



# MultiCharger

USER GUIDE

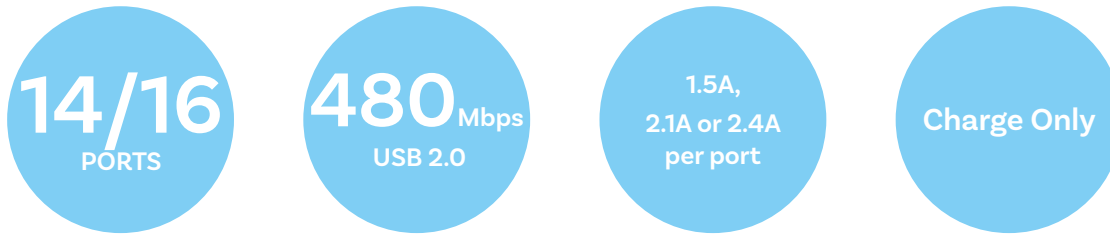


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## 1 MultiCharger at a glance



The Multi-Charge (MC Range) has been designed primarily for desktop use, being highly compact and quiet. Three different models are available to charge USB devices safely and reliably. They are:

Model	Number of Ports	Charge Current (Amps)	Charge Power (Watts)	Compatible Device Manufacturer
MC16-1.5	16	1.5	7.5	Generic
MC16-2.1	16	2.1	10	Apple
MC14-2.4	14	2.4	12	Apple

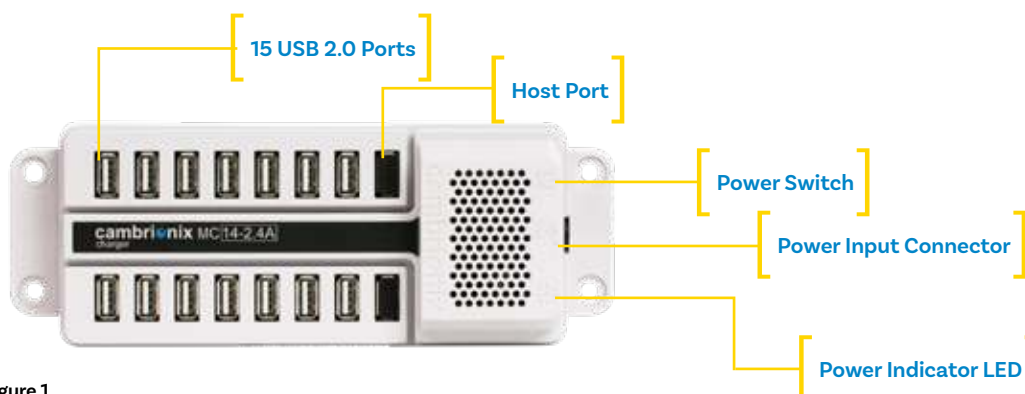
The MC Range is supplied with external power supplies to minimize the desktop footprint. It is ready to charge USB devices at 5.2 Vdc out-of-the-box.

### What's included

These items are required to use your MultiCharger and are included in the box:

- The MultiCharger unit (see Figure 1 below)
- A 135W-180W Power Supply Unit (PSU) (dependent on model)
- A mains cable appropriate for the country of use

Optional High-Speed Type-A to Type-A USB2.0 cables are available to purchase separately.



**Figure 1**  
MultiCharger  
connections

## 2 Getting Started

### 2.1 Registration

You may register you and your product at <https://cambrionix.com> to download LiveViewer, our API and firmware updates.

### 2.2 Connecting to the mains

Connect the Power Supply Unit (PSU) to the MultiCharger using the 4-pin DIN plug.

Connect the mains cable to the PSU. Making sure you adhere to local safety regulations, connect the mains cable to the 100 - 250 Vac mains power outlet and switch the MultiCharger on using the small power switch located adjacent to the power input connector on the MultiCharger. When the device is switched on, a red LED will be illuminated. The MultiCharger is now ready to charge attached devices.

