

## ServSwitch Wizard DVI

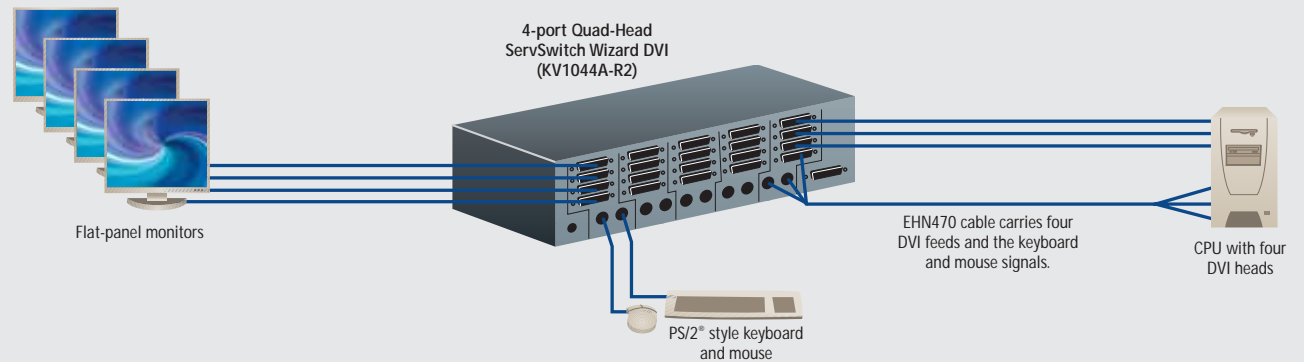


A KVM switch for CPUs that output one, two, four, or more feeds of crystal-clear DVI digital video.

## FEATURES

- Control multiple CPUs that output DVI video with a keyboard, mouse, and one or more monitors.
- Single-, dual-, and quad-head models for either two or four CPUs.
- Supports 1600 x 1200 at up to 60 Hz.
- Dual-head and quad-head models support compositing video for even higher total resolutions.
- Can be cascaded to control more CPUs.
- Can be synchronized with compatible switches to control more heads or both DVI and analog CPUs.

*If your CPUs output four independent video feeds, you can switch displays with resolutions up to 1600 x 1200 on four monitors as shown here. If your video card and monitor support composite pictures built from four video feeds, you can (with special monitor cables) switch spectacular 3200 x 2400 displays on a single screen.*



## OVERVIEW

Do you have two or more computers that output Digital Visual Interface (DVI) video? Would you like to monitor and control them with one keyboard and mouse and one monitor or set of monitors?

The ServSwitch Wizard™ DVI could be the KVM switch you need. Based on our proven ServSwitch Wizard technology, the ServSwitch Wizard DVI comes in six models that differ by the number of CPUs they support (2-port or 4-port) and the number of DVI video heads each attached CPU can have (single-head, dual-head, or quad-head).

The ServSwitch Wizard DVI supports resolutions up to 1600 x 1200 pixels at refresh rates up to 60 Hz. (In fact, its maximum pixel frequency of 165 MHz per port is the highest single-link bandwidth supported by the DVI spec.)

If you're using multi-head CPUs that output different segments of the same image on each head to make a single screen, the ServSwitch Wizard DVI can pass these through to the monitor as normal: The ServSwitch Wizard DVI supports composited resolutions as high as 2400 x 1600 (dual-head models) or 3200 x 2400 (quad-head models).

If you have more than four CPUs to switch between, you can cascade ServSwitch Wizard DVIs to handle as many as 256 of them. If your CPUs output more than four video feeds (that is, they have more than four heads), you can "synchronize" a pair of Quad-Head ServSwitch Wizard DVIs by running a special serial cable between them. They will switch channels simultaneously—for example, when you switch to CPU 3 on one, the other will do the same. So, by running the "extra"

video feeds through the same CPU channel on the second ServSwitch Wizard DVI, they can be handled transparently, as if the two ServSwitch Wizard DVIs were one larger switch.

