DIGITUS®

KVM SWITCH 4K

Quick Installation Guide

DS-12870, DS-12880

DS-12851, DS-12891

User consideration

The manufacturer has the right to modify and change the information, documents and specifications contained in the QIG without prior notice. If the software program is found to be defective after purchase, the purchaser will be responsible for all necessary services, repairs and any accidental or consequential damages caused by the software.

The manufacturer is not responsible for any unauthorized adjustments to the radio and / or television interference caused by this equipment, and the user must correct the interference. If the operating voltage setting is not correctly selected before operation, the manufacturer will not be liable for any damage caused.

Be sure to confirm that the voltage is set correctly before use. This product does not have a power supply. If the power supply is required in a special environment, the customer can configure it according to the product power interface (power supply socket specification 5.5mm*2.1mm) and the power socket printing parameters.

Package Contents

The multi-computer KVM switch package includes the following:

DS-12870

- 1 x KVM Switch, 2-Port, 4K, HDMI
- 2 x KVM cable (HDMI, USB, Audio)
- 1 x QIG

DS-12880

- 1 x KVM Switch, 4-Port, 4K, HDMI
- 4 x KVM cable (HDMI, USB, Audio)
- 1 x QIG

DS-12851

- 1 x KVM Switch, 2-Port, 4K, DisplayPort
- 2 x KVM cable (DisplayPort, USB, Audio)
- 1 x QIG

<u>DS-12891</u>

- 1 x KVM Switch, 4-Port, 4K, DisplayPort
- 4 x KVM cable (DisplayPort, USB, Audio)
- 1 x QIG

Check that all parts are in place and that they are not damaged in transit.
If you encounter problems, please contact your dealer.
To prevent damage to the machine or equipment connected to the machine, please read this QIG carefully and follow the instructions for installation and operation.
* Since the publication of this QIG, there may be new product features. Please visit our website to download the latest version of the QIG.

Table of contents

About QIG

This QIG will assist you in the effective use of product features, including the installation, setup, and operation of your equipment. You can find out what is included in the following:

Chapter 1 Introduction - This chapter describes the rack-mounted KVM device system, including its functions, features, and benefits, and describes and describes its front and rear panel components.

Chapter 2 Hardware installation - This section explains how to install this product.

Chapter 3 Basic operation - Explain the basic operational concept of the KVM switch.

Chapter 4 Hotkey Operation - Describes the keyboard's hotkey combination operations and settings.

Appendix - Mainly provide specifications and other technical information about the relevant KVM switch.

Common terms:

Following symbols indicate the text information that should be entered:

Symbols	Text information that should be entered
[ ]	The brackets indicate the key you want to enter. For example, "Enter" means that the Enter key is pressed. For keys that need to be entered at the same time, they are placed in the same brackets and the keys are connected by a plus signs. For example: [CTRL]
1.	Indicates the serial number of the operation step
◆	Indicate that information is provided for reference, but is independent from the operation steps
•	The origin symbol represents the classification sub-item information and is independent of the operation steps

Product information

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 reseller for more contact information.

Chapter 1

Introduction

Product description

As a KVM switch, desktop KVM Series Switches allows users to access from a single USB keyboard, mouse and display console accesses 2 to 4 computers. As per built in USB hub, it allows each computer (one computer at a time) to access the connected peripherals. Switch installation is quick and easy, just plug the cable into the correct port. No software settings are required, no installation procedures and no compatibility issues. Desktop compact design, metal casing, easy to install and place to provide a variety of video interface options, to provide users with a variety of fast switching options for audio, video, USB devices, saving desktop space, is a multimedia application such as SOHO office Ideal.