## 3 Charging

The MC Range has been designed to charge certain devices using pre-determined charge profiles.

These are:

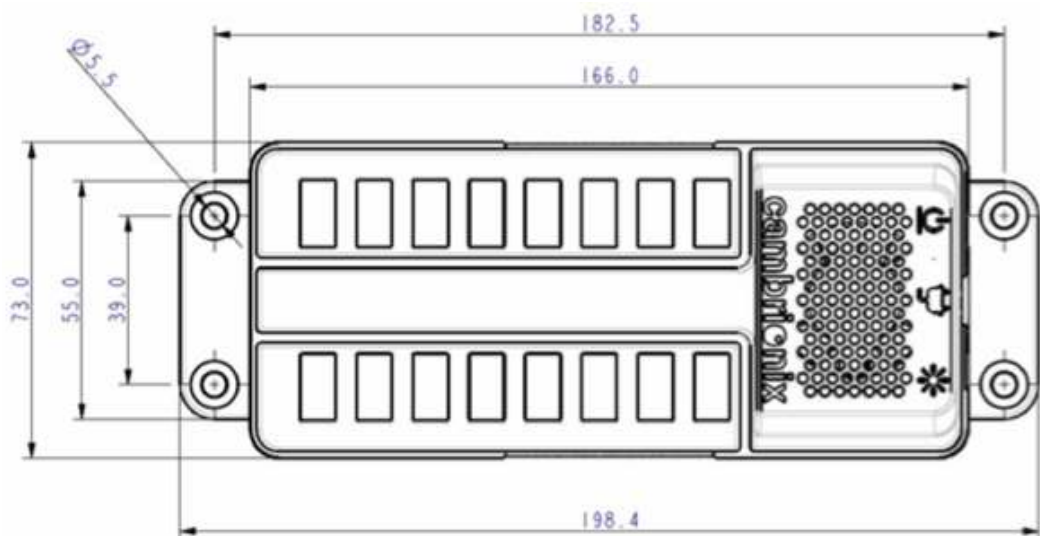
- MC16-1.5 - generic charging profile for BC1.2 compliant devices capable of charging at 1.5 A
- MC16-2.1 - 2.1 amp Apple charging profile
- MC14-2.4 - 2.4 amp Apple charging profile

If you intend using either the 2.1 or 2.4 MC products for charging non-Apple devices, you should verify

whether or not the devices charge properly using an Apple charger of the equivalent power before purchasing the MC unit.

Assuming the unit is correct for your charging needs, simply connect the devices to be charged to any of the available 15 ports (not the Host Port) using USB2.0-compliant cables and charging will commence.

## 4 Dimensioned Schematic



## 7 Specifications

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### MultiCharger

MultiCharger	MC16-1.5	MC16-2.1	MC14-2.4
Input Voltage:	12Vdc	12Vdc	12Vdc
Input Current:	15A	15A	15A
Output Current (max per port):	1.5	2.1	2.4
Output Power (max per port):	7.5W	10W	12W
Output Power (Total):	124.8W	174.72W	174.72W
Output Connectors (USB Type-A)	16	16	14
Ambient Operating Temperature Range:		0 – 35°C	
Dimensions (approx.)		198.4mm long x 73mm wide x 40mm high	
Approximate weight:		1.6 kg (inc PSU)	

## 8 Certifications

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- Independently safety tested by the Underwriters Laboratory (UL) under file #E346549
- CE Tested and marked
- CB Certificate
- FCC Part 15 Tested and marked
- RoHS Compliant
- China CCC certification
- Japanese PSE certification (pending)
- Complies with the latest EN60950 safety requirements for ITE
- Housed within a UL94-V0 specification fire enclosure

## 9 Safety Guidelines and Precautions

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### Please read and understand these guidelines prior to installation or use.

