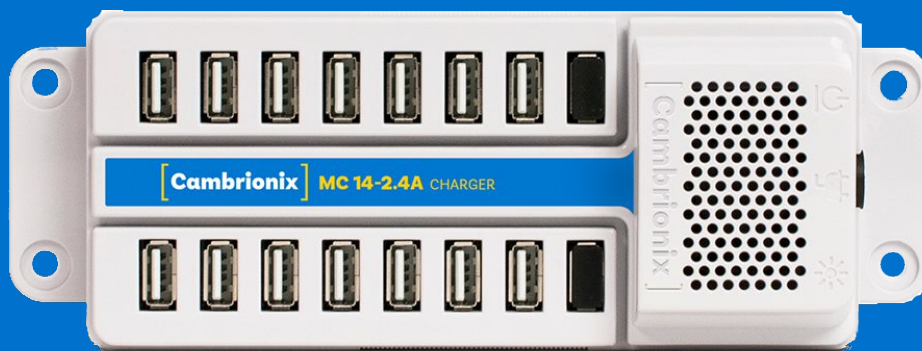


MultiCharger14-2.4A

User Manual



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2. Your MultiCharger14-2.4A at a glance

The MultiCharger14-2.4A has been designed primarily for desktop use, being highly compact and quiet. It provides 12W of charging power to each of its Type-A ports, allowing mobile devices to be charged quickly, safely and reliably. All ports can be controlled using Cambrionix software to enable charging whilst monitoring important port and device information.

The MultiCharger14-2.4A can charge attached USB devices without using a local computer, and our intelligent charging algorithm allows almost any device to be charged at its optimum rate (up to 2.4A). The firmware can be updated to enable new charging profiles to be added, ensuring the MultiCharger14-2.4A can charge the latest devices. It is ready to charge out-of-the-box.


You can download the latest version of this manual and all product user manuals from our website at the following link. www.cambrionix.com/product-user-manuals

3. Safety

This user manual is for informational purposes only, it contains information for the start-up and operation of this product. Note: the contents and the product described are subject to change without notice. To avoid injuries and damage, observe the safety instructions in the user manual.

This manual has been arranged to follow the IEC/ICEE 82079-1 standard. This is to facilitate the easier understanding and location of information relating to the MultiCharger14-2.4A. Any errors or omissions can be reported using our support ticket system (see [Help and Support](#)). This way, any issues that are discovered can be acted on quickly and we can update the documentation to reflect this.

Understanding and observing the instructions in this user manual are prerequisites for hazard-free use and safety during operation. This user manual cannot cover all possible applications. If you would like additional information or if problems arise that are not sufficiently addressed in this manual, please ask your distributor or contact us directly using the means preferred, which are located on the back cover of this manual.

	⚠ CAUTION
	<p>Personal Injury and Damage to the product</p> <p>Always observe the safety instructions in this user manual</p>


3.1. Signal word panel

Depending on the probability of serious consequences, potential dangers are identified with a signal word, the corresponding safety colour, and if appropriate, the safety alert symbol.

⚠ CAUTION
<p>Indicates a potentially hazardous situation that, if not avoided, may result in moderate or minor (reversible) injury.</p>



CAUTION
<p>Indicates a potentially hazardous situation which, if not avoided, may result in damage to the product and its functions, or to property in its proximity.</p>



3.2. Safety alert symbol

	<p>Use of the safety alert symbol indicates a risk of injury.</p>
<p>Observe all measures that are marked with the safety alert symbol in order to avoid injury</p>	

3.3. Pictograms


These symbols will be used throughout this documentation to alert to any potential dangers or any actions that must be taken.


Warning Signs	
 Electrical hazard	 Fire Hazard

Mandatory action signs	
 Read operating instructions	 Mandatory regulation

3.4. Product modification

Cambrionix products are designed and manufactured to meet the requirements of UK and international safety regulations. Modifications to the product could affect safety and render the product non-compliant with relevant safety standards, resulting in injury or damage to the product.


	⚠ CAUTION
	<p>An electric shock or personal injury may occur</p> <p>Do not modify the product in any way. Do not dismantle the product. Do not open the product</p>


	⚠ CAUTION
	<p>Fire, or personal injury may occur</p> <p>Do not obstruct air vents on the product. Do not cover the product in or place near combustible material.</p>

	CAUTION
	<p>Damage to your product may occur</p> <p>Do not bend or compress any part of the product.</p>

3.5. Power supply


This section describes the safety precautions you must follow when using the external power supply.


