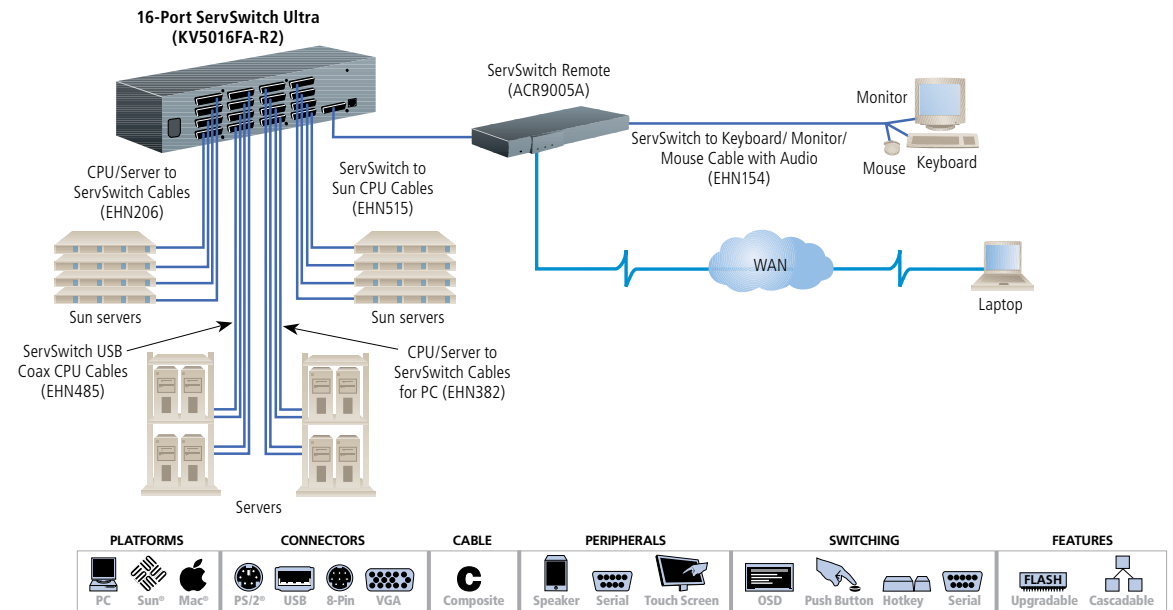ServSwitch Ultra

Multiplatform access, management, and control—plus it's ready for your audio or serial applications.

FEATURES

» Optimized for audio applications! Just use standard or coax audio cables.
» Manages PC, Sun, Mac, and PC UNIX servers all at once!
» Supports USB keyboards and mice.
» Support for audio and serial, too!
» Daisychain multiple units to manage up to 256 servers!
» Features on-screen menus for switching servers.
» Flash-ROM upgradable.

Multiplatform connectivity and control!

16-Port ServSwitch Ultra
(KV5016FA-R2)

ServSwitch Remote
(ACR9005A)

Monitor

ServSwitch to Keyboard/ Monitor/
Mouse Cable with Audio
(EHN154)

Mouse   Keyboard

CPU/Server to
ServSwitch Cables
(EHN206)

ServSwitch to
Sun CPU Cables
(EHN515)

WAN

Laptop

Sun servers   Sun servers

ServSwitch USB
Coax CPU Cables
(EHN485)

CPU/Server to
ServSwitch Cables
for PC (EHN382)

Servers

PLATFORMS			CONNECTORS				CABLE	PERIPHERALS			SWITCHING				FEATURES	
PC	Sun®	Mac®	PS/2®	USB	8-Pin	VGA	Composite	Speaker	Serial	Touch Screen	OSD	Push Button	Hotkey	Serial	Upgradable	Cascadable

OVERVIEW

Exactly how much control and convenience do you need to manage your servers?

Chances are, you can't have enough. That's why we made the ServSwitch Ultra™.

With the ServSwitch Ultra, you can manage multiple-platform servers that include PC, Sun®, Mac®, and certain PC-based UNIX® platforms like SGI™, RS/6000®, and DEC™ Alpha.

