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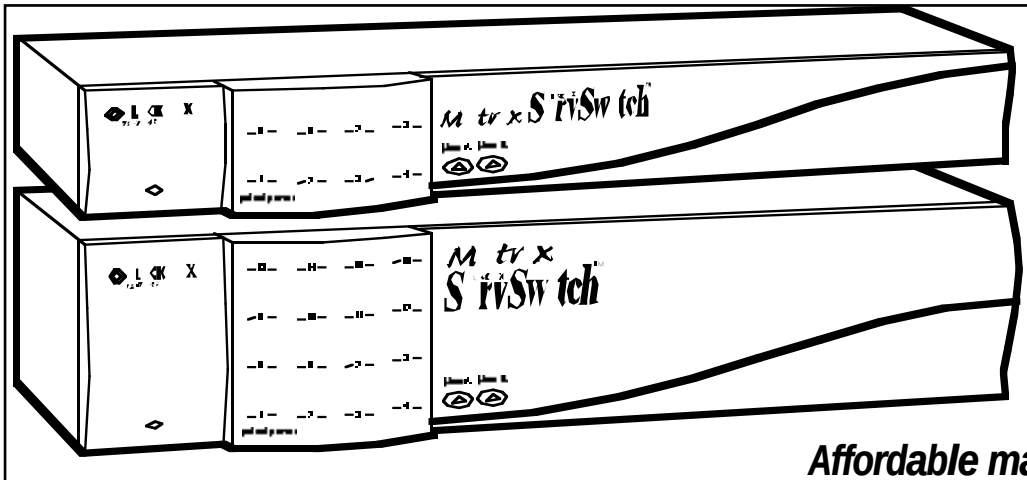
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MATRIX SERVSWITCH™



Affordable many-to-many multiplatform KVM switching.

Key Features

- ***Models available for PC-only and PC/Sun multiplatform control.***
- ***Daisychain up to 64 units with optional Expansion Module.***
- ***As many as 4 users can control up to 1000 CPUs.***
- ***Supports resolutions up to 1600 x 1280.***
- ***Optional adapter also connects to Mac.***
- ***Keyboard commands and on-screen menus.***
- ***Flexible access-control measures for greater security.***

You have a crowded server room. Perhaps all of your computers are IBM® or compatibles; maybe some of them are SGI™, RS/6000®, or Sun® boxes. You have a desire to manage all the computers with just two or four keyboard, monitor, and mouse control stations.

A Matrix ServSwitch is what you need. Some models support IBM PS/2® and PC/AT® only, while others support IBM PS/2, PC/AT, RS/6000, SGI, and Sun CPUs; many keyboard and mouse protocols; and VGA, SVGA, XGA, RS/6000, and SGI video—up to 1600 x 1280 resolution! With extra adapters, you can also attach Mac® computers to the Matrix.

As many as 16 computers can be attached to a Matrix, or 1000 computers to a daisychain of 64 such switches. In either case, you can attach two control stations; up to four control stations can be connected, but they'll have to contend for access.

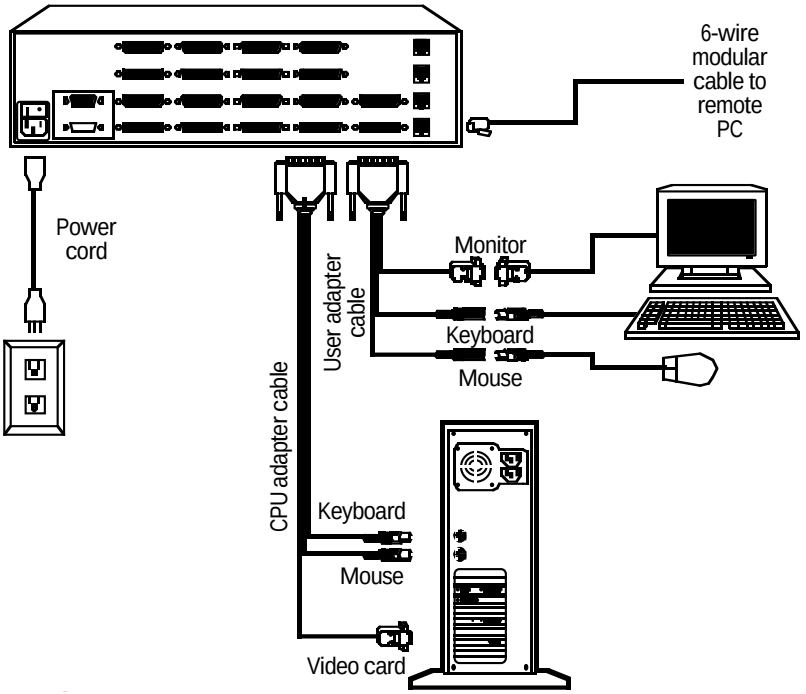
Each Matrix has two or four user ports (KVM 1 and 2 or KVM 1, 2, 3, and 4) and either 4, 8, or 16 CPU ports. The Matrix can also accommodate an Expansion Module (SW740C-R3-B), which can be ordered separately. With Expansion Modules installed, you can daisychain Matrix chassis to reach larger or more widely separated groups of CPUs.

