USB-SUN-R
LEGACY SUN TO USB ADAPTER

USB-PS2-R
PS2 TO USB ADAPTER
Installation Manual
Warranty Information

The warranty period on this product (parts and labor) is two (2) years from the date of purchase. Please contact Network Technologies Inc at (800) 742-8324 (800-RGB-TECH) or (330) 562-7070 or visit our website at http://www.networktechinc.com for information regarding repairs and/or returns. A return authorization number is required for all repairs/returns.

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CHANGES
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INTRODUCTION

The NTI USB-SUN-R is a legacy SUN to USB adapter designed to enable the connection of a legacy SUN CPU to an NTI USB KVM switch. It also enables the connection of a USB keyboard and mouse to a legacy SUN CPU, or to an NTI Universal KVM switch.

The NTI USB-PS2-R is a PS/2 to USB adapter designed to enable the connection of a PS2 CPU to an NTI USB KVM switch. The USB-PS2-R also enables the connection of a USB keyboard and mouse to a PS/2 CPU, or to an NTI PS/2 KVM switch.

Features

- Support for USB 1.1 Specification
- Sun extra keys are emulated when using a PS/2 or MAC layout keyboard with the USB-SUN-R
- Adapter is powered by the CPU it is connected to
- USB connection(s) can be hot-plugged to the adapter without effecting the CPU performance

Definitions

Legacy SUN CPU - a SUN CPU that has 8 pin miniDIN connector for keyboard/mouse connection
PS/2 CPU - a CPU that has two 6 pin miniDIN connectors for keyboard and mouse connection

Supported Devices

- NTI USB KVM switches
- USB Sun Keyboard - All foreign USB Sun keyboards are detected and supported
- USB PS/2 Keyboard - Extra keys from Sun keyboard are emulated through sequences of 2 keys
- USB Mac Keyboard - Extra keys from Sun keyboard are emulated through sequences of 2 keys
- USB Mouse
- USB Intellimouse® (wheel) – Sun operating system may not have wheel support
- USB Hub with only USB keyboard and/or USB mouse connected at its inputs
- Logitech diNovo Edge keyboard
- Logitech Cordless Desktop EX 110,S510, MX5000 Laser
- Crystal Vision keyboard with touchpad
- Ergo2000 keyboard/mouse drawer
- Creative Desktop Wireless 8000
- Fellowes Cordless Combo
- Gyration GO 2.4 Optical Air Mouse & Compact Keyboard Suite
- HP Wireless Keyboard & Mouse (P2360AA)
- Kensington PilotBoard Wireless Desktop
- Microsoft Wireless Optical Desktop 3000,4000

FYI: Use a foreign SUN USB keyboard to properly present a country code to an attached SUN CPU. A foreign Windows USB keyboard will not present a foreign keyboard country code.

Note: The Multimedia keys do not work through the USB-PS2-R adapter.

Materials

Materials supplied this kit:

- USB-SUN-R or USB-PS2-R
- USB2-AB-3-5T Cable
- This manual

Other lengths of USB2-AB-x-5T cables are available. (x =length of the cable in feet) Available lengths include 3,6,10 or 15 foot cables) Contact NTI for additional cables if desired at (800) 742-8324 (800-RGB-TECH) or (330) 562-7070 or visit our website at http://www.networktechinc.com.
APPLICATIONS

Connect any NTI USB KVM Switch to a legacy SUN CPU (See Figs. 1 & 2 for details)

Connect any NTI USB KVM Switch to a PS/2 CPU (See Figs. 5 & 6 for details)

Connect a USB SUN keyboard and/or mouse to an NTI NODEMUX Universal KVM Switch (See Figs. 3 & 4 for details)

Connect a supported USB keyboard and/or mouse to an NTI KEEMUX PS/2 KVM Switch (See Figs. 7 & 8 for details)
Connect a USB SUN keyboard and/or mouse to a legacy SUN CPU (See Figs. 1 & 3 for details)

Connect a supported USB keyboard and/or mouse to a PS/2 CPU (see Figs. 5 & 7 for details)
**INSTALLATION**

**USB-SUN-R**

**Connect to a legacy SUN CPU**

*Note: The CPU should be powered down before connection of the USB-SUN-R.*

Connect the orange 8 miniDIN male connector to the device port on a legacy SUN CPU (See Fig. 1)

![Rear View of legacy SUN CPU](image1)

![8 miniDIN male connector](image2)

**Connect to a USB Switch**

Using a USB2-AB-x-5T cable (x = 3, 6, 10 or 15 foot cable), connect the USB Type A male connector end to either of the ports marked "USB DEVICES" on the adapter. Connect the USB Type B male connector end to a "CPU" port on the NTI UNIMUX USB KVM matrix switch. (See Fig. 2.)

![Rear View of a UNIMUX Switch](image3)

Figure 1- Connect to a legacy SUN CPU

Figure 2- Connect the USB-SUN-R to a UNIMUX switch
Connect to a USB Keyboard and Mouse

Alternatively, connect any supported USB keyboard and mouse to either of the two USB type A female connectors marked "USB DEVICES" as seen in Fig. 3.

FYI: The USB connections can be hot-plugged at any time.