The MultiCharger has ESD, over-voltage, over-current and over-temperature protection. However, to use the equipment safely you should follow all local regulations relating to the use of electrical equipment and note that:

- Failure to install and operate the equipment in accordance with all local and these safety guidelines may result in unit failure, electrical shock and personal injury.
- The plug on the power cord is considered the “disconnect device” and consequently the mains outlet should be located near the TS2-16, easily accessible in case the power supply needs to be isolated from the mains power.
- If there is a liquid spillage over a ventilation slot, external data/power connector or product aperture, remove power from the unit without contacting the liquid immediately.

## Important Electrical and Safety Messages

Safety warning	Potential consequence if ignored
Do not modify the product in any way.	Fire, electric shock or personal injury may occur.
Do not dismantle the product.	Fire, electric shock or personal injury may occur.
Do not bend, compress or drill into any part of the product.	Damage, electric shock or personal injury may occur.
Parts of Cambrix products may become hot during operation. Do not obstruct air vents on the product or operate the product in an environment where the ambient temperature is outside the recommended operating temperature region.	An increased internal temperature may cause a fire.
Cambrix products are not reverse-polarity protected. The power connections MUST be connected correctly. If in doubt, please contact Cambrix.	Damage to your Cambrix product may occur. A fire or electric shock may result.
Do not short circuit the Power Supply Unit (PSU) supplied with your Cambrix product.	Sparks, fire or electric shock may result.
Ensure dust does not collect around the power plug pins or power socket, or in or around the air vents to the extent it causes a reduction in air circulation.	A fire may result if there is combustible material within the power socket or around the power plug, or if the internal temperature increases due to lack of air circulation.
Do not allow liquids to come into contact with the unit or power supply.	Fire, electric shock or personal injury may occur.
Keep the mains power socket (where the power cord is connected) unobstructed.	The power cord must be disconnected to cut off power to the product when an issue occurs. Note that the product may not be completely powered down by only using the power switch on the product.
Do not use a damaged power cord or plug, or a loose power socket.	An electric shock or fire may result.
Do not power multiple products from a single power socket.	Overheated power sockets may cause a fire.
Do not touch the power plug with wet hands.	An electric shock may result.
Insert the power plug all the way into the socket so that it is not loose.	An unsecured connection may cause a fire.
Connect the power plug to an earthed socket.	Failure to connect use an earthed socket may result in an electric shock or injury.
Do not bend or pull the power cord with force. Be careful not to leave the power cord underneath a heavy object.	Damage to the power cord may result in fire or electric shock.
Do not place the power cord near heat sources.	A fire or electric shock may result.
Only use the power cord provided (if applicable).	A fire or electric shock may result.
Only use the power supply provided with the product (if applicable).	A fire or electric shock may result.
Do not disconnect the power cord while the product is being used.	The product may become damaged by electric shock.
Cambrix OEM modules are susceptible to Electrostatic Discharge (ESD). OEM modules should be handled in an ESD safe area.	Damage to your Cambrix OEM module may occur.
There are sharp edges, corners and components. Suitable protective equipment must be worn during handling of Cambrix OEM modules.	Personal injury may occur.
No power supply is shipped with a Cambrix OEM module. Please contact your power supply manufacturer directly for safety related information.	Fire, electric shock or personal injury may occur. Please see the installation instructions for your Cambrix product for correct wiring requirements.
When mounting a Cambrix OEM module, all mounting holes should be used with appropriate spacers, screws and a torque level of 1.1Nm.	Damage or personal injury may occur.



**This product can expose you to chemicals, including Nickel, which is known to the State of California to cause cancer or birth defects or other reproductive harm. For more information, go to [www.p65Warnings.ca.gov](http://www.p65Warnings.ca.gov)**

**If in any doubt about how to correctly operate or maintain your Cambrix system product or OEM module, or if any part of this safety document is unclear or confusing, please do not use your product and contact Cambrix before proceeding further.**



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