KVM Over the NET™

The KVM Over the NET™ switches allow local and remote operators to monitor and access the entire enterprise data center over the Internet using a web-based browser. In addition, they offer out-of-band access – including external modem support – for BIOS-level troubleshooting when the network is down.

These switches have been designed with unique and powerful features that enable administrators to manage their entire server room and data center devices easily and conveniently from just about anywhere in the world.

To help you manage and control your entire datacenter environment, we now support blade servers and chassis. Also, there are some new powerful features such as Power Association, which enables the switch's KVM ports to be associated with power outlets on an ATEN/ALTUSEN PDUs – therefore allowing power management of the server attached to the port from the switch's interface. If a server has dual power supply, secondary power association lets you associate a second outlet port and synchronize the operation for both power supplies. The KVM Over the NET™ switches' powerful capabilities further include: Message Board , Panel Array Mode, Mouse DynaSync, Adapter ID, and Virtual Media.

The Virtual Media function lets you map USB storage media (including DVD/CD drives), and image files to a remote server – allowing administrators to conduct file transfers, install applications and OS patches, and perform diagnostics remotely with ease.

With their dual on-board NICs and dual power supplies, these switches are built for 24/7 reliability to ensure the highest rate of availability for your server room and data center services. The switch's design also features Green IT solutions that include four temperature sensors to regulate up to six fans – making sure they are always running at optimum speed – throttling down and speeding up depending on the room temperature, reducing data center IT operation costs through a more efficient way of using energy.

With Altusen KVM over the NET™ switches, IT administrators can manage their server rooms and data centers from practically anywhere – minimizing travel costs and MTTR (Mean Time to Repair) – and ensuring the highest availability of data center services possible.

KN2124v
- 24 ports
- 1 local and 2 remote user access
- Audio, virtual media, dual power and fan speed control support

KN2140v
- 40 ports
- 1 local and 2 remote user access
- Audio, virtual media, dual power and fan speed control support

KN4124v
- 24 ports
- 1 local and 4 remote user access
- Audio, virtual media, dual power and fan speed control support

KN4140v
- 40 ports
- 1 local and 4 remote user access
- Audio, virtual media, dual power and fan speed control support

Front view

KN4132 rear view

KN4140v rear view

Features

Hardware
- High port density – RJ-45 connectors for up to 40 ports in a 1U housing
- Two or four separate buses for remote KVM over IP access
- Two 10/100/1000 Mbps NICs for redundant LAN or two IP operation
- Blade server support *New!*
- Supports PS/2, USB, Sun Legacy (13W3) and serial (RS-232) connectivity
- Local console provides PS/2 and USB keyboard and mouse support
- Supports multiplatform server environments: Windows, Mac, Sun, Linux and VT100 based serial devices
- Audio enabled
- Virtual Media support lets you map DVD-CD-ROMs and other storage media to a remote server
- Dual Power Supply
- High video resolution – up to 1600 x 1200 @ 60Hz – 32 bit color depth for the local console; up to 1600 x 1200 @ 60Hz with 24 bit color depth for remote sessions, at up to 50 m
- Monitor and control up to 24, or 40 computers on a single level, or control up to 640 computers in a cascade*
- * Cascade-compatible KVM Switches include the following: CS9134, CS9138, CS88A, KH1508, KH1516, KH1508A, and KH1516A

Management
- Up to 64 user accounts – up to 32 users simultaneously share the control
- Green IT-Fan speed varies according to temperature
- End session feature – administrators can terminate running sessions
- Event logging and Windows-based Log Server support
- Critical system event notification via SMTP email; SNMP trap and Syslog support
- Customizable events notification *New!*
- Firmware upgradeable
- Out-of-Band Access-Modem dial-in/dial out/dial back support *New!*
- Adapter ID Function: Stores port information allowing administrators to relocate the servers to different ports, without having to re-configure the adapters and switches
- Port Share Mode allows multiple users to gain access to a server simultaneously
- Integration with ALTUSEN CC2000 Management software
- Power Association enables the switch's KVM ports to be associated with an ATEN/ALTUSEN'S PDUs power outlets for remote power management of the servers from the switch's interface *New!*
- Manage browser access methods (Browser, http, https) *New!*
- IPv6 capable *New!*

Ease-to-Use Interface
- Local Console, browser-based, and AP GUIs offer a unified multilanguage interface to minimize the user training time and increase productivity
- Multiplatform client support (Windows, Mac OS X, Linux, Sun)
- Multi-browser support: Internet Explorer, Chrome, Firefox, Safari, Opera, Mozilla, Netscape
- Browser-based UI in pure Web technology allows administrators to perform administrative tasks without pre-installed Java software package required
- User can launch multiple Virtual Remote Desktop to control multiple connected servers from the same login session
- Magic Panel
- Full-screen or sizable and scalable Virtual Remote Desktop
- Panel Array Mode available to both local console operators and remote access users
- Keyboard/Mouse Broadcast – keyboard and mouse inputs can be duplicated on all the attached servers *New!*
- Video syncing with the local console – local console monitor's EDID information stored on the KVM Adapter Cables for display resolution optimization *New!*

