VuWall

Datasheet

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. All VuStream appliances are compatible with VuScape controllers and can be centrally configured and managed by the TRx centralized management 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
Built on an open architecture. Adheres to SDVoE, NDI, SRT and H.264/H.265 standards.

VuStream Applications

Control Rooms

VIDEO WALL CONTROL & KVM

Corporate Workspaces

MULTI-SOURCE VISUALIZATION

Experience Centers

VERSATILE DISPLAY MANAGEMENT

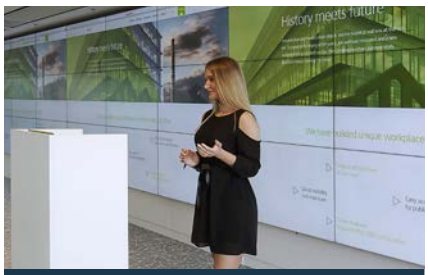
Crisis Rooms

UNIFIED VISUALIZATION

Lobby Signage

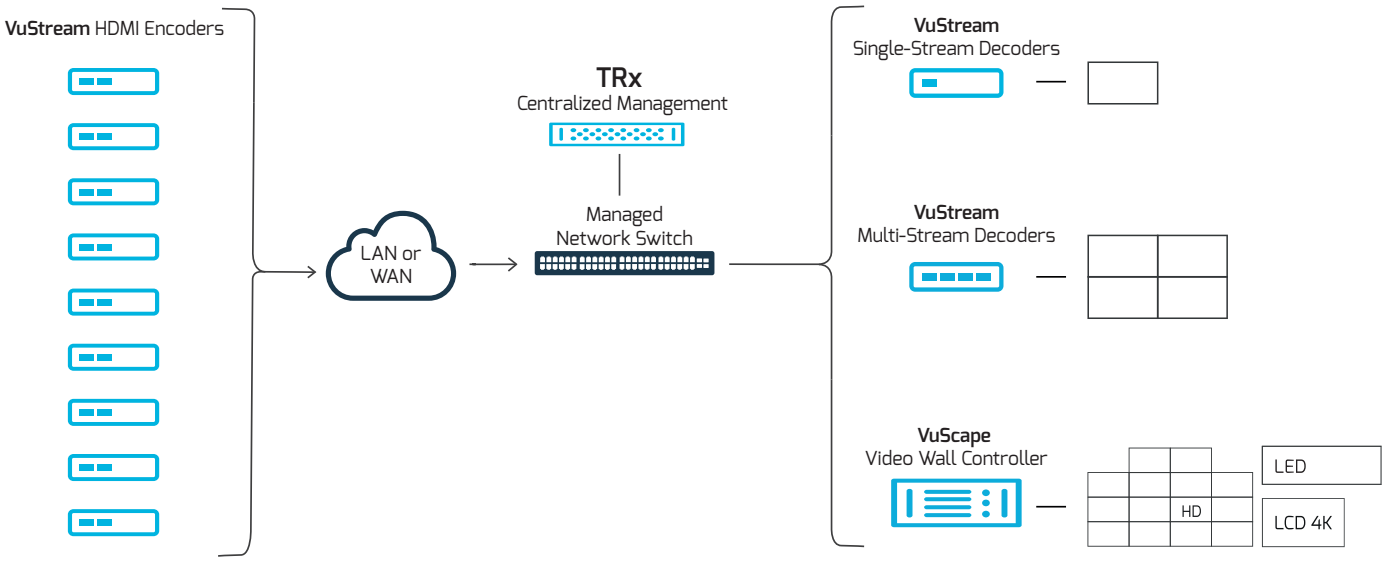
CONTENT MANAGEMENT & DISTRIBUTION

Classrooms & Auditoriums



PRESENTATION & COLLABORATION

VuStream Workflow Example



Selecting the Right VuStream Solution

VuStream	150	200	300	510
IDEAL FOR	Single stream encoding in FHD & UHD	Single or multi-stream encoding & decoding	Multi-stream encoding & decoding with UHD signals up to 4:4:4 and low latency	High performance streaming with highest quality 4K up to 4:4:4 and virtually no latency
MAX RESOLUTION	3840x2160@60Hz	4096x2160@60Hz	3840x2160@60Hz	4096x2160@60Hz
QUALITY	4:2:0	Up to 4:4:4	4:4:4	Up to 4:4:4
FORMAT	H.264 & H.265	H.264	H.264	SDVoE
NETWORK	1 Gb	1 Gb	1 Gb	10 Gb
IP-KVM	-	-	USB	-

