

## VuStream Encoders & Multi-View Decoders

### Delivering high quality video streams across your network

VuStream™ series of encoders and decoders include a range of appliances available in various form factors, resolutions, and performance features. VuStream appliances are compatible with PAK video wall nodes, VuScape controllers, 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 decoders 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, SDVoE, 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



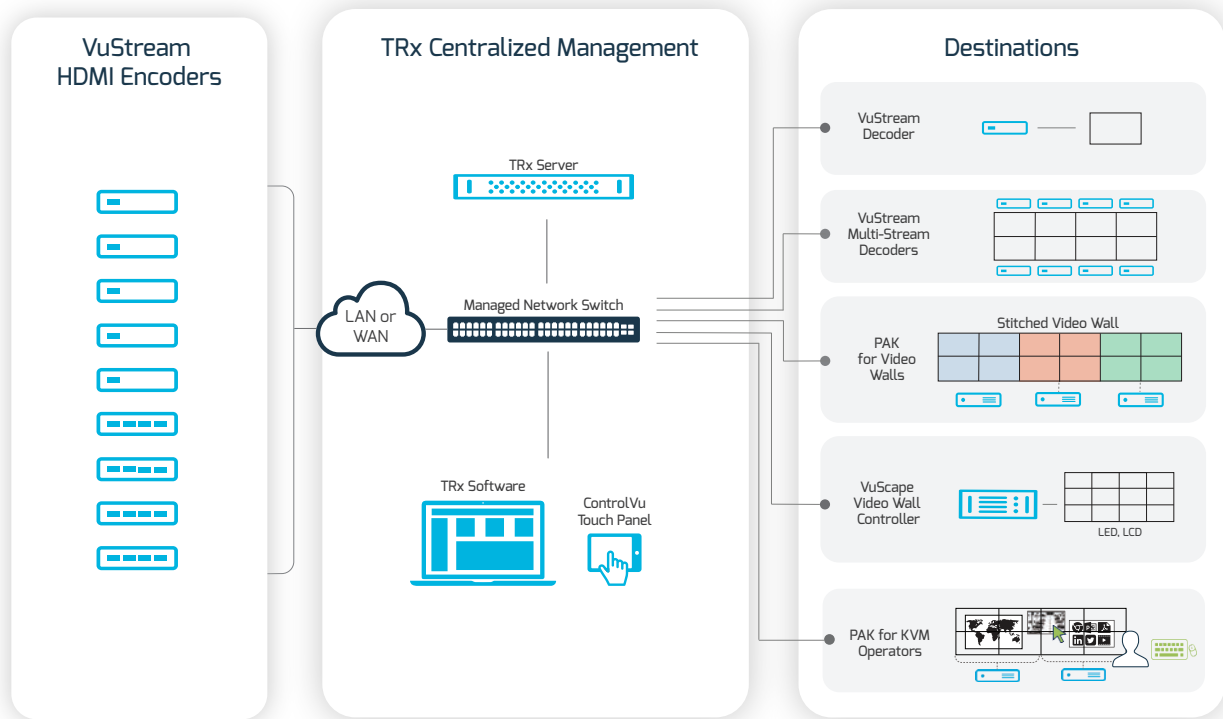
CONTENT MANAGEMENT & DISTRIBUTION

#### Classrooms & Auditoriums



PRESENTATION & COLLABORATION

# VuStream Workflow Example



## Selecting the Right VuStream Solution



VuStream	150	200	320/340	350	550
MAX RESOLUTION	3840x2160@60Hz	4096x2160@60Hz	3840x2160@60Hz	4096x2160@30Hz or 1920x1200@60Hz	4096x2160@60Hz
ENCODING QUALITY	4:2:0 or 4:2:2	Up to 4:4:4	4:4:4	4:2:0 or 4:4:4	Up to 4:4:4
FORMAT	H.264	H.264	H.264	Proprietary	SDVoE
ENCRYPTION	N/A	N/A	AES-128 bit	AES-256 bit	AES-128 bit
NETWORK	1 Gb	1 Gb	1 Gb	1 Gb	10 Gb
IP KVM	N/A	N/A	USB	USB	N/A

