

INSTRUCTION MANUAL

(M247B01-03-19B)

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Disclaimer

CIRCUTOR, SA reserves the right to make modifications to the device or the unit specifications set out in this instruction manual without prior notice.

CIRCUTOR, SA on its web site, supplies its customers with the latest versions of the device specifications and the most updated manuals.

www.circutor.com



Revision log

Date	Revision	Description
02/19	M247B01-03-19A	Initial Version
07/19	M247B01-03-19B	Change of Logo and corporate colors

Here's your guide to use and configure URBAN.

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This manual provides information about the usability and configuration of the **Master-Slave**, which has been designed and tested to allow electric vehicle charging, specified in IEC 61851.

It contains all the necessary information for safe use and help to get the best performance from it with step-by-step configuration instructions.

THE FOLLOWING SYMBOLS ARE USED FOR IMPORTANT SAFETY INFORMATION IN THIS DOCUMENT



ATTENTION!

Indicates that the damage to property can occur if appropiate precautions are not taken.

- Complies with IEC 61851, Electric vehicle conductive charging system (IEC 61851-1 and IEC 61851-22)
- Complies with IEC 62196, Plugs, socket-outlets, vehicle couplers and vehicle inlets (IEC 62196-1 and IEC 62196-2).
- Standards: 2014/35/UE, LVD;2014/30/UE, EMC.
- RFID complies with ISO 14443A/B

So, hello!

IMPORTANT SAFETY INFORMATION



Read carefully all the instructions before manipulating the unit.

The Charge Point may not include elements of electrical protection.

- Read all the instructions before using and configurating this product.
- Do not use this unit for anything other than electric vehicle charging.
- Do not modify this unit. If modified, CIRCUTOR 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 electrical parts inside the device.
- Check the installation annually by a qualified technician.
- Remove from service any item that has a fault that could be dangerous for users (broken plugs, caps that don't close...).
- Use only **CIRCUTOR** 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.



Master



1 - Hat

2 - LED Beacons

6 - Key lock

3 - Touch screen



- 5 Plugs⁽¹⁾
- 7 Base

 ${}^{{\scriptstyle {\scriptstyle (1)}}}$ Plugs may vary depending on the model

- **HMI:** 8" colour touch screen as the interface between the Charge Point and the user. Provides detailed information about ongoing charge transactions and the instructions of how to interact with the Charge Point.
- **Connector Lock:** Type 2 connector has a lock system to avoid disconnection of EV meanwhile is charging.
- Light beacon: Three colour led indicates the status of the connectors.
- **RFID:** User authentication.
- Ethernet: TCP/IP communication for remote supervision and configuration.
- **4G Modem (optional):** For those places where wired communications are not sufficient.
- Energy metering: Integrated meter built is measuring power and energy consumed by the EV during a charge transaction.
- **Remote access:** For supervision and control from everywhere.
- Charge transaction historics: Charge Point is capable of storing information about the charge transactions.
- **OCPP:** Open standard communication protocol, allows communication between the Charge Point and the Central System.

Features

Slave



- **Connector Lock:** Type 2 connector has a lock system to avoid disconnection of EV meanwhile is charging.
- Light beacon: Three colour led indicates the status of the connectors.
- Energy metering: Integrated meter built is measuring power and energy consumed by the EV during a charge transaction.
- **Remote access:** For supervision and control from everywhere.
- Charge transaction historics: Charge Point is capable of storing information about the charge transactions.

1 - Hat

2 - LED Beacons

4 - Key lock

- 3 Plugs⁽²⁾
- 5 Base

⁽²⁾ Plugs may vary depending on the model



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.



How to use it?

When tapping on the screen, the HMI will skip to the next one:



Here the Charge Point is asking to show the identification card or touch the screen.

The first option, show the identification card, is the option that will allow to start a 'Charging session' or to stop an ongoing 'Charging session'.

The second option, touch the screen, is meant to get information about the connectors status and the charging process so as to know the Charge Point availability. However, a 'Charging session' cannot be started or do any action over the currently charging session unless an authorized identification card is shown.



During all the process is possible to change language, pressing on the top of the screen over the **'Flag'** touch symbol:



The language can be chosen by tapping on the corresponding flag.



The availability of the different languages is subject to the firmware version.

In case of doubt, please consult your local supplier.

C Start charging

Once the identification card is shown, it may take a few seconds to authorise the access.



The HMI informs if the access is granted or not.

Language	Language
Authorized	Not authorized

If the user is authorised, the connector can be chosen.



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

Once the connector is chosen, instruction screens will appear successively.



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".



1- Language button: pressing over this button it is possible to change the HMI language.

2- Analog process indicator: at first moment it is red, as the vehicle is charging it will change to green, passing before for orange.

3- Charge time with status bar: charging time elapsed so far.

- 4- House touch button: it goes back to the "identification screen".
- **5- Additional information:** instructions, current status, etc.
- 6- Energy charged: energy supplied to the vehicle so far.

E Special events start charging

"Not authorized": some Charge Points could be working under the supervision of a main management system. If the user is not authorized, the HMI will show the following message:



"Authorization failed": the authorization could not be completed due to some communication problem with the Back Office.



It is possible that the Charge Session could not be started due to some unexpected reason. The HMI will show next screen, press **'Retry'** button and try again.



F Stop charging

After showing the same identification card that started the Charging Session, the Charge Point will automatically allow to stop the charging session, press over the **'Stop'** button:



Once the charging session is stopped, the HMI shows the summary screen. Press over the **'Exit'** touch button and disconnect the vehicle:





1- Language button: pressing over this button it is possible 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- Stop reason: It shows why the charging session has been stopped.

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, per example the "reason for stopping" or another one.

H Connector status

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

Connector available, a Charging Session can be starded.
Connector charging, a Charging Session cannot be starded because it is already in use.
Connector disabled, a Charging Session cannot be starded because it is under maintenance or because the Back office has decided to stop it.
Connector out of service, a Charging Session cannot be starded due to some error. Tap on the ' Information ' button in order to get more information about it.
Connector reserved, a Charging Session can only be starded using the IdTag assigned to the reservation.

Errors

The Charge Point can report about different sort of errors, it can be from different parts or devices from it.



When the **'Error screen'** appears, the **'Information'** touch button has to be pressed in order to see the error message, as you can see below:

Errors	l
Chargegoint: Plug: 0x20000	
$\boldsymbol{\otimes}$	
8	

Logical levels:



Charge point: General errors affecting the whole charge Point (E.g.: RFID error).

Plug: Error affecting one plug. All sockets are in error state. Plug is inoperative.

Socket: One plug may have more than one socket. Error can affect one socket and plug still being available.



How to connect it?





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



There is only one Ethernet port on the Slave Charge Point and it is located on the TCP1RS. The location of this device may vary depending on the model, for more information please contact **CIRCUTOR** Post-Sales Department.

Before proceeding , make sure all the following is ready:



Computer running at least Microsoft Windows XP.



UTP Cable (at least one for each Charge Point)





1 - Connect the UTP Cable to the Computer (running Microsoft Windows, at least Windows XP) and the Ethernet Switch.

