

## KE9950ATC

KE9950 Air Traffic Control Bundle Solution – TAA



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 specific 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.

For the latest list of compatible network switches, please visit: [ATEN Support Center](#) for more information.

## 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\*
    - \*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
  - An industrial-grade power adapter included - supports operating temperature of 0°C - 50°C to ensure durability and adaptability under harsh environmental conditions

\*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 you 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 you 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

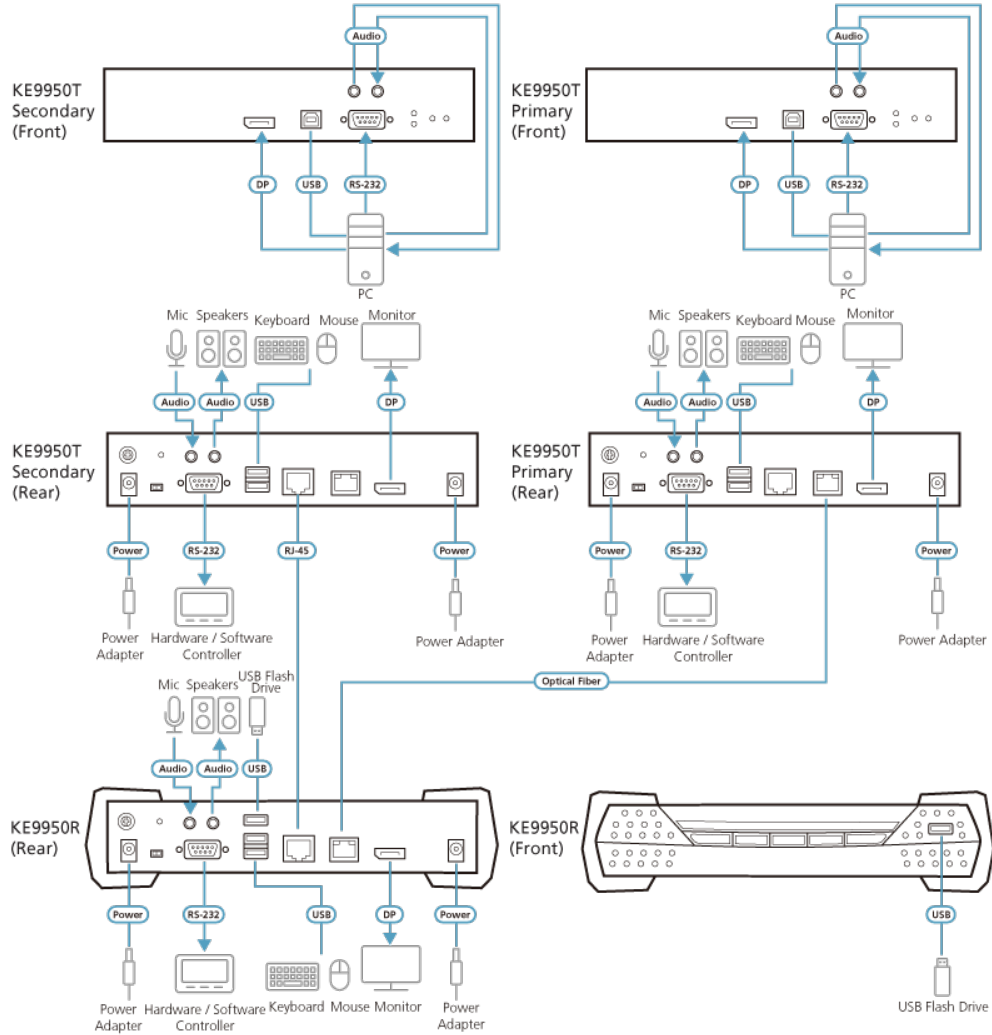
## Specification

|               |                                                                                                                                                         |                                                                                                                                                         |
|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| Function      | KE9950R                                                                                                                                                 | KE9950T                                                                                                                                                 |
| Connectors    |                                                                                                                                                         |                                                                                                                                                         |
| USB Port      | 2 x USB Type A Female (White)                                                                                                                           | N/A                                                                                                                                                     |
| Console Ports | 2 x USB Type A Female (White)<br>1 x DisplayPort Female (Black)<br>1 x Mini Stereo Jack (Green)<br>1 x Mini Stereo Jack (Pink)<br>1 x DB-9 Male (Black) | 2 x USB Type A Female (White)<br>1 x DisplayPort Female (Black)<br>1 x Mini Stereo Jack (Green)<br>1 x Mini Stereo Jack (Pink)<br>1 x DB-9 Male (Black) |