	⚠ CAUTION
	<p>An electric shock or personal injury may occur</p> <p>Do not use a damaged power cord or plug, or a loose power socket. Do not touch the power plug with wet hands. Do not allow liquids to come into contact with the unit or power supply.</p>

	CAUTION
	<p>Damage to your product may occur</p> <p>Do not short circuit the Power Supply Unit (PSU) supplied with your product. Do not disconnect the power cord while the product is being used. Do not bend or pull the power cord with excessive force. Do not use a power supply that exceeds the power supply specifications within this manual</p>


3.6. Storage and Installation

This section describes safety precautions you must follow when installing and storing your MultiCharger14-2.4A.

	⚠ CAUTION
	<p>An electric shock or personal injury may occur</p> <p>Do not place the power cord near heat sources. Connect the plug only to an earthed socket.</p>


	CAUTION
	<p style="text-align: center;">Damage to your Cambrionix product may occur</p> <p style="text-align: center;">Operate the product only in an environment where the ambient temperature is inside the operating temperature range. Operate the product only in an environment where the relative humidity is inside the operating range. Be careful not to leave the power cord underneath a heavy object.</p>

	⚠ CAUTION
	<p style="text-align: center;">Overheated power sockets may cause a fire</p> <p style="text-align: center;">Do not overload the power socket that your hub is connected to. Insert the power plug all the way into the socket so that it is not loose.</p>

	CAUTION
	<p style="text-align: center;">Overloading the brackets may cause failure</p> <p style="text-align: center;">The rack brackets for all our products are not designed to be used in a mobile application, bracket failure could occur if the units are not supported fully e.g Shock during road transport.</p>

3.7. Cleaning your MultiCharger14-2.4A

Cleaning the product is generally not required, although in some instances it may be necessary if excess dirt/ dust/ hair has accumulated, or if minor liquid spillages have occurred on the module during operation or storage.

	⚠ CAUTION
	<p style="text-align: center;">Electric shock or personal injury may occur</p> <p style="text-align: center;">If there is a dirt/ spillage over a ventilation slot, external data/ power connector or product aperture, please remove power from the unit without touching the liquid and seek advise before reapplying power</p>

- Ensure that the product is switched off and the power cord is removed from the product. Hold the power cable by the plug and do not touch either the plug or the power cord with wet or damp hands as an electrical shock may result
- Wipe the product with a clean, dry and soft cloth. Do not use detergents which contain alcohol, solvent or surface-active agents. Do not spray water or detergent directly onto the product
- Mildly dampen a soft and dry cloth in water and wring thoroughly to clean the product as required
- Dry the product thoroughly once the cleaning has finished
- Reconnect the power cord and use your product as advised once cleaning is complete

4. Getting Started


This manual provides a reference for end-users installing for the first time and using their hub afterwards. As well as a guide for product safety-related information.

The MultiCharger14-2.4A is intended to be used in an indoor static environment in which the environment falls within the tested specifications to provide charge, sync and management functionality. Please see the [Product Specifications](#) section of this manual for information on the environment specifications.

4.1. Unpacking your product

When you have received your product, please check the packing slip inside the box to ensure all contents and quantities are correct before opening. This is to avoid retesting and repackaging any items that are not required.

When opening the packaging, use a suitable method to open the box i.e, do not use a knife. This is to ensure the product is not damaged.

	<p>⚠ CAUTION</p> <p>Personal Injury and Damage to the product</p> <p>There will be a label on the hub advising you to read the User manual before use. This will need to be removed before use as it may be covering host ports, vents etc.</p>
---	---

4.2. What's Included

- MultiCharger14-2.4A Hub
- 2m Mains power cable (Country specified on order including fuse for the UK plugs)
- Power Supply Unit

4.3. Consumables and Placing Orders

If you require any spare parts, such as the power cable or - cable, these can be ordered by quoting the product part number listed in the [Product Specifications](#).

These can be ordered from the reseller or solution partner you purchased your MultiCharger14-2.4A from, or from Cambrionix directly.

To find one of our partners local to you please visit www.cambrionix.com/partners where you can learn about the local vendors and distributors that can assist you and find their contact information.

4.4. Connecting to the mains

Connect the Power Supply Unit (PSU) to the hub using the 4-Pin Mini-DIN plug. Connect the power cable to the PSU. Making sure you adhere to local safety regulations, connect the power cable to the

100 - 250 VAC mains power outlet and switch the hub on using the small power switch located adjacent to the power input connector on the hub. When the device is switched on, a LED next to the power input will be illuminated. The hub is now ready to charge attached devices.

Periodic inspections should be made to power supply cables and any USB cables for any signs of damage. If any damage is found, replace the damaged cord before further use.

Please note that USB specifications require a minimum 100 mA charge current to be available during data transfer. As indicated in above, if the attached device has a BC1.2 compliant CDP port, the device can draw up to 2.4A whilst transferring data.