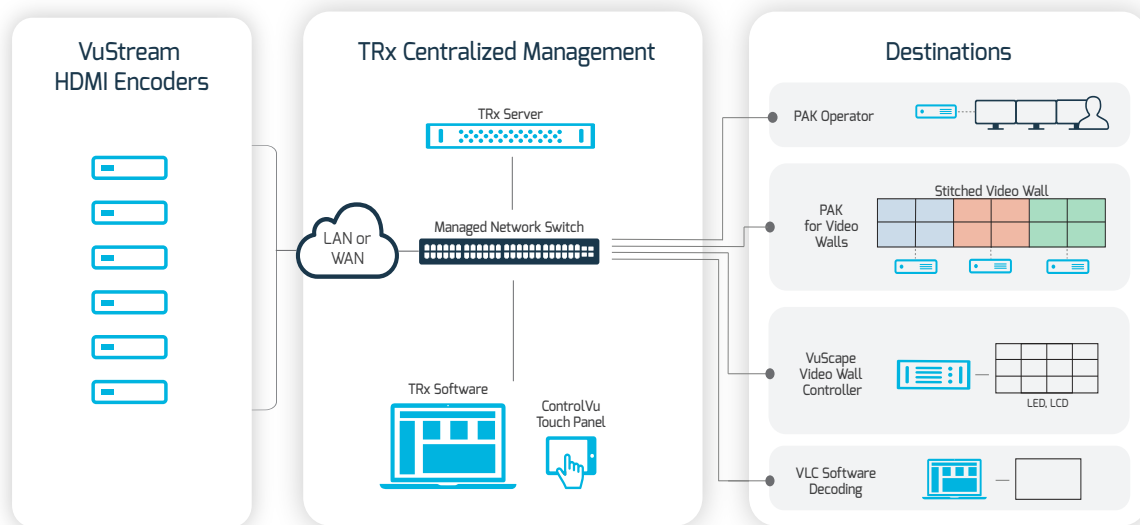
## VuStream 150 Encoder

### 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

<b>Product Name</b>	<b>VuStream 150</b>
Part Number	VuStream-150-3
<b>Hardware</b>	
Network	1 x 1 Gb/s LAN – PoE – 802.3af
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, 20W or PoE
Rackmount	Rackmount Kit Sold Separately – Part Number: VuStream-150-3-1U-Rack-Mounting-Kit
Warranty	3 Years
<b>Inputs / Outputs</b>	
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)
<b>Encoding</b>	
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, REST-API

