Cambrionix
CHARGE • CONNECT • MANAGE

User Manual

PDS-C4

2022/05

ES

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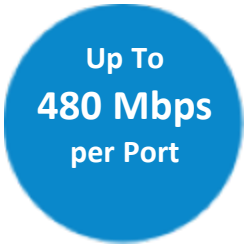
2. Your PDS-C4 at a glance

The PDS-C4 has been designed primarily for desktop use, being highly compact and quiet. It provides 60 W of charging power to each of its 4 x USB 2.0 tipo C ports, allowing mobile devices to be charged quickly, safely and reliably. All ports can be controlled using Cambrionix software to allow charging and/or data transfer while monitoring important port and device information.

The PDS-C4 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 3 A). The firmware can be up-dated to allow new charging profiles to be added, ensuring the PDS-C4 can charge the latest devices. It is ready to charge out-of-the-box and to sync devices when attached to a host computer.

When a local (host) computer is attached, the host can control operation of the ports using freely available software. Device charging and synchronisation can be monitored through Cambrionix's LiveViewer App, the Application Programming Interface (API) or Command Line Interface (CLI). Cambrionix's free monitoring and control software can be downloaded from www.cambrionix.com/software

2.1. Key Features



Transfer Data Seamlessly

Each high speed port can transfer data up to 480 Mbps

Power

Each port can charge devices up to 3 A (60 W)

Scalability

Up to 16 devices can be connected at once using multiple hubs

3. Safety

This user manual is for informational purposes only, it contains information for 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 of the user manual.

This manual has been arranged to follow IEC/ICEE 82079-1 standards. This is to facilitate the easier understanding and location of information relating to the PDS-C4. Any errors or omissions can be reported back using our support ticket system (see"Help and Support") this way any issues can be collected and fixed.

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 conceivable 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.

	**⚠PRECAUCIÓN**
	Personal Injury and Damage to the product • Observe the safety instructions in this user manual

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.

⚠PRECAUCIÓN
Indicates a potentially hazardous situation which, if not avoided, may result in moderate or minor (reversible) injury.

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

3.2. Safety alert symbol

Use of the safety alert symbol indicates a risk of injury.

Observe all measures that are marked with the safety alert symbol in order to avoid injury

3.3. Pictograms

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 to relevant safety standards, which could result in injury or damage to the product.

	**⚠PRECAUCIÓN**
	Electric shock or personal injury may occur

⚠PRECAUCIÓN

- Do not modify the product in any way
- Do not dismantle the product

⚠PRECAUCIÓN

Fire or personal injury may occur

- Do not obstruct air vents on the product
- Do not cover the product in combustible material

PRECAUCIÓN

Damage to your product may occur

- Do not bend or compress any part of the product

3.5. Power supply

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

⚠PRECAUCIÓN

Electric shock or personal injury may occur

- 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

PRECAUCIÓN

Damage to your product may occur

- Do not short circuit the Power Supply Unit (PSU) supplied with your product

	**PRECAUCIÓN**
	• Do not disconnect the power cord while the product is being used • Do not bend or pull the power cord with excessive force

3.6. Storage and Installation

This section describes safety precautions you must follow when installing and storing your PDS-C4.

	**⚠PRECAUCIÓN**
	Electric shock or personal injury may occur • Do not place the power cord near heat sources • Connect the plug to an earthed socket

	**PRECAUCIÓN**
	Damage to your Cambrionix product may occur • 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

	**⚠PRECAUCIÓN**
	Overheated power sockets may cause a fire • 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

4. Getting Started

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

The PDS-C4 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. For information on the environment specifications please see the physical specifications section of this manual.

4.1. Opening your product

When you have received your product please check the packing slip to ensure all products and quantities of them are correct before opening. This is to avoid retesting and repackaging any items which 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.

4.2. What's Included

- PDS-C4 Hub
- 2m Mains power cable (Country specified on order including fuse for UK plugs)
- Power Supply Unit

Parte Descripción	**número de pieza**
Unidad de fuente de alimentación	200402

Reino Unido cable de alimentación	200144
Cable de alimentación de EE. UU.	200327
Cable de alimentación de la UE	200329
Cable de alimentación australiano	200337
Cable de alimentación IND	200341

4.3. Connecting to the mains

Connect the Power Supply Unit (PSU) to the hub using the DIN de 4 pines plug. Conecte el cable de alimentación a la fuente de alimentación. Siempre cumpliendo las normas de seguridad

locales, conecte el cable de alimentación a la toma de corriente de 100 – 250 V CA y encienda el hub utilizando el pequeño interruptor de alimentación adyacente al conector de entrada de alimentación del hub. Cuando el dispositivo se enciende, se ilumina un led rojo. El hub ya está listo para cargar los dispositivos conectados.

