

5K DisplayPort Dual Display KVM over IP Extender

KX9980T / KX9980R

The KX9980 5K DisplayPort Dual Display KVM over IP transmitter is a high-performance IP-based Dual Display transmitter, where the transmitter can transmit a computer's keyboard, video, mouse, and USB signals to the receiver for providing separate console accesses from both the transmitter's and receiver's locations. The setup allows extended access to computer systems via a USB dual DisplayPort console (USB keyboard, USB mouse, Dual DisplayPort monitors) over Intranet, enabling users to place the computers in secure and temperature-controlled environments, which may be isolated from the user workstation.

The KX9980 supports two DisplayPort video displays for delivering video resolutions of up to 5K (5120 x 2880 @ 30 Hz), and offers flawless and lossless video quality with zero latency. The KX9980 is equipped with one RJ-45 port and two SFP+ slots. 10-Gbps SFP+ fiber module expansions are supported for fiber optic network connections and a transmission distance of up to 10 km. For connection flexibility, both the KX9980 transmitter and receiver models can be connected either directly to each other or via a high-speed network over a copper-based or fiber-based LAN. The KX9980 also features dual power supply capability for power redundancy to ensure reliable service. The KX9980 can be set up at the workstation, mounted onto a wall or at the rear of a rack with its space-saving 0U rack-mount design.

As an IP-based matrix extender, the KX9980 can be installed in flexible configurations, including point-to-point, point-to-multipoint, multipoint-to-point, and multipoint-to-multipoint. When combined with the KVM over IP Matrix Manager (CCKM), it can be integrated into a KVM over IP matrix system (multipoint-to-multipoint) for providing more flexible applications in different working environments.

By integrating CCKM with KX9980, IT administrators can benefit from advanced features such as auto detection of all KX9980 devices on the same subnet for 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 of the KX9980 include 256-bit AES encryption for secured data transmissions, as well as RADIUS, LDAP, Active Directory, TACACS+ for third-party authentication services. In conclusion, the KX9980 offers the most convenient solution for providing full digital extension over a network for control room applications, such as air traffic control (ATC), traffic management centers, and broadcast distribution monitoring systems.

Note: The SFP+ module (2A-141G / 2A-142G) is sold separately. Contact your ATEN dealer for product information.

KX9980T Front View



KX9980T Rear View



KX9980R Front View



KX9980R Rear View



Features

Advanced Features¹

- Lossless video compression up to 5120 x 2880 for dual display, including UHD or DCI with zero latency
- Native DP signal processing with color depth 8, 10, 12 bits
- Supports Adobe RGB
- Supports USB isochronous transfer to enable USB camera and USB speaker usage between transmitter and receiver
- Boundless Switching — simply move the mouse cursor across screen borders to switch between different receivers (Rx)
- Fast Switching – 0.3-second switching between transmitter-connected servers of any resolution
- Authentication lock – automatically logs in when the power of the system is resumed after power off
- Connection redundancy – automatically connects to another transmitter (Tx) after disconnection with the original Tx, ensuring constant access to servers
- Disconnection alert – Pop-up warning message and looping alarm beeping notify users the disconnection status
- Push and Pull — share content instantly to / from a single Rx or video wall by just one click
- Video walls — create multiple video walls with up to 12 x 12 (144 displays max.) in each layout
- Advanced Scheduling — improve efficiency and save costs by allowing connections to be set based on time and date
- Virtual Transmitter — independently stream video, audio, USB, and serial sources from different Tx
- Internal and external authentication support — supports LDAP, Active Directory, RADIUS, and TACACS+
- Advanced User Authorization Settings — administrators can set up to four access modes on Tx devices for collaboration or prevention of interference among users
- Configurable user and group permissions for access and control of KX devices
- Tx grouping of up to 4 sets of KX transmitters to support multi-display applications
- Rx access control — users at the Tx local console can enable / disable Rx control privilege by simply pressing a control button

Note:

1. These advanced functions are supported when the KX transmitters are paired with KX 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

