



User Manual

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

GCS1642/GCS1644

PART NO. M1087-b / M1088-b

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Table of Contents

Package Contents	4	Mac Keyboard Emulation	24
System Requirements	5	Sun Keyboard Emulation	25
GCS1642 Overview	6	Factory Default Hotkeys Settings	26
GCS1644 Overview	8	Firmware Upgrade	27
Single Stage Installation	10	Upgrade Fail	32
Quad View (DDC Mode)	15	Federal Communications Commission (FCC) Statement	33
LED Indication	17	CE Statement	34
Port Switching	18	Limited Warranty	35
Port Switching via Hotkeys	19	Contact	36
Auto Scanning	21		
Hotkey Setting Mode (HSM)	22		

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 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

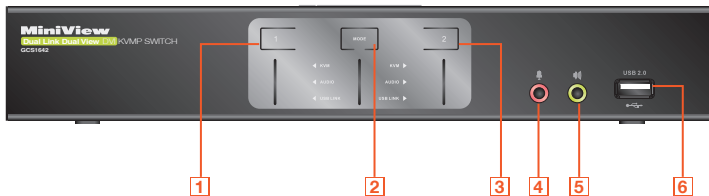
Optional Audio

- Analog audio connections for speakers and mic.

GCS1642 Overview

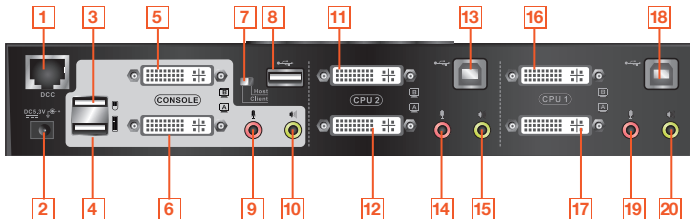
Front View

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

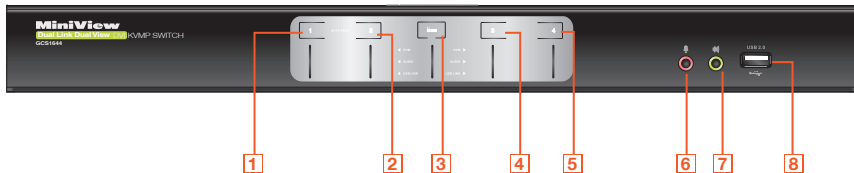
- | | | |
|--------------------------------|------------------------------------|----------------------------|
| 1. DDC Port (Daisy Chain Port) | 8. USB 2.0 Peripheral Sharing Port | 14. CPU2 Mic. Connection |
| 2. DC Power Jack | 9. Console Mic. Connection | 15. CPU2 Audio Connection |
| 3. Console USB Mouse Port | 10. Console Audio Connection | 16. CPU1 DVI Video Port 1B |
| 4. Console USB Keyboard Port | 11. CPU2 DVI Video Port 2B | 17. CPU1 DVI Video Port 1A |
| 5. Console DVI Video Port B | 12. CPU2 DVI Video Port 2A | 18. CPU1 USB Connection |
| 6. Console DVI Video Port A | 13. CPU2 USB Connection | 19. CPU1 Mic. Connection |
| 7. DDC Switch (Host/Client) | | 20. CPU1 Audio Connection |



GCS1644 Overview

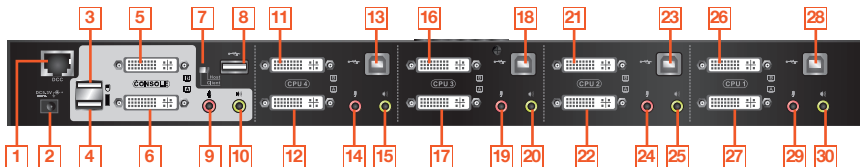
Front View

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. DDC Port (Daisy Chain Port) | 11. CPU4 DVI Video Port 4B | 21. CPU2 DVI Video Port 2B |
| 2. DC Power Jack | 12. CPU4 DVI Video Port 4A | 22. CPU2 DVI Video Port 2A |
| 3. Console USB Mouse Port | 13. CPU4 USB Connection | 23. CPU2 USB Connection |
| 4. Console USB Keyboard Port | 14. CPU4 Mic. Connection | 24. CPU2 Mic. Connection |
| 5. Console DVI Video Port B | 15. CPU4 Audio Connection | 25. CPU2 Audio Connection |
| 6. Console DVI Video Port A | 16. CPU3 DVI Video Port 3B | 26. CPU1 DVI Video Port 1B |
| 7. DDC Switch (Host/Client) | 17. CPU3 DVI Video Port 3A | 27. CPU1 DVI Video Port 1A |
| 8. USB 2.0 Peripheral Sharing Port | 18. CPU3 USB Connection | 28. CPU1 USB Connection |
| 9. Console Mic. Connection | 19. CPU3 Mic. Connection | 29. CPU1 Mic. Connection |
| 10. Console Audio Connection | 20. CPU3 Audio Connection | 30. CPU1 Audio Connection |



