

# 4K DisplayPort Single Display KVM over IP Extender

## 4K DisplayPort Single Display KVM over IP Extender with PoE

### KE9950 / KE9952

The KE9950 / KE9952 4K DisplayPort Single Display KVM over IP Extender consists of a high performance IP-based transmitter (KE9950T / KE9952T) that connects to the computer and receiver (KE9950R / KE9952R) that provides console access from a separate location. The KE9950 / KE9952 allows access to a computer system from a remote USB console (USB keyboard, USB mouse, DisplayPort monitor) over an intranet, enabling users to locate computers in a secure and temperature controlled environment, which is isolated from users' workstation.

The KE9950 / KE9952 supports one DisplayPort display at each end, providing video resolutions up to 3840 x 2160 @ 30 Hz (4:4:4) as well as flawless and lossless video compression quality with extremely low latency.

Both KE9950 and KE9952 support connections via an RJ-45 port or a SFP slot. The transmitter and receiver can be connected either directly to each other or via a high-speed network, over a copper-based or fiber-based LAN, ensuring 24/7 availability of remote access to servers. To connect via the SFP slot, the extender supports 1Gbps SFP fiber module<sup>1</sup> expansions, enabling connections via fiber optic network to extend transmission distances up to 10 km.

The KE9950 also provides dual power supplies for redundancy. Meanwhile, the KE9952 features Power over Ethernet (PoE) function, and its power can be supplied through a PoE Network Switch; therefore, eliminating the need for a power adapter and effectively reduces the power configuration cost.

The KE9950 / KE9952 can be set on a desk, mounted on a wall or at the rear of a rack with its space-saving 0U rack-mount design. As an IP-based matrix extender, the KE9950 / KE9952 can be used as a point-to-point / point-to-multipoint / multipoint-to-point / multipoint-to-multipoint extender, or integrated into a KVM over IP Matrix System (multipoint-to-multipoint) when combined with the CCKM, providing more flexible applications in different working environments.

When integrated with the CCKM, the KE9950 / KE9952 supports more advanced features such as boundless switching, "Push" and "Pull", video wall and multi-display setups, and profile scheduling that provide uninterrupted access with quick and easy control tools to use the KE9950 / KE9952 over a network.

More functions include auto detection of all KE Series extenders<sup>2</sup> in the same subnet for the sake of fast installation or configuration, username / password authentication and authorization, and the ability to define different types of connections that can be switched and shared. Security features also provide extra protection, supporting AES encryption for secured data transmissions, while RADIUS, LDAP, AD or remote user authentication provides an added layer of connection security; moreover, with an OSD, RS-232 support, and Auto MDIX, the KE9950 / KE9952 is the most cost-effective and convenient way to get a full digital extension from anywhere on the intranet.

Whether users are monitoring, operating, controlling or extending computer access, the KVM over IP Matrix System is made adaptable, to fit an endless variety of working environments and workstation settings, to provide solutions in traffic management centers, retail surveillance centers, facility situation rooms, command control centers, utilities process control centers, broadcasting distribution monitoring systems, network operations centers (NOC), and many other industries where matrix extending is required.

**Note:**

1. The SFP module (2A-136G / 2A-137G) is sold separately. Contact your ATEN dealer for product information.
2. Refer to [www.aten.com](http://www.aten.com) for a list of the KE Series extenders.

KE9950R / KE9950T Front View



KE9950R / KE9950T Front View



KE9950R / KE9950T Rear View



KE9952R / KE9952T Rear View



## Features

### Advanced Features<sup>1</sup>

- ATEN Matrix Link – allows users instant link transmitters and receivers, and perform real-time port and profile switching on an iPad
- Boundless Switching – simply moves the mouse cursor across screen boundaries to switch between different receivers (Rx)
- Fast Switching – switches between different remote video resolutions on a local display within 0.3 seconds
- “Push” and “Pull” – shares content instantly to / from a single Rx or video wall by just one click
- Video walls – creates multiple video walls with up to 12 x 12 (144 displays max.) in each layout
- Flexible connections – allows multiple extender and matrix connections for multi-display installations and video wall applications
- On-screen Preview (Panel Array™ Mode) – allows users to view the video of up to 36 displays on one screen
- Advanced scheduling – improves efficiency and saves costs by allowing connections to be set based on time and date
- Channel connections allow RX devices to connect to multiple TX devices – to stream video, audio, USB and serial sources independently
- Virtual transmitter – independently streams video, audio, USB, and serial sources from different Tx
- Internal and external authentication support – supports LDAP, Active Directory, RADIUS and TACACS+ external authentications
- Advanced user authorization settings – administrators can set four access modes of permissions on TX devices for collaboration or to avoid interference among users
- Video grouping of up to 4 sets of KE series devices to support Multi-Display applications
- Configurable user and group permissions for access and control of KVM over IP extenders
- Rx access control – users at the Tx local console can enable / disable Rx access by simply pressing a control button<sup>2</sup>

