NETWORK TECHNOLOGIES INCORPORATED ®

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PRIMUX® Series

PRIMUX
CAT5 KVM System
Quick Start Guide

What's in the Box

- NTI PRIMUX-UZR User Station
- 120VAC or 240VAC @ 50 or 60Hz, 5VDC/2A AC Adapter
- Line cord, country specific
- Terminating Plug (for last Host Adapter in chain)
- DINT-6-FF Null Modem Cable (for firmware upgrades)
- PRIMUX CDROM w/ Owner's Manual and Quick Start Guide (pdf files)
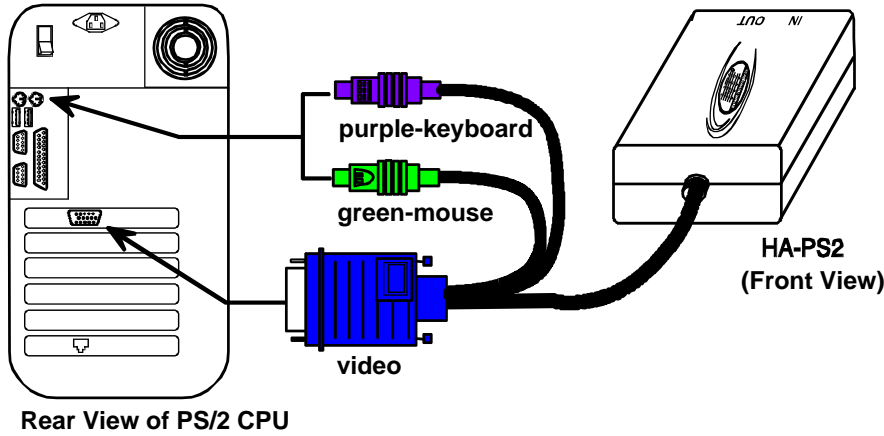- This Quick Start Guide

What's also needed (sold separately)