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

4.4. Conexión al host

Once the power is connected connect the PDS-C4 to your host system using a USB 2.0 tipo C cable. El uso de un cable de host incorrecto puede dar lugar a que el hub y todos los puertos posteriores no sean reconocidos por su host.

Please note that USB specifications require a minimum 100 mA charge current to be delivered during data transfer. As indicated in above, if the attached device has a BC1.2 compliant CDP port, the device can draw up to 3 A while transferring data.

4.5. Registration

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

4.6. 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://cambrionix.atlassian.net/servicedesk/customer/portals

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 it will be helpful to supply us with 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. Including serial and PO numbers can help identify the product in question faster and speed up the process.

5. Using your PDS-C4

In this section you can find information information on how to use your hub in a charge only or a charge and sync application. You can also find information on managing your hub and changing port modes, connecting multiple hubs to one host and using Cambrionix Software.

5.0.1 LED Configuration

Your PDS-C4 has inbuilt LEDs used to show the state of the ports or devices. These LEDs can be configured to support your own use case, this can be controlled either by using the API to send commands directly or through separate software.

The default LED behaviour of the hub is below.

Colour	**Behaviour**
Flashing Red	Port is in charge mode and is profiling the device
Red	Port is in charge mode and is charging
Yellow	Port is in sync mode and has a host connection
Green	Port is in charge mode and the device has reached the charged threshold

5.1. Using without connecting to host

When the Hub is switched on and is not connected to a local host computer it is automatically configured to charge devices using its intelligent charging algorithm. Simply connect the devices to be charged to any of the available ports (not the Host Port) using USB - compliant cables.

Once the devices are connected, the algorithm will detect the highest charge rate allowable for each attached device. Charging at the optimum rate (up to 3 A) specified by the manufacturer will commence once profiling is complete. Depending on the state of charge of the device attached, this may take tens of seconds.

5.2. Using when connected to host

5.2.1 Connecting the Hub to a host computer

Connect the PDS-C4 to your host system using a USB 2.0 tipo C cable. Using an incorrect host cable may result in the hub and all subsequent ports not being recognised by your host.

5.2.2 Charging

When the Host Port is connected to a local computer, the hub defaults to Sync mode and charge currents are determined according to USB Implementers Forum (USBIF) Super-Speed USB3 specifications. If the attached device complies with USB-IF Battery Charging specification BC1.2 and supports Charging Downstream Port (CDP), the hub can provide high-speed charging at up to 3 A. If the connected device does not comply with BC1.2, the charge current will be limited to 500mA in compliance with USB specifications.

If you wish to limit the charging to your devices whilst connected to your host system then you can disable CDP on all ports by inputting the following commands.

The CLI commands for turning off the sync charg options, with a 1 or 0 per port.

```
settings_unlock
settings_reset
settings_set sync_chrg 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
settings_set alt_sync_chrg 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
reboot
```

This can also be done via the API if this is easier. Just supply that string (joined with \n) like:

```
cbrxapi.cbrx_connection_set(handle, "Settings", "settings_unlo-
ck\nsettings_reset\nsettings_set sync_chrg 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0\nsettings_set alt_sync_chrg 0 0 0 0 0 0 0 0 0 0 0 0 0
0 0 0\nreboot")
```

Note that settings_reset clears any previous settings, so if you need to retain something else, it would be better to issue settings_display first, which gives you the entire settings which you can then modify and re-issue in entirity.

5.2.3 Data Transfer

If you wish to transfer data, change applications, restore or update your mobile device, a data

connection to a local host computer is required. The hub is compatible with macOS®, Windows™ and Linux® operating systems and can transfer data between these operating systems and many mobile operating systems such as iOS™ and Android™.

In order to transfer data, connect the host port to your local (host) computer using a USB 2.0 tipo C compliant cable. Any devices connected to the hub will now appear as if they were connected to the host computer's USB port.

5.2.4 Protocolo e interfaz de comunicación

los PDS-C4 aparece como un puerto serial virtual (también llamado UART o VCP). En Microsoft™ Windows, el sistema aparecerá como un puerto COM. En macOS®, se crea un archivo de dispositivo en el directorio /. Tiene el formato /dev/tty.usbserial S, donde S es una cadena serial alfanumérica única para cada dispositivo.