4.5. Connecting devices to your MultiCharger14-2.4A

Throughout this manual we will refer to "devices" this relates to the device you are connecting to the MultiCharger14-2.4A this could be any USB device such as a phone, tablet, USB drive or any other USB connected device.

Once you have your hub setup the next thing is to connect your devices to start using the MultiCharger14-2.4A. We would always recommend using the OEM cable supplied by the manufacturer of the device, so whatever cable is provided with the device use that cable to connect to the hub.

If your device has a USB plug (male connector) on it already then you can connect the device directly into the hub.

If the cable (or plug fitted to device) is not the same USB type as the socket (female connectors) on the MultiCharger14-2.4A then you will require an adaptor or a different cable.

Cables

Some USB cables are data transfer only, and some are power delivery only. There are also options that can handle both tasks. Be sure to verify a cable's abilities before purchasing it and select a cable which can handle the speeds and power transfer that you require.

4.6. Charging

Your MultiCharger14-2.4A will allow your device to charge at the maximum rate possible up to 2.4A. The way that charging takes place is the MultiCharger14-2.4A will provide the device with a capability to charge and the devices USB charging controller will determine the maximum amount of charge it wants to draw down.

Although a maximum charge rate of 2.4A is possible, the device itself determines the exact rate and as such you may not see the maximum amount of charging on every device type that is connected.

4.6.1 Fan Behaviour

Your MultiCharger14-2.4A has an inbuilt fan used to cool the product when internal temperatures rise above a set threshold. On power up the fan will spin for approximately a second before turning off. For more information on the temperatures that trigger the fan please see the fan properties section in the [MC14-2.4A Specifications](#).

4.7. Registration

You may register your product at www.cambrionix.com/product-registration

4.8. Help and Support

FAQs and help can be found on the Help page here

- www.cambrionix.com/help_pages/help.

You can raise a support ticket for more in depth support here

- <https://support.cambrionix.com>

You can also download any of our manuals and keep up to date at the link here

- www.cambrionix.com/product-user-manuals

When contacting support, please supply the product information for the hub in question. This can be found on the Device Information Plate which is either on the underside or back of the unit.

Providing serial and Purchase order numbers, can help identify your specific product and speed up the process.

5. Product Specifications

5.1. Features

MC14-2.4A Features	
19-inch Rack Mountable	no
Dedicated control port	no
Fan Assisted Cooling	yes
Selective upstream port	no
Internal Temperature Monitoring	yes
Indicator LED	yes
User Replaceable Fuse	no

Table 5-1

USB Downstream Port Features	
Configurable enumeration delay	no
USB BC 1.2 Support	no
USB Type-C Rev 1.3 Support	yes
USB Power Delivery 2.0 Support	no
USB Power Delivery 3.0 Support	no
Independent Hi-Speed Enable and Disable	no
Independent SuperSpeed Enable and Disable	no
Individual Enable and Disable	no
Individual port voltage measurement, Vbus	no
Individual port current measurement, Vbus	no
Individual CC voltage measurement, Vconn	no
Individual CC current measurement, Vconn	no
Link speed detection	no
Programmable port current limits	no
RGB Indicator LEDs	no
Individual Colour Indicator LEDs	no

Table 5-2

5.2. MC14-2.4A Specifications

MC14-2.4A Properties						
Colour	Nom	White		Number of USB Upstream Ports	Nom	-
Control Port Connector Type	Nom	-		Number of USB Upstream Ports	Nom	-
Dimensions Depth (mm)	Nom	73		Number of USB2 Type-A Downstream Ports	Nom	-
Dimensions Height (mm)	Nom	42		Number of USB2 Type-A Expansion Ports	Nom	-
Dimensions Width (mm)	Nom	199		Number of USB2 Type-A Upstream Ports	Nom	-
Downstream Connector Type	Nom	Type-A		Number of USB2 Type-B Upstream Ports	Nom	-
Electrostatic Discharge, air (kV)	Max	-		Number of USB2 Type-C Downstream Ports	Nom	-
Electrostatic Discharge, Vesd (kV)	Max	-		Number of USB2 Type-C Expansion Ports	Nom	-
Enclosure Material	Nom	Plastic		Number of USB2 Type-C Upstream Ports	Nom	-
Expansion Connector Type	Nom	-		Number of USB3 Type-A Downstream Ports	Nom	-
Form Factor	Nom	Desktop		Number of USB3 Type-A Expansion Ports	Nom	-
Fuse Type	Nom	-		Number of USB3 Type-A Upstream Ports	Nom	-
Host Connector Type	Nom	-		Number of USB3 Type-C Upstream Ports	Nom	-
Manufacturing Origin	Nom	UK		Output Power, Max (W)	Max	174.72
Mass (kg)	Nom	1.5		Part Number	Nom	200287

