

Raption 150 Compact

User Manual



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Here's your guide to use and configure Raption 150 Compact

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This manual contains all the necessary information for the proper use of the Charge Point and helps the user to perform charging with a high level of efficiency and safety.

The CIRCONTROL Charge Point provides a 150kW solution for charging EVs. Its innovative and original design provides a quick and intuitive way for recharging the electric vehicles, according to the current regulations. It can carry out loads in direct current (DC), either individually or simultaneously.

The unit integrates an intuitive user interface easy to use. It is an 8" touch screen by which all necessary operations for recharging are performed. It has been designed vandal-proof in compliance with all requirements regarding IK indices. In addition, the Charge Point also has a communications system that allows monitoring and control remotely via OCPP and use XML parameters while the recharging is being performed. This feature provides an easy way to integrate the Charge Point into superior systems that allow to the owner or system manager monitor it.



Read carefully all the instructions before using the Charge Point.



Important safety instructions

- Do not use the Charge Point for anything other than electric vehicle charging modes which are defined in IEC 61851-1.
- Do not modify the Charge Point. If modified, CIRCONTROL will reject all responsibility and the warranty will be void.
- Comply strictly with electrical safety regulations according to your country.
- Do not make repairs or manipulations with the unit energised.
- Only trained and qualified personnel should have access to the electrical parts inside the Charge Point.
- Check the installation annually by qualified technician.
- Remove from service any item that has a fault that could be dangerous for users (broken connectors, caps that don't close...).

- Use only Circontrol supplied spare parts.
- Do not use this product if the enclosure or the EV connector is broken, cracked, open, or shows any other indication of damage.
- Adaptors or conversion adapters and cord extensions set are NOT allowed to be used.
- The device does not emit noise, ultrasounds, electromagnetic fields and does not produce harmful substances, thanks to which it can be operated in the environment.
- Pay attention to traffic in busy streets
- Waste generated after the disassembly of a waste device or a device taken out of service is handed over to a person conducting activity in the field of recycling or conducting activity in the field of recovery processes.





• HMI: there is a TFT colour touch screen of 8 inches which is the interface between the Charge Point and the user. Provides information about every step of the charge transaction. Also includes the detail of the in progress charge transactions (SoC, charging time remaining, etc).

• RFID: there is a radio frequency reader that allows user authentication to proceed with the recharging of the electric vehicle. At the discretion of the facility operator, the user's recharge also can be allowed or denied.

• User Management: provides a database that associates users with one or more identification cards, you can also assign consumption and charging logs.

• Beacons light: by a LED beacons located above connectors, it is indicated the charging status of the socket/connector.

• Ethernet: the unit allows communicate using TCP / IP on an Ethernet network, giving flexibility to the system operator and management of the Charge Point.

• Remote monitoring and control in real-time 4G: it can be done via Circontol software and also via OCPP integrations through the integrated router. In addition, by using a standard Web browser, you can access to the Charge Point and adjust the settings remotely.

• Historic charge transactions: the system is able to generate charging process reports, according to the historical database of the Charge Point.

• Energy metering: two integrated meters are measuring power and energy consumed by the EV during a charge session. Both meters are MID certified.

• OCPP integration: OCPP is a communication protocol between the Charge Point and management platforms (BackOffice) for comprehensive management of charging. This integration allows, among other things, management and user authentication as well as a variety of parameters to monitor during a charge transaction'.







| 1- Cover | 2- CCS light beacon | 3- CCS holder | 4- CCS connector |
|------------------------|---------------------------|----------------------------|-----------------------|
| | | | |
| 5- Handle | 6- RFID reader | 7- Card payment | 8- Touch screen |
| | | | |
| 9- Air inlet Unit | 10- CHAdeMO light beacon | 11- CHAdeMO holder | 12- CHAdeMO connector |
| | | | |
| 13- Power M. air inlet | 14- Decorative rear panel | 15-4G Antenna | 16- Courtesy light |
| | | | |
| 17- Exit cable | 18- Emergency button | 19- Decorative front panel | |

Note: Depending on the model, the components can vary.



• Units specified in millimeters:











Over each connector there is a beacon light, it indicates the state of charge in which the socket/connector is located.



| Colour | Status | Description |
|--------|-----------|---|
| Green | Available | The connector or socket is available to start a charging session |
| Blue | Charging | The connector or socket is performing a charging session |
| Cyan | Reserved | The connector or socket has been booked by system operator through OCPP |
| Red | Error | The Charging Station indicates that the emergency button has been activated or some error has occurred. Check the HMI Screen and follow the instructions |



The Charge Point is equipped with two connectors of different load; these can recharge a large range of vehicles:

- DC (Mode 4): CHAdeMO, Tethered cable, 3.5 meters. Up to 200 A / 100 kW
- DC (Mode 4): Combo 2 (CCS), Tethered cable, 3.5 meters. Up to 375 A / 150 kW





The Charge Point can operate under the following scenarios:

- Only DC CHAdeMO
- Only DC CCS2
- Simultaneous, CHAdeMO and CCS 2 connectors at the same time

Optionally, Charge Point can be configured to work without simultaneity. It is required a specific configuration file.





DC Connectors Lock

If your Charge Point is equipped with the **'Mechanical connector locking'** accesory at DC holders, is not possible to pull back the connectors from holders without first unlocking it.

System consists on a sensor for connector detection and the lock mechanism. CHA connector is locked by the Charge Point; CCS connector is locked by a piston.

CHA Holder





CCS Holder

Also, there is one Led over each holder indicating the lock state:

- $\mathbf{Red}
 ightarrow$ Connector locked
- $\mathbf{Off}
 ightarrow$ Connector unlocked

The connectors will be delivered right in the moment than the user push over the 'Connector touching button' when choose the option in the HMI screen:





The first time the Charge Point is powered on, the system will take around 10 seconds to start up, the screen will show next image:



In the lower right corner, the firmware version is shown. After 10 seconds, the first screen that appears is the screensaver.







Tap over the screensaver, and the HMI will skip to the next screen:

Depending on the optionals chosen, the identification methods shown in this picture can vary.

At this new screen, the Charge Point is asking for showing the identification method the user is going to use in order to start a charge transaction, as you can see there are four possible options.

- Choosing RFID, code reader or keyboard options, are the options that will let to initiate a 'Charging session' to the user that has the identification card, has been registered in advance or a code has been given to type it manually in the screen.

- Paying by a debit or credit card, that will let to initiate a 'Charging session' to the user without been registered in advance.

In the lower right corner, it shows the connectors status and the charging process so as to know the Charge Point availability.

Also, at this screen and during all the process is possible to change language, pressing on the top of the screen over the **'Flag'** touch symbol:



Next screen will appear, press over your language's flag*:



This option will allow user to change the language ONLY for the current Charge Transaction. When Charge Point returns to main or standby screen, it will return the default language, which is configured in the Setup Webpage.

(*) More languages than shown available to choose.



B Starting a charging session

Once you have shown your identification card, the HMI will show next screen:



Wait while Charge Point authorizes the user.

If everything is correct and the user is authorized, the HMI will show next screen:



Now, the user can choose the connector, always depending of the sort of vehicle that you have and if the connector status is available:



back to the "identification screen".

Once you have chosen your connector, follow the instructions in the screen to start the charge transaction.

1- Connect your vehicle and press the 'Start' button



At any time is possible to tap this button in order to go back to the previous screen.



2- Checking vehicle connection... Please wait



In a few seconds, the charging session will start and the HMI will show the charging process.



Tap this button in order to go back to the "identification screen".

O Special events starting a charge

A - "Not authorized": some Charge Points could be working under the supervision of the main management system, called Back Office. It can generate a whitelist in order to register new users, manage charging sessions, etc. If the user is not authorized, the HMI will show the following message:



B - "Authorization failed": if there is some communication problem with the Back Office right at the connecting time:





C - "Not authorized, Concurrent charge": in this case, the identifier is already involved in another charge transaction:



D - "Not authorized, Authorization expired": it is possible that the back office has put a deadline to your identification card and this date is already expired:



E - "Not authorized, Authorization blocked": it is possible that the back office has blocked temporarily your identification card.



F – After the user has been properly authorized, just at the moment that has to choose the connector, the screen will show the connectors status. It could appear some problem. It will be not possible to use any connector with tool symbol, like in the next picture:





G- Almost all vehicles cannot charge if the shift lever is not in parking mode position. This situation can be detected by the Charge Point and it will be displayed by HMI as **"Please, check vehicle gear shift position, put it in parking mode"**. After check it, press over **'Retry'** button.



H– Is possible that the problem that appears is not a concrete one. The HMI will show next screen, press over **'Retry'** button.



D Stopping a charging session

The HMI is showing the charging process and next message **"Show your identification to stop"**, the session can be stopped by the same user that has started it.



After showing the identification card, the Charge Point will allow you to stop the charging session by pressing over the **'Stop'** touch button:





Once you have stopped the charging session the HMI will show the summary screen,. Press over the **'Exit'** touch button and disconnect your vehicle:





Depending on the the connector used, the HMI screen can show different process information. The information is almost the same except for few details.



- 1- Language button: possibility to change the HMI language.
- 2- Additional information: current status, errors, battery status, etc.
- **3- Connector information:** type and identificator of connector, power of charge, etc.
- 4- House touch button: it goes back to the "identification screen".
- 5- Charge time with status bar: charging time elapsed so far.
- 6- Energy charged: energy supplied to the vehicle so far.
- 7- Battery SOC: it indicates the current battery state of charge.

8- Process indicator: at first moment it is red, as the vehicle is charging it will change to orange, changing after 75% of battery charged to green.

9- Remaining time until 100 %: remaining time until 100 % of the SOC.

10- Remaining time until 85 %: remaining time until 85 % of the SOC (information only available in CCS plug)



6

7

8

Charging summary 6 Language **Charging has finished** 2 **Disconnect your vehicle** 232.00 kWh (-) 00:25:00 3 Energy charged Recharge time €6.60 60.0% 4 Battery status Total amount (□) User request

Reason for stopping Thank you for using our chargers **5 Exit**

1- Language button: possibility to change the HMI language.

2- Process instructions: different instructions can be displayed.

3- Energy charged: total energy charged at the end of the charging session.

4-Battery SOC: It indicates the final battery state of charge at the end of the charging session.

5- Exit button: It has to be pressed in order to finish the charging session. After pressing, the HMI screen will go back to the "identification screen".

6- Recharge time: total recharging time at the end of the charging session.

7- Information button: pressing over this button you can get information about the charging session tariff applied.

8- Stop reason: It shows why the charging session has been stopped.



If for any reason the Emergency button is pressed, all in progress charge transactions will be stopped, the beacon lights will turn red and it will not be possible to start new charge transaction until the recovery process is completed successfully. All the power modules will shut down in order to protect the user and the own Charge Point. The HMI screen will remain powered up in order to show the instructions.



At first moment, the **'Restart'** touch button will be in light grey and it will not be able for pressing. Once emergency button has been unlocked, the **'Restart'** touch button will be in green and able to use.







The HMI screen shows a different symbols over the connector pictures, as you can see below:

| (%) (%) | - It means that the connector is ready to be used. |
|------------|--|
| 8 | - This connector is out of service for any technical reason. Press over 'Information' touch button in order to get more information about it. |
| 8 | - The Charge Point is out of service because the emergency button has been pressed. This fact affects all the connectors at the same time. |
| (%) (%) | - The connector is disabled. The Charge Point is out of order due to some maintenance job or because the Back office has decided to stop it. |

| 8 | - The user cannot use this connector because another user is already using it. |
|---|--|
| 8 | This connector has been reserved and only will be able to use per the user that has made the reserve. NOTE: if the user that has reserved the Charge Point is yourself the charging session will start normally, if not, the Charge Point will not be able to charge until the date and time displayed have expired. |
| (%) () () () () () () () () () () () () () | - Applies when simultaneous charge is not available. In case, one connector is booked or already in use. |



Consulting the connectors status

It is possible to press over each connector picture to get more information about the status:

1 - CONNECTOR AVAILABLE



2 - CONNECTOR IN ERROR



3 - CONNECTOR DISABLED



4 - CONNECTOR IN USE







5 - CONNECTOR RESERVED



6 - CONNECTOR BLOCKED PER RESERVED

*Applies only when simultaneously charge is not available.



7 - CONNECTOR BLOCKED PER CHARGING

*Applies only when simultaneously charge is not available.



8 - CONNECTOR BLOCKED PER ERROR







The Charge Point can be configured and monitored to establish owner preferences or specific setup using integrated Ethernet communication port allocated in HMI screen device (see below)..

Once Service PC is configured as bellow procedure and connection is established with the Charge Point, direct access to the main setup page will be allowed.

The Charge Point is shipped from the factory with default network setting of "DHCP enabled". It means that the Charge Point will try to obtain an IP address from a DHCP server available on the network.

In case of there is no DHCP server available on the network, follow the step by step guide from the next pages in order to assing an IP address to the Charge Point and do the settings



The Ethernet port is located at the bottom left side of the rear part of the HMI screen.





Below table shows, hardware and software needed to setup an IP address to the Charge Point.

| X | - Service PC running Microsoft Windows, at least Windows XP . |
|--------------|--|
| | - UTP Cable (Crossover recommended) |
| IP Setup.exe | - IPSetup.exe (*) |
| Const. | - CirCarLife Scada Client (*) |

(*) In order to get the software needed, you can download it from Circontrol Expert Area or contact with support@circontrol.com



Connecting the Service PC with Charge Point needs to be done with static IP address and TCP/IP v4 protocol.

Next section shows how to do this configuration. Below image shows Ethernet connection topology and the IP addresses used in this guide as example.

For Service PC \rightarrow IP: 192.168.1.10

NETMASK: 255.255.255.0

For Charge Point → IP: 192.168.1.50 NETMASK: 255.255.255.0






This section provides a step-by-step guide to connect the Service PC to the Charge Point in order to see real-time status.