### Note:

1. These advanced functions are supported when the KE transmitters are paired with KE receivers and managed by CCKM.
2. The KVM over IP Access Control Box (2XRT-0015G) is sold separately. Contact your ATEN dealer for product information.

## Hardware

- Supports power / network failover – dual DC jacks for power redundancy and 1 RJ-45 & 1 SFP fiber ports for network failover to ensure constant availability for mission-critical applications
- Supports 1Gbps SFP fiber module expansions up to 10 km<sup>1</sup>
- Advance processor provides lossless and low latency video transmissions up to 3840 x 2160 @ 30 Hz (4:4:4) ; 24-bit color depth
- Audio enabled – supports stereo speakers and microphone
- High speed USB storage transmission support
- Auto-MDIX – automatically detects cable type
- Built-in 8KV / 15KV ESD protection and 2KV surge protection
- Fanless design for silent operations that are energy efficient
- Support 32:9 ultra-wide resolution
- Rack Mountable – Mounting options:
  - 2X-021G Dual Rack Mount Kit
  - 2X-031G Single Rack Mount Kit
- Includes an industrial-grade power adapter – supports operating temperature of 0°C- 50°C to ensure durability and adaptability under harsh environmental conditions

## Note:

1. The SFP module (2A-136G / 2A-137G) is sold separately. Contact your ATEN dealer for product information.

## Management

- Centralized management software – KVM over IP Matrix Manager (CCKM) allows users to easily administrator all KE devices with an intuitive web-based GUI
- Dual console operation – controls the user's system from both the transmitter's and receiver's keyboard, monitor, and mouse consoles
- OSD (On Screen Display) on the Receiver configures both units
- EDID Expert™ – selects optimum EDID settings for smooth power-up and highest quality display
- Four selectable access modes for multiple simultaneous access(Exclusive/Occupy/Share/ View only mode) – administrators can select access modes of permissions on Tx devices to boost collaboration or to avoid interference among users
- Command line interface – administrators can control all KVM over IP extenders via RS-232 or TCP/IP using a CLI or 3rd party application
- RS-232 serial ports – allows users to connect to a serial terminal for TextMenu, CLI, or serial devices such as touch screens and barcode scanners
- Supports Hotkey Commands
- Flashing LED and beeping features help locate and identify devices
- Video Compression Level – allows users to increase / decrease the video quality to adjust for appropriate network bandwidth
- Compatible with all KE devices

## Security

- Dedicated LAN port for KE direct connections – can be isolated from the corporate network
- Secure data transmission – AES 128-bit encryption to secure all data before transmitted over a network and decrypts the data on the receiver
- Supports industry standard Transport Layer Security (TLS) protocol