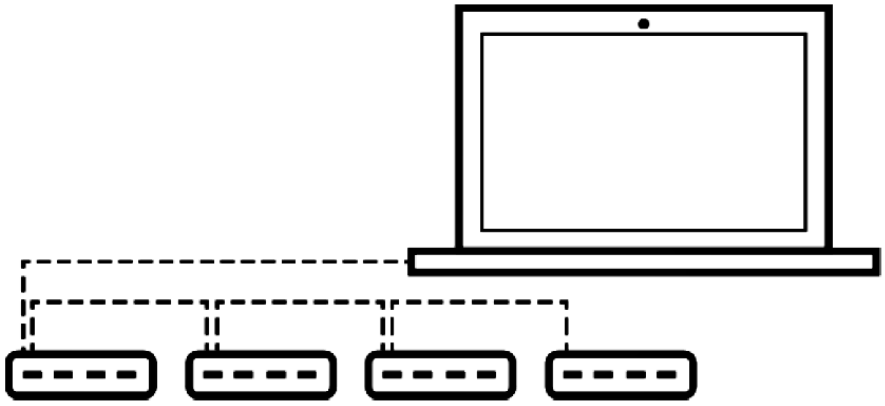
Los dispositivos incorporan un circuito convertidor USB a UART FT230X de FTDI International. En Windows 7 o posterior, se podría instalar automáticamente un controlador (si Windows está configurado para descargar controladores de Internet automáticamente). Si este no es el caso, o si se utiliza una plataforma Mac® o Linux®, el controlador puede descargarse de www.ftdichip.com. Los controladores VCP son obligatorios. Para computadoras Linux® o Mac, se deben usar los controladores predeterminados del sistema operativo.

La configuración de comunicaciones predeterminada debe ser de 115 200 baudios, 8 bits de datos, sin paridad y 1 bit de parada. En ocasiones, se indica como 115200,8,N,1. No se utiliza control de flujo. Se debe seleccionar la emulación de terminal ANSI

5.3. Scalability

Si desea sincronizar más dispositivos, es posible interconectar varios hubs para poder gestionar más dispositivos desde un solo equipo host simultáneamente.

Para poder encadenar múltiples hubs, cada hub debe estar conectado a la alimentación eléctrica
individualmente y el primer hub de la cadena debe conectarse al equipo local a través del "puerto de host" del hub. El puerto de host del siguiente hub de la cadena se conecta a cualquiera de los puertos USB posteriores del primer hub. Para añadir más hubs, se procede de la misma manera.



5.4. Manage Ports & Your PDS-C4

Each port on your PDS-C4 can be managed either individually or all together. You can turn the ports off and on, change the port mode or change the charging profiles. This can be done either through LiveViewer or by connecting to the hub via the API.

5.4.1 Port Modes

Sync	Turn specific ports or the whole hub to sync mode (data and power channels open)
Off	Turn specific ports on or off or switch the whole hub on or off. (no power and no data channels open)

5.4.2 Charging Profiles

To ensure attached devices charge at their optimum rate, our smart USB hubs come with the below intelligent charging profiles built in:

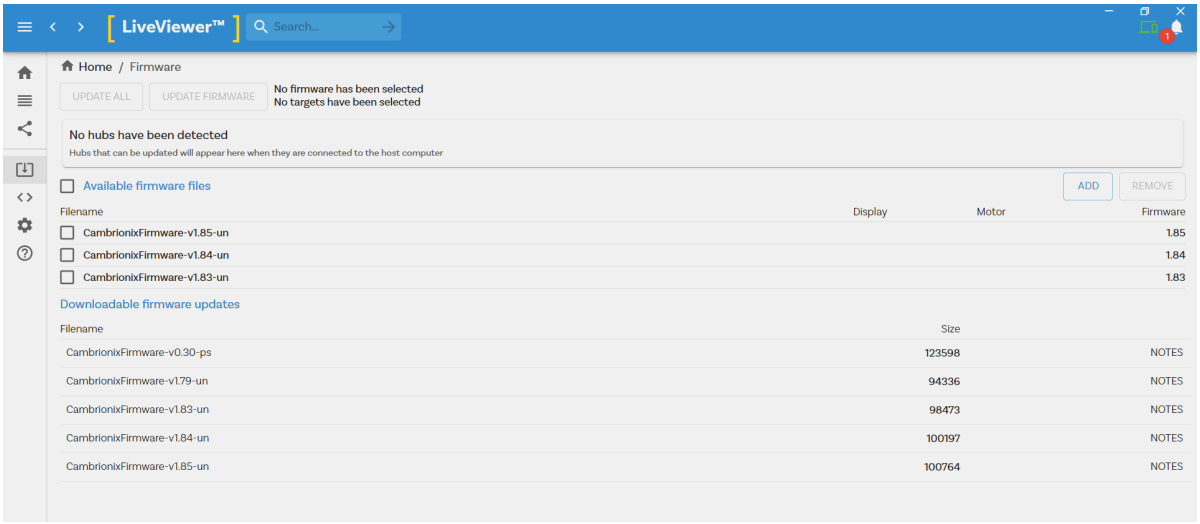
1	15W
2	27W
3	45W
4	60W

5.4.3 Firmware

The firmware can be kept up to date using our LiveViewer software. As part of delivering an easy user experience our LiveViewer application is now a set-and-forget solution. The LiveViewer application will find out what firmware your USB hub has and present an update for you, ready to just hit install.

To update the firmware first go to the firmware updater section of LiveViewer. Here you can see the available Firmware versions available to download and install to the hub. To download a firmware file click on the version under the "downloadable firmware updates" section. once downloaded it will appear in the "Available firmware files" section.

The current firmware version on the hub is displayed in the firmware updater section alongside the hubs name. This will appear red if a newer version is available or green if it is the most up to date.



To install the firmware onto the hub simply click the hub/ hubs connected that you want to update and then select the firmware version you want to upgrade to. Once selected press the update button at the top and the update will commence.

	PRECAUCIÓN
	Your Cambrionix Firmware may get corrupted • Do not interrupt the Firmware update process • Do not disconnect the power during the update process

5.5. Software

Más productividad y ahorro de tiempo. Cambrionix ofrece tres interfaces posibles para la monitorización y administración del hub:

- LiveViewer
- API de Cambrionix
- Instrucciones de línea de comandos

The PDS-C4 uses string commands to communicate with the host system. These can be sent via the virtual serial port of the PDS-C4 directly, or the API can be used to provide other protocols that sends translated string commands. LiveViewer can use the API to interact with the devices through a user friendly application.

There are three different channels for both our LiveViewer application and the API. The three channels are Alpha/ Beta and Release. We would recommend using the release version of both the API and LiveViewer.

We will push bug fixes and any updates through Alpha and then onto Beta before it is merged into the Release version. If you have found a bug that we have a fix for, the Alpha and Beta releases may already have addressed these and implemented fixes.

5.5.1 Installing-Software

Cambrionix has 2 pieces of software which can be used to manage the devices and your hub using different host systems. In this section we have instructions and information on using our software on 3 of the most popular host systems.

Our software is available to download from www.cambrionix.com/software, you will find software available for Windows™, Mac® and Linux® Systems.

To install on Mac® and Windows™ systems download the install files from the above link, once downloaded run the install process and dialogue boxes will appear to help you through installation and initial set up.

For Linux® systems download the install files from the website at the above link. Once downloaded, you can either install it from the desktop GUI, or from the command line via:

```
sudo apt install ./
```

after this command you will need to enter the file name that has just been downloaded from our website.

5.5.2 LiveViewer

LiveViewer is an Application that can be downloaded from www.cambrionix.com/products/liveviewer . Once downloaded and installed on the host computer, LiveViewer allows you to switch the ports on and off, set the port to charge only, or to sync mode. LiveViewer's home page shows the following information about all the ports:

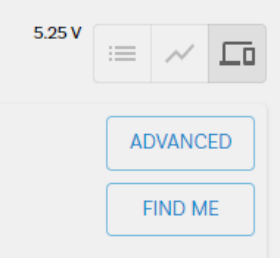
- Status (attached/disconnected)
- Mode (Charge/Sync/Off)
- Profile (Charging profile)
- Duration (how long the device has been attached)
- End time (time the battery reaches a threshold (full) level)
- Current (instantaneous charge current in mA)
- Energy (present energy rate)

Tick boxes adjacent to each port symbol allow that port mode to be changed. When the port is in Sync mode, only instantaneous current can be monitored through LiveViewer. When the port is in Charge mode, the charge profile, instantaneous current, energy rate, duration of charge and end time are displayed. In addition to individual port information and control, LiveViewer displays the hub rail voltages, time since switched on, total instantaneous current and power, and temperature. Further information on LiveViewer is available on our website.

Configuración de NVRAM

Dentro de su concentrador hay algunas configuraciones controlables específicas llamadas "configuraciones de RAM no volátiles" que se conocen como configuraciones de NVRAM. Estos controlan una variedad de configuraciones diferentes en su PDS-C4 .