- NTI Host Adapter(s) HA-PS2 / HA-USB / HA-SUN / HA-RS (see chart on page 5)
- CAT5/5e/6 unshielded twisted-pair cable(s) terminated with RJ45 connectors wired straight thru (pin 1 to pin 1, etc.)
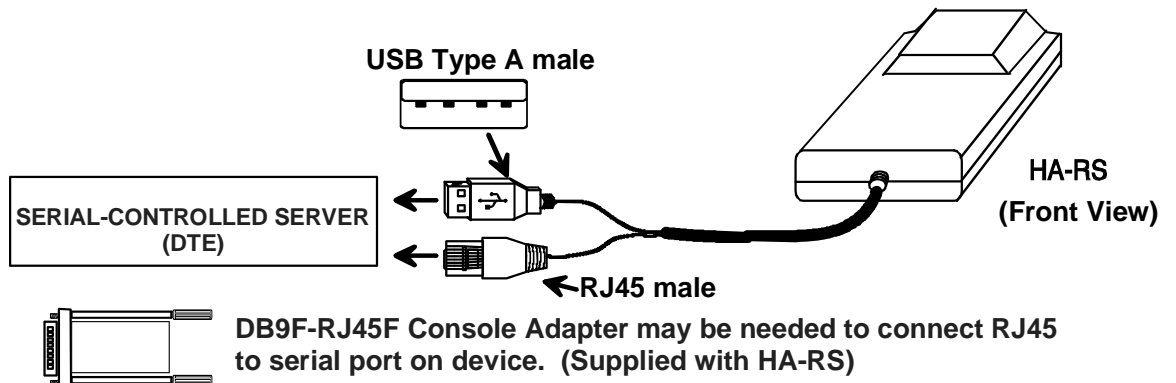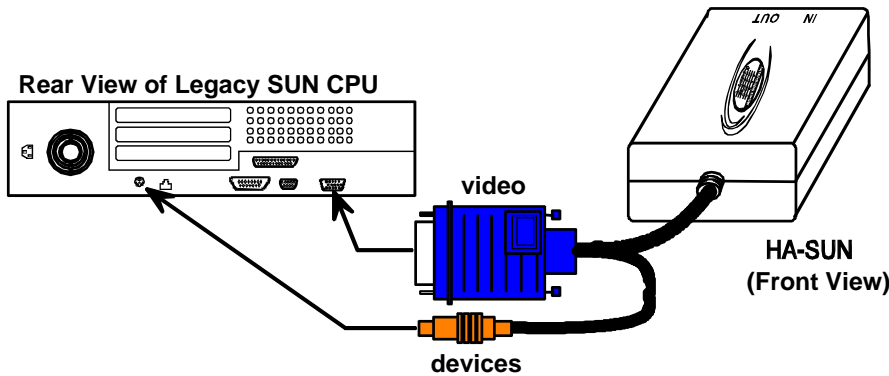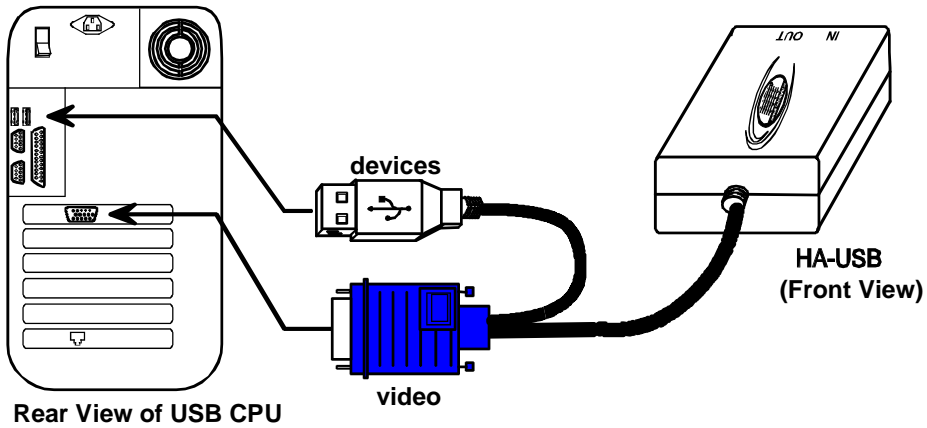
Please Note: A PRIMUX-UZR User Station with firmware version 2.0 and later will not recognize or work with a Host Adapter programmed with firmware version 1.6 and earlier.   If you have Host Adapters with firmware version 1.6 and earlier, they must first be updated to firmware version 2.0 using a PRIMUX-UZR User Station programmed with firmware version 1.9.   After updating all Host Adapters, the PRIMUX-UZR User Station can then be updated to firmware version 2.0 to work with the newly updated Host Adapters.   Firmware version 1.9 (with version 1.6 Host Adapter firmware) and firmware version 2.0 can be found at http://www.networktechinc.com/download/d-kvmswitch-cat5.html.   Instruction for changing the firmware in the User Station and Host Adapters is included in the .zip file with the firmware.
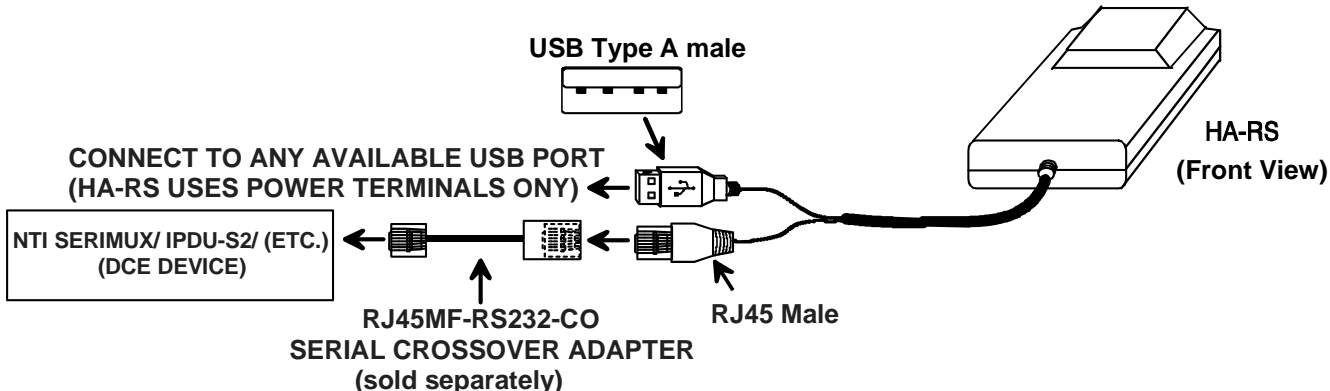
Hardware Setup

