



# User Manual

4Kx2K 4-Port HD Switch

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**GHSW8241**

PART NO. M1293-a



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## Introduction

IOGEAR's 4Kx2K 4-Port HD Switch allows users to connect up to four HD source devices to one HD display and supports Ultra HD 4Kx2K, the latest digital format for high-definition displays at a distance of up to 50ft. For easy access and convenience, this switch has one HD port on the front panel that can be used to connect your portable devices, such as laptops, tablets or digital cameras, while the other three HD ports on the back provide permanent connections for your Blu-ray players, set-top boxes, game consoles and more.

Switching between source devices can be done via the front panel push-buttons, RS-232 bi-directional control or IR remote control with front panel LEDs indicators for each source device. The built-in bi-directional RS-232 serial port allows you to control the switch through a high-end controller, PC and / or home automation / home theater software system.

## Package Contents

1 x GHSW8241 4Kx2K 4-Port HD Switch  
1 x HD Cable  
1 x IR Remote Control

1 x Power Adapter  
1 x Quick Start Guide  
1 x Warranty Card

## Requirements

### Source Devices

- HD output

### Display

- HDTV or HD Projector with an HD input

### Cables

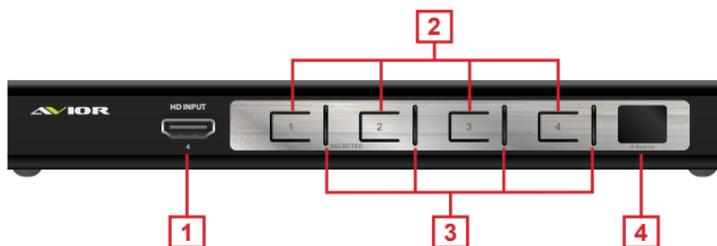
- 4 HD Cables\*
- RS-232 Cable (optional)\*
- IR extension Cable (optional)\*

\*Cable not included

## Overview

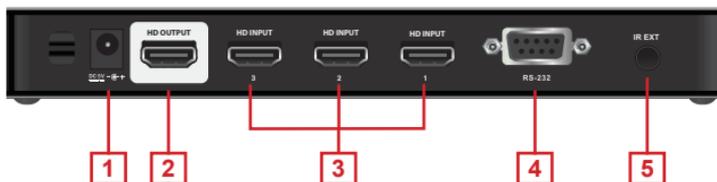
### Front View

1. HD Input
2. Port Selection Push-button
3. Port Status LED
4. IR Receiver



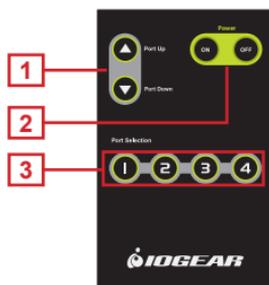
### Back View

1. Power Jack
2. HD Output
3. HD Input
4. RS-232 Serial Port
5. IR Extension Port (IR extension cable not included)



### Remote Control

1. Port Up / Port Down Buttons
2. Power ON / OFF (see note below)
3. Port Selection Buttons



Note: The remote in this manual covers multiple models and some features may not work on all models.

## Installation

**Note:** Make sure your source devices and display are powered off before you start.

### STEP 1

Connect an HD cable to the output port from the HD switch to the input port of the HDTV or HD Projector.

### STEP 2

Connect any HD media sources to the input ports of the HD switch via HD cables.

### STEP 3 (optional)

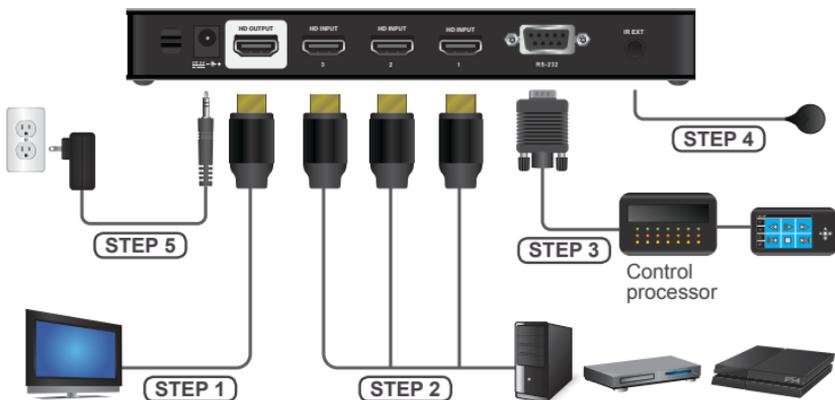
Connect your hardware or software RS-232 controller for HD switch control.

