

# 2-port Cable Integrated KVM Switch Series

**LS-21DA**

**LS-21HA**



**User manual**

**Statement**

## US Federal Communications Commission Interference Statement

This product has been tested and certified to meet the digital device requirements of Class B of the FCC Rules and provisions in Part 15 of the FCC Rules. These rules are intended to use the device in a commercial environment so as to protect them from harmful interference, and they are the specified provisions that can provide effective protection. This device can generate and radiate electromagnetic waves. Therefore, if it is not installed and used in accordance with the provisions of this manual, it may cause interference to wireless communication devices. However, there is no guarantee that interference will not occur in a particular installation. If the device is turned on or off causing interference in radio and television reception, the user should try the following ways to reduce interference.

- ◆ Change direction and move the receiving antenna.
- ◆ Increase the distance between the device and the receiver.
- ◆ Connect the device to the circuit exit (the interface to which the receiver is not connected).
- ◆ Please ask your distributors and an experienced radio / TV technician for help.

**FCC warning:** Changes and modifications made to the device not by the responsible and qualified party will result in the user losing the right to operate the device.

**CE warning:** This is a Class B product. In the home environment, this product may cause radio interference, so the user may need to take appropriate measures to prevent it.



## RoHS

This product is RoHS compliant.



## User notes

The manufacturer has the right to modify and change the information, documents and specification tables contained in the manual without prior notice. The manufacturer does not guarantee, express, imply or statutorily declare its contents or specifically disclaims its merchantability and applicability for a particular purpose. The same applies to any manufacturer's software that is sold and authorized as described in this manual. If the software program is found to be defective after purchase, the purchaser (and the non-manufacturers, its distributors or its merchants) shall be responsible for all necessary services, repair cost and any accidental or consequential damages caused by the software defect.

The manufacturer is not responsible for any interference in the radio and/or television that is caused by the unauthorized adjustment of this device. The user must correct the interference by himself.

If the operating voltage setting is not correctly selected before operation, the manufacturer shall not be liable for any damage caused.

**Be sure to confirm that the voltage is set correctly before use.**



## Product model introductions:

Model	Configuration introductions
LS-21DA	2 sets of server interface DVI + audio + MIC + USB (keyboard, mouse, U disk, printer, etc.), a set of local console interface, a front USB interface, supporting hot key switching and panel key switching control.
LS-21HA	2 sets of server interface HDMI + audio + MIC + USB (keyboard, mouse, U disk, printer, etc.), a set of local console interface, a front USB interface, supporting hot key switching and panel key switching control.

## Package contents

The multi-computer KVM switch package includes the following:

- ◆ 1 KVM switch host
- ◆ 2 sets of customized KVM connection cables (LS-21DA, LS-21HA)
- ◆ 1 user manual

Check and make sure that all parts are in place and that they are not damaged in transit. If you encounter problems, please contact your distributors.

To prevent damage to the machine or devices connected to the machine, please read this manual carefully and follow the instructions for installation and operation.

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\* Since the publication of this manual, there may be new product features added. Please visit our website to download the latest version of the user manual.

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## About this manual

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This user manual will assist you in the effective use of the product functions, including the installation, setting, operation and other procedures of the device. You can learn what is included in this manual from the following:

**Chapter I Introduction** – This chapter introduces the rack-mountable KVM device system, including its functions, features, advantages and so on, and describes and introduces its front and rear panel components.

**Chapter II Hardware installation** – This chapter explains how to install this product.

**Chapter III Basic operation** – Explains the basic operation concepts of the KVM switch.

**Chapter IV Keyboard port operation** - Describes the keyboard's hot key combination operations and settings.

**Appendix** – Mainly provides specification tables and other technical information about the relevant KVM switch.

## Common symbol introductions

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<b>Symbol</b>	<b>represents the text information that should be entered</b>
<b>【】</b>	Parenthesis represents the keys that need to be entered. For example, [Enter] means pressing the Enter key. For keys that need to be entered at the same time, they are put in the same parenthesis, and they are connected by a plus sign. For example: [Ctrl]
1.	The number represents the actual sequence number of operation steps.
◆	The rhombus symbol represents that information is provided for reference, but is not related to the operation steps.
●	The origin symbol represents the classification sub-item information, but is not related to the operation steps.

