User Manual

2-Port 4K Dual View DisplayPort Matrix KVMP with USB3.0 Hub and Audio

GCMS1922

PART NO. M1731

www.iogear.com

Table of Contents

Safety Instructions

- Read all of these instructions. Save them for future reference.
- This device is for indoor use only.
- Follow all warnings and instructions marked on the device.
- Do not place the device on any unstable surface (cart, stand, table, etc.). If the device falls, serious damage will result.
- Do not use the device near water.
- Do not place the device near, or over, radiators or heat registers.
- The device cabinet is provided with slots and openings to allow for adequate ventilation.
  To ensure reliable operation, and to protect against overheating, these openings must never be blocked or covered.
- The device should never be placed on a soft surface (bed, sofa, rug, etc.) as this will block its ventilation openings. Likewise, the device should not be placed in a built in enclosure unless adequate ventilation has been provided.
- Never spill liquid of any kind on the device.
- Unplug the device from the wall outlet before cleaning. Do not use liquid or aerosol cleaners. Use a damp cloth for cleaning.
- The device should be operated from the type of power source indicated on the marking label. If you are not sure of the type of power available, consult your dealer or local power company.
- The device is designed for IT power distribution systems with 230V phase-to-phase voltage.
- To prevent damage to your installation, it is important that all devices are properly grounded.
- The device is equipped with a 3-wire grounding type plug. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not attempt to defeat the purpose of the grounding-type plug. Always follow your local/national wiring codes.
- Do not allow anything to rest on the power cord or cables. Route the power cord and cables so that they cannot be stepped on or tripped over.
- If an extension cord is used with this device, make sure that the total Ampere ratings of all products used on this cord does not exceed the extension cord Ampere rating. Make sure that the total of all products plugged into the wall outlet does not exceed 15 Amperes.
- To help protect your system from sudden, transient increases and decreases in electrical power, use a surge suppressor, line conditioner, or un-interruptible power supply (UPS).

- Position system cables and power cables carefully; Be sure that nothing rests on any cable.
- Never push objects of any kind into or through cabinet slots. They may touch dangerous voltage points or short out parts resulting in a risk of fire or electrical shock.
- Do not attempt to service the device yourself. Refer all servicing to qualified service personnel.
- If the following conditions occur, unplug the device from the wall outlet and bring it to qualified service personnel for repair.
  - The power cord or plug has become damaged or frayed.
  - Liquid has been spilled into the device.
  - The device has been exposed to rain or water.
  - The device has been dropped, or the cabinet has been damaged.
  - The device exhibits a distinct change in performance, indicating a need for service.
  - The device does not operate normally when the operating instructions are followed.
- Only adjust those controls that are covered in the operating instructions. Improper adjustment of other controls may result in damage that will require extensive work by a qualified technician to repair.

Conventions

This manual uses the following conventions

Monospaced	Indicates text that you should key in
[ ]	Indicates keys you should press. For example, [Enter] means to press the Enter key.
1.	Numbered lists represent procedures with sequential steps
•	Bullet lists provide information, but do not involve sequential steps
→	Indicates selecting the option (on a menu or dialog box, for example), that comes next. For example, Start → Run means to open the *Start* menu, then select *Run*
	Indicates critical information

Introduction

IOGEAR's GCMS1922 2-Port 4K Dual View DisplayPort Matrix KVMP Switch with USB 3.0 Hub and Audio takes KVM to a whole new level by combining KVM, Matrixing, Mouse Crossover Switching, dual video interface, 2-Port USB 3.0 hub and 2.1 Channel audio. It provides up to Cinema 4K – 4096x2160 @60Hz resolution that displays high-definition video while delivering premium sound for music, movies, and gaming.

The GCMS1922 allows users to access two DisplayPort computers from a single USB Keyboard, USB mouse, and dual HDMI monitors. In addition to the front panel pushbutton and hotkeys, IOGEAR's GCMS1922 offers mouse wheel switching as well as a remote port selector to change ports.

With the built-in Matrix function, the GCMS1922 provides two operation modes – Extension and Matrix. In Extension Mode, content of the focused computer can be displayed over both monitors, and in Matrix Mode two computers can be displayed individually on either monitor. When in Matrix Mode, the Mouse Crossover Switching allows users to simply drag the mouse cursor across the two monitors and will instantly switch to the other connected computer.

With a built-in USB 3.1 Gen 1 hub, each connected computer can transfer up to SuperSpeed 5 Gbps to all connected peripherals. The GCMS1922's independent switching feature allows the KVM to focus on one computer while the USB peripheral and audio focus on another. This allows for a much higher level of multi-tasking for professional environments such as IT Programing, Graphic Designing, Video Editing, Financial Trading and Remote Working.

Package Contents

- 1 x 2-Port 4K Dual View DisplayPort Matrix KVMP Switch KVMP Switch
- 2 x DisplayPort KVM Cable set
- 1 x Remote Port Selector
- 1 x Power Adapter
- 1 x Power Cord
- 1 x Quick Start Guide
- 1 x Warranty Card

Please verify that all components are present, and nothing was damaged in shipping. If you encounter a problem, contact your dealer.

Read this manual thoroughly and follow the installation and operation procedure to prevent any damage to the unit, and/or any of devices connected to it.