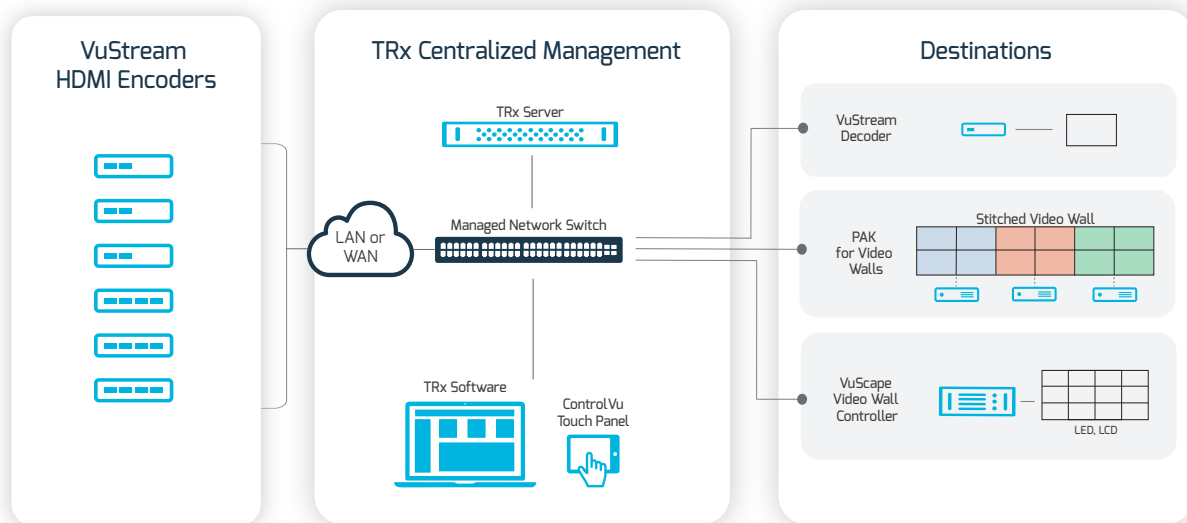
## VuStream E220-2 & E240-2 Encoders

### 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 VuScape 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
<b>Hardware</b>		
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	
<b>Inputs / Outputs</b>		
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
<b>Encoding</b>		
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

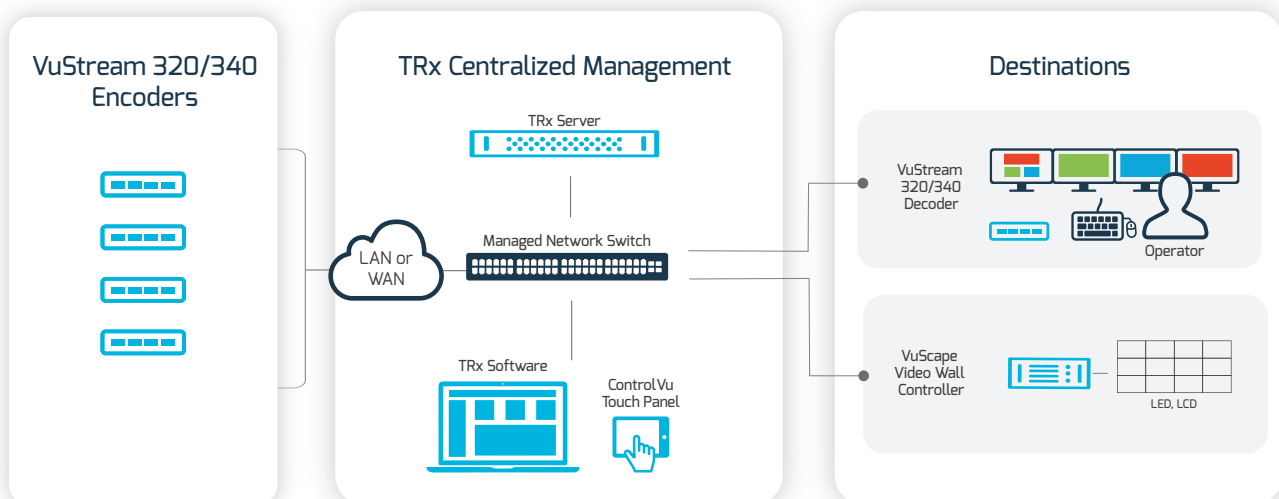
## VuStream 320 & 340 Encoders/Decoders

### Fully Integrated IP KVM Solution

The VuStream 320 & 340 is an IP KVM encoder and decoder solution that delivers 3840x2160@60Hz 4:4:4 UHD performance and quad-monitor capabilities over standard Gigabit Ethernet at unprecedented low bitrates.



VuStream 320 & 340 can be configured as a point-to-point or as a networked KVM matrix delivering multiple video, keyboard, mouse, USB and audio signals using a single fiber or copper cable. It works with standard network switches to deliver a scalable IP KVM matrix solution. VuStream 320 & 340 is also compatible with VuWall's VuScape Series 2 Video Wall Controllers to display content directly on video walls without requiring additional equipment.



## Features

- ✓ Full IP-based KVM encoder and decoder solution
- ✓ Dual or Quad encoders and decoders
- ✓ Extend signals up to 3840x2160 @ 60Hz at a very low bitrate with very high quality in 4:4:4
- ✓ Standard 1G Ethernet network operation
- ✓ Easy configuration of a scalable KVM matrix over IP with unicast and multicast support
- ✓ View and control multiple sources simultaneously and work more efficiently on one station; take control of a remote source easily by moving the mouse to the target source
- ✓ Streams can be directly decoded on any VuScape Series 2 controller
- ✓ Full control via TRx management platform

