

Coolgear CG-31G1EA4K

Coolgear Gigabit Ethernet USB3.1 Gen 1 Adapter User Manual

Model: CG-31G1EA4K

1. INTRODUCTION

This manual provides instructions for the installation, operation, and maintenance of the Coolgear Gigabit Ethernet USB3.1 Gen 1 Adapter with 4KVrms Isolation and Mounting Kit. This device allows you to add a high-speed Gigabit Ethernet port to your computer via a USB 3.1 Gen 1 connection, offering robust network connectivity with enhanced electrical isolation for industrial and critical applications.

2. KEY FEATURES

- Compliant with USB Specification 3.1 Gen 1 (5 Gbps), backward compatible with USB 2.0 and USB 1.1.
- Adds a single RJ45 Gigabit Ethernet Port (10/100/1000M).
- Features 4KVAC electrical isolation for the Ethernet port, enhancing protection in demanding environments.
- Supports Wall Mounting Kit and Optional DIN RAIL for industrial critical applications.
- Easy installation for Windows (Plug and Go), also supports Linux and Mac OS X.
- Supports all USB Power Saving Modes.
- Complies with IEEE 802.3, 802.3u, 802.3ab, 802.1Q, and IEEE 802.3az-2010 (Energy Efficient Ethernet).
- Supports Jumbo Frames up to 9K Bytes.
- Supports Microsoft AOAC (Always On Always Connected).
- LED indicators for Ethernet status (LINK/ACT) and data transferring speed.
- Built-in IPv4/IPv6 packet Checksum Offload Engine (COE).
- Supports Suspend mode and remote wake-up, crossover detection, and auto-correction.
- Equipped with 1 Upstream USB3.1 Type-B connector with Screw Lock Mechanism.

3. PACKAGE CONTENTS

Verify that all items are present and in good condition upon opening the package:

- Coolgear Gigabit Ethernet USB3.1 Gen 1 Adapter

- Mounting Kit
- USB 3.1 Type-B to Type-A Cable
- User Manual (this document)



Figure 3.1: Contents of the Coolgear Gigabit Ethernet USB3.1 Gen 1 Adapter package, showing the adapter, mounting bracket, and USB cable.

4. SETUP AND INSTALLATION

4.1 Physical Connection

1. **Connect the USB Cable:** Insert the USB Type-B end of the provided USB 3.1 cable into the USB 3.1 Gen 1 port on the adapter. Connect the USB Type-A end to an available USB 3.1 (or 3.0/2.0) port on your computer.



Figure 4.1: USB 3.1 Gen 1 Type-B port for host connection.

2. **Connect the Ethernet Cable:** Connect a standard RJ45 Ethernet cable from your network router, switch, or wall jack to the RJ45 port on the adapter.



Figure 4.2: RJ45 Gigabit Ethernet port with LINK/ACT and SPEED LEDs.

4.2 Driver Installation

For Windows operating systems, the adapter is designed for "Plug and Go" functionality, meaning drivers typically install automatically upon connection. For Linux and Mac OS X, built-in drivers are often available, or specific drivers may be required depending on your system version. Refer to the Coolgear website for the latest driver information if automatic installation does not occur.

4.3 Mounting Kit Installation (Optional)

The included mounting kit allows for secure installation of the adapter. The adapter slides into the bracket, which can then be affixed to a surface using screws or other appropriate fasteners. This is particularly useful for industrial or fixed installations.



Figure 4.3: Adapter shown with its detachable mounting bracket.

5. OPERATION

Once connected and drivers are installed, the adapter will automatically establish a network connection. Observe the LED indicators on the RJ45 port for status:

- **LINK/ACT LED:**
 - **Solid Green:** Indicates a successful network link.
 - **Blinking Green:** Indicates network activity (data transmission).
- **SPEED LED:**
 - **Solid Amber:** Indicates a 100 Mbps connection.
 - **Solid Green:** Indicates a 1000 Mbps (Gigabit) connection.
 - **Off:** Indicates a 10 Mbps connection.
- **PWR LED:** (Located near USB port)
 - **Solid Green:** Indicates the device is powered on.



Figure 5.1: Front view of the adapter, highlighting the Ethernet port and LED indicators.

6. MAINTENANCE

The Coolgear Gigabit Ethernet USB3.1 Gen 1 Adapter is designed for durability and requires minimal maintenance. Follow these guidelines to ensure optimal performance and longevity:

- **Cleaning:** Use a soft, dry cloth to clean the exterior of the adapter. Do not use liquid cleaners or aerosols.
- **Environment:** Operate the adapter within its specified temperature and humidity ranges. Avoid exposing it to extreme temperatures, direct sunlight, or excessive moisture.
- **Connections:** Periodically check all cable connections to ensure they are secure.
- **Firmware/Drivers:** While not frequently required, occasionally check the Coolgear website for any updated drivers or firmware that may improve performance or address issues.

