



Installation Guide

2/4-Port Dual View Dual Link DVI KVMP Switch with Audio

GCS1642/GCS1644
PART NO. M1087 / M1088





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Package Contents

- 1 x 2/4-Port Dual View Dual Link DVI KVMP Switch with Audio
- 2/4 x Dual Link DVI KVM Cables (2 for GCS1642 / 4 for GCS1644)
- 2/4 x Dual Link DVI Cables (2 for GCS1642 / 4 for GCS1644)
- 1 x USB to PS/2 Converter
- 1 x Firmware Upgrade Cable
- 1 x Power Adapter
- 1 x Installation Guide
- 1 x Warranty Card

System Requirements

Console

- Two displays with DVI inputs
- A Keyboard and Mouse

Computer

- Computers with DVI outputs
- An open USB port

Optional Audio

- Analog audio connections for speakers and mic.

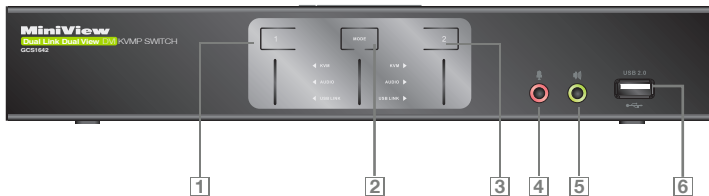
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GCS1642 Overview

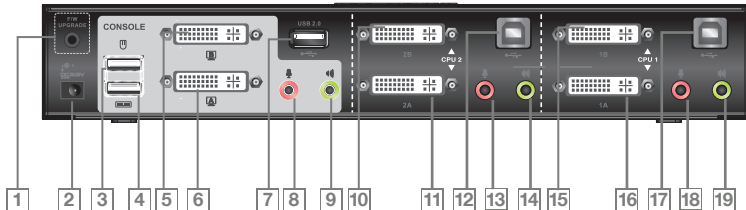
Front View

1. Port 1 Pushbutton
2. Mode Button
3. Port 2 Pushbutton
4. Front Panel Console Mic. Connection
5. Front Panel Console Audio connection
6. Front Panel USB 2.0 Peripheral Sharing Port



Rear View

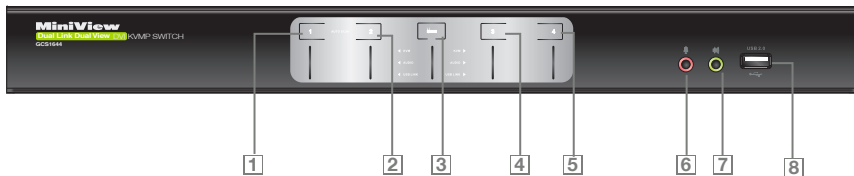
- | | | |
|------------------------------|------------------------------------|----------------------------|
| 1. Firmware Upgrade Port | 7. USB 2.0 Peripheral Sharing Port | 13. CPU2 Mic. Connection |
| 2. DC Power Jack | 8. Console Mic. Connection | 14. CPU2 Audio Connection |
| 3. Console USB Mouse Port | 9. Console Audio Connection | 15. CPU1 DVI Video Port 1B |
| 4. Console USB Keyboard Port | 10. CPU2 DVI Video Port 2B | 16. CPU1 DVI Video Port 1A |
| 5. Console DVI Video Port B | 11. CPU2 DVI Video Port 2A | 17. CPU1 USB Connection |
| 6. Console DVI Video Port A | 12. CPU2 USB Connection | 18. CPU1 Mic. Connection |
| | | 19. CPU1 Audio Connection |



GCS1644 Overview

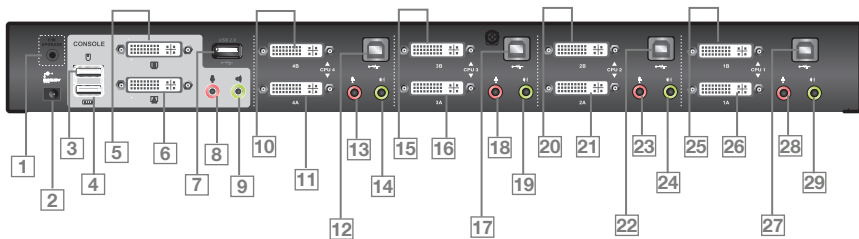
Front View

1. Port 1 Pushbutton
2. Port 2 Pushbutton
3. Mode Button
4. Port 3 Pushbutton
5. Port 4 Pushbutton
6. Front Panel Console Mic. Connection
7. Front Panel Console Audio connection
8. Front Panel USB 2.0 Peripheral Sharing Port



