



16-Port USB 3.1 Gen1 Metal Hub w/15KV ESD Surge Protection and DIN Rail Mounting Kit

Product Manual



Coolgear, Inc.

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Model Number: CG-16PU31H

Revision History

Revision	Date	Author	Comments
1.1	02/22/2018	Coolgear	New Manual

About this document

This product manual outlines installation and features of the CG-16PU31H 16-Port USB 3.1 Gen1 Metal Hub w/15KV ESD Surge Protection and DIN Rail Mounting Kit.

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; Equipment Rack, Machine Equipment, Kiosk, Office, and others.

Product Support

support@coolgear.com

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1. Introduction

Unique 16-Port USB 3.1 Gen1 hub is a compact solution with a big purpose. Its uniquely designed shell expands your USB port usage by 16 from your USB 3.1 Gen1 host port. This is a self powered hub uses a +7~24V DC 2-pin terminal block power connector from an external power adapter (sold separately). The 16-Port USB 3.1 hub supports up to 5Gbps of data transfer and is backward compatible with legacy USB 2.0/1.1/1.0 speeds. It can be DIN Rail or horizontally surface mounted to secure a stationary mount.

WEIGHT	0.88 lbs
DIMENSIONS	4.43”(L 5.22” with ears) x 2.55”(W) x 1.91”(H)
UPC	045079159426
WARRANTY	1 year from date of purchase
COLOR	Black
DOWNSTREAM PORTS	16 USB 3.1 Type-A Female Ports
UPSTREAM PORTS	1 USB 3.1 Type-B Female 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 • 1 USB-B Upstream and 16 USB-A Downstream USB 3.1 Gen1 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 • Supports DIN RAIL Mounting Kit and Horizontal Mounting Bracket • 1.5A per USB port with thermal shutdown at 2A per port • BC 1.2 compliant for normal charging
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1.2 Connector Layout

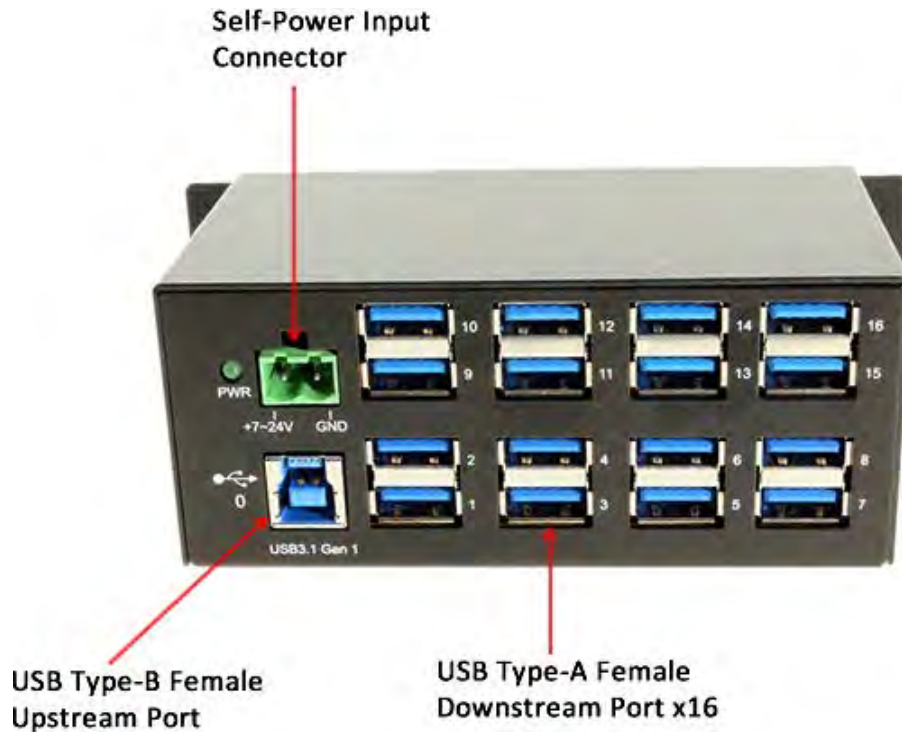


Figure 1

USB 3.1 Upstream Port	USB 3.0 Downstream Port	Self Power Input
<p>Type-B female connector from upstream USB 3.1 port. It is connected from host or another USB 3.0 hub.</p>	<p>There are 16 Type-A female connectors for USB 3.1, they also support USB 2.0 or USB 1.1 legacy devices.</p>	<p>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 24VDC.</p>

