

# KVM over IP Switches

## KN2124VA / KN2140VA / KN4124VA / KN4140VA

- The KN2124VA / KN2140VA / KN4124VA / KN4140VA are ATEN's 4th generation of KVM over IP switches, which feature superior video quality with HD resolutions up to 1920 x 1200, FIPS 140-2 with level 1 security standards and virtual media transmissions at twice the normal speed.

The KN Series provides a local console and remote over IP access for users to monitor and access their entire data center over a network.

Exclusive KN Series Features:

- High-grade security – supports FIPS 140-2 level 1 security standards
- 2x faster virtual media transmission speeds
- Advanced FPGA graphics processor with HD resolutions up to 1920 x 1200

With dual on-board NICs and dual power supplies, the KN Series is built for reliability that ensures 24/7 availability of remote access to all servers.

The KN Series can be integrated into ATEN's CC2000 Management Software. CC2000 puts administrators in complete control of remote data centers and branch offices no matter where they are in the world – allowing them to remotely monitor and control all devices on a network (refer to ATEN's website to get more information on CC2000).

In addition, the KN series is compatible with ATEN's KVM over IP Console Station, the KA82 series. The KA82 series is a hardware-based, standalone console solution that can centrally manage multiple KN devices. It is especially suitable for environments where a PC is not allowed (refer to ATEN's website to get more information on the KVM over IP Console Station).

The KN series now also supports web-friendly KVM-over-IP access with its Web Client Viewer functionality<sup>1</sup>. Being fully compatible with major web browsers<sup>2</sup>, the Web Client Viewer runs directly off the browser without Java or browser plug-in installation. Like the Java or Windows plug-in counterparts, the Web Client Viewer allows users to remotely access all the servers and PCs connected to the KN series, but benefiting from a more simultaneous, direct access option for management and operation.

Additional exclusive features of ATEN KVM over IP switches include: a Message Board, Panel Array Mode™, Mouse DynaSync™ and the Adapter ID function.

For added convenience to management, an iPad application – PadClient, is also available. It has an intuitive interface that makes real-time access and control of the servers/computers simple and mobile. Refer to ATEN's website to get more information on PadClient.

ATEN KVM over IP switches save you time and money by allowing administrators to manage their data centers from practically anywhere – minimizing travel and Mean Time To Repair (MTTR) costs and ensuring the highest availability for data center services.

**Note:**

1. The Web Client Viewer supports basic KVM over IP access and functions. We recommend using Win client app or Java client app for a more robust management and control.
2. Performance and usage may vary depending on the user's hardware configuration. A minimum of 8GB RAM, dual core CPU and a graphics card that supports OpenGL is required. Please also make sure that the browser is the latest version.

### KN2124VA

- 24 Ports
- 1 Local and 2 Remote User Access
- Audio, Virtual Media, Dual Power, Fan Speed Control

### KN2140VA

- 40 Ports
- 1 Local and 2 Remote User Access
- Audio, Virtual Media, Dual Power, Fan Speed Control

### KN4124VA

- 24 Ports
- 1 Local and 4 Remote User Access
- Audio, Virtual Media, Dual Power, Fan Speed Control

### KN4140VA

- 40 Ports
- 1 Local and 4 Remote User Access
- Audio, Virtual Media, Dual Power, Fan Speed Control

KN4140VA Front view



KN4140VA Rear view



## Features

### Exclusive KN Series Features

- High-Grade Security – supports FIPS 140-2 level 1 security standards
- Advanced FPGA graphics processor with HD resolutions up to 1920 x 1200
- 2x faster virtual media transmission speeds
- Simultaneously share one local console and two or four independent connections to servers