## Product information

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To find out more about our KVM product information and how to use it more efficiently, you can go to our website or contact an authorized distributor for more contact information.

# Chapter I

## Introduction

### Product introductions

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As a KVM switch, the 2-port desktop KVM series switch allows users to access 2 computers from a single USB keyboard, USB mouse and DVI, HDMI monitor console. As a USB hub, it allows each computer (one computer at a time) to access the peripherals it is connected to. The switch is easy and fast to install. Just plug the cable into the correct port. No software settings are required, no installation procedures and no compatibility issues. Desktop type has compact design, metal housing, easy to install and place, also provides a variety of video interface options. It provides users with a variety of quick switching options for audio, video, USB devices, thus saving desktop space. Therefore, it is an ideal choice for multimedia applications such as SOHO office and so on.

### Product features

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- ◆ 2-port USB2.0 multiple video series KVM switch
- ◆ Single USB console controls 2 computers and USB peripherals
- ◆ Built-in USB2.0 hub, compatible with USB2.0 protocol specification
- ◆ Support DVI video resolution up to 1920\*1080@60HZ (1080P)
- ◆ Support HDMI video resolution up to 2048\*1536@60HZ (2K)
- ◆ Provide keyboard hot key switching and shortcut key function selections
- ◆ Support various operating systems of multiple platforms
- ◆ BIOS level hardware connection, no need to install drivers and control software
- ◆ The front end of the device is extended with USB interface, which is convenient for users to connect USB keyboard, mouse, or U disk, USB printer and other peripherals.
- ◆ Provide a variety of hot key selections and setting functions, which is convenient for users to set their own hot keys according to the situation.
- ◆ Automatically scan the online status of the connected computer

## Operating system

- ◆ The operating systems supported by remote users' computers include: Windows XP and above version.
- ◆ The operating systems supported by the server connected to the switch are shown in the table below:

Operating system		Version
Windows		Windows 2000/XP/2003/2008/Vista/7/10
Linux	RedHat	9.0 or higher
	SuSE	10/11.1 or higher
	Debian	3.1/4.0
	Ubuntu	7.04/7.10
UNIX	AIX	4.3 or higher
	FreeBSD	5.5 or higher
	Sun Solaris	8 or higher
Mac		From OS 9.0 to 10.6 (Snow Leopard)
Novell	Netware	6.0 or higher

## Parts

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### View


3D view of the LS-21DA





3D view of the LS-21HA



Product interface introductions:

 Input interface for local USB keyboard and mouse

 Output interface for local MIC

 Output interface for local audio

 Interface for DVI video

 Interface for HDMI video



## Chapter II

# Hardware installation

## Cable connection and installation

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The KVM switch can be placed on any suitable flat surface and is sufficient to safely support the weight of the device plus additional connection cables. Please make sure the flat surface is clean and free of debris that can affect the ventilation and normal operation of the switch.

To install a 2-port desktop KVM device, please operate as the following steps:

1. Plug the USB keyboard and USB mouse into the USB console port on the rear panel of the device.
2. Plug the DVI, HDMI monitor into the console video port on the rear panel of the device.
3. If you use a separate speaker and microphone, plug it into the console analog signal audio port on the rear panel of the device.
4. Use a customized KVM cable set to plug the KVM cable connector and the attached USB connector into the corresponding jack on the rear panel of the switch.
5. Plug the other end of the cable, video and USB cable into the corresponding port on your computer.
6. Plug the USB peripheral into the Type A jack.
7. Turn on the monitor power supply.
8. Turn on your computer power supply.

