

True 4K HDMI over IP Transmitter with PoE / True 4K HDMI over IP Receiver with PoE

VE8962T / VE8962R

Adopting advanced compression technology, the ATEN VE8962 Video over IP Extender consists of a transmitter VE8962T and a receiver VE8962R that can transmit up to 4096 x 2160 @ 60 Hz (4:4:4) HDMI, audio, USB 2.0, IR, RS-232 signals with ultra-low latency via a single Cat 5e/6 or fiber optic cable.

Additionally, the VE8962 features power redundancy with DC in and Power over Ethernet, over IP redundancy with copper cable and fiber optical cable, operation redundancy with user-friendly web GUI, and control commands by control system.

With a built-in scaler, the VE8962 can easily upscale various input resolutions up to 4096 x 2160 @ 60 Hz, giving viewers the best visual quality across all displays. Moreover, the VE8962 is capable of embedding and de-embedding audio, allowing it to be either embedded in the HDMI stream or extracted and delivered separately.

The extender supports multiple ways of controls including pushbuttons, web GUI, RS-232, bi-directional IR, and Telnet/Reslink. The VE8962 also provides users with user-friendly web GUI to customize control rooms over web for contextual and practical usage. The VE8962 supports USB 2.0 compatibility, enabling users to access USB 2.0 peripherals. For additional local input usage, the VE8962R is equipped with local HDMI input and pushbutton for easy port switching.

Engineered to meet today's demands of large scale, multi-display, True 4K signal transmission, the VE8962 supports AV matrix switch and video wall configurations with up to 80 displays, allowing you to design creative video walls, with a combination of horizontal and vertical displays.

With limitless scalability and flexibility, the VE8962 Video over IP Extender can transmit signals from floor to floor with over IP structure via simple installation, making it an ideal and reliable solution for a wide range of environments, such as trade shows, airports, university campuses, conference centers, and shopping centers.



VE8962T



Transmitter



VE8962R



Receiver



Features

Lightweight Compression with Ultra-low Latency

- Extends True 4K HDMI signals over IP up to 100 m point-to-point via a single Cat 5e/6 or up to 10 km via fiber optic cable with ultra-low latency
- Delivers visually lossless high-quality video up to 4096 x 2160 @ 60 Hz (4:4:4)
- Supports HDR 10 with HDCP 2.2/ 2.3 compliant for content protection
- Supports individual stereo audio and HDMI audio formats including LPCM 7.1CH, Dolby True HD, Dolby Digital Plus, and DTS-HD Master Audio
- EDID Expert™ selects the optimum EDID settings for smooth power-up, high-quality display, and the best video resolution across different screens

Multiple Redundant Mechanisms

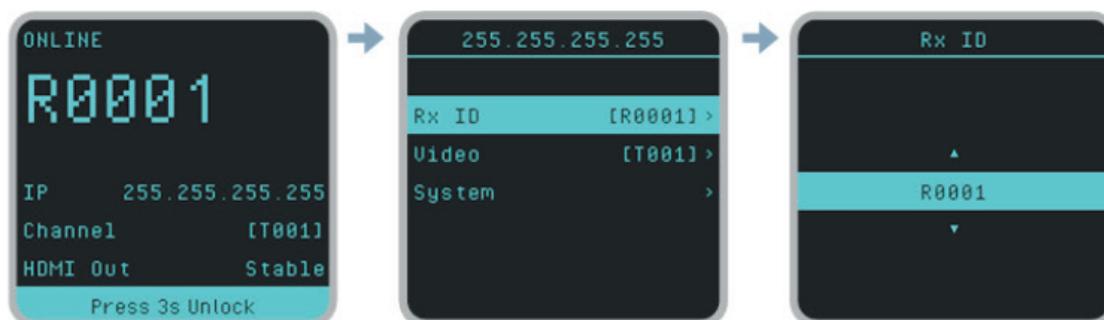
- Power redundancy – with automatic switching between DC Jack and Power over Ethernet (PoE) when both are supplied, compliant with IEEE 802.3at standard
- Over IP redundancy – transmitting the over IP signal through copper or optical fiber cable
- Operation redundancy – user-friendly Web GUI and multiple control methods