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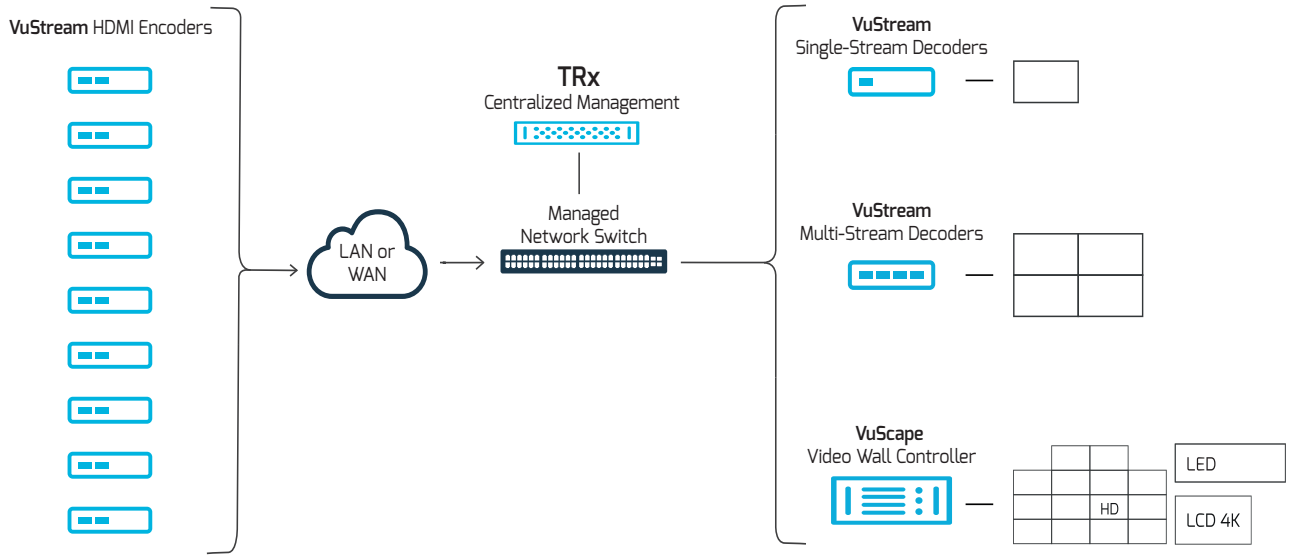
VuStream 150 Encoder/Decoder

H.264/H.265 HDMI 2.0 Video with PoE and NDI®|HX

The VuStream 150 appliance can be used as an encoder or a decoder. It can transmit HDMI 2.0 signals up to 3840x2160@60Hz resolution over standard networks using H.264, H.265 and the NDI|HX protocol. Streams can be sent over unicast or multicast to a VuStream 150 decoder, a VuScape controller decoding cards or to 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 hardware architecture for interoperability, excellent I/O functionality and powerful software features.



Features

- High quality UHD encoding and decoding
- Latest compression with H.264 and H.265 and low-bandwidth for AV-over-IP
- Support of many streaming protocols like RTSP, SRT, HLS, NDI|HX
- Compact and fanless design with encoding and decoding in one device with Power over Ethernet
- HDMI 2.0 with up to 3840x2160 at 60fps and audio
- Ultra-low 60ms latency between encoder and decoder
- Secure end-to-end video distribution with AES 128-bit encryption
- Open interoperability with third-party software decoding (e.g. VLC)
- Compatible with all VuWall solutions