### Hardware

- High Port Density – RJ-45 connectors for up to 40 ports in 1U housing
  - Laptop USB Console (LUC) – a dedicated USB port directly connects to a laptop for easy console operation
  - Two or four separate buses for remote KVM over IP access
  - Two 10/100/1000 Mbps NICs for redundant LAN or dual IP operation
  - Blade server support
  - Supports PS/2, USB, Sun Legacy (13W3) and serial (RS-232) connectivity
  - Local console provides USB keyboard and mouse support
  - Supports multiplatform server environments: Windows, Mac, Sun, Linux and VT100 based serial devices
  - Audio enabled
  - Dual power supply
  - High Video Resolutions – up to 1920 x 1200 @ 60 Hz with 24-bit color depth at the switch's local console and on remote displays
  - Monitor and control up to 40 computers on a single level or control up to 512 computers in a cascade\*
- \* Cascade-compatible KVM switches include the following: CS9134, CS9138, KH1508A and KH1516A.

### Management

- Supports 64 user accounts and up to 32 users can be logged in at the same time for control and management
- Green IT Fan – auto-fan-speed adjustment responding to temperature
- Event logging and Windows-based Log Server support
- Critical system event notification via SMTP email; SNMP trap and Syslog support
- Customizable events notification
- Firmware upgradeable
- Adapter ID Function – stores port information, allowing administrators to relocate servers to different ports without having to re-configure adapters or switches
- Port Share Mode – allows multiple users to gain access to a server simultaneously
- Supported by ATEN's CC2000 Management Software
- Supports ATEN KVM over IP Console Station (KA8270 / KA8280 / KA8278 / KA8288)
- IPv6 capable

### Easy-to-Use Interface

- Supports PadClient application on an iPad for mobile management/control
- ATEN Exclusive Panel Array™ Mode – monitors all ports in a grid display (both local and remote screens)
- Multiplatform client support (Windows, Mac OS X, Linux, Sun)
- Multi-browser support: Internet Explorer, Chrome, Firefox, Safari, Opera and Netscape
- Browser-based GUI in pure Web technology – allows administrators to perform administrative tasks without pre-installed software (e.g. Java)
- Supports web-friendly KVM-over-IP access with Web Client Viewer – users can remotely access all the connected servers and PCs directly off web-browsers without Java or browser plug-in installation
- Launch multiple virtual remote desktop sessions to control multiple servers at the same time
- Full-screen or scalable virtual remote desktop window
- Keyboard/Mouse Broadcast – keyboard and mouse signals can be duplicated across all servers simultaneously
- Video syncing with the local console – local console monitor's EDID information stored on the KVM Adapter Cables for display resolution optimization

### Advanced Security

- Remote authentication support: RADIUS, LDAP, LDAPS and Microsoft Active Directory
- Supports TLS 1.2 encryption and RSA 2048-bit certificates to secure browser logins
- Flexible encryption design allows users to choose any combination of 56-bit DES, 168-bit 3DES, 256-bit AES, 128-bit RC4 or Random for independent Keyboard/Mouse, video and virtual media data encryption
- Supports IP/MAC address filtering
- Configurable user and group permissions for server access and control
- Automated CSR creation utility and third-party CA certificate authentication

### Virtual Media

- Virtual media enables applications, OS patching, software installations and diagnostic testing
- Works with USB-enabled servers at the operating system and BIOS level
- Supports DVD/CD drives, USB mass storage devices, hard drives and ISO images

