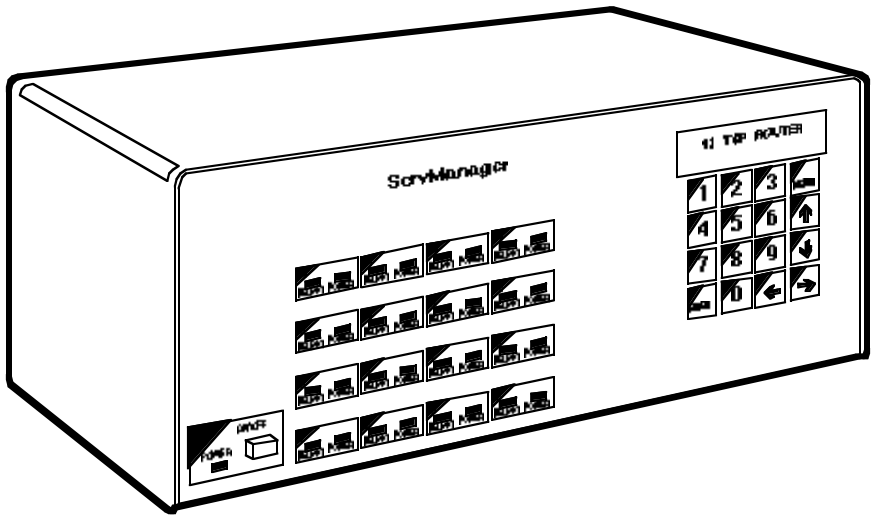
ServManager

Manage up to 256 IBM PC compatible, Sun, and/or Apple Macintosh CPUs using a single keyboard, monitor, and mouse.



Key Features

▶ *Access up to 256 IBM, Mac, and Sun type CPUs with a single monitor, keyboard, and mouse.*

▶ *Add easy on-screen menus with the ServSwitch Overlay Option Board.*

▶ *Use any of a variety of keyboard and mouse combinations; use any of a variety of video types at resolutions up to 1280 x 1024.*

▶ *Select CPUs from the keyboard, from the unit's front panel, or with keyboard commands from a PC.*

▶ *Quickly assess and configure the unit with the front-panel LEDs, display, and keypad.*

▶ *Download firmware updates directly into the unit's flash ROM.*

Managing a room full of servers of different platforms used to be a real challenge. You not only had to figure out where to put them—even a dozen monitors would eat up most of the tabletop space in an average room—but, once you did, you had to resign yourself to maintaining horrible tangles of cabling and to rushing around the room from keyboard to keyboard.

Now the ServManager—one of our most sophisticated electronic keyboard/video/mouse switches—makes that problem a thing of the past. You can attach as many as 256 IBM® type, Apple® Macintosh®, or Sun® CPUs to a set of ServManagers and use a single shared monitor, keyboard, and mouse to administer them all.

Plus, our updated ServManager now accepts our popular ServSwitch Overlay Option Board for easy on-screen menus.

Just add the ServSwitch Overlay Option Board to your ServManager for easy-to-use on-screen menus. It enables you to:

- Configure CPU, keyboard, and mouse types from an on-screen setup menu.
- Give each server a name that makes sense to you.
- Identify and select attached servers quickly and easily.
- Position the menu window anywhere you choose on your screen.
- Choose the color of the window.
- Program the computer-label fadeout time.

As with all our ServSwitches, the ServManager can also be switched from the front-panel keypad with keyboard commands, or from the the RS-232 serial port. And with the 16-key keypad and built-in alpha-numeric display, you can configure the number of ports, CPU type, and scan time directly from the ServManager as well as from on-screen menus.

(Continued on page 2)

Typical Applications

Use a Sun keyboard and mouse and a true multiscan, multisync monitor to manage a rack full of IBM PC servers, a counter full of Mac servers, and a Sun SPARCstation®.

Cascade ServManagers and other Serv type switches to administer all of the CPUs in a data center.

(From page 1)

Cable management is also simpler. The ServManager's ports are standard DB25 female connectors; all CPUs and the shared peripherals are attached to them with special three-way adapter cables. So, if you need to reorganize CPUs, it's a matter of plugging and unplugging single cables rather than three each.

