Installation Guide

2/4-Port DVI KVMP Switch with Cables

GCS1102/GCS1104

PART NO. M1108/M1109

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Package Contents

1 x 2/4-Port DVI KVMP Switch
2/4 x DVI-D KVM Cables (2 for GCS1102 and 4 for GCS1104)
1 x Power Adapter
1 x Installation Guide
1 x Warranty Card

System Requirements

Console
- DVI-D supported Monitor
- USB keyboard and mouse
- Powered Speakers and microphone (optional)

Computers
- A USB port
- A DVI-D supported connection
- 3.5mm Audio and microphone connections (optional)

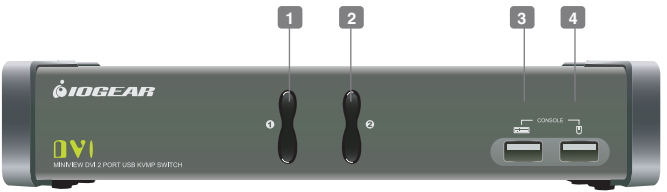
Operating System
- Windows XP
- Windows Vista (32-bit/64-bit)
- Windows 7
- Mac OS X or greater
- Sun Solaris workstation
- Linux, UNIX and other USB supported systems*

*Additional drivers and support may be needed

GCS1102 Overview

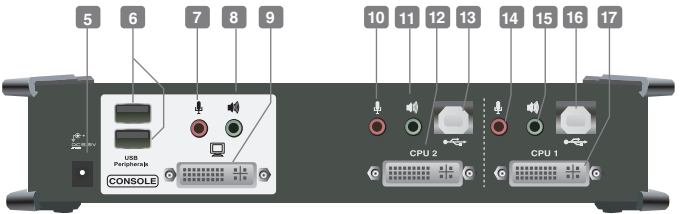
Front View

1. Port 1 Switch Button
2. Port 2 Switch Button
3. Console USB Keyboard Port
4. Console USB Mouse Port



Rear View

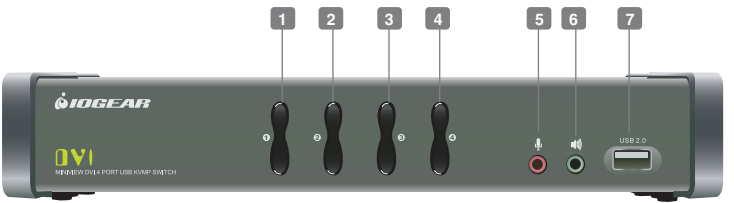
5. Power Jack
6. USB 2.0 Peripheral Sharing Ports
7. Console Mic. Port
8. Console Audio Port
9. Console DVI Port
10. CPU2 Mic. Port
11. CPU2 Audio Port
12. CPU2 DVI Port
13. CPU2 USB Port
14. CPU1 Mic. Port
15. CPU1 Audio Port
16. CPU1 USB Port
17. CPU1 DVI Port



GCS1104 Overview

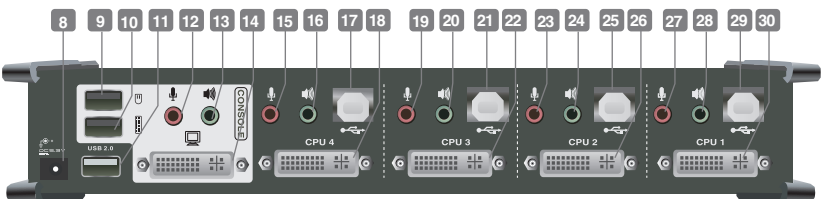
Front View

1. Port 1 Switch Button
2. Port 2 Switch Button
3. Port 3 Switch Button
4. Port 4 Switch Button
5. Front Panel Mic. Port
6. Front Panel Audio Port
7. USB 2.0 Peripheral Sharing Port



Rear View

8. Power Jack
9. Console Mouse Port
10. Console Keyboard Port
11. USB 2.0 Peripheral Sharing Port
12. Console Mic. Port
13. Console Audio Port
14. Console DVI Port
15. CPU4 Mic. Port
16. CPU4 Audio Port
17. CPU4 USB Port
18. CPU4 DVI Port
19. CPU3 Mic. Port
20. CPU3 Audio Port
21. CPU3 USB Port
22. CPU3 DVI Port
23. CPU2 Mic. Port
24. CPU2 Audio Port
25. CPU2 USB Port
26. CPU2 DVI Port
27. CPU1 Mic. Port
28. CPU1 Audio Port
29. CPU1 USB Port
30. CPU1 DVI Port



Installation

Step 1

Please make sure your computers and monitor are powered off before you start.

Step 2

Connect the power adapter from your wall outlet to your power jack of the KVM.

Step 3

Connect the DVI cable from your monitor to the console DVI monitor port. Then, turn on your monitor.

GCS1104

Step 4

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

GCS1102

Step 5

Connect your powered speaker and mic. to the console audio port and console mic. Port.