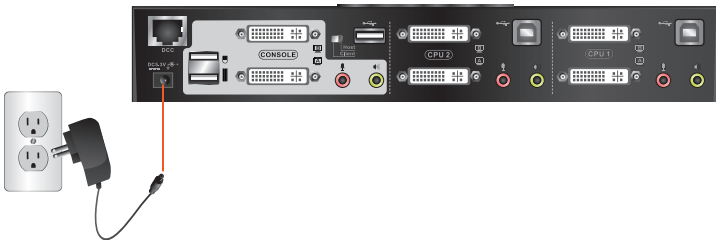
Single Stage Installation

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

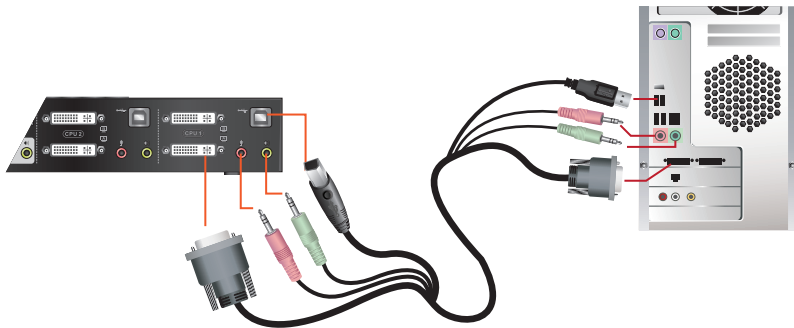
Connect your USB keyboard and mouse to the console USB keyboard port and console USB mouse port.



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.

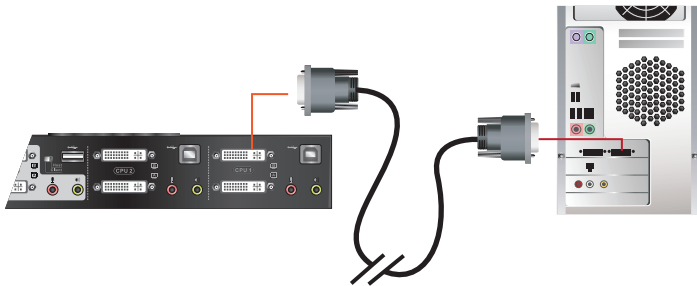
Step 5

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.

Quad View (DDC Mode)

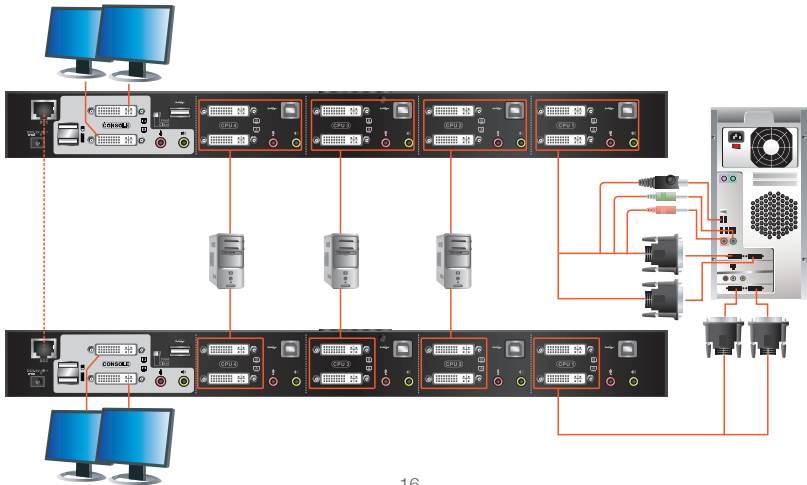
To expand your installation from Dual View displays to Quad view displays, you can use the DDC Mode port to connect two GCS1642 / GCS1644 units together. After doing so, you will be able to configure the quad displays video settings on the computer in extended mode or Mirrored mode.

To set up DDC mode, power off all devices, refer to the installation diagram on the next page.

1. Connect all the computers to the Host as described in Hardware Setup, Cable Connection on page 18.
2. On the Client, using two custom DVI Dual Link cables, plug the DVI connectors into the DVI sockets A and B in the same KVM port section of the switch.
3. At the other end of the two custom DVI Dual Link cables, plug the monitor cable into the respective ports on the computer.
4. Repeat steps 2 and 3 for all computers.
5. On the rear of the second GCS1644, set the DCC switch to Client.*
6. On the rear of the primary GCS1644, set the DCC switch to Host.
7. Plug the console monitors into the DVI console ports located on the Host's and Client's rear panel.
8. Using an RJ-45 cable, connect the DCC port of the Host to the DCC port of the Client.
9. Power up the installation: plug in the power cord for the Host and Client, then power on both. After both units are up, power on the computer/video source devices.

Note:

1. In DCC mode the Client's front panel pushbuttons are disabled and it takes all commands directly from the Host.
2. Setting the DCC switch to Client will disable all front panel pushbuttons on that switch.



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]	Open a text editor such as notepad and the information will be displayed after use the hotkey shown to the left.