MC14-2.4A Properties			
Model Number	Nom	MC14-2.4A	Min -
Number of Thunderbolt 3 Expansion Ports	Nom	-	Nom -
Number of Thunderbolt 3 Upstream Ports	Nom	-	Max -
Number of USB Control Ports	Nom	-	Power Type DC
Number of USB Downstream Ports	Nom	14	Product Name MultiCharger14-2.4A
Number of USB Expansion Ports	Nom	-	Vbus Source Power (W) Max 174.72

Table 5-3

MC14-2.4A Environmental Properties		
Ambient Operating Temperature (°C)	Min	0
	Max	35
Relative Humidity Range (%)	Min	20
	Max	80
Storage Relative Humidity Range (%)	Min	5
	Max	95
Storage Temperature (°C)	Min	-20
	Max	60
Operating Altitude Max (m)	Max	2000

Table 5-4

Fan Properties		
Airflow (m3/hr)	Min	-
	Nom	11.9
	Max	-
Acoustic Noise (dB A)	Min	-
	Nom	20.6
	Max	-
Start Temperature (°C)	Min	-
	Nom	26
	Max	-
Max Airflow Temperature (°C)	Min	-
	Nom	60
	Max	-
Stop Temperature (°C)	Min	-
	Nom	-
	Max	-

Table 5-5

Boxed Properties		
Dimensions, Depth (cm)	Nom	10
Dimensions, Height (cm)	Nom	16
Dimensions, Width (cm)	Nom	28
Mass (kg)	Nom	1.7

Table 5-6

Power LED Properties		
Colour	Nom	Red
Diameter (mm)	Nom	-
LED Wavelength, Red (nm)	Min	-
	Nom	626
	Max	-

Power LED Properties		
Luminous Intensity (mcd)	Nom	2.3

Table 5-7

5.3. Power Specifications

MC14-2.4A Power Input Properties		
Connector Type	Nom	4-Pin Mini-DIN
Voltage, Vsupply (V)	Min	-
	Nom	12
	Max	-
Voltage Measurement Rate (Hz)	Nom	-
Voltage Measurement Accuracy, Vsupply (%FSR)	Nom	-
Power, Psupply (W)	Min	-
	Max	-
Power, no devices attached (W)	Min	-
	Nom	-
	Max	-

Table 5-8

AC Power Input Properties		
Operating Current @ 115VAC (A)	Min	4
	Max	4
Operating Current @ 230VAC (A)	Min	2
	Max	2
Operating Voltage, Vsupply (VAC)	Min	100
	Max	240
Under Voltage Threshold (VAC)	Min	-
	Nom	-
	Max	-
Over Voltage Threshold (VAC)	Min	-
	Nom	-
	Max	-
Voltage Measurement Resolution, Vsupply (mVAC)	Nom	-
Frequency Range (Hz)	Min	2
	Max	-

Table 5-9

MC14-2.4A DC Power Input Properties		
Under Voltage (V)	Min	-
	Nom	-
	Max	-
Current, Isupply (A)	Min	-
	Max	15
Over Voltage (V)	Min	-
	Nom	-
	Max	-
Voltage Measurement Resolution, Vsupply (mV)	Nom	-

Table 5-10

PSU Properties		
Dimensions, Depth (mm)	Nom	85
Dimensions, Height (mm)	Nom	46
Dimensions, Width (mm)	Nom	210
Input Connector Type	Nom	C14
Input Power Type	Nom	AC
Output Connector Type	Nom	4-Pin Mini-DIN
Output Power Max (W)	Max	180
Output Power Type	Nom	DC
Part Number	Nom	200421
Power Efficiency, at maximum load (%)	Min	-
	Nom	-
	Max	-

Table 5-11

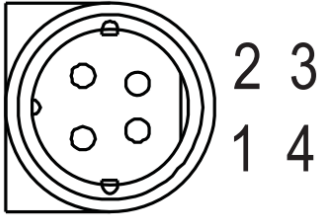
Power connection pin layout		
	Pin	Function
	1	+Vo
	2	+Vo
	3	-Vo
	4	-Vo

Table 5-12

*-V is connected to AC input ground.