Product features

- Dual Video Display series KVM switch
- Single USB Console controls 2 to 4 of computers
- Built-in USB2.0 hub (low speed), compatible with USB2.0 protocol specification
- HDMI video maximum support resolution is 4K@30fp (DS-12870, DS-12880)
- DisplayPort video maximum support resolution 4K@60fp (DS-12851, DS-12891)
- Provide keyboard hotkey switching shortcut function and device panel button two switching function selection
- Support Mouse switching operation
- Support multiple platforms for various operating systems
- BIOS level hardware connection, no need to install drivers and control software
- The front panel of the device is extended with a USB interface, which is convenient for users to connect peripheral devices such as a USB keyboard, a mouse, or a USB flash drive or a USB printer
- Provide a variety of hotkey selection and setting functions, so that users can set different hotkeys according to the situation
- Automatically scans the connected computer ω

Operating system

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

operating system		version
Windows		Windows 2000 / XP / 2003 / 2008 / Vista 7 / 10 / 11
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		OS 9.0 to 10.6 (Snow Leopard)
Novell	Netware	6.0 or higher

Components DS-12870

Front view   **Rear view**
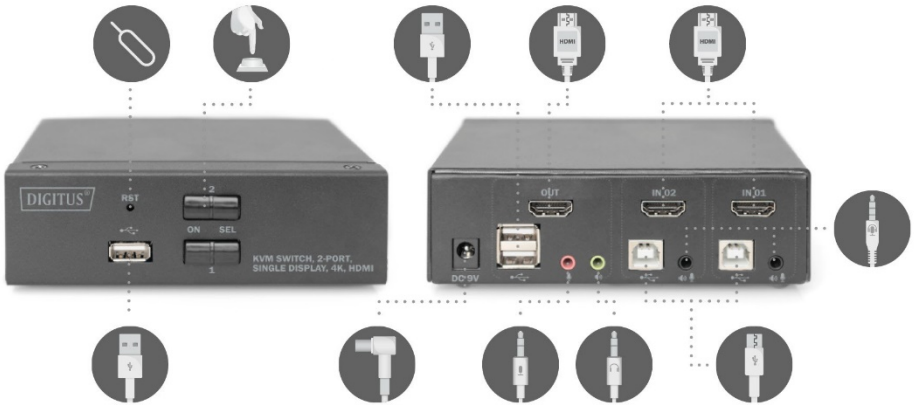
① . Reset Button

② . Switch Button

③ . Front USB interface, you can connect mouse and keyboard, U disk storage device and printer.

④ . Power 9V DC, optional

⑤ . Local USB keyboard and mouse input interface

⑥ . For HDMI video Monitor

⑦ . For HDMI Computers

⑧ . Console Microphone connector

⑨ . Console Speaker connector

⑩ . For USB-B connector to KVM cable

⑪ . For audio and MIC connector to KVM cable

Components DS-12880
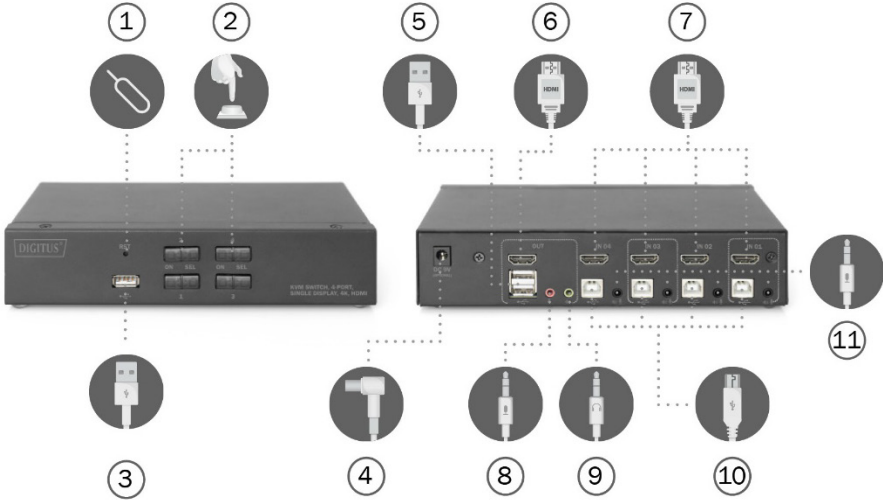
Front view   **Rear view**

①. Reset button
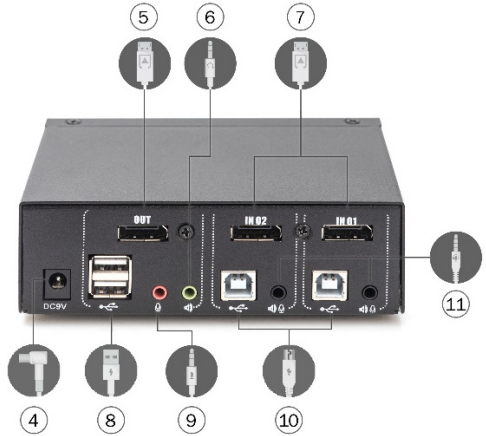
②. Switch Button

③. Front USB interface, you can
   connect mouse and keyboard,
   U disk storage device and printer.