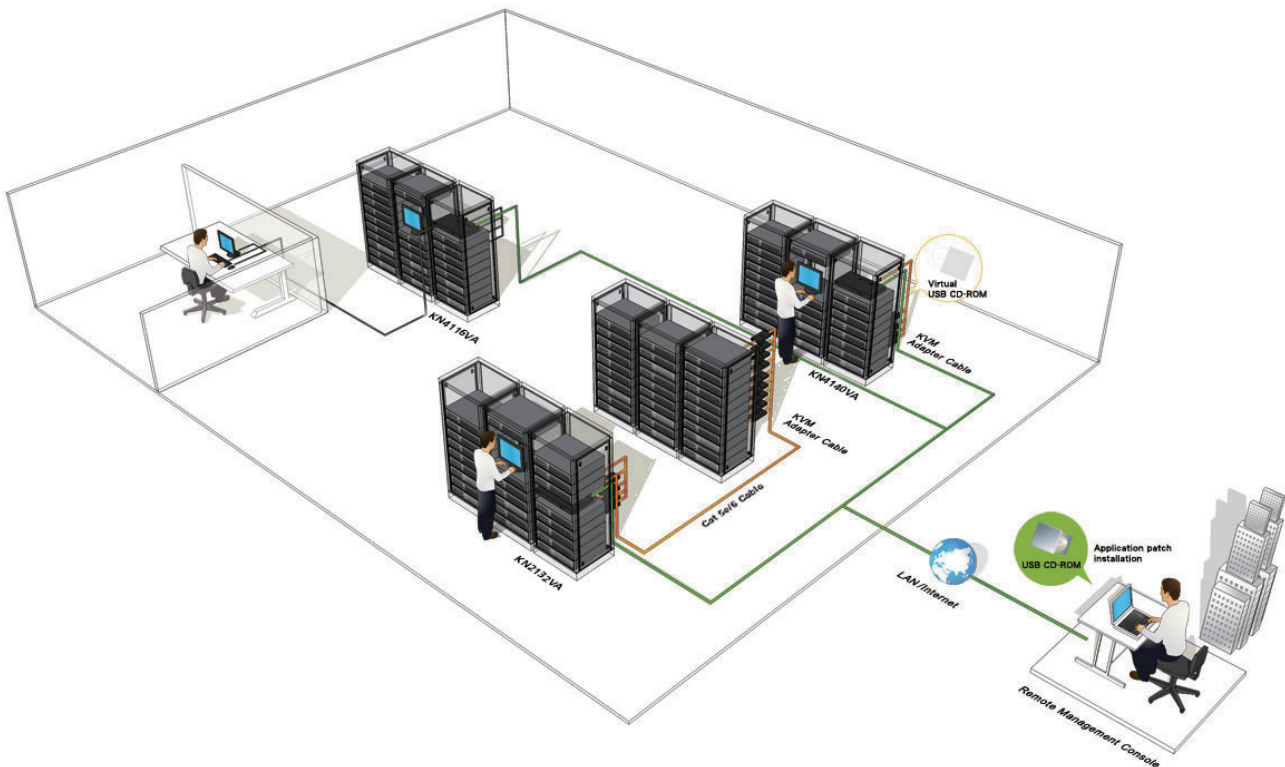
### Virtual Remote Desktop

- Video quality such as monochrome color depth, threshold and noise settings, bandwidth increment/reduction can be adjusted for optimizing data transfer speed
- Fullscreen or scalable window for desktop sessions
- Message Board for communication among remote users
- Mouse DynaSync – automatically synchronizes the local and remote mouse movements
- Exit Macro support
- On-screen keyboard with multi-language support
- BIOS-level access for troubleshooting

## Highlights

<b>High-Grade Security</b>	FIPS 140-2 certified cryptography provides an FIPS mode to use an embedded FIPS 140-2 certified OpenSSL cryptographic module.
<b>Extreme Virtual Media Speeds</b>	Virtual media supports twice the transmission speed of comparable models and supports mounting of DVD/CD drives, USB mass storage devices, hard drives and ISO images. Virtual media allows you to conduct file transfers, application and OS patches, and run diagnostics remotely.
<b>Advanced FPGA Graphics Processor</b>	Our enhanced FPS throughput provides a responsive and vivid video display, offering resolutions up to 1920 x 1200 @ 60 Hz with 24-bit color at the switch's local console, up to 50 meters from the computers, and on remote session displays.
<b>Panel Array Mode™</b>	Exclusive ATEN feature allows simultaneous monitoring for both local console operators and remote access users.
<b>Blade Server Support</b>	Support for blade server associations with KVM switch ports – allows the blade server chassis and individual blades to be integrated into the sidebar tree view for easy access.
<b>Dual IP / Dual Power</b>	Dual IP / Dual Power operation provides network/power backup for complete redundancy and reliability. Should one of the Ethernet ports or power supplies become unavailable, the other will take over for normal system functions.
<b>Configurable Network Bandwidth Settings</b>	Network bandwidth settings allow you to streamline data throughput by adjusting the size of the data stream (bandwidth) to match network traffic conditions. Video performance can be adjusted so that data throughput is optimized for the available network bandwidth. With high-speed LAN access, the settings can be adjusted so that a greater amount of video data is sent, resulting in a higher quality video display. In a limited bandwidth situation, the settings can be adjusted so that network lag is minimized.
<b>Mouse DynaSync™</b>	Automatically synchronizes the local and remote mouse movements for perfect alignment of mouse pointers, regardless of the mouse acceleration settings on the server.

