



# 10 & 20 Port USB-C 3.2 Gen 1 Industrial Power Delivery Charging Hubs

w/ ESD Surge Protection & Port Status LEDs

Model Number: *CG-10XU3CPD / CG-20XU3CPD*

## Product Manual

Coolgear, Inc.

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## Revision History

Revision	Date	Comments
1.0	2024-07-16	First Release

## 1. Introduction

Thank you for purchasing this 10 or 20 port USB 3.2 Gen 1 Industrial Power Delivery Charging Hub. Housed in a rugged steel chassis, these charging hubs are perfect for installations in schools, offices, labs, warehouses, and other industrial applications.

### Features:

- ✓ Supports iOS and Android devices, as well as MacBook Air, MacBook Pro, and Chromebook, among others.
- ✓ Supports USB PD 2.0 / USB PD 3.0 (PPS) / QC 2.0 / QC 3.0 / USB Battery Charging Spec 1.2 in Sync & Charge modes.
- ✓ CG-10XU3CPD: Enables delivery of output current up to 27W per port; supports 5V 3A / 9V 3A / 12V 2.25A / 15V 1.8A in either Sync or Charge mode on each port.
- ✓ CG-20XU3CPD: Each port can deliver up to 27W, supporting 5V 3A, 9V 3A, 12V 2.25A, and 15V 1.8A in both Sync and Charge modes.
- ✓ Supports USB PD 3.0 (PPS) 3.3 ~ 5.9V 3A / 3.3 ~ 11V 2.25A in either SYNC or Charge mode on each port.
- ✓ The hub will shut down in 60 seconds in Green Energy mode (when the button is pressed ON) if it idles without connected devices. Manually turn on the power switch either for a single unit or cascaded connection to start charging again.
- ✓ Supports connection of up to 10 or 20 USB 3.2 Gen 1 devices (CG-10XU3CPD) or up to 20 or 40 devices (CG-20XU3CPD) by using the cascade port to link additional units.
- ✓ Allows Sync/Charge mode switching by manually connecting or disconnecting the host port.
- ✓ Activates the Green Energy function to automatically shut down the hub within 5 seconds when all devices are fully charged in Charge mode.
- ✓ Supports Over Current Protection and Short Circuit Protection on each port; enables the specific LED to display Red blinking, meanwhile, cutting off its output power of that port.
- ✓ Supports Over Temperature Protection on each port; enables the specific LED to display green blinking, meanwhile, cutting off output power of that port.
- ✓ Supports  $\pm 15\text{kV}$  (air),  $\pm 8\text{kV}$  (contact) ESD protection on each port.
- ✓ Supports 40A (5/50ns) & Peak Pulse Power 360W (8/20 us) Surge and Transient spikes protection on each port.
- ✓ The rear fan specs: SUNON Vapo DC Fan; Life Expectancy: 60,000 hours.
- ✓ Enables automatic start/cut-off of the fans according to temperature settings.

## 2. Specifications

Model No.		USB-C1030PD	USB-C2030PD
USB Specification		USB 3.2 Gen1 / 2.0 / 1.1 compliant	
Data Transfer Rate		1.5M / 12M / 480M / 5Gbps	
Current per Port		5V 3A / 9V 3A / 12V 2.25A / 15V 1.8A max. (27W)	
Charging Specification	SYNC Mode	USB PD 2.0 / USB PD 3.0 (PPS) / QC 2.0 / QC 3.0 / USB Battery Charging Spec 1.2	
	Charge Mode		
Connector	Host	USB Type C Female	
	Downstream	USB Type C Female x 10	USB Type C Female x 20
	Cascade	USB Type C Female	
Power Supply		DC19V 15.75A (300W)	DC19V 15.75A (300W) x 2
Green Energy		Push Button Switch	
LED	Sync Mode	Orange Color x 10	Orange Color x 20
	Charge Mode	Charging in progress: Red Color x 10	Charging in progress: Red Color x 20
		Disconnected or Fully charged: Green Color x 10	Disconnected or Fully charged: Green Color x 20
	OCP, SCP	Red blinking x 10	Red blinking x 20
	OTP	Green blinking x 10	Green blinking x 20
Environmental	Operating Temperature	0 ~ 40°C	
	Storage Temperature	0 ~ 60°C	
	Humidity	0-80% RH, Non-condensing	
Cooling Fan		SUNON Vapo DC Fan x 2	
Housing		Metal	
Dimension (L x W x H)		268 x 102 x 40 mm	

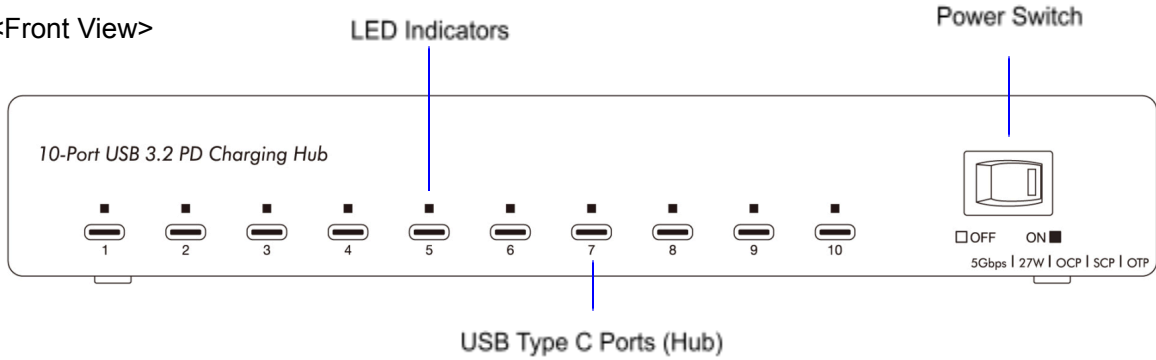
### 2.1 Cautions

1. End users may extend another unit of USB 3.2 Gen1 10 / 20-Port charging hub. (It allows sync or charging maximum up to 20 / 40 USB devices simultaneously.)
2. The specific cable for iPad, tablet isn't included in the package accessory. Please check with your distributor regarding the use of an appropriate cable.