Not only is the ServSwitch Ultra versatile enough to support multiple platforms, but it also supports USB keyboards and mice as well as serial devices such as touch-screen monitors. Plus, all units are optimized for use with audio applications.

All ServSwitch Ultra units feature convenient on-screen menus that make system configuration and server selection a snap. Choose a model that fits your installation.

The ServSwitch Ultra is expandable, too. Install an Expansion Card to add 4 ports—or daisychain units to manage up to 256 servers!

Let's get personal.

From the main configuration page, the ServSwitch Ultra on-screen displays enable you to configure the ServSwitch™, change to different servers, and see the server to which you are connected. Overlay parameters like screen colors, screen fonts, and how long server labels are displayed are also programmed through the on-screen menus.

For ease of use, the on-screen display enables you to select names for each server. These names will show up on the screen when you select the corresponding port. And when you configure the overlay page, you can select such things as the screen saver, screen-saver time, computer-select window appearance, and computer-label appearance. You can truly make the ServSwitch Ultra yours.

What kind of monitor?

Use a multisync monitor that can sync to the highest horizontal frequency of all video systems being shared.

How the monitor identifies itself is also important. The ID bits it sends may not be recognizable to different video systems. We recommend a multi-sync monitor for mixed video platform systems.

Your monitor should also have the appropriate adapter cables to enable it to work with each video platform in your system. Although the ServSwitch Ultra converts keyboard and mouse signals in multiplatform configurations, it won't convert video signals.

Upgrade the firmware.

The Flash ROM can be upgraded at power-up, receiving a programming file at either 57.6 kbps or 9600 bps (user-selectable) from a PC's serial port.

To do this, connect the serial port of a PC to the serial port of the ServSwitch Ultra via the DB25M–RJ-45 adapter and modular cable that comes with the switch.

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NETWORK SERVICES

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Top: KV5008SA-R2;
bottom: KV5016FA-R2

Expand your system.

It's easy to daisychain ServSwitch Ultra units, and you can manage large server systems that include as many as 256 CPUs. Use the ServSwitch to ServSwitch Expansion Cable (EHN274) to connect multiple ServSwitch units together—call Tech Support for ordering information. Submaster units are chained off the master unit by connecting them from the master's CPU ports to the submaster's keyboard/monitor/mouse input. When the master unit is configured, all connected submaster units are automatically configured.

Add more ports.

Add four additional ports to your full-size ServSwitch Ultra with a 4-Port Expansion Card. (Since it's a tricky procedure, we require that our experts do the installation for you at our facility. There's no extra charge.)

Install it in a rack.

If space is a premium, keep multiple switches neatly racked in your computer room. Choose from three different-sized Rack Kits: 19", 23", and 24".

TECH SPECS

Approval — UL®, CSA, CE

Distance (Maximum) — 20 ft. (6.1 m) using standard ServSwitch cable; for higher resolutions and greater distances, use coax cable (up to 100 ft. [30.5 m])

Hardware Requirements — Multisync monitor required; should be able to match the highest video standard used and form video from either Composite sync or separate vertical and horizontal sync signals

Resolution (Maximum) — All PC, Mac®, and Sun® up to 1600 x 1280 noninterlaced video; monitor must support video resolution

Supported CPUs — PS/2®; IBM® 286, 386, 486; Pentium® or compatible; Mac; Sun; and PC UNIX®, including SGI™, RS/6000®, and DEC™ Alpha

Connectors —
(1) IEC 320 input for power;
(1) RJ-11 6-wire for serial control and Flash-ROM upgrades;
(1) DB25 F for common KVM; (1) DB25 F for each CPU port

Indicators — LEDs: (1) Power; (1) CPU Selected and (1) CPU Power for every CPU port

Power — 100 to 240 VAC, 50 to 60 Hz (autosensing) with IEC 320 connector

Size — Mini: 1.75"H x 8.9"W x 4.8"D (4.4 x 22.6 x 12.2 cm);
Slim: 1.75"H x 13.8"W x 4.8"D (4.4 x 35.1 x 12.2 cm);
Full: 3.5"H x 13.8"W x 4.8"D (8.9 x 35.1 x 12.2 cm)