The Computer and the Charge Point must be in the same network and in the same range.



2 - Execute IPSetup.exe on the Computer.



- 3 Enter the following parameters and click on 'Configure'
- MAC of the Charge Point (see label on the side of the Charge Point)
- IP address
- Netmask
- Gateway: leave default settings

🔩 IPSetup	
	>>
	MAC
	Dirección
	255 . 255 . 255 . 0
	Gateway 0 . 0 . 0 . 0
	Configurar Salir

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



5 - The process will complete when the following message appears, by click ing on '**OK**' the setup webpage will open.





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

To access the setup web page, open a web browser and enter the IP address previously configured.



Overview

As a relevant information, the 'Summary' shows:

- Firmware version: Version of the firmware currently working in the Charge Point
- MAC Address: Identifier of the network card of the Charge Point

<			H C
Ø Dashboard	⑦ Dashboard		Overview
A Network	Summary		
Security	Product raption	Firmware Version 2.5.0 rc2	
C Time	MAC Address 00:26:45:00:AD:EB	Company Name CIRCONTROL S.A	💻 System Status
Integrations	Company URL http://www.circontrol.com	Build Creation Date 2018-08-23 16:05:23	Orivers
Services			FRepository Sources
Firmware			🟴 System Logs
 ChargePoint Configuration 			
Configuration Update			

Setup Webpage

Devices Status

As a relevant information, the 'Devices Status' shows:

- Device name: Name of the devices inside the Charge Point
- Status: **OK** (online) / **NOT OK** (offline)

			H C
Ø Dashboard	⑦ Dashboard		Overview
Network	Devices Status		C
Security	Device Name	Status 🔨	P Devices Status
<u> </u>	ChargeDemo_AC3	Ok	💻 System Status
C Time	ChargeDemo_AC2	Ok	
S Integrations	ChargeDemo_AC1	Ok	© Drivers
Services	TCP1	Ok	The Repository Sources
Firmware	Reader	OK	
	Serial 2	Ok	F System Logs
 ChargePoint Configuration 	EVSE	Ok	
Configuration Update			

System Status

The information shown in this section is basically relative to the state of the Control Board of the Charge Point

This is necessary for the technical service staff but does not show any information regarding the external connection of the Charge Point or the charging session.

 • 						H C
Ø Dashboard	O Dashboard					
A Network	System Status					
Security	Uptime 3d, 19h50m45s			MemUsed 71.99%		
C Time	MemTotal 244 MB			MemFree 68 MB		System Status
Integrations	cpu_usr 67%			cpu_sys 32%		© Drivers
Services	disk_used 111.8M			disk_available 1.3G		Repository Sources
1 Firmware	Ethernet RX/TX 591.1 MiB / 374.4	MiB				🗭 System Logs
ChargePoint Configuration	Network Status					
*** 0 5 5 11 12	-	Protocol	Local Address	Foreign Address	State	
Configuration Update		tcp	0.0.0.0:webcache	0.0.0.0:*	LISTEN	
		tcp	0.0.0.0:www	0.0.0.0:*	LISTEN	
		tcp	0.0.0.0:ssh	0.0.0.0:*	LISTEN	
		tcp	localhost:1500	0.0.0.0:*	LISTEN	
		tcp	localhost:2812	0.0.0.0:*	LISTEN	

Drivers

The information shown in this section is regard to the drivers that the Charge Point needs in order to recognize the different devices inside the Charge Point, such as the meters, the Mode 3 controller, the RFID reader, etc.

		нс
Ø Dashboard	② Dashboard	Overview
A Network	Drivers	
Security	A8 Embedded CBS-4	✓ Devices Status
Time	CBS-8	🚍 System Status
Integrations	CCL1 Engine CEM-C10 CEM-C20	Drivers
Services	CEM-C30	Fepository Sources
1 Firmware	CHARGEDEMO CVM-1D	System Logs
 ChargePoint Configuration 	CVM-MINI CVM-NRG96	
Configuration Update	M3CD	
	Mode 4 DELTA	
	Mode 4 PRE	
	RS232/485	
	SMARIMETER	
	TCP2RS	



Repository Sources

The information shown in this section is basically related to the internal behavior of the Charge Point.

This is necessary for the technical service staff but does not show any information regarding the external connection of the Charge Point or the charging session.

•		H C
Oashboard	O Dashboard	Overview
A Network	Platform Sources	
Security	/var/svn/charger-raption/branches/173500_Master_Slave → 561	
C Time		💻 System Status
Integrations	/var/svn/circarlife/raption/branches/173500_Master_Slave/common 🔶 8361	Orivers
Services	/var/svn/libuid/tags/1.0 → 6	Repository Sources
1 Firmware	Avar/svn/circartife/raption/branches/173500_master_stave/fibs/XCTools + 8361	System Logs
 ChargePoint Configuration 	/var/svn/circarlife/raption/branches/173500_Master_Slave/libs/XCRemote → 6686	
Configuration Update	Veb Setup Sources Nar/svn/embedded-web/branches/173500_Master_Slave → 254	
	HMI Sources	
	/var/svn/circarlife/hml/trunk/src 🔶 8365	
	/var/svn/circarlife/tools/touch_alignment/tags/1.1.0 ↔ 4774	

System Logs

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.

This logs are created since Charge Point is powered On. Even if Charge Point is restarted the logs are saved.

<							H (C
0	Dashboard	O Dashboard						
A	Network	System Logs			C	Â		
•	Security	Date 🔨	Source	Severity	Message		✗ Devices Status	
- 0	Time	Sep 18 09:55:19	raption	user.err	ocpp1.6: OcppCsClienLisonWS.cpp:135 - Cannot connect to: wss://ocpp-spp.ze- watt.com:9000/ocppi//ZW99994 - Error code: -1285552788		💻 System Status	
5	Integrations	Sep 18 09:55:19	raption	user.err	ocpp1.6: OcppCsClienLlsonWS.cpp:135 - Cannot connect to: wss://ocpp-spp.ze- watt.com:9000/ocppi//ZW99994 - Error code: -1285552788		Orivers	
	Services	Sep 18 09:55:19	raption	user.err	ocpp1.6: OcppCsClienLisonWS.cpp:135 - Cannot connect to: wss://ocpp-spp.ze- watt.com:9000/ocppi//ZW99994 - Error code: -1285552788	₽ Red	Repository	
± ≁ ≎	Firmware	Sep 18 09:55:19	raption	user.err	ocpp1.6: OcppCsClienLisonWS.cpp:135 - Cannot connect to: wss://ocpp-spp.ze- watt.com:9000/ocppi//ZW99994 - Error code: -1285552788		Sources	
	ChargePoint	Sep 18 09:55:19	raption	user.err	ocpp1.6: OcppCsClienLisonWS.cpp:135 - Cannot connect to: wss://ocpp-spp.ze- watt.com:9000/ocppi//ZW99994 - Error code: -1285552788		🖵 System Logs	
	Configuration	Sep 18 09:55:19	raption	user.err	ocpp1.6: OcppCsClientJsonWS.cpp:135 - Cannot connect to: wss://ocpp-spp.ze- watt.com:9000/ocppi//ZW99994 - Error code: -1285552788			
	Configuration Update	Sep 18 09:55:19	raption	user.err	ocpp1.6: OcppCsClientJsonWS.cpp:135 - Cannot connect to: wss://ocpp-spp.ze- watt.com:9000/ocppi//ZW99994 - Error code: -1285552788			
		Sep 18 09:55:19	raption	user.err	ocpp1.6: OcppCsClientJsonWS.cpp:135 - Cannot connect to: wss://ocpp-spp.ze- watt.com:9000/ocppi//ZW99994 - Error code: -1285552788			
		Sep 18 09:55:19	raption	user.err	ocpp1.6: OcppCsClientJsonWS.cpp:135 - Cannot connect to: wss://ocpp-spp.ze- watt.com:9000/ocpp//ZW99994 - Error code: -1285552788			



This section provides basic configuration of the network parameters. Clicking over the **'Network'** tab, next image will appear.

