

## VuStream Video Encoding Appliances

### Delivering high quality video streams across your network

VuStream™ series encoding appliances include a range of various features, form factors, and resolutions. Each unit is compatible with PAK video wall nodes, VuScope processors and can be centrally configured and managed by the TRx centralized management software platform.

### VuStream Benefits



#### Performance Encoding

Deliver low latency high performance 4K video streams up to 4:4:4.



#### Single Vendor

A complete range of encoders and processors for all needs.



#### Centralized Management

Single common configuration and operation platform.



#### Interoperable

Compatible with 3<sup>rd</sup> party brands. Supports H.264, H.265, SRT, and more.

### VuStream Applications

#### Control Rooms



VIDEO WALL CONTROL & KVM

#### Corporate Workspaces



MULTI-SOURCE VISUALIZATION

#### Experience Centers



VERSATILE DISPLAY MANAGEMENT

#### Crisis Rooms



UNIFIED VISUALIZATION

#### Lobby Signage



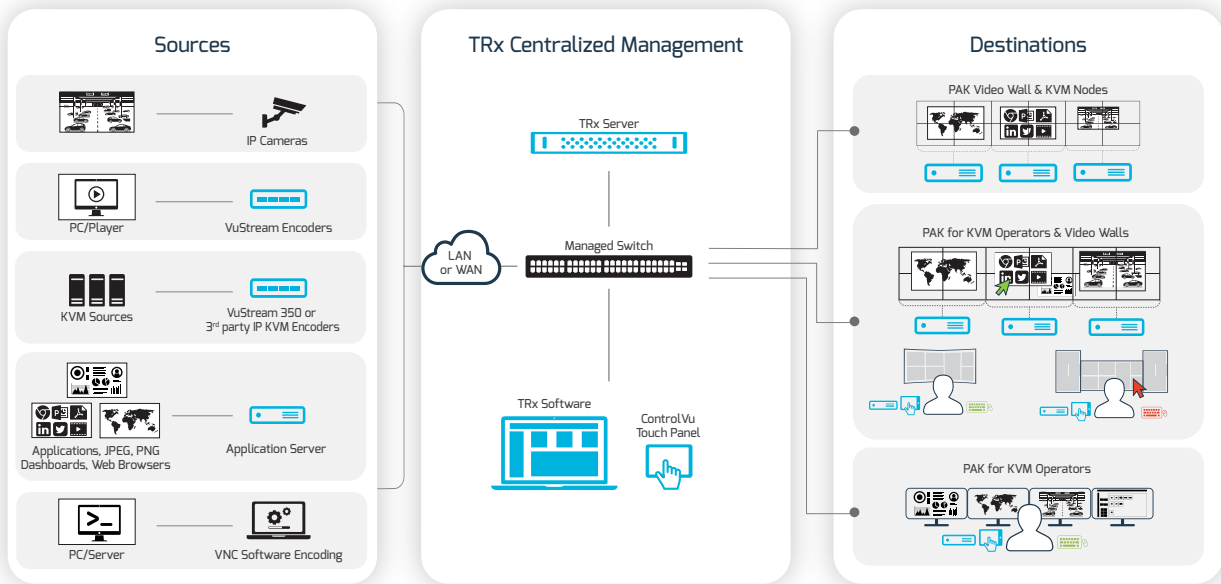
CONTENT MANAGEMENT & DISTRIBUTION

#### Classrooms & Auditoriums



PRESENTATION & COLLABORATION

## Workflow Example



## Selecting the Right VuStream Solution



VuStream	150	200	350
MAX RESOLUTION	3840x2160@60Hz	4096x2160@60Hz	4096x2160@30Hz or 1920x1200@60Hz
ENCODING QUALITY	4:2:0 or 4:2:2	Up to 4:4:4	4:2:0 or 4:4:4
FORMAT	H.264	H.264	Proprietary
ENCRYPTION	N/A	N/A	AES-256 bit
NETWORK	1 Gb	1 Gb	1 Gb
IP KVM	N/A	N/A	USB