7. TROUBLESHOOTING

If you encounter issues with your Coolgear Gigabit Ethernet USB3.1 Gen 1 Adapter, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
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Problem	Possible Cause	Solution
No network connection / LINK/ACT LED is off.	<ul style="list-style-type: none">Loose cable connection.Incorrect or missing drivers.Network cable issue.Network port issue on router/switch.	<ul style="list-style-type: none">Ensure both USB and Ethernet cables are securely connected.Verify driver installation in Device Manager (Windows) or System Information (macOS/Linux). Reinstall if necessary.Try a different Ethernet cable.Connect to a different port on your network device.Restart your computer and network equipment.
Slow network speed / SPEED LED indicates lower speed than expected.	<ul style="list-style-type: none">Cable quality.Network device limitation.USB port limitation.	<ul style="list-style-type: none">Ensure you are using a Cat5e or Cat6 Ethernet cable for Gigabit speeds.Verify your router/switch supports Gigabit Ethernet.Connect the adapter to a USB 3.0/3.1 port on your computer for optimal performance.
Adapter not recognized by computer / PWR LED is off.	<ul style="list-style-type: none">Insufficient USB power.Faulty USB port.Damaged USB cable.	<ul style="list-style-type: none">Try connecting the adapter to a different USB port on your computer.If using a USB hub, try connecting directly to the computer.Try a different USB cable.

8. SPECIFICATIONS





Feature	Detail
Model Number	CG-31G1EA4K
Hardware Interface	USB 3.1 Gen 1 (Type-B), RJ45 Ethernet
Data Link Protocol	Gigabit Ethernet (10/100/1000 Mbps)
Data Transfer Rate	Up to 5 Gigabits Per Second (USB 3.1 Gen 1)
Ethernet Isolation	4KVrms
Supported Standards	IEEE 802.3, 802.3u, 802.3ab, 802.1Q, 802.3az-2010
Jumbo Frame Support	Up to 9K Bytes
Compatible Operating Systems	Windows 11, 10, 8.x, 7, Vista, XP; Linux; Mac OS X
Dimensions (L x W x H)	2.56in x 1.67in x 0.81in (65.0 x 42.5 x 20.5 mm)
Item Weight	2 ounces
Color	Gray


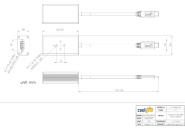
9. WARRANTY AND SUPPORT

Coolgear products are designed for reliability and performance. For specific warranty information, please refer to the warranty card included with your product or visit the official Coolgear website. For technical support, driver downloads, or further assistance, please contact Coolgear customer service through their official channels.
Coolgear Official Website: www.coolgear.com

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Related Documents - CG-31G1EA4K

	<p>Coolgear CG-31BG1EA USB 3.2 Type B Gen 1 to Gigabit Ethernet Adapter User Manual</p> <p>User manual for the Coolgear CG-31BG1EA, a USB 3.2 Type B Gen 1 to 1 Gigabit Ethernet adapter. Includes specifications, package contents, mounting instructions, and Windows installation guide.</p>
	<p>Coolgear CG-31BC1EA USB 3.2 Type C Gen 1 to 1 Gigabit Ethernet Adapter User Manual</p> <p>User manual for the Coolgear CG-31BC1EA USB 3.2 Type C Gen 1 to 1 Gigabit Ethernet Adapter. Provides details on package contents, specifications, Din-Rail mounting, wall mounting, and Windows installation.</p>
	<p>Coolgear CG-12PU31HB 12-Port USB3.1 Gen 1 Metal Hub Installation Guide</p> <p>Installation guide for the Coolgear CG-12PU31HB 12-Port USB3.1 Gen 1 Metal Hub, featuring 15KV ESD surge protection and DIN RAIL mounting. Includes setup, specifications, and support information.</p>
	<p>Coolgear CG-10PU3MGD-NT 10 Port Managed USB 3.2 Gen 1 Hub Installation Guide</p> <p>Installation guide for the Coolgear CG-10PU3MGD-NT, a 10-port managed network shareable USB 3.2 Gen 1 hub with 15KV ESD surge protection. Includes setup, connector layout, software installation, and specifications.</p>

	<p>Coolgear USBG-4NET: Fix Windows 10 & 11 Blue Screen Errors</p> <p>A step-by-step guide to resolve Blue Screen errors on Windows 10 and 11 caused by the Coolgear USBG-4NET device by adjusting program compatibility settings.</p>
	<p>Coolgear CG-1MGDU3C Single Port Managed USB-C Adapter - Technical Drawing</p> <p>Technical drawing and specifications for the Coolgear CG-1MGDU3C, a single port managed USB-C adapter, detailing dimensions, mounting holes, and connectivity.</p>