1- On the Service PC click over the **'Network icon'** next to the clock of the taskbar, and click on **'Open Network and Sharing Center'**



2- On the left panel, click on 'Change adapter settings'



3- Right click on 'Local Area Connection' and then click on 'Properties'



4- Select 'Internet Protocol Version 4 (TCP/IP)' option and click on 'Properties'

| Connect using: | | | |
|---|--|--|-----|
| Intel 2114 | 0-Based PCI Fast Ethernet Adapte | r (Emulated) | |
| | 6 | Configure | |
| This connection | uses the following items: | | |
| Client fo | or Microsoft Networks | | |
| 🗹 📙 QoS Pa | cket Scheduler | | |
| 🗹 📙 File and | Printer Sharing for Microsoft Netv | orks | |
| Internet | Protocol Version 6 (TCP/IPv6) | | |
| 🗹 📥 Internet | Protocol Version 4 (TCP/IPv4) | | |
| | | | |
| 🗹 🔺 Link-La | yer Topology Discovery Mapper I/ | O Driver | |
| ✓ Link-La; ✓ Link-La; | yer Topology Discovery Mapper I/ yer Topology Discovery Responde | O Driver er | |
| ✓ Link-Lay ✓ Link-Lay | yer Topology Discovery Mapper I/ yer Topology Discovery Responde | O Driver er | |
| ✓ Link-La; ✓ Link-La; Install | yer Topology Discovery Mapper I/ yer Topology Discovery Responde Uninstall | O Driver er Properties | |
| Link-La Link-La Install | yer Topology Discovery Mapper I/ yer Topology Discovery Responde | O Driver er Properties |]< |
| ✓ Link-La; ✓ Link-La; ✓ Install Description | yer Topology Discovery Mapper I/ yer Topology Discovery Responde Uninstall | O Driver er Properties |]< |
| ✓ ▲ Link-La; ✓ ▲ Link-La; Install Description Transmission (wide area net) | ver Topology Discovery Mapper I/ ver Topology Discovery Responde Uninstall Control Protocol/Internet Protocol. | O Driver er Properties The default unication |] < |
| ✓ ▲ Link-La; ✓ ▲ Link-La; ✓ ▲ Link-La; ✓ Install Description Transmission (wide area net across diverse | ver Topology Discovery Mapper I/ ver Topology Discovery Responde Uninstall Control Protocol/Internet Protocol. work protocol that provides commi interconnected networks. | O Driver er Properties The default unication |]<: |



5- Setup IP address and subnet mask like as shown here below and click **'OK'** twice to complete the assigning IP address process to the computer.

| You can get IP settings assign his capability. Otherwise, you for the appropriate IP settings | ed automatically if your network support u need to ask your network administrator s. | ts |
|--|--|----|
| Obtain an IP address aut Obtain an IP address aut Use the following IP addr | tomatically ress: | |
| IP address: | 192 . 168 . 1 . 10 | < |
| Subnet mask: | 255 . 255 . 255 . 0 | < |
| Default gateway: | | |
| Obtain DNS server addre Use the following DNS se Preferred DNS server: Alternate DNS server: | ess automatically rver addresses: | |
| Validate settings upon e | Advanced | |

6- Now execute IPSetup.exe software provided on the Service PC



7- Enter the following parameters and click on 'Configure'

- MAC of the Charge Point (see label on the cover's screen)
- IP address: i.e.(192.168.1.50)
- Netmask: i.e. (255.255.255.0)
- Gateway: leave default settings.

| 🛃 IPSetup | | - • • |
|-----------|---------------------|-------|
| | >> | |
| | MAC | |
| | IP | < |
| | 192 . 168 . 1 . 50 | |
| | 255 . 255 . 255 . 0 | |
| | Gateway 0.0.0.0 | < |
| | Configure Exit | |
| | | |

8- Wait 30 seconds approximately until the process is complete.

Please wait...



9- The process will complete when the following message appears, click on **'OK'**



10- If the message shown is the next one, check the following parameters and click on **'OK'**



- Check IP address entered.
- Check the MAC of the device entered.
- Try with another UTP CAT5e cable.



A Introduction

This section describes how to install the SIM card and setting up the modem. The modem that has been installed in Raption Series is Teltonika RUT 240.

Modem location

The modem is installed inside the unit and the antenna is fixed outside, right on the Charge Point's roof.



Step 1- Open Charge Point's right door and locate the modem, on the rear side.

Step 2- Check that the Charge Point is provided with the antenna on the cover top.



Modem is fully configurated by default in Circontrol.

Only in case it is needed to configure it, remain in this section.

B Modem configuration

1 - MODEM OVERVIEW

The 4G modem installed from factory in the Charge Point is: Teltonika RUT240

This device allows to the Charge Point connects over 4G networks to remotely view or manage the Charge Point status. RUT240 is part of the RUT2xx series of compact mobile routers with high speed wireless and Ethernet connections.



| 1 | LAN Ethernet port |
|----|---------------------------------|
| 2 | WAN Ethernet port* |
| 3 | LAN Led indicator |
| 4 | WAN Led indicator |
| 5 | Power connector |
| 6 | Power LED |
| 7 | Signal strength indication LEDs |
| 8 | SIM card holder |
| 9 | WiFi antenna connector |
| 10 | Reset button |
| 11 | LTE antenna connectors |

(*) WAN Ethernet port is set up as a LAN Ethernet port in order not to disconnect modem from Charge Point during service issues.

2 - CONNECTION STATUS LED

Explanation of connection status LED indication:

- Signal strength status LED's turned on: router is turning on
- 2G, 3G and 4G LED's blinking every 1 sec: no SIM or bad PIN
- 2G/3G/4G LED's blinking every 1 sec: connected 2G/3G/4G, but no data session established
- Blinking from 2G LED to 4G LED repeatedly: SIM holder not inserted or access to network denied
- 2G/3G/4G LED turned on: connected 2G/3G/4G with data session
- 2G/3G/4G LED blinking rapidly: connected 2G/3G/4G with data session and data is being transferred.





3 - SIM CARD INSTALLATION

Insert SIM card which was given by your ISP (Internet Service Provider). Correct SIM card orientation is shown in the picture.



- 1. Push the SIM holder extract button
- 2. Pull out the SIM holder
- 3. Insert the SIM card
- 4. Push in the SIM holder

After installing the SIM card, check out that the 4G antenna (mobile), WiFi antenna and the power connector are properly attached.

NOTE: SIM card is not provided with equipment.

4 – LOGGING IN

After you're complete with the setting up as described in the section above, you are ready to start logging into your router and start configuring it. This example shows how to connect through WiFi:



4.1 Connect your ethernet cable in the LAN port and do all the settings being locally connected (it can also be done from the WAN port when WAN port is configured as a LAN).

4.2 At your service computer, look for access point named ChargePoint_xxxxxxxxxx (where "x" means the MAC Address), and connect on it.





4.3 Open a web browser and type *http://192.168.1.1*. Use the following parameters when prompted for authentication, and then either click Login with your mouse or press the Enter key.

User name: **admin** Password: **Admin001**

| <pre> TEL: </pre> | ΤΟΝΙΚΑ |
|-----------------------|-----------------------------|
| Autho | rization Required |
| Please enter | your username and password. |
| Username | admin |
| Password | ••••• |
| | Login |
| Teltonika solutions | www.teltonika.lt |

You have now successfully logged into the RUT240!, from here on you can configure almost any aspect of your router.

4.4 **Configuration Wizard** will start after logging in. It is necessary to complete Configuration Wizard to setup modem to the correct mode.

Go to **Status** \rightarrow **Network** \rightarrow **Mobile** and pay attention to 'Sim card state' field, it has to be *Ready*.

| ou hav | en't chang | ed the d | efault passw | ord for this rou | uter. To ch | ange route | password click here. | |
|--------|---------------|----------|--------------|------------------|-------------|------------|----------------------|--|
| Mobile | WAN | LAN | Wireless | OpenVPN | VRRP | Access | | |
| M | bile Info | ormati | on | | | | | |
| Mob | le Jil | | | | | | | |
| Data | connection s | state | | | | | | |
| IMEI | | | | 861107031 | 557813 | | | |
| IMSI | | | | 214017501 | 304502 | | | |
| ICCIE |) | | | 893456750 | 100034265 | 3F | | |
| Sim (| ard state | | | Ready | | | | |
| Signa | il strength | | | -77 dBm | | | | |
| Cell I | D | | | 15065313 | | | | |
| Per | | | | 75.40- | | | | |



In order to change the password, remember to adjust it in Charge Point side, as explained in section 4.

4.5 **Network Mobile configuration.** Here you can configure mobile settings which are used when connecting to your local network.

Go to Network \rightarrow Mobile \rightarrow General > Mobile Configuration

| TELTONIKA Status | Network - | Services - | System - | | Logout 🕒 |
|--|-------------------|----------------|---------------------------|-------------------|------------------|
| You haven't changed the default passwo | rd for this route | . To change ro | uter password click here. | | |
| General Mobile Data Limit | | | | | |
| Mobile Configuration | | | | | |
| Mobile Configuration | | | | | |
| Connection typ | OM I | | | | |
| Mod | NAT | • | | | |
| | 4 | | | | |
| PIN numbe | r | | | | |
| Dialing number | r *99# | | | | |
| Authentication metho | d None 💌 | | | | |
| Service mod | Automatic | • | | | |
| Deny data roamin | | | | | |
| Use IPv4 on | у 🔽 | | | | |
| Mobile Data On Demand | | | | | |
| Enabl | | | | | |
| No data timeout (see |) 10 | | | | |
| Force LTE network | | | | | |
| Enabl | | | | | |
| Reregiste | r 🖂 | | | | |
| Interval (sec | 300 | | | | |
| | | | | \longrightarrow | Save |
| Teltonika solutions | | | | | www.teltonika.lt |

Type the APN from your SIM provider and push over 'Save' tab.

NOTES:

1. If your SIM provider require any authentication ask them about what type, PAP or CHAP, select it on 'Authentication method' field and introduce a password and username.

2. If you need to do some custom over the modem configuration, ask the Circontrol Support staff in order to get the Teltonika modem manual.



4.6 In order to know if the connection has been done properly, check next steps:

Go to Status \rightarrow Network \rightarrow Mobile and pay attention to Data connection state, it has to be Connected

| ¢ | TELTONIKA | Status - | Network - | Services - | System - | Logout 🕑 |
|---|--------------------------|----------------|--------------------|-------------------|--------------------------|----------|
| Y | ou haven't changed the o | lefault passwo | ord for this route | er. To change rou | ter password click here. | |
| I | Mobile WAN LAN | Wireless | OpenVPN | VRRP Acces | 3 | |
| | Mobile Informati | on | | | | |
| | Mobile al | | | | | |
| | Data connection state | | Connected | ← | | |
| | IMEI | | 86110703155 | 7813 | | |
| | IMSI | | 21401750130 | 4502 | | |
| | ICCID | | 89345675010 | 00342653F | | |
| | Sim card state | | Ready | | | |
| | Signal strength | | -77 dBm | | | |
| | Cell ID | | 15065313 | | | |
| | RSCP | | -75 dBm | | | |

Go to **Status** \rightarrow **Network** \rightarrow **WAN** and pay attention to *IP address, the modem* must has found a public IP address

| TELTONIKA | Status - Networ | k - Services - | System - Logout 🖻 |
|----------------------------|----------------------------|------------------------|-------------------------|
| You haven't changed the de | efault password for this r | outer. To change route | er password click here. |
| Mobile WAN LAN | Wireless OpenVPN | VRRP Access | |
| WAN Information | | | |
| WAN | | | |
| Interface | Mobile | | |
| Туре | QMI | | |
| IP address | 77.209.11 | .31 🗲 | |
| Netmask | 255.255.2 | 255.192 | |
| Gateway | 77.209.11 | .32 | |
| DNS 1 | 212.166. | 210.6 | |
| DNS 2 | 212.73.3 | 2.67 | |
| Connected | 2h 56m 3 | s | |

Go to **Status** \rightarrow **Network** \rightarrow **LAN** \rightarrow *DHCP Leases* and pay attention to *IP addresses*

| Mobile WAN | LAN Wire | eless OpenV | VPN VRRP | Access |
|------------------|---------------|---------------|-------------------|----------------------|
| LAN Informa | tion | | | |
| LAN Information | | | | |
| Name | IP address | Netmask | Ethernet MAC add | ress Connected for |
| Lan | 192.168.1.1 | 255.255.255.0 | 00:1E:42:19:01:DB | 0h 5m 13s |
| DHCP Leases | | | | |
| Hostname | IP address | LAN name | MAC address | Lease time remaining |
| Service PC | 192.168.1.206 | Lan | A0:88:69:27:D4:B8 | 11h 56m 3s |
| raption-4500c402 | 192.168.1.240 | Lan | 00:26:45:00:C4:02 | 11h 55m 23s |
| Ports | L | 1 | L | I |
| | | POWER :!! | | win t |

At **'DHCP Leases'** check that the modem has detected the automatic IP address and MAC number for both, your Service PC and the Charge Point.

NOTES:

1. If the modem has not detected the automatic IP address, switch off the circuit breaker, wait for 10 seconds and switch on again. Connect again your Service PC to the access point named ChargePoint_xxxxxxxxx, and repeat the steps 4.3 y 4.6.

2. To make sure that the Charge Point' s MAC number is correct, it can be seen in one label behind the HMI screen.





4.7 Go to **Network** \rightarrow **LAN** > *Static Leases*

| CALL TELTONIKA | Status Network Se | rvices - System - | |
|-----------------------------|----------------------------|------------------------------|-----------------|
| | Start 100 | | |
| | Lease time 12 | Hours | |
| Static Leases | | | |
| Hostname | MAC address | IP address | |
| Raption | 00:26:45:00:c4:02 (192.168 | 1.1.240) 🔻 192.168.1.50 💌 De | elete |
| | | ▼ De | elete |
| Add | | | |
| IP Aliases | | | |
| There are no IP allases cre | ated yet | | |
| Add | | | |
| | | — | Save |
| Teltonika solutions | | W | ww.teltonika.lt |

Complete the fields with next information:

Hostname - It can be written the name that you want for your Charge Point. It is highly recommended to name it keeping this structure: ChargePoint_xxxxxxxxx, to identify it easier.