### STEP 4 (optional)

If you have an IR extension cable (not included), plug it into the IR Extension port and place it where the IR remote can reach it.

### STEP 5

Connect the power adapter to the power jack and into an available wall outlet.



## Port Switching

### Via Front Panel Pushbutton

- Press the specific Port ID's push-button to switch your media source.

### Via IR Remote Control

- Press the specific port ID's button to switch your media source.
- Press the Port Up / Down buttons to switch to the previous or next port respectively.

\*Note: The maximum range of the remote control is 20ft. Aim the remote control at the IR receiver located on the front panel of the 4Kx2K 4-Port HD Switch. For optimal performance, make sure there is a clear line-of-sight between the remote control and the IR receiver.

### Via RS-232 hardware or software device

- Please refer to the serial port configuration and command list on pages [9-10](#) for more details.

## Serial Port (RS-232) Configuration

The device's built-in bi-directional RS-232 serial interface allows system control through a high-end controller, PC and / or home automation / home theater software package.

### Configuring the Serial Port

The controller's serial port should be configured as follows:

Description	Setting
Baud Rate	19200
Data Bits	8
Parity	None
Stop Bits	1
Flow Control	None

### Verification

After entering a command, using the instructions on pages [10-15](#), a verification message will appear:

- **Command OK** – indicates that the command is correct and successfully performed by the switch
- **Command incorrect** – indicates that the command has the wrong format and / or values

## Serial Port (RS-232) Configuration List

### Switch Port Commands

The formulas for Switch Port commands are as follows:

1. Switch Command + Input Command + Port Number + [Enter]  
- For example, to switch to input port 02, type the following:  
**sw i02 [Enter]**
2. Switch Command + Enable / Disable HD Out + [Enter]  
- For example, to disable the HD output signal, type the following:  
**sw off [Enter]**
3. Switch Command + Port Sequence (+ / -) + [Enter]  
- For example, to switch to the next input port (+), type the following:  
**sw + [Enter]**

Note: Each command string can be separated with a [Space].

The following tables show the possible values and formats for the **Switch Port** formulas:

Command	Description
sw	Switch Command

Input	Description
i	Input Command

Port Number	Description
xx	01-04 (default is 01)

Control	Description
on	Enable HD Output Signal
off	Disable HD Output Signal
+	Port Sequence – Next Port
-	Port Sequence – Previous Port

The following table lists the available Switch Port Commands:

Command	Input	Port #	Control	Enter	Description
sw	i	xx		[Enter]	Switch Input Port
			on	[Enter]	Turn on (Display on)
			off	[Enter]	Turn off (Display off)
			+	[Enter]	Switch to the next input
			-	[Enter]	Switch to the previous input

### Read Command

To view the current configuration settings of the device, enter in the formula as follows:

1. Read Command + [Enter]: **read [Enter]**

The following table shows the value for the **Read** formula:

Command	Description
read	Read information from the device

### Reset Command

To reset the device back to the factory default settings, enter in the formula as follows:

1. Reset Command + [Enter]: **reset [Enter]**

The following table shows the value for the **Reset** formula:

Command	Description
reset	Reset the device back to factory default

## Switch Mode Command

You can choose how the 4Kx2K 4-Port HD Switch behaves when a new input source is connected. There are three Switch Modes:

1. **Default** – The switch behaves normally without automatic switching.
2. **Next** – Switch priority is placed on the next port that has a new source device connected to it.
3. **Auto** – Places priority on a selected port so that when a source is connected to the selected port, the 4Kx2K 4-Port HD Switch will automatically switch to it, and the port cannot be changed until the source device is unplugged or auto switching mode is disabled with the default command.
4. In addition, the **Go To** function enables the 4Kx2K 4-Port HD Switch to switch to the next port with a powered on source device when the current input source device is powered off.