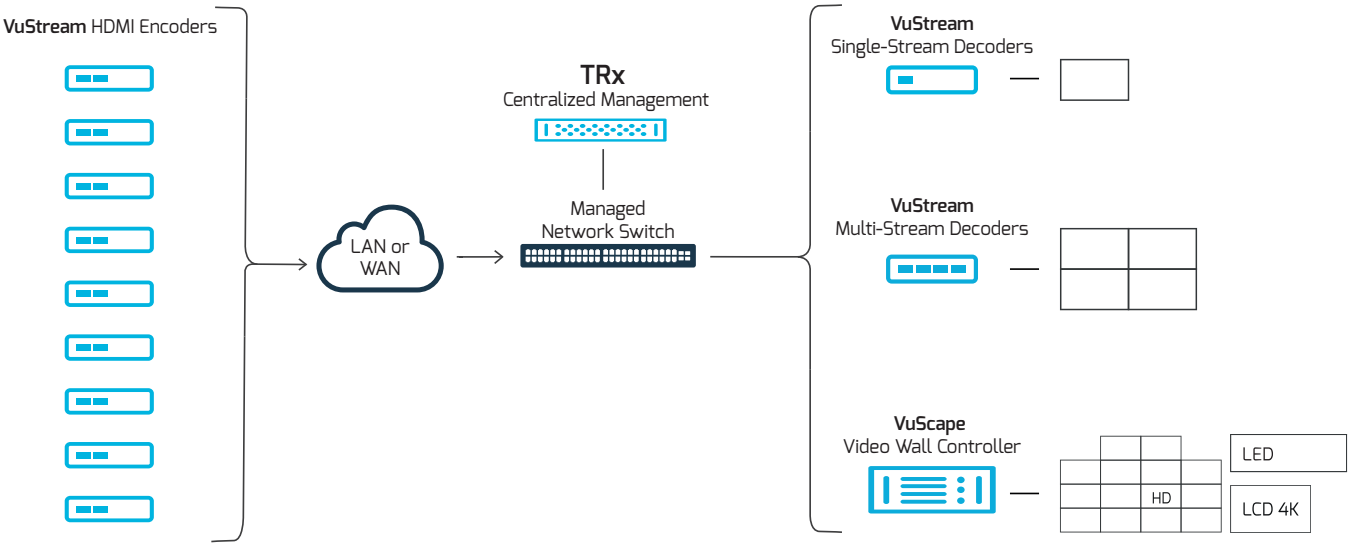
VuStream 150 Technical Specifications

Model	VuStream 150
Hardware	
Network	1 x 1Gb/s LAN - POE - 802.3af Standard
Dimensions	150 mm x 82 mm x 41 mm (WxDxH) (5.9" x 3.26" x1.61")
Power Supply	100-240V AC In, 12VDC Out, 20W or over PoE
Chassis	Compact & Fanless Chassis
Inputs / Outputs	
Video Input	1x HDMI 2.0 (Type A) with audio support
Video Output/Pass-Through	1x HDMI 2.0 (Type A) with audio support and 4:2:0 chroma-subsampling
Maximum Capture Resolution	• 3840x2160 @ 60Hz • 3840x1600 @ 60Hz • 3440x1440 @ 60Hz • 2560x1440 @ 60Hz • 2560x1080 @ 60Hz • 1920x1200 @ 60Hz • 1920x1080 @ 60Hz • 1280x720 @ 60Hz
Audio Input/Output	Analog (3.5mm)
Encoding/Decoding	
Encoding/Decoding	The device can be used as a Encoder or Decoder (Configurable over Web Interface) Up to 3840x2160 with 50/60fps (Adjustable from 5fps to 60fps) Encoder to Decoder Latency 60ms
Profiles	Baseline, Main, High with 4:2:0
Streaming Protocols	RTSP (HTTP/TCP/UDP) , SRT, HLS, NDI®|HX
Formats (Codecs)	Video: H.264 (AVC) H.265 (HEVC) Audio: MPEG-4 AAC-LC
Network Standard	Unicast & multicast
Bandwidth Range	Simultaneous streams Up to max. 64Mbps total (adjustable)
Encryption	End-to-end AES 128bit encryption (Over SRT protocol)
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 D211 Multiformat Decoder

H.264/H.265 HDMI 2.0 Video Decoder

The VuStream D211 is a single-stream, multi-format decoding appliance that displays H.264/H.265 encoded streams, network captured sources such as VNC and TRx Capture Server, HTML5 web pages and local media files. The VuStream D211 decoder has a standard ethernet gigabit network connection and a 4k60 HDMI 2.0 output. With its compact size, it can easily be installed behind a display or video wall and managed with VuWall's TRx centralized management software.



