

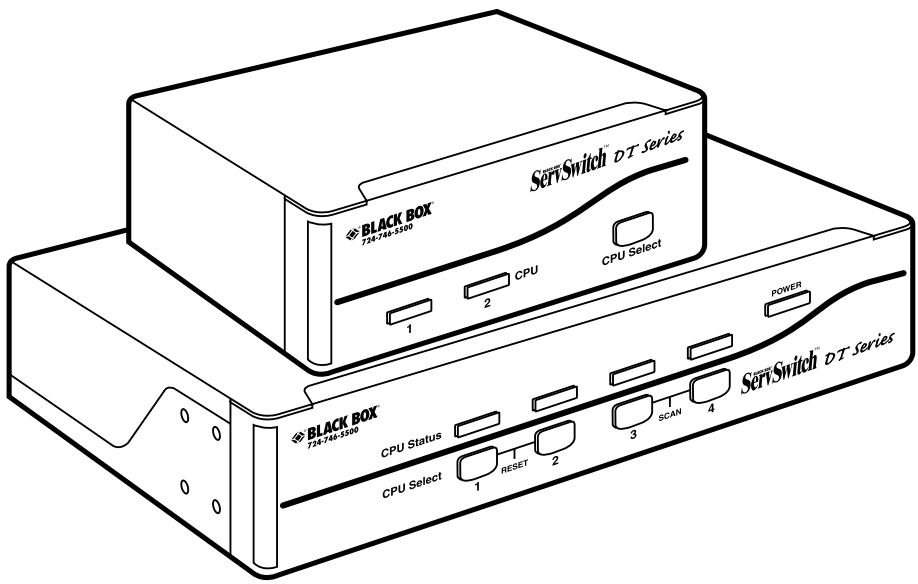


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1000 Park Drive • Lawrence, PA 15055-1018 • 724-746-5500 • Fax 724-746-0746



2- and 4-Port ServSwitch DT Series DVI KVM Switch



**CUSTOMER
SUPPORT
INFORMATION**

Order toll-free in the U.S.: Call **877-877-BBOX** (outside U.S. call **724-746-5500**)
FREE technical support 24 hours a day, 7 days a week: Call **724-746-5500** or fax **724-746-0746**
Mailing address: **Black Box Corporation**, 1000 Park Drive, Lawrence, PA 15055-1018
Web site: www.blackbox.com • E-mail: info@blackbox.com

**FEDERAL COMMUNICATIONS COMMISSION
and INDUSTRY CANADA
RADIO FREQUENCY INTERFERENCE STATEMENTS**

Class B Digital Device. This equipment has been tested and found to comply with the limits for a Class B computing device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. This equipment generates, uses, and can radiate radio frequency energy, and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. If this equipment does cause harmful interference to radio or telephone reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult an experienced radio/TV technician for help.

CAUTION

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

To meet FCC requirements, shielded cables and power cords are required to connect this device to a personal computer or other Class B certified device.

This digital apparatus does not exceed the Class B limits for radio noise emission from digital apparatus set out in the Radio Interference Regulation of Industry Canada.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de classe B prescrites dans le Règlement sur le brouillage radioélectrique publié par Industrie Canada.