Rear View

1. Firmware Upgrade Port
2. DC Power Jack
3. Console USB Mouse Port
4. Console USB Keyboard Port
5. Console DVI Video Port B
6. Console DVI Video Port A
7. USB 2.0 Peripheral Sharing Port
8. Console Mic. Connection
9. Console Audio Connection
10. CPU4 DVI Video Port 4B
11. CPU4 DVI Video Port 4A
12. CPU4 USB Connection
13. CPU4 Mic. Connection
14. CPU4 Audio Connection
15. CPU3 DVI Video Port 3B
16. CPU3 DVI Video Port 3A
17. CPU3 USB Connection
18. CPU3 Mic. Connection
19. CPU3 Audio Connection
20. CPU2 DVI Video Port 2B
21. CPU2 DVI Video Port 2A
22. CPU2 USB Connection
23. CPU2 Mic. Connection
24. CPU2 Audio Connection
25. CPU1 DVI Video Port 1B
26. CPU1 DVI Video Port 1A
27. CPU1 USB Connection
28. CPU1 Mic. Connection
29. CPU1 Audio Connection



Installation

Step 1

Please make sure your source devices and display are powered off before you start.

Step 2

Plug the power adapter into the power outlet and connect it to the DC power jack from the KVM.



Step 3

Connect the DVI cables from your monitors to the console DVI port A and B. Port A will be your main monitor and Port B will be your extended desktop monitor.



Step 4

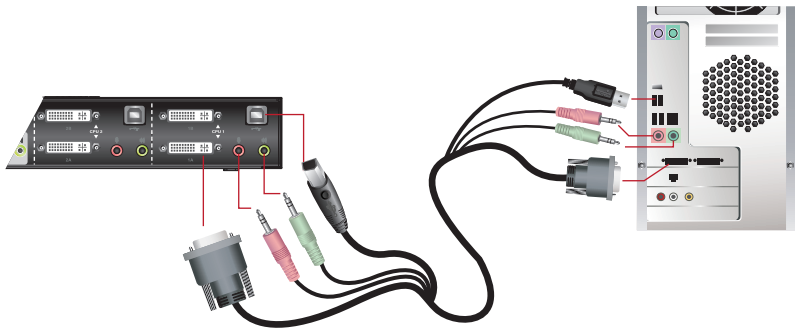
Connect your USB keyboard and mouse to the console USB keyboard port and console USB mouse port.



Note: If you are using PS/2 keyboard and mouse, please use the included PS/2 to USB converter. Simply connect the PS/2 keyboard and mouse to the PS/2 keyboard and mouse port from the converter, then connect the USB port to the console USB keyboard port.

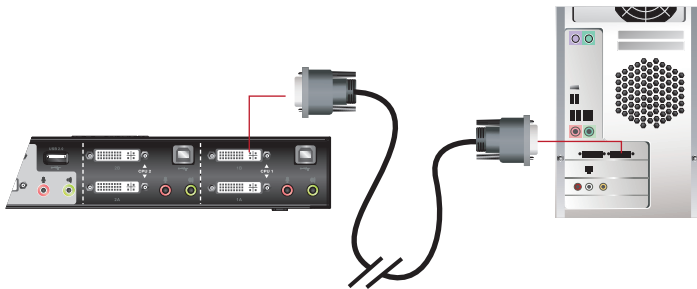
Step 5

Connect a set of your Dual Link DVI KVM cable from the KVM switch to each of your computers – DVI connection from DVI Port A to the DVI output and USB connection to open USB port from your computer. Connect the audio and mic. connectors to your audio output and mic. input.



Step 6

Connect Dual Link DVI cables from DVI Port B of the KVM to your second DVI output of your computers.



Final Step

Turn on your source devices.

LED Indication

LED		Description
Mode	Orange	Shows the pushbutton mode that the KVM is in
Online / Selected	Dim Green	A device is connected to the KVMP switch but the port is not on focus
	Bright Green	The specific port has focus on the KVM (Keyboard, video and mouse)
Audio	Green	The specific port has focus on the audio
USB Link	Green	The specific port has focus on the USB peripheral sharing ports

Port Switching

Simply press the front panel Pushbutton from the multimedia KVM switch or trigger hotkeys from your keyboard.