MAC address - It will be the MAC number found behind the HMI screen, on the label

IP address - 192.168.1.50

After filling the fields, push over 'Save' button.

4.8 Disconnect the MCB inside the Charge Point in order to do a hard reset over the modem and the HMI screen, after 10 seconds switch ON again the MCB.

4.9 Repeat again the points 4.2 and 4.3 explained above:

4.2 - look for modem access point and connect on it.

4.3 - log on modem webpage with authentication.

4.10 Now, go again to **Status** \rightarrow **Network** \rightarrow **LAN** \rightarrow *DHCP Leases* and confirm that the information written at the point 4.7 has been successfully recorded:

Hostname - the name given for Charge Point

MAC address - the MAC of the Charge Point

IP address - 192.168.1.50

| | رینی | ELTONIKA | Status - | letwork - | Services - | System - | Log |
|----|-----------------|--------------|----------|-------------|------------|----------------------|----------------------|
| | Mobile WAN | LAN Wireless | OpenVPN | VRRP | Access | | |
| | LAN Informa | ation | | | | | |
| | LAN Information | | | | | | |
| | Name | IP address | | Netmask | | Ethernet MAC address | Connected for |
| | Lan | 192.168.1.1 | | 255.255.255 | 0 | 00:1E:42:19:01:DB | 0h 59m 17s |
| | DHCP Leases | | | | | | |
| | Hostname | IP address | | LAN name | | MAC address | Lease time remaining |
| >[| Raption | 192.168.1.50 | | | | 00:26:45:00:C4:02 | 11h 30m 52s |
| | Service PC | 192.168.1.20 | 6 | Lan | | A0:88:69:27:D4:B8 | 11h 59m 47s |
| | Ports | | | | | | |
| | | | POWER | !! | Ū. | WAN | |
| | | | | | | | Refresh |



4.11 Go to **Network > Firewall > Port Forwarding >** *New Port Forward Rule*

| <pre>(TEL</pre> | TONIKA Statu | is Network Servic | es - System - | L | .ogout₿ |
|-----------------------------|----------------------------|---|--|-----------------------|---------|
| You haven't changed the | default password for this | router. To change router passw | ord click here. | | |
| General Settings | Port Forwarding Tra | ffic Rules Custom Rules | DDOS Prevention | Port Scan Prevention | |
| Firewall - Port F | orwarding | | | | |
| Port forwarding allows remo | te computers on the Intern | et to connect to a specific compu | ter or service within the priva | ite LAN. | |
| Port Forwarding Rules | | | | | |
| Name | Protocol | Source Via | Destination | Enable Sort | |
| Enable_SSH_WAN_PASS | THROUGH TCP | From any host To any router in wan port 22 | P at Forward to IP 127.0 port 22 in Ian | 0.0.1, Edit Delete | 9 |
| New Port Forward Rule | 2 | | | | |
| Name | Protocol | External port (s) | iternal IP Interna | ll port (s) | |
| New rule's name | TCP+UDP - | 1800 or 2000-2200 | • 1800 | or 2000-2200 Add |] |
| | | | | Save | |
| Teltonika solutions | | | | www.teltonii | ka.lt |

The ports that you can see in the table below are introduced in the modem by default, although only the named 50000 and 9191 are enabled:

| Name | Protocol | External port (S) | Internal IP | Internal port (S) |
|-------|----------|----------------------|--------------|----------------------|
| 80 | ТСР | 80 | 192.168.1.50 | 80 |
| 8080 | ТСР | 8080 | 192.168.1.50 | 8080 |
| 50000 | ТСР | 50000 | 192.168.1.50 | 50000 |
| 9191 | ТСР | 9191 | 192.168.1.1 | 80 |

If necessary, it is possible to enable the other ports or introduce them following the table listed above.

Push over 'Save' button after any modification.

4.12 Go to Network > Firewall > Traffic Rules

| | | | | _ | | _ |
|---|---|------------------------------|----------------------|--|-----------------------|-------------------------------|
| | General Settings | Port Forwarding | Traffic Rules | Custom Rules | DDOS Prevention | Port Scan Prevention |
| | Firewall - Tr | affic Rules | | | | |
| | Traffic rules define police WAN ports on the route | cies for packets trav er. | veling between diffe | rent zones, for example | to reject traffic bet | ween certain hosts or to oper |
| | Traffic Rules | | | | | |
| | Name | Protocol | Source | Destination | Action Ena | able Sort |
| | Allow-DHCP-Relay | UDP | From any host in wan | To any router IP a port 67 on this device | at Accept Input | Edit Delete |
| ≯ | Enable_HTTP_WAN | TCP, UDP | From any host in wan | To any router IP a port 80 on this device | at Accept Input | Edit Delete |
| ╞ | Enable_HTTPS_WAN | TCP, UDP | From any host in wan | To any router IP a port 443 on this device | at Accept Input | Edit Delete |
| | | | | | ^ | |

Roll down and look for '*Enable_HTTP_WAN*' and '*Enable_HTTPS_WAN*' fields and enable these.

| | KA Status | • Network • | Services Sy | /stem ∗ | Logo | out 🕑 |
|---|--|--------------------------------------|----------------------|------------------------|------------------|-------|
| New forward rule | AN V | VAN 💌 | Add | | | |
| Source NAT | | | | | | |
| Source NAT is a specific form of m for example to map multiple WAN | asquerading which addresses to intern | allows fine grained o al subnets. | control over the sou | Irce IP used for outgo | ping traffic, | |
| Name | Protocol | Source Des | stination | SNAT | Enable | |
| There are no source NAT rules ci | eated yet | | | | | |
| New Source NAT | | | | | | |
| Name | Source | Destination | Source IP | Source port | | |
| New SNAT rule | LAN | WAN | | Do not rewrite | Add | |
| | | | | | Save | |
| Teltonika solutions | | | | | www.teltonika.lt | |

Roll down again and push over **'Save'** button.



4.13 For ending with the modem logging is necessary to do a reboot:

Go to ${f System} o {f Reboot}$ and push over the ' ${f Reboot}$ ' tab



During the process, the system will show the progress, do not switch off the modem.

| System - Rebooting 23% done |
|------------------------------|
| S MA |
| The system is rebooling now. |
| DO NOT POWER OFF THE DEVICE! |
| |
| |

4.14 Repeat again the points 4.2 and 4.3 explained above:

- 4.2 look for modem access point and connect on it.
- 4.3 log on modem webpage with authentication.

4.15 It is necessary to check that the Teltonika RUT240 LTE modem option is chosen at Charge Point's setup webpage:

Make sure that your Service PC is still connected with the Charge point through wifi, open a web browser and type 192.168.1.50.

Go to Configuration > Communications > General

| = | Configuration Communications | Save |
|-----------------------|--------------------------------------|-----------|
| Dashboard | Status General Ethernet Router Proxy | ٨ |
| Monitor | Hostname | |
| Historic | raption-4500adeb | |
| Integrations > | Public IP source | |
| Configuration | Tettonka RUT240 LTE | · · · · · |
| Identification method | | |
| Plugs | | |
| Charge | | |
| Communications | | |
| HMI | | |
| Master-slave | | |
| Tariffs | | |
| | | |

Click over the 'Save' button located at the top right corner.





Setup webpage allows managing network setup, upgrading devices and other options.

Once the Service PC is already connected to Charge Point, it is possible to open Setup Webpage through the IP entered. In the example shown in the previous section, it has been set 192.168.1.50

Open a web browser on the service PC and enter this IP, next image will appear.

| Ę | CIRCONTROL Mobility & eMobility | | | Q | EN | (info) |
|----------|------------------------------------|---|--------------------|---|--|--------|
| | | = | Dashboard | | | |
| Ø | Dashboard | | | | | |
| | Monitor | | Communications | | Θ | |
| <u> </u> | Historic | | Charge Point | | (\rightarrow) | \vee |
| | | | Active integration | | (→ <u>=</u>) | \sim |
| 0 | Integrations | | | | 0 | |
| Ø | Configuration | | Last charges | | $\left(\begin{array}{c} \\ \\ \\ \end{array} \right)$ | \sim |
| P | Maintenance | > | | | | |

The webpage opened shows the **'Dashboard' Overview'** as a main screen, but there are many more options. In the next points, they will be explained.

| CIRCONTROL Mobility & eMobility | | | | Q | (EN) (info |
|------------------------------------|---|--------------------|---------------------------|------------------------------------|----------------|
| | = | Dashboard | Platform | raption | |
| ② Dashboard | | Communications | Serial number | | |
| Monitor | | communications | Firmware Creation date | 3.0.0-beta1 2021-01-21 12:27:51 | |
| Historic | | | Seller Manufacturer | Circontrol S.A. | |
| 🛆 Integrations | > | Channe Brint | Manufacturer URL | http://www.circontrol.com | |
| (⊙) Configuration | | Charge Point | | | |
| d Maintenance | > | Active integration | | | (E) V |
| | | Last charges | | | \odot \lor |

In the right top corner it is shown the search engine icon, the language list and information about the Charge Point. Once the info button is pressed, it appears the screen displayed above, with model and firmware version information, among others.





COMMUNICATIONS

| | ľL v | | | Q | EN | (mfo) |
|----------------|---------|----------------|----------------------------------|---|----|-------|
| | = | Dashboard | | | | |
| ② Dashboard | | Communications | | 5 | | ~ |
| 🖵 Monitor | | communications | [000] Fibourat | 9 | G | · ` ` |
| Historic | | | 192.168.1.2 00:26:45:00:CD:DE | | | |
| 🖒 Integrations | > | | | | | |

As a relevant information, it shows:

| Value | Description | | | | |
|-------------|--|--|--|--|--|
| IP | Short for Internet Protocol. Identifier that allows information to be sent between devices on a network. | | | | |
| MAC Address | Identifier of the network card of the Charge Point | | | | |

CHARGE POINT

| € | CIRCONTROL Mobility & eMobility | | | Q | | (info) |
|---|------------------------------------|---|---------------------------------------|---|---|--------|
| | | = | Dashboard | | | |
| 0 | Dashboard | | Communications | | A | |
| | Monitor | | Communications | | 9 | |
| Ë | Historic | | Charge Point | G | | ^ |
| 0 | Integrations | > | Status 🔵 Idle | | | |
| 0 | Configuration | Σ | | | | |
| P | Maintenance | > | · · · · · · · · · · · · · · · · · · · | | | |

It is displayed if the Charge Point is available to be used or not.



In this section, it can be consulted the status of the Charge Point, the type of connectors it has and the availability of them.

It is possible to start or stop a charging session, able or disable a connector or lock or unlock it remotely.

| CIRCONTROL Mobility & eMobility | | | | | | | Q | EN | (info |
|------------------------------------|---|--------------|---|--------------|------------|-----------|---------|----|-------|
| | = | Monitor | | | | | | | |
| Ø Dashboard | | Charge Point | | | | | | | 3 |
| Monitor | | | | | Status | Available | | | |
| Historic | | DC - CCS | _ | | | | | | |
| Integrations | | | | Status | Available | | Start | | |
| O Configuration | > | | | Availability | Senabled | I | Disable | | |
| J Maintenance | > | DC CHAdaMO | | | | | | | |
| | | Deternation | | Status | Available | 1 | Start | | |
| | | | | Lock | 🕞 Unlocked | | Lock | | |

It is also shown when connector individually has an internal error, and an error code, in order to look for the type of fault.

| CIRCONTROL Mobility & eMobility | | | | | Q | EN | info |
|------------------------------------|---|-------------|--------------|------------|---------|----|------|
| | = | Monitor | | | | | |
| ② Dashboard | | | Lock | 🔒 Unlocked | Lock | | |
| 🔔 Monitor | | | Availability | C Enabled | Disable | | |
| Historic | | | Error code | 12290 🔨 | | | |
| Integrations | | AC - Type 2 | | | | | |
| ⓒ Configuration | | | Status | Faulted | | | |
| / ³ Maintenance | | | Availability | S Enabled | Disable | | |
| U | | | Error code | 12290 🔨 | | | |
| | | | | | | | |





This section provides information of every charge transaction started in the Charge Point.

It can be checked date and hour of begin and end of a charge transaction, energy charged, alias of the user and type of charge used.

All of this elements have the chance to be organised depending on the user needs.

| Ę | CIRCONTROL Mobility & eMobility | | | | | | Q | EN | (info |
|-----|------------------------------------|---|---------------------|---------------------|-------------|--------------|------------|------|-------|
| | | = | Historic | | | | | | |
| Ø | Dashboard | | Date range | | | Identifier | | | |
| L_2 | Monitor | | | | | | | | |
| m | Historic | | Begin date 🕹 | End date | Charge time | Energy (kWh) | Identifier | Plug | |
| | | | 2021/04/15 12:55:39 | 2021/04/15 12:55:53 | a few s | 2.200 | OOFFFFFFFF | DC | |
| 8 | Integrations | | 2021/03/30 15:41:57 | 2021/03/30 15:43:59 | 2 min | 22.000 | 02D864EC | DC | |
| 0 | Configuration | > | 2021/03/29 10:07:55 | 2021/03/30 02:37:11 | 16 h | 0.000 | 09222DC2 | AC | |
| P | Maintenance | > | 2021/03/26 13:16:58 | 2021/03/26 14:04:13 | an h | 0.000 | B2D160A1 | AC | |
| | | | 2021/03/23 14:12:26 | 2021/03/23 14:12:50 | a few s | 0.000 | B2D160A1 | AC | |
| | | | 2021/03/23 10:30:07 | 2021/03/23 10:30:41 | a few s | 0.000 | 22B364EC | AC | |



Clicking over the 'Integrations' tab, user will be able to activate OCPP integrations.

| Ę | CIRCONTROL Mobility & eMobility | | | | Q | EN | info |
|------------|------------------------------------|---|-------------------------------|-------------|---|----|------|
| | | = | Integrations General | | | | |
| 0 | Dashboard | | Available integrations | | | | |
| 0 | | | OCPP 1.6 JSON | | | | |
| | Monitor | | Apply | | | | |
| <u>0-0</u> | Historic | | | | | | |
| 0 | Integrations | | Charge Point ID | | | | |
| 0 | Configuration | > | ChargeBox identity | | | | |
| ß | Maintenance | | Disabled Basic Authentication | | | | |
| ď | | | Connection URL | CS-Password | | | |
| | | | Host URL | CS-Password | | | |

NOTE: the integration of the Charge Point needs a separate section. In the next sections number 7 and 8 it is explained how to integrate OCPP.