## Chapter III

### Basic operation

#### Overview

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There are two ways for the KVM switch to access the connected computer: the hot key combination on the USB keyboard to switch operations or the manual switching operation of keys in front of the KVM device.

#### Keyboard hot key combination switching mode

Users can use the keyboard of the USB interface connected to the KVM device to perform hot key combination operation. For details, please refer to the detailed introductions in the following chapters.

#### Power off and restart

If it is necessary to turn off the power supply of the device, before restarting the power supply of the device, you must do the following operations:

1. Turn off all the power supply of the computers connected to the switch.
2. Wait 10 seconds, and then plug back the power adapter cable of the switch.
3. After the switch is turned on, turn on the computer power supply.

## Chapter IV

# Keyboard port operation

## Overview

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The KVM product in this desktop series offers a large number of easy and convenient hot key operations, so that it is convenient to set up KVM through the keyboard or to complete the switching and selection function of the port.

## Hot key combination

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This series of products provides 4 hot key combinations for users to select and set. The default hot keys are [CTL] + [CTL] to switch to the next online port, [CTL] + [SHIFT] + [1] or [2] to switch to the specified port. The following table is the introductions of the 4 hot key combinations. Please check the settings when using it:

### 1. 【CTL】 + 【SHIFT】 mode

Hot key combinations	Introductions
【CTL】 + 【CTL】	switch to the next connected computer
【CTL】 + 【SHIFT】 + 【1】 or 【2】	switch to the computer corresponding to the port of [1] [2]
【CTL】 + 【SHIFT】 + 【→】 or 【↓】	switch to the next computer
【CTL】 + 【SHIFT】 + 【←】 or 【↑】	switch to the previous computer
【CTL】 + 【SHIFT】 + 【B】	buzzer on or off
【CTL】 + 【SHIFT】 + 【S】	automatic switching mode, the default is 5 seconds, and press [ESC] to exit
【CTL】 + 【SHIFT】 + 【S】 + 【N】	set the time interval of automatic switching mode, and press [ESC] to exit
【CTL】 + 【SHIFT】 + 【SCROLL】	switch to [SCROLL] + [SCROLL] hot key combination mode
【CTL】 + 【SHIFT】 + 【NUM】	switch to [NUM] + [NUM] hot key combination mode
【CTL】 + 【SHIFT】 + 【CAPS】	switch to [CAPS] + [CAPS] hot key combination mode

### 2. 【SCROLL】 + 【SCROLL】 mode

Hot key combinations	Introductions
【SCROLL】 + 【SCROLL】 + 【1】 or 【2】	switch to the computer corresponding to the port of [1] [2]

<b>【SCROLL】 + 【SCROLL】 + 【→】 or 【↓】</b>	switch to the next computer
<b>【SCROLL】 + 【SCROLL】 + 【←】 or 【↑】</b>	switch to the previous computer
<b>【SCROLL】 + 【SCROLL】 + 【B】</b>	buzzer on or off
<b>【SCROLL】 + 【SCROLL】 + 【S】</b>	automatic switching mode, the default is 5 seconds, and press [ESC] to exit
<b>【SCROLL】 + 【SCROLL】 + 【S】 + 【N】</b>	set the time interval of automatic switching mode, and press [ESC] to exit
<b>【SCROLL】 + 【SCROLL】 + 【CTL】</b>	switch to [CTL] + [CTL] hot key combination mode
<b>【SCROLL】 + 【SCROLL】 + 【NUM】</b>	switch to [NUM] + [NUM] hot key combination mode
<b>【SCROLL】 + 【SCROLL】 + 【CAPS】</b>	switch to [CAPS] + [CAPS] hot key combination mode