Puede navegar a la configuración de NVRAM abriendo LiveViewer y seleccionando el concentrador al que desea conectarse. Una vez que haya elegido el concentrador conectado, navegue hasta el icono de abajo en la parte superior derecha de la pantalla desde LiveViewer y haga clic en Avanzado.



Una vez que haya presionado Avanzado, esto lo llevará a la página de configuración avanzada donde puede ver y cambiar la configuración de NVRAM, incluida la reversión a la configuración predeterminada de fábrica.

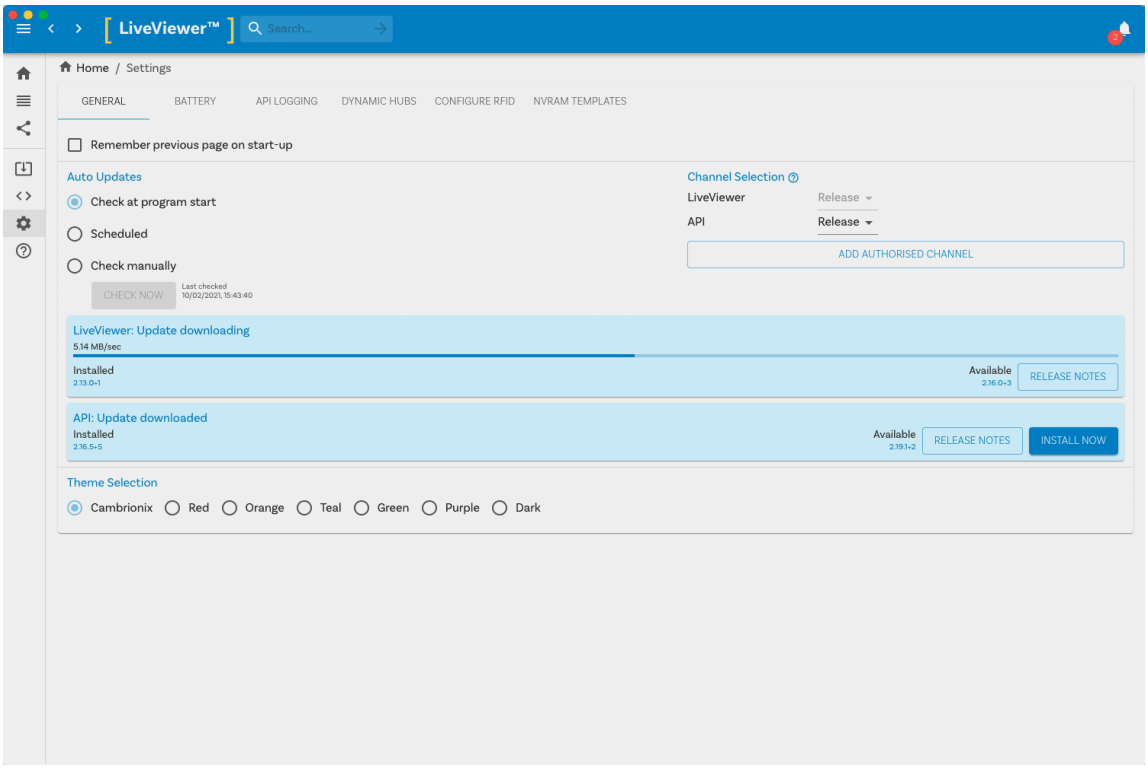
5.5.3 Cambrionix API

Cambrionix API allows you to monitor and control each port in more detail and to integrate these functions into your own workflow processes. The API comprises a daemon that can be downloaded from www.cambrionix.com/products/api and installed on the host machine. Port information and control can be provided through the API using JavaScript Object Notation (JSON) Remote Procedure Calls (RPC) over TCP. JSON-RPC calls send a request to the API to "Get" port, device or Hub information, or "Set" port functions (such as mode). A library of sample Python code can be obtained from www.cambrionix.com/products/api to help you integrate many of these functions into your process workflow alongside the full User Guide.

5.5.4 Updating Software

By using LiveViewer you will be able to automatically download and install the most up to date software (LiveViewer and the Cambrionix API)

By going into the settings section on the left hand side of LiveViewer you can navigate to the general tab and under this can see the options for keeping both LiveViewer and the API up to date.



You can select when you would like the automatic software checks to take place or if you prefer can change to a manual update selection. You can also select which version of the software you would like to use between the options of Alpha, Beta or Release.

When you have some software updates available you can select install now to begin the installation process, a progress bar will appear to show the installation status. From this bar you can also view the release notes for the version of the software you are looking at.