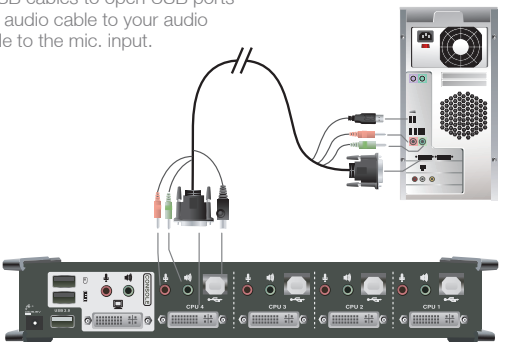
GCS1104

Step 6

Connect a set of your molded KVM cable from your KVM switch to each of your computers – DVI cable to the DVI output, USB cables to open USB ports from your computer, audio cable to your audio output and mic. cable to the mic. input.

Final Step

Turn on your computers.



LED Indications

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

Port Switching

Port Switching

You can switch port via front panel pushbutton or hotkey commands.

Port Switching via Front Panel Pushbutton

Mode1 (Default)

Function	Description
Switch All Focus (KVM, Audio and USB)	Press and hold the specific pushbutton for 2 seconds
Switch KVM Focus	Press the specific pushbutton once
Switch Audio Focus	Press the specific pushbutton twice rapidly

Mode2*

Function	Description
Switch All Focus (KVM, Audio and USB)	Press the specific pushbutton once
Switch KVM Focus	Press and hold the specific pushbutton for 2 seconds
Switch Audio Focus	Press the specific pushbutton twice rapidly

*Please refer to the HSM (Hotkeys Setting Mode) section for details about how to switch the front panel pushbutton into Mode2.

Port Switching via Hotkey Commands

To trigger a Hotkey Mode, simply press [Scroll Lock] [Scroll Lock]*. Please refer to Hotkey Summary Table for details.

*Note: If there is a conflict using [Scroll Lock] [Scroll Lock] sequence, you can change to the alternative sequence [Ctrl] [Ctrl]. Please refer to Hotkey Setting Mode (HSM) section for details.

Hotkeys Summary Table

Hotkey combination		Description
[Scroll Lock] [Scroll Lock] + or [Ctrl] [Ctrl]* + *Note: If alternative hotkey sequence is chosen	[Enter]	Switch KVM, USB and audio focus to the next port
	[n*] [Enter]	Switch KVM, USB and audio focus to the specific port
	[k] [Enter]	Switch KVM focus to the next port
	[n*] [k] [Enter]	Switch KVM focus to the specific port
	[u] [Enter]	Switch USB focus to the next port
	[n*] [u] [Enter]	Switch USB focus to the specific port
	[s] [Enter]	Switch audio focus to the next port
	[n*] [s] [Enter]	Switch audio focus to the specific port
	[n*] [k] [s] [Enter]	Switch KVM and audio focus to the specific port
	[n*] [k] [u] [Enter]	Switch KVM and USB focus to the specific port
	[n*] [u] [s] [Enter]	Switch USB and audio focus to the specific port

*Note: Interval n is the port ID number (1 and 2 for GCS1102 and 1, 2, 3 and 4 for GCS1104)

Autoscan Mode

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

Function	Description		
Auto Scan	Front Panel Push Button	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 trigger Autoscan Mode via 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
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]	Change 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 out current settings Note: Please have a Notepad or word document opened before you trigger this function.

Invoke HSM, then press [F5]	USB Reset
Invoke HSM, then press [b]	Toggle hotkey beepers on or off
Invoke HSM, then press [s]	Toggle front panel pushbutton between Mode1 and Mode2
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 monitor's EDID 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.

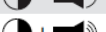
PC Keyboard	Mac Keyboard
[Shift]	Shift
[Crtl]	Ctrl
	⌘
[Ctrl] [1]	
[Ctrl] [2]	
[Ctrl] [3]	
[Ctrl] [4]	

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

*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	Auto Detect
Port Switching Keys	Enabled
Front Panel Pushbutton Mode	Mode1
Mouse Emulation	On

Firmware Upgrade

Step 1

Please follow through the installation process from the Installation section.

Step 2

Switch ALL focus to the port that you will be using to perform the firmware upgrade. (Please refer to Port Switching Section). Then, go to www.iogear.com to download the latest available firmware or the specific firmware that you wish to use.

Step 3

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

Step 4

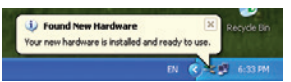
Disconnect your keyboard and mouse from the console keyboard and mouse port, then connect them to the USB peripheral sharing ports.

Step 5

Windows will now install all the required drivers. You may see the below message popup in tray icon area.