3. **【NUM】 + 【NUM】 mode**

Hot key combinations	Introductions
<b>【NUM】 + 【NUM】 + 【1】 or 【2】</b>	switch to the computer corresponding to the port of [1] [2]
<b>【NUM】 + 【NUM】 + 【→】 or 【↓】</b>	switch to the next computer
<b>【NUM】 + 【NUM】 + 【←】 or 【↑】</b>	switch to the previous computer
<b>【NUM】 + 【NUM】 + 【B】</b>	buzzer on or off
<b>【NUM】 + 【NUM】 + 【S】</b>	automatic switching mode, the default is 5 seconds, and press [ESC] to exit
<b>【NUM】 + 【NUM】 + 【S】 + 【N】</b>	set the time interval of automatic switching mode, and press [ESC] to exit
<b>【NUM】 + 【NUM】 + 【SCROLL】</b>	switch to [SCROLL] + [SCROLL] hot key combination mode
<b>【NUM】 + 【NUM】 + 【CTL】</b>	switch to [CTL] + [CTL] hot key combination mode
<b>【NUM】 + 【NUM】 + 【CAPS】</b>	switch to [CAPS] + [CAPS] hot key combination mode

4. **【CAPS】 + 【CAPS】 mode**

Hot key combinations	Introductions
<b>【CAPS】 + 【CAPS】 + 【1】 or 【2】</b>	switch to the computer corresponding to the port of [1] [2]
<b>【CAPS】 + 【CAPS】 + 【→】 or 【↓】</b>	switch to the next computer
<b>【CAPS】 + 【CAPS】 + 【←】 or 【↑】</b>	switch to the previous computer
<b>【CAPS】 + 【CAPS】 + 【B】</b>	buzzer on or off
<b>【CAPS】 + 【CAPS】 + 【S】</b>	automatic switching mode, the default is 5 seconds, and press [ESC] to exit
<b>【CAPS】 + 【CAPS】 + 【S】 + 【N】</b>	set the time interval of automatic switching mode, and press [ESC] to exit
<b>【CAPS】 + 【CAPS】 + 【SCROLL】</b>	switch to [SCROLL] + [SCROLL] hot key combination mode
<b>【CAPS】 + 【CAPS】 + 【NUM】</b>	switch to [NUM] + [NUM] hot key combination mode
<b>【CAPS】 + 【CAPS】 + 【CTL】</b>	switch to [CTL] + [CTL] hot key combination mode

**Note:** 1. The testing time of each hot key code is 5 seconds. If you press [CTL] for the first time and then

press [CTL] again after an interval of 5 seconds, this combination key will be invalid input.

2. In the combination key, [N] represents the number key [1]---[9], which can set the number of seconds in the time interval, as shown in the following table:

Time interval of automatic switching	
N	Seconds
1	5
2	10
3	15
4	20
5	25
6	30
7	35
8	40
9	60

## Appendix

### Safety instructions

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#### In general

- ◆ This product is for indoor use only.
- ◆ Please read all the instructions and use them for future reference.
- ◆ Please follow all warnings and instructions on the device.
- ◆ Do not place the device on any uneven surface (such as a cart, shelf, table, etc.). If the device is dropped, it will cause serious damage.
- ◆ Do not use the device in the place near water.
- ◆ Do not place the device on the radiator or next to or above the heating unit.
- ◆ The device housing is equipped with slots for heat dissipation and ventilation. To prevent overheating during operation, do not block or cover the openings.
- ◆ The device should not be placed on a soft surface (such as a bed, sofa, blanket, etc.), which will block the fan opening. Similarly, it also should not be placed in a sealed environment unless proper ventilation has been provided before placing.
- ◆ Do not spill any liquid on the device.
- ◆ The power supply of the device must be pulled out from the wall outlet before cleaning. Do not use any liquid or foamy cleaning agent. Please use a wet cloth to clean it.
- ◆ Please use the device according to the power supply type on the label. If you are not sure if the power supply type is available, please contact your distributor or local power company.