<		H C	
Oashboard	A Network		
A Network	Hostname		
Security	raption-4500adeb		
() Time	DHCP	Public Address Manager	
0	OFF	Address Type	H
Integrations		Teltonika RUT240 LTE v	H
Services	DHCP Client	Public IP	
firmware		10.103.1.71	
 ChargePoint Configuration 	IP Address Settings		
Configuration Update	IP Address		
- · ·	192.168.110.45		
	Netmask	Gateway	
	255.255.255.0	192.168.110.254	H
	Primary DNS server	Secondary DNS server	
	192.168.0.9		H
			H

Value	Description		
Hostname	Name of the Charge Point on the network		
	•Local address: select this option if the OCPP central system is connected to the same private network than the Charge Point is already connected. It is assigned to the Ethernet Port.		
	• Static address: select this option if the external modem/rout- er is different than listed below. It must have static public IP address, check it with your SIM provider.		
	NOTE: Public IP address must be entered manually in the "Public IP" text box.		
Address Type	•SIERRA Wireless Raven XE H2295EW: select this option only when SIERRA Wireless RAVEN XE cellular router is con- nected to the charge point.		
	•SIERRA Wireless AirLink LS300: select this option only when SIERRA Wireless AirLink LS300 cellular router is connect- ed to the charge point.		
	•Circutor SGE-3G/GPRS: Select this option only when CIR- CUTOR SGE-3G/GPRS cellular router is connected to the charge point.		
	• Teltonika RUT240 LTE: Select this option only when Teltoni- ka RUT240 LTE cellular router is connected to the charge point.		
DHCP Client ID	Client ID associated to the DHCP server (if available)		
Public IP	Static public IP address to write if provided by the SIM provider		
IP Address	IP Address assigned to the Charge Point		
Netmask	Netmask of the network		
Gateway	Gateway of the network		



This section provides basic configuration of the security parameters. Avoiding unauthorised access to the Setup Webpage. All parameters are disabled from factory settings.

<			Ħ	С	
Ø	Dashboard	Security			I
A	Network	Authentication OFF			I
•	Security	User Name			I
C	Time	Dassword Dopost password			I
5)	Integrations				I
-	Services				I
1	Firmware				I
4	ChargePoint Configuration				I
\$	Configuration Update				I
					I

Value	Description
Authentication	ON: authentication enableb / OFF: authentication disabled
User Name	
Password	Username and Password authentication for Setup web page
Repeat password	



Do not forget the credentials. There is no way to restart the Charge Point to default factory settings.




This section allows setting the time and region time for the Charge Point.

<		÷	H C
0	Dashboard	© Time	
A	Network	Time Zone	Primary NTP server
•	Security	UTC	
G	Time	Time	Secondary NTP server
59	Integrations	Sync Device Time Torsizona Torsizona Torsizona	
-	Services		
±	Firmware		
+	ChargePoint Configuration		
۵	Configuration Update		

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	Synchronize the time through internet automatically
Secondary NTP Server	



This section allows to enable and disable OCPP service of the Charge Point.

Both OCPP 1.5 and OCPP 1.6 are available on the last firmware version.

	H C
Oashboard	Integrations
A Network	Available Integrations
Security	None v
C Time	OCPP 1.5 OCPP 1.6
Integrations	
Services	
1 Firmware	
 ChargePoint Configuration 	
Configuration Update	
_	



For more information about the parameters and configuration, please refer to **'OCPP 1.5'** or **'OCPP 1.6'** chapters of this manual.



This section allows to change the HMI language, make a Grid test as well as setting a password.

<			Ħ	С	
0	Dashboard	Services			1
A	Network	Grid Test			I
	Security	OFF			I
G	Time	Charge Point HMI Configuration			I
5)	Integrations	Català			I
	Services	Authentication			I
1	Firmware	ON			I
4	ChargePoint Configuration	User Password admin ++++			I
¢	Configuration Update	H Save			

Value	Description
Grid Test	The Charge Point makes a calibration test on the HMI screen
Default language	It is possible to choose the default language for the HMI screen
Authentication	It can be set an authentication to avoid changes in this page



The Charge Point firmware can be upgraded remotely by clicking on the **'Select File'** button.

		Ħ	С
Ø Dashboard	± Firmware		
A Network	File Size Status Actions		
Security	Solad File		
C Time	▲ · · · · · · · · · · · · · · · · · · ·		
Integrations			
Services			
± Firmware			
 ChargePoint Configuration 			
Configuration Update			

A window will pop up in order to choose the file, then click on 'upload'.

Network	File	Size	Status Actions		
Security	firmware.upgrade Upload File Progress	75.96 MB	Upload	⊘ Cancel	
Integrations			T_		
Services					
Firmware					
ChargePoint Configuration					
Configuration Update					
			_		_

H Charge Point Configuration

The Charge Point is capable of balancing the available power based on the number of outlets in use.

<		Ħ	С
Oashboard	PowerBalance		
A Network	Enable Power Balance Total Consumption PowerBalance Configuration		
Security	NO 0 H Save		
C Time			
Integrations	Slave chamers configuration		
Services	List of chargers:		
± Firmware	Charger Name Charger Model IP Address MAC Address Actions		
 ChargePoint Configuration 	Add charger		
Configuration Update			
		_	_

Value	Description
Enable Power Balance	YES: the Charge Point shares equally the power delivered to each ongoing Charge Transaction without exceeding the limit configured.
butanee	NO: the Charge Point does not take in consideration any limit, giv- ing the maximum power for each connector.
	Maximum current value offered by the Charge Point that shares between the ongoing Charge Transactions.
Total Consumption	NOTE: This value must be equal or higher than 6A multiplied by the number of outlets. Meaning that it must be equal or higher than the sum of current delivered when all outlets are charging at the minimum.



The Master Charge Point is able to manage numerous Slave Charge Points, in order to add them click on '**Add charger**'.