Synchronizing is also useful when you need to switch both CPUs that output DVI and CPUs that output VGA-compatible analog video. In this case, you can synchronize a ServSwitch Wizard DVI with a regular ServSwitch Wizard or one of the other switches in the ServSwitch Wizard family. The ServSwitch Wizard DVI will handle the video from the DVI computers and the keyboard and mouse signals from all of the computers, and the other switch will handle the video from the VGA-type computers. Because many DVI monitors autosense and auto-adapt to either DVI or analog input, you might be able to use a single monitor for the whole system.

The ServSwitch Wizard DVI can be used with IBM® PC compatible computers running any popular operating system, as well as IBM RS/6000®, Compaq® Alpha®, and SGI™ computers that output DVI.

To connect your CPUs to the switch, we offer special bonded cables that carry keyboard and mouse lines and one, two, or four DVI lines (EHN450, EHN460, and EHN470). Keep in mind that the maximum DVI distance on either side of the Wizard DVI is 5 m (16.4 ft.) as per the DVI spec.

All of the multi-head ServSwitch Wizard DVI models come with a power supply. The single-head models can usually get enough power from the CPUs' keyboard leads to operate; if not, the PS649-R2 power supply is available separately.



KV1004A-R2

## TECH SPECS

**Compliance** — CE (EN55022 Class A); FCC Part 15 Subpart B Class A, IC Class/classe A

**Maximum Distance** — 2 m (6.6 ft.) if interface-powered or 5 m (16.4 ft.) if AC-powered to any attached keyboard, monitor, and mouse; 5 m (16.4 ft.) to any attached CPU or cascaded KVM switch; 50 ft. (15.2 m) from serial port to any attached serial device

**Resolution and Refresh Rate** — Up to 1600 x 1200 noninterlaced at up to 60 Hz (higher refresh rates possible at lower resolutions); with video cards and monitors that support composite images transmitted on multiple heads, the KV1022A-R2 and KV1024A-R2 can support up to 2400 x 1600 and the KV1042A-R2 and KV1044A-R2 can support up to 3200 x 2400

**Serial Characteristics** — Protocol: Asynchronous only; Data rate: 8 data bits, no parity, 1 stop bit (fixed), 1200 bps (fixed); Flow control: None

**Standard** — Supports DDC2B signaling

**Enclosure** — Steel, aluminum, and plastic

**MTBF** — 500,000 hours (based on the historical reliability of similarly designed and manufactured products)

**User Controls** — Keyboard commands; Mouse-click functions; (1) Front-mounted button for channel change and configuration mode; (1) Bottom-mounted 8-position DIP switch for bootup autoswitching, reset, and firmware upgrade; Optional Remote Control Module for channel change; Optional serial commands for channel change and multi-chassis synchronization

**Interfaces** — Video: Single-link DVI (Digital Visual Interface); Keyboard and mouse: IBM PS/2 compatible; with appropriate adapters, also supports CPUs with EIA/TIA RS-232 mouse ports; Serial port: EIA/TIA RS-232 proprietary pinned on DB15

**Connectors** — All rear-mounted:(1) Multipurpose DB15 female; (1) Barrel jack for power-supply connection; User port:(2) 6-pin mini-DIN female for keyboard and mouse attachment;Molex DVI-D female for monitor attachment: KV1002A-R2, KV1004A-R2: (1);KV1022A-R2, KV1024A-R2: (2);KV1042A-R2, KV1044A-R2: (4); CPU ports ([2] on KV10x2A-R2 models, [4] on KV10x4A -R2 models), each consisting of:(2) 6-pin mini-DIN female for keyboard- and mouse-port attachment; Molex DVI-D female for video-port attachment:KV1002A-R2, KV1004A-R2: (1);KV1022A-R2, KV1024A-R2: (2);KV1042A-R2, KV1044A-R2: (4)

**Indicator** — (1) Front-mounted 7-segment status display

**Temperature Tolerance** — 32 to 104°F (0 to 40°C)

**Humidity Tolerance** — 5 to 60% noncondensing

**Maximum Altitude** — 10,000 ft. (3048 m)

**Power** — KV1002A-R2, KV1004A-R2: Either:5 VDC at up to 1 A from the keyboard interfaces of the attached computers; or From optional power supply PS649-R2:Input: 100 to 240 VAC at 50 to 60 Hz; Output: 5 VDC at up to 1 A; Consumption: 5 watts maximum;