5.5.5 Removing Software

If you wish to uninstall the software (Cambrionix LiveViewer and Cambrionix API) from your host system this can be done by the following steps. One thing to note when removing the API is to check you have also removed the recorder service which will install alongside it.

Windows

To remove the software from a windows system you can do so by going into "Add or remove programs" find the software you wish to remove and then selecting it and pressing "uninstall"

macOS®

To remove the software from a macOS® system Locate the application in the Finder, Drag the application to the Trash, or select the application and choose File > Move to Trash. At this stage you may be asked to enter the name and password of an administrator account on your Mac®. Then to completely delete the application, choose Finder > Empty Trash.

Linux®

To remove software on Linux® there are two options.

The first is to use Software centre, then either use the list of installed applications or the search bar to find the software you wish to remove. Once you have selected the application click on the remove button and you will be prompted for a password, enter the password and the software will be removed.

The second way you can remove software is by using the command line. All you need to do is to use the command in the following fashion:

```
sudo apt remove program_name
```

You'll be asked to enter your account password. When you enter it, nothing is visible on the screen. You will need to confirm removal it will ask for your conformation, press the enter key or Y key: Keep in mind that you'll have to use the exact package name in the apt remove command otherwise it will show 'unable to locate package error'. What you can do is to type the first few letters of the program you want to uninstall. And then hit the tab key. It will show all the installed packages that match those letters at the beginning of their names.

5.5.6 Command Line Instructions (CLI)

Command Line Instructions can be used to control and monitor the functions of the hub and attached devices. In order to use the command line interface a serial terminal emulator must be installed on the host computer. Examples include Serial, ZTerm, PuTTy, and Minicom. If you would like more information please look at our more in depth information here www.cambrionix.com/cli

Two example commands can be seen below, you can use these commands to check hub information and health.

Command	Action
system	Show hardware and firmware information
health	Show voltages, temperatures, errors and boot flag

5.6. Cleaning your PDS-C4

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.

	**⚠PRECAUCIÓN**
	Electric shock or personal injury may occur • 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 contact Cambrionix immediately

- Asegúrese de que el producto esté apagado y de que el cable de alimentación se haya desconectado del producto. Sostenga el cable de alimentación junto al enchufe y no toque el enchufe ni el cable de alimentación con las manos mojadas o húmedas, ya que podría provocar una descarga eléctrica.
- Limpie el producto con un paño limpio, seco y suave. No utilice detergentes que contengan alcohol, disolvente ni agentes tensoactivos. No rocíe agua ni detergente directamente sobre el producto.
- Humedezca un paño suave y seco en agua y escurra bien para limpiar el producto según sea necesario
- Seque bien el producto una vez finalizada la limpieza
- Vuelva a conectar el cable de alimentación y utilice el producto como se recomienda una vez que se haya completado la limpieza y el secado.

6. Product Specifications

The PDS-C4 is manufactured in the Reino Unido

6.1. Requisitos de la alimentación entrante

Voltaje de entrada	24 V CC
Corriente de entrada	15 A
Conexión de entrada	DIN de 4 pines

6.2. Potencia de salida

Voltaje de salida	Máximo 21 V
Corriente de salida (máx. por puerto)	3 A
Potencia de salida (máx. por puerto)	60 W
Potencia de salida (total)	200 W

6.3. Especificaciones físicas

Conectores de entrada	1 x USB 2.0 tipo C
Puerto de expansión	1 x USB 2.0 tipo C
Conectores de salida	4 x USB 2.0 tipo C
Velocidad máxima de datos descendentes por puerto	480 Mbps
Rango de temperatura ambiente de funcionamiento	0-35 °C
Humedad relativa	Del 5 % al 95 % sin condensación
Dimensiones	106x126x36mm
Peso	1,6 kg