5.4. Port Specifications

USB Downstream Port Properties					
Short Circuit Detection Time (ms)	Max	-	Vbus Output Current, CDP Mode (A)	Nom	-
Short Circuit Response Time (μ s)	Max	-	Vbus Output Current, DCP Mode (A)	Nom	2.4
USB D Logic Low Voltage (V)	Min	0	Vbus Output Current, SDP Mode (A)	Nom	-
	Max	0.3	Vbus Output Power (W)	Max	12
USB D Logic High Voltage (V)	Min	2.8	Vbus Output Voltage (V)	Min	4.8
	Max	3.6		Nom	5
USB Hi-Speed Data Rate (Mbps)	Nom	-		Max	5.2
USB SuperSpeed Data Rate (Gbps)	Nom	-	Vbus Source Power (W)	Max	-
Vbus Current Measurement Accuracy (%FSR)	Min	-	Vbus Voltage Measurement Accuracy (%FSR)	Min	-
	Max	-		Max	-
Vbus Current Measurement Range (A)	Min	-	Vbus Voltage Measurement Range (V)	Min	-
	Max	-		Max	-
Vbus Current Measurement Rate (Hz)	Nom	-	Vbus Voltage Measurement Rate (Hz)	Nom	-
Vbus Current Measurement Resolution (mA)	Nom	-	Vbus Voltage Measurement Resolution (mV)	Nom	-
Vbus Current Setpoint Resolution (mA)	Nom	-	Vbus Voltage Ripple (mV)	Max	-
Vbus Output Current (A)	No	2.4	Vbus Voltage Setpoint Resolution (mV)	Nom	-

Table 5-13

Table 5-14

Ports Lifetime

Standard USB connections have a minimum rated lifetime of 1,500 cycles of insertion and removal. USB-C receptacles have a minimum rated lifetime of 10,000 cycles of insertion and removal. This is an industry-standard.

One thing you can do to prolong the lifetime of the ports on your MultiCharger14-2.4A is to use "sacrificial cables" in between the hub and your charging cables so when you repeatedly connect/disconnect you are only going to wear the cables rather than the hub.

5.5. Drawings

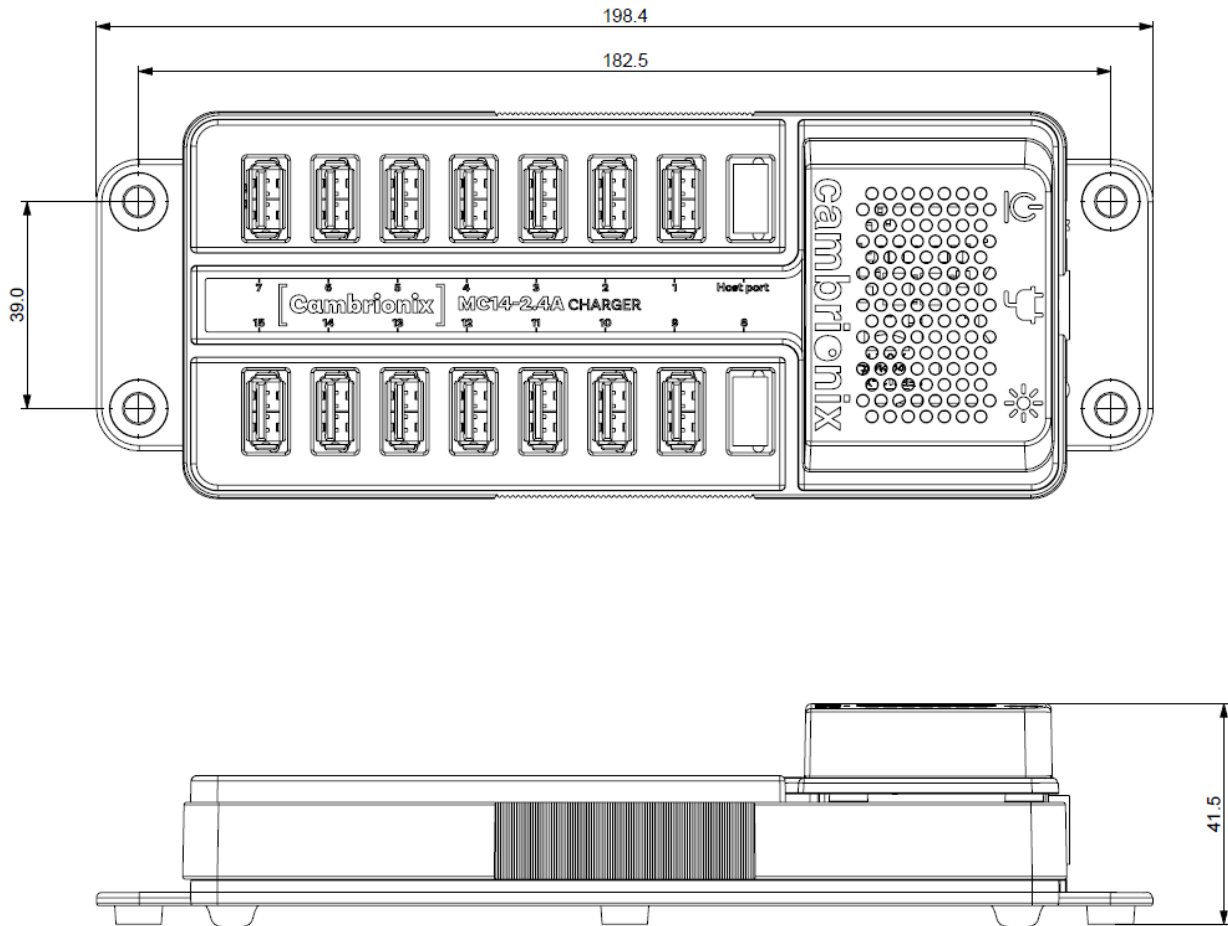
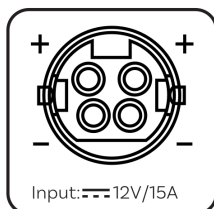