Advanced Security
- Remote authentication support: RADIUS, LDAP, LDAPS, and MS Active Directory
- Supports SSL 128-bit data encryption and RSA 1024-bit certificates to secure users log in from browser
- 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 KB/Mouse, video, and virtual media data encryption
- Support for IP/MAC Filter
- Configurable user and group permissions for server access and control
- Automated CSR creation utility and third party CA certificate authentication *New!*

Virtual Media
- Virtual media enables file applications, OS patching, software installation and diagnostic testing
- Works with USB enabled servers in operating system and BIOS level
- Support DVD/CD drives, USB mass storage devices, PC hard drives and ISO images

Virtual Remote Desktop
- Video quality and video tolerance can be adjusted to optimize data transfer speed; monochrome color depth setting, threshold and noise settings for compression of the data bandwidth in low bandwidth situations
- Full screen video display or scalable video display
- Message Board for communication among remote users
- Mouse DynaSync-automatically synchronizes the local and remote mouse movements
- Exit Macros support
- On-screen keyboard with multilanguage support
- BIOS-level access

Benefits

Power Association	Used in conjunction with ATEN/ALTUSEN PDUs power management device, you can associate a KVM Over the NET Switch's port with a PDU's power outlet, and then manage the power operation of a server from the switch's interface – a single interface point. It also enables you to associate a second outlet port if the server has a dual power supply, and lets you synchronize the operation for both power supplies. In this way, Power Association reduces maintenance time and increases management efficiency.
Blade Server Support	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 and accessed easily.
Improved SNMP Trap	Monitor the critical events on your system and customize the settings according to your needs. Logged events are divided into categories providing clear and complete information to administrators.
Dual IP/Dual Power	Dual IP/ Dual Power supply operation provides the backup redundancy, and reliability. Should one of the IP or one of the power supplies become unavailable, the other will take over in order to keep the system functioning normally.
Magic Panel	A special hideaway control panel with configurable function icon enables you to control and manage the servers more convenient.
Ease-to-use user interface	A user-friendly, intuitive, GUI provides convenient, access, configuration and operation. Local Console , browser-based and AP GUIs offer a unified multilanguage interface to minimize user training time and increase productivity.
Virtual Remote Desktop	The remote desktop can appear full-screen or as a window with a flexible scaling video display. Advanced features such as the Message Board, Mouse DynaSync™, Virtual Media, and Keyboard Pass Through, create a Virtual Remote Desktop that allows users to operate servers from remote locations just as if they were actually at the local site.
Superior Video	With enhanced fps throughput for crisp responsive video display, the switches offer resolutions of up to 1600 x 1200 @ 60Hz; vibrant 24-bit color depth for rich remote session display at up to 50m

