



USB 3.1 4 Port Metal Hub w/DIN Rail Clip & ESD Surge Protection

Product Manual



Coolgear, Inc.

Version 1.1

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Model Number: USBG-4U3MLR2

Revision History

| Revision | Date | Author | Comments |
|----------|------------|----------|------------|
| 1.1 | 11/14/2017 | Coolgear | New Manual |

About this document

This product manual outlines installation and features of the USBG-4U3MLR2 USB 3.1 4 Port Metal Hub w/DIN Rail Clip & ESD Surge Protection.

Scope

The scope of this manual is to give the user of the product an understanding of its use with detailed diagrams and verbiage. The manual allows the users to apply the product to their application.

Intended Audience

This product is intended for use in numerous industries including but not limited to applications such as; Automotive, Machine Equipment, Kiosk, Office, and others.

Product Support

support@coolgear.com

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1. Introduction

Coolgear USB 3.1 4 port metal industrial hub complies with USB 3.1 Gen1 standards capable of up to 5Gbps data transmission. It supports 7-48V through its 2-wire plug connector for extra power to hungry devices (power adapter sold separately). The new, redesigned Coolgear USB 3.1 Gen1 hub has the same great performance and is the best buy for your money in its series.

| | |
|------------------|---------------------------------------------------------|
| WEIGHT | 0.45 lbs |
| DIMENSIONS | 4.50”(L) x 2.26”(W) x 1.03” (H)(11.45 x 5.73 x 2.63 cm) |
| UPC | 736983900173 |
| WARRANTY | 1 year from date of purchase |
| COLOR | Black |
| DOWNSTREAM PORTS | 4 USB 3.1 Type-A Ports |
| UPSTREAM PORTS | 1 USB 3.1 Type-B Port |

1.1 Features

| | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> • TAA Compliant • Compliant with USB3.1 Gen 1 Specifications • Rigid Wall and DIN RAIL Mountable Metal Case • Provides 4 (USB-A) Downstream USB3.1 Facing Ports • Supports 5Gbps (Super-speed), 480Mbps (High-speed), 12Mbps Full-speed) and 1.5Mbps (Low-speed) Speed | <ul style="list-style-type: none"> • Supports 15KV ESD Surge Protection • Multi Transaction Translators (TT) per Hub • Supports USB Battery Charging: CDP and DCP modes • Accepts 7-48V additional power through the 2-wire plug • Supports DIN RAIL Mounting Kit • BC 1.2 compliant for normal charging |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