Figure 5.1

5.6. Product Label

The following label can be found on the MultiCharger14-2.4A. This is where you can find the information such as the part number, Power Input Pin configuration and Logos for Compliance and Standards applicable to the MC14-2.4A

For more information please see the [Compliance and Standards](#) section.



[Cambrionix]
MC14-2.4A

Model: CBRX1122
www.cambrionix.com
Output: ---5.2V, 2.4A per port



Figure 5.2

6. Troubleshooting

If you experience any issues with your MultiCharger14-2.4A; please try the following troubleshooting steps, if the issue is not addressed in this section, please get in touch with your local vendor or Cambrionix. To contact Cambrionix Support please see [Help and Support](#).

6.1. Common troubleshooting tips

Some tips and information to check first.

- If you directly connect the same device to the port the hub is in, does it appear to the OS.
- If you plug a device (phone, USB stick) into the hub, does it appear to the OS (device manager/ system info etc.).
- Try switching the cables with ones that are working/ use cable from a hub that is working.

6.2. Logging through Cambrionix Connect

If you are experiencing a bug or an issue, we may ask you to obtain some logs of the behaviour, to see in more detail what is happening. To get logs of the behaviour use the following steps to get a zip file of the logs.

1. Open Cambrionix Connect (if this is not already downloaded, then go onto our website and download both the API and Cambrionix Connect) www.cambrionix.com/software
2. Once in Cambrionix Connect, on the left-hand side of the screen, select the settings section.
3. Once in the settings section, select the API tab.
4. In the API section click the "cog" button on the right hand side of the local API
5. Click the "select all" tick box and then the save button.
6. After this is enabled, use the hub in a way that causes the issue you are seeing.
7. Wait for the issue to occur, i.e. device disconnects.
8. Make a note of the time and date that the issue occurs then go back to the API page in Cambrionix Connect, and press the zip logs.
9. Once you have the logs un-tick the "select all" box and save your settings.
10. Send the logs to us for us to take a look at.

The API keeps a maximum of 20 logs at 256Mb each, so the latest one is usually smaller. If a crash occurs, you would see a smaller log file and the next instance of API shuffles the existing ones

Default locations

Log messages generated by the CambrionixApiService go to syslog.

Using Windows the logs will default to the below location

```
C:\ProgramData\Cambrionix
```

Using macOS the logs will default to the below location

```
Library>Logs>Cambrionix
```

Using Linux the logs will default to the below location

```
/var/log/cambrionix
```

6.3. Hardware Failure

If the Hardware fails, the LEDs can flash in a pattern to determine the type of failure. If no LEDs are on the downstream ports, this will be the red power LED flashing in a pattern.

The unit will blink(B) four times, followed by eight long(L) or short(S) flashes, which then repeat. The flashes are a number in binary which match a number in our error code list.

i.e if the LED flashes the following - BBBB SLSSSLSS, the binary number is 01000100.

6.4. Device connection

If you are seeing any device connection issues please read through the following trouble shooting steps to see if this resolves the observed behaviour.

Device issues when updating

We have found that during updates on some devices the connection can be dropped or lost on the device, this is due to devices going in and out of the bootloader and requiring different power levels. In most instances disabling CDP has resolved this issue for our customers.

You can disable CDP through Internal hub settings either by going through the advanced settings and turning "Sync charge" off or through the API and disabling it via code. For example, the instructions would be below using the command line.

```
settings_unlock  
settings_set sync_chrg 0000000000000000
```

Unstable device connection

Some devices can have unstable connections with your host system through the MultiCharger14-2.4A. We have only observed this behaviour in a very few amount of devices, disabling CDP and setting the ports to always be on has resolved all issues and the connections are stable.