In this section, there can be adjusted many different settings related with the Charge Point, depending on the elements it has and level of security it is desirable to have.

IDENTIFICATION METHOD

It is possible to enable or disable the option to use the Charge Point with or without identification and also if the user is capable to stop charge transaction.

| | | | | | Q | | (info) |
|-----------------------|--|---------------|------------------|------------------------|-------------|------|--------|
| = | Configuration Identification method | | | | | Save | |
| Configuration | Authorisation required | | ~ | | | | |
| Identification method | Epobled Show disa | bled methods | | | | | |
| Plugs | Enabled | | | | | | |
| Charge | | | | | | | |
| Communications | RFID Payr | ment terminal | Virtual keyboard | | | | |
| HMI | Enabled RFID | | Enabled | Allow to stop transact | ions from I | нмі | |

When the Charge Point includes payment terminal, it is necessary to enable the option to let the user pay with this method.

| Ę | CIRCONTROL Mobility & eMobility | | | | | Q | | (info) |
|----|------------------------------------|--|----------------------|------------------|------------------------|---|------|--------|
| | = | Configuration Identification method | | | | | Save | |
| ٩ | Integrations | RFID | Payment terminal | Virtual keyboard | | | | |
| © | Configuration | Disabled | Payment terminal | | | | | |
| | Plugs Charge | Enabled | ChargeBox Id enabled | | | | | |
| | Communications | Pre-authorisation amo | unt | | | | | |
| | Master-slave Tariffs | Upload configuration | | | Download configuration | | | |
| | Security | Choose file | | Browse | | | | |
| 10 | Maintenance | Update | | | | | | |

Enable ChargeBox Id option allows the system to differentiate every single charge point separately, in order to use this data by the back end system.

As a Pre-authorisation amount, it can be configurated the amount of money that the bank blocks to the user once the charge transaction starts. When the charge transaction is finished, the blocked fee is returned and only charge to the user according to the tariff described below.

Upload configuration allows to upload the configuration file with the payment gateway keys supplied by the specific finantial service or bank. It can be downloaded the existing file whenever it is necessary.

| Ę | CIRCONTROL Mobility & eMobility | | | | | Q | EN | (info) |
|---|------------------------------------|------------------|---------|----------------|-------------------|---|----|--------|
| | = | Configu Plugs | uration | | | | | |
| 0 | Integrations | | | | | | | |
| 0 | Configuration | | Name | Connector Type | Current Limit (A) | | | |
| 1 | Identification method | | EVSE DC | | -1.000000 | | | |
| | Plugs | | EVSE AC | unknown | -1.000000 | | | |
| | Charge Communications | | Edit | | | | | |

PLUGS

It is possible to enable and disable charging with quick charging (EVSE DC), slow charging (EVSE AC) or both in each Charge Point.



CHARGE:

| = | Configuration Charge |
|---|---|
| Dashboard Monitor Historic Integrations | Power balance Profiles Disabled Status Type |
| Configuration Identification method Plugs Charge Communications HMI | |

| Value | Des | cription | | | | |
|---------------|---|---|-------------------------------------|--|--|--|
| Power Balance | The Charge Point is capable of on the number of outlets in us solution). | The Charge Point is capable of balancing the available power based on the number of outlets in use (only available in Master-Satellite solution). | | | | |
| | NABLE: the Charge Point shares equally the power delivered be each ongoing Charge Transaction without exceeding the limit onfigured. | | | | | |
| | DISABLED: the Charge Point do limit, giving the maximum powe | es not take ir er for each co | n consideration any nnector. | | | |
| Profiles | It lets to choose whether from t be disconnected or not and choo timeout in seconds. | It lets to choose whether from the EV transaction and lock should be disconnected or not and choose the charging cable connection timeout in seconds. | | | | |
| | idTag option enabled adds a pre identification chosen by the use | efix indicating r, as shown ir | the method of h the table below: | | | |
| | Method of identification | Prefix | | | | |
| | RFID | RF | | | | |
| | Contactless Payment | СС | | | | |
| | PIN-code | KC | | | | |
| | Plug&Charge | NA | | | | |

| CIRCONTROL Mobility & eMobility | | | |
|------------------------------------|-------|-------------------------|--|
| | = | Configuration Charge | |
| Dashboard | | Power balance Profiles | |
| A Monitor | | | |
| Historic | | Enabled Status | |
| → Integrations | | Туре | |
| Configuration | | OCPP - Smart Charging | |
| Identification n | ethod | | |
| Plugs | | | |
| Charge | | | |
| Communicatio | 15 | | |
| HMI | | | |

| | = | Configuration Charge | | | |
|----------------------|---|-------------------------|----------|---|-------------------------|
| Dashboard | | Power balance | Profiles | | |
| Monitor | | | | | |
| Historic | | Enabled | Status | | |
| 3 Integrations | | Туре | | | Max. current supply (A) |
| Configuration | | Shared power | | · | 32 |
| Identification metho | d | | | | |
| Plugs | | | | | |
| Charge | | | | | |
| Communications | | | | | |
| | | | | | |

| Value | Description |
|------------------------|---|
| Shared power | It indicates the power available to divide between the connected vehicles. The <i>Max.current supply (A)</i> is the available power ONLY for AC outlets. |
| OCPP-Smart Charging | The power balance is made via OCPP. |



COMMUNICATIONS

This section provides basic configuration of the network parameters.

| Status | General | Ethernet | Proxy | Status | General | Ethernet |
|--------|---------|--------------|-----------|------------------|---------|----------|
| | | ę | 000 | Hostname | | |
| | | Eth 192.1 | 68.1.2 | raption-4500cdde | | |
| | | 00:26:45 | :00:CD:DE | Public IP source | | |
| | | | | Local Address | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

DHCP server (router) means to enable or disable the IP address assignment. To be enabled when working with the integrated modems.

| Status | General | Ethernet | Proxy | | |
|---------------------|---------|----------|------------|-------------------|---------------|
| Disabled | DHCP | | | | |
| DHCP client | | | | | |
| DHCP client | | | | | |
| IP address settings | | | | | |
| IP address | | Defau | lt gateway | | Subnet mask |
| 192.168.1.2 | | Gat | eway | | 255.255.255.0 |
| DNS | | | | | |
| Primary DNS server | | | s | ondary DNS server | |
| Primary DNS | | | | econdary DNS | |

| Status | General | Ethernet | Proxy | |
|---------------|---------|----------|-------|-----------------|
| Disabled | Proxy | | | |
| Server | | | | Port |
| Server | | | | 0 |
| Username | | | | |
| Username | | | | |
| Password | | | | Repeat password |
| Password | | | | Repeat password |
| Exceptions | | | | |
| Ex: localhost | | | | |
| | | | | |
| | | | | |

НМІ

Short for Human Machine Interface.

In this section, there can be adjusted many settings related with the Display.

In General tab it is possible to adjust screen brightness and enable or disable the email support and timeout. Also, in the Charge Point can be uploaded up to 20 languages between the wide variety able to choose.

| Ę | CIRCONTROL Mobility & eMobility | | | Q | EN | (info |
|---|--|---|------------------------|---|------|-------|
| | = | Configuration HMI | | | Save | |
| 0 | Configuration | General Screensaver | | | | |
| | Identification method Plugs Charge | Brightness (%) | | | | |
| | Communications | Charge summary | | | | |
| | нмі | Disabled Enable URL or email support | | | | |
| | Master-slave Tariffs Security | URL or email support www.circontrol.com | | | | |
| P | Maintenance > | Timeout (s) | Error view timeout (s) | | | |
| | | 60 | 60 | | | |

Also, it is possible to customise the languages in the Charge Point. In the left column are all the available languages between the wide variety able to choose and in the right column are the ones chosen to be displayed in the Charge Point, organised as shown on screen.

| Ę | CIRCONTROL Monthly & editority | | | Q (R) (C) |
|---------|-----------------------------------|---|----------------------------|---------------------------------------|
| | - | = | Configuration HMI | Save |
| \odot | Dashboard | | Available languages in HMI | |
| 0 | | | Available languages | Languages on the charge point (13/20) |
| Q. | Monitor | | نام SaudiArabia | Català. Spain |
| m | Historic | | Български, Bulgaria | Čeština. CzechiRepublic |
| | | | Cymraeg, Unitedkingdom | Deutsch, Germany |
| 0 | Integrations | | Dansk, Denmark | British English. UnitedKingdom |
| 6 | Configuration | | maz, israel | Español de España. Spain |
| ĩ | | | Hrvatski. Croatia | Español de México. Mexico |
| | Identification method | | Norsk bokmål, Norway | Eesti Estonia |
| | Plugs | | Ελληνικά, Greece | Euskara. Spain |
| | Charge | | Suomi, Finland | polski. Poland |
| | Communications | | Slovenčina, Slovakia | Português europeu, Portugal |
| | нмі | | Français, France | Română. Romania |
| Т | Master-slave | | Magyar, Hungary | Pycowii, Russia |
| | Tariffs | | Íslenska, iceland | Svenska. Sweden |
| | Convitu | | Italiano. Italy | |
| | secondy | | Lietuvių, Lithuania | |
| P | Maintenance | | Latviešu. Latvia | |
| | | | Nederlands, Netherlands | |
| | | | Slovenščina. Slovenia | |
| | | _ | annalises en Uleraine | |



In Screensaver tab it is possible to adjust timeout and brightness and enable or disable advertisements, what lets customise the Screensaver image by uploading a file.

| Ę | CIRCONTROL Mobility & etMobility | | | | | Q | | (info) |
|---|---|-------------|--|-------------|----------------|---|------|--------|
| | | = | Configuration HMI | | | | Save | |
| 0 | Integrations Configuration Identification method Plugs Charge | > ~ d | General Timeout (s) 60 | Screensaver | Brightness (%) | | | |
| 2 | Communications HMI Master-slave Tariffs Security Maintenance | > | Advertisements Disabled Images interval (s) 5 Summary Upload date | | l | | | |

TARIFFS

In this section, it can be adjusted the cost of a charge transaction in the Raption station. These settings are just displayed to inform the customer.

It is necessary to work with an integrated system for the payment, such as Kit VISA or OCPP Integrations. The payment will be done through one of these platforms.

As explained in the previous paragraphs, this is just information for the final user. When adjusting these settings, they will be displayed in the charger screen even if there is not a platform in charge of the receipt.

Make sure that values are set according to the final price from these platforms.

Remember to press 'Save button to apply the settings.

| | | | | | QENE |
|---|--|-------------------------------|-----------------------------|--------------------------------|---------|
| = | Configuration Tariffs | | | | |
| Dashboard | Currency European Euro (EUR) Price limit | | ~ | | |
| Historic | Disabled 0 | | | | |
| Configuration Configuration Configuration Method Plugs Charge Communications HMI Master-slave | AC Description Fixed Service fee Energy fee Time fee | Price 0 0 0 0,157 | Units C CAWh Crwin | Enabled Enabled Disabled | Enabled |
| Tariffs Security Maintenance | DC Description Fixed service fee | Price 1 | Units € | Enabled Disabled | Enabled |
| | Energy fee Time fee | S 0,157 | €/kWh €/min | Enabled | |

There are few parameters that can be adjusted:

| Value | Description | | | | |
|-------------------|--|--|--|--|--|
| Currency | Choose the proper currency according to the area the Charge Point is installed | | | | |
| Price Limit | Maximum cost of the charge transaction | | | | |
| Fixed service fee | Price of a new charge transaction | | | | |
| Energy fee | Amount of money to be payed based on the energy delivered to the EV | | | | |
| Time fee | Amount of money to be payed based on the duration of charge transaction | | | | |

All these settings can be combined according to the customer preferences.



SECURITY

| Ę | CIRCONTROL Mobility & eMobility | | Q | info |
|---|------------------------------------|--|---|------|
| | = | Configuration Security | | |
| 0 | Integrations > | Disabled Allow only secure connections | | |
| 0 | Configuration V | Disabled Authentication | | |
| | Plugs | Change password | | |
| | Charge | User name | | |
| | Communications | admin | | |
| | нмі | Old password | | |
| | Master-slave | Old password | | |
| | Tariffs | Password Repeat password | | |
| | Security | Password Repeat password | | |
| P | Maintenance > | | | |

| Value | Description |
|-------------------------------------|--|
| Allow only secure connections | ENABLE: Information transferred between Charge Point and laptop is strictly encrypted. Once enabled, it must be done some modifications in modem configuration, as explained below. DISABLED: not possible to assure secure connections between Charge Point and laptop. |
| Authentication | ENABLE: Introduce a user and a password in order to enter in the web setup. NOTE: Old password is 1234 by default. DISABLED: not password required to enter in the web setup. |
| | It is possible this option to be changed whenever is desired. |

Configure modem to allow secure connections:



After you're complete with the setting up as described in the section 5, you are ready to start logging into your router and start configuring it.