<b>Message Board</b>	To alleviate the problem of access conflicts arising from multiple logins, the Message Board functions similar to an Internet chat program, allowing users to instantly communicate with each other.
<b>Intelligent Bus Assignment with Flexible Port Switching</b>	With Intelligent Bus Assignment, users are automatically assigned to one of four buses as they log in. With flexible port switching, up to 32 users can be distributed over 4 separate bus sessions, and multiple users are allowed to share access to one server for maximum efficiency.
<b>Adapter ID</b>	The Adapter ID function stores port information such as the Adapter ID, OS, keyboard language, adapter name, operation modes and more. This enables administrators to relocate the servers to different ports without having to re-configure the adapters or switches.



## KVM Adapter Cables

The following KVM adapter cables are required when using ATEN KVM over IP switches:

Type:	PS/2 KVM Adapter Cable	USB KVM Adapter Cable	Sun Legacy KVM Adapter Cable	Serial KVM Adapter Cable	USB Virtual Media KVM Adapter Cable	USB Virtual Media KVM Adapter Cable with Audio	USB Virtual Media KVM Adapter Cable with Smart Card Reader	USB Virtual Media KVM Adapter Cable with Audio	DVI USB Virtual Media KVM Adapter Cable with Smart Card Reader support	HDMI USB Virtual Media KVM Adapter Cable with Smart Card Reader	DisplayPort USB Virtual Media KVM Adapter Cable with Smart Card Reader
Interface:	6-pin Mini-DIN Male 6-pin Mini-DIN Male HDB-15 Male	USB Type A Male HDB-15 Male	13W3 Male DIN 8 pin Male	RS-232 DB-9 Female	USB Type A Male HDB-15 Male	USB Type A Male HDB-15 Male 2 Audio plugs	USB Type A Male HDB-15 Male HDB-15 Male 2 Audio plugs	USB Type A Male HDB-15 Male HDB-15 Male 2 Audio plugs	USB Type A Male HDB-15 Male DVI-D Male (Single Link)	USB Type A Male HDB-15 Male	USB Type A Male DisplayPort Male

