

KE9950 Air Traffic Control Bundle Solution

KE9950ATC

ATEN KE9950 Air Traffic Control Bundle Solution consists of two high performance IP-based transmitters (KE9950T) that connect to two PCs / servers and an IP-based receiver (KE9950R), providing console access from a separate location. The solution builds effortless IP extension that eliminates the distance restrictions of control room management, enabling a faster response to mission-critical data center emergencies. With Primary-Secondary Architecture, the KE9950 Air Traffic Control Bundle Solution enables connection to a primary and a secondary computers that allows instant system failover via hotkey switching without moving around workstations. The deployment of ATEN KE9950 Air Traffic Control Bundle Solution allows access to a computer system from a remote USB DisplayPort console (USB keyboard / mouse and DisplayPort monitor) over the intranet, allowing the computer to be located in a secure and temperature controlled environment, which is also isolated from the user workstation.

KE9950T / KE9950R features 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 zero latency. KE9950T and KE9950R both support connections via an RJ-45 port or a SFP slot. The transmitter KE9950T and receiver KE9950R working as an IP-based extender 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* expansions, enabling connections via fiber optic network to extend transmission distances up to 10 km.

Other key highlights of the KE9950 Air Traffic Control Bundle Solution include that the solution features the dedicated LAN port for KE direct connections which can be isolated from the corporate network; it also provides secure data transmission – AES 128-bit encryption to secure all data before transmitted over a network and decrypts the data on the receiver. The solution adopts industry standard Transport Layer Security (TLS) protocol. Moreover, the KE9950 Air Traffic Control Bundle Solution features dual power supplies for redundancy, eliminating the need for a power adapter and effectively reducing the power configuration cost. The LAN and power redundancy supports dual power and network connections for system failover, ensuring robust system uptime.

In particular, ATEN KE9950 Air Traffic Control Bundle Solution supports the exceptional 2K x 2K screen resolutions dedicated for radar monitoring in Approach Control Room and Area Control Center specifically in air traffic control scenario. It allows customizable hotkey settings for instant network port switching without going via CCKM – KVM over IP Matrix Manager, within the network of 2x Tx and 1x Rx deployment. These make the KE9950 Air Traffic Control Bundle Solution perfect for the ATC industry.

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

KE9950T Front View



KE9950T Rear View



KE9950R Front View



KE9950R Rear View



Features

Exclusive Features for ATC Industry

- Supports 2K x 2K video resolution (2048 x 2048 @ 60 Hz); default EDID resolution up to 1920 x 1080
- Disconnection Alert – pop-up warning message and looping alarm beeping notify users the disconnection status
- Supports power / network failover – 2 DC jacks for power redundancy and 1 RJ-45 & 2 SFP fiber ports for network failover to ensure constant availability for mission-critical applications

Advanced Features

- Enhanced point-to-point extender mode – a secondary redundant server for fail-safe functioning
- Fast Switching – 0.3-second switching between transmitter-connected servers of any resolution (via KE OSD)
- Connection Redundancy – automatically connects to another transmitter (Tx) after disconnection with the original Tx, ensuring constant access to servers (via KE OSD)
- Supports primary server reconnect notification
- Rx access control – users at the Tx local console can enable / disable Rx access by simply pressing a control button*

Note: The KVM over IP Access Control Box (2XRT-0015G) is sold separately. Contact your ATEN dealer for product information.

Hardware

- The housing meets IEC 60945 standards for maritime control room use and has passed environmental tests
- Supports DisplayPort video resolutions up to 3840 x 2160 @ 30 Hz (4:4:4) ; 8-bit RGB (24-bit total color)
- Supports digital video output
- Compliant with DP 1.2 and HDCP 1.3
- Supports stereo speakers and stereo 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
- Supports connection via Gigabit Ethernet port (RJ-45) or SFP port for failover
- Supports 1Gbps SFP fiber module* expansions up to 10 km
- Power Redundancy – 2 DC Jack for power redundancy
- 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: The SFP module (2A-136G / 2A-137G) is sold separately. Contact your ATEN dealer for product information.