④. Power 9V DC, optional

⑤. Local USB keyboard and
   mouse input interface

⑥. For HDMI Monitor

⑦. For HDMI Computers

⑧. Console Microphone connector

⑨. Console Speaker connector

⑩. For USB-B connector to KVM cable

⑪. For audio and MIC connector to
   KVM cable

Components DS-12851

Front view   **Rear view**

①. Reset button

②. Front USB interface, you can connect mouse and keyboard, U disk storage device and printer.

③. Switch button

④. Power 9V DC, optional

⑤. For DisplayPort Monitor

⑥. Console Speaker connector

⑦. For DisplayPort Computers

⑧. Local USB keyboard and mouse input interface

⑨. Console Microphone connector

⑩. For USB-B connector to KVM cable

⑪. For audio and MIC connector to KVM cable

Components DS-12891

Front view   **Rear view**
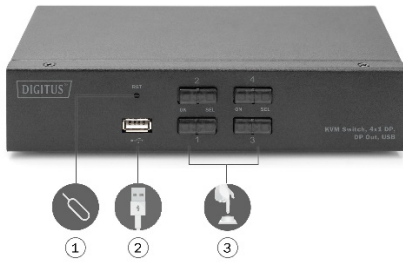
①. Reset button
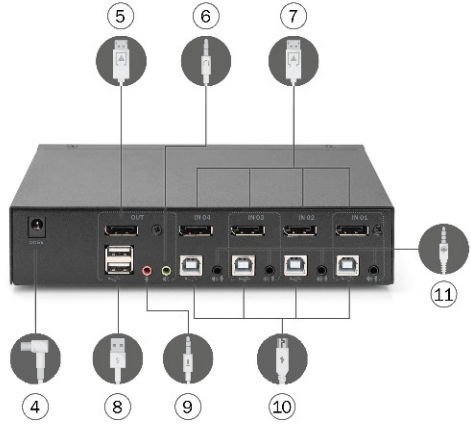
②. Front USB interface, you can connect mouse and keyboard, U disk storage device and printer.

③. Switch Button

④. Power 5V DC, optional

⑤. For DisplayPort Monitor

⑥. Console Speaker connector

⑦. For DisplayPort Computers
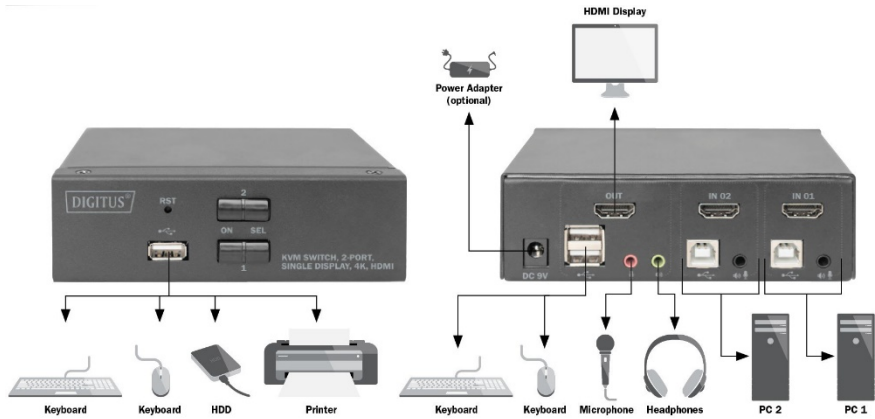
⑧. Local USB keyboard and mouse input interface