The Multiplatform ServSwitches with serial support have an RJ-12, 6-conductor, RS-232 serial port for each installed system CPU card. This connector provides a serial interface to the ServSwitch from a computer terminal, a standalone computer, or a notebook computer that is not connected to any CPU port.

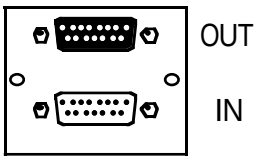
Via the RS-232 serial port, you can upgrade the system firmware, restore the unit to its factory default settings, configure an expansion switch, or switch any KVM station to any CPU port. An adapter and serial cable are provided for the serial interface.

You also won't have to worry about unauthorised people using or seeing what they shouldn't. You can assign users and computers to password-protected access groups. Computers can belong to multiple groups, but users can belong to only one. Users will only be able to access computers in their group, and you define the level of access they'll have.

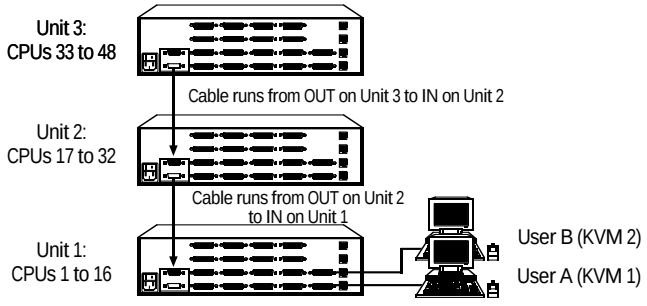
Right: The basic elements of a single Matrix ServSwitch setup are shown: connections to a user station (keyboard, monitor, and mouse), a CPU, and AC power. IBM PC equipment is shown, but the principles will be similar for all equipment types. Connectors will vary depending on the types of equipment you are installing.



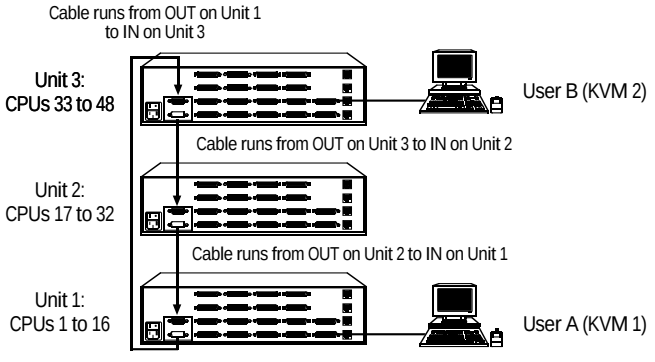
Right: If you need to share access to a large number of CPUs, think about putting in a Matrix ServSwitch daisychain made up of units with Expansion Modules like this one installed. The switch's expansion port comes with a Terminator Module installed, but once you swap in an Expansion Module, you'll be able to attach one Matrix ServSwitch to another.



Expansion Module



Bus



Ring

Above: Here are the two basic options for designing your daisychain layout:.

- If both of your users are on one chassis, use the bus topology (left).
- If your users are located on different chassis, use the ring topology (right).*

*It is always important to keep in mind that only one user at a time can use the bus that interconnects daisychained Matrix ServSwitch units. For example, if any user on KVM 1 selects a CPU attached to a switch other than his own, no other KVM 1 user can select a CPU.