NORMAS OFICIALES MEXICANAS (NOM) ELECTRICAL SAFETY STATEMENT

INSTRUCCIONES DE SEGURIDAD

1. Todas las instrucciones de seguridad y operación deberán ser leídas antes de que el aparato eléctrico sea operado.
2. Las instrucciones de seguridad y operación deberán ser guardadas para referencia futura.
3. Todas las advertencias en el aparato eléctrico y en sus instrucciones de operación deben ser respetadas.
4. Todas las instrucciones de operación y uso deben ser seguidas.
5. El aparato eléctrico no deberá ser usado cerca del agua—por ejemplo, cerca de la tina de baño, lavabo, sótano mojado o cerca de una alberca, etc..
6. El aparato eléctrico debe ser usado únicamente con carritos o pedestales que sean recomendados por el fabricante.
7. El aparato eléctrico debe ser montado a la pared o al techo sólo como sea recomendado por el fabricante.
8. Servicio—El usuario no debe intentar dar servicio al equipo eléctrico más allá a lo descrito en las instrucciones de operación. Todo otro servicio deberá ser referido a personal de servicio calificado.
9. El aparato eléctrico debe ser situado de tal manera que su posición no interfiera su uso. La colocación del aparato eléctrico sobre una cama, sofá, alfombra o superficie similar puede bloquea la ventilación, no se debe colocar en libreros o gabinetes que impidan el flujo de aire por los orificios de ventilación.
10. El equipo eléctrico deber ser situado fuera del alcance de fuentes de calor como radiadores, registros de calor, estufas u otros aparatos (incluyendo amplificadores) que producen calor.
11. El aparato eléctrico deberá ser conectado a una fuente de poder sólo del tipo descrito en el instructivo de operación, o como se indique en el aparato.

12. Precaución debe ser tomada de tal manera que la tierra física y la polarización del equipo no sea eliminada.
13. Los cables de la fuente de poder deben ser guiados de tal manera que no sean pisados ni pellizcados por objetos colocados sobre o contra ellos, poniendo particular atención a los contactos y receptáculos donde salen del aparato.
14. El equipo eléctrico debe ser limpiado únicamente de acuerdo a las recomendaciones del fabricante.
15. En caso de existir, una antena externa deberá ser localizada lejos de las líneas de energía.
16. El cable de corriente deberá ser desconectado del cuando el equipo no sea usado por un largo periodo de tiempo.
17. Cuidado debe ser tomado de tal manera que objetos líquidos no sean derramados sobre la cubierta u orificios de ventilación.
18. Servicio por personal calificado deberá ser provisto cuando:
 - A: El cable de poder o el contacto ha sido dañado; u
 - B: Objetos han caído o líquido ha sido derramado dentro del aparato; o
 - C: El aparato ha sido expuesto a la lluvia; o
 - D: El aparato parece no operar normalmente o muestra un cambio en su desempeño; o
 - E: El aparato ha sido tirado o su cubierta ha sido dañada.

2- AND 4-PORT SERVSCHWITCH DT SERIES DVI KVM SWITCH

TRADEMARKS USED IN THIS MANUAL

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1. Specifications

Resolution: 1600 x 1200 @ 60 Hz

Supported Operating Systems: Windows® 95/98/Me/2000/XP and Windows NT®

Hotkeys: Yes

User Controls: KV9502A: (2) port buttons (labeled 1–2) also used for KVM reset and AutoScan;

KV9504A: (4) port buttons (labeled 1–4) also used for KVM reset buttons and AutoScan

Connectors: KV9502A: (1) Power; Console end: (1) DVI-I, (2) 6-pin mini-DIN; Computer end: (2) DVI-I, (4) 6-pin mini-DIN;

KV9504A: (1) Power; Console end: (1) DVI-I, (2) 6-pin mini-DIN; Computer end: (4) DVI-I, (8) 6-pin mini-DIN

Indicators: LEDs: KV9502A: (2) Port; KV9504A: (4) Port

Temperature Tolerance: Operating: 32 to 104°F (0 to 40°C); Storage: -4 to +140°F (-20 to +60°C)

Power: From the interface or via a 9-VDC, 600-mA power supply (optional, not included)

Size: KV9502A: 1.6"H x 4.9"W x 2.7"D (4 x 12.4 x 7 cm); KV9504A: 1.7"H x 8.7"W x 5.1"D (4.4 x 2.2 x 13 cm)

Weight: KV9502A: 0.9 lb. (0.4 kg); KV9504A: 2.2 lb. (1 kg)

2. Overview

2.1 Introduction

The 2- or 4-Port ServSwitch DT Series DVI KVM Switch allows you to control up to two or four computers from a single IBM® console (PS/2® keyboard, PS/2 mouse, and DVI [Digital Visual Interface] monitor). Supported mice include Microsoft® IntelliMouse® and other mice.