⑨. Console Microphone connector

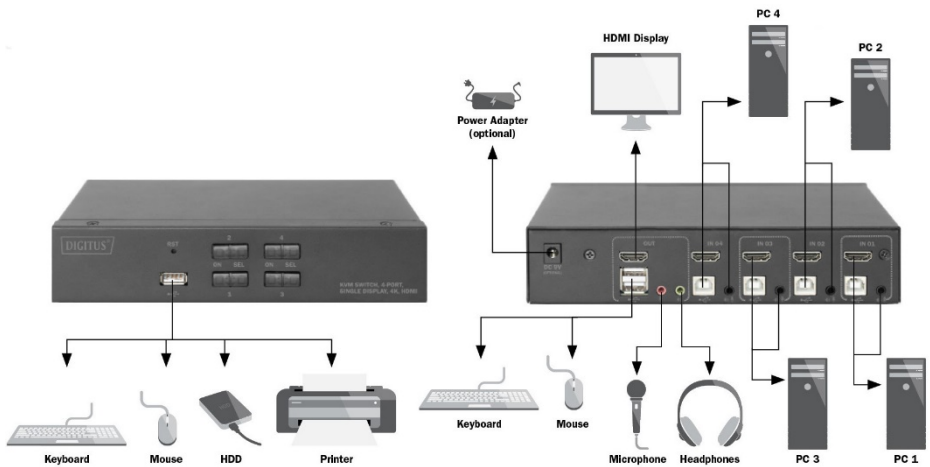⑩. For USB-B connector to KVM cable

⑪. For audio and MIC connector to KVM cable

Connections

DS-12870:

DS-12880:

DS-12851:
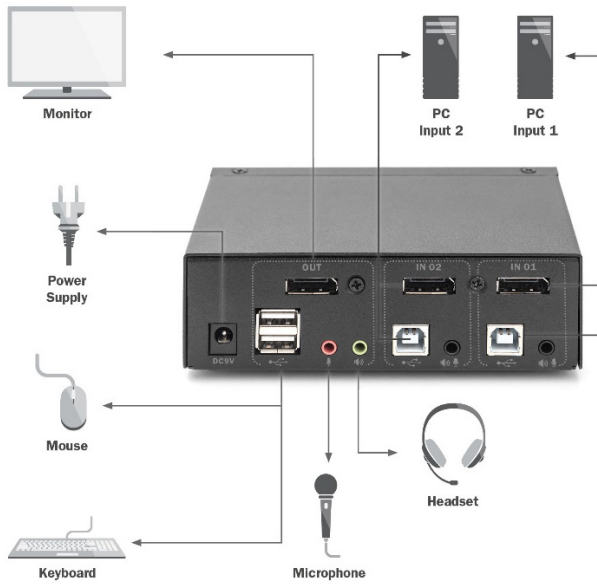
DS-12891:
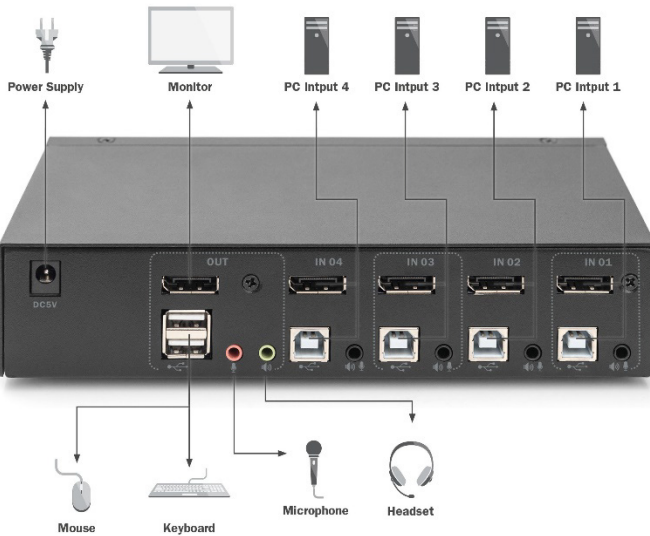
Chapter 2

Hardware installation

Cable connection and installation

KVM switches can be placed on any suitable surface, and is sufficient to safely support the weight of the device plus the additional cable; clean and make sure that no other plane debris would affect the switch ventilation and normal operation.