- The housing meets IEC 60945 standards for maritime control room use and has passed environmental tests
- Support dual display with 32:9 ultra-wide resolution (combined) or two individual displays
- Supports DisplayPort video resolutions — up to 5120 x 1440 @ 60 Hz (4:4:4), 5120 x 2880 @ 30 Hz (4:4:4), 4096 x 2160 @ 60 Hz (4:4:4), 1920 x 1080 @ 240 Hz (4:4:4) (CVT-RB), 2560 x 1440 @ 144 Hz (4:4:4) per display
- DisplayPort 1.2 compliant
- Stereo speakers and microphone support
- High-speed USB Storage Transmission support
- Auto-MDIX — automatically detects cable type
- Built-in 8 kV / 15 kV ESD protection and 2 kV surge protection
- Supports power redundancy — KX9980 has 2 DC jacks for power redundancy
- Supports network failover — 1 RJ-45 & 2 SFP+ slots for network failover to ensure constant availability for mission-critical applications
- Supports 10-Gbps SFP+ fiber module expansions for up to 10 km*
- 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 – 50 °C to ensure durability and adaptability under harsh environmental conditions

Note: The SFP+ module (2A-141G / 2A-142G) is sold separately. Contact your ATEN dealer for product information.

Management

- Integration with KVM over IP Matrix Manager (CCKM) –a software enabling easy configurations of all KX devices with an intuitive web-based GUI
- Dual console operation –controls user's system from both the transmitter's and receiver's keyboard, monitor, and mouse
- OSD (On Screen Display) –enables configuration of both Tx / Rx devices on the receiver's display screen
- EDID Expert™–selects optimum EDID settings to prevent video compatibility issue caused by different monitors
- On-screen Preview (Panel Array™Mode) –allows users to view the video of up to 36 displays on one screen
- Video Compression Level –allows users to increase / decrease the video quality to adjust for appropriate network bandwidth
- Command Line Interface –administrators can control all KX devices via RS-232 or Telnet by issuing commands or 3rd-party application
- Supports hotkey commands
- RS-232 serial ports –allows users to connect to a serial terminal for TextMenu, CLI, or to serial devices such as touch screens and barcode scanners
- All KX Tx models are compatible to be used with all Rx models

Security

- Dedicated LAN port for KX direct connections – can be isolated from the corporate network
- Secured data transmission – 256-bit AES encryption for all data being transmitted from the transmitter to the receiver
- Supports industry standard Transport Layer Security (TLS) protocol