Using a hotkey command sequence (see **Section 4.3**), you can asynchronously switch the KVM control and the attached devices. And the ServSwitch works with common operating systems, including Windows 98/Me/2000/XP and Windows NT.

Setup is fast and simple, and there's no software to configure. Its small desktop footprint is ideal for on or under your desktop. Use either front-panel buttons on the ServSwitch or hotkeys on your keyboard to select ports or start AutoScan. The front-panel LEDs will light with the corresponding active port when switching between the computers. The ServSwitch beeps to confirm that it's in hotkey mode. The AutoScan function allows you to automatically scan and monitor all computers, one by one, that are connected to the ServSwitch.

2- AND 4-PORT SERVSCHWITZ DT SERIES DVI KVM SWITCH

2.2 Components

2.2.1 FRONT PANEL

Figure 2-1 shows the 4-Port ServSwitch front view. Table 2-1 describes the components numbered in the illustration.

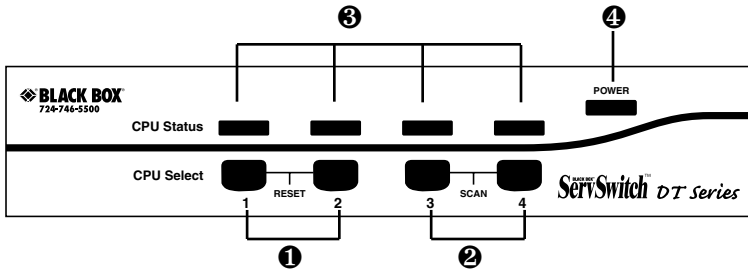


Figure 2-1. The 4-Port ServSwitch front-panel view.

Table 2-1. Front-panel components.

Component	Description
① ② Port selection buttons	Press buttons 1–4 individually to select a computer.
① KVM reset buttons	Press buttons 1 and 2 together to reset the ServSwitch.
② Autoscan buttons	Press buttons 3 and 4 together to start Autoscan.
③ Port LEDs	LEDs light when the connected computer is selected.
④ Power LED	Lights when power is on.

2.2.2 REAR PANEL

Figure 2-2 shows the 4-Port ServSwitch rear view. Table 2-2 describes the components numbered in the illustration.

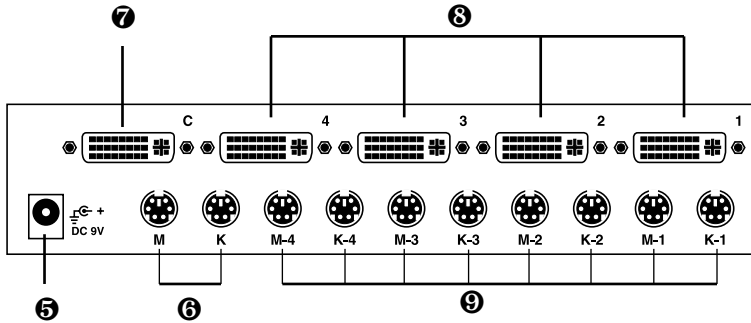


Figure 2-2. The 4-Port ServSwitch back-panel view.

Table 2-2. Rear-panel components.

Component	Description
<p>5 Power connector</p>	<p>Connects to a 9-VDC, 600-mA power supply (optional).</p>
<p>6 Console 6-pin mini-DIN ports</p>	<p>Keyboard and mouse ports for console.</p>
<p>7 Console DVI port</p>	<p>Attaches to the user monitor.</p>
<p>8 Computer DVI ports</p>	<p>Connect to a computer's video cards.</p>
<p>9 Computer 6-pin mini-DIN ports</p>	<p>Keyboard and mouse ports for computer.</p>

2.3 What's Included

The package should contain the following items. If anything is missing or damaged, please contact Black Box.

- 2- or 4-Port ServSwitch DT Series DVI KVM Switch
- (1) Universal power supply, output: 9 VDC, 600 mA
- This user's manual

2.4 Cables That You'll Need to Supply

- 2- or 4-Port ServSwitch DT Series DVI KVM Switch Cable (EHN900024P -0006, -0010): These cables connect to PCs that have DVI connectors. The cables are available in 6- and 10-foot (1.8- and 3-m) versions.