Features

- Supports multiple source formats
- Decode H.264/H.265 streams with audio 4:2:0
- Display network captured sources (VNC & TRx Capture Server)
- Display HTML5 web pages and local media files (videos and images)
- HDMI 2.0 output supporting resolutions up to 4K60
- Decode streams from the VuStream 150, E220, E240 and external RTSP H.264 streams

VuStream D211 Technical Specifications

Model	VuStream D211
CPU	Intel Celeron 4205U Dual Core 1.8GHz
RAM	8GB
Storage	Single 128GB SSD
Network	2x 1GbE LAN ports
Video Output Type and Resolution	1x HDMI 2.0 supporting 3840x2160@60Hz ***or*** 1x DisplayPort 1.4 supporting 3840x2160@60Hz ***or*** 1x HD15 VGA output supporting 1920x1080p60
Decoding Capabilities	1x H.264/H.265 stream 3840x2160@30Hz with 4:2:0 and audio ***or*** 4x H.264/H.265 stream 1920x1080@30Hz with 4:2:0 and audio *or* 1 x HTML website or 1 x VNC/Capture
Streaming Protocols	HTTP, RTSP, RTP, UDP and Unicast/Multicast mode
Formats (Codecs)	H.264 (MPEG-4 Part 10 AVC), MPEG-2 Part 2, MJPEG
Embedded OS	Windows 10 Enterprise LTSC x64
Management	Content management from TRx Management Server
Power Button	1x front panel power button
Power Supply	Included 65W PSU - Input: 100-240VAC Output: 19VDC 3.2A
Chassis	Slim chassis fits 2 on conventional 1U rackmount shelf
Mounting Hardware	VESA 75/100 mounting hardware included
Dimension	165 mm x 20 mm x 3.95 mm (WxDxH) (6.5" x 7.87" x 1.55")
Weight	1.5kg (3.3lbs)

VuStream D211 Decoder

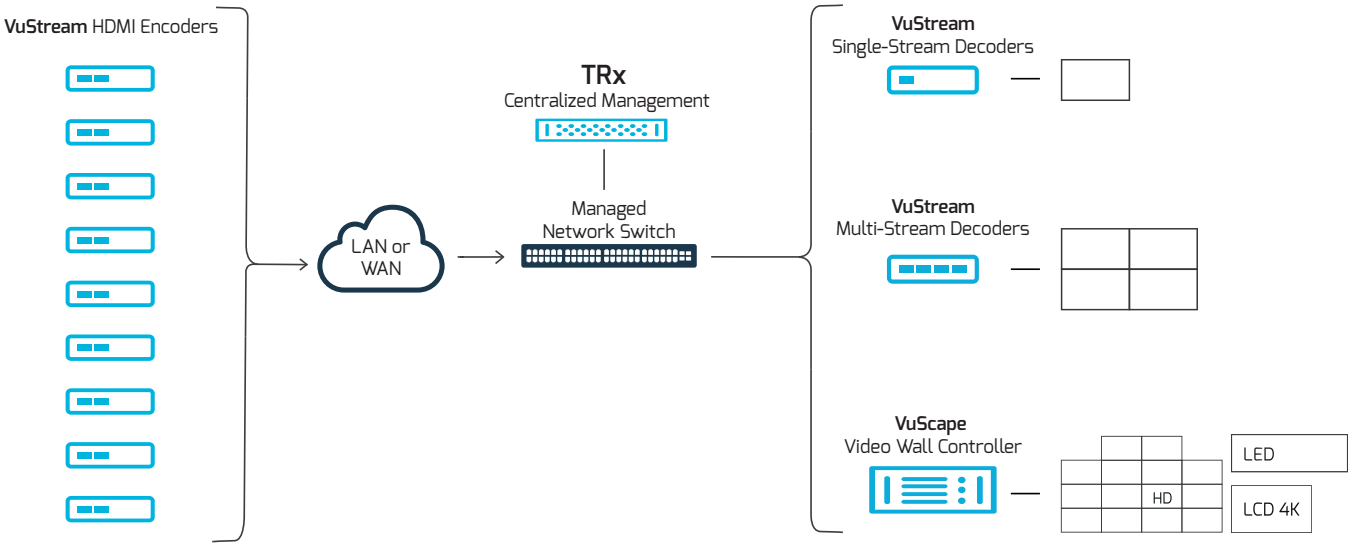
VuStream D211Decoder Rear

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 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

Model	VuStream E220-2	VuStream E240-2
Hardware		
Network	2x 1Gb/s LAN	2x 1Gb/s LAN
Dimensions	217 mm x 189 mm x 43 mm (WxDxH) (8.54" x 7.44" x 1.69")	217 mm x 189 mm x 43 mm (WxDxH) (8.54" x 7.44" x 1.69")
Power Supply	100-240 VAC in, 12 VDC out, 60W	100-240 VAC in, 12 VDC out, 60W
Inputs / Outputs		
Video Input	2x HDMI2.0 (Type A) with audio support Up to 2x 4096x2160@60Hz with 4:4:4	4x HDMI2.0 (Type A) with audio support With 4096x2160@60Hz with 4:4:4
Video Output/Pass-Through	2x HDMI2.0 (Type A) with audio support With 4096x2160@60Hz with 4:4:4	4x HDMI (Type A) with audio support
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 5.1	Up to 5.1
Bandwidth Range	100kbps to 125Mbps (adjustable)	100kbps to 125Mbps (adjustable)