					H	С
Ø Dashboard	PowerBalance					
A Network	Image: PowerBalance Enable Power Balance Total Consumption NO Image: PowerBalance Slave chargers configuration List of chargers: Charger Name Plug Name Charger Model IP Address MAC Address Action Add charger					
Security	NO	0	Save			
C Time						
Integrations	Slave chargers configuration					
Services	List of chargers:					
Firmware	Charger Name Plug Nar	ne Charger Model	IP Address	MAC Address	Actions	
 ChargePoint Configuration 	Add charger					
Configuration Update						

A new menu will show up in order to add new Slave Charge Points.

×									Ħ	С	۱
0	Dashboard	PowerBalance									I
A	Network	Enable Power Bal	ance	Total Cor	sumption	PowerBalance	Configuration				I
•	Security					TT Save					I
0	Time										I
5)	Integrations	🚊 Slave chargers o	onfiguration								I
-	Services	List of chargers:									I
±	Firmware	Charger Name	Plug Name		Charger Model	IP Address	MAC Address	Actions			I
+	ChargePoint Configuration	Add charger									
۵	Configuration Update	New slave charge	r information:								I
		Slave charger mo	del	¥	Charger Name		Use auto-general	ted names			Į
		IP Address			MAC Address		Perform IP addre	ss assigment			I
		0.0.0.0			00:00:00:00:00:00		YES				
									_		J

Instruction Manual

More fields are shown when selecting a 'Slave charger model'.

C							Ħ	С
② Dashboard	Slave chargers of the state	onfiguration						
A Network	List of chargers:	enngarater.						
Security	Charger Name	Plug Name	Charger Model	IP Address	MAC Address	Actions		
Time	Add charger							
Integrations	New slave charge	r information:						
Services	Slave charger mo	del	Charger Name		Use auto-genera	ted names		
🛧 Firmware			Charge Point 1		NO			
ChargePoint Configuration	IP Address		MAC Address		Perform IP addre	ess assigment		
coniguration	0.0.0.0		00:00:00:00:00:00		YES			
	Plug A Name Plug A	Restore	2xType 2 Plugs - Si	ngle-phase supply	Plug B	Name B		

By clicking the **'Save'** button, all the configuration inside the **'Slave chargers configuration'** is applied. Before doing so, make sure all fields are properly filled.

Value	Description
	List of Slave Charge Point models.
Slave charger model	NOTE: Select it carefully according to the model described on the label.
Charger Name	Allows to specify the name of the charger.
	NOTE: this name only serves as a label, it does not affect the correct operation of the equipment.
Use auto-generated	YES: 'Charger Name' assigned by default.
	NO: 'Charger Name' can be edited manually.
IP Address	IP address of the Slave Charge Point
MAC Address	MAC address of the Slave Charge Point
Perform IP address	YES: when clicking the 'Save' button on the bottom of the web- page, the desired IP address is assigned to the Slave Charge Point with the MAC address specified.
assigment	NO: when clicking the 'Save' button on the bottom of the webpage, the Slave Charge Point with the IP address specified is added to the list ignoring the MAC address field.
	Plug A name can be edited manually.
Plug A Name	NOTE: this name is shown on the Master Charge Point screen
	Plug B name can be edited manually.
Plug B Name	NOTE: this name is shown on the Master Charge Point screen

Configuration Update

The Charge Point configuration can be updated remotely by clicking on the **'Select File'** button. Intended ONLY for Service Staff to restore the Charge Point to default factory settings.

		Ħ	С	
Ø Dashboard	Configuration Update			
A Network	File Size Status Actions			ł
Security	Select File			ł
C Time				ł
Integrations	▲ · · · · · · · · · · · · · · · · · · ·			I
Services				ł
± Firmware				I
 ChargePoint Configuration 				I
Configuration Update				
		-	-	Ì

A window will pop up in order to choose the file, then click on 'upload'.

				H	С
Oashboard	Configuration Update				
A Network	File	Size	Status Actions		
Security	configuration.tar	75.97 MB	• Upload	O Cancel 🛱 Remove	
C Time	Upload File Progress				
Integrations			A		
Services					
± Firmware					
 ChargePoint Configuration 					
Configuration Update					



To obtain the appropriate configuration file please contact **CIRCUTOR** Post Sales Department. More information in **'Need help?**' chapter.



The 4G modem installed by default is:

Teltonika RUT240



This device allows to the Charge Point connect 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.

5	20	⑦			
POWER		•	LAN	WAN	
6	8)		3	(4)	



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

Teltonika RUT 240



Explanation of connection status LED indication:

- 1. Signal strength status LED's turned on: router is turning on
- 2. 2G and 3G LED's constant blinking every 1 sec: no SIM or bad PIN

3. 2G/3G LED's blinking every 1 sec: connected 2G/3G, but no data session established

4. Blinking from 2G LED to 3G LED repeatedly: SIM holder not inserted

5. 2G/3G LED turned on: connected 2G/3G with data session

6. 2G/3G LED blinking rapidly: connected 2G/3G with data session and data is being transferred.





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), Wi-Fi antenna and the power connector are properly attached.



SIM card NOT provided by **CIRCUTOR.**



When the set up is done as described in the previous section, the modem is accessible via Wi-Fi or Ethernet.

1.Using a Computer look for a Wi-Fi access point named RUT240_xxxxxxxx and connect on it, no password needed. If connecting via Ethernet, skip this step.

2.Open a web browser and type http://192.168.1.1

3.Use the following parameters when prompted for authentication:

User name: **admim** Password: **admin01**

👯 Teltonika-RUT240.com - Wel	•∪× +	And All
← → ♂ û	1 🎽	192.168.1.1/cgi-bin/luci
	TELTONIKA	
A	uthorization	Required
Please	enter your usernar	ne and password.
Userna	ame admin	
Passw	ord	
	Login	
Teltonika soluti	ons	www.teltonika.lt



The **Configuration Wizard** will start after logging in. It is necessary to complete Configuration Wizard to setup the modem correctly.

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





When using OCPP, do not change the default password. Charge Point needs to obtain a public IP address.



Go to Network > Mobile > General > Mobile Configuration.

Type the APN from your SIM provider and click on the 'Save' button.

→ C' û	③ <u>¥</u> 192.168.1.1	L/cgi-bin/luci/:st	ok=4996cc89d8	3bf3878e08d171	.0e13c06ba/admi	n/network/mobile/g	eneral/ 🛡 🏠 🤇	२ Buscar 🛙	\ D	
TELTONI	KA Status -	Network -	Services -	System -			Logout	ŀ		
You haven't chang	ed the default passwor	d for this route	. To change ro	uter password	lick here.					
General Mob	ile Data Limit									
Mobile Conf	iguration									
Mobile Configurat	ion									
	Connection type	QMI -								
	Mode	NAT	•							
	APN									
	PIN number									
	Dialing number	*99#								
	Authentication method	None 💌								
	Service mode	Automatic	•							
	Deny data roaming									
	Use IPv4 only	V								
Mobile Data On D	emand									
	Enable									
	No data timeout (sec)	10								
Force LTE networ	k									
	Enable									
	Reregister									
	Interval (sec)	300								
							Save			
Teltonika solutions							www.teltonika.lt			

If the SIM provider requires any authentication, PAP or CHAP, select it on 'Authentication method' field and introduce a password and username.

