

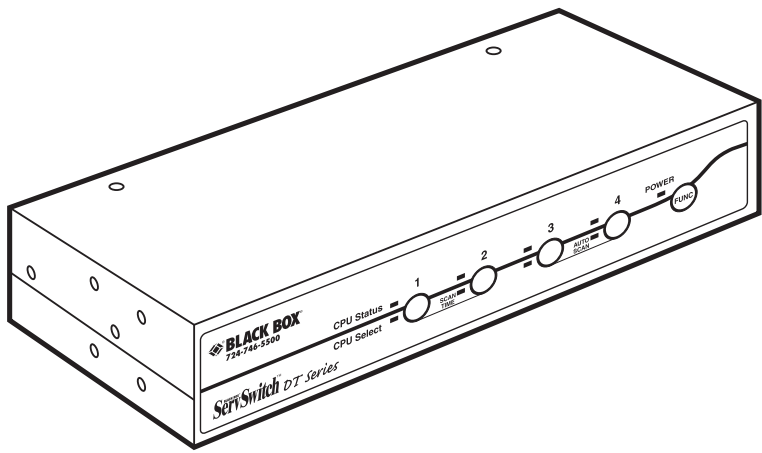


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1000 Park Drive • Lawrence, PA 15055-1018 • 724-746-5500 • Fax 724-746-0746



4-Port ServSwitch DT Series USB/DVI/Audio 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.

TRADEMARKS USED IN THIS MANUAL

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1. Specifications

Hotkeys: Yes

Resolution: 1600 x 1200 @ 60 Hz

Supported Operating Systems: Windows® 98 SE/Me/2000/XP, and Windows Vista™

User Controls: (4) port buttons (labeled 1–4) also used for Scan time buttons and AutoScan, (1) function button

Connectors: (1) Power;

Console end: (1) DVI-I, (4) USB Type A, (2) 3.5-mm jacks for audio (speaker and microphone);

Computer end: (4) DVI-I, (4) USB Type B, (8) 3.5-mm jacks for audio (speaker and microphone)

Indicators: (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 5-VDC, 2-A power supply (included)

Size: 1.7"H x 8.7"W x 5.1"D (4.4 x 2.2 x 13 cm)

Weight: 2.2 lb. (1 kg)

2. Overview

2.1 Introduction

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

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 front-panel buttons on the ServSwitch to select ports or start AutoScan. The front-panel LEDs will light with the corresponding active port when switching between the computers. The AutoScan function allows you to automatically scan and monitor all computers, one by one, that are connected to the ServSwitch.

4-PORT SERVSWITCH DT SERIES USB/DVI/AUDIO 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.

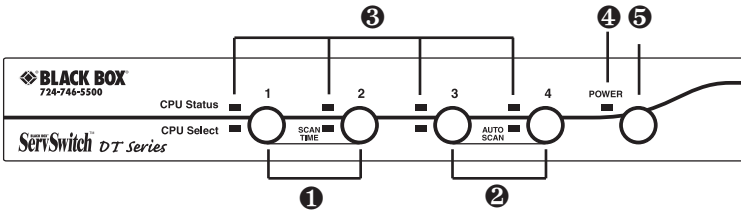


Figure 2-1. The 4-Port ServSwitch front-panel view.

Table 2-1. Front-panel components.

Component	Description
① ② Port selection buttons	Press buttons 1–4 individually to select a computer.
① Scan time buttons	Press buttons 1 and 2 together to change the Scan time interval. The unit beeps 1, 2, 3, or 4 times for scan time of 3, 8, 15, or 30 seconds, respectively.
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.
⑤ Function button	Adjusts video signal strength or selects audio signal. See Section 4.4 .

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.

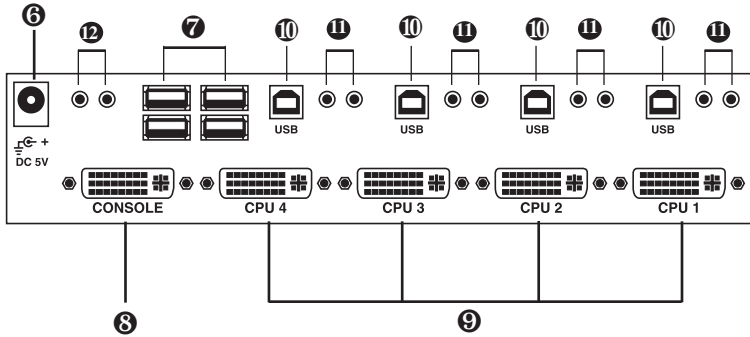


Figure 2-2. The 4-Port ServSwitch back-panel view.

Table 2-2. Rear-panel components.

Component	Description	
6	Power connector	Connects to a 5-VDC, 2-A power supply.
7	Console USB Type A ports	Keyboard and mouse ports for console.
8	Console DVI port	Attaches to the user monitor.
9	Computer DVI ports	Connect to a computer's video cards.
10	Computer USB Type B ports	Keyboard/mouse ports for computers.
11	Computer audio ports	Speakers and microphones connect here.
12	Console audio ports	Speaker and microphone connect here.

2.3 What's Included

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

- 4-Port ServSwitch DT Series USB/DVI/Audio KVM Switch
- (1) universal power supply, output: 5 VDC, 2 A
- This user's manual

2.4 Cables That You'll Need to Supply

- 4-Port ServSwitch DT Series USB/DVI KVM Switch Cable (EHN900024U-0006, -0009, -0015): These cables connect to PCs that have USB and DVI connectors. The cables are available in 6-, 9-, and 15-foot (1.8-, 2.8-, and 4.7-m) versions.
- Audio cable (EJ110-0002, -0005, -0010, -0015): These cables connect to audio and are available in 2-, 5-, 10-, and 15-foot (0.6-, 1.5-, 3.1-, and 4.7-m) versions.