VuStream E220-2/240-2

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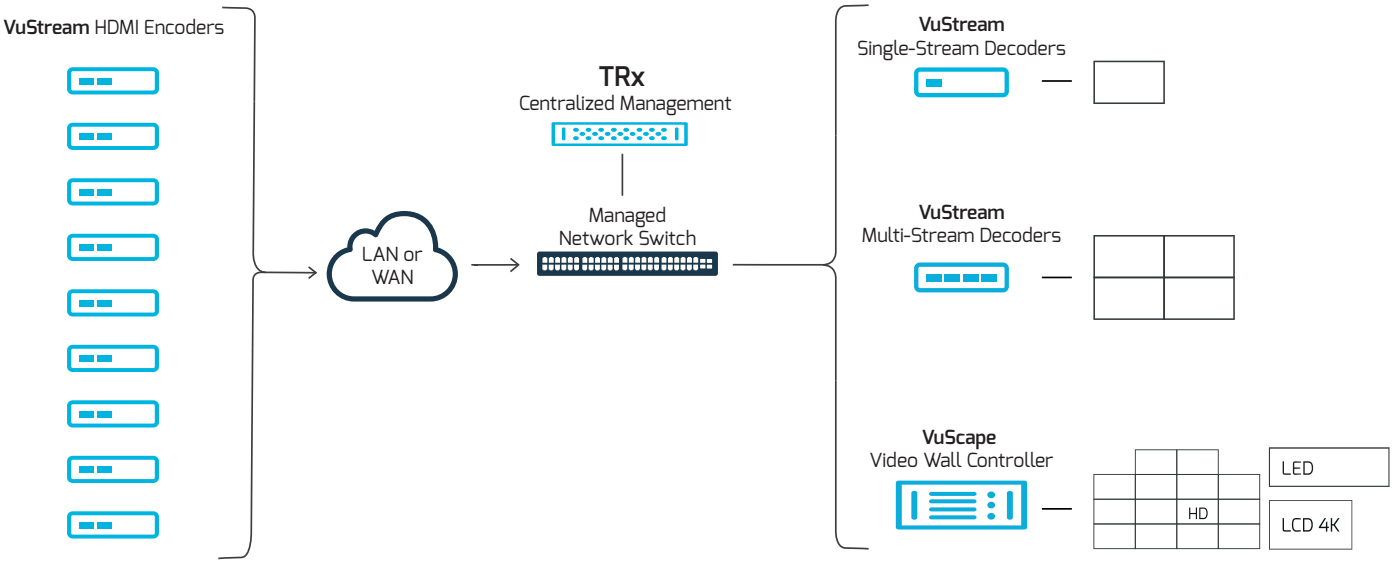
VuStream D240M Decoder

Compact IP Video Wall Processor with Multi-Decoding

The VuStream D240M is a multi-decoder that works as an IP Video Wall processor and can display and decode multiple high-density streams and drive up to four 4K displays. Multiple devices can be combined to drive larger video walls.

This multi-decoder can decode any H.264 stream from encoders, cameras, or other devices up to 4:4:4 color format. The VuStream D240M decoder has a standard ethernet gigabit network connection. With its compact size, it can easily be installed behind a display or video wall and managed with VuWall's TRx centralized management software.



Features

- Multiple decoding up to 16x 1080@30p or 4x 4K@30p streams
- Compatible with any H.264 RTSP stream
- Decoding up to 4:4:4, 4:2:2, 4:2:0 color formats
- One RJ45 1GBit network connection
- Up to 4x Mini-DP outputs at 3840x2160@30Hz
- Multiple devices can be driven together to create large video walls
- Compatible with the VuWall TRx solution to manage and control multiple devices