Configurable Network Bandwidth settings	A Network setting is provided that allows 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 network setting can be adjusted so that a greater amount of video information is sent, resulting in a higher quality video display. In a limited bandwidth situation, the network setting can be adjusted so that net lag is minimized.
Mouse DynaSync	Automatically synchronizes the local and remote mouse movements for perfect alignment of mouse pointers, regardless of server mouse acceleration settings.
Panel Array Mode	Panel array mode permits simultaneous monitoring of the video output of the installations' servers. Operators can monitor the screen display of up to 40 servers for real-time server monitoring.
Message Board	To alleviate the problem of access conflicts arising from multiple logins, the Message Board functions like an Internet chat program, allowing users who are logged in to instantly communicate with each other.
Intelligent Bus Assignment – Flexible Port Switching	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 flexibly distributed over 4 separate bus sessions and multiple users are allowed to share access to one server for maximizing system efficiency.
Adapter ID	The Adapter ID Function stores port information such as the Adapter ID, OS, keyboard language, adapter name, operation modes, and etc. This enables administrators to relocate the servers to different ports, without having to re-configure the adapters and the switches
Virtual Media	Virtual Media support lets you map DVD/CD-ROMs and other storage media to a remote server. This function allows you to conduct file transfers, application and OS patches, and diagnostics remotely.
Green IT– Variable Fan Speed	The switches have support for four temperature sensors that can control up to six fans. The sensors regulate the fans to run at optimum speed, using energy more efficiently and prolonging the life of both the fans and the switch.
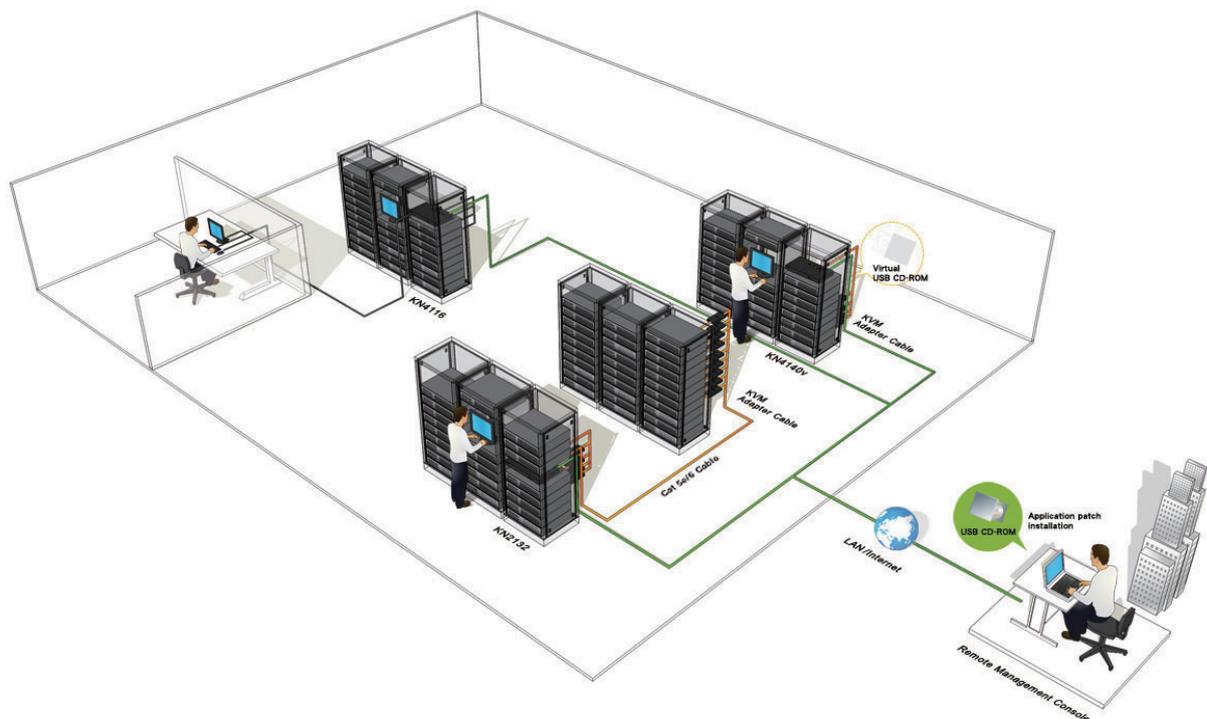
KN series Model	Description	Dimensions (L x W x H)	Weight	Power Consumption
KN2124v	24 KVM ports, 1 Local and 2 Remote User Access	43.36 x 41.35 x 4.40 cm	5.99 kg	Single Power: 115V/36.4W; 230V/37.2W Dual power: 115V/41.8W; 230V/42.5W
KN2140v	40 KVM ports, 1 Local and 2 Remote User Access	43.36 x 41.35 x 4.40 cm	6.08 kg	Single Power 115V/36.8W; 230V/37.7W Dual Power: 115V/42.2W; 230V/43W
KN4124v	24 KVM ports, 1 Local and 4 Remote User Access	43.36 x 41.35 x 4.40 cm	6.04 kg	Single Power 115V/43.7W; 230V/44.6W Dual Power: 115V/49.1W; 230V/50W
KN4140v	40 KVM ports, 1 Local and 4 Remote User Access	43.36 x 41.35 x 4.40 cm	6.12 kg	Single Power 115V/49W; 230V/50W Dual Power: 115V/54W; 230V/56W

General Specifications

Connectors	LAN	2 x RJ-45 Female (Black)
	Modem	1 x RJ-45 Female (Black)
	USB	3 x USB Type A Female (White)
	PON	1 x RJ-45 Female (Black)
Switches	Reset	1 x Semi-recessed Pushbutton
	Power	2 x Rocker Switch
	Port Selection	2 x Pushbutton
LEDs	On Line	16/24/32/40 (Green)
	Selected	16/24/32/40 (Red)
	Power	1 (Blue)
	Link 10/100/1000 Mbps	2 (Red / Red + Green / Green)
Environment	Operating Temp.	0–50°C
	Storage Temp.	-20–60°C
	Humidty	0–80% RH, Non-condensing
Form Factor		19" / 1U
Network Protocol		10Base-T, 100Base-T, 1000Base-T, Auto-Sense, TCP, IP, HTTP, HTTPS, DNS, DHCP, PPP, UDP, ARP, ICMP, SMTP, RADIUS, LDAP, LDAPS

KVM Adapter Cables

The following KVM Adapter cables are required for use with the KVM Over the NET Switches:

	PS/2 KVM Adapter Cable	USB KVM Adapter Cable	Sun Legacy KVM Adapter Cable	Serial KVM Adapter Module	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
	KA9120/KA7120	KA9170/KA7170	KA9130/KA7130	KA9140	KA7140	KA7175	KA7176	KA7177
Type:	PS/2	For all USB systems	Sun Legacy	Serial	Serial	Connect to systems with USB 2.0 ports	Connect to systems with USB 2.0 ports+Audio	Connect to system with USB 2.0 ports + Smart Card Reader support
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	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; USB Type A Male; HDB-15 Male