Features

- Dual Monitor console controls for two computers and two USB3.0 peripherals
- Dual Operation Modes
  - Extension Mode – access one PC at a time and allows content of the current focus computer to be displayed over two monitors
  - Matrix Mode – allow contents of two computers to be displayed separately on two monitors regardless the computer focus
- Port switching via pushbuttons, hotkeys, mouse wheel, mouse cursor and remote port selector
- Mouse Crossover Switching – Under the Matrix Mode, the mouse cursor can drag across two monitors for instant switching between the two connected computers
- Independent Switching of KVM, USB, and Audio focus
- Superior 4K video quality – 4K UHD (3840x2160 @60Hz) and True 4K (4096x2160 @60Hz)
- DisplayPort 1.2, HDMI 2.0 and HDCP compliant
- 2-Port USB 3.1 Gen 1 With Super Speed 5 Gbps transfer rate
- Audio Mixer – enable mixing of up to two audio sources and output the mixed audio to the speakers
- Support 7.1 HD audio through DisplayPort
- Full bass response for high quality 2.1 channel surround sound systems
- Power on detection – if a computer is powered OFF, the GCMS1922 will automatically switch to the next powered ON computer
- Mouse emulation or bypass feature supports most mouse drivers and multifunction mice
- Keyboard emulation or bypass feature supports most multifunction keyboard
- Multi-platform support
- Multilingual Keyboard mapping supports English, French, German and Japanese Keyboards
- Mac keyboard support and emulation
- Auto Scan Mode feature to monitor all computers

Note:

1. Mouse switching supported by mouse emulation mode using a USB 3-button mouse wheel
2. HD audio through DisplayPort cannot be switched independently

Requirements

Console

- 2 x HDMI Monitors
- Standard 3-button wired USB mouse
- Standard 104-key wired USB keyboard
- Microphone and speakers (optional)

Computers

- 2 x DisplayPort Ports
- Type-A USB Port
- Audio Ports (optional)

Cables

We recommend using the included IOGEAR DisplayPort KVM cable sets, designed specifically to work with the GCMS1922

Note:

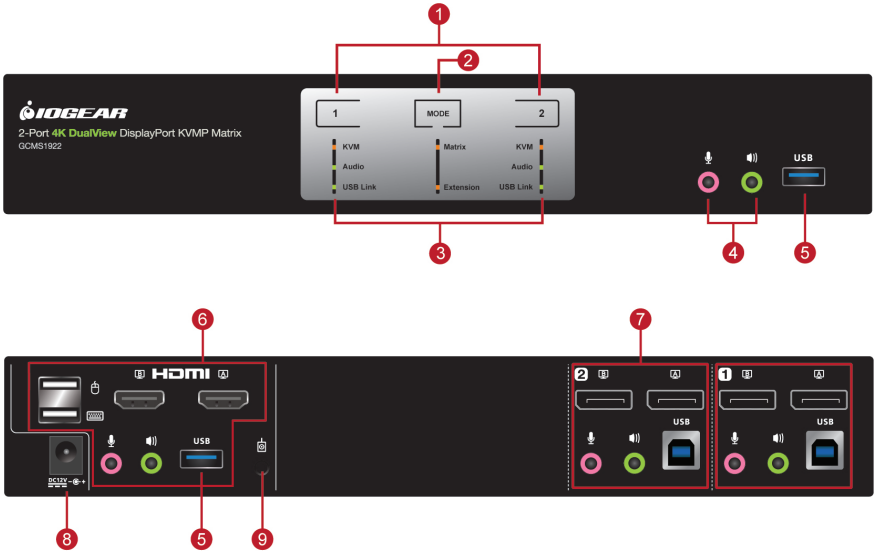
The quality of the display is affected by the quality and length of the cables.

If DisplayPort 1.1 cables are being used instead, please make sure that the DisplayPort EQ setting on the monitor is set to auto or DP1.1.

Operating Systems

- Windows® 7/8.1/10/11
- Linux®
- Mac® OS X 9 and higher

Overview


IOGEAR
2-Port 4K DualView DisplayPort KVMP Matrix
GCMS1922
1
MODE
2
KVM
Audio
USB Link
Matrix
Extension
KVM
Audio
USB Link
USB
HDMI
USB
USB
USB
DC12V
1
2
3
4
5
6
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8
5
9

No.	Component	Description
1	Port Selection Pushbuttons	For manual port selection (**see Manual Switching, page 14**) • Press one of the port selection pushbuttons for less than two seconds to bring the KVM, USB hub and audio focus to the computer connected to its corresponding port • Press one of the port selection pushbuttons for longer than two seconds to bring only the KVM focus to its corresponding port • Press one of the port selection pushbuttons twice to bring the audio focus to the computer connected to its corresponding port • Press port selection buttons 1 and 2 simultaneously for 2 seconds to implement Auto Scan Mode. (**See Auto Scan Mode section for more details, page 21**)
2	Mode Selection Pushbutton	The LEDs will light up DIM Orange to indicate its mode and status • Press to toggle between Extension and Matrix Mode ◦ Extension Mode – Content of the focused computer will be displayed on both monitors ◦ Matrix Mode – Content of two computers will be displayed individually on two monitors • Press and hold mode selection pushbutton and the remote port selector pushbutton before powering on to enter Firmware Upgrade mode. (**See Firmware Upgrade Mode section, page 32**)
3	Port LEDs	The Port LEDs are built into the Port Selection Pushbuttons. The top LEDs are KVM port LEDs, the middle LEDs are Audio LEDs, the bottom LEDs are USB LEDs: **KVM** • LED lights up DIM Orange to indicate that the computer attached to the corresponding port is connected • Selected LED lights up Bright Orange to indicate that the computer attached to the corresponding port is the one that has the KVM FOCUS (Selected) • LED flashes to indicate that the computer attached to its corresponding port is being accessed under Auto Scan Mode **Audio** • LED lights up DIM Green to indicate that the audio is being outputted from the corresponding port(s) **USB** • LED lights up DIM Green to indicate that the computer attached to the corresponding port has access to the USB Peripherals
4	Audio Ports	Microphone and speakers connected into these audio ports have priority over those connected in the rear side panel of the GCMS1922
5	USB Hub	USB peripherals (USB drives, printers, etc.) can be connected into this port. The built-in USB 3.1 Gen 1 ports feature 5 Gbps data transfer rates for compatible USB peripherals
6	Console Ports	The cables from the HDMI monitors, USB keyboard, USB mouse, speakers and microphone are connected into these ports Each connector is marked with an appropriate icon to indicate its use
7	KVM Ports	The KVM cables from the computers are connected into these ports. Each KVM port section is comprised of a microphone jack, speaker jack, USB type B socket and two DisplayPort connectors
8	Power Jack	The power adapter cable is connected into this jack
9	Remote Port Selector Jack	The remote port selector is connected into this port

Beeper Behavior

Sound	Description
1 beep	• Switching port • Activating Auto Scan Mode • Pausing/resuming Auto Scan
1 long beep	• Powering on GCMS1922 • Resetting GCMS1922
2 beeps	• Interrupting Auto Scan • Enable Keyboard Emulation OFF Mode • Finishing USB synchronization