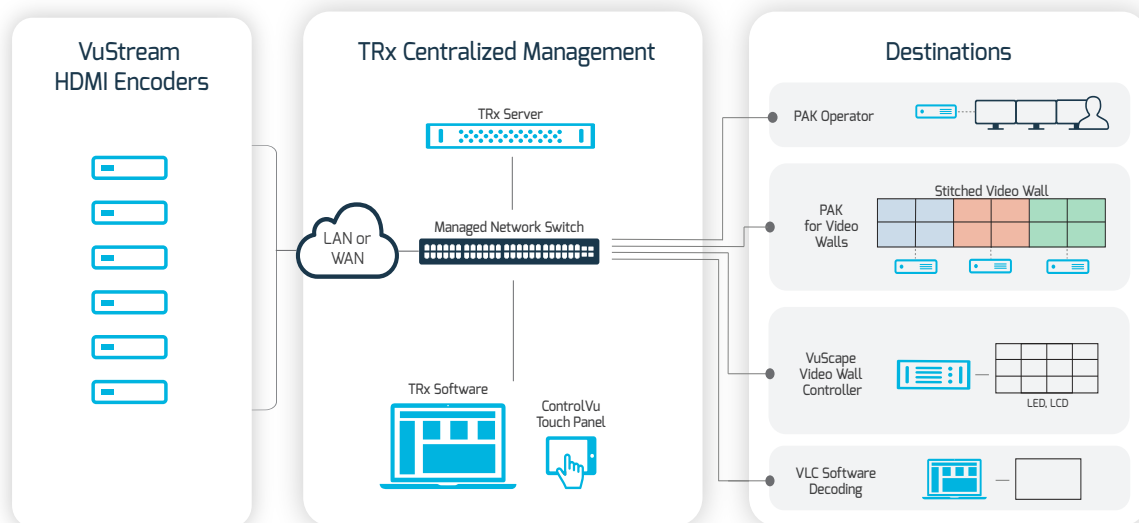
## VuStream 150 Encoder

### PoE Powered, H.264 HDMI AV Encoder

The VuStream 150 encoder appliance can transmit HDMI signals up to 3840x2160@60Hz resolution over standard networks using H.264 codec. Streams can be sent over unicast or multicast to PAK Video Wall & KVM processing nodes configured as an operator station or as a video wall; VuScape video wall controllers or standard players like VLC. The VuStream 150 can be set with user-defined low bitrates for excellent quality and low network bandwidth consumption.



The VuStream 150 offers a high quality, cost effective video-over-IP solution featuring an open architecture for interoperability, excellent I/O functionality and powerful software features.



## Features

- ✓ HDMI 4K60 encoding with audio
- ✓ H.264 and low-bandwidth for AV-over-IP
- ✓ 4:4:4 pass-through
- ✓ 4:2:0 or 4:2:2 streaming
- ✓ Power over Ethernet (PoE)
- ✓ Low latency between encoder and PAK Nodes
- ✓ Compatible with third-party software (e.g. VLC)
- ✓ Compact design

# VuStream 150 Technical Specifications

Product Name	VuStream 150
Part Number	VuStream-150-3
Hardware	
Network	1 x 1 Gb/s LAN – PoE – 802.3at
Dimensions	208 x 117 x 40mm (WxDxH) 8.2 x 4.6 x 1.6" (WxDxH)
Power Supply	100-240V AC in, 120 DC Out, 24W or PoE
Rackmount	Rackmount Kit Sold Separately – Part Number: VuStream-150-3-1U-Rack-Mounting-Kit
Warranty	3 Years
Inputs / Outputs	
Video Input	1x HDMI with audio support
Video Output/Pass-Through	1x HDMI with audio support and 4:4:4 chroma-subsampling
Maximum Capture Resolution	3840x2160 @ 60Hz 3840x1600 @ 60Hz 3440x1440 @ 60Hz
Audio Input/Output	Analog (3.5mm)
Encoding	
Streaming Resolution	Up to 3840x2160 with 50/60fps (adjustable from 5fps to 60fps)
Profiles	Baseline, main, high with 4:2:0 and 4:2:2
Streaming Protocols	RTSP over UDP
Formats (Codecs)	Video: H.264 (AVC) Audio: MPEG-4 AAC-LC
Network Standard	Unicast & multicast
Bandwidth Range	Up to max. 64Mbps total (adjustable)
Scaling and Cropping	Up and downscaling and cropping, adjustable frame rate, auto scaling for seamless switching and fixed resolution
Configuration / API	Web interface