Weight —
KV5002MA-R2, KV5004MA-R2: 4 lb. (1.8 kg);
KV5004SA-R2: 5 lb. (2.3 kg);
KV5008SA-R2: 5.3 lb. (2.4 kg);
KV5008FA-R2: 8 lb. (3.6 kg);
KV5012FA-R2: 8.3 lb. (3.8 kg);
KV5016FA-R2: 9 lb. (4.1 kg)

Item	Code
ServSwitch Ultra	
Mini Chassis Style	
2-Port	**KV5002MA-R2**
4-Port	**KV5004MA-R2**
Slim Chassis Style	
4-Port	**KV5004SA-R2**
8-Port	**KV5008SA-R2**
Full Chassis Style	
8-Port	**KV5008FA-R2**
12-Port	**KV5012FA-R2**
16-Port	**KV5016FA-R2**
To mount your ServSwitch, order…	
Rackmount Kits	
19" Rackmount Kit for Mini Chassis	**RMK19M**
23" Rackmount Kit for Mini Chassis	**RMK23M**
24" Rackmount Kit for Mini Chassis	**RMK24M**
19" Rackmount Kit for Slim Chassis	**RMK19B**
23" Rackmount Kit for Slim Chassis	**RMK23B**
24" Rackmount Kit for Slim Chassis	**RMK24B**
19" Rackmount Kit for Full Chassis	**RMK19C**
23" Rackmount Kit for Full Chassis	**RMK23C**
24" Rackmount Kit for Full Chassis	**RMK24C**
To expand your 8- or 12-Port Full Chassis to 12 or 16 ports, order…	
4-Port Expansion Card	**KV5000C-R2**

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EHN151-0005

Item	Code
Connect your ServSwitch Ultra with the following cables.	
For distances up to 20 feet (6.1 m), order standard cables.	
For higher resolutions and greater distances, order coax cables…	
CPU/Server to ServSwitch Cables (CPU Cables)	
PS/2—Standard ([1] HD15, [2] 6-Pin Mini-DIN)	
5-ft. (1.5-m)	**EHN151-0005**
10-ft. (3-m)	**EHN151-0010**
20-ft. (6.1-m)	**EHN151-0020**
PS/2—Standard with Audio	
([1] HD15, [2] 6-Pin Mini-DIN, [1] 3.5-mm stereo)	
5-ft. (1.5-m)	**EHN151A-0005**
10-ft. (3-m)	**EHN151A-0010**
20-ft. (6.1-m)	**EHN151A-0020**
AT®—Standard ([1] HD15, [1] 5-Pin DIN, [1] DB9)	
5-ft. (1.5-m)	**EHN048-0005**
10-ft. (3-m)	**EHN048-0010**
PS/2—Coax (HD15, [2] 6-Pin Mini-DIN)	
5-ft. (1.5-m)	**EHN382-0005**
10-ft. (3-m)	**EHN382-0010**
20-ft. (6.1-m)	**EHN382-0020**
35-ft. (10.6-m)	**EHN382-0035**
50-ft. (15.2-m)	**EHN382-0050**
75-ft. (22.8-m)	**EHN282-0075**
100-ft. (30.4-m)	**EHN282-0100**
PS/2—Coax with Audio	
([1] HD15, [2] 6-Pin Mini-DIN, [1] 3.5-mm Stereo)	
5-ft. (1.5-m)	**EHN382A-0005**
10-ft. (3-m)	**EHN382A-0010**
20-ft. (6.1-m)	**EHN382A-0020**
35-ft. (10.6-m)	**EHN382A-0035**
50-ft. (15.2-m)	**EHN382A-0050**
75-ft. (22.8-m)	**EHN382A-0075**
100-ft. (30.4-m)	**EHN382A-0100**
PS/2—Coax with Serial	
([1] HD15, [2] 6-Pin Mini-DIN, [1] DB9)	
1-ft. (0.3-m)	**EHN382S-0001**
5-ft. (1.5-m)	**EHN382S-0005**
10-ft. (3-m)	**EHN382S-0010**
20-ft. (6.1-m)	**EHN382S-0020**
35-ft. (10.6-m)	**EHN382S-0035**
50-ft. (15.2-m)	**EHN382S-0050**
75-ft. (22.8-m)	**EHN382S-0075**
100-ft. (30.4-m)	**EHN382S-0100**
Multiplatform USB—Coax ([1] HD15, [1] USB Type A)	
5-ft. (1.5-m)	**EHN485-0005**
10-ft. (3-m)	**EHN485-0010**
20-ft. (6.1-m)	**EHN485-0020**
35-ft. (10.6-m)	**EHN485-0035**
50-ft. (15.2-m)	**EHN485-0050**
75-ft. (22.8-m)	**EHN485-0075**
100-ft. (30.4-m)	**EHN485-0100**