See page 24 for Beeper setting to turn it ON or OFF

Hardware Setup

Hardware Installation

Please read **Safety Instructions** (page 4) before proceeding with installation
Please make sure that all devices including the GCMS1922, HDMI monitor, and computers are powered **OFF**

1. Connect the USB keyboard and USB mouse to the GCMS1922 Console ports located on the rear side panel
2. Connect the HDMI monitors to the GCMS1922 Console ports on the rear side panel
3. Turn monitor(s) power to ON
4. Connect the main analog microphone and speakers into GCMS1922 microphone and speaker jacks located on the front side panel(optional). The microphone and speaker connected into this front port have priority over those connected on the rear port.
5. Connect the secondary analog microphone and speakers into GCMS1922 microphone and speaker jacks located on the rear panel (optional)
6. Using the included cables:
    a. Connect the connector into any available DisplayPort “A” port in the KVM port section of the GCMS1922. Then connect the USB 3.0 cable, microphone and/or speaker cables into their corresponding sockets.
    b. Connect the other end of the DisplayPort 1.2 cable, USB 3.0 cable and microphone/speaker cables into their respective ports on the computer.
    c. Using a separate DisplayPort 1.2 cable, connect the DisplayPort connector into the DisplayPort “B” port in the same KVM port section of the switch. Then at the other end of the DisplayPort 1.2 cable connect the cable into its respective port on the computer.
7. Repeat step 6 for each dual display computer system being installed
8. Connect the included remote port selector into GCMS1922's remote port selector jack on the rear panel (optional)
9. Connect the USB peripherals into the front or rear USB peripheral ports (optional)
10. Connect the included power adapter to an AC power source. Then, connect the power adapter cable into GCMS1922 power jack
11. Turn all connected computers power to ON

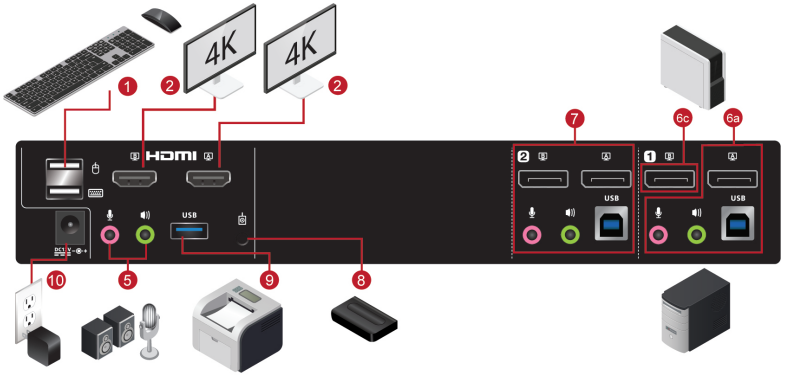
Note:

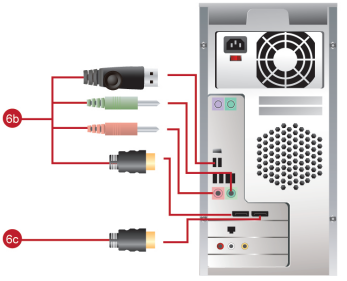
Verify that all the connectors are on the same KVM Port sockets (all in Port 1, all in Port 2) and that each socket is marked with an appropriate icon to indicate itself

By default, the GCMS1922 switches to the first computer is powered ON. We recommend that the video cable length from computer to the console monitor not to exceed 10ft. (3m)

Please make sure that only high-quality video cables used to achieve 4K(4096x2160 @60Hz) resolution

Please follow steps from previous page





Basic Operation

Port Switching

There are five convenient methods to access the computer:

a. Manual – involves pressing the port selection pushbuttons located on GCMS1922 front panel.

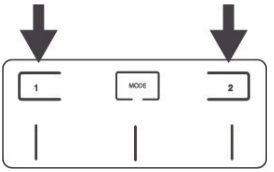
b. Remote Port Selector – involves pressing port selection pushbutton located on the remote port selector.

c. Hotkey – involves entering a hotkey combination from the keyboard (see Hotkey Operation section for details).

d. Mouse Wheel – involves pressing the mouse wheel button (clicking it twice) to switch between ports (see Mouse Emulation and Mouse Port Switching section for more details).

e. Mouse Crossover Switching – under the Matrix Mode, the mouse cursor can drag across the two monitors for instant switching between the two connected computers.

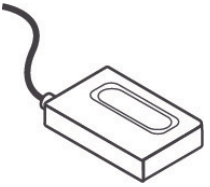
For Manual Port Selection:



- Press and release a port selection pushbutton to switch the focus of the KVM, USB and Audio focus to the computer attached to the corresponding port.
- Press and hold a port selection pushbutton for more than 2 seconds to switch the KVM focus to the computer attached to its corresponding port. The USB and Audio focus will not change – they will stay with the port that they are already on.
- Press a port selection pushbutton twice to switch the audio focus to the computer attached to its corresponding port
- Press and hold port selection pushbuttons 1 and 2 for more than 2 seconds to start Auto Scan Mode **(see page 21 for details).**
- Press and release either of the port selection pushbuttons to stop Auto Scan Mode. The KVM focus goes to the computer attached to the corresponding port of the button you pressed.

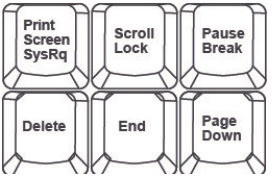
For Remote Port Selector Switching:

Make sure the remote port selector is connected to the remote port selector jack on the rear panel. Press the remote port selector button for less than 3 seconds to cycle through the ports.