Configure the Matrix ServSwitch with powerful, easy-to-use menus like the one shown here.

```
Configure system

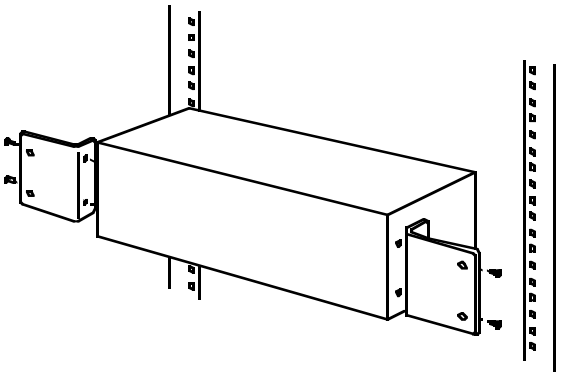
System settings
Configure password          ********
Starting computer number         0
Maximum computer                64

Keyboard settings
PC keyboard rate (chars/sec)    20
PC keyboard delay              Fast

Appearance
Menu color scheme          Night sky
Screen saver                 Weaving
Screen saver time (seconds)   1200
Background color              Cyan
Text color                   Black
Position             X= 25   Y= 45
Fadeout    (seconds)              5

Password to configure box
```

If you can use a screwdriver, you can install the Rackmount Kits.



What else you might need:

- CPU Adapter Cables, User Adapter Cables, and (if you're daisychaining) Expansion Cables.
- Keyboards, mice, and monitors for your users. If you're mixing platforms, we recommend true multiscan, multisync monitors 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 monitors must be able to accept both separate H/V sync and composite sync. (Such monitors are available from NEC®, Sony®, and CTX®.)

  We recommend that the monitors 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.
- *To attach an Apple® Mac computer:*
  - One ServSwitch Micro Mac Converter (our product code KV99MCON) that attaches directly to the CPU port and translates the Apple Desktop Bus (ADB) signals into PS/2 keyboard and mouse signals.
  - One G3™, G4™, or regular Macintosh® style CPU Extension Cable.
  - *If the Mac needs to see ID bits from its monitor:* One Mac Video Adapter for ServSwitch (our product code KV99MA) that attaches to the CPU's video port and spoofs the ID bits.
- *To attach a Sun computer:*
  - One Sun style CPU Extension Cable.
- *To daisychain a Matrix ServSwitch unit:* An Expansion Module.
- *To rackmount a Matrix ServSwitch unit:* A ServSwitch Rackmount Kit.

Specifications

Compliance: CE, FCC Part 15 Subpart B Class A, IC Class A/ classe A

Standards:
- With original Serv cabling: VGA (color or monochrome/ page white) video;
- With original Serv cabling (minimal) or coaxial cabling (recommended): SVGA and (with KV99MA adapter) Mac video;
- With coaxial cabling: XGA (color or monochrome), RS/6000, SGI, or (SW761A-R4, SW762A-R4, SW763A-R4, SW767A-R4, SW768A-R4, SW769A-R4 only): Sun video

Data Format: 8 data bits, 1 stop bit, no parity (fixed)

Data Rate: 9600 bps, 57.6 kbps

Distance (Maximum):
- Matrix ServSwitch to attached devices: 20 ft. (6.1 m) of CPU or User Cable; depending on CPUs, monitor, and video resolution, possibly as much as 100 ft. (30.5 m);
- Between any two Matrix units: 100 ft. (30.5 m) of expansion cable;
- From any Matrix RS-232 port to computer's serial port: 50 ft. (15.2 m) of serial cable

Protocol: Async

Hardware Required: Monitor that supports your computers' highest video standard; multiplatform applications require a multisync model capable of forming video from either composite sync or separate horizontal and vertical sync signals

Resolution: Up to 1600 x 1280

User Controls:
- System: Keyboard commands and on-screen menus;
- On Matrix chassis (2-user only): (2) front-mounted "switch to next port" buttons: (1) for User A (KVM 1), (1) for User B (KVM 2); (1) rear-mounted on/off switch;
- On Expansion Module: Board-mounted Bus/Ring jumper

