USB C Hub 4 Port USB 3.1 Gen1 SuperSpeed Type-B Upstream

Product Manual

Coolgear, Inc.
Version 1.1
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Model Number: CG-4PU31C1B1

Revision History

Revision	Date	Author	Comments
1.0	10/9/2015	Coolgear	New Manual

About this document

This product manual outlines installation and features of the CG-4PU31C1B1 USB C Hub 4 Port USB 3.1 Gen1 SuperSpeed Type-B Upstream.

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

USB C hub provides 4 USB 3.1 Gen1 ports to include 3 USB-A ports and 1 USB C port. An ideal mini hub for super-speed data transfer in industrial environments! The USB C hub is a generation 1 hub of USB 3.1 supporting Super-Speed 5Gbps data transmission speeds and the reversible type-C port. This hub is self powered with a 2-pin terminal block connector to supply power input of +7 ~ 48V DC sold separately.

WEIGHT	.937 lbs
DIMENSIONS	4.50”(L) x 2.26”(W) x 1.03”(H) (11.45 x 5.73 x 2.63 cm)
UPC	045079158429
WARRANTY	1 year from date of purchase
COLOR	Black
DOWNSTREAM PORTS	3 USB 3.1 Type-A Ports / 1 USB 3.1 Type-C Port
UPSTREAM PORTS	1 USB 3.1 Type-B Port

1.1 Features

• Compliant with USB 3.1 Gen 1 Specifications • Ruggedly constructed DIN Rail mountable metal chassis • Can be wall mounted via attached flange • Provides 4 (1 USB-C and 3 USB-A) downstream facing USB 3.1 ports	• Uses included USB 3.1 A to B cable for upstream data • Supports 5Gbps (super-speed), 480Mbps (High-Speed), 12Mbps (Full-Speed), and 1.5Mbps (low-speed) speeds • Supports 15KV ESD Surge Protection • Multi Transaction translators (TT) per hub • Supports USB battery charging: CDP and DCP modes

1.2 Connector Layout

Figure 1

Power LED: Indicates the hub is powered either by Bus-Power or Self-Power.

Self Power Input Connector: This 2-pin (one pin is + voltage and the other is GND) terminal block connector is used to connect a wide range power source to self-power the hub. The voltage can be in the range from +7V to 48V DC.

USB-B Upstream Port	USB C Downstream Port	USB-A Downstream Ports
The Type-B connector from upstream USB 3.1 port is connected from the host or another USB 3.1 Hub's downstream facing port.	The small downstream facing port connector is a 24-pin fully reversible-plug connector for USB devices and cabling.	There are 3 USB-A connectors with the USB 3.1 standard, backward compatible with legacy USB 2.0/1.1 devices.

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 self-powered by the upstream USB port (USB-B connector), This 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 or B to C USB 3.1 cable (depends on the host port's connector type). Please connect the Type-A end connector of the cable to your PC's host USB 3.0 port, then insert the type-B end connector to this 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 2

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 3

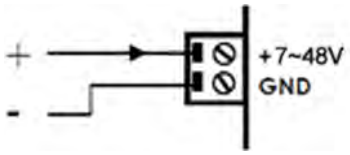
1.5 Environmental Specifications

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

2. Notes, Tips, and Warnings

Note	In some cases, during hardware installation, you will see an error message said that the USB Hub caused the USB bus power over the 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. Reference Section 1.2 Hardware Installation.

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/usb-c-hub-4-port-usb-3-1-gen1-superspeed-type-b-upstream