For Hotkey Port Selection:

All port switching begins by clicking **[Scroll Lock]** twice. Details of the Hotkey parameters, see Hotkey Operation, page 18

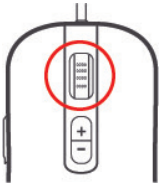


For Mouse Wheel Switching:

Double-click the scroll wheel of your USB mouse to cycle through the ports

Notes:

- Mouse switching is only supported by USB 3-key scroll wheel mice
- Mouse switching is disabled by default. See Hotkey Setting Mode (HSM) on page 25, to enable mouse switching
- Mouse switching is only supported when Mouse Emulation is enabled



For Mouse Crossover Switching:

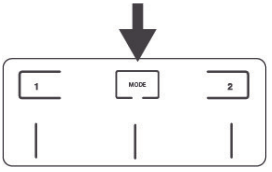
Mouse Crossover Switching allows the mouse cursor to drag across two monitors for instant switching between two connected computers

Notes:

- Before using Mouse Crossover Switching, mouse acceleration in the operating system settings must be turned OFF
- To enable Mouse Crossover Switching, please see page 26
- Mouse emulation must be enabled for Mouse Crossover Switching to function

Operation Mode Switching

The GCMS1922 provides two operation modes – Extension Mode(default) and Matrix Mode. There are three methods to switch between Extension Mode and Matrix Mode.



- Push Button - involves pressing the Mode selection pushbutton located on GCMS1922 front panel. (See page 9-10)
- Hotkey - involves entering a hotkey combination from the keyboard (see page 26 under Hotkey Operation section for details).
- Remote Port Selector - involves pressing port selection pushbutton located on the remote port selector, Press, and hold the remote port selector pushbutton for more than 3 seconds to switch between the two modes. (See page 14)

Extension Mode(default)

Matrix Mode

Hot Plugging

The IOGEAR GCMS1922 supports USB hot plugging – components can be removed and added back into the installation by unplugging their cables from the USB hub ports, without the need to shut the unit down.

Powering OFF and Restarting

If it becomes necessary to Power OFF the GCMS1922, before switching it back ON, you must follow below steps:

1. Shut down or Power OFF all computers that are attached to the GCMS1922.
2. Unplug the GCMS1922 power adapter cable.
3. Wait for 10 (ten) seconds, then plug the GCMS1922 power adapter cable back into the unit.
4. After the GCMS1922 turns ON, power ON all the attached computers.

Port ID Numbering

Each KVM port section on the GCMS1922 is assigned a port number

- 1 or 2 for the GCMS1922
- The port numbers are marked on the rear panel of GCMS1922
- The Port ID of a computer is derived from the KVM port number it is connected to. For example, a computer connected to KVM port 2 has a Port ID of 2.
- The Port ID is used to specify which computer gets the KVM, USB peripheral and audio focus with the Hotkey port selection method **(see Hotkey Operation page 18 for details)**.

Alternative Manual Port Selection Setting

When Hotkey Setting Mode has been activated, pressing **[S]** will invoke the alternative front panel pushbutton manual port selection functions as follows:

- Press a port selection pushbutton once to bring only the KVM focus to the computer attached to its corresponding port.
- Press and hold a port selection pushbutton for more than 2 seconds to bring the KVM, audio and USB focus to the computer attached to its corresponding port.
- Press a port selection pushbutton twice to bring only the audio focus to the computer attached to its corresponding port.
- Press and hold selection pushbuttons 1 and 2 for more than 2 seconds to start Auto Scan Mode **(see Auto Scan Mode at page 21 for details)**

Hotkey Operation

IOGEAR's GCMS1922 provides an extensive, easy-to-use, hotkey function for convenience in controlling and configuring KVM installation from the keyboard. Hotkeys provide asynchronous (independent) switching of the KVM, USB hub and audio focus. Therefore, the users can give one computer the KVM focus, and another the USB hub focus or the audio focus.

Port Switching

All port switching begins by clicking **[Scroll Lock]** twice. The table below describe the actions that each combination performs.

Note:

If using the **[Scroll Lock]** key conflicts with other programs running on the computer, the **[Ctrl]** key can be used, instead. See Alternate Port Switching Key at **page 23** for details.

Cycling Through the Ports

Hotkey	Function
[Scroll Lock][Scroll Lock][Enter] Example: 1. Click [Scroll Lock] twice. 2. Click [Enter].	Brings the KVM, USB hub and Audio focus to the next port (1 to 2; 2 to 1). Note: The KVM, USB hub and Audio focus all go to this port even if they were on different ports to begin with.
[Scroll Lock][Scroll Lock][K][Enter] Example: 1. Click [Scroll Lock] twice. 2. Click [K]. 3. Click [Enter].	Brings only the KVM to the next port. The USB hub and Audio focus remain where they are.
[Scroll Lock][Scroll Lock][U][Enter] Example: 1. Click [Scroll Lock] twice. 2. Click [U]. 3. Click [Enter].	Brings only the USB hub to the next port. The KVM and Audio focus remain where they are.
[Scroll Lock][Scroll Lock][S][Enter] Example: 1. Click [Scroll Lock] twice. 2. Click [S]. 3. Click [Enter].	Brings only the Audio to the next higher port The KVM and USB hub remain where they are.

Going Directly to a Port

Hotkey	Function
[Scroll Lock][Scroll Lock][n][Enter] Example: 1. Click [Scroll Lock] twice. 2. Click [2]. 3. Click [Enter].	Brings the KVM, USB hub, and Audio focus to computer attached to [n] port. **[n] stands for the computer's Port ID number. Replace [n] with the appropriate Port ID when entering hotkey combinations. For GCMS1922, the Port IDs are 1 and 2.** Note: The KVM, USB hub, and Audio focus all go to this port even if they were on different ports to begin with
[Scroll Lock][Scroll Lock][n][K][Enter] Example: 1. Click [Scroll Lock] twice. 2. Click [2]. 3. Click[K]. 4. Click [Enter].	Brings only the KVM to the computer on [n] port The USB hub and audio focus remain where they are.
[Scroll Lock][Scroll Lock][n][U][Enter] Example: 1. Click [Scroll Lock] twice. 2. Click [2]. 3. Click[U]. 4. Click [Enter].	Brings only the USB hub focus to the computer on [n] port. The KVM and audio focus remain where they are.
[Scroll Lock][Scroll Lock][n][S][Enter] Example: 1. Click [Scroll Lock] twice. 2. Click [2]. 3. Click[S]. 4. Click [Enter].	Brings only the Audio to the computer on [n] port The KVM and USB hub focus remain where they are.
[Scroll Lock][Scroll Lock][n][K][U][Enter] Example: 1. Click [Scroll Lock] twice. 2. Click [2]. 3. Click [K]. 4. Click [U]. 5. Click [Enter].	Brings the KVM and the USB hub focus to the computer on [n] port. The audio focus remains where it is.

