VP1421

4 x 2 True 4K Presentation Matrix Switch with Scaling, DSP, and HDBaseT-Lite

The ATEN VP1421 is a multi-in-one presentation switch that integrates a video matrix switch, 4K scaler, HDBaseT extender, audio DSP, and analog-to-digital converter functions into one compact device that easily mounts under a table or in a rack. With four analog/digital inputs to one HDBaseT and one HDMI True 4K outputs, it is designed to boost the efficiency and impact of professional presentations.

With streamlined control from front-panel pushbuttons, IR remote controller, RS-232, and web-based GUI via Ethernet, the VP1421 reduces not only system device count, but also lowers operation complexity. It is suitable for all meeting space and education environments, such as huddle rooms, classrooms, training rooms, or any other presentation setting, such as in exhibition galleries or hotels.

Features

- Fast Analog/Digital AV Matrix Switching
  - Supports multi-format 4 Inputs – 2 HDMI, 1 HDBaseT, and 1 VGA inputs
  - 1 HDMI and 1 HDBaseT outputs
  - Audio embedding – stereo audio can be embedded into display output or separated to stereo and optical audio outputs
  - Audio de-embedding – HDMI/HDBaseT audio can be extracted to stereo audio output
  - Built-in Audio DSP – supports microphone input with selectable 48V Phantom Power and allows microphone input to be mixed with program audio and embedded into display output
  - Automatically reduces program audio when a microphone signal is detected
  - Auto switching – automatically detects and switches to a new source as soon as it is connected for time-saving and convenience

- High-definition Video with Optimum Output
  - Superior video quality – up to 4096 x 2160@60Hz (4:4:4) (HDMI) / 4096 x 2160@60Hz (4:2:0) (HDBaseT)
  - Supports HDR
  - Scaler – supports video upscaling to 4K on display A and downscaling to 1080p on display B
  - EDID Expert™ – automatically selects the optimum EDID settings for smooth power-up, high-quality display, and the best video resolution across connected devices
  - HDMI 2.0 (3D, Deep Color, 4K); HDCP 2.2 compliant

- Versatile, Streamlined Operation
  - Multiple control options – flexible control via front-panel pushbuttons, IR remote control, RS-232, and web-based GUI through Ethernet
  - Bi-directional RS-232 and IR channel – allows AV device control over HDBaseT connection without additional cabling
  - Supports stand-by mode for power saving and fast waking up

- Extended Transmission over One Cable
  - Long-distance transmission – transmit digital AV signal, bi-directional RS-232, and IR control signals up to 140m* via Cat 6/6a or ATEN 2L-2910 Cat 6 cables
  - Power over HDBaseT (POH) – remote powering over existing communication cable with selectable powering device
    Note: This is achieved using both the HDBaseT In and the HDBaseT Out ports on the VP1421, each extending the transmission up to 70m.
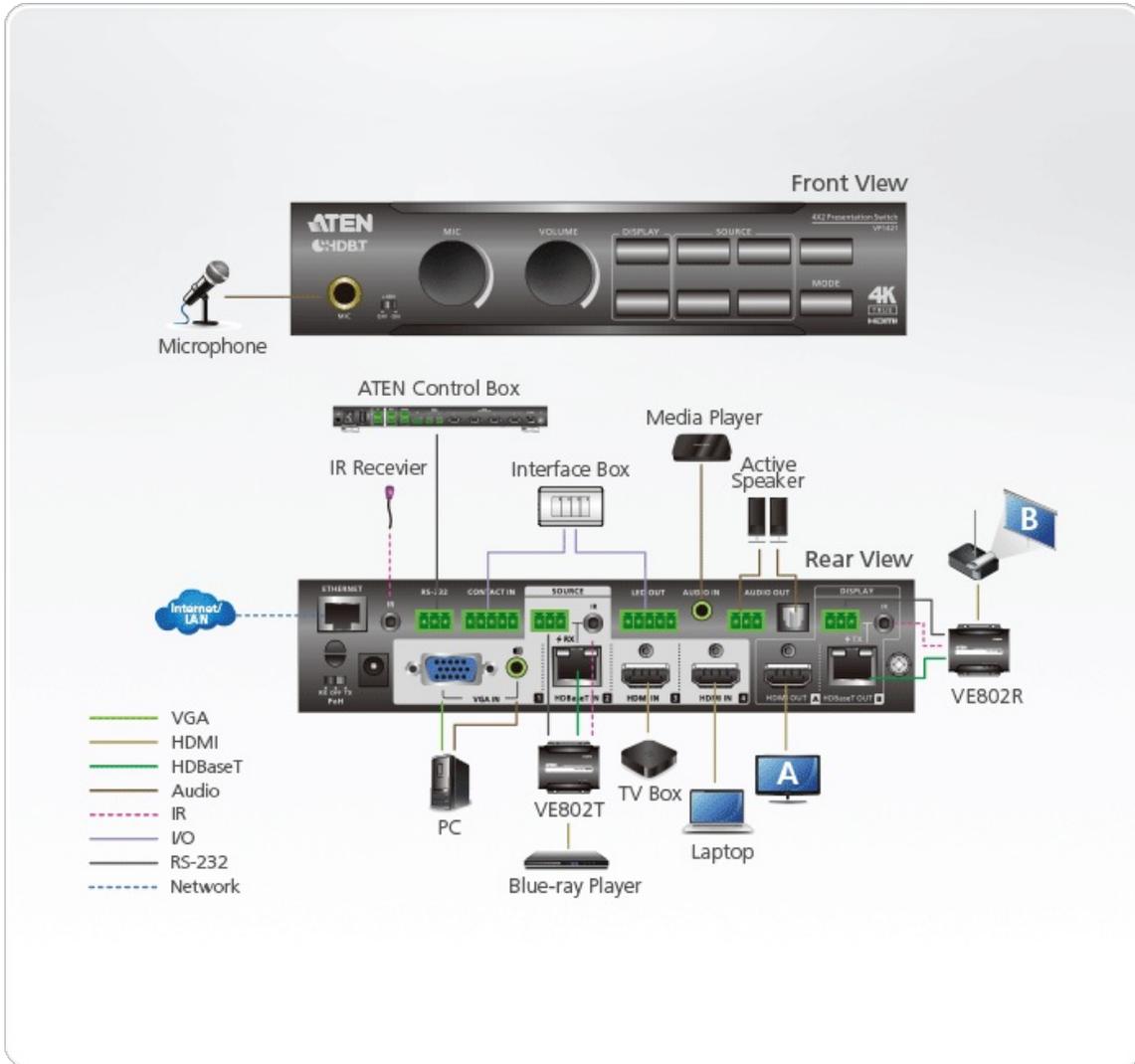
Specifications