Management

- Dual console operation – controls user's system from both the Transmitter's and Receiver's keyboard, monitor, and mouse consoles
- Local console for emergency operation
- OSD (On Screen Display) on the Receiver configures both Tx / Rx devices
- EDID Expert™ – selects optimum EDID settings to prevent video compatibility issue caused by different monitors
- Video Compression Level – allows users to increase / decrease the video quality to adjust for appropriate network bandwidth
- CLI – administrators can control all KE devices via RS-232 or Telnet by issuing commands
- 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

Security

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

Virtual Media

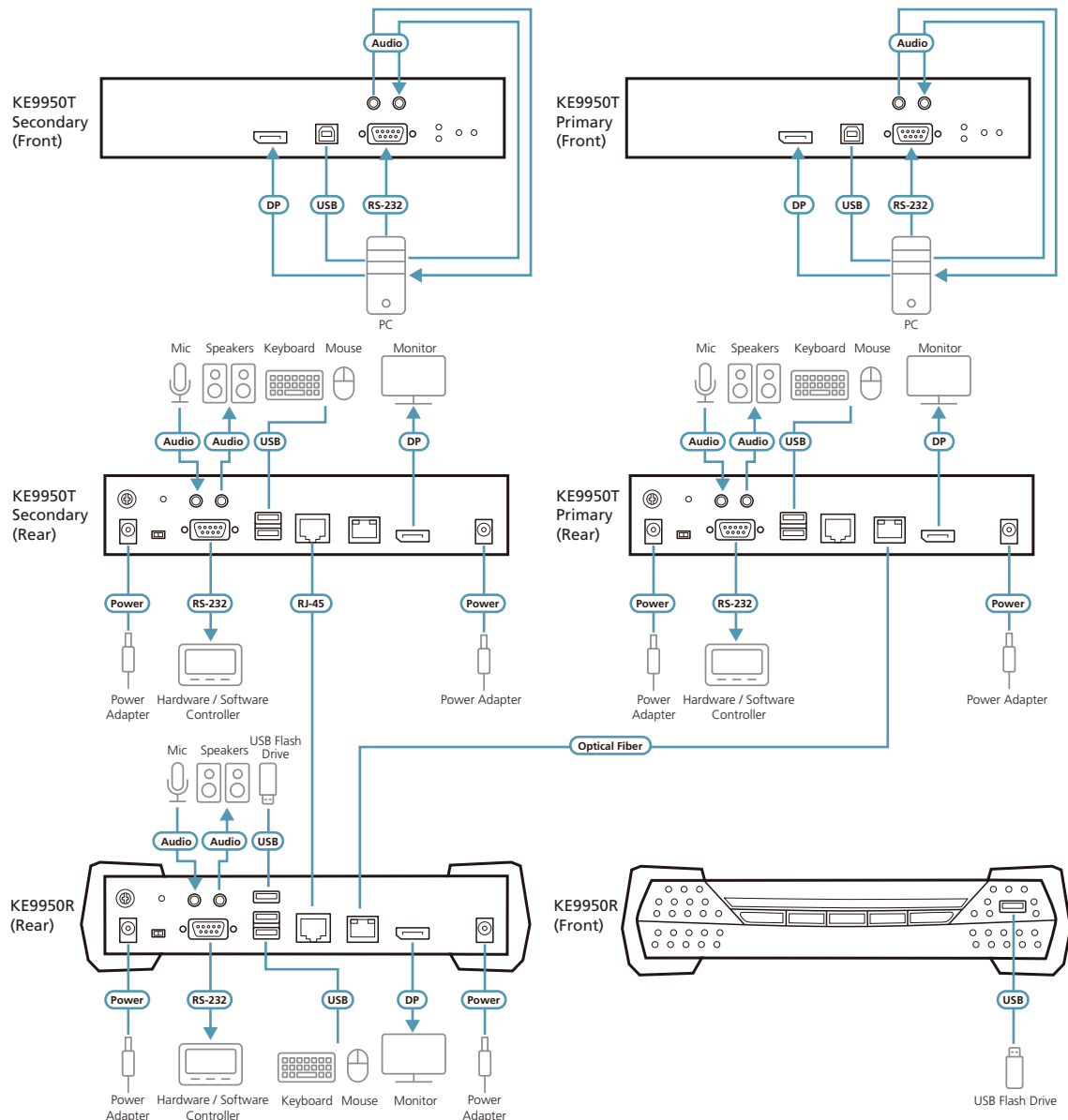
- Virtual Media mode enhances data transmission performance, ideally for file transfers, OS patching, software installations and diagnostic testing
- Supports USB 2.0 DVD / CD drives, USB mass storage devices, PC hard drives and ISO images
- Supports Smart Card / CAC Reader