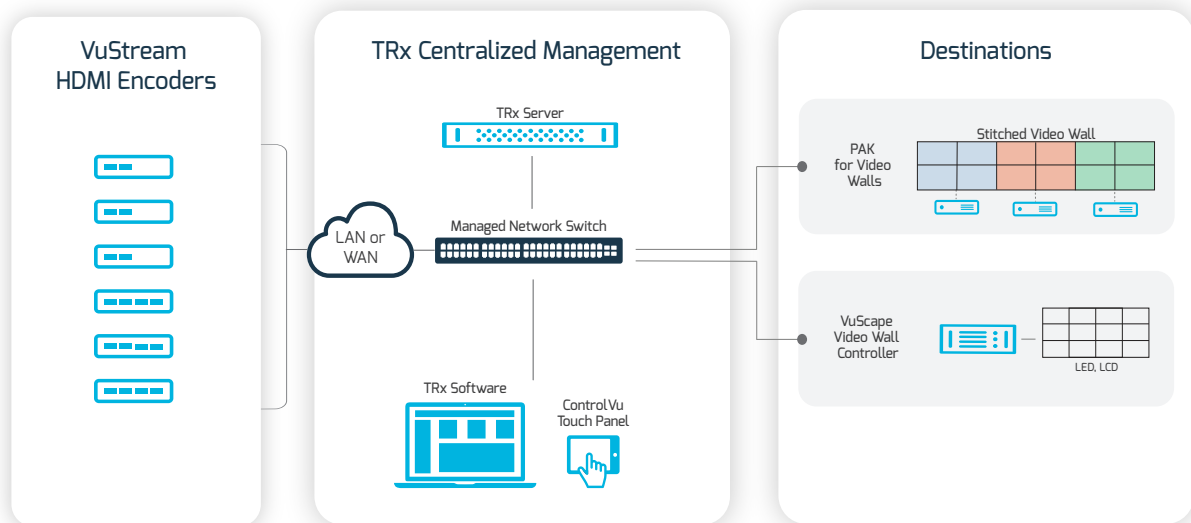
## VuStream E220-2 & E240-2 Encoders

### H.264 HDMI Video Encoders

The VuStream E200 Series of encoders transmit HDMI signals up to 4096p2160@60Hz resolution over standard networks using H.264. Stream either unicast or multicast to the VuScope controller decoding cards, to PAK Video Wall Nodes or to standard players like VLC. The VuStream E200 Series can be set with user-defined low bitrates for excellent quality and low network bandwidth consumption. It can also record to a shared network or NAS drive.



The VuStream E200 Series of encoders is a high quality, cost effective video over IP solution featuring an open hardware architecture for interoperability, excellent I/O functionality and powerful software features.



### Features

- ✓ HDMI and digital audio inputs or analogue audio inputs
- ✓ H.264 compression for high-quality, low-bandwidth AV-over-IP
- ✓ 4K/UHD with configurable multi Chroma sub-sampling in 4:4:4, 4:2:2, 4:2:0
- ✓ Open encoding allows for third-party software decode (e.g. VLC)
- ✓ Standard Ethernet Network operation with 10/100/1000 Mbps
- ✓ Unicast and multicast through UDP, RTP & RTSP
- ✓ Compatible with all VuWall solutions