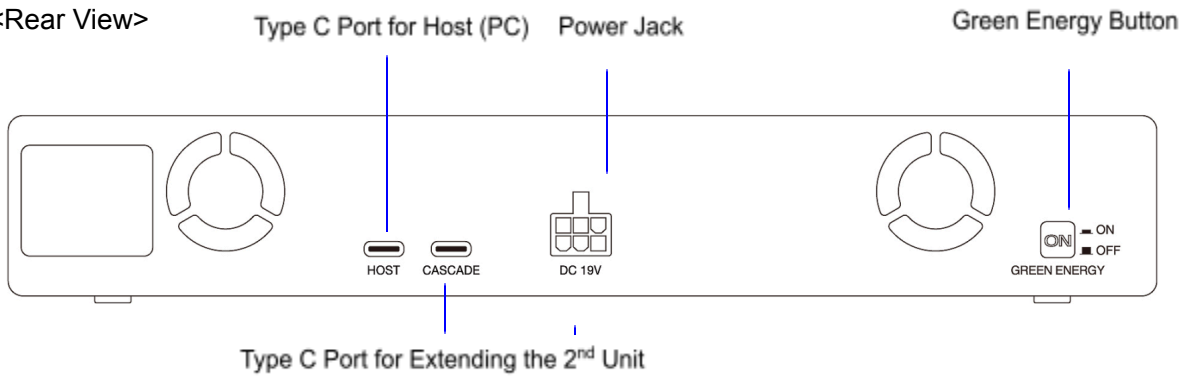
### 3. Connector Layouts

#### 10-Port Charging Hub | CG-10XU3CPD

<Front View>

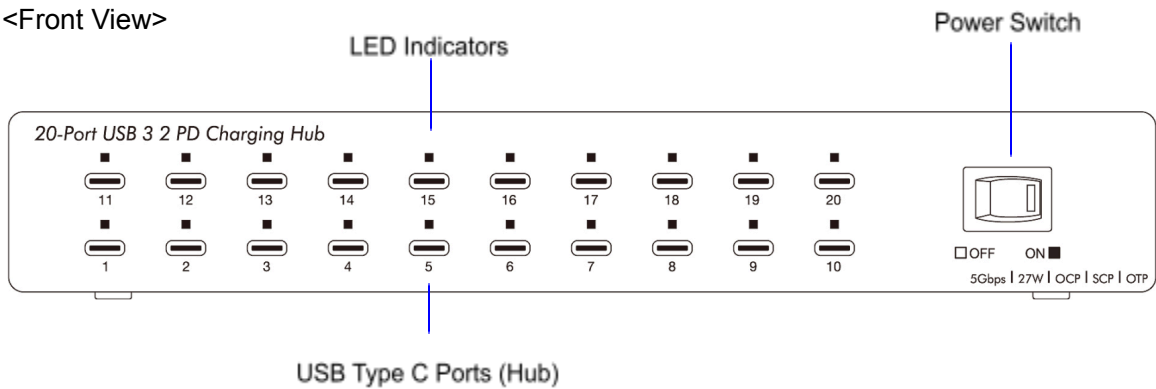


<Rear View>

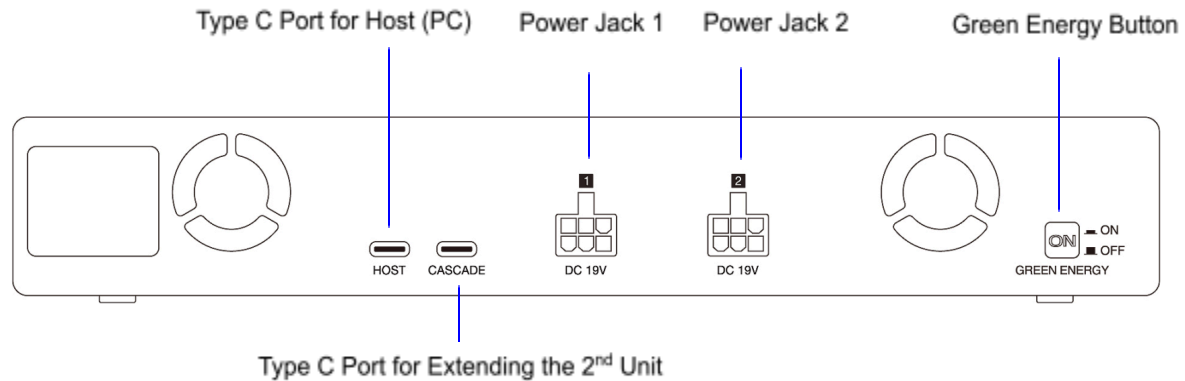


#### 20-Port Charging hub

<Front View>



<Rear View>

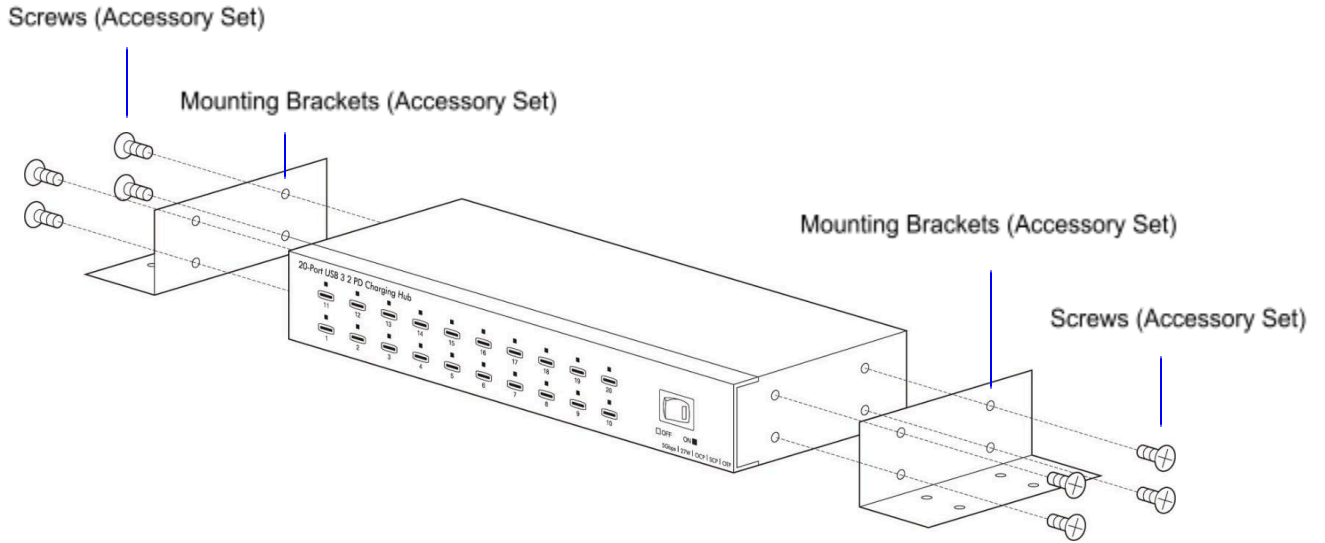


1. **USB Ports** - Allows connecting iOS, Android devices and MacBook Air, MacBook Pro or Chromebook etc.
  - Beware that this unit does not require a host computer connected to the hub for it to charge compatible devices.
  - This unit does not contain accessory set of cables for iPad, tablet. Please check with your distributor regarding of using appropriate cable.
2. **LED Indicators**
  - Fully charged or devices disconnected: Green LED illuminates