6.4. Consumibles y realización de pedidos

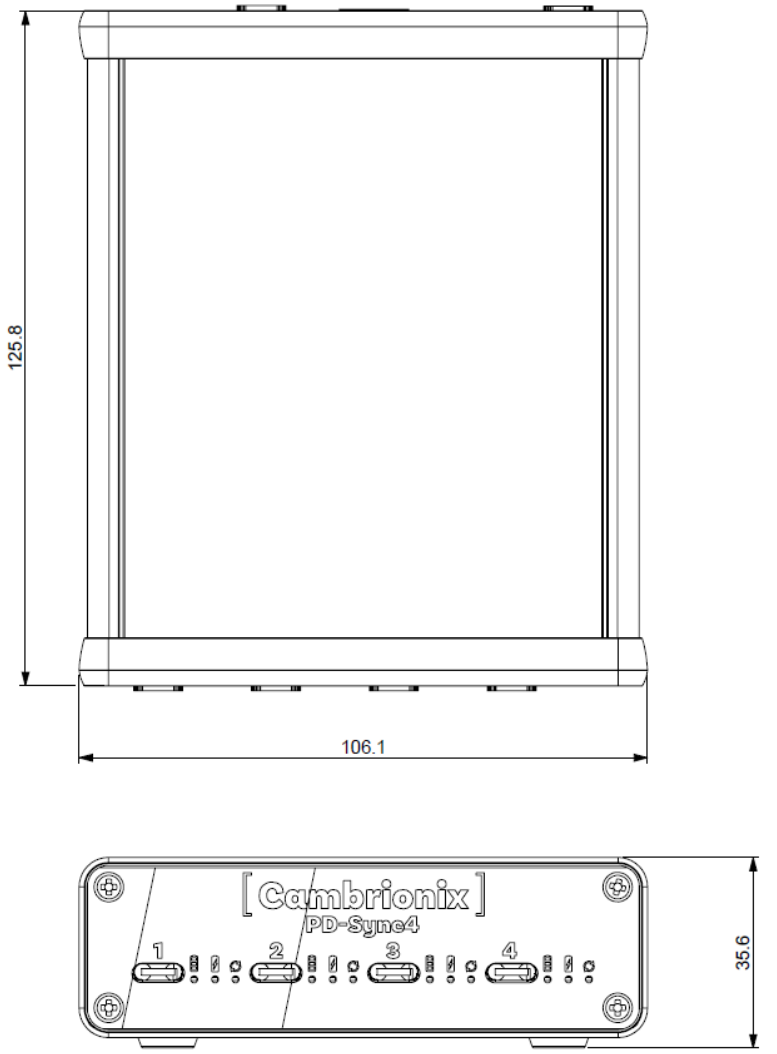
A continuación, se muestra una lista de los productos consumibles que puede necesitar para su PDS-C4, incluidos los cables que necesitará para conectar los dispositivos al hub.

Cables	4 x USB 2.0 tipo C

Si necesita alguna pieza de repuesto, como los cables de alimentación o USB 2.0 tipo C cable, estos se pueden pedir citando el número de pieza del producto y el número de pieza de repuesto (disponible en la sección de lo que se incluye)

Estos se pueden pedir al distribuidor o socio de soluciones que compró su PDS-C4 desde, o desde Cambrionix directamente.

Para encontrar uno de nuestros socios locales, visite www.cambrionix.com/partners donde puede obtener información sobre los proveedores y distribuidores locales que pueden ayudarlo y encontrar su información de contacto.



6.5. Power Supply

Input Voltage	100-250Vdc
Input Current	4A @ 115VAC
	2A @ 230VAC
Input Frequency	50-60Hz
Input Connector	C14
Output Voltage	24V
Output Current	0 - 9.2A
Output Power	221W
Output Connector	4-pin DIN

Dimensions	210 x 85 x 46mm

7. Troubleshooting

If you experience any issues with your PDS-C4 then please try the following solutions, if your issue is not addressed in this section then please contact your local vendor or Cambrionix.

7.1. Initial troubleshooting tips

Some tips and information to check first.

- If you plug a device (phone, usb stick) into the hub, does it appear to the OS.
- If you directly connect the same device to the port the hub is in, does it appear to the OS.
- Try switching updater cables with one that is working/ use cable in a hub which is working

7.2. Logging through LiveViewer

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

1. Open LiveViewer (if this is not already downloaded then go onto our website and download both the API and LiveViewer) www.cambrionix.com/software
2. Once in LiveViewer on the left hand side of the screen select the settings section.
3. Once in the settings section select the API tab at the top of the screen
4. In the API section click the “select all” tick box and then click the save button.
5. After this is enabled use the hub in a way that causes the issue you are seeing
6. Wait for the issue to take place i.e. When updating an iPad the device disconnects
7. Make a note of the time that the issue takes place and then go back to the API page in LiveViewer and press the zip logs.
8. Once you have the logs un tick the “select all” box and save your settings
9. Send the logs into us for us to take a look at.

7.3. Hardware Failure

If the Hardware fails then the LEDs can flash in a pattern to give information on the type of failure that has occurred. The power LED will flash the pattern if no leds are present on the downstream ports.

The unit will blink 4 times followed by 8 long or short flashes which then repeat, the flashes are a number in binary which should match a number in our error code list.