1. Disconnect power from the CPU. (If your CPU fully supports hot-plugging, powering-down will not be necessary).

2. Plug the Host Adapter into the devices and video ports on the back of the CPU.

purple-keyboard

green-mouse

video

Rear View of PS/2 CPU

HA-PS2
(Front View)

Note: When hotplugging the mouse and keyboard cables into a PS/2 CPU, be sure to connect the mouse cable first, then the keyboard cable. Failure to connect in this order may cause the mouse to not be recognized by the CPU.

devices

video

Rear View of USB CPU

HA-USB
(Front View)

Rear View of Legacy SUN CPU

video

devices

HA-SUN
(Front View)

USB Type A male

SERIAL-CONTROLLED SERVER
(DTE)

HA-RS
(Front View)

RJ45 male

DB9F-RJ45F Console Adapter may be needed to connect RJ45 to serial port on device. (Supplied with HA-RS)

USB Type A male

**CONNECT TO ANY AVAILABLE USB PORT
(HA-RS USES POWER TERMINALS ONY)**

**NTI SERIMUX/ IPDU-S2/ (ETC.)
(DCE DEVICE)**

**RJ45MF-RS232-CO
SERIAL CROSSOVER ADAPTER
(sold separately)**
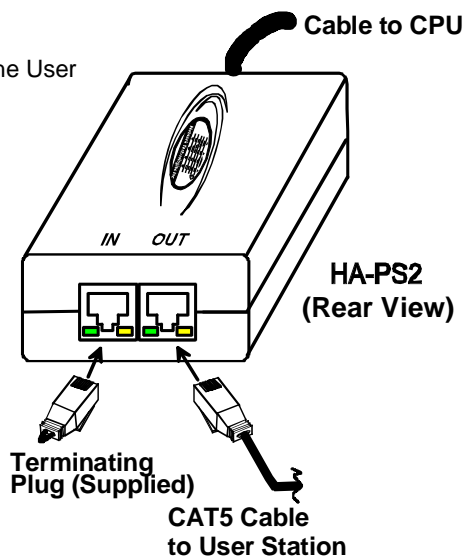
RJ45 Male

**HA-RS
(Front View)**

Cable to CPU

3. Connect a CAT5 cable from the "OUT" port on the Host Adapter to the "CAT5" port on the User Station.
4. Connect the Terminating Plug (supplied) to the "IN" port on the Host Adapter.
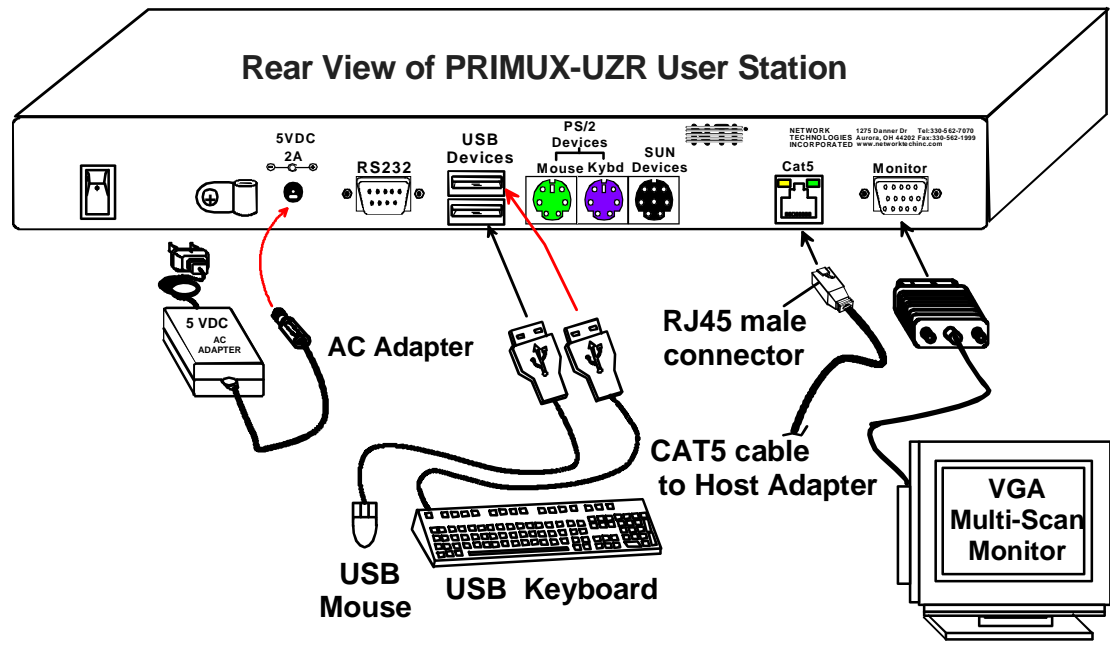
FYI: If more Host Adapters will be connected, follow the instructions that follow for "Daisy-Chained Host Adapters".