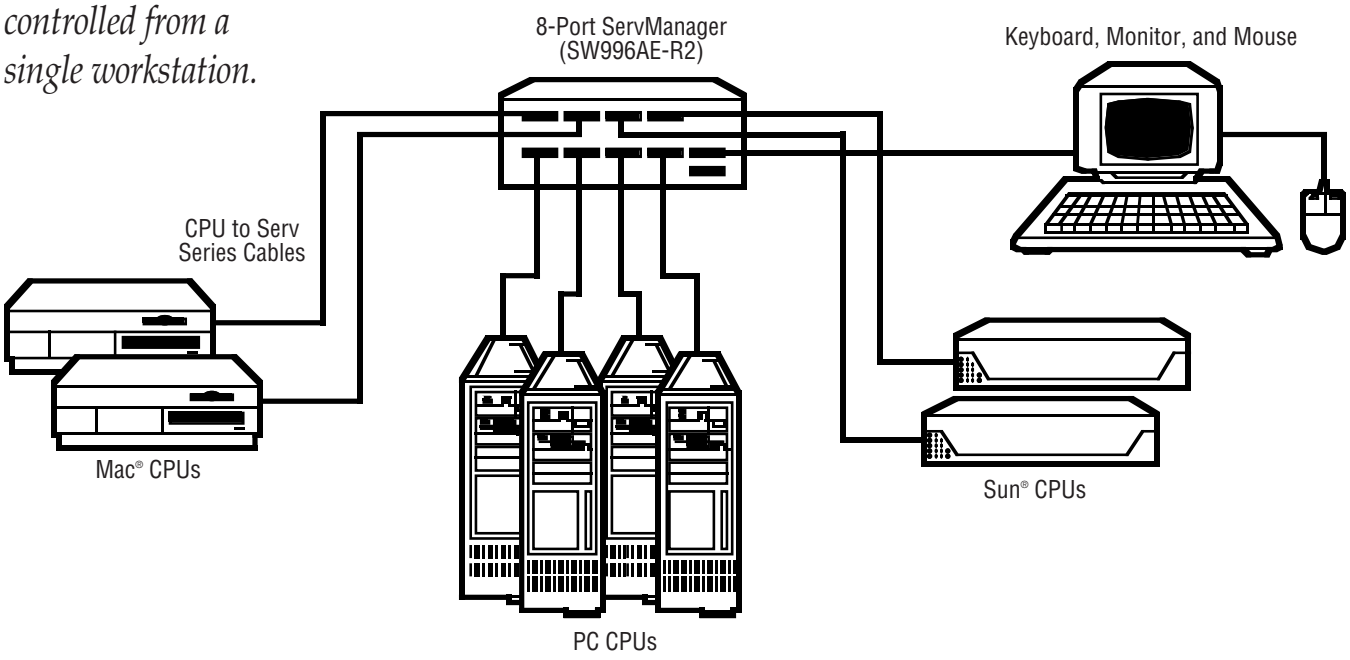
ServManagers support many video standards; they also support many types of keyboards and mice, as long as the shared keyboard and mouse are the same type. See **Specifications** on page 4.

You can configure the ServManager, scan CPU ports, set and trigger a screen-saver function, set the key-repeat rate for the keyboard, and perform other functions by entering simple commands of two to six keystrokes from the shared keyboard. You can also use the display and keypad on the front panel for these purposes.

The ServManager also has an RS-232 port from which you can run cable to a remote PC, Mac®, or Sun workstation. From this computer you can remotely scan ports or download new firmware.

You can add more ports to your ServManager with the Expansion Board. Buy a ServManager with as many ports as you need *now*, then add more ports *later* as your installation expands—it's easy with our 4-Port Expansion Card. You can upgrade the 4-Port ServManager 4 ports at a time to a full 16 ports. Note that this new version of the ServManager requires a different expansion card than our original ServManager.