# VuStream E220-2, E240-2 Technical Specifications

Product Name	VuStream E220	VuStream E240
Part Number	VuStream-E220-2	VuStream-E240-2
Hardware		
Network	2x 1Gb/s LAN	2x 1Gb/s LAN
Dimensions	217 x 189 x 43 (WxDxH) 8.54 x 7.44 x 1.69" (WxDxH)	217 x 189 x 43mm (WxDxH) 8.54 x 7.44 x 1.69" (WxDxH)
Power Supply	100-240 VAC in, 12 VDC out, 60W	100-240 VAC in, 12 VDC out, 60W
Warranty	3 Years	
Inputs / Outputs		
Video Input	2x HDMI (Type A) with audio support Up to 2x 4096x2160 @ 60Hz with 4:4:4	4x HDMI (Type A) with audio support Up to 4x 4096x2160 @ 60Hz with 4:4:4
Video Output/Pass-Through	2x HDMI (Type A) with audio support With 4096x2160 @ 60Hz with 4:4:4	4x HDMI (Type A) with audio support With 4096x2160 @ 60 Hz with 4:4:4
Maximum Encoding Resolution	2x 3840x2160 @ 60Hz 4:2:0 1x 4096x2160 @ 60Hz 4:2:0 2x 3840x2160 @ 30Hz 4:2:0 2x 4096x2160 @ 30Hz 4:2:0 1x 3840x2160 @ 30Hz 4:4:4 2x 1920x1080 @ 60Hz 4:4:4 2x 1920x1200 @ 60Hz 4:2:0	2x 3840x2160 @ 60Hz 4:2:0 1x 4096x2160 @ 60Hz 4:2:0 4x 3840x2160 @ 30Hz 4:2:0 3x 4096x2160 @ 30Hz 4:2:0 1x 3840x2160 @ 30Hz 4:4:4 3x 1920x1080 @ 60Hz 4:4:4 4x 1920x1200 @ 60Hz 4:2:0
Encoding		
Profiles	Baseline (BP), Main (MP), High (HiP), High 10 (Hi10P), High 4:2:2 (Hi422P), High 4:4:4 predictive profile separate plane (Hi444PP), CAVLC 4:4:4 intra (44)	Baseline (BP), Main (MP), High (HiP), High 10 (Hi10P), High 4:2:2 (Hi422P), High 4:4:4 predictive profile separate plane (Hi444PP), CAVLC 4:4:4 intra (44)
Streaming Protocols	RTSP/RTCP/RTP (all required), RTP, RTMP, MPEG-2 TS over UDP Formats (Codecs)	RTSP/RTCP/RTP (all required), RTP, RTMP, MPEG-2 TS over UDP Formats (Codecs)
Formats (Codecs)	Video: H.264/MPEG-4 Part 10 (AVC) Audio: MPEG-4 AAC-LC/HEV1/HEV2 IP Stream	Video: H.264/MPEG-4 Part 10 (AVC) Audio: MPEG-4 AAC-LC/HEV1/HEV2 IP Stream
Network Standard	Unicast, multi-unicast, multicast	Unicast, multi-unicast, multicast
Levels	Up to 5.2	Up to 5.2
Bandwidth Range	100kbps to 125Mbps (adjustable)	100kbps to 125Mbps (adjustable)