Connect to an NTI Universal KVM Switch

Note: The switch should be powered down before connection of the USB-SUN-R.

The USB-SUN-R can be used to connect a supported USB keyboard and mouse (see "Supported Devices on page 1) as shown above to the 8 pin miniDIN user “DEVICES” port on a NODEMUX Universal KVM switch (multi-user or single-user).
USB-PS2-R

Connect to a PS/2 CPU.

*Note: The CPU or switch should be powered down before connection of the USB-PS2-R.*

1. Connect the green 6 miniDIN male mouse connector to the mouse port on the CPU. (See Fig. 5)
2. Connect the purple 6 miniDIN male keyboard connector to the keyboard port on the CPU.

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Connect to a USB Switch

Using a USB2-AB-x-5T cable (x = 3, 6, 10 or 15 foot cable), connect the USB Type A male connector end to either of the ports marked ‘USB DEVICES” on the adapter. Connect the USB Type B male connector end to a "CPU" port on the NTI UNIMUX USB KVM matrix switch. (See Fig. 6.)
Connect USB Keyboard and Mouse

Connect any supported USB keyboard and mouse to either of the two USB type A female connectors marked "USB DEVICES" as seen in Fig. 7.

_FYI: The USB connections can be hot-plugged at any time._

![Figure 7- Connect keyboard and mouse to adapter](#)

Connect to NTI PS/2 KVM Switch

The USB-PS2-R can be used to connect a supported USB keyboard and mouse (see "Supported Devices on page 1) as shown above to the 6 pin miniDIN user "Keyboard" and "Mouse" ports on a KEEMUX PS/2 KVM switch.

![Figure 8- Connect a USB-PS2-R to an NTI PS/2 KVM switch](#)
POWER UP

If the USB-SUN-R or USB-PS2-R has been connected to a CPU, power up the CPU. The CPU will boot up normally whether a USB keyboard and mouse are attached to the UNIMUX switch or not.

Exception: If a USB Sun foreign keyboard is being used, it must be connected before the CPU is powered up in order to communicate the country code to the CPU.

KEY EQUIVALENTS

Using the chart below, find the character needed to be typed on the CPU, then follow the row across for the equivalent on the keyboard being used. See Fig. 9 on page 9 for reference.

<table>
<thead>
<tr>
<th>USB 101</th>
<th>WINxx</th>
<th>MAC (Apple USB)</th>
<th>SUN</th>
</tr>
</thead>
<tbody>
<tr>
<td>L-Ctrl</td>
<td>L-Ctrl</td>
<td>L-Ctrl</td>
<td>L-Ctrl</td>
</tr>
<tr>
<td>L-Alt</td>
<td>L-Alt</td>
<td>L-Option</td>
<td>L-Alt</td>
</tr>
<tr>
<td>SB+F12</td>
<td>Application</td>
<td>SB+F12</td>
<td>Compose</td>
</tr>
<tr>
<td>R-Alt</td>
<td>R-Alt</td>
<td>R-Option</td>
<td>Alt-Graph</td>
</tr>
<tr>
<td>SB+Alt</td>
<td>Windows Logo</td>
<td>Command</td>
<td>Meta</td>
</tr>
<tr>
<td>SB+R Arrow</td>
<td>SB+R Arrow</td>
<td>Power</td>
<td>Suspend</td>
</tr>
</tbody>
</table>

SB = Space Bar
L and R = Left and Right keys when two keys are marked the same on a keyboard.

SUN’s 16 Extra Keys

Use the chart below to type SUN’s additional 16 keys using a 101, WINxx, or MAC (Apple) USB keyboard

<table>
<thead>
<tr>
<th>101,WINxx,MAC Keyboards</th>
<th>SUN Extras</th>
<th>101,WINxx,MAC Keyboards</th>
<th>SUN Extras</th>
</tr>
</thead>
<tbody>
<tr>
<td>SB+F1</td>
<td>Stop (L1)</td>
<td>SB+F9</td>
<td>Find (L9)</td>
</tr>
<tr>
<td>SB+F2</td>
<td>Again (L2)</td>
<td>SB+F10</td>
<td>Cut (L10)</td>
</tr>
<tr>
<td>SB+F3</td>
<td>Props (L3)</td>
<td>SB+F11</td>
<td>Help</td>
</tr>
<tr>
<td>SB+F4</td>
<td>Undo (L4)</td>
<td>SB+F12</td>
<td>Compose</td>
</tr>
<tr>
<td>SB+F5</td>
<td>Front (L5)</td>
<td>SB + Up Arrow</td>
<td>Vol +</td>
</tr>
<tr>
<td>SB+F6</td>
<td>Copy (L6)</td>
<td>SB + Down Arrow</td>
<td>Vol -</td>
</tr>
<tr>
<td>SB+F7</td>
<td>Open (L7)</td>
<td>SB + L Arrow</td>
<td>Mute</td>
</tr>
<tr>
<td>SB+F8</td>
<td>Paste (L8)</td>
<td>SB + R Arrow</td>
<td>Suspend</td>
</tr>
</tbody>
</table>

SB = Space Bar

Mouse Click Equivalents

To emulate a right button click using Apple 1 button mouse, hold down the Command key (⌘) while pressing the mouse button.
Figure 9- Keyboard Layouts