  - The ports of charging in progress: Red LED illuminates
  - Syncing: Orange LED illuminates
3. **Power switch**
  - User may switch power to on / off.
4. **Power jack**
  - To use with power adaptor provided.
5. **USB port for extending the 2<sup>nd</sup> unit**
  - It is available to connect with another unit for extending purpose.
6. **USB port for host (PC)**
  - It is available to connect with host computer by USB cable.
7. **Green Energy button**
  - It is available to automatically shutdown upon fully charged.

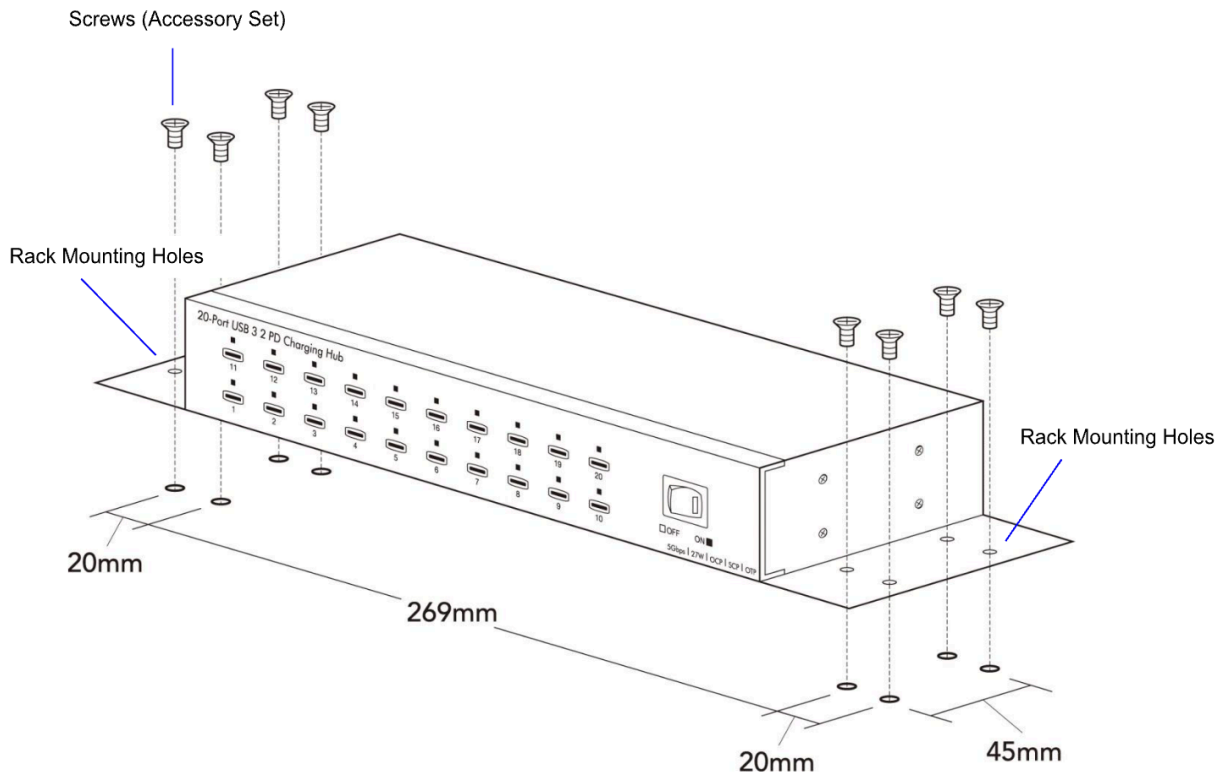
## 4. Rack Mounting

To install, attach the mounting brackets to the unit's side panels (one on each side) and secure them with the screws provided.