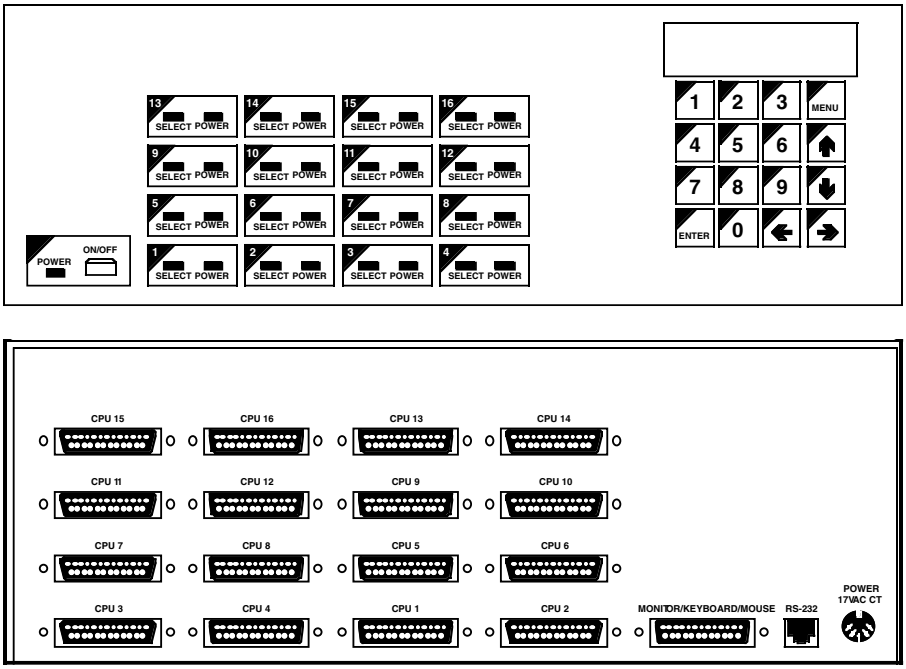
A typical application for the ServManager—PCs, Macintosh CPUs, and Sun CPUs controlled from a single workstation.