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 24V) 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 16 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 a flat surface or DIN RAIL if required.**

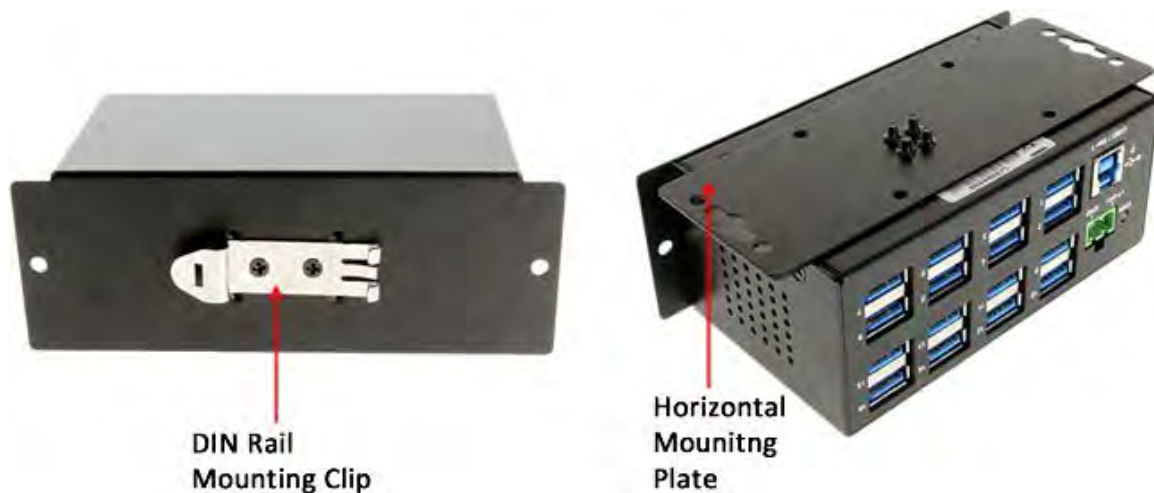


Figure 2

1.4 Checking the Hub Installation

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

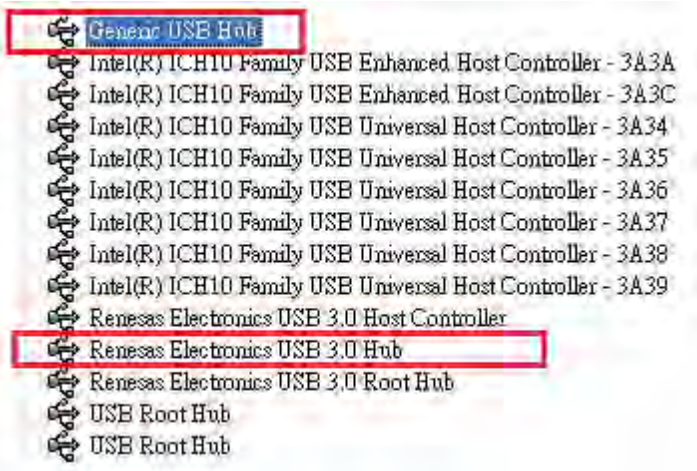
<ol style="list-style-type: none"> 1. Click Start 2. Click Control Panel 3. Click System 4. Click Device Manager button 5. Double Click Universal Serial Bus Controller 6. Double click Generic USB Hub, the message will show that this device is working properly 	
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Figure 3

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.

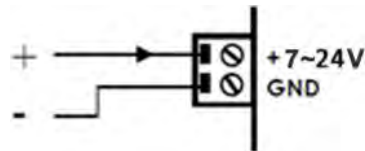


Figure 4

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/16-port-usb3-gen1-metal-hub-surge-protection-din-rail

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