- (1) Use the mounting brackets and screws onto rack.



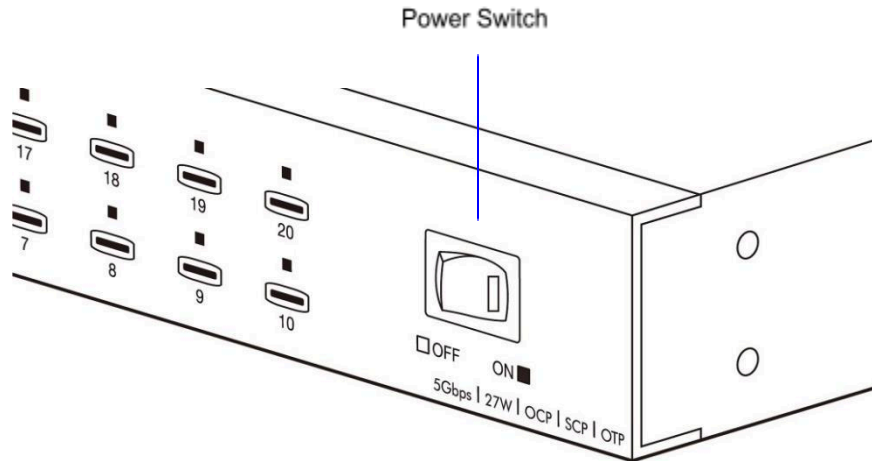
- (2) User may install on the applicable cabinet, rack environments such as a cage or trolley cart.



## 5. Connection

(1) To turn off the power switch.

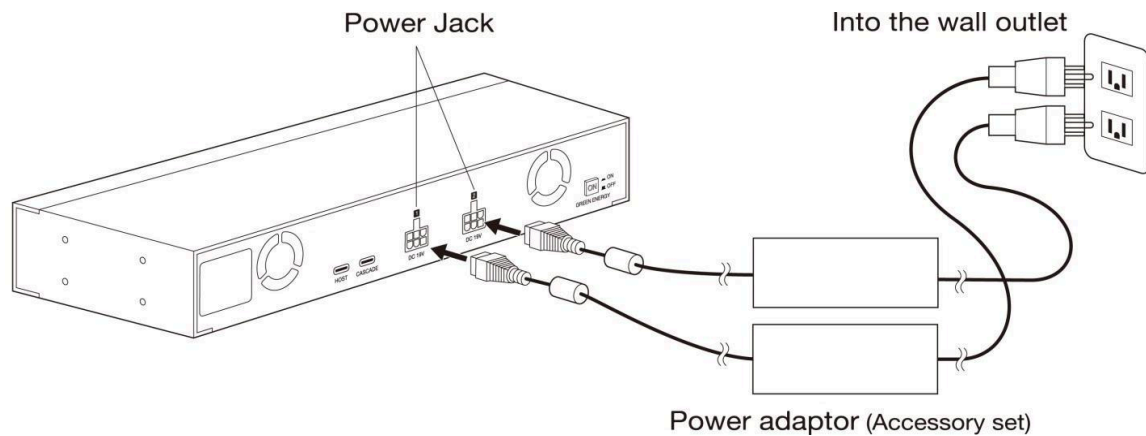
<Front Panel>



(1) Plug the power adaptor to the unit's power jack.

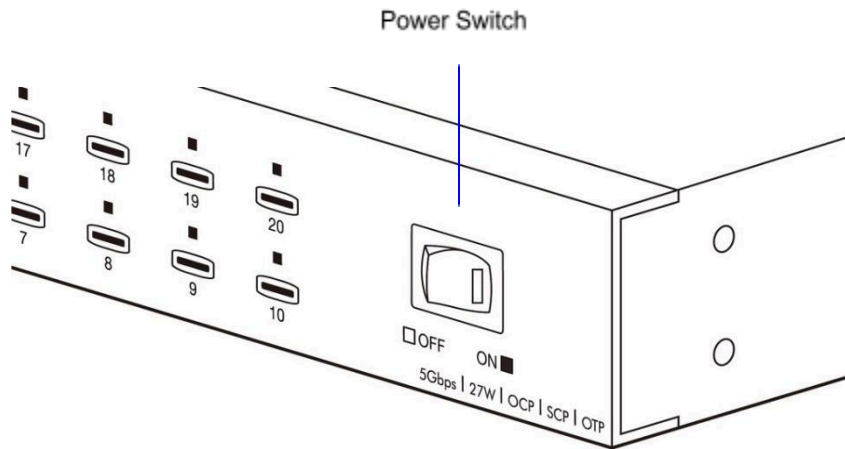
(2) Put the plug of power adaptor into the wall outlet.

<Rear Panel>



(1) Turn on the power switch.