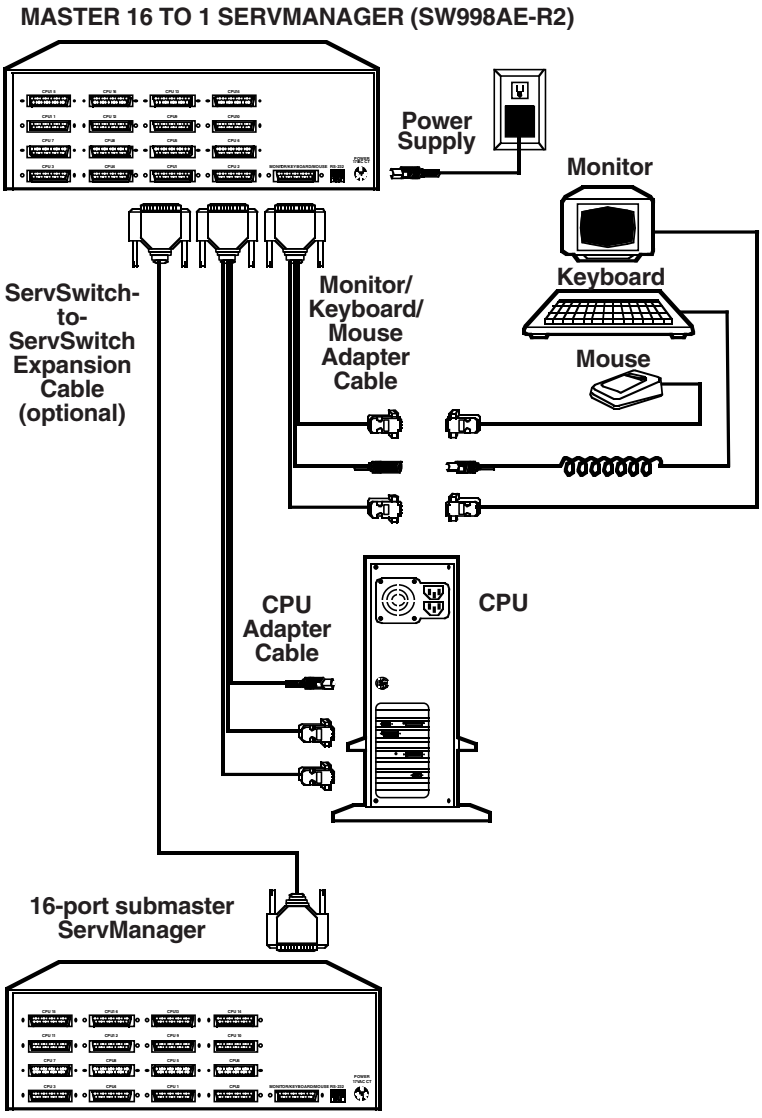
Technically Speaking

- Other devices in the Serv series, such as the original ServSwitch and the Matrix ServSwitch, can be cascaded with ServManagers, but a ServManager must be the master unit unless all of the CPUs are IBM compatible. If one or more submasters are Matrix ServSwitches, two master ServManagers can provide access to all CPUs through *two* monitors, keyboards, and mice. (The ServManager is not compatible with the ServSwitch Multi or the ServSelect.)
- The maximum distance that original Serv cable can be run is 7.6 m end-to-end from the shared peripherals to any CPU. We don't rec-ommend running coaxial cable more than 6.1 m from any ServManager to any attached device—12.2 to 18.3 m end-to-end depending on whether or not you cascade—but we provide such cables in lengths up to 30.5 m because some CPUs can drive the keyboard and mouse signals farther than others. (Consult with your CPU manufacturers about this, and note that screen-image quality will decrease with distance.)
- You will need specially quoted cables to use true monochrome video or IBM 9515, 9517, or 9518 monitors.
- The ServManager is not designed to work with dongles or docking stations at this time.

The front and rear panels of a 16-port (SW998 model) ServManager. Note the vacuum-fluorescent alphanumeric display on the top right of the front panel.



The basic elements of a ServManager setup (IBM type computer equipment is shown).



Specifications

Standards — With original Serv cabling: VGA (colour, monochrome, or page white), EGA (colour or monochrome), or CGA video;
With original Serv cabling (minimum) or coaxial cabling (recommended): SVGA video;
With coaxial cabling: XGA (color or monochrome), Macintosh, or Sun video;
With special cabling: True PC monochrome video

Interfaces — CPU and MONITOR/KEYBOARD/MOUSE Ports: Proprietary composite of:
• IBM AT, IBM PS/2, Macintosh, or Sun keyboard;
• RS-232, PS/2, ADB, or Sun mouse;
• Video (standards listed above);
RS-232 Port: Proprietary variant of EIA RS-232D, DTE

Resolutions — With original Serv cabling: Up to 1024 x 768 noninterlaced;
With coaxial or special cabling: Up to 1280 x 1024 noninterlaced

Protocol —
RS-232: Asynchronous

Data Format —
RS-232: 8 data bits, 1 stop bit, no parity (fixed)

Data Rate —
RS-232: 9600 bps (fixed)

Maximum Distance —
Depending on the CPU, monitor, and video resolution, either: 7.6 m of total original Serv cable from the keyboard, monitor, and mouse to any CPU, including up to 1.5 m from any ServManager to any other Serv unit (submaster) attached to it; or 20 ft. (6.1 m) of coaxial cable—possibly as much as 30.5 m, depending on CPUs—from any ServManager to any device attached to it; Also, 15.2 m of serial cable from any ServManager's RS-232 port to a non-local computer

User Controls — Keyboard commands; Front-mounted ON/OFF pushbutton; Front-mounted 16-key keypad

Indicators — All front-mounted; All models:
(1) 2 x 20 vacuum-fluorescent display panel;
(1) POWER [to unit] LED;
SW995 models:
(4) SELECT, (4) POWER [to CPU] LEDs;
SW996 models:
(8) SELECT, (8) POWER [to CPU] LEDs;
SW997 models:
(12) SELECT, (12) POWER [to CPU] LEDs;
SW998 models:
(16) SELECT, (16) POWER [to CPU] LEDs;

Connectors — All rear-mounted; All models:
(1) 5-pin DIN female: POWER; (1) RJ-12 (6-wire RJ-11) female: RS-232 (for remote control); (1) DB25 female: MONITOR/KEYBOARD/MOUSE;
SW995 models:
(4) DB25 female: CPU;
SW996 models:
(8) DB25 female: CPU;
SW997 models:
(12) DB25 female: CPU;
SW998 models:
(16) DB25 female: CPU;

Power — For power supply: Optimal input: 230 VAC, 50 Hz, 255 mA; Output: 16 VAC CT, 2.5 amps;
Consumption: Up to 23.9 VA

Maximum Altitude — 3048 m

Temperature Tolerance — 0 to 55° C

Humidity Tolerance — 10 to 90% noncondensing

Enclosure — Steel

Size — H14 x W34.3 x D12.4 cm

Weight — Net: 4.5 kg; Shipping: 5.4 kg

The complete package:

- The main ServManager unit.
- Its power supply.
- A users' manual.