⚠ *WARNING: Never connect the PRIMUX Host Adapter or User Station to an Ethernet card, Ethernet router, hub or switch or other Ethernet RJ45 connector of an Ethernet device.   Damage to devices connected to the Ethernet may result.*

IN   OUT

**HA-PS2
(Rear View)**

**Terminating
Plug (Supplied)**
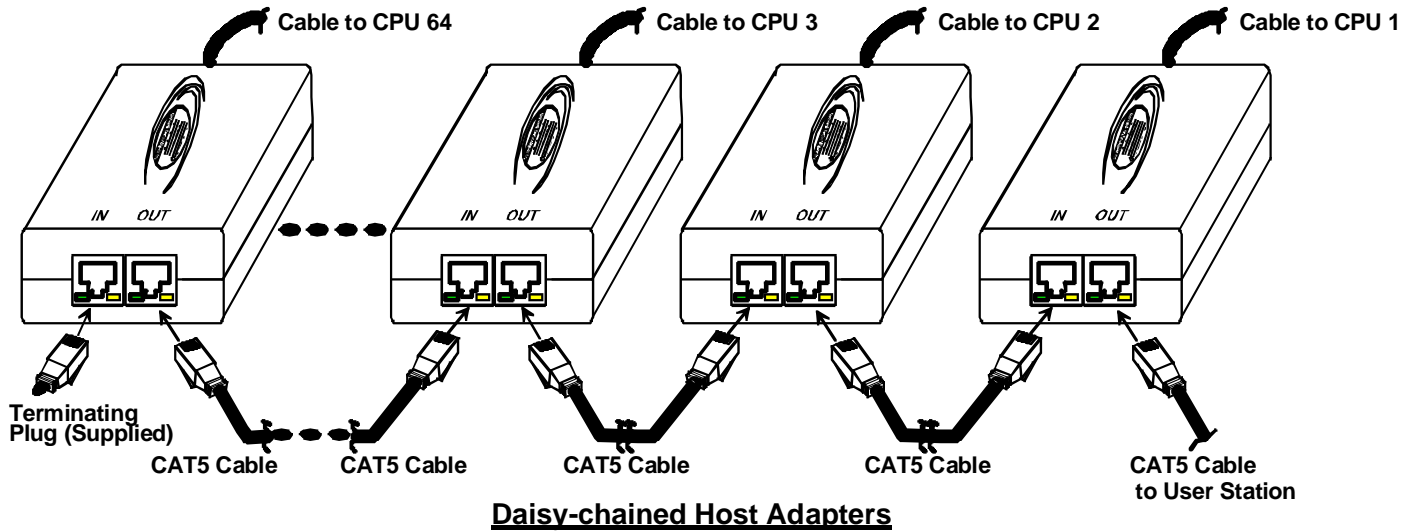
**CAT5 Cable
to User Station**

5. Connect the user keyboard and mouse to the proper "DEVICES" port(s) (USB or PS/2) on the User Station. (USB type devices are shown in the following image.)
6. Connect the user monitor to the "MONITOR" port on the User Station.