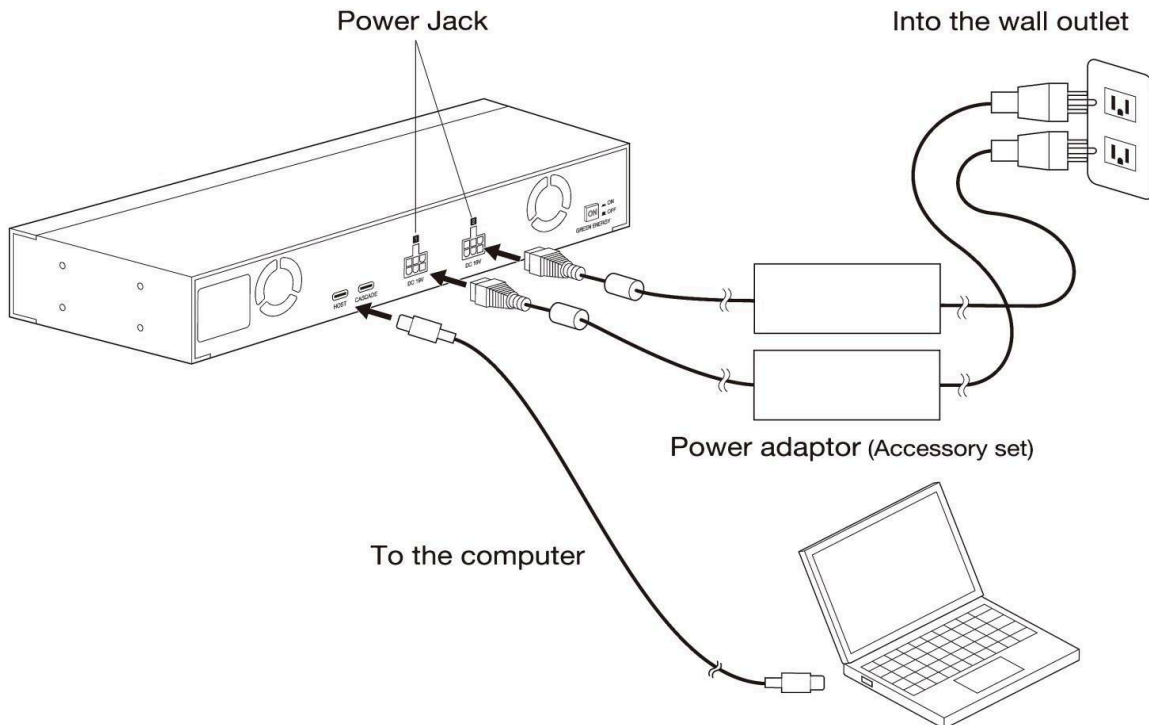
<Front Panel>



(2) Using the USB 3.2 Gen1 Type C male to male cable provided and connects the USB Type C end on the unit.

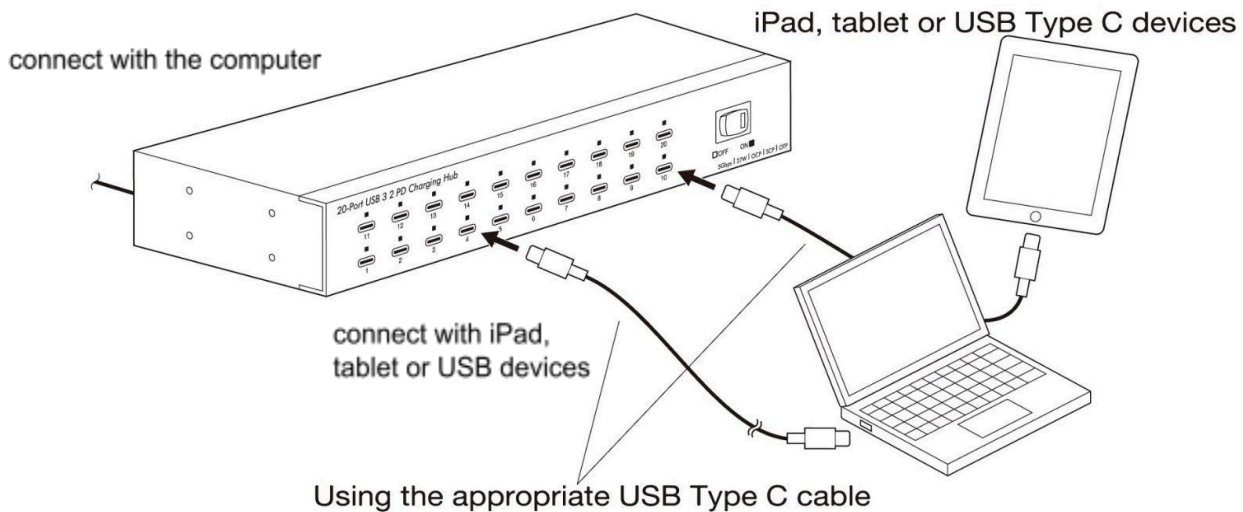
(3) Using the USB 3.2 Gen1 Type C male to male cable end and connects to your host computer.

<Rear Panel>



(4) To use USB cable and connect with iPad, tablet or USB Type C devices to the USB ports (Front Panel).





## 6. Charging & Syncing

Please follow below ways for charging or syncing USB Type C devices.

(1) Follows the step of connection with host computer, and connects host computer with the unit.

- This unit does not contain accessory set of cables for iPad, tablet. Please check with your distributor regarding of using appropriate cable.

(2) Connect your USB Type C devices to the USB Type C ports on the hub.

- **Sync mode –**
  - As soon as the Type C Charging hub connects to a computer, turn the power on; the Type C charging hub may charge and sync at a time either at single unit or cascade connecting.
  - The Charging hub can be used with iTunes & Apple Configurator for synchronization and management of iPads and other iOS devices. For this and any other application (on Windows, Linux, etc.) the charging hub acts as a USB hub. While these instructions are specific to iPads, virtually the same steps can be used for iPhones and iPod Touch devices.
- **Charge Mode** - Allows connecting iOS, Android devices and MacBook Air, MacBook Pro or Chromebook etc.
- **Charge/Sync mode switching** - While the Type C Charging hub disconnects the computer, it will switch function to Charge mode. Re-connect the computer and it will switch function to Sync mode again either at single unit or cascade connecting.
- Re-start the hub on cascade connections – If the 2 hubs are cascade connecting, you must turn their power switches on for the 2 hubs. Once the 1<sup>st</sup> hub is disconnected to the computer, the 2<sup>nd</sup> hub will switch to Charge mode and work on same function.
- On the contrary; once the 1<sup>st</sup> hub is connected to the computer again, the 2<sup>nd</sup> hub will re-start and switch to Sync mode, and work on same function. (Make sure all their power switches of the 2 hubs are turned at 'ON')

### (3) The Green Energy function

When charging is at Charge mode; the Type C charging hub designed with the Green Energy function (push button at the rear panel) may cut off the power when all the charging is finished.