1. Go to **Network > Firewall > Port Forwarding >** *Port Forwarding Rules*

Locate the port named "Enable_ HTTPS_WAN_PASSTHROUGH" and click Edit button.

| TELTONIKA Status | s Netwo | rk Service | es - System - | | | | Logout 🕞 |
|--|-------------------|-------------------------|---------------------------------|--|----------|---------|----------------|
| Profile in use: default | | | | | FW ver.: | RUT2XX | R_00.01.12.3 |
| General Settings Port Forwardin | g Traffic F | Rules Custon | Rules DDOS Preve | ention Port Scan Preven | tion | Helpers | |
| Firewall - Port Forwarding Port forwarding allows remote computers o Port Forwarding Rules | n the Internet to | connect to a spe | affic computer or service w | ithin the private LAN. | | | |
| Name | Protocol | Source | Via | Destination | Enable | Sort | |
| Enable_SSH_WAN_PASSTHROUGH | TCP | From any host in wan | To any router IP at port 22 | Forward to IP 127.0.0.1, port 22 in Ian | | •• | Edit Delete |
| Enable_HTTP_WAN_PASSTHROUGH | TCP | From any host in wan | To any router IP at port 80 | Forward to IP 127.0.0.1, port 80 in Ian | | •• | Edit Delete |
| Enable_HTTPS_WAN_PASSTHROUGH | ТСР | From any host in wan | To any router IP at port 443 | Forward to IP 192.168.1.50, port 443 in Ian | | 00 L | Edit Delete |

Once in Edit screen, insert 192.168.1.50 in "Internal IP address" field and click Save button.

| | O sstp: | | |
|---------------------|------------------------|------------------------------|--|
| | O vpn: operwpr: 👩 | | |
| | 💿 wan: ppp: 🔬 tun: (em | oty) wan: 🔩 wwan0v6: (empty) | |
| Source MAC address | any | ÷ | |
| Source IP address | any | | |
| Source port | any | | |
| External IP address | any | | |
| External port | 443 | | |
| Internal zone | O gre: gre tunnel: 0 | | |
| | O hotspot: | | |
| | O 12tp: 12tp: | | |
| | 🖲 lan: lan: 🔩 🔩 🛬 👳 | | |
| | O pptp: pptp: | | |
| | O sstp: | | |
| | O vpn: operwpr: 👩 | | |
| | 🔿 wan: ppp: 🧕 tun: (em | oty) wan: 🔩 wwan0v6: (empty) | |
| Internal IP address | 192.168.1.50 ¥ | | |
| Internal port | any | | |
| Enable NAT loopback | | | |
| Extra arrumente | | | |


2. Go to Network > Firewall > Port Forwarding > New Port Forward Rule

At the bottom part of the screen, add a new port forward rule with the following parameters and once introduced click Add button:

Name: Enable_HTTPS_WAN_OCPP Protocol: TCP External port: 8443 Internal IP: 192.168.1.50 Internal port: 8443

| New Port Forward Rule | | | | | |
|-----------------------|-----------|-------------------|-------------|-------------------|-----|
| Name | Protocol | External port (s) | Internal IP | Internal port (s) | |
| New rule's name | TCP+UDP ~ | 1800 or 2000-2200 | ~ | 1800 or 2000-2200 | Add |

Check that the new line appears and tap enable check in case is disabled.

| TELTONIKA State | us Netwo | ork - Servic | es - System - | | | | Logou |
|----------------------------|----------|---------------|---------------------------|-------------------------------|----------|------|--------|
| | 700 | From any host | To any router IP at ports | Forward to IP 127.0.0.1, | _ | (| Edit |
| Enable_CEI_WAN_PASSTHHOUGH | TOP | in wan | 4200-4220 | ports 4200-4220 in lan | | | Delete |
| | | From any host | To any router IP at port | Forward to IP 192 168 1 1 | | (| Edit |
| Redirect_DNS | TCP, UDP | in lan | 53 | port 53 in lan | | | Delete |
| | | From any bast | To any router IP at port | Equiparent to ID 102 159 1 50 | | | Edit |
| 80 | TCP, UDP | in wan | 80 | port 80 in lan | | | Delete |
| | | From any bact | To any router IP at port | Equipred to IR 102 159 1 50 | | 00 (| Edit |
| 22 | TCP | in wan | 22 | port 22 in lan | | | Delete |
| | | From any bast | To any router IP at part | Equipard to ID 102 169 1 1 | | 00 | Edit |
| 9191 | TCP, UDP | in wan | 9191 | port 80 in lan | | | Delete |
| | | From any bost | To any router IP at port | Forward to IP 192 168 1 50 | | | Edit |
| Enable_HTTPS_WAN_OCPP | TCP | in wan | 8443 | port 8443 in lan | ~ | 00 | Delete |

3. Go to Network > Firewall > Traffic Rules

Locate the port named "Enable_ HTTPS_WAN" and click Edit button.

| TELTONIK | A Status - | Network - | Services Syst | em - | | | | | Logout |
|-------------------------|-----------------|---------------|---------------------|------------------------|-----------------|--------|--------|-------------|-------------|
| Profile in use: default | | | | | | | FW ver | .: RUT2XX_F | R_00.01.12. |
| General Settings | Port Forwarding | Traffic Rules | Custom Rules D | DOS Prevention P | ort Scan | Prever | ntion | Helpers | |
| | | | | | | | .00 | Edit | |
| Enable_SSH_WAN | TCP, UDP | | From any host in wa | port 22 on this device | Accept input | | 00 | Delete | |
| Enable CLI WAN | TCP UDP | | From any host in wa | To any router IP at | Accept | _ | | Edit | |
| | | | | this device | input | | | Delete | |
| Feeble LITTE WAN | TCD LIDD | | From one boot in us | To any router IP at | Accept | _ | | Edit | |
| ETIADIO_HTTP_WAN | TCP, ODP | | From any nost in we | port 80 on this device | e input | | | Delete | |
| Epoble LITTES WAN | TCR LIDR | | From any bost in w | To IP 192.168.1.50, | Accept | | | Edit | |
| Enable_HTTPS_WAN | TOP, ODP | | From any nost in wa | port 443 in lan | forward | | 00 | Delete | |

Once in Edit screen, insert 192.168.1.50 in "Destination address" field and 443 in "Destination port" field; then click Save button.

| TELTONIKA Status Ne | twork Services System Logout |
|---------------------|--|
| | O sstp: |
| | O wper: oper/wpm: O |
| | 🖲 wan: ppp: 🛬 tun: (empty) wan: 🛬 wwan0v6: (empty) |
| Source MAC address | any |
| Source address | any |
| Source port | any . |
| Destination zone | O Device (input) |
| | Any zone (forward) |
| | O gre: gre tunnek 💦 |
| | O hotspot: |
| | C latp: latp: () |
| | Ian: Ian: <a>3 |
| | o pptp: pptp: 0 |
| | o satp: |
| | |
| | wan: ppp: 5 tun: (empty) wan: 5 wwan0v6: (empty) |
| Destination address | 192.100.1.00 |
| Destination port | 443 |
| Action | accept 🛩 |
| Extra arguments | |
| Back to Overview | Save |



4. Go to Network > Firewall > Traffic Rules

At the bottom part of the screen, add a new traffic rule with the following parameters and once introduced click Add button:

Name: OCPP Protocol: All Destination address: 192.168.1.50 Destination port: 8443



Check that the new line appears and tap enable check in case is disabled.

| TELTONIKA Status Ne | twork - Services - System - Logout |
|----------------------------|--|
| | O satp: |
| | vpm: openvpn: () |
| | 💌 wan: ppp: 🔩 tun: (empty) wan: 🔩 wwan0v6: (empty) |
| Source MAC address | any |
| Source address | any . |
| Source port | any . |
| Destination zone | O Device (input) |
| | Any zone (forward) |
| | O gre: gre tunnel: |
| | O hotspot: |
| | C t2tp: l2tp: () |
| | 🖲 lanc lanc 🔄 🚉 🛬 👳 |
| | O pptp: pptp: 0 |
| | o sstp: |
| | vpn: openvpn: 🕥 |
| | 🔿 wan: ppp: 🔩 tun: (empty) wan: 🍇 wwan0v6: (empty) |
| Destination address | 192.168.1.50 |
| Destination port | 8443 |
| Action | accept 🗸 |
| Extra arguments | |
| Back to Overview | Stree |



DEVICES STATUS

In this section, it can be consulted the status of the devices which are communicating via RS-485.

| Ę | CIRCONTROL Mobility & eMobility | | | | Q | (EN) | info |
|----------|------------------------------------|---|-------------------------------|--------|---|------|------|
| | | = | Maintenance Devices status | | | | |
| | Monitor | | Device name | Status | | | |
| <u> </u> | Historic | | EVSE | Ok | | | |
| 0 | Integrations | | Serial 2 | Ok | | | |
| 6 | Configuration | | Reader | Ok | | | |
| 63 | coniguration | | A8 | Ok | | | |
| 1 | Maintenance | | TCP1 | Ok | | | |
| | Devices status | | ChargeDemo_CHAdeMO | Ok | | | |
| | Diagnostics | | ChargeDemo_CCS | Ok | | | |
| | System status | | TCP2 | Ok | | | |
| | Advanced | | Mode3Wifi | Ok | | | |
| | | | Payment Terminal | Ok | | | |

UPDATES

Through this tab, the Charge Point firmware and the application can be upgraded remotely.

| Ę | CIRCONTROL Mobility & eMobility | | | | | Q | (EN) | (info) |
|---|--|---|-------------------------------|--------|--|---|------|--------|
| | | = | Maintenance Updates | | | | | |
| | Monitor | | Firmware update | | | | | |
| Ë | Historic | | Upload file | | Summary | | | |
| ß | Integrations | | Choose file | Browse | Build creation date 2021-01-21 12:27:51 | | | |
| 0 | Configuration | | | | Firmware version | | | |
| 1 | Maintenance | | | | 3.0.0-beta1 | | | |
| | Devices status | | Configuration update | | | | | |
| | Updates | | Upload file | | | | | |
| | Diagnostics System status Advanced | | Choose file Update | Browse | | | | |



To obtain the latest firmware version, please contact CIRCONTROL Support Department.



DIAGNOSTICS

Clicking over the '**HW Testing**' tab, it appears to enable or disable Grid test option.

That means HMI shows a test screen to check that touch function works properly.

| CIRCO Mobility & | NTROL | | Q EN mo |
|---------------------|---------|----------------------------|---------|
| | = | Maintenance Diagnostics | |
| 👝 Monitor | | HW Testing Logs | |
| Historic | | | |
| 🛆 Integrati | ons > | Disabled Grid test | |
| O Configur | ation > | | |
| d Mainter | ance | | |
| Devices | status | | |
| Updates | | | |
| Diagno | tics | | |

The logs shown in this section are automatically produced by the Charge Point. It is a detailed list of the charging sessions, system performance or user activities.

When Charge Point is powered ON, system begins to register log files. If the Charge Point is restarted these logs are lost and immediately are created new ones.

However, it is highly recommended to check log files in the next URL:

| Ę | CIRCONTROL Mobility & eMobility | | | Q | EN | info |
|-----|------------------------------------|---|-------------------------------------|---|----|------|
| | | = | Maintenance Diagnostics | | | |
| Ç. | Monitor | | HW Testing Logs | | | |
| | Historic | | | | | |
| 0 | Integrations | | Choose type | | | |
| ~ | 6 . f | | Charging Station 🗸 | | | |
| (2) | Configuration | | Filter | | | |
| P | Maintenance | | None | | | |
| 1 | Devices status | | | | | |
| | Updates | | Date time range | | | |
| | Diagnostics | | 14/04/2021 16:43 - 14/04/2021 23:59 | | | |
| | System status | | All available logs | | | |
| | Advanced | | Ver Guardar | | | |
| | | | | | | |

http://IPADDRESS/services/cpi/log

SYSTEM STATUS

The information shown in this section is basically relative to the state of the PC of the Charge Point. It is necessary for the technical service staff but does not show any information regarding to the external connection of the Charge Point or to the charging session.

| Ę | CIRCONTROL Mobility & eMobility | | | | | Q | into |
|----|------------------------------------|---|------------------------------|--------------------|-------------------|---|------|
| | | = | Maintenance System status | | | | |
| Ę. | Monitor | | | | | | |
| | Historic | | Memory MB | CPU % | Disk MB | | |
| 0 | Integrations | | | | | | |
| ٢ | Configuration | | Uptime 7h 13m 32s | | | | |
| 1 | Maintenance | | Drivers | | | | |
| | Devices status | | - A8 Embedded | - CBS-4 | - CBS-8 | | |
| | Updates | | - CCL1 Engine | - CEM-C10 | - CEM-C20 | | |
| | Diagnostics | | - CEM-C30 | - CHARGEDEMO | - CVM-1D | | |
| | System status | | - CVM-MINI | - CVM-NRG96 | - Comms simulator | | |
| 1 | Advanced | | - Display CCL1 | - Display CCL1Mini | - EDMk | | |

ADVANCED

This section allows setting the time and region time for the Charge Point. Also, it offers the possibility to reset the Charge Point.

| Ę | CIRCONTROL Mobility & eMobility | | | | | Q | (EN) | (info) |
|----------|------------------------------------|---|--------------------------------|---|---------------------------------------|---|------|--------|
| | | = | Maintenance Advanced | | | | | |
| | Monitor | | Date and time | | | | | |
| <u> </u> | Historic | | Time zone | | Device time | | | |
| 0 | Integrations | | UTC | ~ | Synchronise clock 14/04/2021 16:45:45 | | | |
| ര | Configuration | | Primary NTP server | | Secondary NTP server | | | |
| ~ | Maintenance | | Primary NTP server | | Secondary NTP server | | | |
| <i>«</i> | munitentitee | | Basat | | | | | |
| | Devices status Updates | | Choose Type | | | | | |
| | Diagnostics | | Soft Hard | | | | | |
| | System status | | | | | | | |
| | Advanced | | | | | | | |



| Value | Description |
|---|---|
| Time Zone | Select the regional time for the Charge Point according to the location |
| Time | Current date and time of the Charge Point |
| Primary NTP Server Secondary NTP Server | Synchronize the time through internet automatically |
| Soft Reset | Restart of the Charge Point, closing applications and clearing any data in RAM. Unsaved data in current use may be lost but data stored on the hard drive, applications and settings are not affected. |
| Hard Reset | Also known as a factory reset or master reset, is the restoration of the Charge Point to the state it was in when it left the factory. |

Next, we will explain the different sections of the 'Date and time' and 'Reset'



The goal of the Open Charge Point Protocol (OCPP) is to offer a uniform solution for the communication between Charge Point and a Central System. With this open protocol it is possible to connect any Central System with any Charge Point, regardless of the vendor.

