



USB Charging Hub – 10 Port Hi-Power 2.4A USB Charger Hub

Product Manual



Coolgear, Inc.

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Model Number: U2CHGRHUB10

Revision History

Revision	Date	Author	Comments
1.0	07/14/2015	Coolgear	Original format
1.1	02/21/2018	Coolgear	New Manual Format

About this document

This product manual outlines installation and features of the U2CHGRHUB10 USB Charging Hub – 10 Port Hi-Power 2.4A USB Charger Hub.

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; Airports, Schools, Conference Rooms, and others.

Product Support

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1. Introduction

The 10-Port Charging hub is a solution for quick charging or sync up to 10 iPads, iPhones iPods and USB charging devices operating simultaneously; this is a perfect tool to effectively perform Sync/Charge Mode switching. Also is ideal for large capacity USB station in-house that enables charging and syncing at a time. Places such as school's classroom, businesses conference or meeting in organizations.

WEIGHT	2.243 lbs
DIMENSIONS	10.60(L)x4.11(W)x1.66in(H)
UPC	045079157873
WARRANTY	1 year from date of purchase
COLOR	Black
DOWNSTREAM PORTS	10 USB Type-A Female Ports
UPSTREAM PORTS	1 USB Type-B Female Port
SYSTEM REQUIREMENTS	Compatible with all USB enabled operating systems.

1.1 Features

<ul style="list-style-type: none"> • Compliant with USB Battery Charging Spec 1.2 • Enables to provide up to 1.5A at Sync (CDP mode) or 2.4A at Charge (DCP mode) output current on each port. • Supports the iOS, Android devices. • Enables Sync/Charge mode switching upon manually connecting or disconnecting host port. • If all devices are fully charged at Charge Mode, the unit would cut off the ports LED & power automatically. 	<ul style="list-style-type: none"> • Intelligently detects the power current of each port by the sensing meter with firmware, and enables the port's LED to illuminate its corresponding color. (Charging in progress: red; Disconnected or Fully charged: green) • Supports Over-Current Protection and $\pm 15\text{kV}$ (air), $\pm 8\text{kV}$ (contact) ESD protection on each port. • Supports 40A (5/50ns) & Peak Pulse Power 250 W (8/20 us) Surge and Transient spikes protection on each port.
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For the High-temp protection, if the unit's high temperature is over the setting, it will cut off all the output current immediately. At the same time, all the LEDs of the 10 ports will be green blinking.



Figure 1

Fully charged or devices disconnected: Green LED illuminates. The ports of charging in progress: Red LED illuminates. Syncing: Orange LED illuminates	This unit DOES NOT require a host computer connected to the hub for it to charge compatible devices.	This 3-pin (one pin plus voltage and the other 2 pins are GND) terminal block connectors are used to connect strong power to self-power the hub, the voltage can be in the range from +7V to 24VDC.
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1.2 Specifications

U2CHGRHUB10		
Current per Port	Sync Mode	DC5V 1.5A
	Charge Mode	DC5V 2.4A
Speed	480 / 12 / 1.5 Mbps	
USB Specification	USB 2.0 / 1.1 / 1.0 compliant	
Connector	Upstream	USB B Female
	Downstream	USB A Female x10
	Cascade	USB A Female x 1
Power Supply	DC24V 6.25A (150W)	
Chip Model	Terminus FE1.1S Chip	
Green Energy Button	Green energy button x1	
LED	Charge Mode	Charging in Progress: Red Color x10

		Disconnected or fully charged: Green Color x10
	SYNC Mode	Orange Color: x10
Operating Temperature	0 ~ 40°C	
Housing	Metal	
Dimensions	10.60(L)x4.11(W)x1.66in(H)	

1.3 Cautions

1. End user may extend another unit of USB 2.0 10 port charging hub. (It allows connecting or changing maximum up to 10 / 20 USB devices simultaneously.)
2. It may daisy-chain (cascade) the 10-Port Charging hub up to 6 units. (Total 7 unit connection)
3. The specific cable for iPad, tablet isn't included in package accessories. Please check with your distributor regarding using appropriate cables.
4. If user connects with two units, the 2nd unit may not be detected by some computers which have built-in USB 3.0 hub.

1.4 Function Information

1) USB Ports (Hub) – Allows Connecting iPad, tablet, or USB devices

- 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
- Charging in progress ports: Red LED illuminates
- Syncing: Orange LED Illuminates

3) Power Switch

- User may switch power to on / off.

4) Power Jack

- To use with power adapter provided.

5) USB for Extending 2nd Unit

- It is available to connect with another unit for the purpose of extending.

6) USB Port for host

- It is available to connect with host computer by USB cable.

7) Green Energy button

- It is available to automatically shut down upon reaching full charge.

1.5 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 in the package.

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

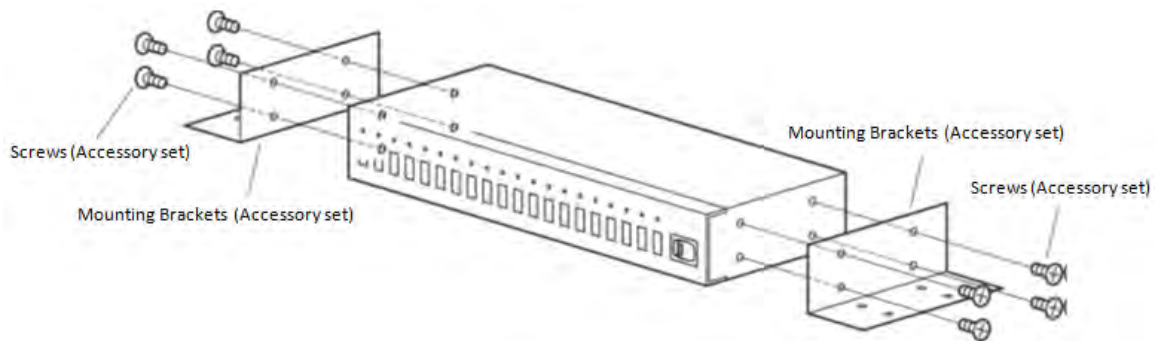


Figure 2

- 2) User may install on the applicable cabinet, rack environments.