## Specifications

Function	KN2124VA	KN4124VA	KN2140VA	KN4140VA
<b>Computer Connections</b>				
Direct	24	24	40	40
Maximum	384 (via Cascaded KVM Switches)	384 (via Cascaded KVM Switches)	512 (via Cascaded KVM Switches)	512 (via Cascaded KVM Switches)
<b>Console Connections</b>				
Local	1	1	1	1
Remote	2	4	2	4
<b>Port Selection</b>	Pushbuttons, Hotkeys, GUI	Pushbuttons, Hotkeys, GUI	Pushbuttons, Hotkeys, GUI	Pushbuttons, Hotkeys, GUI
<b>Connectors</b>				
Console Ports	2 x USB Female (Black) 1 x DVI-I Female (White)	2 x USB Female (Black) 1 x DVI-I Female (White)	2 x USB Female (Black) 1 x DVI-I Female (White)	2 x USB Female (Black) 1 x DVI-I Female (White)
KVM Ports	24 x RJ-45 Female (Black)	24 x RJ-45 Female (Black)	40 x RJ-45 Female (Black)	40 x RJ-45 Female (Black)
USB Port	3 x USB Female (Black)	3 x USB Female (Black)	3 x USB Female (Black)	3 x USB Female (Black)
Audio	2 x Audio Jack Female (Pink; Green)	2 x Audio Jack Female (Pink; Green)	2 x Audio Jack Female (Pink; Green)	2 x Audio Jack Female (Pink; Green)
Laptop USB Console (LUC) Port	1 x Mini-USB Female (Black)	1 x Mini-USB Female (Black)	1 x Mini-USB Female (Black)	1 x Mini-USB Female (Black)
PON	N/A	N/A	N/A	N/A
Serial	N/A	N/A	N/A	N/A
LAN Ports	2 x RJ-45 Female (Black)	2 x RJ-45 Female (Black)	2 x RJ-45 Female (Black)	2 x RJ-45 Female (Black)
Power	2 x IEC 60320/C14	2 x IEC 60320/C14	2 x IEC 60320/C14	2 x IEC 60320/C14
<b>Switches</b>				
Power	2 x Rocker Switches	2 x Rocker Switches	2 x Rocker Switches	2 x Rocker Switches
Port Selection	2 x Pushbuttons	2 x Pushbuttons	2 x Pushbuttons	2 x Pushbuttons
Reset	1 x Semi-recessed Pushbutton	1 x Semi-recessed Pushbutton	1 x Semi-recessed Pushbutton	1 x Semi-recessed Pushbutton
<b>LEDs</b>				
Online / Selected	24 (Green/Orange)	24 (Green/Orange)	40 (Green/Orange)	40 (Green/Orange)
Power	2 (Blue)	2 (Blue)	2 (Blue)	2 (Blue)
Link 10 / 100 / 1000 Mbps	2 (Red/Orange/Green)	2 (Red/Orange/Green)	2 (Red/Orange/Green)	2 (Red/Orange/Green)
<b>Emulation</b>				
Keyboard / Mouse	PS/2; USB	PS/2; USB	PS/2; USB	PS/2; USB
<b>Video</b>				
Remote	1920 x 1200	1920 x 1200	1920 x 1200	1920 x 1200
Local	1920 x 1200	1920 x 1200	1920 x 1200	1920 x 1200
I/P Rating	100 - 240 VAC; 50 - 60 Hz; 1 A	100 - 240 VAC; 50 - 60 Hz; 1 A	100 - 240 VAC; 50 - 60 Hz; 1 A	100 - 240 VAC; 50 - 60 Hz; 1 A
<b>Power Consumption</b>				
Scan Interval	AC110V, 34.3W, 198BTU AC220V, 34.3W, 198BTU 1 - 255 Sec	AC110V, 38.2W, 215BTU AC220V, 38.5W, 217BTU 1 - 255 Sec	AC110V, 36.5W, 207BTU AC220V, 36W, 205BTU 1 - 255 Sec	AC110V, 41.2W, 229BTU AC220V, 41.5W, 231BTU 1 - 255 Sec
<b>Environmental</b>				
Operating Temperature	0° to 40° C	0° to 40° C	0° to 40° C	0° to 40° C
Storage Temperature	-20° to 60° C	-20° to 60° C	-20° to 60° C	-20° to 60° C
Humidity	0 - 80% RH, Non-condensing	0 - 80% RH, Non-condensing	0 - 80% RH, Non-condensing	0 - 80% RH, Non-condensing
<b>Physical Properties</b>				
Housing	Metal	Metal	Metal	Metal
Weight	5.48 kg	5.51 kg	5.54 kg	5.56 kg
Dimensions (L x W x H)	43.36 x 41.21 x 4.40 cm	43.36 x 41.21 x 4.40 cm	43.36 x 41.21 x 4.40 cm	43.36 x 41.21 x 4.40 cm

Product information is subject to change without prior notice.

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