[Scroll Lock][Scroll Lock][n][K][S][Enter] Example: 1. Click [Scroll Lock] twice. 2. Click [2]. 3. Click [K]. 4. Click [S]. 5. Click [Enter].	Brings the KVM and Audio focus to the computer on [n] port. The USB hub focus remain where it is.
[Scroll Lock][Scroll Lock][n][U][S][Enter] Example: 1. Click [Scroll Lock] twice. 2. Click [2]. 3. Click [U]. 4. Click [S]. 5. Click [Enter].	Brings the USB hub and Audio focus to the computer on [n] port. The KVM focus remain where it is.

Mouse Crossover Switching

For the following hotkeys to work, the GCMS1922 needs to be in Matrix Mode and Mouse Crossover Switching needs to be enabled. See Mouse Crossover Switching at page 26 and Matrix Mode at page 7 and 16.

Hotkey	Function
[Scroll Lock] [Scroll Lock] [K][U] [Enter] Example: 1. Click [Scroll Lock] twice. 2. Click [K]. 3. Click [U]. 4. Click [Enter].	Bring the keyboard, mouse, and USB peripheral focus to the next port. The audio focus remains where it is.
[Scroll Lock] [Scroll Lock] [K][S] [Enter] Example: 1. Click [Scroll Lock] twice. 2. Click [K]. 3. Click [S]. 4. Click [Enter].	Bring the keyboard, mouse, and audio focus to the next port. The USB peripheral focus remains where it is.
[Scroll Lock] [Scroll Lock] [K][K] [Enter] Example: 1. Click [Scroll Lock] twice. 2. Click [K]. 3. Click [K]. 4. Click [Enter].	Bring only the keyboard and mouse to the next port. The USB peripheral and audio focus remain where it is.

Hotkey	Function
[Scroll Lock] [Scroll Lock] [K][U][S] [Enter] Example: 1. Click [Scroll Lock] twice. 2. Click [K]. 3. Click [U]. 4. Click [s]. 5. Click [Enter].	Bring the keyboard, mouse, USB peripheral and audio to the next port.

Auto Scan Mode

Under **"Extension Mode"**, GCMS1922's Auto Scan feature allows you to monitor computer activities without switching from port to port manually. This feature automatically cycles the KVM focus through the computer ports at regular intervals. See the table below for details

When Auto Scan is in effect, only Auto Scan Mode compliant keystrokes and mouse clicks work. Ordinary keyboard and mouse functions are suspended. Click **[Esc]** or **Space Bar** to exit **Auto Scan Mode** to regain normal control of the console.

Although video focus switches from port to port, keyboard, mouse, and USB focus do not switch. They remain on the port when **Auto Scan** began.

Hotkey	Function
[Scroll Lock] [Scroll Lock] [A][Enter] Example: 1. Click [Scroll Lock] twice. 2. Click [A]. 3. Click [Enter].	Invokes Auto Scan The KVM focus cycles from port to port at 5 seconds (default) intervals.
[Scroll Lock] [Scroll Lock] [A][n] [Enter] Example: 1. Click [Scroll Lock] twice. 2. Click [A]. 3. 3Click [9]. 4. Click [Enter].	The KVM focus cycles from port to port at [n] second intervals. The [n] stands for the number of seconds that the GCMS1922 should dwell on a port before moving on to the next port. Replace [n] with a number between 1 and 99 when entering this hotkey combination.

Advance Configuration

Hotkey Setting Mode

Hotkey Setting Mode is used to set up your GCS1922 switch configuration. All operations begin with invoking Hotkey Setting Mode (HSM).

To invoke HSM (Default)

1. Press and hold down **[Num Lock]** (use **[Clear]** on Mac)
2. Press and release **[-]** minus key
3. Release **[Num Lock]** key (use **[Clear]** on Mac)
4. To exit HSM manually, press **[Esc]** or **Spacebar**

Note:

The **[-]** minus key must be released within one half second, otherwise Hotkey invocation is cancelled.

When HSM is active, **[Caps Lock]** and **[Scroll Lock]** LEDs will flash in succession to indicate that HSM is in effect. They will stop flashing and revert to normal status when you exit HSM.

Only Hotkey compliant keystrokes and mouse clicks (described on **Hotkey Settings Mode Summary Table at page 29**) function. Ordinary keyboard and mouse functions are suspended while on HSM.

At the conclusion of some hotkey operations, you can automatically exit hotkey mode. With some operations, you must exit manually by pressing **[Esc]** or **Spacebar.**

Alternate HSM Invocation Keys

In some instances, the default hotkey settings conflict with programs running on your computer and in some instances the default hotkeys either do not exist on your keyboard (Mac keyboards do not have **[Scroll Lock]**, or are inconvenient to use, Hotkey Setting Mode allows you to select alternate configurations for the KVM's hotkeys. An alternate set of HSM invocation keys is provided in case the default set conflicts with programs running on the computers.

On Alternate HSM, the HSM invocation keys become the **[Ctrl]** key (instead of **[Num Lock]**) and **[F12]** (instead of **[-]** minus key)

To switch to the Alternate HSM invocation set:

1. Invoke Default HSM above
2. Press and release **[H]**

Note:

This procedure is a toggle between the two methods. To revert back to the original HSM invocation keys, invoke HSM, then press and release **[H]** key again.

Alternate Port Switching Keys

The port switching activation keys can be changed from clicking **[Scroll Lock]** key twice (**[Scroll Lock][Scroll Lock]**) to clicking **[Ctrl]** key twice (**[Ctrl][Ctrl]**).

To change the port switching activation keys:

1. Invoke HSM, see page 22
2. Press and release **[T]** key

Note:

This procedure is a toggle between the two methods. To revert back to the default **[Scroll Lock][Scroll Lock]** method, invoke HSM, then press and release **[T]** key again.