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 KVM 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
Invoke HSM, then press [n]	Toggles keyboard emulation on/off (default is on)
Invoke HSM, then press [w]	Toggles mouse port switching on/off. To use this function, mouse emulation must be enabled
Invoke HSM, then press [c]	Changes front panel push buttons to a hotkey of your choice (GCS1644 only)

*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	PC Keyboard	Mac Keyboard
[Shift]	Shift	[Print Screen]	F13
[Ctrl]	Ctrl	[Scroll Lock]	F14
			=
[Ctrl] [1]		[Enter]	Return
[Ctrl] [2]		[Backspace]	Delete
[Ctrl] [3]		[Insert]	Help
[Ctrl] [4]		[Ctrl] 	F15
[Alt]	Alt		

*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

Make sure that the power adapter is connected to the KVM. Shut down all other computers connected to the GCS1642A / GCS1644A installation, except the computer connected to port 1.

Step 2

If you have a Quad View installation, remove the cable connected to the DCC port, which connects the two GCS1642A / GCS1644A units, and set both DCC switches to Host.

Step 3

Invoke Firmware Upgrade Mode (see Firmware Upgrade Mode, page 23). The front panel LEDs flash together to indicate Firmware Upgrade Mode is in effect.

Step 4

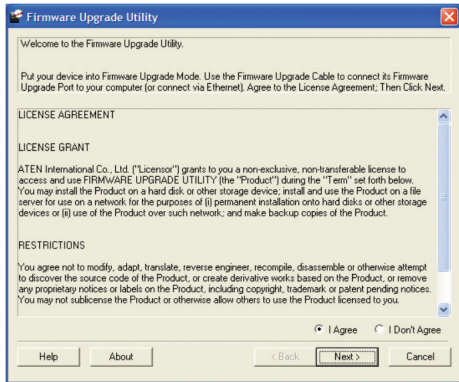
Remove keyboard and mouse from the KVM, then plug these into the computer connected to port 1.

Step 5

Choose the Firmware Upgrade Package you want to install you downloaded from the IOGEAR website for the GCS1642A / GCS1644A.

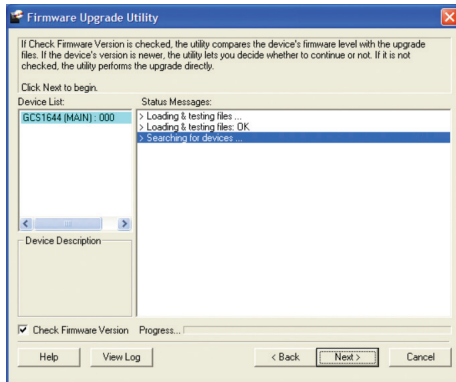
Step 6

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.



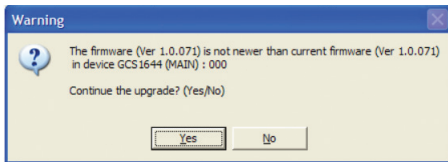
Step 7

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 8

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.



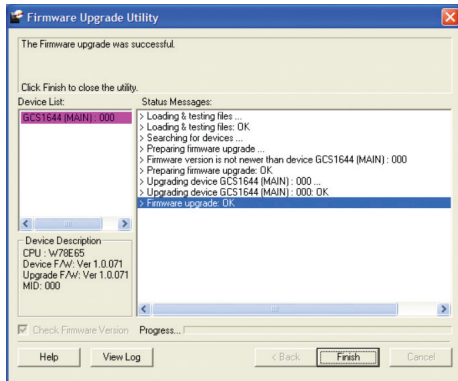
Note: If you did not check the “Check Firmware Version” checkbox, utility will perform the upgrade automatically no matter what version of firmware you have in the KVM.

Step 9

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 the Upgrade Succeeded screen doesn't appear, it means that the upgrade failed to complete successfully. In this case you should do the following:

Step 1

Power off the CS1642A / CS1644A by removing the power jack.

Step 2

Invoke Firmware Upgrade Mode by holding down the Mode Selection push button on the front panel (see Mode Selection Push button, page 9) and power on the CS1642A / CS1644A. The orange LEDs flash together.

Step 3

Go through the firmware upgrade procedure again.

Federal Communications Commission (FCC) Statement

This 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 setting. This product generates, uses, and can radiate radio frequency energy and, if not installed and used as directed, it may cause harmful interference to radio communications. Although this product complies with the limits for a Class B digital device, there is no guarantee that interference will not occur in a particular installation.

CE Statement

This device has been tested and found to comply with the following European Union directives: Electromagnetic Capability (2004/108/EC), Low Voltage (2006/95/EC) and R&TTED (1999/5/EC).

Limited Warranty

WE'RE HERE TO HELP YOU! NEED ASSISTANCE SETTING UP THIS PRODUCT?

Make sure you:

1. Visit www.iogear.com for more product information
2. Visit www.iogear.com/support for live help and product support

Warranty Information

This product carries a 3 Year Limited Warranty. For the terms and conditions of this warranty, please go to <http://www.iogear.com/support/warranty>

Register online at <http://www.iogear.com/register>

Important Product Information

Product Model _____

Serial Number _____

Contact

IOGEAR

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