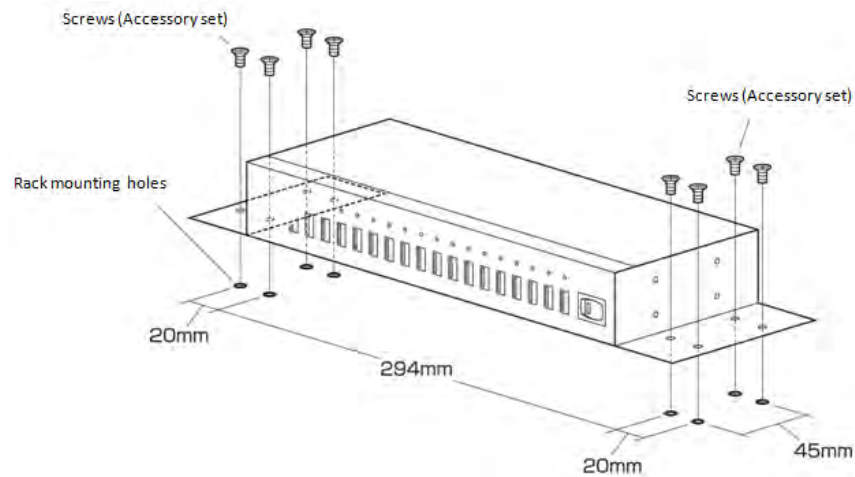


Figure 3

1.6 Connection

- 1) To turn off power switch. (**Front Panel**)

- 2) Plug the power adapter to the unit's power jack.
 - The power jack is threaded with nut, so user may put power DC plug into the power jack without losing connection.
- 3) Put the plug of power adapter into the wall outlet.
- 4) Turn on the power switch. **(Front Panel)**
- 5) Using the USB A to B cable provided, connect the USB B end on the unit.
- 6) Using the USB A end and connects on your host computer.
- 7) Connect the host unit with the computer. **(Rear Panel)**
- 8) Use the USB cable to connect it to the charging ports, then tablets or USB devices. **(Front Panel)**

1.7 Charging & Syncing

Please follow below ways for charging or syncing USB devices.

- 1) Follow the step of connection with host computer, and connect host computer with the unit.
 - This unit does not contain an accessory set of cables for iPad or tablets. Please check with your distributor regarding the use of appropriate cables.
- 2) Connect your USB devices to the USB ports on the hub.
 - *Sync Mode* – As soon as the charging hub connects to a computer, turn the power on; the charging hub may charge and sync at a time either at single unit or cascade connecting.
 - *Charge/Sync Mode Switching*
 - a. While the 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 or cascading units.
 - b. The hub will shut down in 60 seconds if it is idle and there are no devices connected. You may manually turn on the power switch either at single unit or cascade connecting and start charging again.
 - c. Or, you may re-connect to the computer to restart the charging hub and it will switch function to sync (CDP mode) again either at single or cascading connecting. (Make sure both unit's power switches are turned "ON")
 - If all devices are fully charged at charge mode, the charging hub will shut down automatically. You may manually turn on the power switch or re-connect to the computer and start charging again.
 - *Re-start the hub on cascade connections* – If the two hubs are cascade connecting, you must turn their power on for both hubs. Once the 1st hub is disconnected from the computer, both hubs will switch to charge mode, and work on the same function. On the contrary; once the 1st hub is connected to the computer again, both hubs will re-start and switch to sync mode and

work on the same function making sure both power switches are in the “ON” position.

- 3) *The Green Energy function* – When in charge mode; the charging hub is designed with the Green Energy function (push button at the rear panel) may cut off power when charging is finished.
- *Green energy ON:* Button’s green LED illuminating. When all devices are fully charged, the charging hub will shut down automatically. You may manually turn on the power switch or re-connect to the computer and start charging again.
 - *Green energy OFF:* Button’s green LED is off. When all devices are fully charged, the hub still keeps operating; and the port LED’s keep illuminating. Once it senses the devices battery consumed, the hub starts recharging.

Note:

The Charging hub can be used with iTunes & Apple Configurator for synchronization and management of iPads and other iOS devices. For this and other applications (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 iPods Touch devices.

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 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-A 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.

1.8 Regulatory Compliance

Disclaimer

Information in this document is subject to change without notice. The manufacturer does not make any representations or warranties (implied or otherwise) regarding the accuracy and completeness of this document and shall in no event be liable for any loss of profit or any other commercial damage, including but not limited to special, incidental, consequential, or other damages.

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CE/FCC & Recycling Information

CE Certification

This equipment complies with the requirements relating to Electromagnetic Compatibility Standards EN55022/EN55024 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 of 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 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.
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 products. More details can be obtained from your national WEEE recycling agency.



1.9 Environmental Specifications

Operating Temperature:	
0-40°C	

2. Notes, Tips, Warnings, and Safety

Note

The Charging hub can be used with iTunes & Apple Configurator for synchronization and management of iPads and other iOS devices. For this and other applications (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 iPods Touch devices.

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.

Reference section 1.7

Tip

N/A

Warning

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-charging-hub-10-port-hi-power-usb-charger-hub

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