Video Input	
Interfaces	2 x HDMI Type A female (Black) 1 x VGA (HDB-15) Female (Blue) 1 x HDBaseT (RJ-45) Female (Silver) with selectable PoH
Max. Distance	HDMI: 4K@60Hz (4:4:4) at 3m; 4K@30Hz at 10m; 1080p@60Hz at 15m VGA: 1920x1200@60Hz at 15m HDBaseT: 4K@30Hz at 35m (Cat 5e/6) / 40m (Cat 6a/ATEN 2L-2910 Cat6); 1080p@60Hz at 60m (Cat 5e/6) / 70m (Cat 6a/ATEN 2L-2910 Cat6)
Video Output	
Interfaces	1 x HDMI Type A female (Black) 1 x HDBaseT (RJ-45) Female (Silver) with selectable PoH
Max. Distance	HDMI: 4K@60Hz (4:4:4) at 3m; 4K@30Hz at 10m; 1080p@60Hz at 15m

	HDBaseT: 4K@30Hz at 35m (Cat 5e/6) / 40m (Cat 6a/ATEN 2L-2910 Cat6); 1080p@60Hz at 60m (Cat 5e/6) / 70m (Cat 6a/ATEN 2L-2910 Cat6)
Video	
Max. Resolution	HDMI: Up to 4096 x 2160 / 3840 x 2160 @ 60Hz (4:4:4) VGA: Up to 1920x1200@60Hz HDBaseT: Up to 4096 x 2160 / 3840 x 2160 @ 60Hz (4:2:0) ; Up to 4096 x 2160 / 3840 x 2160 @ 30Hz (4:4:4)
Compliance	HDMI 2.0 (3D, Deep Color, 4K); 4K HDR HDCP 2.2 Compatible; Consumer Electronics Control (CEC)
Audio	
Input	Stereo Audio (HDMI/HDBT): 1 x mini stereo Jack female (Green) Stereo Audio (VGA): 1 x mini stereo Jack female (Green) Microphone: 1 x 6.3mm Jack connector (with selectable phantom power)
Output	Line Out (Unbalanced): 1 x Captive Screw Connector, 3-pole Optical Audio: 1 x Toslink (Black)
Control	
RS-232	1 x Captive Screw Connector, 3-pole
IR	1 x Mini Stereo Jack Female (Black)
Ethernet	1 x RJ-45 Female (Silver)
Contact In	1 x Captive Screw Connector, 5-pole
LED Out	1 x Captive Screw Connector, 5-pole LED out power: +5 VDC, 0.2 A
IR Channel	HDBaseT In : 1 x Mini Stereo Jack Female (Black) HDBaseT Out : 1 x Mini Stereo Jack Female (Black)
RS-232 Channel	HDBaseT In : 1 x Captive Screw Connector, 3-pole HDBaseT Out : 1 x Captive Screw Connector, 3-pole
Switches	
Power	1 x Pushbutton (LED: Green / Orange) 1 x Slide Switch (+48V Phantom Power) 1 x Slide Switch (PoH)
Video Input Port Selection	4 x Pushbutton (LED: Green)
Video Output Port Selection	2 x Pushbutton (LED: Orange)
Selection	Mic: 1 x Knob Volume: 1 x Knob Mode / Unlock: 1 x Pushbutton
EDID Settings	EDID Mode: Default / Port 1 / Remix
Connectors	
Power	1 x DC Jack (Black)

Power Consumption	DC12V:14.93W:110BTU
Environmental	
Operating Temperature	0-40°C
Storage Temperature	-20 - 60°C
Humidity	0 - 80% RH, Non-Condensing
Physical Properties	
Housing	Metal
Weight	1.16 kg (2.56 lb)
Dimensions (L x W x H)	20.00 x 17.01 x 4.40 cm (7.87 x 6.7 x 1.73 in.)
Carton Lot	3 pcs
Note	For some of rack mount products, please note that the standard physical dimensions of WxDxH are expressed using a LxWxH format.

Diagram