Follow next steps in order to configure OCPP 1.5 in the Circontrol Charge Points.





Check following steps in order to ensure the correct function of OCPP 1.5:

Go to the Setup Webpage ightarrow 'Configuration' tab ightarrow 'Communications' tab

Once in 'General' section, 'Public IP source' establishes where the Charge Point must obtain the public IP address in order to send it later to the backend. Different values can be selected:

| Ę | CIRCONTROL Mobility & eMobility | | Q | EN | 60 |
|-------|------------------------------------|--------------------------------------|---|----|----|
| | = | Configuration Communications | | | |
| 0 | Integrations | Status General Ethernet Proxy | | | |
| © | Configuration | Hostname | | | |
| | Plugs | raption-4500cdde Public IP source | | | |
| | Communications | Local Address | | | |
| | HMI Master-slave | | | | |
| | Tariffs | | | | |
| - | | | - | | |

Choose the option selected under **'Public IP source'** according to your network topology.

When done, please do not forget to save changes using **'Save'** button in the screen upper right part.

| CIRCONTROL Mobility & eMobility | | | | | | Q | |
|------------------------------------|---|---------------------------------|---------|----------|-------|---|------|
| | = | Configuration Communications | | | | | Save |
| Integrations | | | 6 | Feb | | | |
| <u>Configuration</u> | ~ | Status | General | Ethernet | Ргоху | | _ |
| | | | | | | | |

Go to the Setup Webpage \rightarrow 'Integrations' tab \rightarrow 'General' tab

Choose the option selected under **'Available integrations'** according to your backend policies as shown in the picture:

| CIRCONTROL Mobility & eMobility | |
|------------------------------------|---|
| = | Integrations General |
|) Dashboard | Available integrations |
| Monitor | 0CPP 1.5 |
| Historic | Apply |
| Integrations | Charge Point ID |
| General | Raption50Test |
| Network | Connection URL |
| Settings | http://192.168.5.5%8080//entralSydemSenuice15 |
| SSL certificates | |
| Configuration keys | |
| Backup | |

Charge Point supports different versions of OCPP but only one can be enabled at the same time.

When done, please do not forget to save changes pressing **'Apply'** button just below the option list.

| | = | Integrations General | |
|-------------|---|-------------------------|---|
| ② Dashboard | | Available integrations | |
| . Monitor | | OCPP 1.5 | ~ |
| Historic | | Apply | |
| | | | |

NOTE: Charge Point is working as stand-alone if **'none'** option is selected. All ID cards are authorized to start/stop a new charge transaction and no requests are sent to the backend.





Go to the Setup Webpage ightarrow 'Integrations' tab ightarrow 'Network' tab

In this section it is possible to modify some parameters related with network.

| CIRCONTROL MICHINY & MACONTY | | 6 | |
|---------------------------------|-----------------------------------|-----------------------------------|------|
| = | Integrations Network | | Lave |
| Dashboard | Incoming OCPP TCP Port (Internal) | Incoming OCPP TCP Port (External) | |
| Monitor | 50000 | 5000 | |
| - Martin | incoming port protocol | | |
| Photon, | нтр | | |
| S Integrations | | | |
| General | | | |
| Network | | | |
| Settings | | | |
| SSL certificates | | | |
| Configuration keys | | | |
| Backup | | | |
| Configuration | | | |
| Maintenance | | | |
| | | | |

| Value | Description |
|--------------------------------------|--|
| Incoming OCPP TCP Port (Internal) | Incoming listening port for remote request (internal) |
| Incoming OCPP TCP Port (External) | Incoming listening port for remote request (public) |
| Protocol | If HTTPS is selected, make sure to have CS Server CA certificate |

Go to the Setup Webpage ightarrow 'Integrations' tab ightarrow 'Settings' tab

Check OCPP Settings according to the backend policies, please contact to the Central System to get the configuration parameters:

| | RCONTROL oilty & electrity | | | | | (Et) (16) |
|---------|-------------------------------|---|--------------------------|--|----------|---|
| | | = | Integrations Settings | | | |
| 2) Dash | hboard | | Enabled | Use OCPP time synchronization | Total | Energy for start/stop transaction |
| -o- Mon | nitor | | Total | Energy for metervalues | Disabled | User confirmation on HMI required on Remote Start Transaction |
| Histo | toric | | Enabled | Stop charge if StartTransaction rejects the user | Disabled | Authorize always in offline mode |
| inter | egrations | | Disabled | Authorize Remote Tx Requests | CS | Authorization check order |
| Gen | neral twork | | Enabled | Stop charge if StartTransaction replies ConcurrentTx | Disabled | Retry after CS internal error |
| Sett | ttings | | Little | ID tag endianness | Disabled | Compress OCPP messages |
| SSL | L certificates | | Enabled | Include Power.Active.Import in metervalues | | |
| Bac | ckup | | Timeout obtaining publi | c IP address (s) | | |
| Conf | figuration | | 300 | | | |
| / Main | intenance | | Log capture level | | | |
| | | | DEBUG | | ~ | |
| | | _ | _ | | | |

Before making any changes read following table and set each option according to your backend provider.



| Value | Description |
|----------------------------|---|
| | ENABLED: Synchronization of date and time. |
| Use OCPP time | DISABLED: Synchronization of date and time. |
| Synchronization | *NOTE: Date and Time is sent from backend on each heartbeat response. |
| Energy for Motor Volues | PARTIAL: Sends partial energy consumption while vehicle is charging. |
| Energy for Meter values | TOTAL: sends the actual count of the total accumulated energy meter. |
| Ston charge if StartTrans- | ENABLED: Stop existing charge transaction after response from backend (StartTransaction.conf) when user is blocked, expired or Invalid. |
| action rejects the user | DISABLED : Charge transaction does not stops even if backend rejects the user. (StartTransaction.conf) |
| | *NOTE: Set this option according to your backend system. |
| Authorize Remote Tx | ENABLED: The Charge Point asks for authorization when the Central System sends a remote start. |
| Requests | DISABLED : The Charge Point starts the Charge Transaction when the Central System sends a remote start. |
| Stop charge if | ENABLED: Stop existing charge transaction after response from backend (StartTransaction.conf) when user has already involved in another transaction. |
| ConcurrentTx | DISABLED: Charge transaction does not stops even if backend rejects the user. (StartTransaction.conf) |
| | *NOTE: Set this option according to your backend system. |

| Value | Description |
|---|---|
| ID Tag Endianness | Storage type for system data. Able to choose between (LITTLE>BIG) |
| Include Power Active Import in MeterValues | ENABLED: Send power (Power.Active.Import) and energy (Energy.Active.Import.Register) consumed by the vehicle within meter values requests. DISABLED: Only enrgy consumed is sent within meter values request. |
| Energy for Start/Stop transaction | PARTIAL: Consumed value of energy by the vehicle sent between start and stop. TOTAL: Count of the total accumulated energy meter sent between start and stop. |
| User confirmation on HMI required on Remote Start Transaction | ENABLED: Charge point sends an authorization request before starting a new remote charge transaction request. DISABLED: Charge point starts a new remote charge transaction without authorization request. |
| Authorize always in offline mode | ENABLED: If user is not present locally in the local white-list and charge point cannot ask to the backend, the user is allowed to start a new charge transaction. DISABLED: If user is not present locally in the local white-list and charge point cannot ask to the backend, the user is not allowed to start a new charge transaction. |
| Authorization check order | LOCAL: ID authorization has first place on the local white-list. If the user does not exist locally, then in second place backend is asked to obtain the authorization. CS: ID authorization is always asked to the backend. *NOTE: This setting only applies when Charge Point is online; otherwise the authorization is only locally. |



| Value | Description | | | |
|--|---|--|--|--|
| Potry offer CS internal | ENABLED: If StatusNotification, StartNotification or StopNotification are not received correctly by the backend, the Charge Point retries again to send those requests until it is received correctly. | | | |
| error | DISABLED: The Charge Point is not allowed to retry after an internal error. | | | |
| | *NOTE: Special development must be done in backend in order to retry the messages by charge point. | | | |
| | ENABLED: Reduce messages between Charge Point and backend. | | | |
| Compress OCPP messages | DISABLED: Not reduces messages between Charge Point and backend. | | | |
| | *NOTE: Before enabling this option consult to your backend administrator if central system allows this function. | | | |
| Timeout obtaining public IP address | Timeout (in seconds) before connecting to the central sys- tem. | | | |
| Log capture level | Level of information detailed (DEBUG>INFO>ERROR>NONE) | | | |

Go to the Setup Webpage \rightarrow 'Integrations' tab \rightarrow 'SSL Certificates' tab

When working with 'secure' connections, HTTPS, a certificate from the backoffice (normally a 'bundle' file) may be needed to assure proper communication with the charging station.

Depending on the case, select the proper option and press Browse button in order to upload the certificate. Most common case is 'CS Server CA':

| CIRCONTROL Mobility & ethodaty | | V (|
|-----------------------------------|--|--------------------|
| = | Integrations SSL certificates | 5ave |
| Dashboard | C8.5erver,CA | Summary |
| Monitor | Choose file | Browse Upload date |
| Integrations | CB_Client Disabled CB Client certificate | Summary |
| General Network | Choose file | Browse Upload date |
| Settings SSL certificates | CS_Server_CA | Summary |
| Configuration keys | Choose file | Browse Upload date |
| Backup | Auhtorized_Cs_Client | Summary |
| P Maintenance | Choose file | Browse Upload date |
| | Uplaad centificates | |

Once finished, please do not forget to apply changes pressing '**Upload certificates**' in the screen lower part and to save changes using '**Save**' button in the screen upper right part.

Please, wait until the new configuration is being applied to the Charge Point. A message is displayed informing the progress:





| CIRCONTROL Mobility & eMobility | | | | | (EN) | (iii) |
|--|----------------|---|--|---|------------|-------|
| | = | Integrations Configuration keys | | | | |
| ② Dashboard | | Core | Advanced | | | |
| 👝 Monitor | | Heartbeat interval (s) | Metervalues sample interval (s) | | | |
| Historic | | 600 | 40 | | | |
| Integrations | | | | | | |
| General | | | | | | |
| Settings | | | | | | |
| SSL certificates | | | | | | |
| | | | | | | |
| Configuration | keys | _ | | | | |
| Configuration | keys | | | (| EN | 6 |
| Configuration | keys = | Integrations Configuration keys | | | EN Save | 6 |
| Configuration I CIRCONTROL Meetity & subceity | keys | Integrations Configuration keys Core | Advanced | | EN Save | • |
| Configuration | keys | Integrations Configuration keys Core | Advanced Local wheelst: Sowing | | EN Save | 1 |
| Configuration | ikeys | Integrations Configuration keys Core Enabled | AdvancedLocal white list | | EN Save | 6 |
| Configuration I CIRCONTROL CIRCONTROL Context A statement Context A statement Context A statement Monitor Historic | ikeys | Integrations Configuration keys Core crudied | Advanced Local white-list to the list | | EN Save | 6 |
| Configuration 1 Configuration CREONTROL Dashboard Dashboard Dashboard Historic Integrations General Remark | keys = ~ | Integrations Configuration keys Core | Advanced Local white-list: Solaw Ind | - | EN Save | |
| Configuration Co | keys = | Integrations Configuration keys Core | Advanced Local white list Show Ind | | EB Save | 6 |
| Configuration | | Integrations Configuration keys Core | Advanced Local white fat: Show Ind | | ER Save | |

Go to the Setup Webpage ightarrow 'Integrations' tab ightarrow 'Configuration keys' tab

| Value | Description |
|--------------------------------|---|
| Heartbeat interval | Number of seconds between Heartbeats. |
| | *NOTE: setting this value to 0 disables the Heartbeat. |
| Metervalues sample interval | Number of seconds between MeterValue during an ongoing Charge Transaction. |
| | *NOTE: setting this value to 0 disables the MeterValue. |
| Local white-list | ENABLED: Local list of authorized users. |
| | DISABLED: Local list of authorized users. |

When done, please do not forget to save changes using **'Save'** button in the screen upper right part.

Go to the Setup Webpage ightarrow Integrations ightarrow 'Backup' tab

| Ę | CIRCONTROL Mobility & eMobility | | | EN | (10) |
|---|------------------------------------|---|---|--------|------|
| | | = | Integrations Backup | | |
| Ø | Dashboard | | Download configuration Load configuration from disk | | |
| | Monitor | | Download setup Choose file | Browse | |
| | Historic | | Update | | |
| 0 | Integrations | | | | |
| | General | | | | |
| | Network | | | | |
| | Settings | | | | |
| | SSL certificates | | | | |
| | Configuration keys | | | | |
| | Backup | | | | |
| 0 | Configuration | | | | |
| P | Maintenance | | | | |
| | | | | | |

It is possible to download a backup of the Charge Point pressing 'Download setup' button. On the other hand, it can also be uploaded a backup previously downloaded from another Charge Point.





The goal of the Open Charge Point Protocol (OCPP) is to offer a uniform solution for the communication between Charge Point and a Central System. With this open protocol it is possible to connect any Central System with any Charge Point, regardless of the vendor.

Follow next steps in order to configure OCPP 1.6 in the Circontrol Charge Points.