Before doing any customisation over the modem configuration, ask **CIRCUTOR** Post Sales Department in order to get the Teltonika modem manual.

Go to Status > Network > Mobile.

If the connection has been done properly 'Data connection state' has to be 'Connected'.

ltonika-RUT240.com - Overvi 🗙	+		
→ C' û ()	192.168.1.1/cgi-bin/luci/	stok=60216ef007effb	b4db184bcee999cae98/admin/status/netinfo/mobile/
Teltonika	Status - Networ	'k - Services -	System - Logout [[]
You haven't changed the de	efault password for this	router. To change rou	uter password elick here.
Mobile WAN LAN	Wireless OpenVP!	VRRP Acces	55
Mobile Information	n		
Mobile 📶			
Data connection state	Connect	ed 🗲	l i i i i i i i i i i i i i i i i i i i
IMEI	8611070	31557813	
IMSI	2140175	01304502	
ICCID	8934567	501000342653F	
Sim card state	Ready		
Signal strength	-77 dBm		
Cell ID	1506531	3	
RSCP	-75 dBm		

Go to Status > Network > WAN.

The *modem* must have found a public IP address.

eltonika-RUT240.com - Overvi 🗙	+) 192.168.1.1/cg	gi-bin/luci/;sto	k=d3a035	1451028	3aa79b6ec0e44b4bea16/admi	n/status/netinfo/wan/
TELTONIKA	Status -	Network -	Servi	ces -	System -	Logout 🕑
You haven't changed the	default passwor	d for this rout	ler. To cha	inge rout	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		255.255.255	192			
Gateway		77.209.11.32				
DNS 1		212.166.210	6			
DNS 2		212.73.32.67				
Connected		2h 56m 3s				

Go to Status > Network > LAN > DHCP Leases

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



If the modem has not detected the automatic IP address, switch off the Charge Point, wait for 10 seconds and switch it on again. Connect the Computer to the access point named RUT240_xxxxxxxx and try again.

Go to Network > LAN > Static Leases

Complete the fields with the following information:

Hostname - It can be written the name wanted for the Charge Point

 $\ensuremath{\textbf{MAC}}\xspace$ address - It will be the MAC number found on the label behind the HMI screen

IP address - 192.168.1.50

 0 152.100			III ()
TELTONIKA	Status Network Serv	vices • System •	Logout 🖻
	Start 100		
	Limit 150		
	Lease time 12	Hours	
Static Leases			
Hostname	MAC address	IP address	
Raption	00:26:45:00:c4:02 (192.168.1	.240) • 192.168.1.50 • Delete	
		Delete	
Add			
IP Aliases			
There are no IP aliases create	əd yet		
Add			
		Save	
Teltonika solutions		www.teltoni	kalt

After filling the fields, click on the **'Save'** button.

Switch off the Charge Point, wait for 10 seconds and switch it on again.

Go to Status > Network > LAN > DHCP Leases

Confirm that the information previously entered has been successfully saved:

Hostname - the name given to Charge Point

MAC address - the MAC of the Charge Point

IP address - 192.168.1.50

<u>«</u> т	ELTON	//KA	Status	 Netwo 	ork Service	s - S	ystem -			
You haven'	t changed	l the defau	lt password	for this rout	er. To change rou	ter pass	sword click h	ere.		
Mobile	WAN	LAN	Wireless	OpenV	PN VRRP	Acce	S S			
LAN Ir	nformat	tion								
LAN Inform	nation									
Name		IP addre	ss Ne	mask	Ethernet MAC ad	dress	Connected f	or		
Lan		192.168	.1.1 25	5.255.255.0	00:1E:42:19:01:E	в	0h 5m 13s			
DHCP Lea	ises									
Hostname		IP addre	ss LA	N name	MAC address	Leas	e time remair	iing		
Service PC	:	192.168	.1.206 La	ı	A0:88:69:27:D4:E	8	11h 56m 3s			
raption-450	0c402	192.168	.1.240 Lai	ı	00:26:45:00:C4:0	2	11h 55m 23s	5		
Ports										
						X				
			POW		• LÂN	WAN				
							_		Refresh C	



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

(TELTO	NIKA Statu	s • Network • Ser	vices System		Log
You haven't changed the defa	ult nassword for this	router. To change router pa	assword click here.		
General Settings Port	Forwarding Tra	ffic Rules Custom Ru	ules DDOS Prevention	Port Scan Pre	vention
Firewall - Port Forv	varding				
Port forwarding allows remote co	mputers on the Interne	et to connect to a specific co	imputer or service within the pr	ivate LAN.	
Port Forwarding Rules					
Name	Protocol	Source Via	Destination	Enable S	iort
Enable_SSH_WAN_PASSTHR	DUGH TCP	From any host To any ro in wan port 22	uter IP at Forward to IP 12 port 22 in Ian	27.0.0.1,	Edit Delete
New Port Forward Rule					
Name	Protocol	External port (s)	Internal IP Inter	mal port (s)	
New rule's name	TCP+UDP -	1800 or 2000-2200	• 180	10 or 2000-2200	Add
				\rightarrow	Save

Introduce the ports as in the table below:

Name	Protocol	External port (S)	Internal IP	Internal port (S)
80	TCP	80	192.168.1.50	80
8080	TCP	8080	192.168.1.50	8080
50000	TCP	50000	192.168.1.50	50000
9191	TCP	9191	192.168.1.1	80

After noting down the ports, click on **'Save'** button and check that all of them have been successfully introduced.

Go to Network > Firewall > Traffic Rules

	You haven't changed t	he default password	for this router. To cha	ange router password clic	system •		Logor
Ì	General Settings	Port Forwarding	Traffic Rules	Custom Rules DD	OS Prevention	Port Scan Prevention	
	Firewall - Tr Traffic rules define poli WAN ports on the rout	affic Rules	veling between differe	nt zones, for example to	reject traffic betwe	en certain hosts or to open	
	Traffic Rules						
	Name	Protocol	Source	Destination	Action Enabl	e Sort	
	Allow-DHCP-Relay	UDP	From any host in wan	To any router IP at port 67 on this device	Accept input	Edit Delete	
	Enable_HTTP_WAN	TCP, UDP	From any host in wan	To any router IP at port 80 on this device	Accept input	Edit Delete	
	Enable_HTTPS_WAN	TCP, UDP	From any host in wan	To any router IP at port 443 on this device	Accept input	Edit Delete	

Look for '*Enable_HTTP_WAN*' and '*Enable_HTTPS_WAN*' fields and enable them.

ltonika-RUT240.com - LAN	×				-			
\rightarrow C $rac{1}{2}$	(i) 192.168.1.1/cg	i-bin/luci/;stok=d9	f6bb7e4(90%	… ◙ ☆ (Q Buscar		III\ 🗉) =
(TEL	.TONIKA Sta	atus Network	• Services •	System -			Logo	ut 🖻
New forward rule	LAN	WAN	Add					
Source NAT								
Source NAT is a specific fo for example to map multipl	rm of masquerading whi e WAN addresses to in	ich allows fine grain ternal subnets.	ed control over the	source IP used for o	outgoing traffic	D,		
Name	Protocol	Source	Destination	SNAT	Enable			
There are no source NAT	rules created yet							
There are no source NAT New Source NAT Name	rules created yet	Destination	Source IP	Source port				
There are no source NAT New Source NAT Name New SNAT rule	Source	Destination WAN	Source IP	Source port		Add		
There are no source NAT New Source NAT Name New SNAT rule	Source	Destination	Source IP	Source port		Add Save		
There are no source NAT New Source NAT Name New SNAT rule Telfonika solutions	Source	Destination WAN	Source IP	Source port	▶[Add Save	ka.it	

Click on **'Save'** button.