1.2 Connector Layout

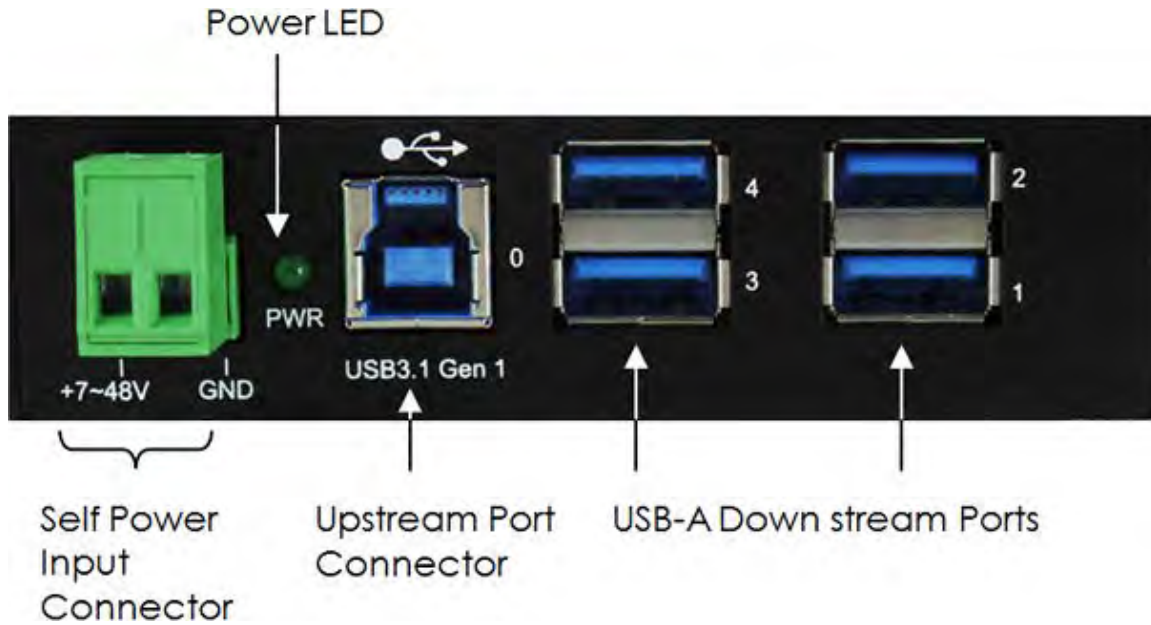


Figure 1

| USB 3.1 Upstream Port | USB 3.0 Downstream Port | Self Power Input |
|-------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type-B female connector from upstream USB 3.1 port. It is connected from host or another USB 3.0 hub. | There are 4 Type-A female connectors for USB 3.1, they support USB 2.0 or USB 1.1 legacy devices. | This 2-pin (one pin for positive voltage and the other pin is GND) terminal block connector is used to connect strong power to self-power the hub; the voltage can be in the range from +7V to 48VDC. |



Figure 2

1.3 Hardware Installation

1. **Use static electricity discharge precautions.** Remove possible static discharge potential from any objects that the hub may come in contact with before installation. This can be accomplished by touching a bare metal chassis rail after you have turned off the power.
2. **Apply DC power (range from +7V to 48V) to the 2-pin Terminal Block Connector.** The hub is bus-powered by the upstream USB port (USB-B connector), The terminal block connector is to add power to ensure enough power for the 4 downstream ports.
3. **Connecting USB Host cables:** The host cable could be either a standard B-to-A USB 3.1 cable. Please connect the Type-A end connector of the cable to your PC's host USB 3.1 port, then connect the type-B end connector to the hub. Since the USB hub is plug-and-play, you don't have to turn off your host computer when installing the hub.
4. **Connect the USB Devices to the downstream ports of this hub.**
5. **Mount your hub on the wall or DIN RAIL if required.**



Figure 3

1.4 Checking the Hub Installation

To check the USB hub installation in Windows device manager, please follow the following steps:

1. Click **Start**
2. Click Control Panel
3. Click **System**
4. Click **Device Manager** button
5. Double Click **Universal Serial Bus Controller**
6. Double click **Generic USB Hub**, the message will show that this device is working properly

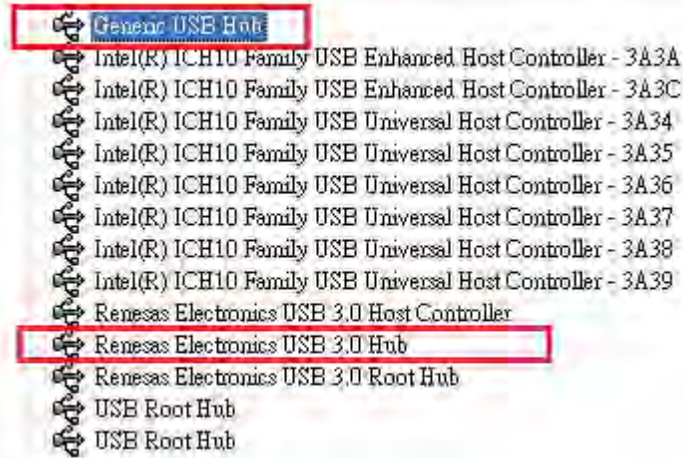


Figure 4

1.5 Environmental Specifications

| Specification | Data |
|------------------------|----------------------|
| Operating Temperature: | 0-55°C (32 to 131°F) |
| Operating Humidity: | 5 to 95% RH |

2. Notes, Tips, Warnings, & Safety

Note

In some cases, you will see an error message said that the USB Hub caused the USB bus power over current limit, please ignore this message since the hub is hot plug and its power capacitor will cause a very short period of current. It will NOT affect your USB function.

Tip

N/A

Warning

Please make sure the polarity of the input power should be correctly matched with the terminal block pins to function properly.

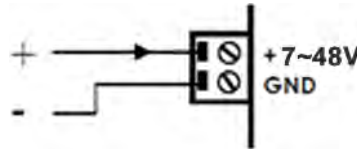


Figure 5

Safety

- Read the entire Product Manual before implementing this product for your application. This manual contains important information about electrical connections that must be followed for safe and proper operation.
- Inspect the product closely for visual defects before putting it to use.
- Keep away from areas where moisture builds, this product contains electrical components that can be damaged by moisture build up, this can adversely affect your equipment connected to it.
- Do not disassemble the product. Handling the product's internal components can expose it to ESD (Electro-Static Discharge) hazards that can affect the function of the device.
- If this product is not functioning properly, email our support team at support@coolgear.com.

3. Supporting References

| Document | Link |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Website Product Page | https://www.coolgear.com/product/usb-3-1-4-port-metal-hub-wdin-rail-clip-esd-surge-protection |

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