To install For a 2 or 4 port desktop KVM device, follow these steps:

1. Plug the USB keyboard and USB mouse into the USB console port on the rear panel of the device.
2. Plug display minotors 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 audio port on the rear panel of the device.
4. With a custom KVM cable set, The KVM cable connector and the included USB connector are plugged into the corresponding jacks on the rear panel of the switch.
5. Put the other end of the cable, video and plug the USB cable into the corresponding USB and graphics video interface on your computer.
6. Insert the USB peripheral into the Type A jack (one on the front panel; the other two on the rear panel)
7. Turn on the monitor.
8. KVM is powered by computer USB port. To turn on computer to activate KVM switch.
9. For external power supply, which is optional. Please use DC 9V power supply Note: DC 5V for DS-12882 and DC connector plug size : 5.5x2.1mm.
10. Turn on your computer.

Chapter 3

Basic operation

Overview

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

Manual switching method

The user only needs to press the corresponding touch button on the front panel of the KVM , and the buzzer will sound a tone indicating that the switch port is successful, and the USB , audio and video signals of the corresponding port will be switched to the corresponding port on the local port.

Hotkey switching method

Users can use the keyboard connected to the USB interface on the KVM device to perform hotkey operation. For details, please refer to the detailed description in the following sections.

Power off and restart

If it is necessary to turn off the power to the device, before turning the device back on, you must do the following:

1. Unplug the data cable from all the computers connected to the switch.
2. Unplug the power adapter cable from the switch.
3. Wait 10 seconds, if there is power, plug the power adapter cable back into the switch.
4. Then connect the computer data cable and turn on the computer.

Chapter 4
Keyboard operation

Overview
The KVM product in this desktop series offers a large number of easy hotkey operations, making it easy to set up KVM via the keyboard or to complete port switching.

Hotkey setting:
This series of products provides 4 combinations of hotkeys for user selection and setting. The default hotkey is [CTRL] [CTRL] to switch to the next online port, [CTRL] + [SHIFT] [1] or [2] Switch to the specified port. The following table is a description of the four hotkey combinations, please check the settings when using the user:

[SCROLL] [SCROLL] [ESC]	Super Defaults to factory Settings anytime

1. [CTRL] + [SHIFT] mode	
Hotkey combination	Description
[CTRL] [CTRL]	Press twice to switch to the next device online port
[CTRL] [SHIFT] [1] or [2] [3] [4]	Switch to the computer corresponding to the port of [1] [2] [3] [4]
[CTRL] [SHIFT] [→] or [↓]	Switch to the next computer
[CTRL] [SHIFT] [←] or [↑]	Switch to the previous computer
[CTRL] [SHIFT] [B]	Buzzer on or off
[CTRL] [SHIFT] [S]	Automatic switching mode, the default is 5seconds, press [ESC] to exit
[CTRL] [SHIFT] [S] [N]	Set the automatic switching mode interval, press [ESC] to exit
[CTRL] [SHIFT] [SCROLL]	Switch to [SCROLL] + [SCROLL] hotkey combination mode

[CTRL] [SHIFT] [Num]	Switch to [NUM] + [NUM] hotkey combination mode
[CTRL] [SHIFT] [CAPS]	Switch to [CAPS] + [CAPS] hotkey combination mode
[CTL] [SHIFT] [TAB]	Enable or disable the pass-through USB port to synchronize with the key and mouse.(Enabled by default)
[CTL] [SHIFT] [U]	Switch the devices (U disk, printer, etc.) on the pass-through USB port separately to the next PC
[CTL] [SHIFT] [U] [1] or [2] [3] [4]	Switch the devices (U disk, printer, etc.) on the pass-through USB port separately to specified PC
[CTL] [SHIFT] [K]	Enable or disable the hot key function. (Enabled by default)
[CTL] [SHIFT] [R]	Reset KVM
[CTL] [SHIFT] [ESC]	Restore factory default Settings (Except Hotkey mode)
[CTL] [SHIFT] [T]	Enable or disable the automatic detection function. (Disabled by default)
For KM Switch User ONLY: While monitors are connected to each computer.	
[CTL] [SHIFT] [0]	**Enable or disable the keyboard and mouse synchronization.** It can synchronize the keys and mice of all controlled ports. (**Disabled** by default)
[CTL] [SHIFT] [F12]	**Enable or disable the left and right screen threading function.** The control end will automatically switch to the next port when the mouse moves to the left and right edge of the current monitor. (**Disabled** by default)
[CTL] [SHIFT] [F10]	**Enable or disable the screen traversal function of the mouse**. The control end will automatically switch to the next port when the

	mouse moves to the upper and lower edges of the current monitor. (**Disabled** by default)