Keyboard Operating Platform

The default port configuration of GCMS1922 is for a “Windows” compatible keyboard operating platform. If the Windows compatible keyboard has been used at console side and you have a Mac or Sun machine attached with GCMS1922, you can change the port’s keyboard operating platform, so the Windows compatible keyboard emulates the Mac or Sun keyboard.

1. Bring the KVM focus to the port you want to set
2. Invoke HSM, see page 22
3. Press and release the appropriate Function key (see the table below). After completing this procedure, GCMS1922 automatically exit HSM.

Function Key	Operation
[F1]	Sets GCMS1922 to **Extension Mode** so that it can work under special operating systems as a standard (104 key) keyboard.
[F2]	Enable Mac keyboard emulation, see page 30 for details.
[F3]	Enable Sun keyboard emulation, see page 31 for details.
[F10]	Enable Windows keyboard emulation

List Switch Settings

To see a listing of the current switch settings:

1. Open a text editor or word processor and place the cursor in the page window
2. Invoke HSM, see page 22
3. Press and release **[F4]** to display the settings

USB Reset

If the USB loses focus and needs to be reset:

1. Invoke HSM, see page 22
2. Press and release **[F5]**

Keyboard Language

To change the keyboard language:

1. Invoke HSM, see page 22
2. Press **[F6] [nn] [Enter]**

Note: **[nn]** is a two-digit number that represents the keyboard language code

- US English: **33**
- French: **08**
- German: **09**
- Japanese: **15**

Beeper Setting

The Beeper can be hotkey toggled ON and OFF. To toggle the Beeper:

1. Invoke HSM, see page 22
2. Press and release **[B]**

The Beeper toggles ON or OFF

Port Switching Keys

To disable the Port Switching Keys (**[Scroll Lock][Scroll Lock]**) or (**[Ctrl][Ctrl]**):

1. Invoke HSM, see page 22
2. Press **[X] [Enter]**

Note: This procedure is a toggle. To enable the Port Switching keys, repeat Step 1 and 2

Firmware Upgrade Mode

To set the GCMS1922 to Firmware Upgrade Mode:

1. Invoke HSM, see page 22
2. Key in **[u][p][g][r][a][d][e]**
3. Press **[Enter]**
   The front panel LEDs will flash to indicate the Upgrade has started

Note: To exit Firmware Upgrade Mode, you must power OFF the GCMS1922

Restore Default Settings

To reset the GCMS1922 to its default hotkey settings:

1. Invoke HSM, see page 22
2. Press **[R][Enter]**

All hotkey settings return to the factory default settings

Alternative Manual Port Selection

To toggle between the default and the alternative front panel pushbutton manual port selection settings:

1. Invoke HSM, see page 22
2. Press **[S]**

This procedure is a toggle. Repeat to revert to the original setting. See Alternative Manual Port Selection at page 17 for more information.

Keyboard Emulation

Console keyboard port emulation/bypass feature supports most gaming/multimedia keyboards. The default setting is enabled. To disable:

1. Invoke HSM, see page 22
2. Press **[N]**

This procedure is a toggle. Repeat Step 1 and 2 to enable Keyboard Emulation

Mouse Emulation

To enable / disable mouse emulation.

1. Invoke HSM, see page 22
2. Press **[M]**

This procedure is a toggle. Repeat to revert to the original setting

Mouse Whell Port Switching

Mouse Port Switching allows you to use the mouse wheel button (clicking it twice) to switch between ports. Mouse Emulation (above) must be enabled in order for Mouse Port Switching to work. To toggle between Mouse Wheel Port switching:

1. Invoke HSM, see page 22
2. Press **[W]**

Note: This feature is only supported by 3-key USB scroll wheel mice. The default setting is OFF.

Operation Mode Switching

GCMS1922 provides two operation modes – Extension Mode(default) and Matrix Mode. To toggle between Extension Mode and Matrix Mode:

1. Invoke HSM, see page 22
2. Press **[O] [Enter]**

This procedure is a toggle. Repeat to revert to the original setting.

N-Key Rollover Keyboard Supporting Function

To enable/disable N-Key rollover keyboard support

1. Invoke HSM, see page 22
2. Press **[K][Enter]**

This procedure is a toggle. Repeat to revert to the original setting

Mouse Crossover Switching

To enable / Disable the Crossover Switching when GCMS1922 is under the Matrix Mode

1. Invoke HSM, see page 22
2. Press and release **[Y] [Enter]**

Note:

This procedure is a toggle. Repeat to revert to the original setting.

Mouse emulation (see page 25) must be enabled for the Crossover Switching to work.

Screen Resolution Setting

To set a resolution for the Display:

1. Invoke HSM, see page 22
2. Press [L] [Resolution (e.g, 3840x2160)] [Enter].

The available resolution value can be set from 100 ~ 9999 x 100 ~ 9999

Monitor Layout Configuration

Under Matrix mode, GCMS1922 allows to set the monitor layout.

1. Invoke HSM, see page 22
2. Type in the layout using the parameters below:

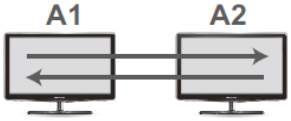
Parameter	Row	Monitor
P	A	1,2
	b	1,2

Parameter refers to the letter “P” which all commands must begin with (For example, PA12). Row refers to a group of display aligned together, each letter represents a row: A, B. Monitor refers to a display in each row: 1, 2. Enter the number in order as it appears in the layout, left-to-right, beginning with Row A. The number represents the computer connected to a port# on the GCMS1922

Scenario 1

To key in a layout, enter “P” followed by “A” and a number for each display. If you have two displays in one row, type **PA12[Enter]**. The monitor 1 and 2 are fixed on the left and right in a row monitor layout.

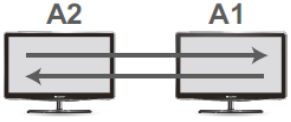
1x2 Monitor Layout



Scenario 2

To key in a layout, enter “P” followed by “A” and a number for each display. If you have two displays in one row, type **PA21[Enter]**. The monitor 1 and 2 are fixed on the right and left in a row monitor layout.