Limitless Scalability and Flexibility

- Extends AV connections from a simple point-to-point to a multi-point to multi-point setup via LAN without distance limitations
- Offers multi-functionality in extender, splitter, matrix switch, video wall, and daisy chain applications
- True 4K Scaler – converting input resolutions to optimum display resolutions
- Built-in 8KV / 15KV ESD protection
- Rack-mountable

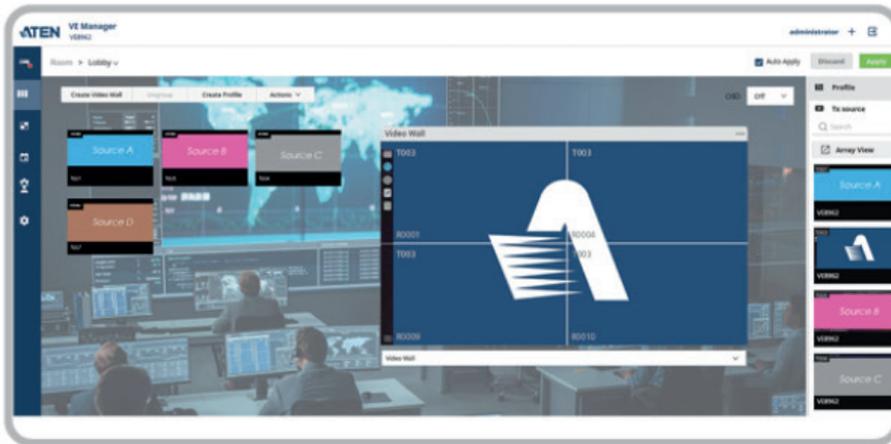
Quick IP Setup

- Simple configuration that requires no extensive IT experience or additional learning
- Assign ID numbers for fast installation, no complex IP settings required
- Effortlessly switches among input sources via ID number of top panel push buttons



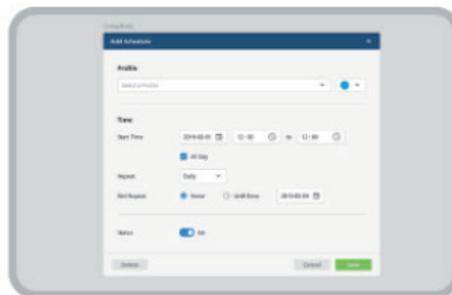
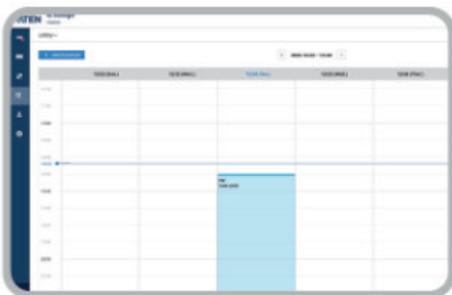
Web GUI-Based Management, No Additional Server PCs or Software Required

- Intuitive web GUI for central management and can work with all major operating systems
- Through the "Add Device" page while logging in for the first time on the web GUI, users can easily search all VE8962 devices
- Operated with imagery and contextualized web GUI, users can import environmental images to intuitively configure and organize control room layouts
- Smooth and clear 720p preview of the source on web GUI