The formulas for Switch Mode Commands are as follows:

1. Switch Command + Input Command + Port Number + Control [Enter]  
- For example, to enable Auto Mode for port 02, type the following:  
**swmode i02 auto [Enter]**
2. Switch Command + Control [Enter]  
- For example, to enable Next Mode, type the following: **swmode next [Enter]**
3. Switch Command + Control [Enter]  
- For example, to enable Default Mode to disable Next / Auto mode, type the following: **swmode default [Enter]**
4. Switch Command + Control [Enter]  
- For example, to enable the Go To function, type the following:  
**swmode goto on [Enter]**

The following tables show the possible values and formats for the **Switch Mode Command** formulas:

Command	Description
swmode	Switch Mode Command

Input	Description
i	Input Command

Port Number	Description
xx	01-04 (default is 01)

Control	Description
default	No automatic switching
next	Priority is placed on the next port that has a new source connected to it (default setting)
auto	Priority is placed on a selected port
goto on	Switch to the next port with a powered on source device when the current input source is off
goto off	Disable Go To (default setting)

The following table lists the available Switch Mode Commands:

Command	Input	Port #	Control	Enter	Description
swmode			default	[Enter]	To use the Default Switch Mode
			next	[Enter]	To use the Next Switch Mode
	i	xx	auto	[Enter]	To use the Auto Switch Mode for port #
			goto on	[Enter]	To enable the Go To function
			goto off	[Enter]	To disable the Go To function

### Hot Plug Detect Command

When enabled, Hot Plug Detect (HPD) will force the connected source device to read the display's EDID information. The EDID contains a display's basic information and is used by the source device to utilize the best resolution across different displays.

The formulas for HPD commands are as follows:

1. HPD Command + [Enter]
  - For example, to enable Hot Plug Detect, type the following: **hpd on [Enter]**

The following tables show the possible values and formats for the **Hot Plug Detect (HPD)** formulas:

Command	Description
Hpd	Hot Plug Detect command

Control	Description
on	Enables Hot Plug Detect
off	Disables Hot Plug Detect (default)

The following table lists the available commands:

Command	Control	Enter	Description
hpd	on	[Enter]	Enables Hot Plug Detect
	off	[Enter]	Disables Hot Plug Detect

### Baud Rate Command

You can select which RS-232 Baud Rate you want the 4Kx2K 4-Port HD Switch to use, choose between 9600, 19200 (default), 38400 and 57600.

The formulas for the Baud Rate commands are as follows:

1. Baud Command + Control [Enter]  
- For example, to select 38400 as your baud rate, type the following:  
**baud 38400 [Enter]**

The following tables show the possible values and formats for the **Baud Rate** formulas:

Command	Description
baud	Sets the RS-232 baud rate

Control	Description
9600	To use 9600 baud rate
19200	To use 19200 baud rate (default)
38400	To use 38400 baud rate
57600	To use 57600 baud rate

The following table lists the available commands:

Command	Control	Enter	Description
baud	9600 / 19200 / 38400 / 57600	[Enter]	Sets the RS-232 baud rate

## Powering Off and Restarting

If you power off the 4Kx2K 4-Port HD Switch, follow these steps before powering it on again:

1. Power off the attached devices.
2. Unplug the power adapter cable from the 4Kx2K 4-Port HD Switch.
3. Wait 10 seconds, and then plug the power adapter cable back in.
4. After the 4Kx2K 4-Port HD Switch is powered on, power on the attached devices.

Note: Whenever the 4Kx2K 4-Port HD Switch is powered on, it will automatically select the A/V source device attached to Port 1.

## Specification

Function			4Kx2K 4-Port HD Switch
Connectors	Device	HD In	4 x HD Type A Female
	Display	HD Out	1 x HD Type A Female
	RS-232 Port		1 x DB-9 Female
	Power		1 x DC Jack
	IR Extension Port		1 x 3.5mm Jack
Switches	Port Switch		4 pushbuttons
IR Control			1
LEDs	Selected		4 (Green)
Video Resolution			HDTV resolution: 480p, 720p, 1080i, 1080p, and up to 4k2k (4096x2160 or 3840x2160)
Power Consumption			DC5V
Environment	Operating Temp.		0–50°C
	Storage Temp.		-20–60°C
	Humidity		0–80% RH, Non-condensing
Physical Properties	Housing		Metal

## Compliance Information

### **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 Compliance**

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](http://www.iogear.com) for more product information
2. Visit [www.iogear.com/support](http://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 <https://www.iogear.com/support/warranty>

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

#### Important Product Information

Product Model \_\_\_\_\_

Serial Number \_\_\_\_\_

## Contact

### IOGEAR

<https://iogear.custhelp.com>

[support@iogear.com](mailto:support@iogear.com)

[www.iogear.com](http://www.iogear.com)

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