Go to System > Access Control > Safety

Uncheck 'WebUI Access Secure' as shown on the

TELT	CONIKA Status - I	Network Serv	ices - Syste	- m			Logout
General	Troubleshoot Backup	Access Control	Diagnostics	MAC Clone	Overview	Monitoring	
General	Safety						
Block	Unwanted Access						
SSH Acce	ss Secure						
	Enal	ole 🗷					
	Clean after rebo	oot 🔲					
	Fail cou	ant 6					
WebUI Ac	cess Secure						
	Enal						
	Clean after rebo	oot 📃					
	Fail cou	ant 5					

To end the modem configuration it is necessary to reboot it.

Go to **System** > **Reboot** and click on the **'Reboot'** button.





Finally, it is necessary to check that the Teltonika RUT240 LTE modem option is chosen and DHCP is ON at Charge Point's setup webpage:

Make sure that the Computer is still connected to the Charge point via Wi-Fi, open a web browser and type 192.168.1.50, next screen will appear:

🞆 Teltonika-RUT240.com - LAN - 🗙	🗔 Device Setup Page 🛛 🗙 🕂		
(←) → C' ŵ	③ 192.168.1.50/html/setup.html	••• 🛡 🏠 🔍 Buscar	\ ⊡ ≡
			НС
Ø Dashboard	A Network		f i
A Network	Hostname		
Security			
Time	DHCP	Public Address Manager Address Type	
Integrations		Teltonika RUT240 LTE	
Services	Dru P Client	Public IP	=
1 Firmware			_
	IP Address Settings		
	IP Address		
	Netmask	Gateway	
_			_

DCHP: ON

Address Type: Teltonika RUT240 LTE

Click over the 'Disk' symbol button in order to save.



A Introduction

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 $\ensuremath{\textbf{CIRCUTOR}}$ Charge Points.

OCPP 1.5

B Before starting

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

Go to the Setup Webpage > 'Network' tab

Public Address Manager 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 in the **'Address Type'** section:

		A .	С
Dashboard	A Network		
Network	Hostname		- 1
Security	raption-50		- 1
	DHCP	Public Address Manager	- 1
9 Time		Address Type	- 1
Integrations	OFF	SIERRA Wireless Airlink LS300	- 1
Services		Local Address	- 1
	DHCP Client	Static address SJERRA Wroless Raven XE H220SEW	
Firmware		SIERRA Wireless Airlink LS300	
	IP Address Settings	Circutor SGE-3G/GPRS	- 1
	IP Address	Texalities No.1210-Life	- 1
	192.168.1.11		- 1
	Netmask	Gateway	- 1
	255.255.255.0	0.0.0	
	Primary DNS server	Secondary DNS server	- 1
			1

Choose the option selected under **'Address Type'** according to your network topology.

When done, please do not forget to save changes using **'Save'** button in the upper right bar:



Go to the Setup Webpage > 'Integrations' 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:

 • 		٦ (C
② Dashboard	Integrations		
A Network	Available Integrations		
Security	None v		
Time	OCPP 1.5 OCPP 1.6		
M Integrations			
Services			
1 Firmware			
ChargePoint Configuration			
Configuration Update			

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 > 'Integrations' tab

Once OCPP 1.5 option is selected, a link appears allowing access to the OCPP configuration.

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

<		H C
② Dashboard	Integrations	
A Network	Available Integrations	Setup Page (OCPP 1.5)
Security	OCPP 1.5 •	C Link
Time		
Integrations		
Services		•
1 Firmware		
ChargePoint Configuration		
Configuration Update		
_		

New webpage is opened to show OCPP Settings. It can also be accessed directly typing: http://<IP>:8080/html/setup.html

First time is running the integration selected on the Charge Point, it starts as configuration mode and all fields are empty.

Settings are always stored even when the Charge Point is powered off or even the integration is disabled/stopped.



On the OCPP webpage, go to 'Charge Box' tab

Check Charge Box Identity and the incoming ports according to the backend policies, please contact to the Central System to get the configuration parameters:

			H	С
Oashboard	 Charge Box 			
Application Parameters	Id	Public IP timeout		_1
🗲 Charge Box	Raption 50	120		÷
🏶 Engine	OCPP Internal Port	OCPP Public Port		_
Central System	50000	50000		
OCPP Settings	Client Certificate	Protocol		
	NO	НТТР		•
Load / Store Setup	Authentication			

Value	Description		
ID	Charge Point identifier		
Public IP timeout	Maximum waiting time to obtain the public IP address of the 3G modem		
OCPP Internal port	Incoming listening port for remote request (internal)		
OCPP Public port	Incoming listening port for remote request (public)		
Client Certificate	Provided by the Central System		
Protocol	If HTTPS is selected, make sure to have CS Server CA certificate		
Authentication	Set an authentication if is required		

Go to 'Central system' tab

Allows the Charge Point to know where the central system is hosted to notify all the requests.

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

<			H	С
Ø Dashboard	 Central System 			
Application Parameters	ID Tag Endianness	Host URL		
🗲 Charge Box	Little	http://192.168.6.83:4080/CentralSystemService152		
# Engine	Authentication			
• Central System	OFF			
CCPP Settings				
SSL Certificates				
Load / Store Setup				
_			_	_

Value	Description
ID Tag Endianness	Storage type for system data
Host URL	URL address of the central system
Authentication	It can be set an authentication for avoinding changes in this page

Go to 'OCPP Settings' tab

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

				H	С
O Dashboard	CCPP Settings				
Application Parameters	Use local white-list		Authorization check order		- 1
🗲 Charge Box	NO		CS		- 1
# Engine	Authorize always in offline mode		Retry after CS internal error		- 1
• Central System	Use OCPP time synchronization		Compress OCPP messages		- 1
CCPP Settings	NO		NO		- 1
SSL Certificates	Energy for Start/Stop transaction		Energy for Metervalues		- 1
Load / Store Setup	Total		Total		- 1
	Stop charge if StartTransaction rejects the user		Stop charge if StartTransaction replies ConcurrentTx		
	Require auth. at remote start		Active power in Metervalues		- 1
	Use Sockets as connector ID		Heartbeat interval		- 1
	Socket		600		2
	Connection timeout		Meter value sample interval		- 1
	100	*	60		
					- 1
					- 1
		-		-	_



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

Value	Description	
Use local white-list	YES: local list of authorized users -> Enabled NO: local list of authorized users -> Disabled	
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 on-line; otherwise the authorization is only locally. 	
Authorize always in offline mode	YES: If user is not present locally in the local white-list and charge point cannot ask to the backend, user is allowed to start a new charge transaction. NO: If user is not present locally in the local white-list and charge point cannot ask to the backend, the user is not al- lowed to start a new charge transaction.	
Retry after CS internal error	 YES: Enabled. If StatusNotification, StartNotification or Stop-Notification are not received correctly by the backend, charge point retries again to send those requests until it is received correctly. NO: Disabled. NOTE: Special development must be done in backend in order to retry the messages by charge point. 	

