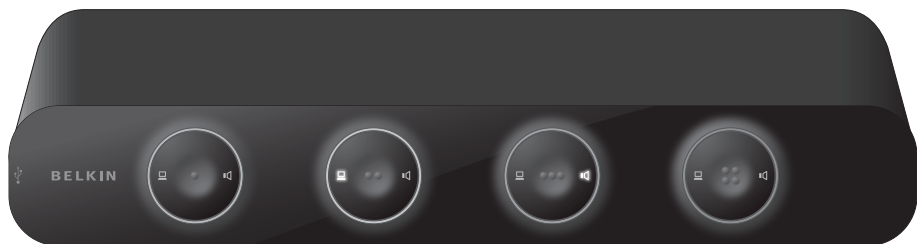


# BELKIN®

## SOHO KVM Switch with Audio

DVI with USB Console and Host Support



## User Manual

F1DD102L

F1DD104L

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# Introduction

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Congratulations and thank you for purchasing Belkin's SOHO KVM Switch with Audio. The KVM Switch lets you share one DVI-D monitor, and one USB keyboard and mouse, with up to four computers. Designed to organize and save your desk space, the KVM Switch sits neatly on your desk to reduce clutter. It saves you money on additional peripherals while providing great convenience with easy-to-use, advanced features.

For details about installation and operation, please consult this User Manual. Our Quick Installation Guide, also enclosed with this purchase, offers quick and easy setup directions. Please review these materials carefully to ensure that you get the most from your new KVM Switch.

## Package Contents



SOHO KVM  
Switch with Audio



Power Supply  
9V, 1A DC Adapter



2/4 SOHO  
DVI/USB/Audio  
Cable Kits, 6 ft.



User Manual



Quick Installation  
Guide

# Overview

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## Feature Overview

### Video Resolution

The SOHO KVM Switch is able to support video resolutions of up to 1920x1200 so you can use the latest in video display technology for all your computers.

### Flash Upgrade

With the firmware-upgrade feature, your investment in the KVM Switch is further ensured and its lifetime value is maximized. You don't have to change your KVM Switch to solve compatibility problems since you can solve them with easy firmware upgrades. A special upgrade cable is not needed; you can use the same KVM cable that connects your computer.

### Built-In USB 2.0 Hub

The SOHO KVM Switch features a built-in Hi-Speed USB 2.0 hub, so you can share two USB peripheral devices, such as a printer, with all your computers. There are two USB ports on the KVM Switch. One port is located on the back and the other is located on the front for easier access.

### Speaker/Microphone Support

The SOHO KVM Switch allows you to share one set of speakers and one microphone with all your computers, so you won't need to unplug and reconnect your speakers and microphone every time you switch access from one computer to the next.

### Direct-Access Port Selectors

Direct-access port selectors, conveniently located on the front face of the SOHO KVM Switch, allow you to easily switch access from one computer to the next. You can change the KVM port or the audio/mic using these buttons.

### Cables

All the required cables are 6 feet in length and are included in the box for easier installation. The cables are also smaller and easier to manage.

### LED Display

There are two LEDs on each button. One indicates which port the KVM is on and the other indicates which port the audio/mic is on.

# Overview

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## Equipment Requirements

### Operating Systems

SOHO KVM Switches with Audio are for use on CPUs using:

### Platforms

Mac OS® X v10.x

Windows® 2000, XP, Vista®, Server 2003

DOS

Linux®

Novell®

\*with USB support

### Keyboards

Supports 101-/102-/104-/107-key keyboards

### Mice

Mice with 2, 3, 4, or 5 buttons,  
compatible with Microsoft®

**Note:** Mouse software is not supported

### Monitor

DVI

### Microphone

Multimedia microphone/stereo with 3.5mm connectors

### Audio

Multimedia speaker/stereo with 3.5mm connectors

### Power Supply

9V, 1A DC power supply is required

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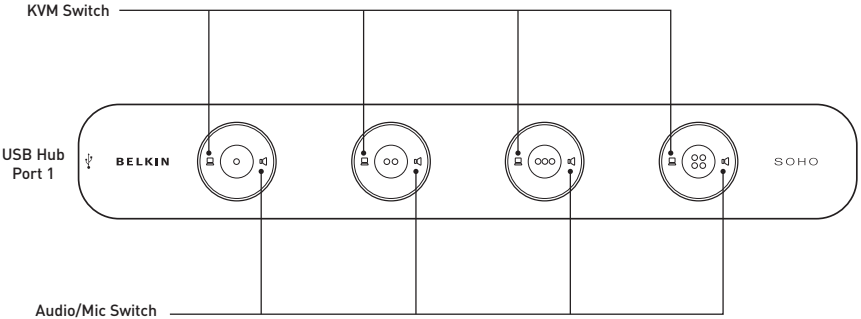
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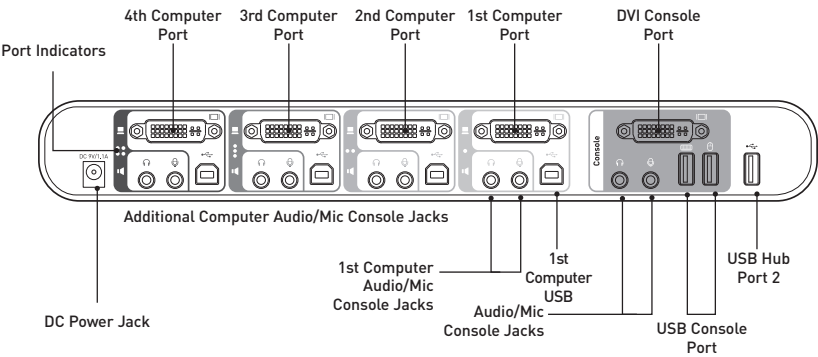
# Overview