Additional equipment you will need:

- A keyboard and mouse. If you are mixing platforms, use a Sun keyboard and mouse if any Sun CPUs are involved; use an IBM type keyboard and mouse if only IBM compatible and Apple CPUs are involved.
- A monitor. If you're mixing platforms, this must be a true multiscan, multisync monitor, capable of syncing to each CPU's video-output frequencies, and compatible with all of the CPUs' video cards. Also, if one of the multiple platforms is IBM, the monitor must be able to accept both separate H/V sync and composite sync. Such monitors are available from NEC, Sony®, and CTX®, but they require specially quoted M/K/M Adapter Cables for use with Sun keyboards and mice.

  We recommend that the monitor be able to display a maximum resolution of not less than 1280 x 1024 at a maximum refresh rate of not less than 75 Hz.
- A Monitor/Keyboard/Mouse (M/K/M) Adapter Cable to connect the shared monitor, keyboard, and mouse to the ServManager.
- CPU Adapter Cables to connect your CPUs to the ServManager.

Additional equipment you might need:

- ServSwitch-to-ServSwitch Cables for cascading.
- The ServSwitch Overlay Option Board for on-screen menus.
- Four-Port Expansion Card if you want to start with minimal ports and add more later.
- An RS-232 cable and adapter for remote switching or upgrading firmware.
- A rackmount kit.
- Station Extenders for extra distance with IBM type shared peripherals.

Ordering Information

The four digits that follow the dash in each cable's product code indicate how long each cable is in feet (one foot = 30.5 cm).

SERVMANAGER UNITS	ORDER CODE
4-Port (for 230 VAC)	SW995AE-R2
8-Port (for 230 VAC)	SW996AE-R2
12-Port (for 230 VAC)	SW997AE-R2
16-Port (for 230 VAC)	SW998AE-R2

OPTIONAL ACCESSORIES	ORDER CODE
ServSwitch Overlay Option Board	SW720C-R3
4-Port Expansion Card	KV5000C
19" Rackmount Kit	SW728

CABLES	ORDER CODE
Monitor/Keyboard/Mouse Adapter Cables for:	
VGA monitor, IBM AT keyboard, serial RS-232 mouse (standard)	EHN052-0001
VGA monitor, IBM AT keyboard, serial RS-232 mouse (coaxial)	EHN270-0yyy*
EGA/CGA monitor, IBM AT keyboard, serial RS-232 mouse	EHN053-0001
VGA monitor, IBM PS/2 keyboard and mouse (standard)	EHN054-0001
VGA monitor, IBM PS/2 keyboard and mouse (coaxial)	EHN273-0yyy*
Macintosh monitor, keyboard, mouse	EHN210-0001
Sun monitor, keyboard, mouse	EHN200-0001
CPU Adapter Cables for:	
VGA video output, IBM AT keyboard input, serial RS-232 mouse input (standard)	EHN048-0xxx*
VGA video output, IBM AT keyboard input, serial RS-232 mouse input (coaxial)	EHN271-0yyy*
EGA/CGA video output, IBM AT keyboard input, serial RS-232 mouse input	EHN049-0xxx*
VGA video output, IBM PS/2 keyboard and mouse input (standard)	EHN051-0xxx*
VGA video output, IBM PS/2 keyboard and mouse input (coaxial)	EHN272-0yyy*
Serv-Series-to-Serv-Series expansion cable (standard)	EHN055-0001
Serv-Series-to-Serv-Series expansion cable (coaxial)	EHN274-0yyy*

STATION EXTENDERS	ORDER CODE
CPU to ServManager (RS-232 Mouse)	AC254A
ServManager to Station (RS-232 Mouse)	AC255A
CPU to ServManager (PS/2 Mouse)	AC257A
ServManager to Station (PS/2 Mouse)	AC258A
Station-Extender Cable	EHN250-0zzz*

*For some cables, variables are shown in place of the last three digits of the product code because the cables come in several stock lengths. For standard CPU adapter cables (those with *xxx*'s), the last three digits can be "005," "010," or "020" for 5-foot (1.5-m), 10-foot (3-m), or 20-foot (6.1-m) cables respectively. For coaxial cables (those with *yyy*'s), these last three digits can be "005," "010," "020," "050," "075," or "100" for 5-foot (1.5-m), 10-foot (3-m), etc., cables respectively. For the Station Extender cable (EHN250-0zzz), the digits can be "050," "100," "150," or "200," for 50-foot (15.2-m), 100-ft. (30.5-m), 150-ft (45.7-m), or 200-ft. (61-m) cables respectively.