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

7.4. Device connection.

If you are having device connection issues please read through the following common solutions to see if this resolves the behaviour you are observing.

Conexión de dispositivo inestable

Algunos dispositivos pueden tener conexiones inestables con su sistema host a través del PDS-C4 . Solo hemos observado este comportamiento en dispositivos muy pequeños y al deshabilitar CDP esto ha resuelto todos los problemas y las conexiones son estables.

Puede deshabilitar CDP a través de la configuración de NVRAM, ya sea mediante la configuración avanzada y desactivando "Alt Sync charge" o mediante la API y deshabilitando a través del código. por ejemplo, usando la línea de comando, las instrucciones serían las siguientes.

```
settings_unlock
settings_set sync_chrg 0000000000000000
```

Dispositivos desconocidos

A veces, dentro de Liveviewer y el administrador de dispositivos, el dispositivo conectado puede aparecer como un dispositivo desconocido.

Esto puede deberse a que el sistema host en cuestión necesita ser de confianza en el dispositivo. Esto se puede hacer en el propio dispositivo en la conexión inicial.

Esto también podría deberse a una cantidad insuficiente de puntos finales disponibles en el controlador USB en el sistema host. Esta es una limitación dentro del controlador USB y solo puede resolverse si conecta menos dispositivos USB al controlador en cuestión.

No se pueden conectar más dispositivos

A veces, puede llegar al límite del punto final de su controlador USB y esto puede impedirle conectar más dispositivos a su sistema host.

Una forma de crear más espacio es cambiar las conexiones de USB3 a USB2. Puede cambiar la conexión desactivando USB3 en el BIOS al iniciar.

Una forma mucho más sencilla es usar cables USB2 en lugar de cables USB3 y esto limitará la conexión a USB2

7.5. Hub connection issues

If you are having issues with the hub and connecting to your host system please see below toubleshooting solutions.

El concentrador no se conecta al host

Si estás viendo que el PDS-C4 no se está conectando al sistema host, uno de los problemas puede deberse a que los controladores USB en su sistema host no están actualizados. Es una buena práctica asegurarse de tener instalados los últimos controladores y actualizaciones en su sistema host, que generalmente es manejado por el sistema operativo, pero a veces puede requerir una actualización directamente del fabricante de controladores de host USB, que se encuentra en su sitio web.

Los controladores USB necesarios son controladores FTDI que se pueden encontrar en el sitio https://ftdichip.com/drivers/

No se puede acceder al puerto COM

Es posible que reciba un mensaje de error que indique "COM (y luego un número) no se pudo abrir (Acceso denegado)".

Esto se debe a que una aplicación tiene control sobre el puerto COM al que está conectado el concentrador y ninguna aplicación posterior puede acceder al concentrador. Para resolver esto, deberá cerrar cualquier aplicación que controle el puerto COM antes de abrir otra.

7.6. No GUI

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
```

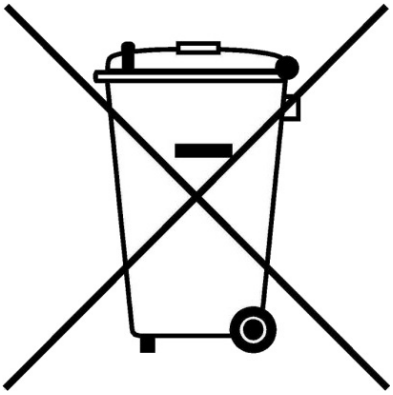
You may delete the file below when you are finished with it.

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

8. Disposal

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

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.



Cambrionix PRN (Producer Registration Number) For the UK is "WEE/BH191TT".

9. 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.

9.1. What do I do if my order arrives and something the product is faulty or is physically damaged?

- If you have received your order in a damaged box and/or the product has physical damage please contact Cambrionix Customer Support. 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 and provide as much information as possible and including any steps followed to troubleshoot internally.
- Please include photos of the damaged box and/or 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.

9.2. 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 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 original packaging where you can. Where the original packaging is not available then 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 of shipment
  - Preferred collection date and time.

10. Compliance and Standards

- Certificado CB
- Probado y marcado CE
- Probado y marcado según la Parte 15 de la FCC
- Alojado en una envolvente a prueba de incendios de la especificación UL94-VO
- Cumplimiento de RoHS
- Probado independientemente por Underwriters Laboratory (UL) con el número de expediente #E346549

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Cambrionix Ltd
The Maurice Wilkes Building
Cowley Road
Cambridge CB4 0DS
Reino Unido

+44 (0) 1223 755 520
enquiries@cambrionix.com
www.cambrionix.com

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