# VuStream 320 & 340 Technical Specifications

Product Name	VuStream E320	VuStream E340	VuStream D320	VuStream D340
Part Number	VuStream E320	VuStream E340	VuStream D320	VuStream D340
<b>Hardware</b>				
Network	1x 1Gb/s LAN or 1x SFP cage - (single-mode transceiver, sold separately) Unicast - Multicast Network			
Dimensions	216.6 x 89 x 42.6mm (WxDxH) 8.5 x 3.5 x 1.67" (WxDxH)			
Power Supply	100-240V AC In, 12VDC Out, 15W			
Warranty	3 Years			
<b>Inputs / Outputs</b>				
Video	2x DP with audio support	4x DP with audio support	2x DP with audio support	4x DP with audio support
Audio	Line-In/Out, Audio 3.5mm or over DP			
Maximum Resolution	2x 1920x1200 @ 60Hz 1x 2560x1600 @ 60Hz	1x 3840x2160 @ 60Hz 2x 3840x2160 @ 30Hz 3x 1920x1200 @ 60Hz 4x 1920x1080 @ 60Hz 4x 1920x1200 @ 50Hz 2x 2560x1600 @ 60Hz	2x 1920x1200 @ 60Hz 1x 2560x1600 @ 60Hz	1x 3840x2160 @ 60Hz 2x 3840x2160 @ 30Hz 3x 1920x1200 @ 60Hz 4x 1920x1080 @ 60Hz 4x 1920x1200 @ 50Hz 2x 2560x1600 @ 60Hz
<b>Encoding / Decoding / Control</b>				
Color Format	4:4:4			
USB	1x USB 2.0 Type B	1x USB 2.0 Type B	4x USB 2.0 Type A	6x USB 2.0 Type A
KVM Modes	Point-to-point Point-to-multipoint Multi-source control Multiview			
Control	OSD-menu or shortcuts			
Management	Control via TRx software			