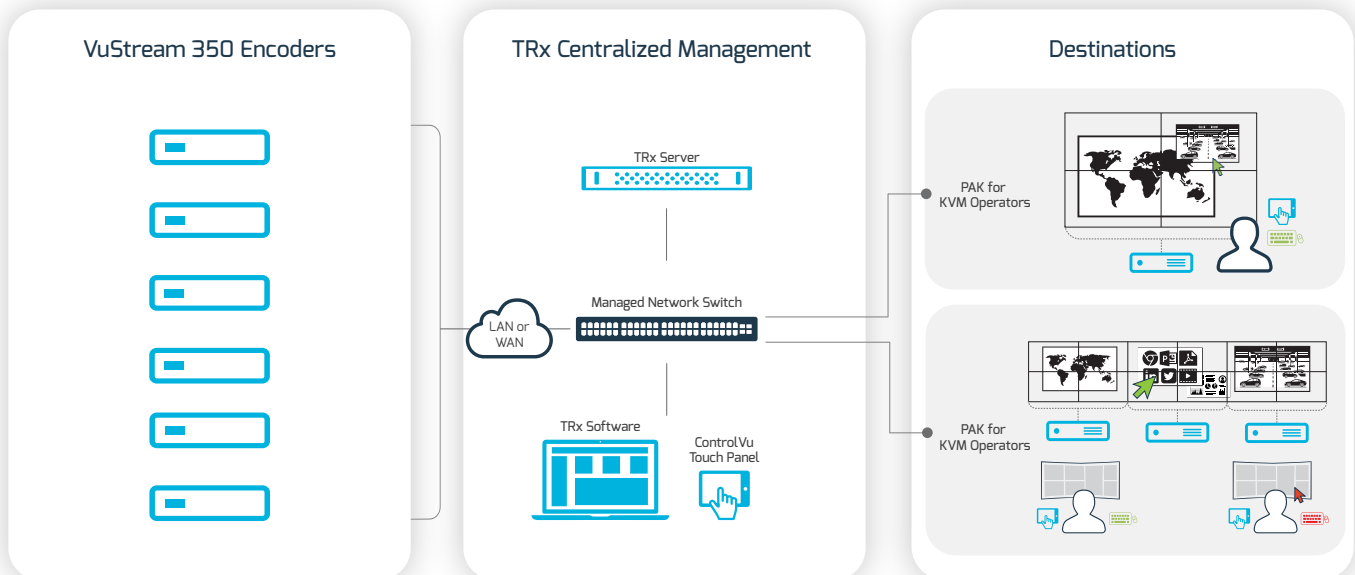


VuStream E220-2/240-2



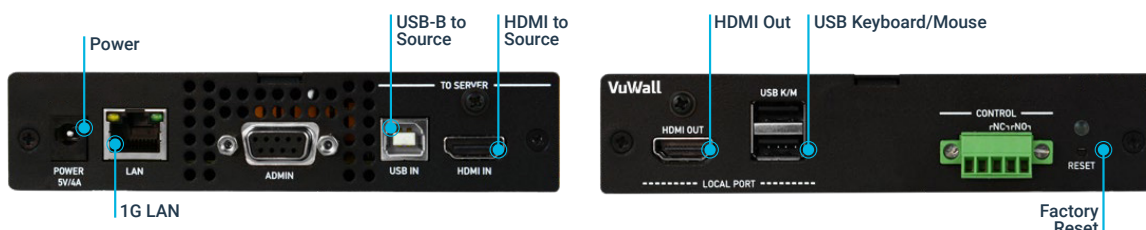
## VuStream 350 IP KVM Encoder

The VuStream 350 is a secure and fanless IP KVM encoder that delivers high-quality up to 4K video, over standard Gigabit Ethernet at low bitrates and ultra low latency. VuStream 350 transmits video & audio (over HDMI), as well as keyboard and mouse on an encrypted AES-256 signal. It is fully compatible with VuWall's TRx Centralized Management Software, ControlVu PoE Touch Panels, and PAK Video Wall and KVM nodes, allowing operator workstations to control the sources connected to VuStream 350 at low latency, making it imperceptible to the user that they are controlling a remote device.



## Features

- ✓ High-quality 4K/UHD encoding and low-bandwidth for AV-over-IP
- ✓ Compact and fanless design
- ✓ Secure end-to-end video distribution with AES 256-bit encryption
- ✓ Full control via TRx Centralized Management Software Platform
- ✓ Configurable chroma sampling with support for 4:4:4 and 4:2:0
- ✓ Ultra-low latency between encoder and PAK destinations
- ✓ Extend video, audio, keyboard, and mouse.
- ✓ Fully compatible with PAK Video Wall and KVM nodes