Check following steps in order to ensure the correct function of OCPP 1.6:

Go to the Setup Webpage ightarrow 'Integrations' tab ightarrow 'General' tab

Once in **'General'** section, Public IP source establishes where the Charge Point must obtain the public IP address in order to send it later to the backend. Different values can be selected:

| CIRCONTROL Mobility & eMobility | | |
|--|---|----------------------------|
| = | Integrations General | |
|) Dashboard | Available integrations | |
|] Monitor | OCPP 1.6 JSON | |
| ⁸ Historic | Apply | |
| Integrations | Charge Point ID | |
| General | ChargeBox identity | |
| | | |
| Settings SSL certificates | Disabled Basic Authentication | |
| Settings SSL certificates Configuration keys | Disabled Basic Authentication | CS-Password |
| Settings SSL certificates Configuration keys Backup | Disabled Basik Authentikation Connection URL Host URL | CS-Password CS-Password |

Choose the option selected under **'Public IP source'** according to your network topology.

When done, please do not forget to save changes using **'Apply'** button just below the option selected.

| ↓ Monitor ● Historic ▲2859/ ● | ② Dashboard | Available integrations | | |
|---|------------------|------------------------|---|--|
| Николе Арри | Δ Monitor | OCPP 1.6 JSON | ~ | |
| | Historic | Apply | | |
| Charge Point ID. | 🛆 Integrations 👋 | Charge Point ID | | |



Go to the Setup Webpage ightarrow 'Integrations' tab ightarrow 'General' tab

Charge Point supports different versions of OCPP but only one can be enabled at the same time.

Go back to setup web page and click on the 'Integrations' tab, choose the option selected under 'Available integrations' according to your backend policies as shown in the picture:

| = | Integrations General | |
|--|---|----------------------------|
| Dashboard | Available integrations | |
| Monitor | OCPP 1.6 JSON | ~ |
| Historic | Apply | |
| Integrations | Charge Point ID | |
| General | ChargeBox identity | |
| | | |
| Settings SSL certificates | Disabled Basic Authentication | |
| Settings SSL certificates Configuration keys | Disabled Basic Authentication Connection URL | CS-Password |
| Settings SSL certificates Configuration keys Backup | Disabled Basic Authentication Connection URL Host URL | CS-Password CS-Password |

NOTE: Charge Point is working as stand-alone if **'none'** option is selected. All ID cards are authorized to start/stop a new charge transaction and no requests are sent to the backend.



| Value | Description | | |
|-------------------------|--|--|--|
| Charge Point ID | Charge Point identifier | | |
| Basic Authentication | Set an authentication if required, being the options 'Enabled' and 'Disabled' | | |
| Connection URL | URL address of the central system | | |
| CS-Password | Introduce CS-Password if required | | |

Go to the Setup Webpage ightarrow Integrations ightarrow 'Settings' tab

Once OCPP 1.6 option is selected, a link appears allowing access to the OCPP configuration.

Please, click on the link button as shown in the picture:

| Ę | CIRCONTROL Mobility & eMobility | | | | | | | Q | (EN) | (info |
|---|------------------------------------|---|--------------------------|-------------------------------|---|----------|-----------------------|-------------|------------|-------|
| | | = | Integrations Settings | | | | | | Save | |
| 0 | Integrations | | Enabled | Use OCPP time synchronization | | Partial | Energy for start/stop | ransactior | | |
| | General | | Partial | Energy for metervalues | | Disabled | User confirmation rec | uired to st | art transa | tion |
| | Settings | | | | | | | | | |
| | SSL certificates | | Big | ID tag endianness | | Enabled | Send metervalues onl | y while cha | arging | |
| | Configuration keys | | Log capture level | | | | | | | |
| | Backup | | INFO | | ~ | | | | | |
| | Security | | | | | | | | | |
| ٢ | Configuration | | | | | | | | | |
| P | Maintenance | | | | | | | | | _ |
| | | _ | | | | | | | | |



| Value | Description |
|---|---|
| Use OCPP time | ENABLED: Synchronization of date and time |
| Synchronization | DISABLED: Synchronization of date and time |
| | * NOTE: Date and Time is sent from backend on each heartbeat response. |
| Energy for Start/ Stop transaction | PARTIAL: Consumed value of energy by the vehicle sent between start and stop. |
| | TOTAL: Actual count of the total accumulated energy meter sent between start and stop. |
| Energy for metervalues | PARTIAL: Sends partial energy consumption while vehicle is charging. |
| | TOTAL: sends the actual count of the total accumulated energy meter. |
| User confirmation required to start | ENABLED: user confirmation needed to proceed with a remote start (i.e. touch the screen) |
| ti alisaction | DISABLED: user confirmation NOT needed to proceed with a remote start |
| ID tag endianness | Storage type for system data (BIG or LITTLE) |
| Send metervalues only while charging | Choose between (ENABLED or DISABLED) |
| Log capture level | Level of information detailed (DEBUG>INFO>ERROR>NONE) |

Go to the Setup Webpage ightarrow Integrations ightarrow 'SSL certificates' tab

| Ę | CIRCONTROL Mobility & eMobility | | | | | | | Q | EN | (info |
|-------|--|---|----------------------------------|---|--------|---|---|---|----|-------|
| | | = | Integrations SSL certificates | | | | | | | |
| 0 | Integrations General | × | CS_Server_CA Disabled | Verify the CS certificate (only with WSS) | | | | | | |
| | Settings | | Disabled | Accept unknown self-signed certificate | 5 | | | | | |
| | Configuration keys Backup Security | | Choose file Upload certificates | | Browse | | | | | |
| 0 | Configuration | > | | | _ | _ | _ | _ | _ | |

For WSS connections is needed a Central System certificate. Upload it in this section.





Go to the Setup Webpage ightarrow Integrations ightarrow 'Configuration keys' tab

| Ę | CIRCONTROL Mobility & eMobility | | | | | | Q | EN | info |
|--------|------------------------------------|---|------------------------------------|-----------------------------|---------------------|------------------------------|---|----|------|
| | | = | Integrations Configuration keys | | | | | | |
|) P | Monitor | | Core Ad | vanced | | | | | |
| ••• | Historic | | Disabled Loca | l authorisation off-line | Disabled | Local pre-authorisation | | | |
| 0 | Integrations | | Disabled Allow | v offline Tx for unknown ID | Disabled | Authorise remote Tx requests | | | |
| | General Settings | | Enabled Stop | transaction on invalid ID | | | | | |
| | SSL certificates | | Transaction message retry inte | erval (s) | Transaction message | attempts | | | |
| | Configuration keys | | 60 | | 2 | | | | |
| | Backup Security | | Heartbeat interval (s) | | Metervalues sample | interval (s) | | | |
| ക | Configuration | > | 120 | | 0 | | | | |
| S. | Maintenance | > | WebSocket ping interval (s) | | | | | | |
| | | | 30 | | | | | | |

| = | Integrations Configuration keys | | |
|--------------------|--|---------------------|--|
| ~ | Metervalue sampled data (select one or more) | | |
| Monitor | Energy.Active.Import.Register | Current.Import | |
| | Current.Offered | Power.Active.Import | |
| Historic | □ SoC | Voltage | |
| C Integrations | V Metervalue aligned data (select one or more) | | |
| [| Energy.Active.Import.Register | Current.Import | |
| General | Current.Offered | Power.Active.Import | |
| Settings | □ soC | Uoltage | |
| SSL certificates | Stop Txn sampled data | | |
| Configuration keys | Energy.Active.Import.Register | Current.Import | |
| Backup | Current.Offered | Power.Active.Import | |
| Security | □ soc | Voltage | |
| Configuration | Stop Txn aligned data | | |
| | Energy.Active.Import.Register | Current.Import | |
| Maintenance | Current.Offered | Power.Active.Import | |
| | □ soC | Voltage | |

| Ę | CIRCONTROL Mobility & eMobility | | | | |
|---|------------------------------------|---|------------------------------------|--------------------------|-----------|
| | | = | Integrations Configuration keys | | |
| 3 | Dashboard | | Core | Advanced | |
| 4 | Monitor | | Enabled | Local authorisation list | Show list |
| | Historic | | | | |
| 3 | Integrations | ~ | Enabled | Authorisation cache | Show list |
| 1 | General | | | | |
| | Settings | | | | |
| | SSL certificates | | | | |
| | Configuration keys | | | | |

| Value | Description | | | | |
|------------------------------------|--|--|--|--|--|
| Authorisation cache | ENABLED: maintain a local list of all presented identifiers that have been successfully authorized by the Central System. | | | | |
| | DISABLED: authorization for presented identifiers is requested directly to the Central System | | | | |
| Authorise remote Tx requests | ENABLED: the Charge Point asks for authorization when the Central System sends a remote start | | | | |
| | DISABLED: the Charge Point starts the Charge Transaction when the Central System sends a remote start | | | | |
| Local pre- authorisation | ENABLED: Charge Point looks for locally-authorized identifiers without waiting for the Central System authorization. | | | | |
| | DISABLED: Charge Point requests authorization for presented identifiers to the Central System. | | | | |
| Allow offline Tx for unknown ID | ENABLED: during offline period unknown identifiers are allowed to start charging | | | | |
| | DISABLED: during offline period unknown identifiers are NOT allowed to start charging | | | | |



| Value | Description | | | | | |
|------------------------------------|---|--|--|--|--|--|
| Local authorisation off-line | ENABLED: during offline period locally-authorized identifiers are allowed to start charging | | | | | |
| | DISABLED: during offline period locally-authorized identifiers are NOT allowed to start charging | | | | | |
| Stop transaction on invalid ID | ENABLED: stop existing Charge Transaction after response from Central System when user is blocked, expired or invalid. | | | | | |
| | DISABLED : Charge Transaction does not stop even if backend rejects the user. | | | | | |
| Metervalue (select one or more) | List of supported values used in the MeterValue. | | | | | |
| Transaction message retry | Number of seconds between transaction message attempts. | | | | | |
| interval | *NOTE: setting this value to 0 disables the attempts. | | | | | |
| Transaction message attempts | How many times the Charge Point should try to send a request to the Central System. | | | | | |
| Heartbeat interval | Number of seconds between Heartbeats. | | | | | |
| | *NOTE: setting this value to 0 disables the Heartbeat. | | | | | |
| Metervalues sample interval | Number of seconds between MeterValue during an ongoing Charge Transaction. | | | | | |
| | *NOTE: setting this value to 0 disables the MeterValue. | | | | | |
| WebSocket ping interval | Number of seconds between Pings. | | | | | |
| | *NOTE: setting this value to 0 disables the Websocket Ping/Pong | | | | | |

Go to the Setup Webpage ightarrow Integrations ightarrow 'Backup' tab

| | | | Q EN |
|---------------------|------------------------|------------------------------|--------|
| = | Integrations Backup | | |
| ∽ Monitor | Download configuration | Load configuration from disk | |
| Historic | Download setup | Choose file | Browse |
| <u>Integrations</u> | | | |
| General | | | |
| Settings | | | |
| SSL certificates | | | |
| Configuration keys | | | |
| Backup | | | |
| Security | | | |
| ලි} Configuration > | | | |

It is possible to download a backup of the Charge Point pressing 'Download setup' button. On the other hand, it can also be uploaded a backup previously downloaded from another Charge Point.



| Ç | CIRCONTROL Mobility & eMobility | | | Q | EN | (mfo |
|---|------------------------------------|---|------------------------------|---|----|------|
| | | = | Integrations Security | | | |
| 0 | Monitor | | Disabled Authentication | | | |
| - | Historic | | Change password User name | | | |
| 3 | Integrations | | admin | | | |
| | General | | Old password | | | |
| | Settings | | Old password | | | |
| | SSL certificates | | Password Repeat password | | | |
| | Configuration keys | | Password Repeat password | | | |
| L | Backup | | | | | |
| | Security | | | | | |
| Ì | Configuration | > | | | | |
| | _ | | | _ | _ | |

Go to the Setup Webpage ightarrow Integrations ightarrow 'Security' tab

In this section could be introduced a user and password in order to enter in this section. It is possible this option to be changed whenever is desired.

NOTE: Old password is 1234 by default.



SCADA Client

The IP address assigned in the section 5, will be useful to connect with the Charge Point in order to monitor the real-time status.

The main way to connect is using the **CirCarLife client software** (Supplied by Circontrol PS-Support staff) or you can download from:

http://circarlife.com/en/downloads/

NOTE: Java software needs to be installed on your computer in order to run the client software, please, download last version from: www.java.com

In remote connections, where is required communicate via 3G/4G data with the Charge Point in order to monitor its parameters, it should be noted that there will be a HIGH data consumption.