Highlights

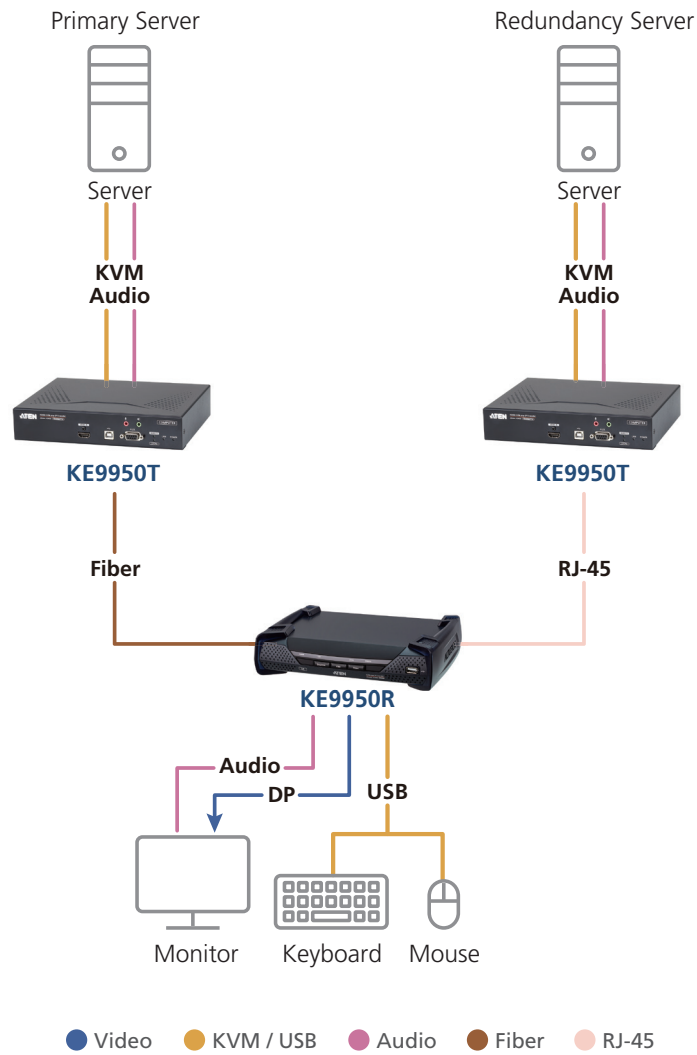
Over IP Extension	KE9950 extends a computer's KVM console any distance over a LAN by connecting the Tx and Rx units to the network. It also features a computer's KVM console up to 100 meters by directly connecting the Tx and Rx units with a single Cat 5e / 6 cable, and standard IP protocols ensuring 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 supports DisplayPort video resolutions up to 3840 x 2160 @ 30 Hz (4:4:4); 24-bit color depth.
Redundancy	The KE9950 supports connection via Gigabit Ethernet port (RJ-45) or SFP port for failover. Besides, the KE9950 supports dual power for redundant power supply, eliminating the need for a power adapter and effectively reducing the power configuration cost.
SFP Module	The KE9950 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 10km while the multi-mode SFP module provides 1GbE connectivity up to 550m. Note: The SFP module (2A-136G / 2A-137G) is sold separately. Contact your ATEN dealer for product information.

Customization	KE9950 Air Traffic Control Bundle Solution supports a customizable feature - hotkey switching for network ports, and RS-232 connection to a dedicated printer. One of the Tx connects to the Rx via RJ-45 and the other Tx connects to the Rx via optical fiber connection. When one of the connected computers goes down, the operator can simply use the pre-configured hotkey to switch to the other network connected to the 2nd computer.
Enhanced Security Features	KE9950 Air Traffic Control Bundle Solution is compliant with universal enterprise grade security standards (AES encryption to secure Video / Keyboard / Mouse / Data transmission and Transport Layer Security (TLS) protocol). The KE extender provides different levels of username / password authentication and authorization.

Diagram



Scenario Diagram



Specifications

	KE9950R	KE9950T
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)	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)	
LAN Ports	1 x RJ-45 (Black) 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	DC 5 V : 9.51 W
Video Resolution	Up to 3840 x 2160 @ 30 Hz	
Latency	< 5ms	
Environmental		
Operating Temperature	0 – 50 °C	
Storage Temperature	-20 – 60 °C	
Humidity	0 – 95 % RH, Non-condensing	
Physical Propertie		
Housing	Metal	
Weight	1.27 kg	1.15 kg
Dimensions (L x W x H)	22.75 x 17.16 x 5.48 cm	21.50 x 16.33 x 4.18 cm

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Product information is subject to change without prior notice.

Released: 08/2025 V3.0

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