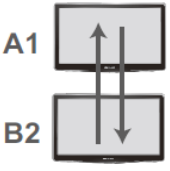
1x2 Monitor Layout



Scenario 3

To key in a layout, enter “P” followed by “A” and a number for each display. If you have two displays in each row, type **PA1B2[Enter]**. The monitor 1 and 2 are fixed on the top and bottom in a tier monitor layout.

2x1 Monitor Layout



Audio Mixer

The Audio mixer feature enables mixing up to two audio sources and output the mixed audio to the speakers. To enable / disable the audio mixer mode:

1. Invoke HSM, see page 22
2. Press **[A][O] [Enter]**

Note:

1. This procedure is a toggle. Repeat to revert to the original setting.
2. Digital audio mixing is unavailable on GCMS1922. Please use analog audio cable connections for audio mixing.

Automatic Audio Mixer

With Automatic Audio Mixer enabled, when GCMS1922 is under Matrix Mode, the audio sources are mixed automatically, and audio sources are separated when under Extension Mode. To enable the automatic audio mixer:

1. Invoke HSM, see page 22
2. Press **[A][P] [Enter]**

Manual Audio Mixer

Manual Audio Mixer will not change the Audio Mixer setting when switching between Extension Mode and Matrix Mode. To enable the manual audio mixer:

1. Invoke HSM, see page 22
2. Press **[A][R] [Enter]**

EDID

EDID Is the data that contains monitor's information and used to communicate with video source. GCMS1922's EDID selection allows to set a pre-programmed EDID for the connected monitor. To implement an EDID setting:

1. Invoke HSM, see page 22
2. Press **[V][n] [Enter]**

na	Description
1	ses the EDID of the monitor connected to PortA and B, this is the default settings.
2	Sets the EDID to FHD which is 1920 x 1080 @60Hz
3	Sets the EDID to 4K HD which is 3840 x 2160 @60Hz
4	Sets the EDID to 4K DCI which is 4096 x 2160 @60Hz

HSM (Hotkey Settings Mode) Summary Table

Function Key	Operation
[F1]	Selects the Extension Mode so that it can work under special operating systems as a standard (104 key) keyboard
[F2]	Enables Mac keyboard emulation, see page 30 for details.
[F3]	Enables Sun keyboard emulation, see page 31 for details.
[F4]	Lists current hotkey settings via text editor or word processor
[F5]	USB keyboard and mouse reset
[F6] [n][n] [Enter]	Set the keyboard language layout. [n][n] represents the language code English (US): 33 French: 08 German: 09 Japanese: 15
[F10]	Enables Windows keyboard emulation
[A][O] [Enter]	Enables / Disables the audio mixer
[A][P] [Enter]	Enable Automatic Audio Mixer
[A][R] [Enter]	Enable Manual Audio Mixer
[B]	Enables / Disables the beeper
[E]	Enables / Disables the Power on Detection feature
[H]	Toggles between default and alternative HSM invocation keys
[K][Enter]	Enables / Disables N-key Rollover feature
[L][resolution][Enter]	Set monitor resolution Resolution – enters the resolution of your monitor, the available resolution value can be set from 100~9999 x 100~9999.
[M]	Enables / Disables mouse emulation
[N]	Enables / Disables keyboard emulation
[O][Enter]	Toggle between Extension mode and Matrix mode
[P][m][n] [Enter]	Configures the physical monitor/display layout for crossover switching m = A or B refers to the row number n = 1 or 2 refers to the column number
[R][Enter]	Reset hotkey setting to default
[S]	Toggle between the default and alternative manual port selection pushbutton settings
[T]	Toggle between the default and alternative port switching keys
[U][P][G][R][A][D][E] [Enter]	Invokes firmware upgrade mode
[W]	Enables / Disables mouse wheel port switching
[X][Enter]	Enables / Disables hotkey port switching
[Y][Enter]	Enables / Disables Mouse Crossover Switching
[Esc] or [Spacer bar]	Exits setting mode

Keyboard Emulation

Mac Keyboard

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

PC Keyboard	Mac Keyboard
[Shift]	Shift
[Ctrl]	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 activation key.

Sun Keyboard

Sun Keyboard

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

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

Note: When using key combinations, press and release the first key **[Ctrl]**, then press and release the activation key.

Firmware Upgrade Utility

GCMS1922 is firmware upgradable, enabling recent firmware upgrade for added compatibilities or bug fixing. The Windows based (.exe) files is posted on www.IOGEAR.com. Please check the website for most current up to date firmware.

Before Starting Firmware Upgrade

To better perform a firmware upgrade, please connect to a computer that is not currently connected to the GCMS1922.

To set GCMS1922 in firmware upgrade mode:

1. From a computer that is not part of GCMS1922 installation, go to www.iogear.com/product/GCMS1922 to get a list of available firmware upgrade packages.
2. Choose the firmware upgrade package (usually the most recent one) to download and unzip it.
3. Disconnect the GCMS1922 from the installation and power it off.
4. Using the included USB/DisplayPort KVM cable, connect USB Type A connector to the computer, which is not part of GCMS1922 installation with unzipped firmware package.
5. From the same cable, connect the USB Type B connector to GCMS1922 Port 1 Type B port.
6. Two ways to invoke Firmware Upgrade Mode:

- Press and hold the Mode button or the Remote Port Selector button. Power on the GCMS1922 to enter the Firmware Upgrade Mode

  or

- Invoke HSM and press**[u][p][g][r][a][d][e]**

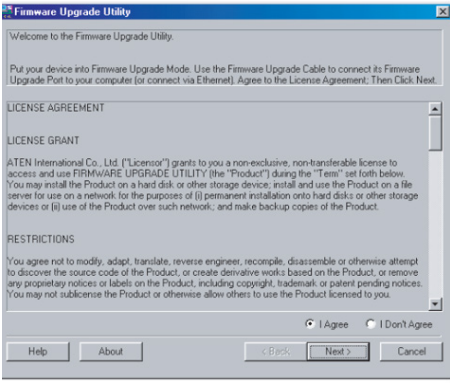
The front panel LEDs will flash together, indicating the KVM is in Firmware Upgrade Mode.