VuStream E320 Encoder



VuStream D320 Decoder



VuStream E340 Encoder

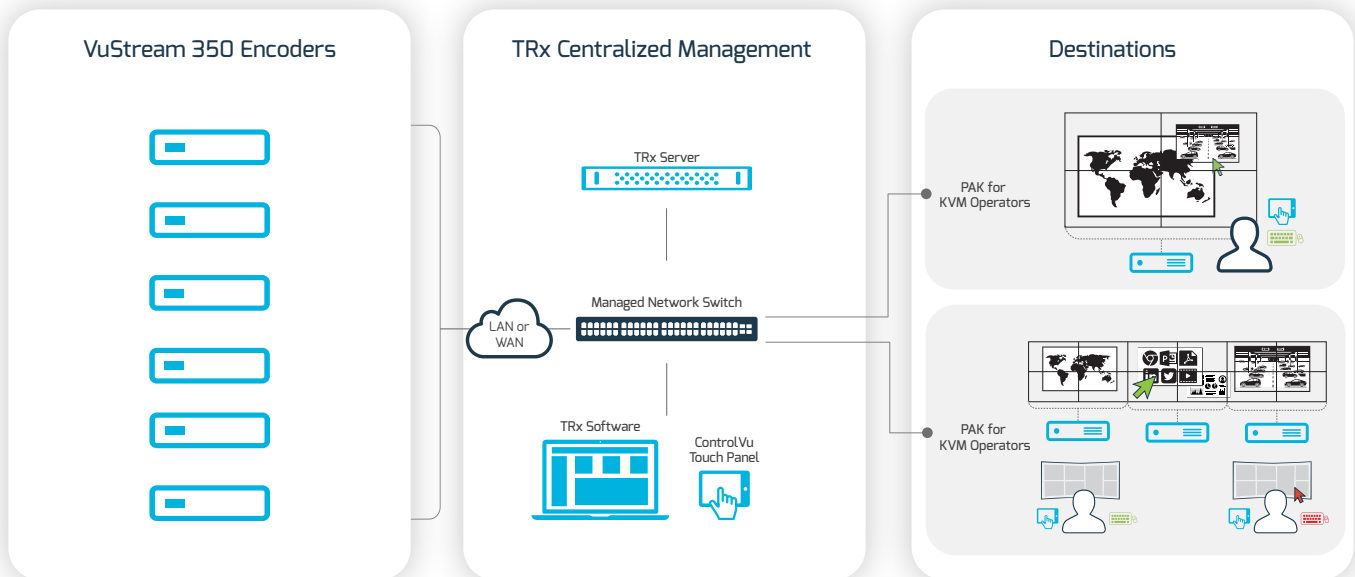


VuStream D340 Decoder



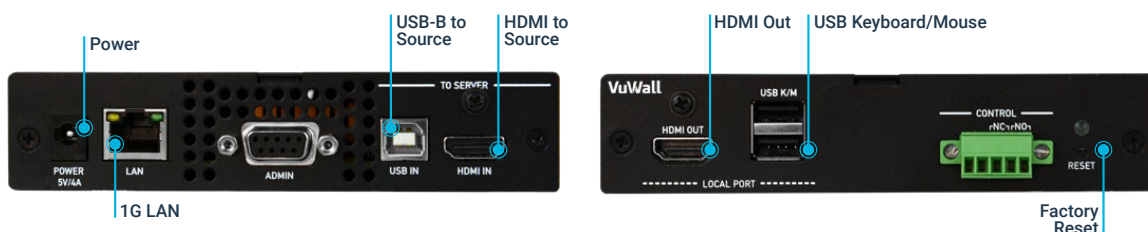
## VuStream 350 IP KVM Encoder

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

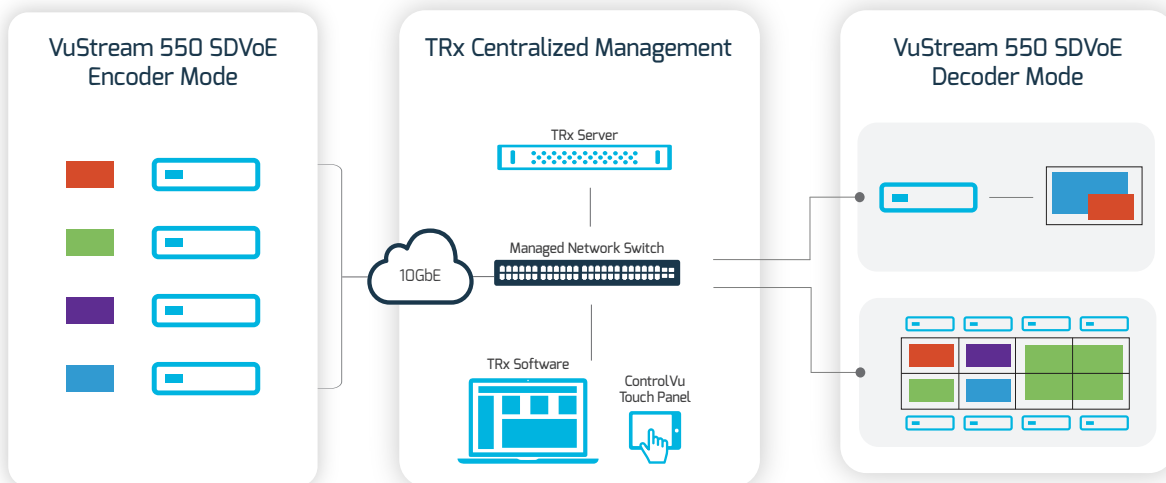
<b>Product Name</b>	<b>VuStream 350</b>
Part Number	VuStream-350
<b>Hardware</b>	
Cooling	Fanless: passive cooling
Dimensions	140 x 144 x 30mm (WxDxH) 5.51 x 5.67 x 1.18" (WxDxH)
Weight	0.65kg (1.42lbs)
Power Supply	Single, auto-sensing power with locking cord, 100-240 Volt AC 50-60Hz
Power Consumption	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
<b>Network Interface</b>	
Connection and Standard	1x RJ45, 1GbE
IP Version	IPv4 and IPv6
Distribution Method	Multicast
IP Addressing	Static IP and DHCP
<b>Input / Output</b>	
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)
<b>Encoding</b>	
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
<b>Decoding</b>	
Supported Device	PAK 20 & 40 Video Wall & KVM Nodes
<b>Software</b>	
Management	VuWall's TRx Centralized Management Software

## VuStream 550 All-in-One SDVoE Encoder/Decoder



The VuStream 550 all-in-one compact appliance can be used as an SDVoE encoder or decoder, for fiber or copper infrastructures. It is designed for distributing 4K60 video and audio over standard 10Gb IP network switches with no latency. The VuStream 550 provides an ultra-scalable, easy to deploy, highly reliable solution, providing incredible flexibility in system design and workflows.