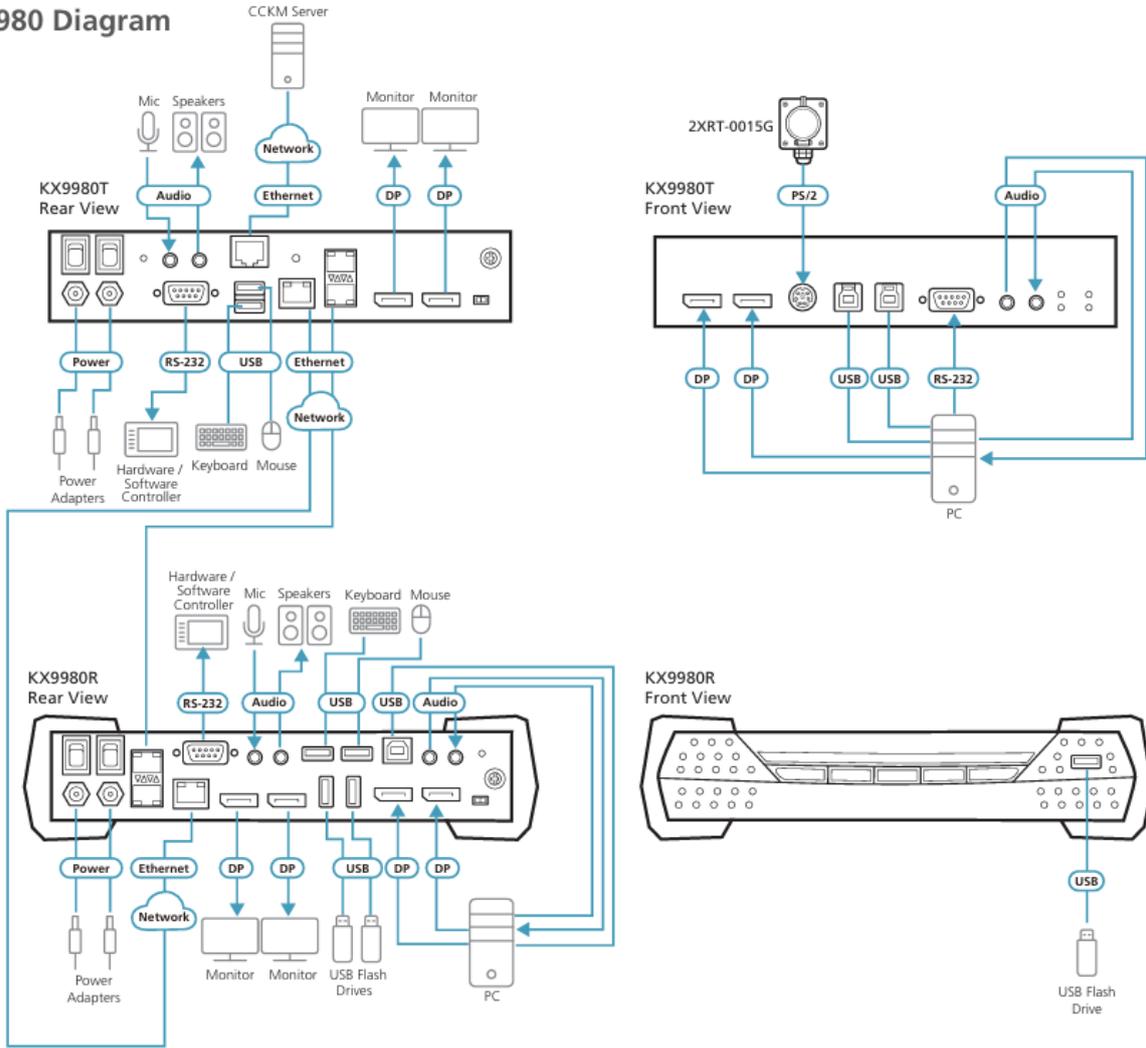
Virtual Media

- Virtual Media mode enhances data transmission performance, and is ideal 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