Interface:
- On CPU and KVM ports and on In and Out ports of expansion modules, proprietary composite:
  - Keyboard: IBM PS/2, PC/AT, or (SW761A-R4, SW762A-R4, SW763A-R4, SW767A-R4, SW768A-R4, SW769A-R4 only) Sun compatible;
  - Mouse: PS/2, RS-232, or (SW761A-R4, SW762A-R4, SW763A-R4, SW767A-R4, SW768A-R4, SW769A-R4 only): Sun compatible
  - KV99MCON adapter also supports ADB® (Mac compatible) keyboard and mouse ports;
- RS-232 ports: TIA/EIA proprietarily pinned on RJ-12 ("6-wire RJ-11") connectors, DTE

Connectors: All 2 User models: (2) DB25 F for user (KVM) connections, (1) IEC 320 M power inlet;
- SW741A-R3, SW761A-R4: (1) RJ-12 F for serial management, (4) DB25 F CPU ports;
- SW742A-R3, SW762A-R4: (2) RJ-12 F for serial management, (8) DB25 F CPU ports;
- SW743A-R3, SW763A-R4: (4) RJ-12 F for serial management, (16) DB25 F CPU ports;
- All 4 User models: (4) DB25 F for user (KVM) connections, (1) IEC 320 M power inlet;
- SW764A-R3, SW767A-R4: (1) RJ-12 F for serial management, (4) DB25 F CPU ports;
- SW765A-R3, SW768A-R4: (2) RJ-12 F for serial management, (8) DB25 F CPU ports;
- SW766A-R3, SW769A-R4: (4) RJ-12 F for serial management, (16) DB25 F CPU ports;
- Can be added to Matrix by installing SW740C-R3-B Expansion Module: (1) DB15 F for bus (daisychain) input to switch, (1) DB15 M for bus (daisychain) output from switch

Indicators: All front-mounted LEDs:
- All models: (1) Power for switch;
- SW741A-R3, SW761A-R4, SW764A-R3, SW767A-R4: (8) for CPUs: (4) Select, (4) Power;
- SW742A-R3, SW762A-R4, SW765A-R3, SW768A-R4: (16) for CPUs: (8) Select, (8) Power;
- SW743A-R3, SW763A-R4, SW766A-R3, SW769A-R4: (32) for CPUs: (16) Select, (16) Power

Temperature Tolerance: 32 to 113°F (0 to 45°C)

Humidity Tolerance: 5 to 80% noncondensing

Enclosure: Steel

Power:
- SW741A-R3, SW742A-R3, SW761A-R4, SW762A-R4: 85–250 VAC, 47–63 Hz;
- SW743A-R3, SW763A-R4, SW764A-R3, SW765A-R3, SW766A-R3, SW767A-R4, SW768A-R4, SW769A-R4: 90–264 VAC, 47–63 Hz

Size:
- SW741A-R3, SW742A-R3, SW761A-R4, SW762A-R4: 1.75"H (1U) x 16.8"W x 4.8"D (4.4 x 42.7 x 12.2 cm);
- SW743A-R3, SW763A-R4, SW764A-R3, SW765A-R3, SW766A-R3, SW767A-R4, SW768A-R4, SW769A-R4: 3.5"H (2U) x 16.8"W x 4.8"D (8.9 x 42.7 x 12.2 cm);
- SW740C-R3-B: 1.6"H x 2.3"W x 2.6"D (4.1 x 5.8 x 6.6 cm)

Weight:
- SW741A-R3, SW761A-R4: 4.3 lb. (2 kg);
- SW742A-R3, SW762A-R4: 4.9 lb. (2.2 kg);
- SW743A-R3, SW763A-R4: 6 lb. (2.7 kg);
- SW740C-R3-B: 0.1 lb. (< 0.1 kg);
- SW764A-R3, SW765A-R3, SW767A-R4, SW768A-R4: 4 lb. (1.8 kg);
- SW766A-R3, SW769A-R4: 8 lb. (3.6 kg)

The complete package:

- The Matrix ServSwitch with a Terminator Module and a blank cover plate installed in its Expansion Port. (The Expansion Module is sold separately as product code SW740C-R3-B.)
- A power cord.
- A 6-ft. (1.8-m) serial cable with RJ-12 ("6-wire RJ-11") plugs.
- An RJ-12 female to DB9 female modular adapter.
- A users' manual.