## Unit Display Diagrams

Front View



Back View



# Overview

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## Specifications

|                          |                                                                                                                                                        |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| Part No.:                | F1DD102L, F1DD104L                                                                                                                                     |
| Power:                   | 9V, 1A DC adapter with center pin-positive polarity                                                                                                    |
| PCs Supported:           | 2 (F1DD102L), 4 (F1DD104L)                                                                                                                             |
| Console Keyboard:        | USB                                                                                                                                                    |
| Console Mouse:           | USB                                                                                                                                                    |
| Monitor Supported:       | DVI-D                                                                                                                                                  |
| Max Resolution:          | 1920x1200                                                                                                                                              |
| Audio Input/Output:      | 3.5mm jack                                                                                                                                             |
| Microphone Input/Output: | 3.5mm jack                                                                                                                                             |
| DVI Port:                | DVI-D                                                                                                                                                  |
| LED Indicators:          | 4 (F1DD102L), 8 (F1DD104L)                                                                                                                             |
| Enclosure:               | High-impact plastic                                                                                                                                    |
| Dimensions:              | F1DD102L<br>12.5 (L) x 5.5 (W) x 5.5 (D) in.<br>(317.5 x 139.7 x 139.7mm)<br>F1DD104L<br>12.5 (L) x 5.5 (W) x 5.5 (D) in.<br>(317.5 x 139.7 x 139.7mm) |
| Weight:                  | F1DD102L<br>1.48 lbs. (0.67kg)<br>F1DD104L<br>1.50 lbs. (0.68kg)                                                                                       |
| Operating Temp:          | 32° to 104° F (0° to 40° C)                                                                                                                            |
| Storage Temp:            | -4° to 140° F (-20° to 60° C)                                                                                                                          |
| Humidity:                | 0-80% RH, non-condensing                                                                                                                               |
| Warranty:                | 3 years                                                                                                                                                |

**Note:** Specifications are subject to change without notice.

# Installing the KVM Switch

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## Pre-Configuration

### Where to Place the KVM Switch

The compact size of the KVM Switch makes it perfect for desktop placement. Consider the following when deciding where to place the KVM Switch: whether or not you intend to use the direct-access port selectors; the length of the cables attached to your keyboard, mouse, and monitor; the location of your CPUs from your console; and the length of the cables you use to connect your computers to the KVM Switch.

### Cautions and Warnings

Avoid having cables near fluorescent lights, air-conditioning equipment, or machines that create electrical noise (e.g., vacuum cleaners).

### Single-Switch Installation

This section provides complete instructions for the hardware setup of a single KVM Switch. (F1DD102L or F1DD104L)

### Cable/model types:

DVI models use: DVI/USB combo cable connected to the USB connector of the host PC

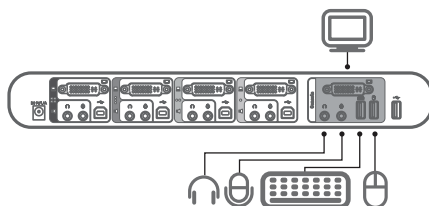
# Installing the KVM Switch

## Connecting the KVM Switch

The KVM Switch is a plug-and-play device for installation. For a quick start on installation and operation, please follow the instructions below for the setup sequence:

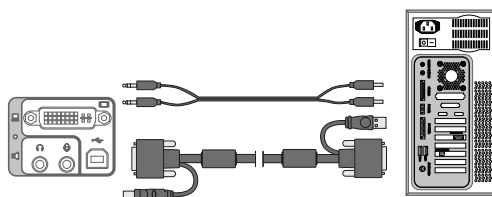
### Step 1.

Connect the shared keyboard, monitor, and mouse (also speaker set and microphone) to the console port of the KVM Switch.



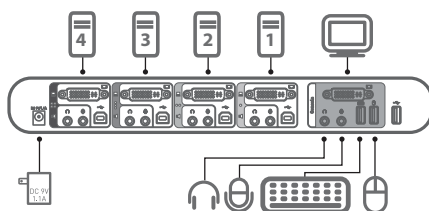
### Step 2.

Connect each of your computers to the KVM Switch, using the USB KVM cable, and audio and mic cables.



### Step 3.

Power your KVM Switch by connecting the external power adapter to it.



**Note:** Since the USB interface is hot-pluggable, you don't have to turn off the computer before making connections to the KVM Switch.

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# Installing the KVM Switch

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## NOTE REGARDING DDC SUPPORT:

In order to read the monitor's DDC information accurately, the following steps must be followed whenever a different monitor is connected to the KVM Switch:

**Step 1.** Power down each computer that is connected to the KVM Switch.

**Step 2.** Remove the power supply from the back of the KVM Switch.

**Step 3.** Disconnect the host cables from the back of the KVM Switch.

**Step 4.** Disconnect the monitor that is connected to the console port of the KVM Switch.

**Step 5.** Connect the new monitor you wish to use to the console port of the KVM Switch.

**Step 6.** Plug the power supply into the back of the KVM Switch.

**Step 7.** Power up the computers that are connected to the KVM Switch.

Following these steps will ensure that the KVM Switch is reading the monitor information correctly. If you are not concerned with DDC, you do not have to follow these steps when changing any piece of hardware that is connected to the KVM Switch.

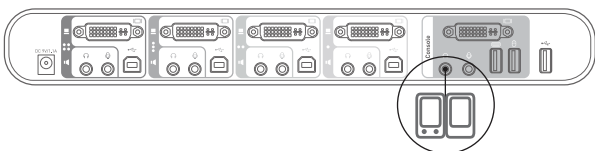
# Installing the KVM Switch

## Audio and Microphone Connections

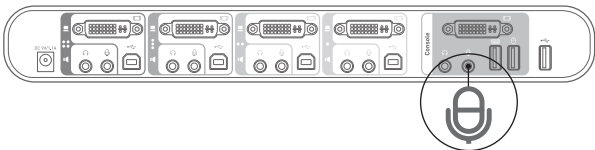
**Note:** Speakers and microphones are not required for use of your KVM Switch.