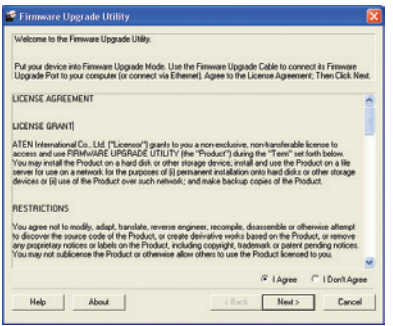
Step 6

After you see the below message “Your new hardware is installed and ready to use.”, extract the downloaded file with WinRAR or compatible software. Then double click on the execute file to begin with the Firmware Upgrade Utility.



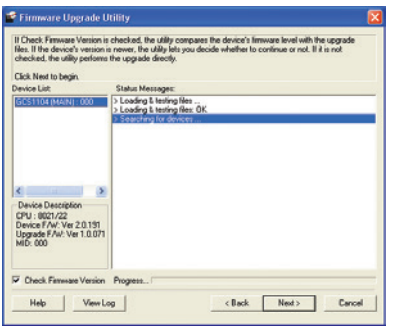
Step 7

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.



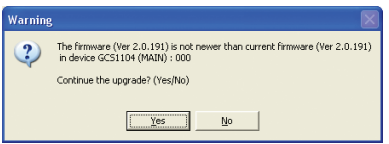
Step 8

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 9

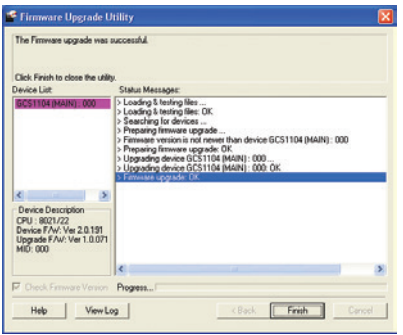
If you have checked the “Check Firmware Version” checkbox, then the utility will check the current firmware that is on your KVM. If the current firmware is newer than the firmware that you wish to upgrade to, a window will popup and prompt you to ask if you wish to proceed. Simply click “Yes” to start 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 10

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 the firmware upgrade process has completed. Then, disconnect the keyboard and mouse from the peripheral sharing ports and connect them back to the console keyboard and mouse port.

Upgrade Fail

If you didn't see "Firmware upgrade OK" in the "Status Messages" window, it means that the firmware upgrade has failed. When that happens, please repeat the complete firmware upgrade process.

FAQ

1. **What is the difference between DVI-A, DVI-D and DVI-I?**
   DVI-A – The “A” stands for analog, which it supports analog DVI signal
   DVI-D – The “D” stands for digital, which it supports digital DVI signal
   DVI-I – The “I” stands for intergraded, which it supports both analog and digital DVI signals

2. **If you have a DVI monitor with both DVI and VGA computers and you would like to connect them through our GCS1102/GCS1104, what should you do and what do you need to know?**
   a.Please make sure that both monitor and monitor cable are DVI-I supported*

   b.A VGA Male to Male cable for each of your VGA computer is required**

   c.A VGA Female to DVI-A Male Adapter for each of your VGA computer is required***

   *DVI-I Male to Male Cable (G2LDI006) is available and sold separately at www.iogar.com
   **VGA Male to Male Cable (G2LVGA006) is available and sold separately at www.iogear.com.
   ***VGA Female to DVI-A Male Adapter (GDVIMVGAF) is available and sold separately at www.iogear.com.

   If you meet all the requirements above, then you can follow the below instructions to setup your KVM. Please make sure all devices are turned off before you start.

For the DVI computers:

Simply follow the instruction of the Installation Section.

For the VGA computers:

1. Connect each of your VGA video output with a VGA Male to Male cable.
2. Connect the other side of the VGA cable to the VGA connection on the DVI-A Male to VGA Female Adapter.
3. Connect the DVI-A connection to the CPU DVI port of the KVM.
4. Then use the provided DVI-D KVM cable for USB, audio and mic. connection ONLY.

For the Console DVI Port

Connect the DVI-I cable from the Console DVI port to the monitor.

FCC Statements

This equipment has been tested and found to comply with the limits for a Class A digital service, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. Any changes or modifications made to this equipment may void the user's authority to operate this equipment. This equipment generates, uses, and can radiate radio frequency energy. 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 harmful interference, and
2. this device must accept any interference received, including interference that may cause undesired operation.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

⚠WARNING: This product can expose you to chemicals including styrene which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov

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

SJ/T 11364-2006

The following contains information that relates to China.

部件名称	有毒有害物质或元素					
	铅 (Pb)	汞 (Hg)	镉 （Cd）	六价 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
电器部件	●	○	○	○	○	○
机构部件	○	○	○	○	○	○

○:表示该有毒有害物质在该部件所有均质材料中的含量均在SJ/T 11363-2006规定的限量要求之下。

●:表示符合欧盟的豁免条款，但该有毒有害物质至少在该部件的某一均质材料中的含量超出SJ/T 11363-2006的限量要求。

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Limited Warranty

IN NO EVENT SHALL THE DIRECT VENDOR'S LIABILITY FOR DIRECT, INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THE PRODUCT, DISK, OR ITS DOCUMENTATION EXCEED THE PRICE PAID FOR THE PRODUCT.

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