2.[SCROLL] + [SCROLL] mode	
Hotkey combination	Description
[SCROLL] [SCROLL] [1] OR [2]	Switch to the computer corresponding to the port of [1] [2]
[SCROLL] [SCROLL] [→] OR [↓]	Switch to the next computer
[SCROLL] [SCROLL] [←] OR [↑]	Switch to the previous computer
[SCROLL] [SCROLL] [B]	Buzzer on or off
[SCROLL] [SCROLL] [S]	Automatic switching mode, the default is 5seconds, press [ESC] to exit
[SCROLL] [SCROLL] [S] [N]	Set the automatic switching mode interval, press [ESC] to exit
[SCROLL] [SCROLL][CTRL]	Switch to [CTRL] + [CTRL] hotkey combination mode
[SCROLL] [SCROLL] [NUM]	Switch to [NUM] + [NUM] hotkey combination mode
[SCROLL] [SCROLL] [CAPS]	Switch to [CAPS] + [CAPS] hotkey combination mode
[SCROLL] [SCROLL] [TAB]	Enable or disable the pass-through USB port to synchronize with the key and mouse.(Enabled by default)
[SCROLL] [SCROLL] [U]	Switch the devices (U disk, printer, etc.) on the pass-through USB port separately to the next PC
[SCROLL] [SCROLL] [U] [1] or [2] [3] [4]	Switch the devices (U disk, printer, etc.) on the pass-through USB port separately to specified PC
[SCROLL] [SCROLL] [K]	Enable or disable the hot key function. (Enabled by default)
[SCROLL] [SCROLL] [R]	Reset KVM
[SCROLL] [SCROLL] [T]	Enable or disable the automatic detection function. (Disabled by default)

For KM Switch User ONLY: While monitors are connected to each computer.	
[SCROLL] [SCROLL] [0]	**Enable or disable the keyboard and mouse synchronization.** It can synchronize the keys and mice of all controlled ports. (**Disabled** by default)
[SCROLL] [SCROLL] [F12]	**Enable or disable the left and right screen threading function.** The control end will automatically switch to the next port when the mouse moves to the left and right edge of the current monitor. (**Disabled** by default)
[SCROLL] [SCROLL] [F10]	**Enable or disable the screen traversal function of the mouse**. The control end will automatically switch to the next port when the mouse moves to the upper and lower edges of the current monitor. (**Disabled** by default)

3. [NUM] + [NUM] mode	
Hotkey combination	Description
[NUM] [NUM] [1] OR [2]	Switch to the computer corresponding to the port of [1] [2]
[NUM] [NUM] [→] OR [↓]	Switch to the next computer
[NUM] [NUM] [←] OR [↑]	Switch to the previous computer
[NUM] [NUM] [B]	Buzzer on or off
[NUM] [NUM] [S]	Automatic switching mode, the default is 5seconds, press [ESC] to exit
[NUM] [NUM] [S] [N]	Set the automatic switching mode interval, press [ESC] to exit
[NUM] [NUM] [SCROLL]	Switch to [SCROLL] [SCROLL] hotkey combination mode
[NUM] [NUM] [CTRL]	Switch to [CTRL] [CTRL] hotkey combination mode

[NUM] [NUM] [CAPS]	Switch to [CAPS] + [CAPS] hotkey combination mode
[NUM] [NUM] [TAB]	Enable or disable the pass-through USB port to synchronize with the key and mouse.(Enabled by default)
[NUM] [NUM] [U]	Switch the devices (U disk, printer, etc.) on the pass-through USB port separately to the next PC
[NUM] [NUM] [U] [1] or [2] [3] [4]	Switch the devices (U disk, printer, etc.) on the pass-through USB port separately to specified PC
[NUM] [NUM] [K]	Enable or disable the hot key function. (Enabled by default)
[NUM] [NUM] [R]	Reset KVM
[NUM] [NUM] [ESC]	Restore factory default Settings (Except Hotkey mode)
[NUM] [NUM] [T]	Enable or disable the automatic detection function. (Disabled by default)
For KM Switch User ONLY: While monitors are connected to each computer.	
[NUM] [NUM] [0]	**Enable or disable the keyboard and mouse synchronization.** It can synchronize the keys and mice of all controlled ports. (**Disabled** by default)
[NUM] [NUM] [F12]	**Enable or disable the left and right screen threading function.** The control end will automatically switch to the next port when the mouse moves to the left and right edge of the current monitor. (**Disabled** by default)
[NUM] [NUM] [F10]	**Enable or disable the screen traversal function of the mouse**. The control end will automatically switch to the next port when the mouse moves to the upper and lower edges of the current monitor. (**Disabled** by default)