### Connect the Audio

Step 1. Using the audio cable attached to your speakers, connect the male 3.5mm plug to the lime audio jack in the “Console” section of the KVM Switch.



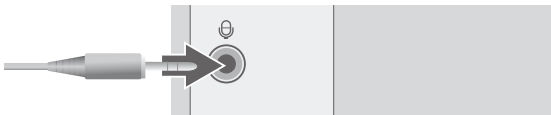
Step 2. Using the mic cable attached to your microphone, connect the male 3.5mm plug to the pink mic jack in the “Console” section of the KVM Switch.



Step 3. Using the SOHO USB Cable Kit, connect one end of the lime male 3.5mm plug to the speaker jack of your sound card or computer, and connect the other end to the audio jack of the KVM Switch.



Step 4. Using the KVM Cable, connect one end of the pink male 3.5mm plug to the mic jack of your sound card or computer, and connect the other end to the pink mic jack of the KVM Switch.



# Installing the KVM Switch

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## Powering Up the Systems

The KVM Switch must be powered up before the computers.

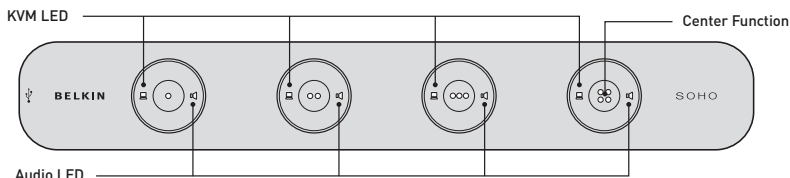
Once all cables have been connected, power up the CPUs that are attached to the KVM Switch. All computers can be powered on simultaneously. The KVM Switch emulates a mouse and keyboard on each port and allows your computer to boot normally. Your KVM Switch should now be ready for use.

You can select which computer to operate by either the direct-access port selectors located on the front panel of the KVM Switch or through keyboard hot-key commands. Note that it will take 1–2 seconds for the video to display after switching. This is due to the refresh of the video signal. There is also re-synchronization of the mouse and keyboard signal that takes place. This is normal operation and ensures that proper synchronization is established.

# Using the KVM Switch

## Selecting a Computer Using Direct-Access Port Selectors

You can directly select which computer you wish to control by pressing the corresponding direct-access port selector next to the appropriate port. The LED will be lit to indicate that the port is currently selected.



- Pushing the button in the center switches both the KVM Switch and audio for that specific computer at the same time.
- Pushing the KVM LED on the left of the button allows you to switch just your USB keyboard, video, and mouse to another connected computer.
- Pushing the Audio LED on the right of the button allows you to independently switch your audio feed while continuing to work off of a different computer.

## Selecting a Computer Using Keyboard Hot-Key Commands

A keyboard hot-key sequence consists of at least three specific keystrokes (hot-key sequence = [ScrLk] + [ScrLk] + Command key(s)).

**User-definable hot keys also allow you to customize your hot-key sequence.**

**For example:**

SCROLL LOCK

CAPS

F12

ESC

NUM LOCK

LEFT\_CTRL

RIGHT\_CTRL

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# Using the KVM Switch

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## Hot-Key Preceding Sequence Configuration

For users who want to use a preceding sequence other than two consecutive Scroll Locks, there is also one convenient way to configure it.

1. Press “ScrLk” + “ScrLk” + H, and a beeping sound will signal readiness for a new preceding sequence selection [or press and hold down the center of the last front-panel button (Button 2 or Button 4) until you hear three beeps, then release the button].
2. Select and press the key you would like to use as your preceding sequence (**SCROLL LOCK, CAPS, F12, ESC, NUM LOCK, LEFT\_CTRL, RIGHT\_CTRL** keys are available for selection), and you will hear a beep for selection confirmation. Now you can use the new preceding sequence to execute your hot-key commands.

**Note:** Each keystroke within a hot-key sequence should be pressed within two seconds. Otherwise, the hot-key sequence will not be validated.

# Using the KVM Switch

To modify the hot-key preceding sequence from the default Scroll Lock, you can either hit the hot-key sequence: scrLk – scrLk – H – (y), y = SCROLL LOCK, CAPS, ESC, F12 or NUM LOCK (as detailed in the Hot-Key Quick Reference Table below).

or

You can use another method: Press and hold the last button to enter the hot-key setting mode.

**Step 1.** Press and hold the last button (i.e., the second button on the 2-port model or the fourth button on the 4-port model) till you hear two beeps. Then release the button.

**Step 2.** Within two seconds, you should hit any of the selectable hot-key triggers (y), y = SCROLL LOCK, CAPS, ESC, F12, NUM LOCK, LEFT CTRL, or RIGHT CTRL to be your hot-key trigger.

For example, if you hit CAPS after hearing the two beeps, then the hot key will be: CAPS – CAPS – command key.

For detailed hot-key sequences and their corresponding functional commands, please refer to the Hot-Key Quick-Reference Table below.