Value	Description	
	YES: Synchronization of date and time -> Enabled.	
Use OCPP time	NO: Synchronization of date and time -> Disabled.	
	NOTE: Date and Time is sent from backend on each heat beat response.	
	YES: Compress messages between Charge point and back- end -> Enabled.	
Compress OCPP messages	NO: Compress messages between Charge point and backer -> Disabled.	
	NOTE: Before enabling this option consult to your backend administrator if central system allows this function.	
Energy for Start/Stop	PARTIAL: Consumed value of energy by the vehicle sent be- tween start and stop.	
transaction	TOTAL: actual count of the total accumulated energy meter sent between start and stop.	
	PARTIAL: Sends partial energy consumption while vehicle is charging.	
Energy for Metervalues	TOTAL: sends the actual count of the total accumulated energy meter.	
Stop charge if Start- Transaction rejects the	YES: Stop existing charge transaction after response from backend (StartTransaction.conf) when user is blocked, expired or Invalid.	
user	NO : Charge transaction does not stops even if backend rejects the user. (StartTransaction.conf)	
	NOTE: Set this option according to your backend system.	

Value	Description		
Stop charge if StartTransaction replies ConcurrentTx	 YES: Stop existing charge transaction after response from backend (StartTransaction.conf) when user has already involved in another transaction. NO: Charge transaction does not stops even if backend rejects the user. (StartTransaction.conf) NOTE: Set this option according to your backend system. 		
Require auth. At remote Start	YES: Charge point sends an authorization request before starting a new remote charge transaction request.NO: Charge point starts a new remote charge transaction without authorization request.		
Active Power in MeterValues	YES: Send power (Power.Active.Import) and energy (Energy. Active.Import.Register) consumed by the vehicle within meter values requests. NO: Only energy consumed is sent within meter values re- quest.		
Heartbeat interval	Heartbeat send interval (in seconds) for the back-end system.		
Connection timeout	Timeout (in seconds) before connecting to the central system.		
Meter value sample interval	Meter value sample send interval (in seconds) during charge transaction. NOTE: Meter values are disabled if 0 seconds is set		



Once done, please do not forget to save changes using **'Save'** button in the upper right bar:

		•
		нс
Dashboard	OCPP Settings	

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





After applying new settings, please go to next URL from Charge Point in order to check properly connection from the integration chosen:

http://<IP>/services/cpi/log?app=ocpp1.5

Look especially for the following messages:



If '**CB boot notification: success'** appears then Charge Point is properly connected to the back-end.

Otherwise, if the message shown is **'Registering CB in the CS: failed'** then check following items:

- Backend URL. Case sensitive. Check all the URL is correct.

- Charge Point ID. Case sensitive. Check if the name entered is same as backend expects to receive.

- Connectivity. Check if modem is power up and connected to the HMI screen. Ask to the backend provider if any request has been received from the charge point (BootNotification, StatusNotification or HeartBeat) after upgrading.



A Introduction

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 $\ensuremath{\textbf{CIRCUTOR}}$ Charge Points.
OCPP 1.6

B Before starting

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

Go to the Setup Webpage > 'Network' tab

Public Address Manager 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 in the **'Address Type'** section:

< C		ВС
② Dashboard	A Network	
A Network	Hostname	
Security	raption-4500adeb	
Time	DHCP	Public Address Manager
Integrations	OFF	Address Type Teltonika RUT240 LTE
Services	DHCP Client	Local Address Static address SIERRA Wireless Raven XE H2295EW
1 Firmware		SIERRA Wireless Arilink LS300 Circutor SGE-3G/GPRS Tellonika DI 172/01 TE
ChargePoint Configuration	IP Address Settings	
Configuration Update	IP Address	
	192.168.110.45	
	Netmask	Gateway
	255.255.255.0	192.168.110.254
	Primary DNS server	Secondary DNS server
	192.168.0.9	

Choose the option selected under **'Address Type'** according to your network topology. When done, please do not forget to save changes using **'Save'** button in the upper right bar:



Go to the Setup Webpage > 'Integrations' 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:

		H	С
② Dashboard	Integrations		
A Network	Available Integrations		
Security	None None		
Time	OCPP 1.6 CCPP 1.6		
Solutions			
Services			
Firmware			
ChargePoint Configuration			
Configuration Update			

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.



License required, refer to the next chapter for more information about the activation.

C License activation

If the Charge Point does not have the license applied, the following message pops up:





To obtain the license file please contact **CIRCUTOR** Post Sales Department. More information in **'Need help?'** chapter.

The license can be applied by clicking on the 'Select File' button.

C Dashboard Integrations	
A Network Available Integrations	
Modem Vone	
Security Provide a license file to activate your product Size Status Actions	_
Locale Select File	
© Time	
3 Integrations	
▲ Firmware	
Configuration Update	



(H	С
Oashboard	Integrations					
A Network	Available Integrations					
A Modem	None					
Security	Provide a license file to activate your product	Size	Status	Actions		
Cocale	activationKey	0.34 KB		● Upload Ø Cancel 🛍 Ren	iove	
(Time	opional ne rogicea					
Integrations				1		
Firmware						
Configuration Update						

A window will pop up in order to choose the file, then click on **'upload'.**

D Configuration

Go to the Setup Webpage > 'Integrations' 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:

<		H C
Oashboard	Integrations	
A Network	Available Integrations	Setup Page (OCPP 1.6)
Security	OCPP 1.6	Chink
Time		A
Integrations		
Services		
1 Firmware		
ChargePoint Configuration		
Configuration Update		

New tabs are opened to show OCPP Settings. It can also be accessed directly typing: http://<IP>:8080/html/setup.html

First time is running the integration selected on the Charge Point, it starts as configuration mode and all fields are empty.

Settings are always stored even when the Charge Point is powered off or even the integration is disabled/stopped.



On the OCPP webpage, go to 'Charge Box' tab

Check Charge Box Identity and the incoming ports according to the backend policies, please contact to the Central System to get the configuration parameters:

•			Ħ	С	
Oashboard	4 Charge Box				1
Application Parameters	Id ZW99994	Cache max. size			I
🗲 Charge Box	Use OCPP time synchronization	Energy for Start/Stop transaction			I
* Engine	YES	Total			I
Central System	Energy for Metervalues	User confirmation required on remote start			I
OCPP Settings	Total	OFF			I
SSL Certificates					I
Load / Store Setup					I
_			-	-	1

Value	Description		
ID	Charge Point identifier		
Cache max. size	Maximum size of the <i>Authorization Cache</i> , that autonomously main- tains a record of previously presented identifiers that have been suc- cessfully authorized by the Central System. It can be viewed accessing to the following URL: http://sIPa:8080/services/cmd/dump.cache.xml		
Use OCPP time synchronization	YES: Synchronization of date and time -> Enabled. NO: Synchronization of date and time -> Disabled. 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 on remote start	ON: user confirmation needed to proceed with a remote start (i.e. touch the screen)OFF: user confirmation NOT needed to proceed with a remote start		



Go to 'Central system' tab

Allows the Charge Point to know where the central system is hosted to notify all the requests.