You can disable CDP through Internal hub settings either by going through the advanced settings and turning "Sync charge" off or through the API and disabling it via code. For example, using the command line, the instructions would be as below.

```
settings_unlock  
settings_set sync_chrg 0000000000000000
```

You can set the ports to always be on through Internal hub settings through the advanced settings and turning "Ports On" settings to always on for each port. When you set the port to always be on you

will need to set a default profile on each port for when the port(s). There is a description for each profile within Cambrionix connect.

Battery information for Android

If you are observing an issue displaying battery information on Android devices ensure firstly you have ADB tool installed and open then try these things in order.

1. Check that developer options are enabled on the android device, and then that USB debugging is also enabled.
2. If you have done this step and it still does not work, go to Developer Options and click 'Revoke USB debugging authorisations'. Unplug the cable and reconnect.
3. If this still doesn't work, turn off the developer options at the top, re-enable it, and re-enable 'USB Debugging'.
4. You can get detailed info directly from ADB at each step to diagnose things:

```
adb.exe shell dumpsys battery # Use -s SERIAL_NUMBER as first options  
if you have more than 1 Android attached
```

Unknown devices

Sometimes, within Cambrionix Connect and device manager, the connected device may show up as an unknown device.

This can be due to the host system needing to be trusted on the device. This can be done on the device itself on the initial connection.

This could also be due to an insufficient number of endpoints available on the USB controller in the host system. This limitation within the USB controller can only be resolved if you connect fewer USB devices to the controller in question.

For Apple devices there is a setting called "USB accessories" which can be activated, Once activated it will reduce the amount of times a device will need to be unlocked/ trusted. More information can be found at the link <https://support.apple.com/en-gb/HT208857>.

Cannot connect any more devices

Sometimes, you may reach the endpoint limit of your USB controller and this may stop you from being able to attach any more devices to your host system.

You can create more space is to change connections from USB3 to USB2. You can change the connection by disabling USB3 in the BIOS on startup.

A much simpler way is to use USB2 cables instead of USB3 cables, limiting the connection to USB2.

6.5. Hub connection issues

If you there are issues with the hub and connecting to your host system, please see below troubleshooting solutions.

Hub not connecting to host

If you see that the MultiCharger14-2.4A is not connecting to the host system, one of the issues may be caused by the USB drivers on your host system not being up to date. It is good practice to ensure you have the latest drivers and updates installed on your host system, which is usually handled by the OS, but sometimes may require an update directly from the USB host controllers manufacturer, which will be found on their website.

USB drivers required are FTDI drivers, which can be found on the site <https://ftdichip.com/drivers/>.

Cannot access the COM port

You may get an error message stating "COM (and then a number) could not be opened (Access is denied)".

This is because an application has control over the COM port that the hub is connected to, and no subsequent application can access the hub. To resolve this, you will need to close any other applications that are using the COM port before trying to use the COM port.

6.6. Using with a headless system

If you are using a headless system with no GUI, then and you require to enable logging for support issues, you can use the following command to create the logging cfg file manually:

```
echo*=DEBUG>/etc/opt/cambrionix/cambrionix.log.cfg
```

Then after re-producing the problem, you can zip the logs from the folder

```
/var/log/cambrionix
```

You may delete the file below when you are finished with it.

```
/etc/opt/cambrionix/cambrionix.log.cfg
```

6.7. Software troubleshooting

Some users have noted that the API can cause a high level of CPU usage. This can sometimes be linked to the API recorder service. If you are finding this and you are not using it then we would recommend to uninstall it from your system entirely. Information on how to uninstall programs can be found in the [Removing Software](#) section.

7. Returns and Damaged Products

If you wish to return or fix a damaged product first look at the terms on our website www.cambrionix.com/terms-conditions

Before a product is returned please contact support using the methods detailed in the [Help and Support](#) section.

7.1. What if my order arrives with an issue?

- If you have received your order in a damaged box and/or the product has physical damage please contact Cambrionix Customer Support or your distribution partner. Please provide photos of the damaged box and/or product when contacting Customer support.
- If an item in your order does not have physical damage but is not functioning properly or will not power on, please contact Customer Support or your distribution partner and provide as much information as possible and including any steps followed to troubleshoot internally.
- Please include photos of the damaged box and product when contacting Customer Support.






Note: If you have received your order in a damaged box and the damage was indicated to the courier, please provide us with a copy of the delivery note detailing this.