| Hot Key Quick Reference Table                                                                            |                                                                                                |                                                                                                                                                                                      |                                                                                                                                                                                                                                                                   |
|----------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2/4-Port SOHO KVM Switch with Audio – & Mic – Operation Commands for Hot Keys/Front-Panel Buttons        |                                                                                                |                                                                                                                                                                                      |                                                                                                                                                                                                                                                                   |
| Hot-key sequence = [ScrLk] + [ScrLk] + Command key(s)                                                    |                                                                                                |                                                                                                                                                                                      |                                                                                                                                                                                                                                                                   |
| * user-definable preceding sequence = SCROLL LOCK, CAPS, F12 or NUM LOCK, LEFT_CTRL, RIGHT_CTRL          |                                                                                                |                                                                                                                                                                                      |                                                                                                                                                                                                                                                                   |
| Command                                                                                                  | Hot Keys <sup>1</sup>                                                                          | Front-Panel Buttons                                                                                                                                                                  | Description                                                                                                                                                                                                                                                       |
| Select Computer Channel <sup>1</sup><br>(Joint-select PC port/audio & mic, if binding is enabled)        | ScrLk + ScrLk + (s)<br>(s is a top-row number key) x = 1–2 / x = 1–4 for PC channel no.        | Press the computer icon on the left of a button to select the active computer channel                                                                                                | Select the active computer channel (Hot key: Joint-select PC port/audio & mic, if binding is enabled)                                                                                                                                                             |
| Select Audio & Mic Channel <sup>1</sup><br>(Joint-select PC port and audio & mic, if binding is enabled) | SerLk + ScrLk + (Fy)<br>Fy = F5–F6/Fx=F5–F8 (Fy is a function key)                             | --                                                                                                                                                                                   | Select the active audio & mic channel (Hot key: Joint-select PC port/audio & mic channel, if binding is enabled)                                                                                                                                                  |
| Bind Computer and Audio & Mic Switching <sup>2</sup>                                                     | SerLk + SerLk + Q                                                                              | --                                                                                                                                                                                   | Enable the binding of PC port and audio & mic switching. (Hot key: Once this feature is enabled, any computer and/or audio & mic switching by hot keys is bound together) (factory default)                                                                       |
| Unbind PC and Audio & Mic Switching <sup>2</sup>                                                         | SerLk + SerLk + W                                                                              | --                                                                                                                                                                                   | Disable the binding of PC port and audio & mic switching                                                                                                                                                                                                          |
| Next lower PC channel <sup>1</sup><br>(Joint-select PC/audio & mic, if binding is enabled)               | SerLk + SerLk + ↑<br>(arrow up)                                                                | --                                                                                                                                                                                   | Select the next lower connected PC channel (Hot key: Joint-select PC/audio & mic, if binding is enabled)                                                                                                                                                          |
| Next higher PC channel <sup>1</sup><br>(Joint-select PC/audio & mic, if binding is enabled)              | SerLk + SerLk + ↓<br>(arrow down)                                                              | --                                                                                                                                                                                   | Select the next higher connected PC channel (Hot key: Joint-select PC/audio & mic, if binding is enabled)                                                                                                                                                         |
| Previous PC channel                                                                                      | SerLk + SerLk + Backspace                                                                      | --                                                                                                                                                                                   | Toggle between the previous channel and current channel                                                                                                                                                                                                           |
| Define Hot-Key Preceding Sequence                                                                        | SerLk + SerLk + H + (y)<br>y = SCROLL LOCK, CAPS, ESC, F12, NUM LOCK, LEFT_CTRL, or RIGHT_CTRL | Press and hold down last button (Button 2 / Button 4) until you hear three beeps, release the button, and then press (y) key. This resets hot-key preceding sequence to SCROLL LOCK. | Select the hot-key preceding sequence among 6 alternative keys                                                                                                                                                                                                    |
| Read KVM Firmware Version                                                                                | Open Note Pad<br>SerLk + SerLk + V                                                             | --                                                                                                                                                                                   | Read the version of firmware that is currently on the KVM Switch. This is helpful when a firmware upgrade is performed as it gives you the ability to read the version of firmware, before and after the upgrade, to ensure the firmware has installed correctly. |

# Using the KVM Switch

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## Notes:

1. The USB keyboard hot keys allow faster and broader control of your KVM Switch and audio/mic switching in addition to the front-panel buttons.  
**If you have configured a hot-key preceding sequence other than two consecutive scroll locks, you should change your hot-key sequence accordingly. (For hot-key preceding sequence configuration, please refer to the Quick Installation Guide.)**
2. When the binding of PC and audio and mic switching is enabled by the hot-key sequence: ScrLk + ScrLk + Q, any PC and audio and mic switching by hot keys are bound together. **(However, the binding will not affect the independent front-panel button operation.)** To remove this binding, use the hot-key sequence: ScrLk + ScrLk + W.

**Mac® User:** Standard PC keyboard mapping to MAC keyboard -- ScrLk + ScrLk + C = ⏏ (CD/DVD drive-eject key); ScrLk + ScrLk + F10 = F13 ; ScrLk + ScrLk + F11 = F14 ; ScrLk + ScrLk + F12 = F15.

## LED Information:

Computer LED status (3 states: Lit/Flashing/Off). Lit = Active port with link established between KVM Switch and computer (via USB interface); Flashing = Active port but with no link established between KVM Switch and computer; Off = Non-active port.

Audio LED status (2 states: Lit/Off). Lit = Active port for audio output; Off = Non-active port for audio output.

# Using the KVM Switch

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## Switching the Audio/Mic

The audio/mic is independent to the KVM Switch and can be switched independently. This means that if you are working on port 1 of the KVM Switch, you can be listening to your music on port 3.

### You can switch the audio/mic in two ways:

1. Using the direct-port selectors: The port selector has an Audio LED that indicates which port your audio/mic is on. Push the speaker icon on any of the four buttons and the audio/mic will switch to the corresponding port.



2. Using the pre-defined hot key: Please see the Hot-Key Quick-Reference Table for a list of the hot keys.

# Firmware-Upgrade Guide

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This firmware-upgradeable KVM Switch allows you to upgrade firmware contents whenever it is needed to enhance its compatibility to other devices or its functionality and performance. We offer both Windows and Mac versions of the upgrade utility. You can choose either one depending on the computer platform on which you are going to perform the KVM Switch firmware uploading. The correct firmware-upgrade procedures using the Windows and Mac upgrade utilities are described below. Please follow the instructions to complete your firmware upgrade.

The firmware upgrade is performed through port 1 of the KVM Switch, so the KVM cables that are connected to port 1 should remain connected. Unplug all remaining KVM cables and peripheral cables connecting the KVM Switch to your computers or peripherals. You can leave the power cable connected to the KVM Switch. The keyboard, mouse, and monitor should be disconnected from the KVM Switch and plugged in directly to the host computer.