Port Switching via Front Panel Pushbutton

Function	Description
Switch all focus (KVM, audio and USB) to a specific port	Press the correspond push button once for the desire port that you wish to switch focus to.
Switch KVM focus to a specific port	Press the Mode button once (Orange LED will show you are in KVM Mode), then press the correspond push button for the desire port that you wish to switch focus to.
Switch audio focus to a specific port	Press the Mode button twice (Orange LED will show you are in Audio Mode), then press the correspond push button for the desire port that you wish to switch focus to.
Switch USB focus to a specific port	Press the Mode button three times (Orange LED will show you are in USB Mode), then press the correspond push button for the desire port that you wish to switch focus to.

Port Switching via Hotkeys

Port Switching via Hotkeys

Hotkeys	Description
[Scroll Lock] [Scroll Lock] [Enter]	Switch all focus (KVM, audio and USB) to the next port
[Scroll Lock] [Scroll Lock] [n] [Enter]	Switch all focus (KVM, audio and USB) to port n*
[Scroll Lock] [Scroll Lock] [k] [Enter]	Switch KVM focus to the next port
[Scroll Lock] [Scroll Lock] [n] [k] [Enter]	Switch KVM focus to port n*
[Scroll Lock] [Scroll Lock] [s] [Enter]	Switch audio focus to the next port
[Scroll Lock] [Scroll Lock] [n] [s] [Enter]	Switch audio focus to port n*
[Scroll Lock] [Scroll Lock] [u] [Enter]	Switch USB focus to the next port
[Scroll Lock] [Scroll Lock] [n] [u] [Enter]	Switch USB focus to port n*

Continue next page

Port Switching via Hotkeys

[Scroll Lock] [Scroll Lock] [n] [k] [u] [Enter] Switch KVM and USB focus to port n*

[Scroll Lock] [Scroll Lock] [n] [k] [s] [Enter] Switch KVM and audio focus to port n*

[Scroll Lock] [Scroll Lock] [n] [u] [s] [Enter] Switch USB and audio focus to port n*

*Note: n is an interval that stands for the Port number

k stands for KVM focus

s stands for audio focus

u stands for USB focus

Auto Scanning

You can either activate Autoscan Mode via front panel push button or hotkeys.

Function		Description	
Auto Scan	Front panel pushbutton	Press and hold port 1 and port 2 Pushbutton simultaneously for 2 seconds to activate Autoscan Mode*	
	Hotkeys	[Scroll Lock] [Scroll Lock] [a] [Enter]	Activate Autoscan mode. It will cycle from port to port every 5 seconds (default)
		[Scroll Lock] [Scroll Lock] [a] [n] [Enter]	Activate Autoscan mode. It will cycle from port to port every n seconds**

*Note: Autoscan Mode from front panel push button will be scanning a port every 5 seconds by default. If you wish to have the Autoscan Mode be scanning with different time interval, please refer to trigger Autoscan Mode from hotkeys.

**Note: n is an interval between 1 and 99 that stands for the time (in second) desire for scanning each port.

Hotkey Setting Mode (HSM)

Hotkey	Description
<ol style="list-style-type: none">1. Press and hold [Num Lock] ([Clear] key on Mac keyboard)2. Press and release [-]3. Release [Num Lock] ([Clear] key on Mac keyboard)	Invoking hotkey setting mode
Invoke HSM, then press [h]	Change the HSM invocation keys from [Num Lock] to [Ctrl] and from [-] to [F12]
Invoke HSM, then press [t]	Switch port switching hotkey sequence between [Scroll Lock] [Scroll Lock] and [Ctrl] [Ctrl]
Invoke HSM, then press [F2]	Enables Mac keyboard emulation
Invoke HSM, then press [F3]	Enables Sun keyboard emulation
Invoke HSM, then press [F10]	Auto-detect the keyboard operating platform (for PC compatible systems). Activates Pass Through Keyboard Mode (keystrokes are sent directly to the computer instead of through the Mac emulator).

Invoke HSM, then press [F4]

List hotkey settings – simply invoke the hotkey and then open a text editor, such as notepad, and use the Paste function to display the hotkey settings.