Ordering Information

ITEM	CODE
Matrix ServSwitch	
For PC	
2 Users x 4 CPUs	SW741A-R3
2 Users x 8 CPUs	SW742A-R3
2 Users x 16 CPUs	SW743A-R3
4 Users x 4 CPUs	SW764A-R3
4 Users x 8 CPUs	SW765A-R3
4 Users x 16 CPUs	SW766A-R3
Multiplatform with serial support	
2 Users x 4 CPUs	SW761A-R4
2 Users x 8 CPUs	SW762A-R4
2 Users x 16 CPUs	SW763A-R4
4 Users x 4 CPUs	SW767A-R4
4 Users x 8 CPUs	SW768A-R4
4 Users x 16 CPUs	SW769A-R4
Matrix ServSwitch Expansion Module	SW740C-R3-B
Remember to order CPU cables…	
CPU/Server to Matrix ServSwitch Cables (CPU Cables) with Audio	
Standard	
IBM PS/2 Style	
5-ft. (1.5-m)	EHN151-0005
10-ft. (3-m)	EHN151-0010
20-ft. (6.1-m)	EHN151-0020
IBM PC/AT Style	
5-ft. (1.5-m)	EHN048-0005
10-ft. (3-m)	EHN048-0010
Coaxial	
Universal IBM Style	
5-ft. (1.5-m)	EHN382-0005
10-ft. (3-m)	EHN382-0010
20-ft. (6.1-m)	EHN382-0020
35-ft. (10.7-m)	EHN382-0035
50-ft. (15.2-m)	EHN382-0050
75-ft. (22.9-m)	EHN382-0075
100-ft. (30.5-m)	EHN382-0100
SGI Style with 13W3 Video Connectors	
5-ft. (1.5-m)	EHN500-0005
10-ft. (3-m)	EHN500-0010
RS/6000 Style with 13W3 Video Connectors	
5-ft. (1.5-m)	EHN520-0005
10-ft. (3-m)	EHN520-0010
Matrix ServSwitch USB Coax CPU Cables	
5-ft. (1.5-m)	EHN485-0005
10-ft. (3-m)	EHN485-0010
20-ft. (6.1-m)	EHN485-0020
35-ft. (10.7-m)	EHN485-0035
50-ft. (15.2-m)	EHN485-0050
75-ft. (22.9-m)	EHN485-0075
100-ft. (30.5-m)	EHN485-0100

Ordering Information (continued)

ITEM	CODE
Remember to order user cables…	
ServSwitch to Keyboard/Monitor/Mouse Cables (User Cables)	
Standard	
IBM PS/2 Style	
1-ft. (0.3-m)	EHN154-0001
5-ft. (1.5-m)	EHN154-0005
10-ft. (3-m)	EHN154-0010
20-ft. (6.1-m)	EHN154-0020
IBM PC/AT Style*	
1-ft. (0.3-m)	EHN052-0001
5-ft. (1.5-m)	EHN052-0005
10-ft. (3-m)	EHN052-0010
20-ft. (6.1-m)	EHN052-0020
* *You can use the PS/2 Style User Cable to control all types of CPUs, but you can only use the PC/AT Style User Cable to control PC/AT style CPUs—the Matrix ServSwitch converts serial-mouse data to PS/2 mouse data, but not vice versa.*	
Coaxial	
IBM PS/2 Style	
5-ft. (1.5-m)	EHN383-0005
10-ft. (3-m)	EHN383-0010
20-ft. (6.1-m)	EHN383-0020
35-ft. (10.7-m)	EHN383-0035
50-ft. (15.2-m)	EHN383-0050
75-ft. (22.9-m)	EHN383-0075
100-ft. (30.5-m)	EHN383-0100
IBM PC/AT Style	
5-ft. (1.5-m)	EHN270-0005
10-ft. (3-m)	EHN270-0010
20-ft. (6.1-m)	EHN270-0020
35-ft. (10.7-m)	EHN270-0035
50-ft. (15.2-m)	EHN270-0050
75-ft. (22.9-m)	EHN270-0075
100-ft. (30.5-m)	EHN270-0100
SGI Style, 1-ft. (0.3-m)	EHN501-0001
RS/6000 Style, 1-ft. (0.3-m)	EHN521-0001
Serial	
DTE Cables with DB9 Female Connector	
5-ft. (1.5-m)	EHN290-0005
10-ft. (3-m)	EHN290-0010
DTE Cables with DB25 Female Connector	
5-ft. (1.5-m)	EHN291-0005
10-ft. (3-m)	EHN291-0010
DCE Cables with DB9 Male Connector	
5-ft. (1.5-m)	EHN292-0005
10-ft. (3-m)	EHN292-0010
DCE Cables with DB25 Male Connector	
5-ft. (1.5-m)	EHN293-0005
10-ft. (3-m)	EHN293-0010