The computer that is connected to port 1 of the KVM Switch will be performing the upgrade and will be referenced as the “Host PC” for this process.

All but one of the cables connected to the KVM ports will be removed from the Switch. The cable connected to port 1 will remain connected. The USB connector at the other end of the port 1 cable will be plugged into a USB port on the host PC. The monitor connector will remain unplugged. The KVM console keyboard, mouse, and monitor are disconnected from the KVM Switch and then plugged in directly to the host PC.

# Firmware-Upgrade Guide

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## Upgrade Using the Windows Version Utility

### Prepare your KVM Switch and the Host PC

**Note:** The host PC must be running Windows 2000 or above in order to complete the firmware upgrade.

#### Step 1.

Ensure that the power adapter is connected to the KVM Switch. Check to make sure that the KVM cables for port 1 remain connected to the KVM Switch and the USB connector at the other end is plugged into a USB port on the host PC. The monitor connector is not used. The console monitor, mouse, and keyboard are disconnected from the console ports of the KVM Switch and plugged in directly to the host PC.

**Note:** The power supply should also remain connected to the KVM Switch.

#### Step 2.

The cables that are connected to port 1 of the KVM Switch also need to be connected to the host PC. Connect the USB cable to the host PC.

**Important:** Some host computers may not have enough USB ports to support the use of a USB keyboard, USB mouse, and the USB cable needed to perform the upgrade. (An example of this is a Mac mini, which only has two USB ports.) If this occurs, the keyboard does not have to be connected to the host PC since the mouse is used to perform the upgrade.

#### Step 3.

Power on the host PC and copy/download the firmware-upgrade utility, "Belkin Soho.exe", and the firmware-upgrade file, "\*.blk", from [belkin.com/support](http://belkin.com/support).

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# Firmware-Upgrade Guide

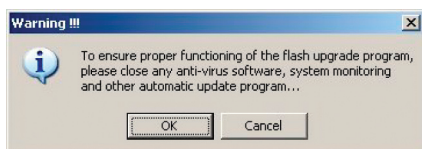
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## Activate the Firmware-Upgrade Utility Program

**Note:** You should close any unnecessary running programs such as antivirus, system-monitoring, or automatic updates; otherwise, the stability of the system during the firmware-upgrade process might be undermined.

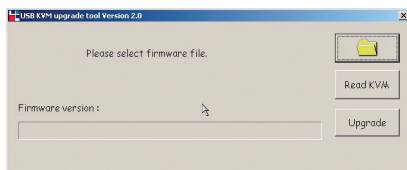
### Step 4.

Double-click the icon of “Belkin Soho.exe”, the firmware-upgrade utility program. A warning message box may appear if you have antivirus software running on the PC.



Read it carefully for information (and close any unnecessary programs before upgrading).

Click “OK”. A firmware file-selection dialog box appears.



# Firmware-Upgrade Guide

## Connect your KVM Switch to the Host PC

### Step 5.

Now press the first front-panel button on the KVM Switch until you hear three beeps. The KVM Switch has now entered into the upgrade mode.

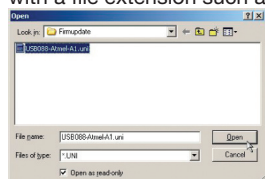
### Step 6.

Check to make sure the KVM cables from port 1 are connected to the host PC.

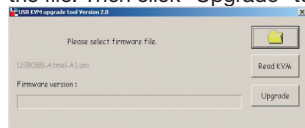
**Note:** A special upgrade cable is not needed to perform the upgrade since you can use the same KVM cable that you use for connecting to the computers. However, depending on the different models, the KVM cables you use will vary.

### Step 7.

Click the “Browse” button and locate the firmware-upgrade file, which is indicated with a file extension such as “.blk”.



Select the upgrade file (for example: “UCF-30-11-07.blk”) and click “Open” to load the file. Then click “Upgrade” to make it ready for upload.



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# Firmware-Upgrade Guide

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## Step 9.

Finally, unplug the power cable from the back of the KVM Switch and all other cables from the KVM Switch, and perform a cold reset. Reconnect all the cables again to the KVM Switch.

Now you can enjoy the newly added functionality and compatibility of the new firmware version.

**Note:** After you have finished the firmware-upgrade process, try the port switching and other functionalities of the KVM Switch to see whether it works fine with the new firmware. If it does, then this upgrade process was successfully completed. Congratulations!

If the file-upload process encounters an error and cannot complete successfully, please refer to the “Firmware-Upgrade Troubleshooting” section.

## Upgrade Using the Mac Version Utility

### Prepare your KVM Switch and the Mac Host

#### Step 1.

Ensure that the power adapter is connected to the KVM Switch. Check to make sure that the KVM cables for port 1 remain connected to the KVM Switch. The monitor, mouse, and keyboard should be disconnected from the console port of the KVM Switch and plugged in directly to the host computer. The power supply should also remain connected to the KVM Switch.

#### Step 2.

Power on the Mac host and copy/download the firmware-upgrade utility, “Belkin Soho.pkg”, and the firmware-upgrade file, “\*.blk”, to it.

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# Firmware-Upgrade Guide

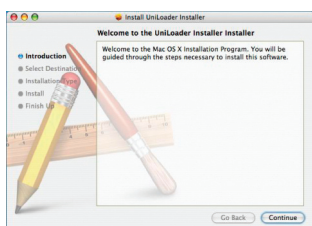
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## Install and Activate the Firmware-Upgrade Utility Program

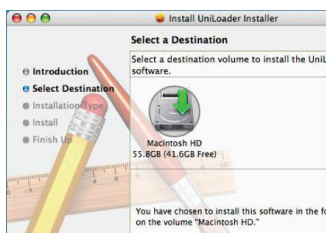
**Note:** You should close any unnecessary running programs such as antivirus, system-monitoring, or automatic updates; otherwise, the stability of the system during the firmware-upgrade process might be undermined.