3. Installation

3.1 ServSwitch Placement

The 2- or 4-Port ServSwitch DT Series DVI KVM Switch is small, portable, and designed to fit on a desktop. Consider the following when deciding where to place the KVM switch:

- How long are the cables attached to your keyboard, mouse, and monitor?
- How far away are the computers from the console?
- How long are the cables you use to connect your computers to the ServSwitch?

CAUTION

Do not place cables near machines that create electrical noise such as fluorescent lighting, air conditioning equipment, etc.

3.2 Hardware Installation

This section provides instructions for the basic hardware setup of a single ServSwitch.

CAUTION

Before you begin, make sure that power to all the devices that you will be connecting is turned off.

To prevent damage caused by ground potential differences, make sure that all devices are properly grounded. If you don't follow these instructions, your computers and/or the ServSwitch could be damaged.

3.2.1 CONNECTING THE CONSOLE, KEYBOARD, AND MOUSE

1. Power off all computers.

2- AND 4-PORT SERVSWITCH DT SERIES DVI KVM SWITCH

2. Connect your PS/2 keyboard and PS/2 mouse directly to the 6-pin mini-DIN keyboard and mouse ports (labeled with keyboard and mouse symbols according to the KV99 standard) on the back of the ServSwitch as shown in Figure 3-1. Connect your DVI cable directly to the DVI port.

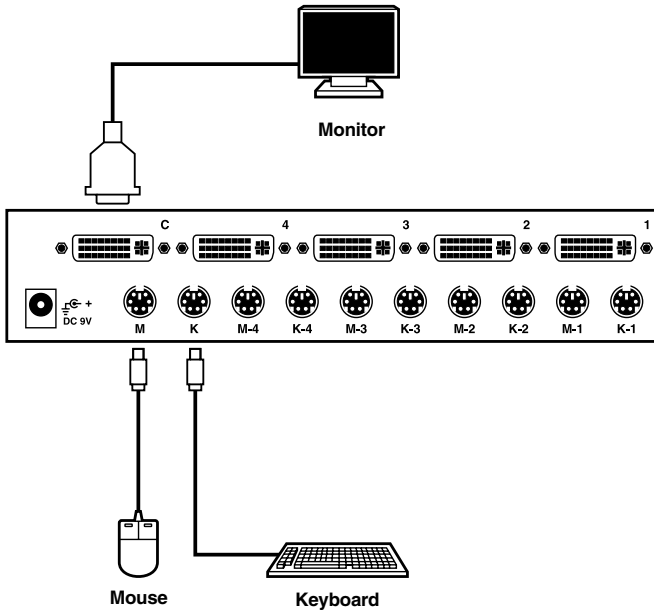


Figure 3-1. Console keyboard, mouse, and monitor connection.

NOTES

The monitor connected to the DVI-I port must be capable of synchronizing with the computer's video signal. If you are uncertain about the monitor type, consult the monitor user's manual.

3.2.2 CONNECTING THE COMPUTERS

Using the all-in-one DVI cable (EHN900024P-0006 or -0010), connect a computer to the ServSwitch. Following the KV99 standard, connect the cable's 6-pin mini-DIN connectors to the computer's keyboard and mouse ports. Connect the cable's DVI-I connector to your computer's DVI-I monitor port as shown in Figure 3-2. Connect the mini-DIN and DVI-I connectors on the other end of the cable to the ServSwitch. Follow the same procedure to connect the other computers.