VuStream D240M Decoder Technical Specifications

Model	VuStream D240M
Hardware	
Network	1x 1Gb/s LAN
Dimensions	152 mm x 262 mm x 54 mm H (WxDxH) (5.98" x 10.31" x 2.12")
Power Supply	100-240 VAC in, 12 VDC out, 60W
Weight	1.15kg (2.53lbs)
Outputs	
Video Output Type	4 x Mini DisplayPort with audio support
Video Output Resolution	4096×2160 @30Hz, 3840×2160 @60Hz*, 3840×2160 @30Hz, 2560×1600 @60Hz
Decoding	
Maximum Decoding	• 2x 3840x2160 @60Hz • 4x 3840x2160 @30Hz • 8x 1920x1080 @60Hz • 16x 1920x1080 @30Hz • 32x 1280x720 @60Hz Numerous SD IP channels
Profiles	Baseline (BP), main (MP), high (HiP), high 10 (Hi10P), high 4:2:2 (Hi422P), high 4:4:4 predictive profile separate plane
Streaming Protocols	RTSP, RTP, RTMP, MPEG-2 TS over UDP Formats, SRT (Codecs)
Formats (Codecs)	H.264/MPEG-4 Part 10 (AVC), Up to Level 5.2
IP Stream Support	unicast, multi-unicast, multicast
Decoder Bitrate	100 kbps to 800 Mbps
Network	
Connection	RJ45, Ethernet 10/100/1000 Base-T, Auto-Detect, Half/Full-Duplex
IP Stream Support	IPv4/IPv6
IP Adresses	DHCP (Default) and Static IP

VuStream D240M Decoder

VuStream D240M Decoder Rear

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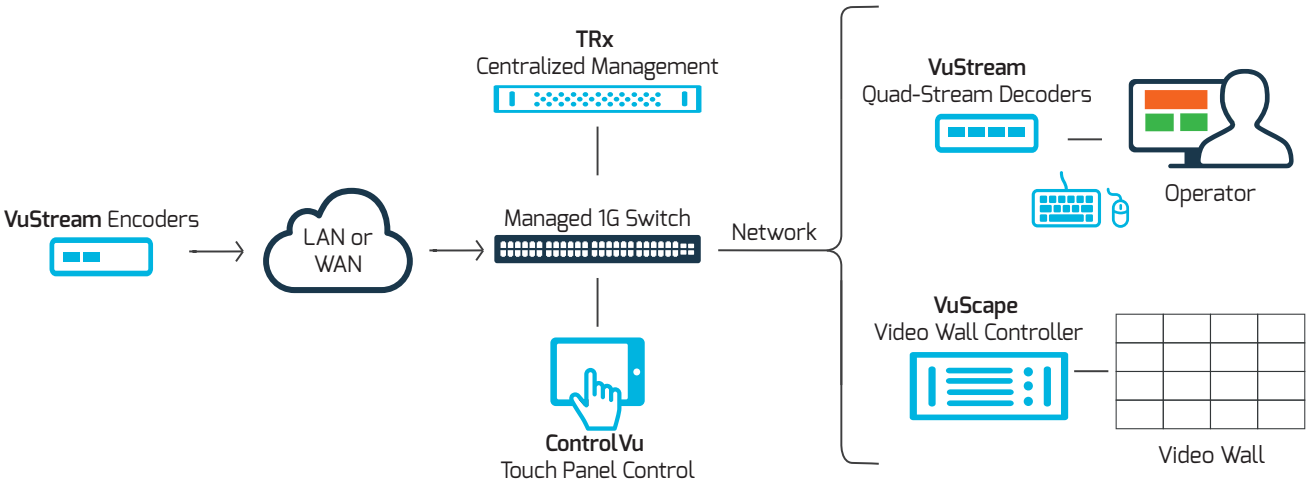
VuStream 300 Series Encoders/Decoders

Fully Integrated IP-KVM Solution

VuStream 300 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 300 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 300 is also compatible with VuWall's VuScape Series 2 Video Wall Controllers and standalone decoders to display content directly on monitors or 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 or standalone decoder
- Full control via TRx management platform

VuStream 300 Series Technical Specifications

Model	VuStream E320	VuStream E340	VuStream D320	VuStream D340
Hardware				
Network	1x 1Gb/s LAN or 1x SFP cage - (single-mode transceiver, sold separately) Unicast - Multicast Network			
Dimensions	216.6 mm x 89 mm x 42.6 mm (WxDxH) (8.5" x 3.5" x 1.67")			
External Power Supply	100-240V AC In, 12VDC Out, 15W			
Inputs / Outputs				
Video	2x DP with audio support	4x DP with audio support	4x DP with audio support	4x DP with audio support
Audio	Line-In/Out, Audio 3.5mm or over DP	Line-In/Out, Audio 3.5mm or over DP	Line-In/Out, Audio 3.5mm or over DP	Line-In/Out, Audio 3.5mm or over DP
Maximum Capture 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
Encoding / Decoding / Control				
Color Format	4:4:4	4:4:4	4:4:4	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 Shortkeys			
Management	Control via TRx software			