# VuStream 350 Technical Specifications

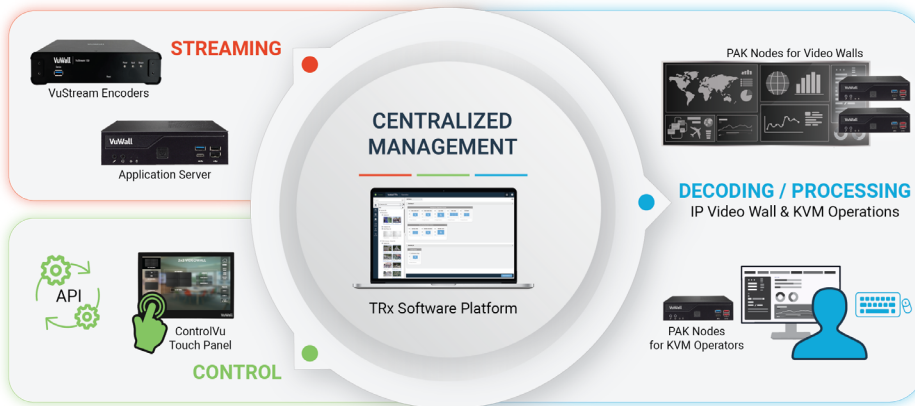
Product Name	VuStream 350
Part Number	VuStream-350
Hardware	
Cooling	Fanless: passive cooling
Dimensions	140 x 144 x 30mm (WxDxH) 5.51 x 5.67 x 1.18" (WxDxH)
Weight	0.65kg (1.42lbs)
Power Supply	Single, auto-sensing power with locking cord, 100-240 Volt AC 50-60Hz
Power Consumption	12.5W/20W max/operating
Environmental	Operating temperature/humidity: 0–55 °C / 20-80% RH Storage temperature/humidity: -20–80 °C / 10-90% RH
Warranty	3 Years
Network Interface	
Connection and Standard	1x RJ45, 1GbE
IP Version	IPv4 and IPv6
Distribution Method	Multicast
IP Addressing	Static IP and DHCP
Input / Output	
Captured Data	Video, audio and USB-HID
Video Input	1x HDMI with audio support
Video Output/Pass-Through	1x HDMI with audio support
Supported Capture Resolution	1024x768 @ 60Hz, 1280x720 @ 60Hz, 1280x1024 @ 60Hz, 1360x768 @ 60Hz, 1400x1050 @ 60Hz, 1440x900 @ 60Hz, 1600x1200 @ 60Hz, 1920x1080 @ 60Hz, 1920x1200 @ 60Hz, 1680x1050 @ 60Hz, 2560x1440 @ 60Hz, 2560x1600 @ 60Hz, 3840x2160 @ 30Hz, 4096x2160 @ 30Hz
Audio Input/Output	via HDMI
USB Connectors	2x USB (local keyboard/mouse) + 1x USB Type B (source)
Encoding	
Format (Codec)	Proprietary and secure. Compatible with PAK 20 & 40
Streaming Resolution	Up to 4096x2160 4:2:0 or 1920x1200 4:4:4
Frame Rate	Adaptive - Up to 60 Hz - Depending on actual motion & content of the sources
Bit Rate	Adaptive - Up to 100 Mbps per stream - Depending on actual motion & content of the sources
Latency	Ultra-low latency
Encryption	AES-256 bit
Decoding	
Supported Device	PAK 20 & 40 Video Wall & KVM Nodes
Software	
Management	VuWall's TRx Centralized Management Software



# The VuWall Ecosystem

## Unified Visualization & Video Wall Control

The VuWall ecosystem of interoperable products is built on a unique standards-based architecture that provides the most effective distribution of visual information, from any source to any display throughout organizations.



At the center of the ecosystem is the TRx Centralized Management Platform. TRx bridges AV, IT and IP systems ensuring interoperability and ease of use, simplifying AV-over-IP deployments, thus reducing deployment time and integration risk.

## Video Wall Management & KVM Operations Made Simple

### Any Source. Any Display. One Platform.



**TRx**  
Centralized Management



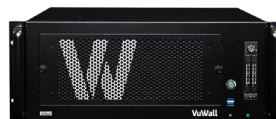
**PAK**  
Video Wall & KVM Nodes



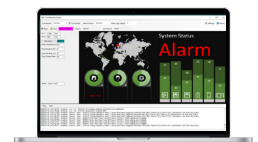
**VuStream**  
Encoders



**ControlVu**  
Touch Panel



**VuScope**  
Custom Video Wall Controllers



**Enhancements**  
More Interoperable Products

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