Item	Code
CPU/Server to ServSwitch Cables (Continued)	
Sun 13W3—Coax ([1] 13W3, [1] 8-Pin Mini-DIN)	
5-ft. (1.5-m)	**EHN206-0005**
10-ft. (3-m)	**EHN206-0010**
20-ft. (6.1-m)	**EHN206-0020**
35-ft. (10.6-m)	**EHN206-0035**
50-ft. (15.2-m)	**EHN206-0050**
75-ft. (22.8-m)	**EHN206-0075**
100-ft. (30.4-m)	**EHN206-0100**
Sun 13W3—Coax with Audio	
([1] 13W3, [1] 8-Pin Mini-DIN, [2] 3.5-mm Stereo)	
1-ft. (0.3-m)	**EHN206A-0001**
5-ft. (1.5-m)	**EHN206A-0005**
10-ft. (3-m)	**EHN206A-0010**
20-ft. (6.1-m)	**EHN206A-0020**
35-ft. (10.6-m)	**EHN206A-0035**
50-ft. (15.2-m)	**EHN206A-0050**
75-ft. (22.8-m)	**EHN206A-0075**
100-ft. (30.4-m)	**EHN206A-0100**
Sun VGA—Coax ([1] HD15, [1] 8-Pin Mini-DIN)	
5-ft. (1.5-m)	**EHN515-0005**
10-ft. (3-m)	**EHN515-0010**
20-ft. (6.1-m)	**EHN515-0020**
35-ft. (10.6-m)	**EHN515-0035**
50-ft. (15.2-m)	**EHN515-0050**
75-ft. (22.8-m)	**EHN515-0075**
Sun VGA—Coax with Audio	
([1] HD15, [1] 8-Pin Mini-DIN, [2] 3.5-mm Stereo)	
1-ft. (0.3-m)	**EHN515A-0001**
5-ft. (1.5-m)	**EHN515A-0005**
10-ft. (3-m)	**EHN515A-0010**
20-ft. (6.1-m)	**EHN515A-0020**
35-ft. (10.6-m)	**EHN515A-0035**
50-ft. (15.2-m)	**EHN515A-0050**
75-ft. (22.8-m)	**EHN515A-0075**
100-ft. (30.4-m)	**EHN515A-0100**
Macintosh® DB15—Standard	
([1] DB15, [1] 4-Pin Mini-DIN)	
5-ft. (1.5-m)	**EHN215-0005**
10-ft. (3-m)	**EHN215-0010**
20-ft. (6.1-m)	**EHN215-0020**
Macintosh DB15—Coax ([1] DB15, [1] 4-Pin Mini-DIN)	
5-ft. (1.5-m)	**EHN208-0005**
10-ft. (3-m)	**EHN208-0010**
50-ft. (15.2-m)	**EHN208-0050**
100-ft. (30.4-m)	**EHN208-0100**