4.[CAPS] + [CAPS] mode	
Hotkey combination	Description
[CAPSLOCK] [CAPSLOCK][1] OR [2]	Switch to the computer corresponding to the port of [1] [2]
[CAPSLOCK] [CAPSLOCK][→] OR [↓]	Switch to the next computer
[CAPSLOCK] [CAPSLOCK][←] OR [↑]	Switch to the previous computer
[CAPSLOCK] [CAPSLOCK][B]	Buzzer on or off
[CAPSLOCK] [CAPSLOCK] [S]	Automatic switching mode, the default is 5seconds, press [ESC] to exit
[CAPSLOCK] [CAPSLOCK] [S] [N]	Set the automatic switching mode interval, press [ESC] to exit
[CAPSLOCK] [CAPSLOCK] [SCROLL]	Switch to [SCROLL] [SCROLL] hotkey combination mode
[CAPSLOCK] [CAPSLOCK] [NUM]	Switch to [NUM] [NUM] hotkey combination mode
[CAPSLOCK] [CAPSLOCK] [CTRL]	Switch to [CTRL] [CTRL] hotkey combination mode
[CAPSLOCK] [CAPSLOCK] [TAB]	Enable or disable the pass-through USB port to synchronize with the key and mouse.(Enabled by default)
[CAPSLOCK] [CAPSLOCK] [U]	Switch the devices (U disk, printer, etc.) on the pass-through USB port separately to the next PC
[CAPSLOCK] [CAPSLOCK] [U] [1] or [2] [3] [4]	Switch the devices (U disk, printer, etc.) on the pass-through USB port separately to specified PC
[CAPSLOCK] [CAPSLOCK] [K]	Enable or disable the hot key function. (Enabled by default)
[CAPSLOCK] [CAPSLOCK] [R]	Reset KVM
[CAPSLOCK] [CAPSLOCK] [ESC]	Restore factory default Settings (Except Hotkey mode)
[CAPSLOCK] [CAPSLOCK] [T]	Enable or disable the automatic detection function. (Disabled by default)
For KM Switch User ONLY: While monitors are connected to each computer.	

[NUM] [NUM] [0]	**Enable or disable the keyboard and mouse synchronization.** It can synchronize the keys and mice of all controlled ports. (**Disabled** by default)
[NUM] [NUM] [F12]	**Enable or disable the left and right screen threading function.** The control end will automatically switch to the next port when the mouse moves to the left and right edge of the current monitor. (**Disabled** by default)
[NUM] [NUM] [F10]	**Enable or disable the screen traversal function of the mouse.** The control end will automatically switch to the next port when the mouse moves to the upper and lower edges of the current monitor. (**Disabled** by default)

Mouse Hotkey Operation	
[Middle button + right mouse button]	Switch to the next PC
[Middle mouse button + left mouse button]	Switch to the last PC

Note:

1. The detection time of each hotkey is 5 seconds. If you press [CTRL] after 5 seconds after pressing [CTRL] for the first time , this key combination will be invalid input.

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

Automatic switching interval	
N	second
1	5
2	10

3	15
4	20
5	25
6	30
7	35
8	40
9	60

Appendix

Safety instructions

General

- This product is for indoor use only
- Please read all 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.)
- Do not use the device near water
- Do not place this unit near or above the radiator or 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
- This device should not be placed on a soft surface (such as a bed, sofa, blanket, etc.), which would block the fan opening and should not be placed in a sealed environment unless proper ventilation has been provided
- Do not spill any liquid on the device
- The power of this unit must be removed from the wall outlet before cleaning Do not use any liquid or foamy cleaning agent. Please use a damp cloth to clean it
- Please use the device according to the type of power supply on the label. If you are not sure if the power type is available, please contact your dealer or local power company
- This equipment is designed for IT power distribution systems with phase-to-phase voltages from 100V to 230V
- To prevent damage to your device, it is important that all equipment is properly grounded
- Do not place anything on the power cord or cable, and arrange the power cord and cable routing 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. Ensure that the total of all products plugged into the wall outlet is not more than 15 A
- Use a surge suppressor, regulator, or uninterruptible power system (UPS) to help protect your system from sudden, transient increases and decreases in power
- Please properly fix the system cable and power cord to ensure that nothing is pressed against the cable