Rear View of PRIMUX-UZR User Station

5VDC
2A

RS232

USB
Devices

PS/2
Devices

Mouse Kybd

SUN
Devices

Cat5

Monitor

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5 VDC
AC
ADAPTER

AC Adapter

**RJ45 male
connector**

**CAT5 cable
to Host Adapter**

**USB
Mouse**

USB Keyboard

**VGA
Multi-Scan
Monitor**

7. Connect the AC adapter to the "5VDC" port on the User Station.
8. Power-up the monitor and User Station.
9. Plug in the power cord(s) and power-up the CPU(s).

Daisy-Chained Host Adapters

Up to 64 CPUs can be connected in a daisy-chain to create a system of CPUs controlled by a single user from a User Station. The first Host Adapter is connected to the User Station via the "OUT" port.   Additional Host Adapters in the daisy-chain will have CAT5 cable connected from their "OUT" port to another Host Adapter's "IN" port to enable communications between the user and each CPU in the daisy-chain (see the illustration on the next page). A Terminating Plug must be installed in the "IN" port of the last Host Adapter in the daisy-chain.

Daisy-chained Host Adapters

Initial Startup

Upon startup, the Command Mode On Screen Display (OSD) menu will be displayed, auto-logging you in as the administrative user **"root"**. By default, the user "**root**" has full administrative rights and access to all Host Adapters and their connected CPUs.

To logout as a user, press <**L**> and the login screen will appear

If you logout and want to log back in as the administrator "**root"** either ;

> A) type <**root**> at the user prompt and press <**Enter**> or <**Tab**>
>   type <**nti**> at the password prompt and press <**Enter**>
>
>   -or-
>
> B) power-cycle the PRIMUX and be automatically logged-in as **root**

NOTE: In PRIMUX units with firmware version 1.9 and earlier, the administrator name was "ADMINISTRATOR" and the password was "NTI"   (all upper case letters).

Make a Connection

From the Command Mode menu, to make connection to any Host Adapter in the daisy-chain,
>   press <**Up arrow**> or <**Down arrow**> to highlight and select the desired Host Adapter,
>   press <**Enter**> to connect to it.

>   *-OR*-

>   use the mouse to highlight the desired Host Adapter to connect to and click on it to connect.

 Press <**Esc**> to exit Command Mode and use the connected CPU.
 Press <**Ctrl**> + <**`**> to return to the Command Mode menu.

Congratulations, you have successfully installed your PRIMUX.

Distances and Resolutions for CAT5/CAT5e and CAT6 Cables

CABLE	DISTANCE (feet)	RESOLUTION
CAT5/CAT5e (UTP)	1000	1024x768 at 60Hz
CAT5/CAT5e (UTP)	700	1280x1024 at 60Hz
CAT5/CAT5e (UTP)	500	1600x1200 at 60Hz
CAT5/CAT5e (UTP)	400	1920x1440 at 60Hz
CAT5/CAT5e (STP)	600	800x600 at 60Hz
CAT5/CAT5e (STP)	500	1024x768 at 60Hz
CAT5/CAT5e (STP)	300	1280x1024 at 60Hz
CAT5/CAT5e (STP)	100	1920x1440 at 60Hz
CAT6 (UTP)	800	1024x768 at 60Hz
CAT6 (UTP)	600	1280x1024 at 60Hz
CAT6 (UTP)	500	1600x1200 at 60Hz
CAT6 (UTP)	350	1920x1440 at 60Hz

> **Note: Actual resolution may vary depending upon the construction of the CAT5 cable used.**

Host Adapter Ordering Chart

NTI #	Application
HA-PS2	PS/2 CPU
HA-SUN	SUN CPU
HA-USB	USB CPU (Win,Sun, or Mac)
HA-RS	Serial-Controlled Devices

To order CAT5/5e/6 cables or Host Adapters, either visit our website at www.networktechinc.com or call us at 1-800-RGB-TECH (800-742-8324) or 1-330-562-7070.

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