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EHN154-0001

Item	Code
ServSwitch to Keyboard/Monitor/Mouse Cables (User Cables)	
PS/2—Standard ([1] HD15, [2] 6-Pin Mini-DIN)	
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**
AT—Standard ([1] HD15, [1] 6-Pin Mini-DIN, [1] DB9)	
1-ft. (0.3-m)	**EHN052-0001**
5-ft. (1.5-m)	**EHN052-0005**
20-ft. (6.1-m)	**EHN052-0020**
PS/2—Coax ([1] HD15, [2] 6-Pin Mini-DIN)	
5-ft. (1.5-m)	**EHN383-0005**
10-ft. (3-m)	**EHN383-0010**
20-ft. (6.1-m)	**EHN283-0020**
35-ft. (10.6-m)	**EHN383-0035**
50-ft. (15.2-m)	**EHN383-0050**
100-ft. (30.4-m)	**EHN383-0100**
PS/2—Coax with Audio	
([1] HD15, [2] 6-Pin Mini-DIN, [1] 3.5-mm Stereo)	
1-ft. (0.3-m)	**EHN383A-0001**
5-ft. (1.5-m)	**EHN383A-0005**
10-ft. (3-m)	**EHN383A-0010**
20-ft. (6.1-m)	**EHN383A-0020**
35-ft. (10.6-m)	**EHN383A-0035**
50-ft. (15.2-m)	**EHN383A-0050**
75-ft. (22.8-m)	**EHN383A-0075**
100-ft. (30.4-m)	**EHN383A-0100**
PS/2—Coax with Serial	
([1] HD15, [2] 6-Pin Mini-DIN, [1] DB9)	
1-ft. (0.3-m)	**EHN383S-0001**
5-ft. (1.5-m)	**EHN383S-0005**
10-ft. (3-m)	**EHN383S-0010**
20-ft. (6.1-m)	**EHN383S-0020**
35-ft. (10.6-m)	**EHN383S-0035**
50-ft. (15.2-m)	**EHN383S-0050**
75-ft. (22.8-m)	**EHN383S-0075**
100-ft. (30.4-m)	**EHN383S-0100**

Item	Code
ServSwitch to Keyboard/Monitor/Mouse Cables (Continued)	
Multiplatform USB to PS/2—Coax	
([1] HD15, [2] USB Type A)	
Flashable	
1-ft. (0.3-m)	**EHNUSB-0001**
5-ft. (1.5-m)	**EHNUSB-0005**
10-ft. (3-m)	**EHNUSB-0010**
20-ft. (6.1-m)	**EHNUSB-0020**
Nonflashable	
1-ft. (0.3-m)	**EHNUSBNF1-0001**
5-ft. (1.5-m)	**EHNUSBNF1-0005**
10-ft. (3-m)	**EHNUSBNF1-0010**
20-ft. (6.1-m)	**EHNUSBNF1-0020**
Sun 13W3—Coax, ([1] 13W3, [1] 8-Pin Mini-DIN)	
1-ft. (0.3-m)	**EHN201-0001**
5-ft. (1.5-m)	**EHN201-0005**
10-ft. (3-m)	**EHN201-0010**
20-ft. (6.1-m)	**EHN201-0020**
35-ft. (10.6-m)	**EHN201-0035**
50-ft. (15.2-m)	**EHN201-0050**
75-ft. (22.8-m)	**EHN201-0075**
100-ft. (30.4-m)	**EHN201-0100**
Sun 13W3—Coax with Audio	
([1] 13W3, [1] 8-Pin Mini-DIN, [2] 3.5-mm Stereo)	
1-ft. (0.3-m)	**EHN201A-0001**
5-ft. (1.5-m)	**EHN201A-0005**
10-ft. (3-m)	**EHN201A-0010**
20-ft. (6.1-m)	**EHN201A-0020**
35-ft. (10.6-m)	**EHN201A-0035**
50-ft. (15.2-m)	**EHN201A-0050**
75-ft. (22.8-m)	**EHN201A-0075**
100-ft. (30.4-m)	**EHN201A-0100**
Sun VGA—Coax ([1] HD15, [1] 8-Pin Mini-DIN)	
5-ft. (1.5-m)	**EHN225-0005**
10-ft. (3-m)	**EHN225-0010**
20-ft. (6.1-m)	**EHN225-0020**
35-ft. (10.6-m)	**EHN225-0035**
50-ft. (15.2-m)	**EHN225-0050**
75-ft. (22.8-m)	**EHN225-0075**
100-ft. (30.4-m)	**EHN225-0100**