The VuStream 550 is ideal for projects where quality and latency are paramount. In combination with the VuWall TRx centralized management platform, this solution simplifies the management and deployment of devices, saving system integrators time and money.



## Features

- ✓ Distribute 4K60 4:4:4 digital video over standard 10G networks
- ✓ SDVoE™ encoder/decoder with no latency
- ✓ 128-bit AES encryption
- ✓ Compact and fanless design with encoding & decoding, fiber & copper in one device
- ✓ Power over Ethernet (PoE 802.3at)
- ✓ SFP plug connection for fiber, bi-directional IR, RS-232, and Ethernet extension.
- ✓ HDMI with HDCP 2.2 support
- ✓ Supports Wall Mode, Multiview Mode
- ✓ Support for USB routing
- ✓ Compatible with the TRx centralized management software to configure and manage appliances



VuStream 550 Front



VuStream 550 Back

## VuStream 550 Technical Specifications

<b>Product Name</b>	<b>VuStream 550</b>
Part Number	VuStream-550-2
<b>Hardware</b>	
Ethernet Network	1x 10Gb/s LAN with RJ45 and PoE (802.3at) bi-directional port
Fiber Network	1x SFP+ 10GB/s (SFP+ plug not included) bi-directional port
Transmission Distance	Over CAT6a up to 100m or up to 300m over multimode fiber or 30Km over single mode fiber
Chassis	Compact and fanless chassis
Dimensions	190 x 107.1 x 40mm (WxDxH) 7.48 x 4.22 x 1.575" (WxDxH)
Weight	640g   1.4lbs
Power Supply	100-240V AC In, 12VDC Out, 18W
Warranty	3 years
<b>Inputs / Outputs</b>	
Video Input	1x HDMI (type A)
Video Output	1x HDMI (type A) Used also as loopthrough in encoder mode
Video Format	YUV 4:4:4 including HDR
Max. Capture Resolution	4096x2160 @ 60HZ
HDCP Compliance	HDCP 2.2
Audio Inputs (Digital)	HDMI LPCM 2.0/5.1/7.1
Audio Inputs (Analog)	Analog (3.5mm)
I/O Ports	1x Ethernet (RJ-45) 1x RS-232 (3-pin terminal block) 1x USB (miniUSB) 1x USB (type B) 2x USB 2.0 (type A)
USB / KVM	Through USB 2.0 (HID capable)
<b>Encoding/Decoding</b>	
Streaming Protocol	SDVoE (IP streaming over 10G network with no latency)
Compression	Uncompressed up to 10Gb/s on higher data rates minimal lossless compression ratio
Encryption	End-to-end AES 128bit encryption
Modes	The device can be used as an encoder or decoder (configurable) and in fiber or copper mode (configurable)
Scaling and Cropping	Upscaling, downscaling, cropping, and auto-scaling for seamless switching and fixed resolutions
<b>Features</b>	
Basic Configuration	Configuration via DIP switches on appliance
IP Matrix Mode	Switch any source from an encoder to a decoder
IP Video Wall Mode	Create video walls and simultaneously display multiple sources or stretched sources over video walls
IP Multiview Mode	Simultaneously display multiple sources through a single decoder
Configuration / API	TRx Software, REST-API

# 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 & AV Distribution Made Simple

### From Any Source to Any Display



**TRx**  
Centralized Management



**PAK**  
Video Wall & KVM Nodes



**VuStream**  
Encoders & Decoders



**ControlVu**  
Touch Panel



**VuScape**  
Custom Video Wall Controllers



**Enhancements**  
More Interoperable Products

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