Spontaneous Scheduling Management

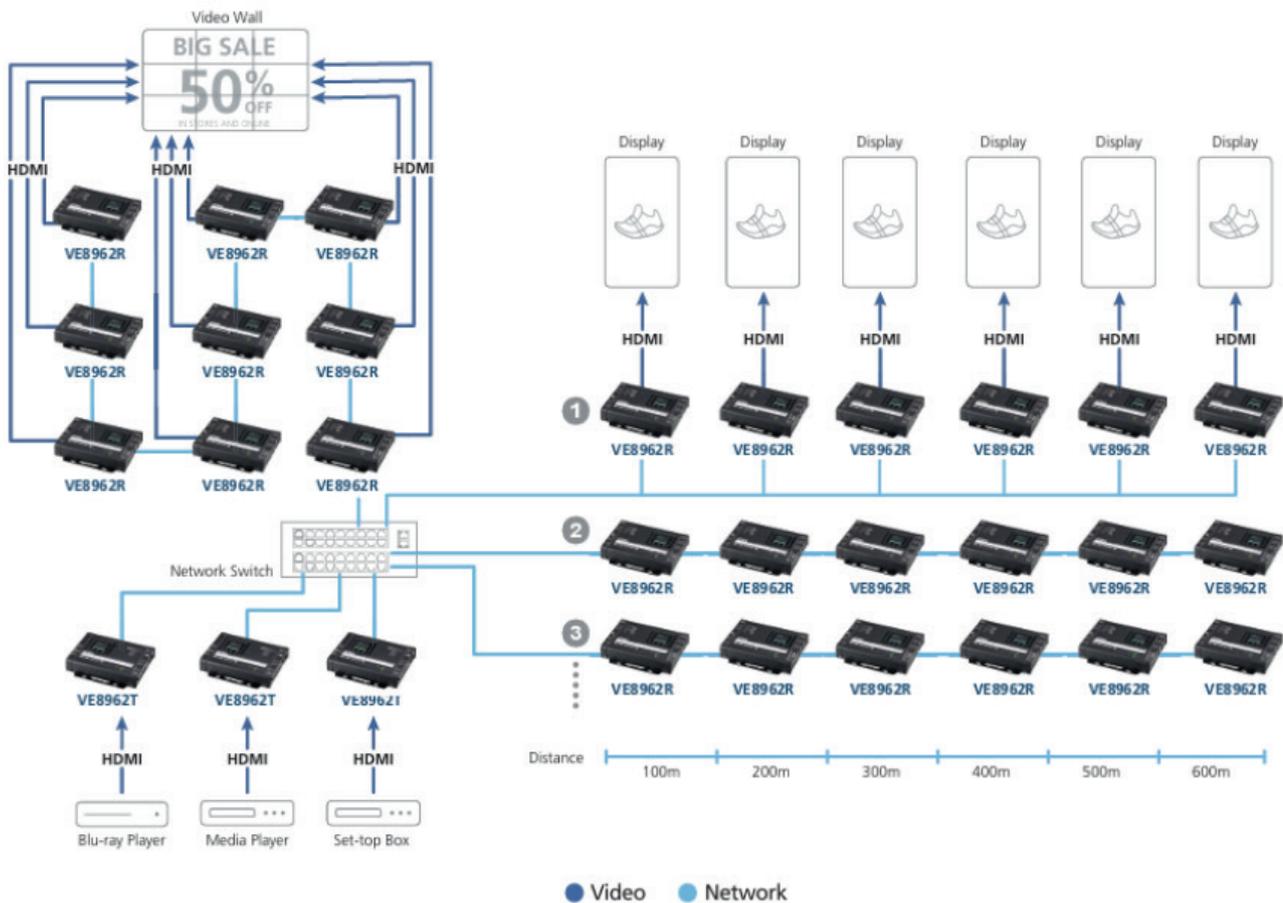
- Offers a user-friendly scheduling management function for users to pre-plan display schedule
- Provides robust and intuitive scheduling management options to help users manage all events in the calendar to as detailed as to setting events to minute intervals
- Integrates all VE8962 units to arrange profiles by grouping individual receivers or video wall
- Multiple profiles can be arranged to play in any order over a selected period of time