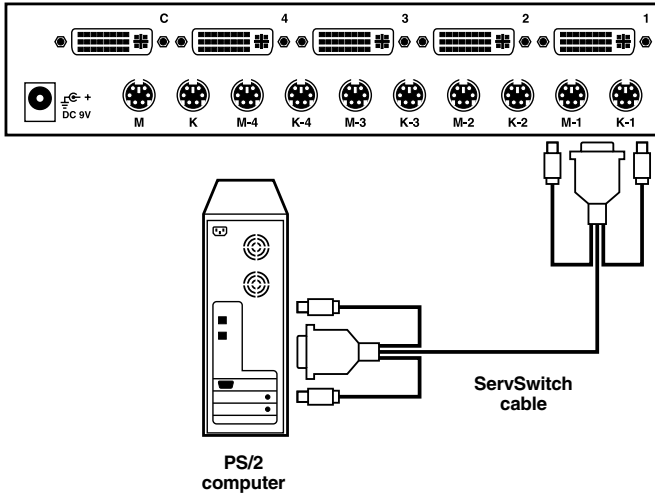


Figure 3-2. Computer connection.

3.2.3 INITIAL POWER ON

After connecting the ServSwitch, power on the computers. The ServSwitch will get enough power to operate from the computers.

4. Operation

4.1 Powering Up the System

Once all cables have been connected and all computers have been powered on, the ServSwitch emulates mouse and keyboard signals on each port, allowing your computer to boot normally. The ServSwitch is now ready for use.

4.2 Selecting Computers Using Front-Panel Buttons

You can instantly select any computer by pressing the port selector buttons on the front panel. The corresponding LED will light when the port is selected.

4.3 Selecting Computers Using Keyboard Hotkey Commands

Each computer is assigned a numeric ID. To directly switch the KVM control to any computer via a simple keyboard command sequence, do the following:

1. To invoke the hotkey mode, press the <Left-Ctrl> key twice within two seconds. The switch will beep to indicate that it's in hotkey mode.
2. Enter your desired switch port number (1–4). For example, if you press <Left-Ctrl><Left-Ctrl> 2, you'll select the computer on port 2.

Or, do the following:

1. To invoke the hotkey mode, press the <Left-Ctrl> key twice within two seconds. The switch will beep to indicate that it's in hotkey mode.
2. Press the <up-arrow> or <down-arrow> keys to switch to the previous or next port, respectively.

Table 4-1 lists the hotkey commands.

Table 4-1. Hotkey commands.

Command	Description
<Left-Ctrl><Left-Ctrl> X	Switch to PC "X".
<Left-Ctrl><Left-Ctrl> <up arrow>	Switch to previous active PC.
<Left-Ctrl><Left-Ctrl> <down arrow>	Switch to next active PC.
<Left-Ctrl><Left-Ctrl> F1	Begin AutoScan.
<Left-Ctrl><Left-Ctrl> F2	Manual scan.
<Left-Ctrl><Left-Ctrl> F3	Set the time before switching to the next computer in sequence. The ServSwitch generates 1 to 4 beeps indicating scan intervals of 3, 8, 15, and 30 seconds.
Any key	Stop AutoScan.
<Left-Ctrl><Left-Ctrl> F4	Set the keyboard typematic rate (characters/sec). The ServSwitch generates 1 to 4 beeps indicating 10, 15, 20, and 30 characters per second.
<Left-Ctrl><Left-Ctrl> S	Enable/disable "beep" sound.

X = 1, 2, 3, 4

Appendix. Troubleshooting

A.1 Calling Black Box

If you determine that your 2- or 4-Port ServSwitch DT Series DVI KVM Switch is malfunctioning, do not attempt to alter or repair the unit. It contains no user-serviceable parts. Contact Black Box at 724-746-5500.

Before you do, make a record of the history of the problem. We will be able to provide more efficient and accurate assistance if you have a complete description, including:

- the nature and duration of the problem.
- when the problem occurs.
- the components involved in the problem.
- any particular application that, when used, appears to create the problem or make it worse.

A.2 Shipping and Packaging

If you need to transport or ship your 2- or 4-Port ServSwitch DT Series DVI KVM Switch:

- Package it carefully. We recommend that you use the original container.
- If you are shipping the 2- or 4-Port ServSwitch DT Series DVI KVM Switch for repair, make sure you include everything that came in the original package. Before you ship, contact Black Box to get a Return Authorization (RA) number.