### Step 3.

Double-click the icon of “Belkin Soho.pkg”, the firmware-upgrade utility program, and a message box appears that will guide you through the installation process.

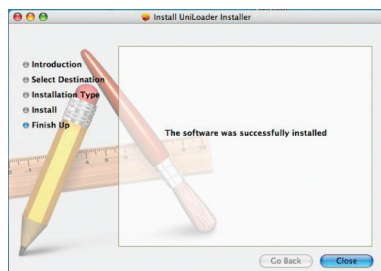


Click “Continue” and a firmware file-selection dialog box appears.



# Firmware-Upgrade Guide

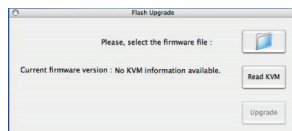
Click the “Choose” button to select the installation path of the upgrade utility. Then go through the guided steps to install the upgrade utility.



After you have installed the program, you can find the upgrade-utility icon in the “Application” folder.

## Step 4.

Now, double-click the “Belkin Soho” icon to activate the upgrade utility.



Now the upgrade utility program is ready.

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# Firmware-Upgrade Guide

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## Connect your KVM Switch to the Mac Host

### Step 5.

Press the first front-panel button on the KVM Switch until you hear three beeps. Now the KVM Switch has entered into the upgrade mode.

### Step 6.

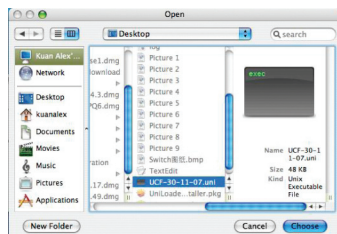
Check to make sure the KVM cables from port 1 are connected to the Mac host.

**Note:** A special upgrade cable is not needed to perform the upgrade since you can use the same KVM cable that you use for connecting to the computers. However, depending on the different models, the KVM cables you use will vary.

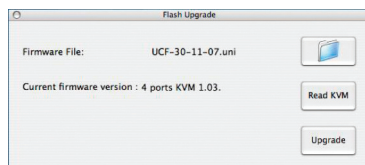
# Firmware-Upgrade Guide

## Step 7.

Click the “Browse” button and locate the firmware-upgrade file, which is indicated with a file extension such as “\*.blk”.



Select the upgrade file (for example: “UCF-30-11-07.blk”) and click “Choose” to load the file. Then click “Upgrade” for upload.



## Begin the File Upload

**Note:** Before clicking on the “Upgrade” button on the utility program, you should make sure that you are focused on port 1 of the KVM Switch where you have the Mac host connected. If not, switch to that port before clicking the “Upgrade” button.

## Step 8.

After you click the “Upgrade” button, the file-transfer progress will begin in seconds and can be monitored through the advancement of the progress bar. Wait until the progress bar runs through its full length for the upgrade process to complete.

**Note:** Meanwhile, be careful not to power off the computer or disconnect the USB-cable connection. Otherwise, the file download will be interrupted and the upgrade process will be aborted. If that does happen, please refer to the “Firmware-Upgrade Troubleshooting” section.

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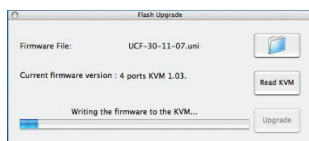
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# Firmware-Upgrade Guide

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The file upload is finished when the progress bar runs through 100 percent and a prompt tells you that the upgrade is OK.

Click "OK". The firmware-upgrade process is complete.

## Step 9.

Finally, unplug the power cable from the back of the KVM Switch and all other cables from the KVM Switch, and perform a cold reset. Reconnect all the cables again to the KVM Switch.

Now you can enjoy the newly added functionality and compatibility of the new firmware version.

**Note:** After you have finished the firmware-upgrade process, try the port switching and other functionalities of the KVM Switch to see whether it works fine with the new firmware. If it does, then this upgrade process was successfully completed. Congratulations!

If the file-upload process encounters an error and cannot complete successfully, please refer to the "Firmware-Upgrade Troubleshooting" section.

## **Which operating systems does the KVM Switch support?**

The KVM Switch will support any operating system that runs on a USB platform. It will also work with non-USB-enabled Sun™ and Mac operating systems using the appropriate adapter. Compatible operating systems include, but are not limited to, Windows 2000, 2003, XP, and Vista; Linux; and Mac OS.

## **What does flash-upgrade capability mean?**

You can update your KVM Switch firmware with flash upgrades, when needed, by going to [belkin.com](http://belkin.com). This ensures that your KVM Switch works with the most current computers and devices.

## **How does the KVM Switch allow the user to switch between ports?**

The KVM Switch supports two methods of port selection. You can select computers using specially designated keyboard hot keys, or independently access the desired port by pushing the direct-access port selectors.

## **What is DDC?**

Short for Display Data Channel, DDC is a VESA standard for communication between a monitor and a video adapter. Using DDC, a monitor can inform a computer's video card about its properties, such as maximum resolution and color depth, to ensure that the user is presented with valid options for configuring the display.

## **What is the maximum video resolution that the KVM Switch supports?**

The advanced video circuit in the KVM Switch supports a maximum resolution of 1920x1200 and analog resolution of 2048x1536. Such higher-resolution support is ideal for graphic artists and designers who depend on high-quality video.

## **What are the benefits of the SOHO KVM Switch's supporting audio and microphone inputs and outputs?**

The SOHO KVM Switch is perfect for the home- and small-office user who commonly uses multimedia applications. With multimedia support, you do not need an extra set of speakers for each computer that is connected to your KVM unit. The audio and mic also switch independently to the KVM Switch.