Scalable Display Networks with Daisy Chain for Large-Scale Deployments

- Daisy chain for VE8962R up to 30 units*
- Connects multiple displays through a single port to utilize every port of the network switch and maximize their value
- Easily expandable – cabling and system deployment is easy with no huge network switches and fewer cables needed
- Perfect for large-scale deployment covering hundreds of meters through fiber optical cables, such as trade shows, airports, university campuses, conference centers, and shopping centers

Note: Only copper cable supports Daisy chain



Video Wall Support

- Supports up to 8 x 10 video wall (80 displays)
- Supports horizontal or vertical (90° and 270° rotation) display orientation
- Easily switches layout profiles, previews and drag-and-drop video sources via intuitive web GUI
- Supports boundless switching, enabling operators to intuitively switch control from one computer to another by moving the mouse cursor across screens*

Note: To be supported in a future firmware release.

Embedded / De-embedded Audio Support

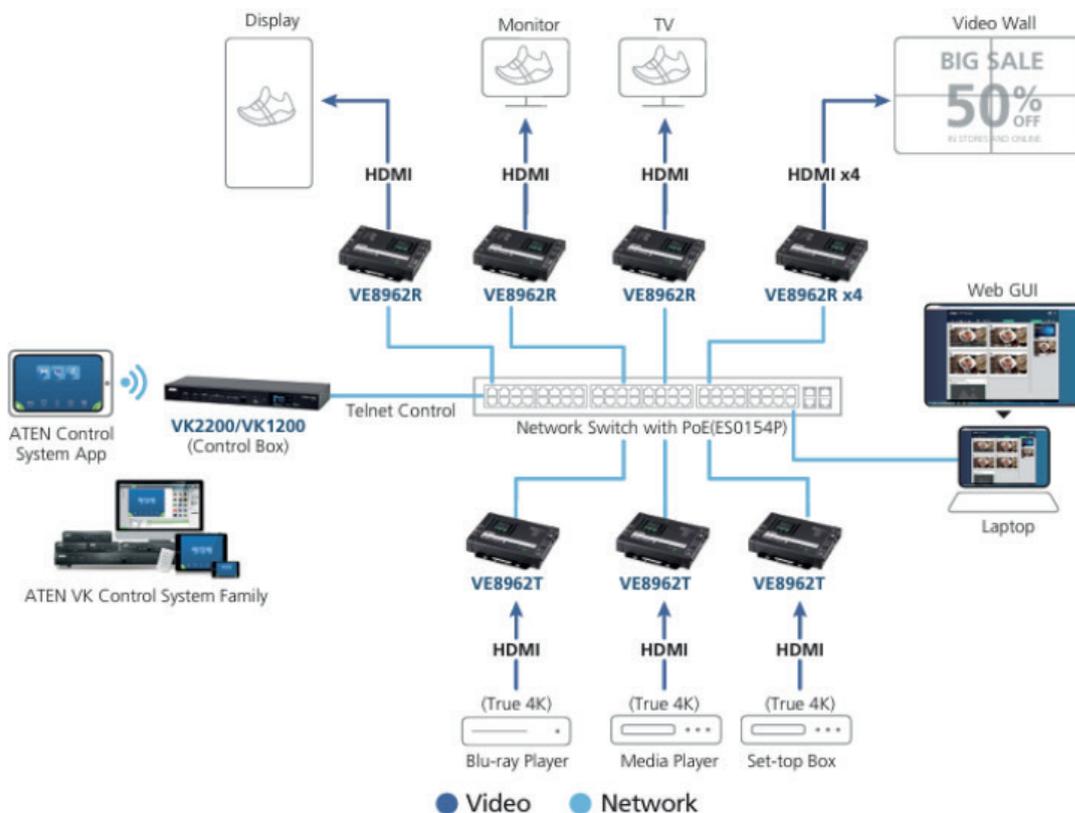
- For transmitters – separate stereo audio signals can be embedded into the HDMI stream
- For receivers – audio streams can be extracted from the HDMI stream and delivered as a separate audio signal
- Supports Audio Matrix – routes audio from selected transmitters to selected receivers, allowing flexible setup based on different unit requirements