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ServSwitch to Keyboard/Monitor/Mouse Cables (Continued)
Sun VGA—Coax with Audio
([1] HD15, [1] 8-Pin Mini-DIN, [2] 3.5-mm Stereo)

Item	Code
1-ft. (0.3-m)	**EHN225A-0001**
5-ft. (1.5-m)	**EHN225A-0005**
10-ft. (3-m)	**EHN225A-0010**
20-ft. (6.1-m)	**EHN225A-0020**
35-ft. (10.6-m)	**EHN225A-0035**
50-ft. (15.2-m)	**EHN225A-0050**
75-ft. (22.8-m)	**EHN225A-0075**
100-ft. (30.4-m)	**EHN225A-0100**

Macintosh DB15—Standard
([1] DB15, [1] 4-Pin Mini-DIN)

1-ft. (0.3-m)	**EHN210-0001**
5-ft. (1.5-m)	**EHN210-0005**
20-ft. (6.1-m)	**EHN210-0020**

Macintosh HD15—Standard
([1] HD15, [1] 4-Pin Mini-DIN)

1-ft. (0.3-m)	**EHN532-0001**
5-ft. (1.5-m)	**EHN532-0005**
10-ft. (3-m)	**EHN532-0010**
20-ft. (6.1-m)	**EHN532-0020**

Macintosh DB15—Coax ([1] DB15, [1] 4-Pin Mini-DIN)

10-ft. (3-m)	**EHN203-0010**
20-ft. (6.1-m)	**EHN203-0020**
50-ft. (15.2-m)	**EHN203-0050**
100-ft. (30.4-m)	**EHN203-0100**

EHN225A-0005

ServSwitch to Keyboard/Monitor/Mouse Cables (Continued)
Macintosh HD15—Coax ([1] HD15, [1] 4-Pin Mini-DIN)

5-ft. (1.5-m)	**EHN540-0005**
10-ft. (3-m)	**EHN540-0010**
20-ft. (6.1-m)	**EHN540-0020**
35-ft. (10.6-m)	**EHN540-0035**
50-ft. (15.2-m)	**EHN540-0050**
75-ft. (22.8-m)	**EHN540-0075**
100-ft. (30.4-m)	**EHN540-0100**

To cascade the ServSwitch Ultra, order…
ServSwitch to ServSwitch Cables

5-ft. (1.5-m)	**EHN284-0005**
10-ft. (3-m)	**EHN284-0010**
20-ft. (6.1-m)	**EHN284-0020**
50-ft. (15.2-m)	**EHN284-0050**
75-ft. (22.8-m)	**EHN284-0075**
100-ft. (30.4-m)	**EHN284-0100**

*NOTE: Because cabling for the ServSwitch Ultra is more complex than for most ServSwitch products, we advise that you call Tech Support at **724-746-5500** for help in choosing the appropriate adapter cables for keyboard/monitor/mouse and CPU connections.*

Why Buy From Black Box? Exceptional Value. Exceptional Tech Support. Period.

Recognize any of these situations?

• You wait more than 30 minutes to get through to a vendor's tech support.

• The so-called "tech" can't help you or gives you the wrong answer.

• You don't have a purchase order number and the tech refuses to help you.

• It's 9 p.m. and you need help, but your vendor's tech support line is closed.

According to a survey by *Data Communications* magazine, 90% of network managers surveyed say that getting the technical support they need is extremely important when choosing a vendor. But even though network managers pay anywhere from 10 to 20% of their overall purchase price for a basic service and support contract, the technical support and service they receive falls far short of their expectations—and certainly isn't worth what they paid.

At Black Box, we guarantee the best value and the best support. You can even consult our Technical Support Experts before you buy if you need help selecting just the right component for your application.

Don't waste time and money—call Black Box today.

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