- Do not insert any objects into the machine through the slots in the casing
  There is a risk of contact with dangerous voltage points or short-circuiting parts
  that could result in fire or electric shock
- Do not attempt to repair this equipment yourself. Please find a qualified service
  person to obtain support services
- If the following conditions occur, unplug the unit from the wall outlet and have
  it handed over to a qualified service person for repair
- Damaged or worn power cord or plug
- Liquid is spilled into the device
- The device is drenched by rain and water
- The device has been dropped or the casing has been damaged
- Significant changes in the functionality of this device
- The device does not operate normally after following the operating instructions
- Adjustments are only made to the control functions covered in the operating
  instructions, and other improper operations may cause damage, so that a larger
  work of qualified personnel is required to repair

Product specification

HDMI KVM Version

Model Number			DS-12870	DS-12880
Computer connections			2	4
Port selection			Front panel buttons/Hotkey	
Connector	Control port	monitor	1 x HDMI Type A female	
		keyboard	1 x USB Type A female	
		mouse	1 x USB Type A female	
		speaker	1 x Mini stereo jack female (green)	
		microphone	1 x Mini stereo jack female (pink)	
	Computer port	monitor	2 x HDMI Type A female	4 x HDMI Type A female
		keyboard and mouse	2 x USB Type B female	4 x USB Type B female
		speaker & microphone	2 x mini stereo jack female	4 x mini stereo jack female
	Power (Optional)		1 x DC 9V 300mA	
	Power Connector size		5.5x2.1mm	
Toggle switch	KVM switch button		2 x button	4 x button
LED's	Online		2 x red	4 x red
	Selected		2 x green	4 x green
USB Peripheral Port			1 x USB (low speed)	
Maximum resolution video			4K@30HZ(3840x2160 @30Hz)	
Default Hotkey			[CTL] [CTL]	
Operating environment	Operating temperature		0-50 °C	
	Storage temperature		-20-60 °C	
	Humidity		0-80% RH , no condensation	
Housing	House		Metal , Black	
	Size (mm)		132x92x66	202x110x66
	Weight (g)		575g	920g

DisplayPort KVM version

Model Number			DS-12851	DS-12891
Computer connections			2	4
Port selection			Front panel buttons/Hotkey	
Connector	Control port	monitor	1 x DisplayPort Type A female	
		keyboard	1 x USB Type A female	
		mouse	1 x USB Type A female	
		speaker	1 x Mini stereo jack female (green)	
		microphone	1 x Mini stereo jack female (pink)	
	Computer port	monitor	2 x DisplayPort Type A female	4 x DisplayPort Type A female
		keyboard and mouse	2 x USB Type B female	4 x USB Type B female
		speaker & microphone	2 x mini stereo jack female	4 x mini stereo jack female
	Power (Optional)		DC 9V 300mA	DC 5V 200mA
	Power Connector size		5.5x2.1mm	
Toggle switch	KVM switch button		2 x button	4 x button
LED's	Online		2 x red	4 x red
	Selected		2 x green	4 x green
USB Peripheral Port			1 x USB (low speed)	
Maximum resolution video			3840x2160 @60Hz	
Default Hotkey			[CTL] [CTL]	
Operating environment	Operating temperature		0-50 °C	
	Storage temperature		-20-60 °C	
	Humidity		0-80% RH , no condensation	
Housing	House		Metal , Black	
	Size (mm)		132x92x66	202x110x66
	Weight (g)		580g	920g

Disclaimer

Hereby Assmann Electronic GmbH, declares that the Declaration of Conformity is part of the shipping content. If the Declaration of Conformity is missing, you can request it by post under the below mentioned manufacturer address.

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