## **Do I have to install any software to use the KVM Switch?**

No, the KVM Switch does not require any drivers or software to be installed in your computers. Simply connect all your computers to the computer/host ports on the KVM Switch, then attach one keyboard, monitor, and mouse to the "Console" port and it is ready for use.

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**Does the KVM Switch require an AC adapter?**

Yes, the KVM Switch requires a 9V, 1A DC power adapter with center pin-positive polarity.

**Can I use the KVM Switch to switch video signals only?**

Yes, you may use the KVM Switch to switch between video signals only without having to connect the keyboard and mouse. The keyboard and mouse should be connected directly to the computer that the video signal is taken from to ensure that your computer functions properly.

**Can I use the SOHO KVM Switch on my Sun computer that supports USB?**

Yes, the KVM Switch works with any USB-capable computer.

**Does the SOHO KVM Switch support Linux?**

Yes, the KVM Switch works with all Linux kernels configured for USB support.

**Does the KVM Switch support Microsoft keyboards?**

Yes, the KVM Switch is compatible with Microsoft Internet Keyboard PRO, Natural® Keyboard PRO, and Logitech® keyboards with up to standard 107-key support only.

**How long is the warranty for the KVM Switch?**

The KVM Switch comes with a 3-Year Limited Warranty.

# Troubleshooting

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## VIDEO

### **Problem:**

**I am getting ghosting, shadowing, or fuzzy images on my monitor.**

### **Solution:**

- Check that all video cables are inserted properly.
- Check that the monitor you are using supports the resolution and refresh-rate setting on your computer.
- Check that the graphics card you are using supports the resolution and refresh-rate setting on your computer.
- Connect the monitor directly into the computer with which you are having trouble to see if the problem still appears.

### **Problem:**

**I am getting a black screen on my monitor.**

### **Solution:**

- Check that all video cables are inserted properly.
- If you are not using a power adapter, check that the keyboard cable is connected and inserted properly between the computer and KVM Switch for the appropriate port.
- If you are using the KVM Switch for video switching only and have no keyboard and mouse connection between the KVM Switch and PC, you will need to purchase the optional 9V DC, 600mA power adapter (F1D065-PWR for your appropriate country).
- Connect your monitor directly to the computer to verify that your monitor is functioning properly.

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# Troubleshooting

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## KEYBOARD

### **Problem:**

**Computer does not detect keyboard and I get a keyboard error reported at boot up.**

### **Solution:**

- Check that the keyboard cable between the KVM Switch and the computer is connected properly. Tighten any loose connections.
- Try swapping your keyboard with a different one.
- Try connecting the computer to a different port.
- If you are using the keyboard software that was included with your keyboard, uninstall it and install the standard Microsoft keyboard driver.

## MOUSE

### **Problem:**

**Mouse is lost when I switch to a different channel.**

### **Solution:**

- Check that the mouse you are using is connected properly to the console of the KVM Switch.
- If you are using a mouse driver that was included with your mouse, uninstall it and install the standard Microsoft mouse driver.
- Disconnect and reconnect the mouse cable attached to the channel with which you are experiencing problems to resynchronize the mouse connection.
- Attach the mouse directly to the computer with which you are experiencing mouse problems.
- If the computer just awoke from standby mode, allow up to one minute to regain mouse function.
- Deactivate power-management schemes on the PC with which you are experiencing problems.
- Try swapping the mouse with a different one.

# Troubleshooting

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1

## **Problem:**

**The mouse is not detected at boot up.**

2

## **Solution:**

- Check the cables and make sure that they are inserted properly.

3

## **Problem:**

**The computer boots up fine, but the mouse does not work.**

4

## **Solution:**

- Make sure it is plugged in properly.
- Make sure the mouse works when directly plugged into the computer. Rebooting may be necessary when trying this.
- Try a different mouse.

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## **Problem:**

**When I switch from one port to another, mouse movement is completely erratic.**

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## **Solution:**

- Make sure you do not have more than one mouse driver installed.
- Make sure that the driver is either for a standard USB mouse or a PS/2 or USB mouse compatible with Microsoft.
- Avoid moving the mouse or pressing the mouse button when switching ports on the KVM Switch.
- You can reset the mouse and resume proper mouse movement simply by unplugging the mouse from the front of the KVM Switch or about 2–3 seconds, and then plugging it in again.

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## **GENERAL**

### **Problem:**

**My computer does not boot when connected to the KVM Switch and works fine when I connect the keyboard, video, and mouse directly to it.**

### **Solution:**

- Make sure that the keyboard and mouse cables are connected tightly between the KVM Switch and the computer.
- Check that the keyboard and mouse cables are not crossed.

# Troubleshooting

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## **Problem:**

**I am connecting my computer to the SOHO KVM Switch via USB and my keyboard and mouse do not work.**

## **Solution:**

- Prior to connecting the SOHO KVM Switch, make sure that the HID USB driver is installed on each computer. (To install the HID USB driver, connect a USB mouse and USB keyboard to the computer. Windows should automatically install the drivers.)

## **Problem:**

**Some of the keys on my keyboard are not functioning properly when I use a Mac computer.**

## **Solution:**

- Because you are using a PC keyboard on a Mac computer, a few of the option keys on your PC keyboard may be reversed. All major keys will function as labeled.

## **AUDIO AND MICROPHONE**

## **Problem:**

**I have connected the speakers to the KVM Switch and I am not getting any sound from my computer.**

## **Solution:**

- Check that the sound is enabled on the computer by going into the system setting.
- Check that the volume is turned up in your sound configuration.
- Make sure that the audio cable is connected properly and connected to the appropriate connector.
- Check that the speakers you are using are functioning properly.

## Firmware-Upgrade Troubleshooting

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### Problem:

The progress bar stops for a long time without any advancement.

2

### Solution:

Press and hold down the first front-panel button until two beeps are heard, and click the upgrade button on the upgrade utility program. The firmware-upload process will begin immediately, and you will see the progress bar advance gradually to full length. However, if the progress bar just stops somewhere in the middle and goes no further for a long time (longer than five minutes), there might be some problem.

