

VGA KVM Matrix Switch via CAT5 – USB, PS2, SUN, Serial

PRIMUMUX®

Consolidated control for multi-user, multi-rack server environment up to 1,000 feet away

- Multi-user, multi-platform, multi-rack access.
- Platform-specific host adapters for host connection – PS/2, USB, SUN, Serial.
- Simple plug-and-play auto-configured installation.
 - Servers are discovered as they are powered up, and can be accessed immediately by authorized users.
- Hot-swap components with no disruption of server operation.
- Supports video resolutions to 1920x1440.
- Automatically adjusts the video quality to compensate for varying lengths of CAT5/5e/6 cable.
- Dedicated microprocessors prevent CPUs from locking up.
- Real time power status of connected servers.
- Command and control provided by OSD of connected User Station.
- Flash upgradeable.



PRIMUMUX-16X64 (Front and Back)

The PRIMUX® KVM Matrix Switch via CAT5 provides non-blocking access for up to 16 simultaneous users to up to 64 servers. The switch frees up valuable space by eliminating large KVM switchboxes and bulky hard-to-manage coax cables.

The PRIMUX system consists of three components: Matrix Switch, connects users to servers; Host Adapters, connect to each server; and User Stations, connect to each set of user-station equipment — keyboard, monitor and mouse. The User Stations and Host Adapters can be located as far as 1,000 feet from each other, and are connected to the matrix switch via CAT5/5e/6 UTP cable.

Specifications

Matrix Switch

Connectors

- Female RJ45 input/output connectors.
- Female RJ45 Ethernet connector.
 - 10/100BaseT Ethernet interface.
- Male DB9 connector.
- Female SCSI 68-pin connector.

Power

- 110 or 220 VAC at 50 or 60 Hz via IEC connector. (Country-specific power supply cable included.)

Environmental

- Operating temperature: 32° to 100°F (0° to 38°C).
- Storage temperature: -20° to 140°F (-30° to 60°C).
- Operating/storage relative humidity: 17 to 90% non-condensing RH.

MTBF

- PRIMUX-8X32: 51,893 hrs
- PRIMUX-16X64: 37,822 hrs

Host Adapters

Hosts

- One platform-specific (USB + PS/2, SUN, Serial) HA-x host adapter is required for each computer.

HA-UNV

- Compatible with PS/2 and USB computers with VGA video.
- One male 15-pin HD, one male 6-pin miniDIN, and one male USB Type A connectors.
 - ◆ Includes female USB Type A to male 6-pin miniDIN adapter.

HA-SUN

- Compatible with legacy SUN computers with VGA video.
- One male 15-pin HD and one male 8-pin miniDIN connectors.

HA-RS-M

- Compatible with most serial devices with an RS232 port.
- One female RJ45 EIA-232 serial port connector.
- Supported signals: TXD, RXD, DSR, DTR, CTS, RTS
- Emulates an ASCII terminal – converts serial data from ASCII device into VGA video

Power

- HA-UNV/HA-SUN: power provided by the host computer.
- HA-RS-M: power provided by the host serial device via USB Type A connector.

Regulatory Approvals

- RoHS
- TAA compliant

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HA-UNV

Control Methods

On Screen Display

- Use keyboard or mouse to operate the switch from menus superimposed onto the monitor.
- Displays the platform, name, and power status of the connected servers.
- Allows color skew and video compensation fine tuning for optimal video quality.
- Locate and select servers by name.
- Names can be up to 16 characters long.
- Help Screens assist users with OSD.
- Modify the size and position of the OSD.
- OS- and software-independent.
- Various administrator configuration features, including users, servers and user stations.

Security

- Administrator can enable or disable all security features and select which servers each user can access.
- Add or remove authorized users.
- Set individual user names and passwords for each user.

Modes of Operation

- **Normal** – a user connected to a host.
- **Scan** – user is subsequently connected to hosts from a list.
- **Sharing** – the administrator can select for each host a sharing attribute, which defines multiple user access to the host.
 - **None (not shared)** – one user is connected to the host and controls it. No other user may select nor control that host.
 - **Limited (video shared)** – one user is connected to and controls the host. Other users may select and see the video output from the host, but not control the host.
 - **Full (shared)** – a host may be selected by many users; the host is still controlled by one user, but its control may be given to any other user after an inactivity timeout (share idle time).

RS232

- Configuration can be done through the serial port.
- Baud rate: 115200.

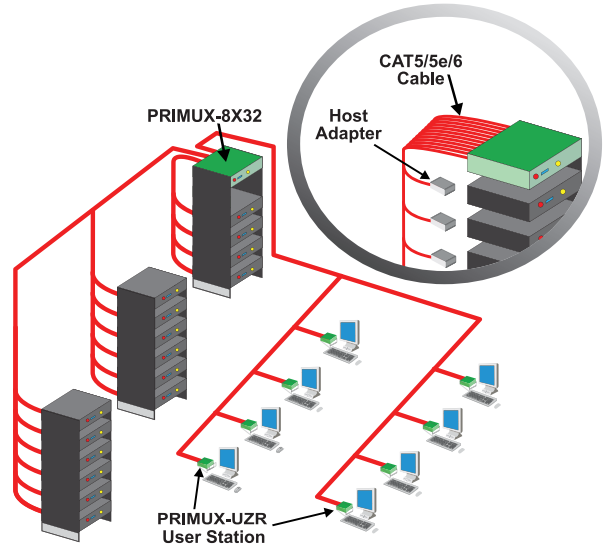
Ethernet Control

- Configuration can be done over the Internet via Telnet.
- 10/100 BaseT Ethernet interface.

Cables

- Use CAT5/5e/6 UTP cable to connect Host Adapters and User Stations to the switch.
 - In electronically noisy and electromechanical environments, shielded CAT5/5e/6 STP cables should be used instead.
- Cables not included.

Configuration and Cable Illustration



How to control a multi-rack server environment containing 8 users

Distances and Resolutions for CAT5/CAT5e and CAT6 Cables

Cable	Distance (feet)	Resolution
CAT5/CAT5e (UTP)	1000	1024x768 at 60Hz
	700	1280x1024 at 60Hz
	500	1600x1200 at 60Hz
	400	1920x1440 at 60Hz
CAT6 (UTP)	800	1024x768 at 60Hz
	600	1280x1024 at 60Hz
	500	1600x1200 at 60Hz
	350	1920x1440 at 60Hz

KVM Matrix Switch via CAT5 Models

NTI Part #	# of Users	# of CPUs	Rack Units	Size WxDxH (in)
PRIMUMX-8X32	8	32	1RU	19x12x1.75
PRIMUMX-16X64	16	64	2RU	19x12x3.5

User Station

NTI Part #	Description	Size WxDxH (in)
PRIMUMX-UZR	User Station	11x11x1.75

Host Adapter Models

NTI Part #	Platform	Size WxDxH (in)
HA-UNV	USB + PS/2	1.5x3.0x0.8
HA-SUN	SUN	2.1x3.7x1.0
HA-RS-M	Serial RS232	1.5x3.0x0.8