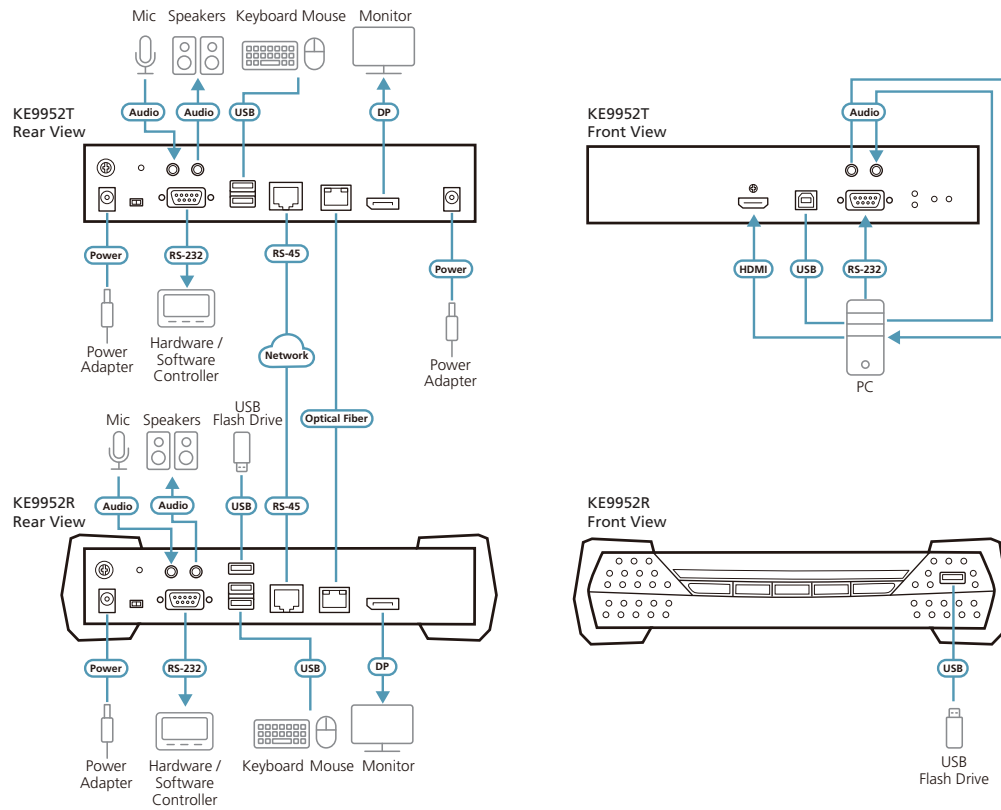
## Virtual Media

- USB storage transmission mode enhances data transmission performance, ideally for file transfers, OS patching, software installations and diagnostic testing
- Supports USB 2.0 DVD / CD drives, USB mass storage devices, PC hard drives and ISO images
- Supports smart card / CAC reader