- Green energy ON:
  - Button's green LED illuminating.
  - This function has no any effect in Sync mode.
  - When all devices are fully charged in 5 seconds, the Type C charging hub will shut down automatically. You may manually turn on the power switch or re-connect to the computer and start charging again either at single unit or cascade connecting.
  - If no device is connected, the charging hub will automatically shut down after 60 seconds. You can manually switch the power switch or reconnect the computer to start it. Please make sure the power switch is in the ON position.
- Green energy OFF - Button's green LED lights off. When all devices are fully charged, the hub still keeps operating; and the port LEDs keep green illuminating. Once it senses the device's battery consumed, the hub starts recharging.

**Please note that the charging hub only serves as a pathway for communication between your devices and the computer. Actual management and synchronization is handled by software or apps independent of this charging hub.**

- **[ For host computer configuring iTunes ]**
  - Please create a library folder on host computer for synchronizing and transfers data to iPad.
  - Recommends automatic updates in your iTunes preferences (to avoid interference with automatic syncing). Please check for updates manually to keep your software up to date.
- **[ For iPad, tablet configuring ]**
  - Ensure each iPad, tablet has been charged completely at first if the objective iPad, tablet is new goods.
  - Please use the unit to synchronize iPad, tablet one after another, and configure at same way. (Login name, ID, the data you want to synchronize etc.)
  - The user may adjust the brightness of screen when you are using the unit to synchronize iPad.
  - When the user may be requested by iTunes to configure manually, you will have to copy the configuration manually for each iPad.
- **[ For host computer connection & sync ]**
  - Connect iPad, tablet to the USB Type C ports of front panel if each iPad, tablet is configured completely.
  - This unit does not contain accessory set of cables for iPad, tablet. It is especially important to use appropriate cables (USB Type C to device-specific connector) provided by the device manufacturer.
  - Get started synchronizing automatically once you connect the unit.
  - It may take a little while for this unit to recognize and sync. Please do not stop by the way once the unit starts synchronizing.
- **[ For iOS update ]**
  - User may not perform the iPad update when iPad is connected. You must update iOS on iPad one after another.

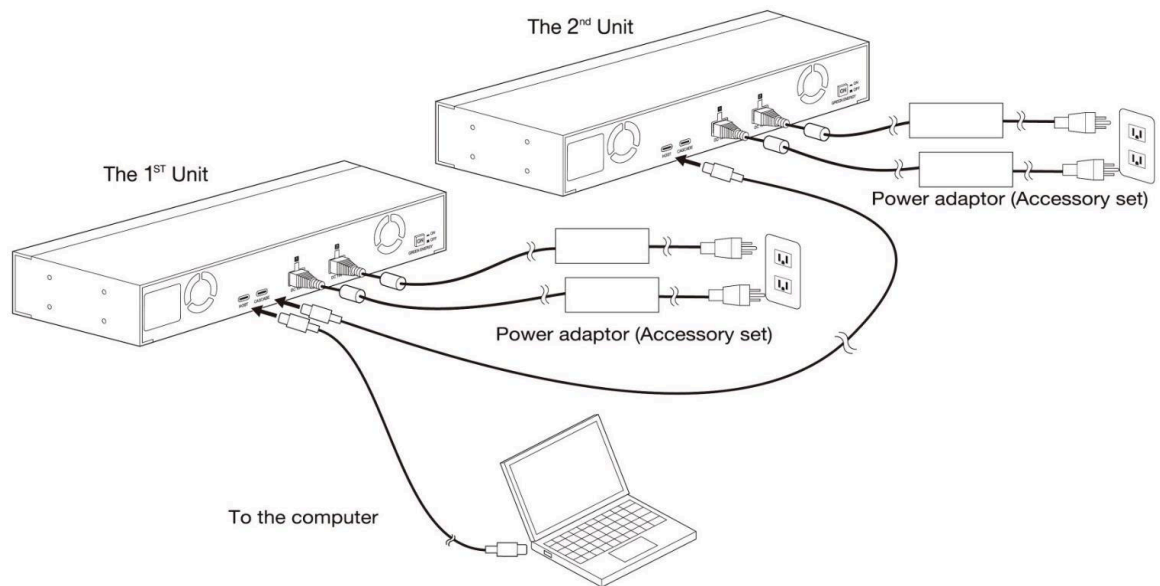
## 7. Daisy-Chain (Cascade) Connection

The 10 / 20-Port Type C charging hub can extend another unit for Daisy-chain (Cascade) connection, the 2<sup>nd</sup> unit can sync simultaneously as well.

- Maximum 2 units can be connected. (It allows connecting or charging maximum up to 20 / 40 USB Type C devices simultaneously.)
- If user connects with two units, all devices of the 2<sup>nd</sup> unit may not be detected by some computers which have built in USB 3.2 Gen1 or higher spec. hub.