In the case of doing the Charge point monitoring, it is reccommended to use Ethernet communications via internet (see section 4).



| Magent EVSE - Raption | | | | | o د ک |
|-------------------------|-----------------------------|-------------------------------------|---------------|--------------------------------------|-----------------------|
| Opciones Vistas Gen | neral | — | | | |
| Anterior | Siguie <u>n</u> te 🔻 | Dispositivos Dispositivos Pantallas | Gráfico Tabla | Sucesos Propiedades Mingrimir Yareas | |
| | | | | EVSE | 4/02/20 15:45:13 |
| Estado pilona | | | | | |
| lluminación | 9 | ON | OFF | | |
| CCS | | | | | |
| Estado | | Disp | onible | Energía activa (KWh) | 189,632 |
| | \frown | | | Energía activa parcial (KWh) | 0,000 |
| Coche conectado | $(-\mathbf{c}, \mathbf{c})$ | | | Potencia activa (kW) | 0,037 |
| Reservado | | Reservar | Liberar | Voltaje (V) | 242,1 |
| Recarga | | Inicio remoto | Paro remoto | Corriente (A) | 2,5 |
| Habilitar | | Habilitar | Deshabilitar | Fecha solicitud recarga | 29/01/20 13:04:52 |
| Emergencia | × | | Reset | Fecha inicio recarga | 29/01/20 13:04:56 |
| Alimentación | × | | | Fecha final recarga | 4.02/20 15:42:45 |
| | | | | Tiempo de recarga | 22:53:30 |
| | | | | Parada última recarga | Parado por el usuario |
| | | | | | |
| CHAdeMO | | | | | |
| Estado | | Disp | onible | Energía activa (kWh) | 122,976 |
| Coche conectado | | | | Energía activa parcial (KWh) | 0,000 |
| | | | | Potencia activa (kW) | 0,036 |
| Reservado | | Reservar | Liberar | Voltaje (V) | 242,1 |
| Recarga | | Inicio remoto | Paro remoto | Corriente (A) | 2,4 |
| Habilitar | | Habilitar | Deshabilitar | Fecha solicitud recarga | 29/01/20 11:27:40 |
| Emergencia | × | | Reset | Fecha inicio recarga | |
| Alimentación | × | | | Fecha final recarga | 4/02/20 15:42:43 |
| | | | | Tiempo de recarga | 00:00:00 |
| | | | | Parada última recarga | |
| | | | | | |
| | | | | | |
| 😑 El servidor está acti | tivo (Localhost - 193 | 2.168.14.66:80) | | | |



This section shows how to manage the output power delivered by the Charge Point for CCS and CHA. To do this action you have to keep connected through the program CirCarLife Client software.

Limiting the output power will be useful when the input power supply for the Charge Point is not enough powerful to feed and keep a good level of charge for electric vehicles.

The power reduction can be done for CCS and CHA plugs, both in watts.

B Power Modules operation

Before apply any adjustment, it is important to understand the way the power of this Charge Point works.

There is a total of 6 power modules, divided in to blocks of 3 each one. When there is only one car charging, the two blocks work for the plug in use. If there are two cars charging, each block will supply each one of the vehicles. This means that maximum power to be delivered when charging two cars simultaneously is 75kW (3 power modules x 25kW each one = 75kW).

CCS cable supports 375A. CHAdeMO only 200A. Current is also restricted when there are two cars charging simultaneously, every power block can provide a maximum value of 250A.

Limits applied are permanent, regardless of whether one or two cars are charging.





Steps:

1- Execute CirCarLife Client software



2- Push on 'General' tab and after on 'Connect' tab



3- Enter the IP address given to the Charge Point and port number **80**, after, press over **'Ok'**

| Options Views General | | |
|----------------------------|---|---------------------|
| Previous Next | ▼ 📗 Devices 🕅 Graph 📰 Table 🏷 Events 🖑 Properties | Drint 🔪 |
| | Connect TCP/IP address 192 168.1222 Example Port 80 ✓ Ok Cancel | 1177/17 11:44:19 AM |
| ever not found or inactive | e | |

4- Press on the 'Views' tab icon at the TOOLBAR and after click on 'Devices status':

| a LYSE | - napae | ··· ••••••••••••••••••• | 0000000 | ********************** | | 000000000000000000000000000000000000000 | ,050505050505050505050 | |
|--------|-----------|-------------------------|---------|------------------------|-----------------|---|------------------------|---|
| ptions | Views | <u>G</u> eneral | | | | | | |
| G P | G | Previous | - | Devices | <u>S</u> creens | Karaph Graph | Ta <u>b</u> le | ۵ |
| | Ð | Next | | | | | | |
| Charge | | Historic | • | | | | | |
| Light | | Study | • | | | P | | |
| -ccs- | ۲ | Screens | • | | | | | |
| Statu | | Devices | • | | | | | |
| Car c | | Events | • | | | | \supset | |
| Rese | | Devices stat | ş | | | | [| |
| Rech | arge | | | | | | [| R |
| Enab | le | | | | | | [| |
| Emer | gency | | | | | × | | |
| Powe | er supply | / | | | | × | | |
| | | | | | | | | |


5- Find in the **Serial 1**, the **CCS-Mode 4** and **CHADEMO-Mode 4** options. Click on the connector whose power has to be adjusted, CCS or CHA

| 🐚 Devices status - Raption |
|--|
| <u>O</u> ptions <u>V</u> iews <u>G</u> eneral |
| 🕞 Prev <u>i</u> ous 🍚 Next 👻 🎑 Devices |
| A8 EVSE Serial 1 CCS-Mode 4 CHADEMO-Mode 4 SUPERVISOR Serial 2 Reader |

6- Once the **CCS-Mode 4** is already opened, press over Combo - General 1 and press the setup button.

| MarcCS-Mode 4L Raption | | | | | - C 🛛 |
|--|--|-------------------|-----------------------|---|---------------------|
| Options Views General | | | | | |
| 🕞 Previous 💮 Next 🔻 🛄 Devices 🎯 Screens 🎢 G | iraph 🔝 Table 🍃 Events 💣 Properties 🧼 Print 💇 Ia | sks | | | |
| A | | CCS-Mode 4 | | | 12/24/19 1:32:01 PM |
| Equipment - General Combo - General Combo - General 2 Combo - Si | atus messages Combo - Error | | | | |
| 10 Handler 1 | IO Handler 2 | EVA Board | | Limits | |
| Session ID 79 | Evse max voltage limit | 20 Eva board 1 br | /te 0 20 | C Limit current (A) | 200 |
| Evse ID 0 | Evse max voltage limit multi | 3 Ev requested | ransfer S | 3 CURRENT_REGULATION_LIMIT (A) | 200 |
| IO handler 1 byte 4 0 | Evse current regulation tolerance | 2 Eva board 1 b | /te1 36 | 30 Limit voltage (V) | 920 |
| Service category 0 | Evse peak current ripple | 2 Ev error code | c. | VOLTAGE_REGULATION_LIMIT (V) | 920 |
| Evse supported energy 3 | IO handler 4 byte 0 | 33 Ev max curren | t limit multiplier 3 | 3 Limit power (W) | 150 |
| Service ID 0 | Evse peak current ripple multiplier | 3 Charge state | 96) 75 | 79 POWER_REGULATION_LIMIT (W) | 150 |
| Schedule tuple ID 0 | Evse energy to be delivered multi | 6 Ev max curren | t limit 12 | 25 Time limit (s) | 3.600 |
| P max 0 | Combo evse energy to be delivered | 150 Ev max power | limit C | 0 Limit battery (%) | 100 |
| Start 0 | Evse present current | 0 Eva board 1 b | rte 5 16 | E Battery limit start (%) | 100 |
| Duration 0 | IO handler 4 byte 3 | 1B Ev max power | limit multiplier 6 | 6 Voltage of isolation test (V) | 500 |
| IO handler 2 byte 6 4 | Evse present current multiplier | 3 Ev max voltage | a limit multiplier 1 | 3 TIME_ISOLATION_TEST (s) | 5.000 |
| Evse isolation status 0 | Evse present voltage multiplier | 3 Ev max voltage | a limit 365 | 39 Percent decrease of maximum current (9 | %) 50 |
| Evse status code 1 | Evse present voltage | 0 Total battery c | apacity (kWh) 0,000 | 10 TEMP_CONNECTOR_HYSTERESIS_LO | W(°C) 85 |
| Evse notification 0 | IO handler prog state | 0 Eva board 2 b | de 1 36 | 36 TEMP_CONNECTOR_HYSTERESIS_HI | GH (°C) 85 |
| IO handler 2 byte 7 none 0 | Evse max current limit | 200 Ev max energy | r capacity multiplier | 6 TEMP_BOARD_CTRL_HYSTERESIS_LC | JW (*C) 130 |
| Notification max delay 0 | IO handler 5 byte 1 | 3 Ev max energy | request multiplier | B DARD_CTRL_HYSTERESIS_HI | (GH (*C) 150 |
| IO handler 3 byte 2 33 | Evse max current limit multi | 3 Ev max energy | request | 0 | |
| Evse current reg tolerance multi 3 | IO hamdler 5 reserved 32bit | 0 Full soc | 255 | 55 Setup | Temperatures setup |
| Evse max power limit multiplier 6 | IO handler 5 reserved 8bit 1 | 0 Bulk soc | 255 | 55 | |
| Evse max power limit 150 | IO handler 5 reserved 8bit 2 | Ev target curre | nt B4 | 34 | |
| | | Ev target volta | ge 365 | 59 | |
| | | Sslected sche | dule tuple ID (| 0 Actions | |
| | | Charging prof | le entry start 0 | 0 Start charge | Stop charge |
| | | Charging prof | le max power (| 0 Lattenaryo | |
| | | Eva board 3 b | ite 3 | 0 | |
| | | Remaining tin | te to bulk soc (s) | 0 | |
| | | Remaining tin | 1e to rull soc (s) | Reset alarms | |
| | | Eva request p | rog state | | |

7- The pop-up window below appears, at **'Limit Power'** tab it is possible to set the maximum DC power output, it can be selected from 10kW until 150kW for CCS.

| Forzar variables |
|---|
| CCS-Mode 4 |
| Corriente límite |
| 200 |
| CURRENT_REGULATION_LIMIT |
| 200 |
| Voltaje límite |
| 920 |
| VOLTAGE_REGULATION_LIMIT |
| 920 |
| Potencia límite |
| 150 |
| POWER_REGULATION_LIMIT |
| 15 |
| Time limit |
| 3600 |
| Batería límite |
| 100 |
| Batería límite inicial |
| 100 |
| Voltaje objetivo del test de aislamiento |
| 500 |
| TIME_ISOLATION_TEST |
| 5000 |
| Porcentaje de disminución de corriente máxima |
| 50 |
| Aceptar X Cancelar |

Click 'OK' to confirm changes.



6- Once the $\mbox{CHADEMO-Mode 4}$ is already opened, press over CHAdeMO - General 1 and press the setup button.



7- The pop-up window below appears, at **'Limit Power'** tab it is possible to set the maximum DC power output, it can be selected from 10kW until 100kW for CHA.

| Forzar variables | X |
|---|---|
| CHADEMO-Mode 4 | |
| Corriente límite | |
| 125 | |
| CURRENT_REGULATION_LIMIT | |
| 125 | |
| Porcentaje de disminución de corriente máxima | |
| 50 | |
| Voltaje límite | |
| 500 | |
| VOLTAGE_REGULATION_LIMIT | |
| 500 | |
| Potencia límite | |
| 75 | |
| POWER_REGULATION_LIMIT | |
| 75 | |
| Time limit | |
| 3600 | |
| Batería límite | |
| 100 | |
| Batería límite inicial | |
| 100 | |
| Voltaje objetivo del test de aislamiento | |
| 500 | |
| TIME_ISOLATION_TEST | |
| 1000 | |
| | |
| Aceptar Kancelar | |

Click '**OK'** to confirm changes.





Technical Data

| GENERAL SPECIFICATIONS | |
|--------------------------------|---|
| AC Power Supply | 3P + N + PE |
| AC Voltage | 400V AC +/- 10% |
| Maximum AC input current | 260A |
| Required power supply capacity | 160kVA |
| Power Factor | 0.98 |
| Efficiency | 95 % at nominal output power |
| Frequency | 50 / 60 Hz |
| Electrical input protection | Main breaker disconnection |
| Overcurrent protections | МСВ |
| Safety protection | RCD Type B |
| Network connection | Ethernet 10/100BaseTX |
| Interface protocol | OCPP 1.5 or OCPP 1.6J SM |
| Compliance | CE / Combo-2 (DIN 70121; ISO15118) IEC 61851-1; IEC 61851-23; IEC 61851-21-2 |
| | CHAdeMO compatible |
| Enclosure rating | IP54 / IK10 |
| Enclosure material | Stainless steel |
| Operating temperature | -30 °C to +50 °C |
| Ambient temperature storage | -40 °C to +60 °C |
| Operating humidity | 5 % to 95 % Non-condensing |
| Socket protection | Locking System |
| RFID system | ISO / IEC14443-1/2/3 MIFARE Classic |
| Display HMI | 8" colour antivandal touch screen |
| Power limit control | By software |
| DC cable length CCS | 3.5 meters |
| DC cable length CHAdeMO | 3.5 meters |
| Lights for status indication | RGB colour indicator |



| Dimensions (D x W x H) | 550x1140x1910 mm (without cable engaged) |
|--------------------------|--|
| Weight | 450 kg |
| Cooling system | Air cooling fans |
| Operational noise level | < 55 dBA |
| AC Meter | Compliant with the EN 50470-1 and EN 50470-3 (MID European standards) or IEC 62052-11 |
| Wireless Comunication EU | 4G LTE/WiFi Hotspot/GPRS/GSM |

| OPTIONAL DEVICES | |
|-------------------------------------|--|
| Wireless Comunication | LATAM/APAC/4G LTE/GPRS/GSM |
| Surge protection | Four pole transient surge protector IEC 61643-1 (class II) |
| Cable Length | 5.5 meters (all cables) |
| Anti-vandal connector protection | CHAdeMO, CCS (mechanical connector locking) |
| Network hub | Switch TCP ethernet 8 ports |
| RFID Extension | Legic Advant / Legic Prime ISO 15693/ISO 18092. Sony FeliCa |
| Contacless payment | Integrated credit card payment terminal |
| EMC class B protection | For safe use in residential areas |

Models Specifications

| Raption 150 Compact Models | CCS | CCS CHA | CCS CCS |
|-------------------------------|---------------|--------------------------------|--------------------------------|
| Maximum output power | CCS: 150 kW | CCS: 150 kW CHA: 100 kW | CCS: 150 kW CCS: 150 kW |
| Output voltage range | CCS: 150-920V | CCS: 150-920V CHA: 150-500V | CCS: 150-920V CCS: 150-920V |
| Maximum output current | CCS: 375A | CCS: 375A CHA: 200A | CCS: 375A CCS: 375A |
| Connection | | | |
| | L | | |



In case of any query or need further information, please contact our **Support Department:**







CIRCONTROL Raption 150 Compact USER MANUAL

A comprehensive guide on how to use and configure your Raption 150 Compact Charging Station.

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