Invoke HSM, then press [F5]

USB Reset

Invoke HSM, then press [b]

Toggle hotkey beepers on or off

Invoke HSM, then press [x] [Enter]

Disable or enable port switching hotkey

Invoke HSM, then press [u] [p] [g] [r] [a] [d] [e] [Enter]

Activate Firmware Upgrade Mode – Front panel KVM LED will flash indicating Firmware Upgrade Mode is activated.

Invoke HSM, then press [r] [Enter]

Restore default settings

Invoke HSM, then press [d]

Capture and store video information on specific port

Invoke HSM, then press [m]

Enable or disable mouse emulation







Invoke HSM, then press [F1]



Reset keyboard and mouse under some special OS' that do not support USB 2.0

*Note: To exit HSM manually, press Esc or spacebar

Mac Keyboard Emulation

The PC compatible (101/104 key) keyboard can emulate the functions of the Mac keyboard. The emulation mappings are listed in the table below.








PC Keyboard	Mac Keyboard
[Shift]	Shift
[Ctrl]	Ctrl
	
[Ctrl] [1]	
[Ctrl] [2]	
[Ctrl] [3]	
[Ctrl] [4]	
[Alt]	Alt

PC Keyboard	Mac Keyboard
[Print Screen]	F13
[Scroll Lock]	F14
	=
[Enter]	Return
[Backspace]	Delete
[Insert]	Help
[Ctrl] 	F15

*Note: When using key combinations, press and release the first key (Ctrl), then press and release the second key.

Sun Keyboard Emulation

The PC compatible (101/104 key) keyboard can emulate the functions of the Sun keyboard. The emulation mappings are listed in the table below

PC Keyboard	Sun Keyboard	PC Keyboard	Sun Keyboard
[Ctrl] [t]	Stop	[Ctrl] [F10]	Cut
[Ctrl] [F2]	Again	[Ctrl] [1]	
[Ctrl] [F3]	Props	[Ctrl] [2]	
[Ctrl] [F4]	Undo	[Ctrl] [3]	
[Ctrl] [F5]	Front	[Ctrl] [4]	
[Ctrl] [F6]	Copy	[Ctrl] [h]	Help
[Ctrl] [F7]	Open		Compose
[Ctrl] [F8]	Paste		
[Ctrl] [F9]	Find		

*Note: When using key combinations, press and release the first key (Ctrl), then press and release the second key.

Factory Default Hotkeys Settings

Function	Default
Port Switching	[Scroll Lock] [Scroll Lock]
Invoking HSM	[Num Lock] [-]
Auto Scan Interval	5 Seconds
Beeper	On
Keyboard Operating Platform	PC Compatible
Port Switching Keys	Enabled
Mouse Emulation	On

Firmware Upgrade

Note: In order to perform a firmware upgrade, you need to use a computer that's not connected to the KVM.

Step 1

Connect the provided firmware upgrade cable to the firmware upgrade port of the KVM and the serial port of your computer. Connect power adapter to your power outlet and the KVM.

Step 2

Go to www.iogear.com to download the latest available firmware or the specific firmware that you wish to upgrade to.

Step 3

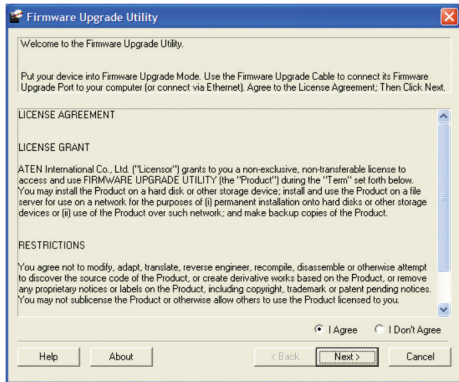
Shut down all the computers that are connected to the KVM. Then Invoke Firmware Upgrade Mode. (Please refer to Hotkeys Setting Mode section.)

Step 4

Extract the file with WinRAR or compatible software. Then double click on the execute file to begin with the Firmware Upgrade Utility.

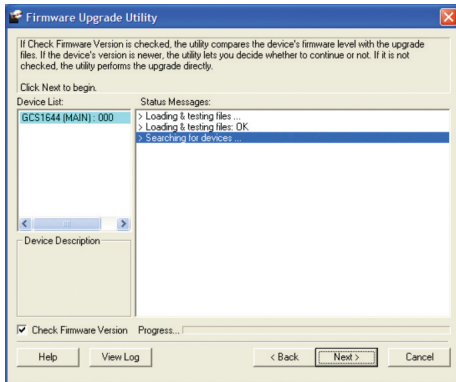
Step 5

Read the License Agreement and click “I Agree” then click “Next” if you wish to continue with the firmware upgrade. Otherwise, click “Cancel” to exit.