3

If so, simply unplug all the cables from the KVM Switch and start the whole firmware-upgrade procedure again as described in the Firmware-Upgrade Guide.

4

However, if you find that the mouse and keyboard no longer work from the console of your KVM Switch, you can connect them directly to the host computer (although the USB cable still has to be reconnected to the KVM Switch), and complete the rest of the firmware-upgrade procedure.

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**Note:** Make sure that you have closed any unnecessary running programs on the host computer, such as antivirus, system-monitoring, or automatic updates, before you perform the upgrade procedure.

7

**Note:** This firmware is crash-proof. If the upgrade has failed before its completion, just repeat the procedure again for another try.

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### Problem:

In the middle of the firmware-file transfer, my computer was shut down by an unexpected power failure or the USB connection was broken. What should I do now to restart the whole firmware-upgrade procedure?

### Solution:

Follow the instructions as described in the previous question.

# Information

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## FCC Statement

### **Declaration of Conformity with FCC Rules for Electromagnetic Compatibility**

We, Belkin International, Inc., of 501 West Walnut Street, Compton, CA 90220, declare under our sole responsibility that the products:

F1DD102L, F1DD104L,

to which this declaration relates:

Comply with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and

(2) this device must accept any interference received, including interference that may cause undesired operation.

### **CE Declaration of Conformity**

We, Belkin International, Inc., declare under our sole responsibility that the products F1DD102L and F1DD104L, to which this declaration relates, are in conformity with Emissions Standard EN55022 and with Immunity Standard EN55024, LVP EN61000-3-2, and EN61000-3-3.

### **ICES**

This Class A digital apparatus complies with Canadian ICES-003. Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

# Information

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## Belkin International, Inc., Limited 3-Year Product Warranty

### What this warranty covers.

Belkin International, Inc. ("Belkin") warrants to the original purchaser of this Belkin product that the product shall be free of defects in design, assembly, material, or workmanship.

### What the period of coverage is.

Belkin warrants the Belkin product for three years.

### What will we do to correct problems?

#### Product Warranty.

Belkin will repair or replace, at its option, any defective product free of charge (except for shipping charges for the product). Belkin reserves the right to discontinue any of its products without notice, and disclaims any limited warranty to repair or replace any such discontinued products. In the event that Belkin is unable to repair or replace the product (for example, because it has been discontinued), Belkin will offer either a refund or a credit toward the purchase of another product from Belkin.com in an amount equal to the purchase price of the product as evidenced on the original purchase receipt as discounted by its natural use.

### What is not covered by this warranty?

All above warranties are null and void if the Belkin product is not provided to Belkin for inspection upon Belkin's request at the sole expense of the purchaser, or if Belkin determines that the Belkin product has been improperly installed, altered in any way, or tampered with. The Belkin Product Warranty does not protect against acts of God such as flood, lightning, earthquake, war, vandalism, theft, normal-use wear and tear, erosion, depletion, obsolescence, abuse, damage due to low voltage disturbances (i.e. brownouts or sags), non-authorized program, or system equipment modification or alteration.

### How to get service.

To get service for your Belkin product you must take the following steps:

1. Contact Belkin International, Inc. at 501 W. Walnut St., Compton CA 90220, Attn: Customer Service, or call (800)-223-5546, within 15 days of the Occurrence. Be prepared to provide the following information:
  - a. The part number of the Belkin product.
  - b. Where you purchased the product.
  - c. When you purchased the product.
  - d. Copy of original receipt.
2. Your Belkin Customer Service Representative will then instruct you on how to forward your receipt and Belkin product and how to proceed with your claim.

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# Information

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Belkin reserves the right to review the damaged Belkin product. All costs of shipping the Belkin product to Belkin for inspection shall be borne solely by the purchaser. If Belkin determines, in its sole discretion, that it is impractical to ship the damaged equipment to Belkin, Belkin may designate, in its sole discretion, an equipment repair facility to inspect and estimate the cost to repair such equipment. The cost, if any, of shipping the equipment to and from such repair facility and of such estimate shall be borne solely by the purchaser. Damaged equipment must remain available for inspection until the claim is finalized.

Whenever claims are settled, Belkin reserves the right to be subrogated under any existing insurance policies the purchaser may have.

## **How state law relates to the warranty.**

THIS WARRANTY CONTAINS THE SOLE WARRANTY OF BELKIN. THERE ARE NO OTHER WARRANTIES, EXPRESSED OR, EXCEPT AS REQUIRED BY LAW, IMPLIED, INCLUDING THE IMPLIED WARRANTY OR CONDITION OF QUALITY, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND SUCH IMPLIED WARRANTIES, IF ANY, ARE LIMITED IN DURATION TO THE TERM OF THIS WARRANTY.

Some states do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you.

IN NO EVENT SHALL BELKIN BE LIABLE FOR INCIDENTAL, SPECIAL, DIRECT, INDIRECT, CONSEQUENTIAL OR MULTIPLE DAMAGES SUCH AS, BUT NOT LIMITED TO, LOST BUSINESS OR PROFITS ARISING OUT OF THE SALE OR USE OF ANY BELKIN PRODUCT, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

This warranty gives you specific legal rights, and you may also have other rights, which may vary from state to state. Some states do not allow the exclusion or limitation of incidental, consequential, or other damages, so the above limitations may not apply to you.

# BELKIN®

## SOHO KVM Switch with Audio

DVI with USB Console and Host Support

# BELKIN®

[www.belkin.com](http://www.belkin.com)

### **Belkin Tech Support**

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310-898-1100 ext. 2263

UK: 0845 607 77 87

Australia: 1800 235 546

New Zealand: 0800 235 546

Singapore: 65 64857620

Europe: [www.belkin.com/support](http://www.belkin.com/support)

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