Ordering Information (continued)

ITEM	CODE
Expansion Cables	
10-ft. (3-m)	KV140010
20-ft. (6.1-m)	KV140020
35-ft. (10.7-m)	KV140035
50-ft. (15.2-m)	KV140050
100-ft. (30.5-m)	KV140100
To rackmount your ServSwitch, order…	
Rackmount Kits	
For 19" Racks	
4 or 8 CPUs	RMK19B
16 CPUs	RMK19C
For 23" Racks	
4 or 8 CPUs	RMK23B
16 CPUs	RMK23C
For 24" Racks	
4 or 8 CPUs	RMK24B
16 CPUs	RMK24C
To connect Apple Macintosh computers, you will need…	
ServSwitch Micro Mac Converter	KV99MCON
For older Mac models that must see monitor ID: Mac Video Adapter for ServSwitch	KV99MA
CPU Adapter Cables (specify length)	
With DB15 Video Connectors (for older Mac models)	
Standard	
5-ft. (1.5-m)	EHN215-0005
10-ft. (3-m)	EHN215-0010
20-ft. (6.1-m)	EHN215-0020
With DB15 Video Connectors (for older Mac models)	
Coaxial	
5-ft. (1.5-m)	EHN208-0005
10-ft. (3-m)	EHN208-0010
20-ft. (6.1-m)	EHN208-0020
35-ft. (10.7-m)	EHN208-0035
50-ft. (15.2-m)	EHN208-0050
75-ft. (22.9-m)	EHN208-0075
100-ft. (30.5-m)	EHN208-0100
With VGA (HD15) Connectors (for Mac G3 and G4 models)	
Standard	
5-ft. (1.5-m)	EHN550-0005
10-ft. (3-m)	EHN550-0010
20-ft. (6.1-m)	EHN550-0020
Coaxial	
5 ft. (1.5-m)	EHN560-0005
10-ft. (3-m)	EHN560-0010
20-ft. (6.1-m)	EHN560-0020
35-ft. (10.7-m)	EHN560-0035
50-ft. (15.2-m)	EHN560-0050
75-ft. (22.9-m)	EHN560-0075
100-ft. (30.5-m)	EHN560-0100

Ordering Information (continued)

ITEM	CODE
To connect Sun computers, you will need…	
CPU Adapter Cables (specify length)	
With 13W3 Video Connectors	
5-ft. (1.5-m)	EHN206-0005
10-ft. (3-m)	EHN206-0010
20-ft. (6.1-m)	EHN206-0020
35-ft. (10.7-m)	EHN206-0035
50-ft. (15.2-m)	EHN206-0050
75-ft. (22.9-m)	EHN206-0075
100-ft. (30.5-m)	EHN206-0100
With VGA (HD15) Video Connectors	
5-ft. (1.5-m)	EHN515-0005
10-ft. (3-m)	EHN515-0010
20-ft. (6.1-m)	EHN515-0020
35-ft. (10.7-m)	EHN515-0035
50-ft. (15.2-m)	EHN515-0050
75-ft. (22.9-m)	EHN515-0075
100-ft. (30.5-m)	EHN515-0100

Artisan Technology Group is an independent supplier of quality pre-owned equipment

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