VuStream E320 Encoder

VuStream D320 Decoder

VuStream E340 Encoder

VuStream D340 Decoder

VuWall

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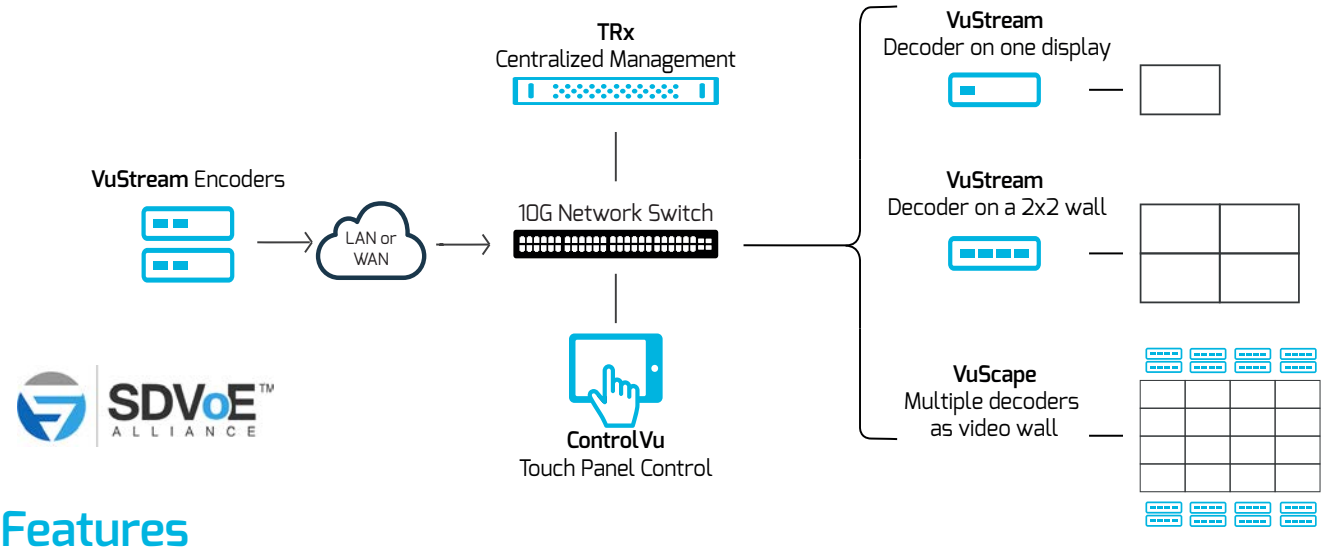
VuStream 510 Encoders & Decoders

The VuStream 510 appliances, based on the SDVoE standard, can be used as encoders or decoders. They are designed for distributing 4K60 video and audio over standard IP network switches with no latency. Using standard 10Gb hardware, the VuStream 510 provides an ultra-scalable, easy to deploy, highly reliable solution.

The VuStream 510 series enables the extension, switching and compositing of real-time signals. Compared to proprietary matrix switches, this technology provides a new and improved way of distributing signals, 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 a significant amount of time and money.



Features

- Distribute 4K60 4:4:4 digital video over standard 10G networks
- HDMI 2.0 with HDCP 2.2 support
- Support digital audio formats: LPCM 7.1CH, Dolby TrueHD, Dolby Digital Plus and DTS HD Master Audio
- Full SDVoE™ compatibility with no latency and 128-bit AES encryption
- Seamless switching between sources
- Compact and fanless design with encoding and decoding in one device with Power over Ethernet (PoE)
- Use as a matrix switcher or create video walls and switch any source on it
- Fully compatible with the TRx centralized management software to configure and manage appliances