|                        |                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                          |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| KVM Ports              | N/A                                                                                                                                                                                                                                                                      | 1 x USB Type B Female (White)<br>1 x DisplayPort Female (Black)<br>1 x Mini Stereo Jack (Green)<br>1 x Mini Stereo Jack (Pink)<br>1 x DB-9 Female (Black)                                                                                                                |
| Power                  | 2 x DC Jack (Black)                                                                                                                                                                                                                                                      | 2 x DC Jack (Black)                                                                                                                                                                                                                                                      |
| LAN Ports              | 1 x RJ-45 (Black)<br>1 x SFP Slot                                                                                                                                                                                                                                        | 1 x RJ-45 (Black)<br>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                                                                                                                                                                                                                                             | 1 x Semi-recessed Pushbutton                                                                                                                                                                                                                                             |
| LEDs                   |                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                          |
| 10/100/1000 Mbps       | 1 (10: Orange / 100: Orange & Green / 1000: Green)                                                                                                                                                                                                                       | 1 (10: Orange / 100: Orange & Green / 1000: Green)                                                                                                                                                                                                                       |
| Power                  | 1 (Blue)                                                                                                                                                                                                                                                                 | 1 (Blue)                                                                                                                                                                                                                                                                 |
| Local                  | 1 (Green)                                                                                                                                                                                                                                                                | 1 (Green)                                                                                                                                                                                                                                                                |
| Remote                 | 1 (Green)                                                                                                                                                                                                                                                                | 1 (Green)                                                                                                                                                                                                                                                                |
| Emulation              |                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                          |
| Keyboard / Mouse       | USB                                                                                                                                                                                                                                                                      | USB                                                                                                                                                                                                                                                                      |
| Power Consumption      | DC5V:9.51W:49BTU/h<br>DC5V:8.03W:63BTU/h<br><br>Note:<br>● The measurement in Watts indicates the typical power consumption of the device with no external loading.<br>● The measurement in BTU/h indicates the power consumption of the device when it is fully loaded. | DC5V:9.51W:49BTU/h<br>DC5V:8.03W:63BTU/h<br><br>Note:<br>● The measurement in Watts indicates the typical power consumption of the device with no external loading.<br>● The measurement in BTU/h indicates the power consumption of the device when it is fully loaded. |
| Video Resolution       | Up to 3840 x 2160 @ 30Hz                                                                                                                                                                                                                                                 | Up to 3840 x 2160 @ 30Hz                                                                                                                                                                                                                                                 |
| Latency                | < 5ms                                                                                                                                                                                                                                                                    | < 5ms                                                                                                                                                                                                                                                                    |
| Environmental          |                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                          |
| Operating Temperature  | 0–50°C                                                                                                                                                                                                                                                                   | 0–50°C                                                                                                                                                                                                                                                                   |
| Storage Temperature    | -20–60°C                                                                                                                                                                                                                                                                 | -20–60°C                                                                                                                                                                                                                                                                 |
| Humidity               | 0–95% RH, Non-condensing                                                                                                                                                                                                                                                 | 0–95% RH, Non-condensing                                                                                                                                                                                                                                                 |
| Physical Properties    |                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                          |
| Housing                | Metal                                                                                                                                                                                                                                                                    | Metal                                                                                                                                                                                                                                                                    |
| Weight                 | 1.27 kg ( 2.8 lb )                                                                                                                                                                                                                                                       | 1.27 kg ( 2.8 lb )                                                                                                                                                                                                                                                       |
| Dimensions (L x W x H) | 22.75 x 17.16 x 5.48 cm<br>(8.96 x 6.76 x 2.16 in.)                                                                                                                                                                                                                      | 22.75 x 17.16 x 5.48 cm<br>(8.96 x 6.76 x 2.16 in.)                                                                                                                                                                                                                      |
| Note                   | For some of rack mount products, please note that the standard physical dimensions of WxDxH are expressed using a LxWxH format.                                                                                                                                          |                                                                                                                                                                                                                                                                          |

## Diagram

## ▶ Diagram


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