7.2. What happens after I have requested a Return?


- If you have not purchased the Product(s) direct from Cambrionix please contact the vendor the item was originally purchased from for their returns process.
- Once you have notified Cambrionix of your return, Cambrionix will arrange for the collection of the product(s), or provide instructions and details for you to return the product direct.
- When returning your product(s), please only send back the items that were advised through the support process.
- Return your product(s) in the original packaging where you can. Where original packaging is not available, use suitable packing methods, which will ensure that the product cannot be subject to impact damage. i.e. double-walled cardboard box with 50mm of soft material.
- Product(s) not returned in their original condition may result in additional costs, please refer to the warranty and terms section on our [website](#).
- Where Cambrionix arranges collection, return shipping will be free, unless Cambrionix notified you otherwise.
- When contacting us about returning a product please provide the following information.
 - Collection Address
 - Weights and Dimensions WxDxH (m) of shipment
 - Preferred collection date and time.
 - Product serial number(s) (this can be found on a label on the rear or underside of the unit)
 - Purchase order number(s)

8. Compliance and Standards

The MultiCharger14-2.4A has secured official certification in strict compliance with established industry standards that are widely recognized. Below, you will find information relating to these certifications:

FCC Declaration of Conformity	
Declaration of RoHS Compliance	
CE Declaration of Conformity	
UL Certification	
Waste Electrical and Electronic Equipment (WEEE)	

8.1. EU RoHS Compliance

	<p>We declare that the MultiCharger14-2.4A comply with The European RoHS Directive 2011/65/EU (Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment), which restricts substances in electrical and electronic equipment:</p>
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With Exemptions


<input checked="" type="checkbox"/>	<p>7a</p>	<p>Lead in high melting temperature type solders (lead-based alloys containing 85 % by weight or more lead).</p>
<input checked="" type="checkbox"/>	<p>7c-1</p>	<p>Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors (piezoelectronic devices) or in a glass or ceramic matrix compound.</p>

You can access and download the complete EU RoHS Declaration of Conformity by following the provided link:

<https://downloads.cambrionix.com/documentation/en/MC14-2.4A-EU-RoHS-DOC.pdf>

8.2. Waste Electrical and Electronic Equipment (WEEE)

Disposal of Old Electrical & Electrical Equipment (Applicable in the European Union and other European countries with separate collection systems)

	<p>This product is subject to Directive 2012/19/EU of the European Parliament and the Council of the European Union on the waste electrical and electronic equipment (WEEE), and in jurisdictions adopting that Directive, is marked as being put on the market after August 12, 2005, and should not be disposed of as unsorted municipal waste. Please utilize your local WEEE collection facilities in the disposition of this product and otherwise observe all applicable requirements.</p>
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Cambrionix PRN (Producer Registration Number) For the UK is "WEE/BH191TT".

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Cambrionix Patents

Title	Link	Application Number	Grant Number
Syncing and Charging Port	GB2489429	1105081.2	2489429
CAMBRIONIX	UK00002646615	2646615	00002646615
CAMBRIONIX VERY INTELLIGENT...	UK00002646617	2646617	00002646617
MOD IT DS	GB2591233	6089600	6089600
MOD IT	eSearch	007918669	007918669
MOD IT	90079186690001	007918669-0001	90079186690001
MOD IT	90079186690002	007918669-0002	90079186690002
MOD IT	90079186690003	007918669-0003	90079186690003
MOD IT	90079186690004	007918669-0004	90079186690004
MOD IT	90079186690005	007918669-0005	90079186690005
MOD IT	90079186690006	007918669-0006	90079186690006
MOD IT		195761	195761
MOD IT DS		30202007995X	30202007995X
MOD IT MM		30202007994Y	30202007994Y
MOD IT STACK		30202007993P	30202007993P
MOD IT DS	6077253	6077253	6077253
MOD IT DS	3a2f8b88e935	202012311	202012311
MOD IT DS		195759	195759
MOD IT DS		329440-001	
MOD IT DS		29/735,477	D936,001
MOD IT	6077254	6077254	6077254
MOD IT MM	6077255	6077255	6077255
MOD IT MM	2a6ebe915fe9	202012310	202012310
MOD IT MM		195758	
MOD IT MM		329441-001	

Title	Link	Application Number	Grant Number
MOD IT MM		29/735,479	
MOD IT	6077256	6077256	6077256
MOD IT STACK	6077257	6077257	6077257
MOD IT STACK	081a4b9c69eb	202012312	202012312
MOD IT STACK		29/735,475	D936,000
MOD IT DS LUGS	6089601	6089601	6089601
MOD IT MM	6089602	6089602	6089602
MOD IT DS LUGS	6089603	6089603	6089603
MOD IT STACK	6089604	6089604	6089604
MOD IT	6089605	6089605	6089605

Terms and Conditions

The use of Cambrionix hubs is subject to the Cambrionix Terms and Conditions, the document can be downloaded and viewed using the following link.

<https://downloads.cambrionix.com/documentation/en/Cambrionix-Terms-and-Conditions.pdf>

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