Multiple Control Channels

- Local HDMI input – the VE8962R is equipped with local HDMI input for additional local input usage and push button for easy port switching
- LCM display – top-panel LCM display allows for the monitoring of the ID & IP address and device status of the extender
- USB Connectivity – USB port (USB 2.0) allows for connection of devices such as keyboard, mouse, touch screen, flash drive, printer, and other USB peripherals
- Bi-directional IR Channel – IR transmission is processed one way at a time
- RS-232 Channel – bi-directional RS-232 serial port allows for connection of peripherals such as touch screens and barcode scanners
- Supports Telnet / CLI, and SSH for remote control, management, and authorized security bypass

Collaboration with ATEN Control System

- Integrated solution – Compatible with ATEN Control System, allowing users to directly operate VE8962T / VE8962R via CLI, Telnet, RS-232 or Reslink protocol
- Effortless Operation – Simple click to effectively operate VE Manager, TV, projector, source player, and related equipment via touch panel and keypad



Note: VE8962 supports PoE and can be installed in combination with PoE network switches to reduce power cabling and additional power outlets. Before choosing the Network switch and installation, please refer to the Implementation Guide.

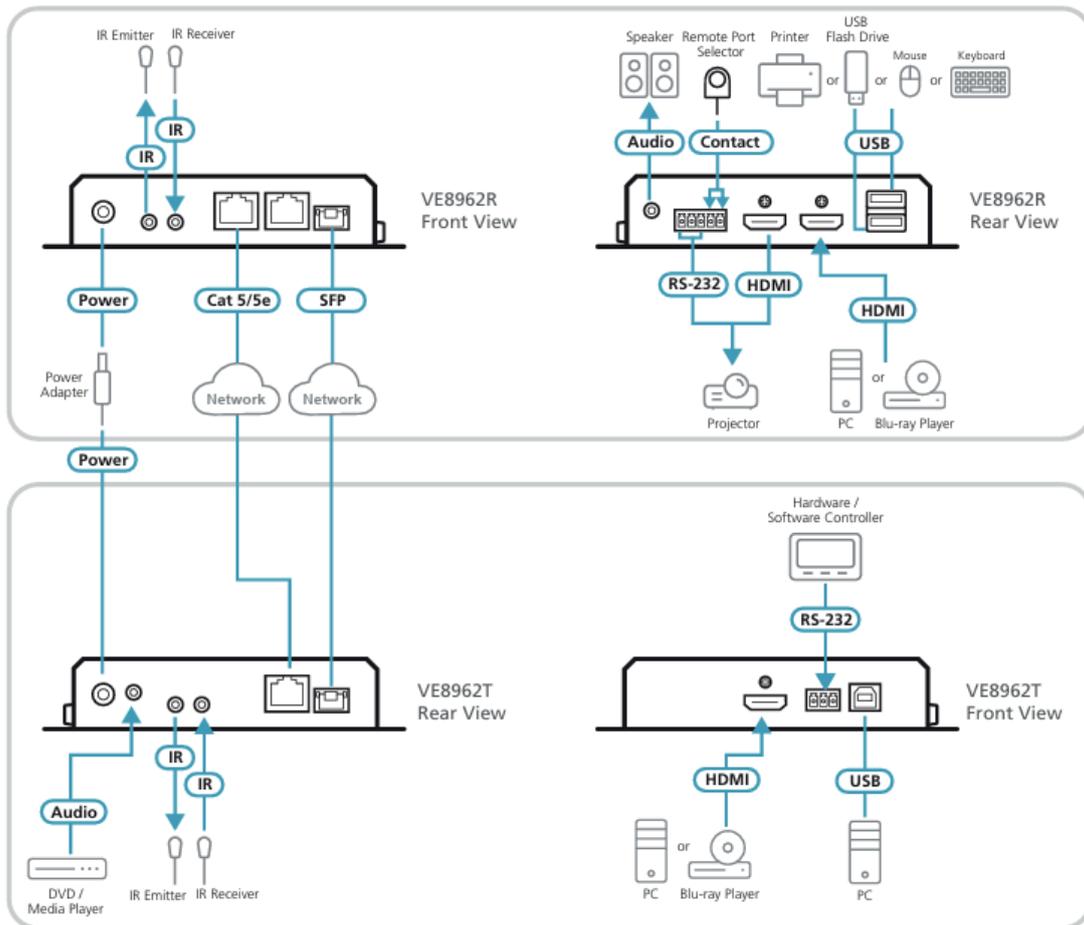
High-Security Protection

- AES-256 encryption for AV streaming in SRTP (Secure Real-time Transport Protocol)
- HTTPS for secure communication

Note: If you experience issues related to your network architecture, please refer to the ATEN HDMI over IP Video Extender System Implementation Guide or contact ATEN representatives for assistance.



Installation Diagram



Specifications

	VE8962R	VE8962T
Video Input		