Starting Firmware Upgrade

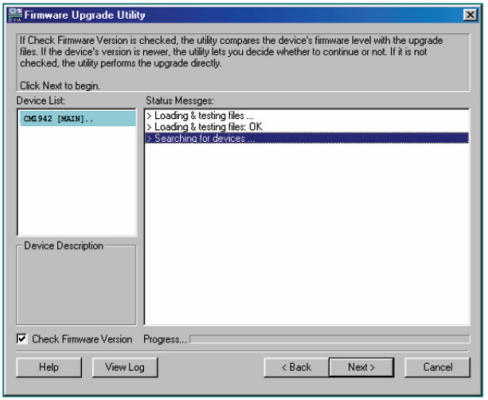
Run the downloaded Firmware Upgrade Package file – either by double clicking the file icon, or using a command line to enter the full path.

1. The Firmware Upgrade Utility window appears.

2. Read the License Agreement and click **"I Agree"** button and click **"Next"**.

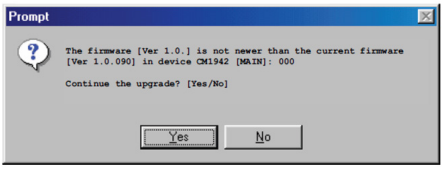


3. The Firmware Upgrade Utility main screen appears. The Utility inspects your installation. All the devices capable of being upgraded by the package are listed in the Device List panel.



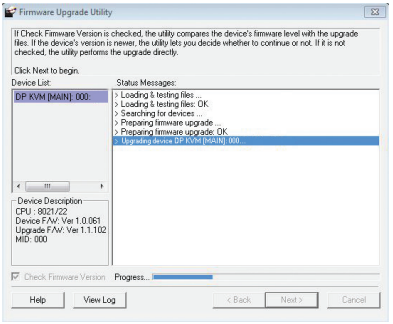
4. As you select a device from the list, the device's description appears in the Device Description panel. After you have made your device selection(s), Click **"Next"** to perform the upgrade.

5. If you enabled Check Firmware Version, the Utility compares the device's firmware level with that of the upgrade files. If the device's version is higher than the upgrade version, a dialog box below will give you the option to Continue or Cancel.

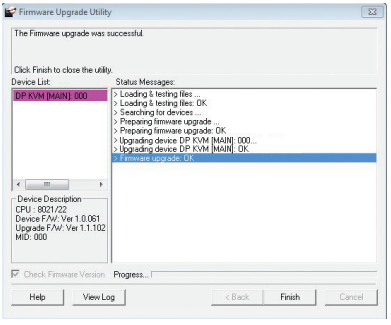


6. If you did not enable Check Firmware Version, the Utility installs the upgrade files without checking whether they are of higher level, or not.

7. As the Firmware Upgrade proceeds, a status message will appear in the Status Messages panel, and the progress toward completion is shown on the Progress bar.



8. After the upgrade has completed, a screen appears to inform you that the procedure was successful. Click **"Finish"** to close the Firmware Upgrade Utility.



9. After a successful completion, the GCMS1922 will exit the Firmware Upgrade Mode and resets itself.

Firmware Upgrade Fail

If the Upgrade Succeeded screen does not appear, this means that the upgrade failed to complete successfully. If this occurs, please follow below steps:

1. Power off the GCMS1922 by removing the power adapter
2. Invoke Firmware Upgrade Mode by holding down the Mode Selection Button or the Remote Port Selector button and power on the GCMS1922. The LEDs flash together
3. Repeat the upgrade procedure from the beginning (see **Before Starting Firmware Upgrade** at page 32)

Specifications Chart

Computer Connections	2
Port Selection	Pushbuttons, Hotkey, Mouse Wheel (mouse wheel port switching only works with 3-key USB mouse wheel in emulation mode), Remote Port selector or Mouse cursor (Under Matrix Mode and Crossover Switching is enabled)
Console Connectors	
Monitor	2 x HDMI
Keyboard	1 x USB Type A
Mouse	1 x USB Type A
Audio	2 x 3.5mm Mini Stereo Jack (Green; Front and Rear)
Microphone	2 x 3.5mm Mini Stereo Jack (Pink; Front and Rear)
CPU Connectors	
Monitor	2 x DisplayPort
Keyboard & Mouse	2 x USB 3.0 Type B
Audio	2 x 3.5mm Mini Stereo Jack (Green)
Microphone	2 x 3.5mm Mini Stereo Jack (Pink)
Connectors	
Remote Port Selector	1 x 2.5 mm Jack Female
USB	1 x USB 3.0 Type A (Blue; Front), 1 x USB 3.0 Type A (Blue; Rear)
Power	1 x DC Jack
Switches	3 x Pushbutton
Port Selection	3 x Pushbutton
LEDs	
KVM	2 x Orange
Audio	2 x Green
USB Peripherals	2 x Green
Mode	2 x Orange
Emulation	
Keyboard	USB
Mouse	USB
Video Resolution	Up to 4096 x 2160 @60 Hz
Scan Interval	1~99 seconds (5 seconds default)
Power Consumption	DC 12V: 11.58W : 97BTU
Environment	
Humidity	0~80% RH, Non-condensing
Operation Temperature	32~ 104 F (0~40 C)
Storage Temperature	-4~ 140 F (-20~ 60 C)
Housing	
Case	Metal
Dimensions	10.3x 2.9x 1.7 in. (26x 7.4x 4.2 cm)

Troubleshooting

Operation problems occur due to variety of causes. The first step in solving them is to make sure that all cables are securely attached and plugged in completely in their sockets.

In addition, updating the GCMS1922 firmware may solve problems that have been discovered and resolved since the prior version was released. If your product is not running the latest firmware version, we strongly recommend that you upgrade. See **The Firmware Upgrade Utility** for upgrade details.

Compliance Information

FEDERAL COMMUNICATIONS COMMISSION INTERFERENCE STATEMENT

This equipment has been tested and found to comply with the limits for a Class B 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.

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

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/registration

Important Product Information
Product Model _____
Serial Number _____

Contact

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

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