- ◆ This device is designed and applied to IT distribution systems with 100V~230V phase-to-phase voltage.
- ◆ To prevent damage to your device, it is important that all devices are properly grounded.
- ◆ Do not place anything on the power cords or connection cables. And properly arrange the wiring paths of the power cords and connection cables to avoid tripping over it.
- ◆ If the device uses an extension cord, make sure that the total charge of all products using the cord does not exceed the current carrying capacity of the cord. Make sure that the total current of all products plugged into the wall outlet does not exceed 15A.
- ◆ Please select and use devices such as surge suppressors, regulators, or uninterruptible power systems (UPS), etc., to help protect your system from sudden, transient increases and decreases in power.
- ◆ Please properly fix the connection cables and power cords of the system to ensure that nothing is pressed against the cables.
- ◆ Do not insert any objects into the machine through the slots of the housing. It is likely to cause the risk of being exposed to dangerous voltage points or parts short circuit that could result in fire or electric shock.
- ◆ Do not attempt to repair the device yourself. Please find qualified service personnel to obtain support services.
- ◆ If the following situations occur, please pull out the power supply of this device from the wall outlet and hand it over to the qualified service personnel for repair.
  - The power cords or plugs are damaged or worn.
  - Liquid is spilled into the device.
  - This device is drenched by rain and water.
  - The device has been dropped or the housing has been damaged.
  - The device has significant changes in the function.
  - The device cannot be operated normally after following the operation instructions.
- ◆ Only adjust the control functions covered in the operation instructions. Other improper operations may cause damage, which may need qualified personnel to do more work in order to repair it.

## Product specification parameters

Type		LS-21DA	
Computer connections		2	
Port selection		Shortcut hot key	
Connector	Console ports	Monitor	1 x DVI- Single Link female
		Keyboard	1 x USB Type A female
		Mouse	1 x USB Type A female
		Speaker	1 x Mini stereo jack female
	Computer ports	Monitor	2 x DVI-Single Link male cable
		Keyboard, mouse	2 x USB Type A male cable
Speaker		2 x Mini stereo jack male cable	
LED indicator	Select console ports	2 x green	
Analog	Keyboard, mouse	USB	

**2-port Cable KVM switch user manual**

mode		
Maximum video resolution		1920*1080@60HZ
Shortcut switch hot key		CTL+CTL(Left)
Operating environment	Operating temperature	0-50℃
	Storing temperature	-20-60℃
	Humidity	0-80%RH, no condensation
Body attributes	Housing	Plastic
	Weight	0.4Kg

Type		LS-21HA	
Computer connections		2	
Port selection		Shortcut hot key	
Connector	Console ports	Monitor	1 x HDMA Type A female
		Keyboard	1 x USB Type A female
		Mouse	1 x USB Type A female
		Speaker	1 x Mini stereo jack green female
	Computer ports	Monitor	2 x HDMI Type A male cable
		Keyboard, mouse	2 x USB Type A male cable
Speaker		2 x Mini stereo jack green	
LED indicator	Select console ports	2 x green	
Analog mode	Keyboard, mouse	USB	
Maximum video resolution		2048*1536@60HZ	
Shortcut switch hot key		CTL+CTL (Left)	
Operating environment	Operating temperature	0-50℃	
	Storing temperature	-20-60℃	
	Humidity	0-80%RH, no condensation	
Body attributes	housing	Plastic	
	Weight	0.42Kg	

## Warranty conditions

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The maximum compensation undertaken by the company shall not exceed the amount paid by the customer for the product. In addition, the company shall not be responsible for any direct, indirect, special, incidental or consequential damages resulting from the use of this product or the CD, documents, etc. attached to this product.

The company does not guarantee, express, imply or statutorily declare the contents and use of this document, and specifically disclaims its quality, performance, merchantability or applicability for a particular purpose.

Direct distributors reserve the right to modify or upgrade the device or documents and are not obligated to inform any person or individual of the contents of the modification or upgrade. For further inquiries, please contact the direct distributors.

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