix.
- **Controls** - Front panel with On-Screen Display (OSD).
- **Built-in ProcAmp** - Color, sharpness, brightness, contrast, etc.
- **Compact MegaTOOLS™** - 2 units can be rack mounted side-by-side in a 1U rack space with the optional RK-T2B universal rack adapter.

VP-727T In-CTRL™ Remote Control Console with "T" Bar



◀ VP-727T

The **VP-727T** is a dedicated remote control console for the VP-747 In-CTRL dual scaler seamless switcher. It is designed to be used in live production events which require remote operation of the seamless switcher and which can benefit from a "T" bar for precise switching and transition control.

FEATURES

- **All VP-747 Functions Replicated** - All the front panel controls of the VP-747 Seamless Switcher are replicated on the VP-727T.
- **Convenient Switching Control** - Via T-Bar or take button with selectable transition speed control.
- **Menu Button** - Control the VP-747 via an on-screen display on the Preview output.
- **Wipe Direction Control** - Via front panel buttons.
- **Control Multiple Units** - Up to 4 VP-747 Seamless Switchers can be controlled from one VP-727T.
- **Gooseneck Lamp** - For low light environments.
- **Control Options** - 4 RS-485 ports to control up to 4 VP-747, and 1 RS-232 for firmware upgrades.
- **Power Supply** - 12V DC.
- **Standard 19" Rack Mount Size** - 4U. Angled faceplate allows for free-standing use on a table.

VP-419xl Video to Computer Graphics Video/HDTV ProScale™ Digital Scaler



◀ VP-419xl

INPUTS	SCALED OUTPUTS
1 x composite	1 x 15-pin HD
1 x s-Video (Y/C)	
1 x component (SD only)	
1 x 15-pin HD (pass-through only)	

The VP-419xl is a high-performance digital scaler for composite, s-Video and component (480i/576i) video signals. It scales a video input to a selectable computer graphics video or HDTV output resolution.

FEATURES

- Computer Graphic Output Resolutions - 640x480, 800x600, 1024x768, and 1280x1024.
- HDTV Output Resolutions - 480p, 576p, 720p, and 1080i.
- Multi-Standard - NTSC & PAL-B/G/I/D.
- Built-in Proc Amp - Color, hue (NTSC only), sharpness, contrast, and brightness.
- 3D Comb Filter. - On/Off.
- 3:2 Pull Down Video Processing - Auto detection.
- Multiple Aspect Ratio Selections - 4x3 or 16x9.
- Digital Noise Reduction - On/Off.
- Computer Graphics/HDTV (15-pin HD) Pass-thru.
- Flexible Control Options - Front Panel buttons, IR Remote (with on-screen menus).
- Desktop Size - Compact size. 2 units can be rack mounted side-by-side in a 1U rack space with the optional RK-1 adapter.

VP-418xl Composite & s-Video to HDMI ProScale™ Digital Scaler



◀ VP-418xl

INPUTS	SCALED OUTPUTS
1 x composite	1 x HDMI
1 x s-Video (Y/C)	

The VP-418xl is a high-performance scaler for composite video and s-Video (Y/C) signals with S/PDIF or unbalanced stereo audio. It scales the selected video signal to an HDTV output resolution, embeds the audio and outputs an HDMI signal.

FEATURES

- HDTV Compatible.
- Output Resolutions - 480p, 576p, 720p, 1080i & 1080p.
- Audio Inputs - Stereo and S/PDIF for each input.
- Embeds Audio into HDMI Output.
- Control - Front panel and contact closure.
- Desktop Size - Compact size. 2 units can be rack mounted side-by-side in a 1U rack space with the optional RK-1 adapter.