VuStream 510-C and VuStream 510-F Front

VuStream 510-C Back

VuStream 510-F Back

VuStream 510 Technical Specifications

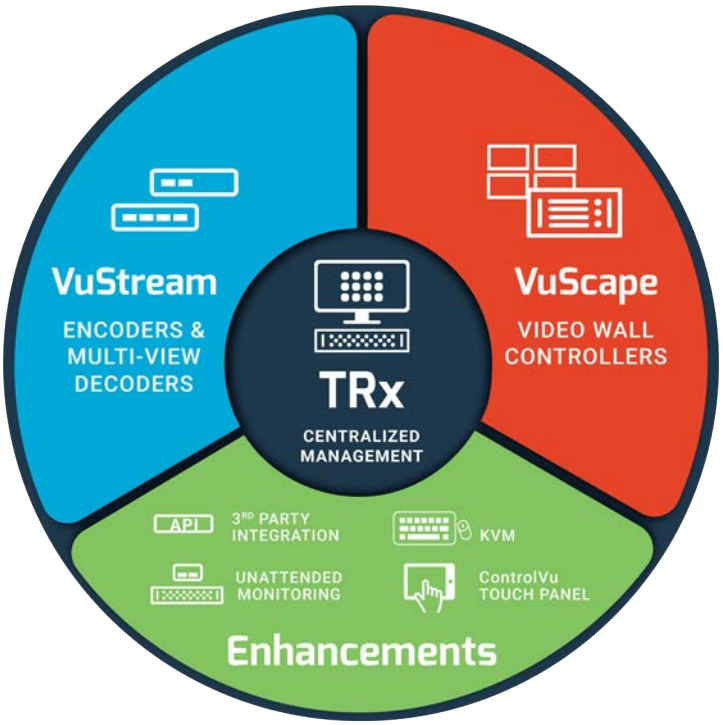
Model	VuStream 510-C (Copper)	VuStream 510-F (Fiber)
Hardware		
Ethernet Network	1x 10Gb/s LAN with RJ45 and PoE (IEEE 802.3ae) bi-directional port	N/A
Fiber Network	N/A	1x SFP+ 10GB/s (SFP+ plug not included) bi-directional port
Transmission distance	Over CAT6a up to 100m	Up to 300m over Multimode Fiber or 30Km over Single Mode Fiber
Chassis	Compact and fanless chassis	
Dimensions	231 mm x 158 mm x 24 mm (WxDxH) (9.1" x6.6" x 1")	
Weight	920g/2lbs	
Power Supply	100-240V AC In, 12VDC Out, 18W	
Inputs / Outputs		
Video Input	1 x HDMI 2.0 (type A) or 1x DP1.2 (female) Configurable as Follow Mode or Fixed Mode	
Video Output	1 x HDMI 2.0 (type A) Used also as Loopthrough in Encoder Mode	
Video Format	YUV 4:4:4 including HDR	
Maximum Capture Resolution	4096x2160@60HZ	
HDCP Compliance	HDCP 2.2	
Audio Inputs (Digital)	HDMI, DP or RJ45 LPCM 2.0/5.1/7.1	HDMI, DP or SFP+ LPCM 2.0/5.1/7.1
Audio Inputs (Analog)	Analog (3.5mm)	
I/O Ports	1 Ethernet (RJ-45) 1 IR Extender (3.5mm) 1 IR Blaster (3.5mm) 1 RS-232 (3-pin terminal block) 1 USB (Mini-B) 2 USB(Type A)	
USB / KVM	USB 2.0 and KVM Mode*	
Encoding/Decoding		
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) Transreceiver Mode* - Simultaneous transmission and receive	
Scaling and Cropping	Up and downscaling and cropping, auto scaling for seamless switching and fixed resolutions	
Features		
Basic Configuration	Configuration via buttons with an On-Screen Display (OSD)	
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	
Configuration / API	OSD, TRx Software, REST-API	

*Software support Q2-2022

VuWall Ecosystem Powered by VuTrex™

The VuWall ecosystem of interoperable products is built on a unique hybrid technology, VuTrex™, that provides the most effective distribution of visual information, from any source to any type of display throughout organizations.

VuTrex bridges AV, IT and IP systems with a hybrid and standards-based interoperable approach. VuTrex has set a new industry benchmark within complex AV/IT environments.



POWERED BY VuTrex™

Extend the Power of VuStream

NEED TO PROCESS VIDEO WALL CONTENT?

VuScape
VIDEO WALL CONTROLLERS

NEED TO MANAGE SEVERAL VUSTREAMS?

TRx
CENTRALIZED MANAGEMENT

NEED VIDEO WALL CONTROL AT YOUR FINGERTIPS?

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