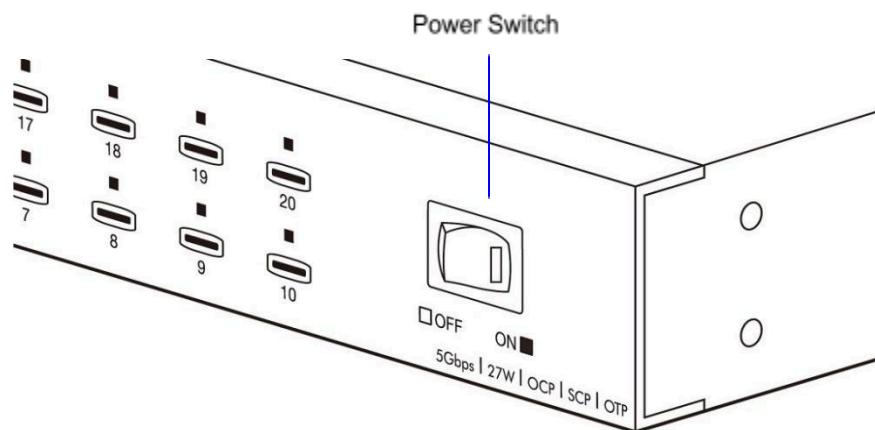
(1) Follows the step of connection with host computer, and connects host computer with the 1<sup>st</sup> unit.

<Rear Panel>



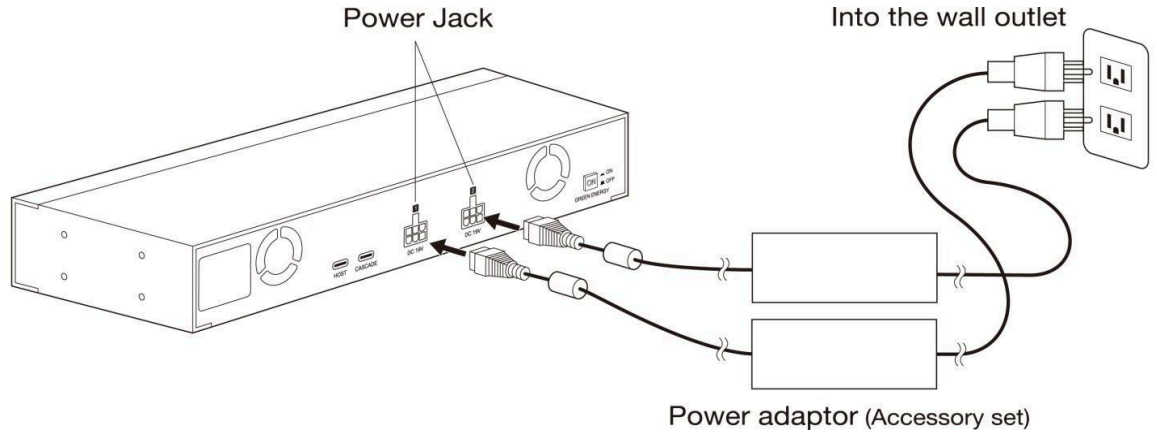
(2) Turn off the power switch of the 2<sup>nd</sup> unit.

<Front panel>



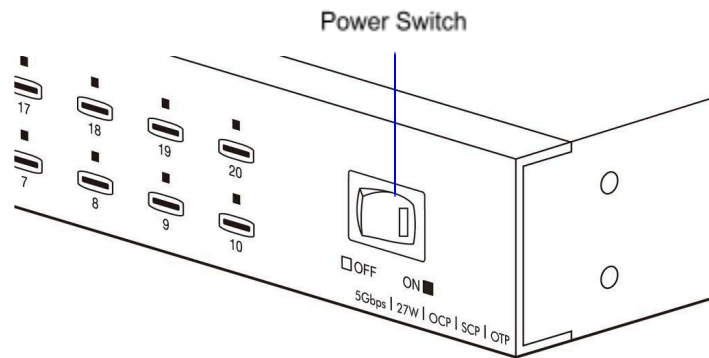
- (3) Plug the power adaptor to the power jack of the 2<sup>nd</sup> unit.
- (4) Put the plug of power adaptor into the wall outlet.

<Rear Panel>

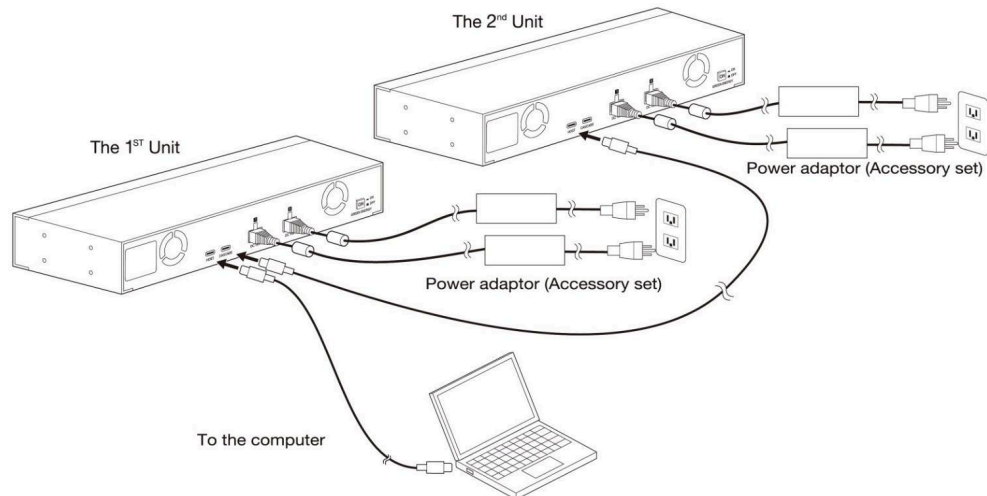


- (5) Turn on the power switch of the 2<sup>nd</sup> unit.

<Front Panel>



- (6) Use the USB Type C cable provided and connects both USB Type C ports of the 1<sup>st</sup> and the 2<sup>nd</sup> units.



