USB-C 7 Port Hub with 2 USB-C and 5 USB-A – DIN Rail and Surge Protection

Product Manual

Revision History

Revision	Date	Author	Comments
1.0	3/20/2017	Coolgear	Original format
1.1	10/11/2017	Coolgear	New Manual Format

About this document

This product manual outlines installation and features of the CG-7PU312C USB-C 7 Port Hub with 2 USB-C and 5 USB-A – DIN Rail and 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

USB 3.1 USB-C hub incorporates 5 USB Type-A ports and 2 USB-C reversible ports, a great hub choice for applications that need 5Gbps data speeds and multiple mounting options. USB-C hub is backward compatible with USB 2.0/1.1 using its RISC-like USB controller, it provides a unique self-power mode to work with wide range (+7 ~ 48V DC) input DC power from its terminal block

WEIGHT	1.275 lbs
DIMENSIONS	5.23"(L) x 2.42"(W) x 1.43"(H) (13.30 x 6.15 x 3.63 cm)
UPC	045079158764
WARRANTY	1 year from date of purchase
COLOR	Black
DOWNSTREAM PORTS	7 USB 3.1 (2 Type-C and 5 Type-A)
UPSTREAM PORTS	1 USB 3.1 Type-B Port

1.1 Features

- Compliant with USB 3.1 Gen 1 Specifications
- Provides 1 USB3.1 Gen 1 Upstream Port with USB-C connector
- Provides 7 USB3.1 Gen 1 Downstream Facing Ports (with 2 USB-C and 5 USB-A Connectors)
- Full-Featured USB-C Port Enables Reversible Plug Orientation and Cable Direction
- Includes a Mounting bracket for flat surface mounting i.e. under desk, on walls or tech bench
- Supports Wide Range Input (+7~48V DC) Self-power Mode from the Terminal Blocks (power adapter sold separately)
- Supports 15KV ESD Surge Protection for Each Port.
- Supports a 2-pin Terminal Block Connector for external power input from AC adapter
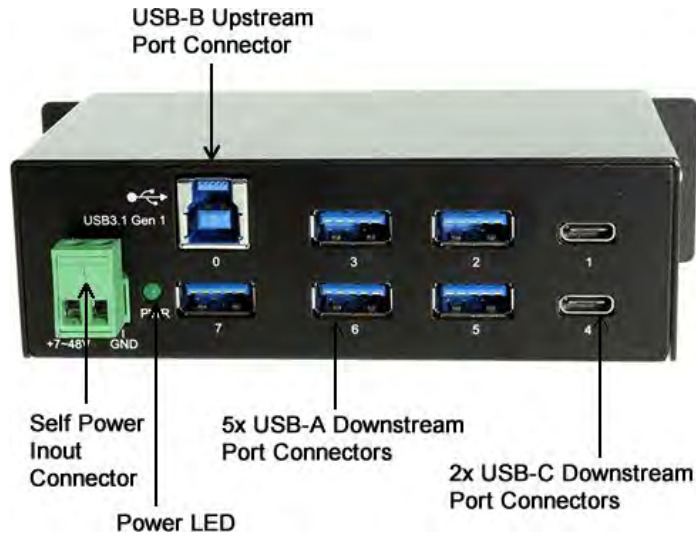
1.2   Connector Layout

Figure 1

Power LED: Turns on and indicates the hub is powered by either Bus Power or Self Power.

Self Power Input Connector: The 2-Pin (one plus voltage and the other GND) terminal blocks are used to connect 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 Port
USB-B connector from upstream USB 3.1 port. It is connected from host or another USB 3.1 hub's downstream facing ports.	The two small 24-pin USB-C connectors are fully reversible-plug connectors for USB devices and USB cabling.	There are 5 USB-A connectors for standard USB 3.1 and 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 bus powered by the upstream USB port (USB-B connector), This terminal block connector is to add power to ensure enough power for the 7 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's port connector type). Please connect the Type-A (or type-C) end connector of the cable to your PC's host port, and 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.** Mounting options are pictured in figure 2 above.

1.4 Checking the Hub Installation

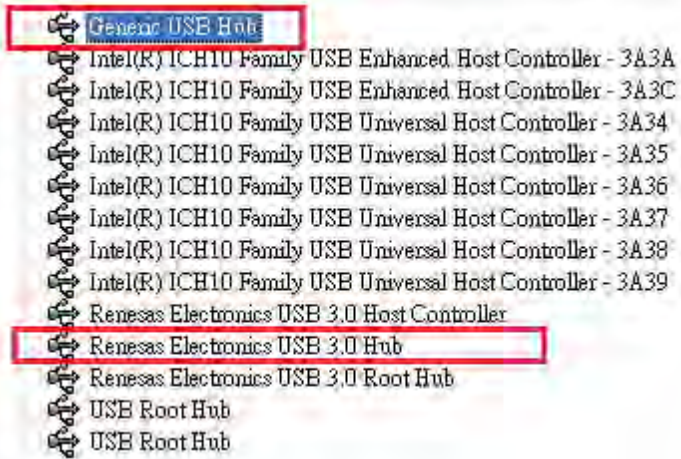To check the USB hub installation in Windows device manager, please follow the following steps:

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 2

1.5 Environmental Specifications

Specification	Data
Operating Temperature:	0-70°C (32 to 158°F)
Operating Humidity:	5 to 95% RH

2. Notes, Tips, Warnings, and Safety

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

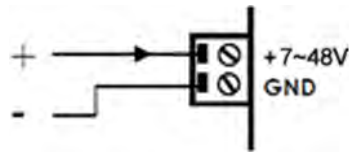| Warning	Please make sure the polarity of the input power should be correctly matched with the terminal block pins to function properly. Figure 3

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-7-port-hub-2x-type-c-5x-type-din-rail-surge-protection