Interfaces	1 x HDMI Type A Female (Black)	
Impedance	100 Ω	
Max. Distance	5m	
Video Output		
Interfaces	1 x HDMI Type A Female (Black)	N/A
Impedance	100 Ω	N/A
Max. Distance	5m	N/A
Video		
Max. Data Rate	Average: 500 ~ 800Mbps	
Compliance	HDMI (True 4K) HDCP2.3 & HDCP2.2 Compatible	
Max. Resolutions / Distance	Up to True 4K@100m (Cat 5e/6, point to point) *True 4K supported : 4096 x 2160 / 3840 x 2160 @ 60Hz (4:4:4)	
Video Compression	Optimized JPEG2000, proprietary codec	
Latency	~ 1 frame	
Audio		
Input	N/A	1 x HDMI Type-A Female (Black) 1 x Mini Stereo Jack Female (Green)
Output	1 x HDMI Type A Female (Black) 1 x Mini Stereo Jack Female (Green)	N/A
Connectors		
Unit to Unit	2 x RJ-45 Female (x1 with PoE+, x1 with Daisy chain) or 1 x SFP+ socket (SFP+ module excluded)	1 x RJ-45 Female or 1 x SFP+ socket (SFP+ module excluded)
Power	1 x DC Jack (Black) with locking or 1 x RJ-45 (Power Over Ethernet, PoE+)	1 x DC Jack (Black) with locking or 1 x RJ-45 (Power Over Ethernet, PoE+)
Control		
IR Channel	2 x Mini Stereo Jack Female (bi-directional, Black)	
RS-232	Connector: 1 x Terminal Block, 3 pole Baud Rate: 19200, Data Bits:8, Stop Bits:1, no parity and flow control	
USB Channel	2 x USB Type-A Female (Black)	1 x USB Type-B Female (White)
Contact In	Connector: 1x Terminal block, 2pole (Contact IN + GND)	N/A
Pushbuttons		
Operating Mode Selection	3 x Pushbuttons for LCM operation	
LEDs		
Power	1 x DC in LED (Green) 1 x PoE LED (Green)	
Power Consumption	DC5V:9.1W POE:11.38W	DC5V:4.35W POE:5.4W
Environmental		
Operating Temperature	0 – 40 °C	
Storage Temperature	-20 – 60 °C	
Humidity	0 – 80% RH, Non-Condensing	
Physical Properties		
Housing	Metal	
Weight	0.74 kg	0.73 kg
Dimensions (L x W x H) with bracket	17.02 x 14.69 x 3.00 cm	
Dimensions (L x W x H) without bracket	16.60 x 12.49 x 2.90 cm	