## 8. Additional Information

The 10 / 20-Port Type C Charging Hub may start/cut off the fans automatically when the unit temperature goes higher/lower limits. (Not recommend putting the unit at places of high temperature such as computer facilities, boiler/steam room, glass workshop, casting work, kiln plants etc.)

- If the temperature of the connection port exceeds the default, the over-temp protection will be activated and the output current of the port will be cut off. At the meantime, the Green LED will be blinking.
- If the connection port activates over-current or short-circuit protection, the output current of the port will be cut off. At the meantime, the Red LED will be blinking.
- If over-temp protection / over-current protection or short-circuit protection is activated, after the problem is eliminated, you can switch the power ON/OFF again or plug and unplug the Host Cable to return to the default settings

If you still cannot diagnose the problem, please call your distributor for technical support.

### ***CE/FCC & Recycling Information***

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#### ***CE Certification***

This equipment complies with the requirements relating to Electromagnetic Compatibility Standards EN55032 / EN55035 and the further Standards cited therein. It must be used with shielded cables only. It has been manufactured under the scope of RoHS compliance.

#### ***FCC Certification***

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. You are cautioned that changes or modification not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

This device complies with part 15 of the FCC Rules.

Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation



***WEEE (Waste of Electrical and Electronic Equipment),  
Recycling of Electronic Products***

In 2006 the European Union introduced regulations (WEEE) for the collection and recycling of all waste electrical and electronic equipment. It is no longer allowable to simply throw away electrical and electronic equipment. Instead, these products must enter the recycling process.

Each individual EU member state has implemented the WEEE regulations into national law in slightly different ways. Please follow your national law when you want to dispose of any electrical or electronic products. More details can be obtained from your national WEEE recycling agency.



**Notes**

This product requires external power source to function. If the power LED is not illuminating after connecting, check that the power source is connected to the hub correctly, and is powered on.

**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](mailto:support@coolgear.com).

## USB CHARGING & CONNECTIVITY EXPERTS

### Within Every Great Machine

For over 20 years our rugged, off-the-shelf USB hubs, chargers, and serial products are ready to go for your next project. Based in the US, Coolgear has successfully engineered and deployed millions of connectivity solutions into industrial, medical, automotive, commercial, and aerospace industries.

We understand the importance of reliability, build quality, & consider all our customers' applications as critical wanting to ensure long-lasting event-free integrations.

**Compliance Statement**

View compliance within the product's respective Technical Data Sheet, found on the product's online listing.

**Technical Support**

When you reach out to Coolgear support, you'll find yourself in the hands of a solution-oriented and knowledgeable expert ready to answer whatever question you throw at them. If you ever need help with your product, visit [coolgear.com/support](http://coolgear.com/support) for support tickets, downloads, and other support resources. For the latest drivers, please visit [coolgear.com/download](http://coolgear.com/download).

**Product Standard Warranty**

One (1) Year Warranty from Date of Purchase Invoice. Coolgear will repair or replace any Product determined to be defective and which has been returned, at your risk and expense, to Coolgear. Where Coolgear determines in its sole judgment that repair or replacement of such Product is not reasonable, Coolgear will keep the non-conforming Product and refund to you the amount you paid for such Product. Returned Products shall be subject to the balance of the Warranty Period otherwise applicable. Any reconditioned parts used by Coolgear shall be subject to all the same provisions as



otherwise applicable to new parts. THE FOREGOING DESCRIBES COOLGEAR'S SOLE LIABILITY, AND YOUR SOLE REMEDY, FOR ANY BREACH OF WARRANTY. IF YOU DO NOT AGREE WITH THE TERMS OF THIS LIMITED WARRANTY, YOU MUST RETURN THE PRODUCTS UNUSED AND IN THEIR ORIGINAL CONTAINERS TO YOUR ORIGIN OF PURCHASE.

**Limitation of Liability**

This Limited Warranty does not cover: (i) defects or damages resulting from natural causes, casualty, accident, misuse or abuse, neglect, alterations, service or repair by other than Coolgear, including without limitation by you; (ii) improper installation or de-installation, operation or maintenance, improper connections with peripherals or other causes not arising out of defects in the materials or workmanship of Products; (iii) any Product for which the warranty sticker has been removed, modified or defaced; (iv) normal wear and tear; (v) damage to or loss of repaired or replaced Products during shipping by Coolgear except when such damage or loss is caused by poor or inadequate packaging by Coolgear; or (vi) Products purchased outside the United States. UNDER NO CIRCUMSTANCES WILL COOLGEAR BE LIABLE FOR ANY LOSS OF USE, INTERRUPTION OF BUSINESS OR ANY INDIRECT, SPECIAL, INCIDENTAL, PUNITIVE OR CONSEQUENTIAL DAMAGES OF ANY KIND (INCLUDING LOST PROFITS) REGARDLESS OF THE FORM OF ACTION WHETHER IN CONTRACT, TORT (INCLUDING NEGLIGENCE), STRICT PRODUCT LIABILITY OR OTHERWISE, EVEN IF COOLGEAR HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. IN NO EVENT SHALL THE TOTAL LIABILITY OF COOLGEAR HEREUNDER EXCEED THE GREATER OF \$50.00 OR THE AMOUNT YOU ACTUALLY PAID FOR THE PRODUCT GIVING RISE TO SUCH LIABILITY, REGARDLESS OF THE CAUSE OF ACTION, IN CONTRACT, TORT, STRICT LIABILITY OR OTHERWISE. NOT ALL JURISDICTIONS ALLOW SUCH LIMITATIONS OF DAMAGES SO THE FOREGOING LIMITATIONS MAY NOT APPLY TO YOU.

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