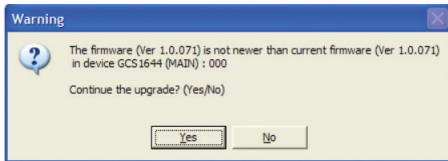
Step 6

Choose the correct KVM that you wish to perform firmware upgrade from the “Device List” and then click “Next” to continue. Then the Firmware Upgrade Utility will verify if there is a KVM connected to the computer by the firmware upgrade cable. (Check Firmware Version checkbox is optional)



Step 7

If you have checked the “Check Firmware Version” checkbox, then the utility will check the current firmware that is on your KVM. If the current firmware is newer than the firmware that you wish to upgrade to, a window will popup and prompt you to ask if you wish to proceed. Simply click “Yes” to start the upgrade and “No” to cancel the upgrade.



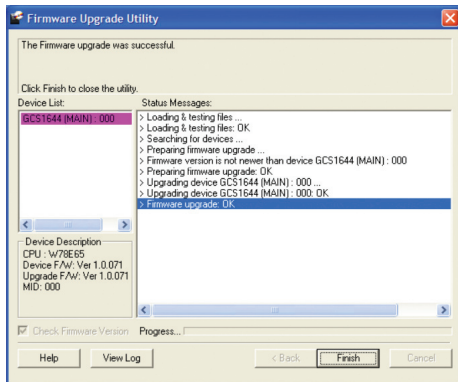
Note: If you did not check the “Check Firmware Version” checkbox, utility will perform the upgrade automatically no matter what version of firmware you have in the KVM.

Step 8

When the firmware upgrade is done, you will see “Firmware upgrade OK” in the “Status Messages” window. Then simply click “Finish” to complete the whole firmware upgrade process.

Final Step

Now the KVM will reset by itself and it will be ready for usage after the rest.



Upgrade Fail

If you don't see "Firmware upgrade OK" in the "Status Messages" window, it means the utility has failed to complete the firmware successfully. If that occurs, please do the following:

Step 1

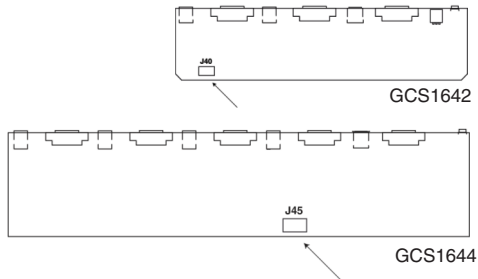
Unplug the DC connector from the KVM, then remove the housing of the KVM.

Step 2

Using a jumper cap, short the jumper on the main board labeled J40 (for GCS1642) / J45 (for GCS1644).

Step 3

Now plug the DC connector back into the DC jack from the KVM. This will restore the KVM with factory default firmware.





Step 4

Perform the firmware upgrade again.

Step 5

When the firmware upgrade is completed, unplug the DC connector from the KVM. Then remove the jumper from J40 (for GCS1642) / J45 (for GCS1644) and put the housing back together.

Final Step

Plug DC connector back into the KVM, then the KVM will be ready for usage again.

Federal Communications Commission (FCC) Statement

15.21

You are cautioned that changes or modifications not expressly approved by the part responsible for compliance could void the user's authority to operate the equipment.

15.105(b)

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

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



THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS:

1. this device may not cause interference and
2. this device must accept any interference, including interference that may cause undesired operation of the device.

FCC RF Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying RF exposure compliance. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

CE Statement

This device has been tested and found to comply with the requirements set up in the council directive on the approximation of the law of member states relating to EMC Directive 89/336/EEC, Low Voltage Directive 73/23/EEC and R&TTE Directive 99/5/EC.

The product has been approved for LVD and covered the following countries:
Belgium, Denmark, France, Germany, Italy, Portugal, U.K., Spain, Sweden

Limited Warranty

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Contact

IOGEAR

23 Hubble

Irvine, CA 92618

P 949.453.8782

F 949.453.8785

Visit us at: www.iogear.com





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IOGEAR supports healthy and fit lifestyles. By integrating products with the latest scientific developments, IOGEAR's solutions enhance the life of end-users.