3. Installation

3.1 ServSwitch Placement

The 4-Port ServSwitch DT Series USB/DVI/Audio 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, MOUSE, AND MONITOR

1. Power off all computers.

4-PORT SERVSWITCH DT SERIES USB/DVI/AUDIO KVM SWITCH

2. Connect your USB keyboard and USB mouse directly to the USB keyboard and mouse ports (labeled with keyboard and mouse symbols) on the back of the ServSwitch as shown in Figure 3-1. Attach your DVI cable from your monitor directly to the DVI port. Then connect the speakers and microphone to the console's audio ports.

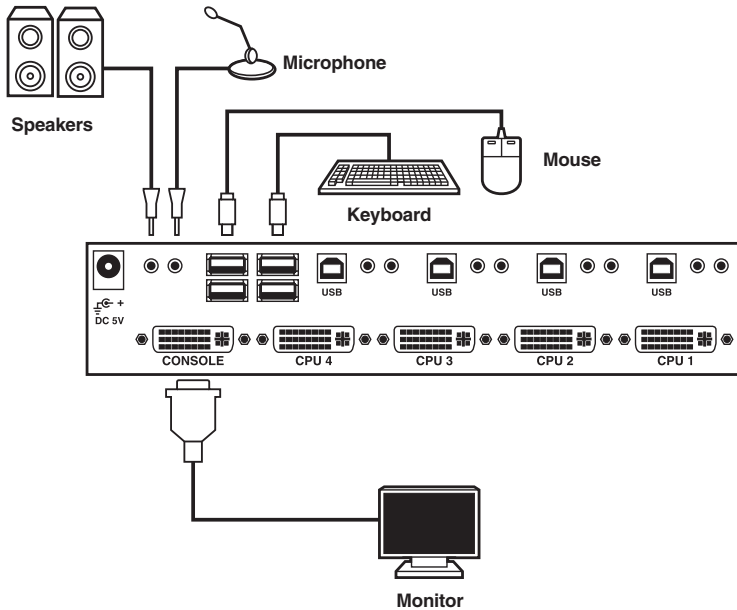


Figure 3-1. Console keyboard, mouse, monitor, and audio connection.

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 (EHN900024U-0006 or -0010), connect a computer to the ServSwitch. Connect the cable’s USB connectors to the computer’s USB port. Connect the cable’s DVI-I connector to your computer’s DVI-I monitor port as shown in Figure 3-2. Connect the USB and DVI-I connectors on the other end of the cable to the ServSwitch. Follow the same procedure to connect the other computers.

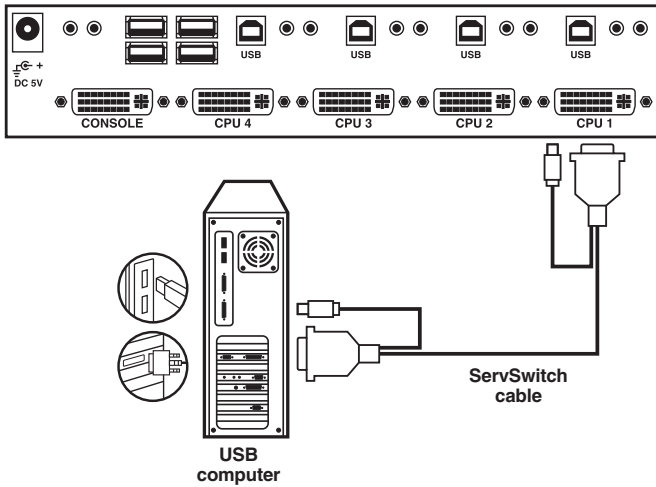


Figure 3-2. Computer connection.

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 Function Button

The Function button (#5 in Figure 2-1) adjusts the optimal video signal strength corresponding to the length or quality of DVI cable. It also selects the audio signal from any of the connected computers' four ports.

To adjust the video signal strength, follow these steps:

1. Press the Function button three times.
2. Press push button #1 one or two times to adjust the selected port's input video strength. One beep = normal or two beeps = enhance.

or

Press push button #3 one or two times to adjust the selected port's output current. One beep = normal or two beeps = enhance.

or

Press push button #4 one, two, three, or four times to adjust the selected port's output emphasis. One beep = no pre-emphasis, two beeps = low pre-emphasis, three beeps = medium pre-emphasis, or four beeps = high pre-emphasis.

3. Once the setting is finished, press the Function button one time to exit the setting.

To select the audio signal from any of the connected computers' four ports, press the Function button in combination with the other push buttons as described below.

1. Press and hold the Function button. Either all the four green LEDs light to indicate the audio port and the selected computer are the same (this is called tracking mode) or just one green LED lights to indicate that the audio port is different from the selected computer port (called non-tracking mode).
2. While holding down the Function button, press push button #1, #2, #3, or #4 to select audio port 1, 2, 3, or 4, respectively.

or

Hold down the Function button and press push buttons #1 and #2 together to enter tracking mode.

3. Release the Function button to exit the setting.

Appendix. Troubleshooting

A.1 Calling Black Box

If you determine that your 4-Port ServSwitch DT Series USB/DVI/Audio 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 4-Port ServSwitch DT Series USB/DVI/Audio KVM Switch:

- Package it carefully. We recommend that you use the original container.
- If you are shipping the 4-Port ServSwitch DT Series USB/DVI/Audio 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.