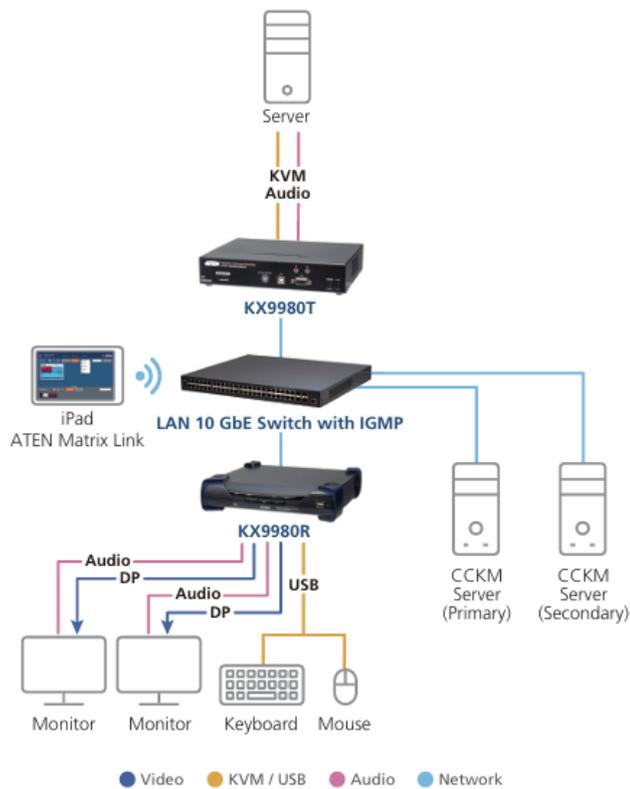
Highlights

Over IP Extension	<p>Extends a computer's KVM console any distance over a LAN by connecting the Tx and Rx units to the same network. Extends a computer's KVM console up to 100 meters by directly connecting the Tx and Rx units with a single Cat 5e / 6 cable. Standard IP protocols ensure maximum compatibility with your existing IT infrastructure and staff skill set.</p>
Superior Video Quality	<p>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 KX9980 supports two DisplayPort video displays, each with resolutions of up to 5120 x 1440 @ 60 Hz (4:4:4).</p>
Redundancy	<p>The KX9980 supports connection via one 10 Gigabit Ethernet port (RJ-45) and two SFP+ slots for failover. In addition, KX9980 supports dual power sources for redundant power supply.</p>
SFP+ Module	<p>The KX9980 supports 10-Gbps SFP+ fiber module expansions, enabling connections with the network switch with either Optical Fiber Channel or Active Copper SFP+ module. The single-mode SFP+ module provides 10-GbE connectivity for up to 10 km while the multi-mode SFP+ module provides 10-GbE connectivity for up to 300 m.</p> <p>Note: The SFP+ module (2A-141G / 2A-142G) is sold separately. Contact your ATEN dealer for product information.</p>
Advanced Management	<p>The CCKM allows users to easily administer all KVM over IP extenders over a network, using an intuitive, user-friendly web-based GUI.</p>
Boundless Switching*	<p>Users can simply move 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.</p> <p>Note: These advanced functions are supported when the KX transmitters are paired with KX receivers and managed by CCKM.</p>
Flexibility	<p>The KVM over IP extender allows users to access, share, and switch full control of Tx-connected computers - from any Rx (KVM console) over the network. It flexibly allows point-to-point, point-to-multipoint, multipoint-to-point, or multipoint-to-multipoint computer to KVM console connections.</p>
Enhanced Security	<p>Compliant with universal enterprise-grade security standards (AES encryption for secured signal transmission and Transport Layer Security (TLS) protocol), the KVM over IP extender provides different levels of username / password authentication and authorization.</p>
Spectacular Video FPS	<p>The KX9980's support for dual displays with resolutions up to 1920 x 1080 @ 240 Hz and 2560 x 1440 @ 144 Hz allows broadcasting producers to seamlessly switch between sources during live events. With eSports' booming popularity rivaling traditional sports leagues in viewership, broadcasting flawless coverage of global gaming events and tournaments is crucial. The KX9980's dual display capability enables producers to monitor multiple sources concurrently, ensuring they capture and switch between the most exciting moments without missing a beat, providing viewers with an immersive and captivating experience.</p>

KX9980 Diagram



Scenario Diagram



Specifications

	KX9980T	KX9980R
Connectors		
USB Port	N/A	2 x USB Type-A Female (White)
Console Ports	2 x USB Type-A Female (White) 2 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 (Blue) 1 x USB Type-A Female (White) 2 x DisplayPort Female (Black) 1 x Mini Stereo Jack (Green) 1 x Mini Stereo Jack (Pink) 1 x DB-9 Male (Black)
Computer Ports	N/A	*Computer ports for future enhancements 1 x USB 2.0 Type-B Female (white) 2 x DisplayPort Female (Black) 2 x Audio Jack Female (Pink for Mic., Green for Ear Phone, Front Panel)
KVM Ports	2 x USB Type-B Female (Blue) 2 x DisplayPort Female (Black) 1 x Mini Stereo Jack (Green) 1 x Mini Stereo Jack (Pink) 1 x DB-9 Female (Black)	N/A
Power	2 x DC Jack (Black)	
LAN Ports	1 x RJ-45 (Black) 2 x SFP+ Slot	
Control	1 x PS/2 Female (Purple)	N/A
Switches		
OSD	N/A	1 x Pushbutton
Port (Up)	N/A	1 x Pushbutton
Port (Down)	N/A	1 x Pushbutton
Reset	1 x Semi-recessed Pushbutton	
Power	2 x Power Switch	
LEDs		
1000/10000 Mbps	1 (1000: Orange / 10000: Green)	
Power	2 (Green)	
Local	1 (Green)	
Remote	1 (Green)	
Emulation		
Keyboard / Mouse	USB	
Power Consumption	DC12V:36.6W	DC12V:33W
Video Resolution	Up to Dual-Display: 5120 x 2880 @ 30Hz, 5120 x 1440 @ 60Hz, 4096 x 2160 @ 60Hz, 2560 x 1440 @ 144Hz, 1920 x 1080 @ 240Hz	
Latency	< 1ms	
Environmental		
Operating Temperature	0 – 50 °C	
Storage Temperature	-20 – 60 °C	
Humidity	0 – 95% RH, Non-condensing	
Physical Properties		
Housing	Metal	
Weight	1.43 kg	1.69 kg
Dimensions (L x W x H)	21.50 x 16.30 x 4.20 cm	22.60 x 22.40 x 5.30 cm