PRODUCT FEATURE COMPARISON

		VP-413xl VP-414xl	VP-418XL	VP-419xl	VP-420 VP-421 VP-422	VP-435	VP-436 VP-437XL	VP-728 VP-729	VP-730 VP-731	VP-747
INPUTS	COMPOSITE (CV)	1	1	1			1	4 (3-WIRE) UNIVERSAL INPUTS	2 (3-WIRE) UNIVERSAL INPUTS	8 (5-WIRE) UNIVERSAL INPUTS
	S-VIDEO (YC)	1	1	1			1			
	COMPONENT			1*	Y	1	2			
	5 BNCS									Y
	15-PIN HD			1**		1	1	2	4	
	DVI-D									2 DVI/ HDMI
	HDMI				VP-422	1	2	2	2	
USB (JPEG)							1	1		
SCALED OUTPUTS	5 BNCS						1			2
	15-PIN HD	1		1	Y		1	1	2	2
	DVI-D				VP-421					2 DVI/ HDMI
	HDMI		1			1	1	1	1	
STEREO AUDIO INPUTS	UNBALANCED AUDIO		2			3	7	6		
	BALANCED AUDIO								6	
	MICROPHONE									
	S/PDIF		2					4	6	
STEREO AUDIO OUTPUTS	EMBEDDED HDMI					Y	Y	Y	Y	Y
	UNBALANCED AUDIO				1 VP-422		1	1		
	BALANCED AUDIO								1	
	AMPLIFIED SPEAKER OUTPUT								1	
FEATURES	S/PDIF						1	1	1	
	EMBEDDED HDMI		Y			Y	Y	1	1	Y
	HGV /K-STORM PROCESSING	K-STORM	K-STORM	K-STORM	K-STORM	K-STORM	K-STORM	HGV	HGV	HGV
	PICTURE IN PICTURE (PIP)							Y	Y	Y
	ON SCREEN DISPLAY			Y	Y	Y	Y	Y	Y	Y
	FLASH UPGRADEABLE							Y	Y	Y
	IR REMOTE CONTROL			Y		Y		Y	Y	Y
	RS-232 CONTROL							Y	Y	Y
	ETHERNET CONTROL						VP-437XL	VP-729	VP-731	Y
	CONTACT CLOSURE CONTROL		Y			Y				
	FRONT PANEL CONTROL	Y	Y	Y	Y	Y	Y	Y	Y	Y+LCD
	3:2/2:2 PULL DOWN	Y	Y	Y	Y	Y	Y	Y	Y	Y
	KEYSTONE CONTROL							Y	Y	Y
	PICTURE ROTATION							Y	Y	Y
	REAR & CEILING PROJECTION							Y	Y	Y
	CUT, FADES & EFFECTS									Y
	FADE-THROUGH BLACK						Y****	Y	Y	Y
	T-BAR CONTROL OPTION									Y
	RESOLUTION MODES	640X480 (VGA)	Y		Y	Y	Y	Y	Y	Y
800X600 (SVGA)		Y		Y	Y	Y	Y	Y	Y	Y
1024X768 (XGA)		Y		Y	Y	Y	Y	Y	Y	Y
1366X768 (WXGA)		Y		Y	Y	Y	Y	Y	Y	Y
1280X1024 (SXGA)		Y		Y	Y	Y	Y	Y	Y	Y
1280X800					Y			Y	Y	Y
1400X1050					Y			Y	Y	Y
1440X900					Y					
1680X1050 (WSXGA)					Y	Y	Y	Y	Y	Y
1600X1200 (UXGA)		Y			Y	Y	Y	Y	Y	Y
1920X1080										
1920X1200 (WUXGA)		Y***			Y	Y	Y	Y	Y	Y
USER DEFINABLE								Y	Y	Y
480i						Y	Y			
576i						Y	Y			
480P		VP-414XL	Y	Y	Y	Y	Y	Y	Y	Y
576P		VP-414XL	Y	Y	Y	Y	Y	Y	Y	Y
720P	VP-414XL	Y	Y	Y	Y	Y	Y	Y	Y	
1080i	VP-414XL	Y	Y	Y	Y	Y	Y	Y	Y	
1080P	VP-414XL	Y		Y	Y	Y	Y	Y	Y	
NATIVE (READS EDID)					Y	Y	Y	Y	Y	
POWER PHYSICAL	POWER	5V DC VP-413XL 12V DC VP-414XL	5V DC	12V DC	5V DC	12V DC	100-240 VAC			
	WEIGHT	0.35KG (0.67LBS) APPROX.	1.1KG (2.4LBS)	0.66KG (1.45LB) APPROX.	0.66KG (1.45LB) APPROX.	1.1KG (2.4LBS)	2.7KG (6LBS)	3KG (6.6LBS)		5.5KG (12.2LBS)
	SIZE	TOOL™	DESKTOP		MEGA- TOOLS	DESKTOP	19" 1U	19" 1U		19" 3U

* SD ONLY

** PASS-THROUGH ONLY

*** PAL ONLY

****FOR ANALOG INPUTS



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