All other models: From utility-power (mains) outlet, through detachable power cord and IEC 320 male inlet, to external power supply:

Input: 100 to 240 VAC at 50 to 60 Hz;

Output: 5 VDC at up to 4 A;

Consumption: 20 watts maximum

**Size** — 1.75"H (1U) x 10.3"W x 5.9"D (4.4 x 26.2 x 15 cm)

**Weight** — 2.2 lb. (1 kg)

## WHAT'S INCLUDED

- ◆ The only other thing that comes with the Single-Head (KV1002A-R2 and KV1004A-R2) models is a users' manual. All other models also come with a power supply. (We don't include a power supply with the Single-Head models because most applications for those models don't require one. If you need a power supply for a Single-Head Wizard DVI, it can be purchased separately as product code PS649-R2.)
- ◆ The only other things that come with the Wizard DVI's optional Remote-Control Module (a CPU-port indicator and a channel-select push button on the end of a long cable—the KV6REM series of product codes) are VELCRO® mounting strips.

## 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.



EHN450



EVNDVIO3

Item	Code
ServSwitch Wizard DVI Single-Head	
2-Port	<b>KV1002A-R2</b>
4-Port	<b>KV1004A-R2</b>
Dual-Head	
2-Port	<b>KV1022A-R2</b>
4-Port	<b>KV1024A-R2</b>
Quad-Head	
2-Port	<b>KV1042A-R2</b>
4-Port	<b>KV1044A-R2</b>

**You might also need...**

Single-Video ServSwitch™ DVI KVM Cable (one DVI-D male to male, two 6-pin mini-DIN male to male)	
3-ft. (0.9-m)	<b>EHN450-0003</b>
6-ft. (1.8-m)	<b>EHN450-0006</b>
10-ft. (3-m)	<b>EHN450-0010</b>
Dual-Video ServSwitch DVI KVM Cable (two DVI-D male to male, two 6-pin mini-DIN male to male)	
3-ft. (0.9-m)	<b>EHN460-0003</b>
6-ft. (1.8-m)	<b>EHN460-0006</b>
10-ft. (3-m)	<b>EHN460-0010</b>
Quad-Video ServSwitch DVI KVM Cable (four DVI-D male to male, two 6-pin mini-DIN male to male)	
3-ft. (0.9-m)	<b>EHN470-0003</b>
6-ft. (1.8-m)	<b>EHN470-0006</b>
10-ft. (3-m)	<b>EHN470-0010</b>

Item	Code
DVI extension cable to CPUs, DVI-D male to male	
6-ft. (1.8-m)	<b>EVNDVIO2-0006</b>
10-ft. (3-m)	<b>EVNDVIO2-0010</b>
DVI extension cable to monitors, DVI-D male to female	
6-ft. (1.8-m)	<b>EVNDVIO3-0006</b>
10-ft. (3-m)	<b>EVNDVIO3-0010</b>
PS/2® extension cable to CPUs, 6-pin mini-DIN male to male	
3-ft. (0.9-m)	<b>EVMP503-0003-MM</b>
6-ft. (1.8-m)	<b>EVMP503-0006-MM</b>
10-ft. (3-m)	<b>EVMP503-0010-MM</b>
PS/2 extension cable to keyboard or mouse, 6-pin mini-DIN male to female	
3-ft. (0.9-m)	<b>EVMP503-0003-MF</b>
6-ft. (1.8-m)	<b>EVMP503-0006-MF</b>
10-ft. (3-m)	<b>EVMP503-0010-MF</b>
Optional power supply for Single-Head models	<b>PS649-R2</b>
Replacement power supply for Dual-Head and Quad-Head models	<b>PS650</b>
Optional Remote-Control Module	
With 10-ft. (3-m) cable	<b>KV6REM</b>
With 25-ft. (7.6-m) cable	<b>KV6REM-25</b>
With 50-ft. (15.2-m) cable	<b>KV6REM-50</b>
With 75-ft. (22.9-m) cable	<b>KV6REM-75</b>

*NOTE: You might also want to call Black Box Tech Support for help determining your best options for power backup/protection.*