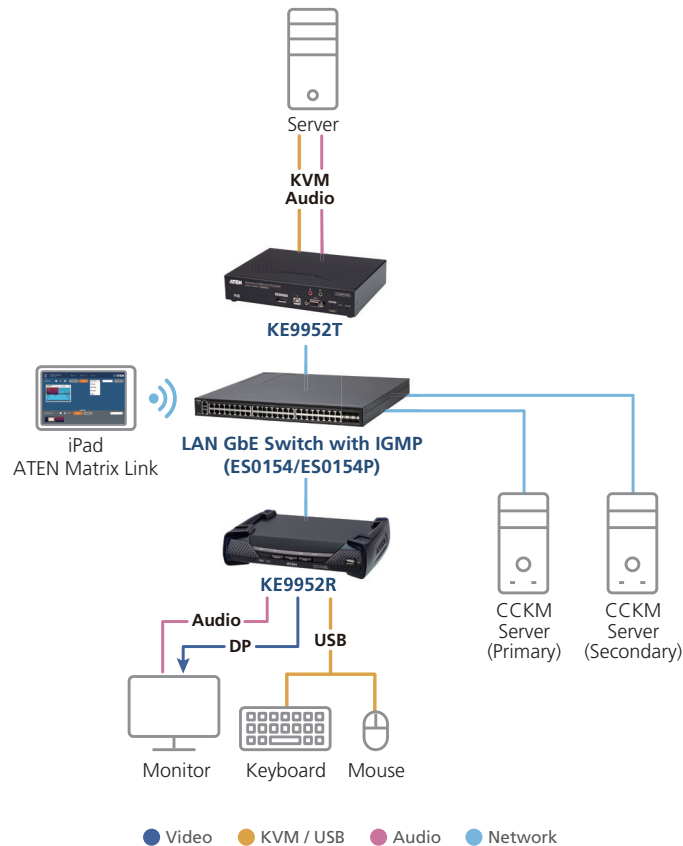
## Highlights

Over IP	The KE9950 / KE9952 extends a computer's KVM console to any distance over a LAN by connecting the Tx and Rx units to users network. The extender also extends a computer's KVM console up to 100 m by directly connecting the Tx and Rx units with a single Cat 5e / 6 cable. Standard IP protocols ensure maximum compatibility with users existing IT infrastructure and staff skill set.
Superior Video Quality	ATEN's advanced graphics processor delivers video that ensures users to experience the same vivid and sharp image quality on the remote monitor no matter how far away the console is located. The KE9950 / KE9952 supports DisplayPort video resolutions up to 3840 x 2160 @ 30 Hz (4:4:4); 24-bit color depth.
Redundancy	The KE9950 / KE9952 supports connection via Gigabit Ethernet port (RJ-45) or SFP port for failover. Besides, the KE9950 supports dual power and the KE9952 features Power over Ethernet (PoE) for redundant power supply. For KE9952, the power can be supplied through a PoE Network Switch; therefore, eliminating the need for a power adapter and effectively reducing the power configuration cost.
SFP Module	The KE9950 / KE9952 supports 1Gbps SFP fiber module expansions, enabling connections with network switch which allow inserting either an optical Fiber Channel SFP module or Active Copper SFP module. The single-mode SFP module provides 1GbE connectivity up to 10 km while the multi-mode SFP module provides 1GbE connectivity up to 550 m. <b>Note:</b> The SFP module (2A-136G / 2A-137G) is sold separately. Contact your ATEN dealer for product information.
Advanced Management System	The KVM over IP Matrix Manager (CCKM) allows users to easily administer all KE devices over a network, using an intuitive user-friendly web based GUI.
Boundless Switching	The extender simply moves the mouse cursor across screen boundaries to switch between different receivers. The function expedites the process of switching between receivers for a smooth and hassle-free user experience and enables immediate monitoring and management of receivers. <b>Note:</b> These advanced functions are supported when the KE transmitters are paired with KE receivers and managed by CCKM.
Flexibility	The KVM over IP extender allows the users to access, share, and switch full control of Tx connected computers - from any Rx (KVM console) on the network. The extender flexibly allows One-to-One, One-to-Many, Many-to-One, or Many-to-Many computer to KVM console connections.
Enhanced Security Features	The KE9950 / KE9952 compliant with universal enterprise grade security standards (AES encryption to secure Video / Keyboard / Mouse / Data transmission and Transport Layer Security (TLS) protocol), and provides different levels of username / password authentication and authorization.

## KE9952 Diagram



## Scenario Diagram



## Specifications

	KE9950R	KE9952R	KE9950T	KE9952T
Connectors				
USB Port	2 x USB Type-A Female (White)		N/A	
Console Ports	2 x USB Type-A Female (White) 1 x DisplayPort Female (Black) 1 x Mini Stereo Jack (Green) 1 x Mini Stereo Jack (Pink) 1 x DB-9 Male (Black)			
KVM Ports	N/A		1 x USB Type-B Female (White) 1 x DisplayPort Female (Black) 1 x Mini Stereo Jack (Green) 1 x Mini Stereo Jack (Pink) 1 x DB-9 Female (Black)	
Power	2 x DC Jack (Black)	1 x DC Jack (Black)	2 x DC Jack (Black)	1 x DC Jack (Black)
LAN Ports	1 x RJ-45 (Black) 1 x SFP Slot	1 x RJ-45 (Black, PoE) 1 x SFP Slot	1 x RJ-45 (Black) 1 x SFP Slot	1 x RJ-45 (Black, PoE) 1 x SFP Slot
Switches				
OSD	1 x Pushbutton		N/A	
Video	1 x Pushbutton		N/A	
Graphics	1 x Pushbutton		N/A	
Reset	1 x Semi-recessed Pushbutton			
LEDs				
10 / 100 / 1000 Mbps	1 (10: Orange / 100: Orange & Green / 1000: Green)			
Power	1 (Blue)			
Local	1 (Green)			
Remote	1 (Green)			
Emulation				
Keyboard / Mouse	USB			
Power Consumption	DC 5 V:8.03 W	PoE: 10.04 W	DC 5 V:9.51 W	PoE: 11.88 W
Video Resolution	Up to 3840 x 2160 @ 30 Hz			
Environmental				
Operating Temperature	0 – 50 °C			
Storage Temperature	-20 – 60 °C			
Humidity	0 – 95% RH, Non-condensing			
Physical Properties				
Housing	Metal			
Weight	1.24 kg	1.27 kg	1.12 kg	1.15 kg
Dimensions (L x W x H)	22.75 x 17.16 x 5.48 cm		21.50 x 16.29 x 4.18 cm	

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Product information is subject to change without prior notice.

Released: 04/2024 V4.0

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