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

		H	С
Oashboard	O Central System		
Application Parameters	ID Tag Endianness Host URL Ltte wss/locpp-central-system.com		
+ Charge Box			
* Engine			
Central System			
OCPP Settings			
SSL Certificates			
Evad / Store Setup			
_		_	

Value	Description	
ID Tag Endianness	Storage type for system data	
Host URL	URL address of the central system	

Go to 'OCPP Settings' tab

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

•		H C
② Dashboard	Core Profile	1
Application Parameters	Authorization cache enabled	Authorize remote Tx requests
Charge Box	Local pre-authorize	Allow offline Tx for unknown Id
* Engine	NO	NO
O Central System	Local authorize off-line	Stop transaction on invalid Id
OCPP Settings SSL Cortificators	Stop transaction when EV unplugged	Unlock CP side when EV unplugged
Load / Store Setup	YES	YES
-	Supported profiles	Maximum number of configuration Keys
	Core, Firmware Management, Local AuthList Management, Remote Trigge	20
	Heartbeat interval	WebSocket ping interval
	900	30
	Metervalue (select one or more)	Transaction message attempts
	Current.Import Energy Active.Import.Register	1
	Energy.Reactive.Import.Register Frequency	Metervalue sample interval
	Power,Ractor Power,Reactive.Import	15
	Transaction message retry interval	Charging cable connection timeout
	60	65
	7 Local Authorization List Management Profile	
	Local authList enabled	Local auth list max. length
	YES	100000
	Sond local list may longth	
	Seno rocar list max, lengtri	
	Contraction Profile	
	Reserve connector zero supported YES	
	Transaction message retry interval 60 Local Authorization List Management Profile Local authList enabled	Charging cable connection timeout 65 Local auth list max. length 100000

Value	Description
Authorization	YES: maintain a local list of all presented identifiers that have been successfully authorized by the Central System.
	NO: authorization for presented identifiers is requested directly to the Central System
Authorize remote	YES : the Charge Point asks for authorization when the Central System sends a remote start
TATEquests	NO: the Charge Point starts the Charge Transaction when the Central System sends a remote start
Local pre-	YES: Charge Point looks for locally-authorized identifiers without waiting for the Central System authorization.
-authorize	NO: Charge Point requests authorization for presented identifiers to the Central System.
Allow offline Tx	YES: during offline period unknown identifiers are allowed to start charging
	NO: during offline period unknown identifiers are NOT allowed to start charging
Local authorize	YES: during offline period locally-authorized identifiers are allowed to start charging
on-tille	NO: during offline period locally-authorized identifiers are NOT allowed to start charging
Stop transaction	YES: stop existing Charge Transaction after response from Central System when user is blocked, expired or invalid.
	NO : Charge Transaction does not stop even if backend rejects the user.

Value	Description		
Ston transaction	YES: Charge Transaction stops when the cable is disconnected from the EV		
when EV unplugged	NO: Charge Transaction does not stop when the cable is disconnected from the EV; furthermore, if it is reconnected energy transfer is allowed again. It is required for the user to present the identifier in order to stop the Charge Transaction.		
Unlock CP	YES: Charge Point unlocks the connector when the cable is disconnected from the EV		
unplugged	NO: Charge Point keeps the connector locked when the cable is dis- connected from the EV, it is required for the user to present the iden- tifier in order to unlock the connector		
	List of supported profiles on the Charge Point		
Supported profiles	NOTE: this field is for information purposes, it cannot be modified.		
Maximum number of configuration Koys	Maximum number of requested configuration keys that can be re- quested by the Central System.		
	NOTE: this field is for information purposes, it cannot be modified.		
Heartheat interval	Number of seconds between Heartbeats.		
near ibeat intervat	NOTE: setting this value to 0 disables the Heartbeat.		
WebSocket ping	Number of seconds between Pings.		
mtervat	NOTE: setting this value to 0 disables the Websocket Ping/Pong.		
Metervalue (select	List of supported values used in the MeterValue.		
	NOTE: hold 'Ctrl' key in order to select more than one Measurand.		
Transaction message attempts	How many times the Charge Point should try to send a request to the Central System.		

Value	Description				
Metervalue sample interval	Number of seconds between MeterValue during an ongoing Charge Transaction.				
	NOTE: setting this value to 0 disables the MeterValue.				
Transaction message retry	Number of seconds between transaction message attempts.				
interval	NOTE: setting this value to 0 disables the attempts.				
Charging cable connection timeout	Number of seconds the Charge Point must wait for the user to plug/ unplug the cable.				
	NOTE: this field is for information purposes, it cannot be modified.				
Local authList enabled	YES: Local Authorization List enabled				
Chapter	NO: Local Authorization List disabled				
Local auth list max. length	Maximum size of the <i>Local Authorization List</i> , a list of identifiers that can be synchronized with the Central System.				
	It can be viewed accessing to the following URL: http:// <ip>:8080/services/cmd/dump_localList.xml</ip>				
	NOTE: this field is for information purposes, it cannot be modified.				
Send local list max. length	Maximum number of identifications that can be send in a single re- quest from the Central System.				
	NOTE: this field is for information purposes, it cannot be modified.				
Reserve connector zero supported	Yes: Charge Point supports reservations on connector 0. That reservation is not done on a specific connector, one connector remains available for the reserved idTag.				
	NO: Charge Point does NOT support reservations on connector 0.				

Once done, please do not forget to save changes using **'Save'** button in the upper right bar:





After applying new settings, please go to next URL from Charge Point in order to check properly connection from the integration chosen:

http://<IP>/services/cpi/log?app=ocpp1.6

If **'CB boot notification: success'** appears then Charge Point is properly connected to the back-end.

Otherwise, if the message shown is **'Registering CB in the CS: failed'** then check following items:

- Backend URL. Case sensitive. Check all the URL is correct.

- Charge Point ID. Case sensitive. Check if the name entered is same as backend expects to receive.

- Connectivity. Check if modem is power up and connected to the HMI screen. Ask to the backend provider if any request has been received from the charge point (BootNotification, StatusNotification or HeartBeat) after upgrading.



SCADA Client

The IP address assigned previously, is useful to connect with the Charge Point in order to monitor the real-time status.

The main way to connect is using the **PowerStudio client software** (Supplied by **CIRCUTOR**) or you can download it from **CIRCUTOR** Webpage.

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 consumption of data.

Monitoring

	-				
Previous	Next 👻 📘	Devices M Gra	aph Ta <u>b</u> le	Events Properties	e Drint
		CCL1	Engine		4/8/13 1:44:22 PM
llard state					
eakage		× 1	Reset	OFF	
amper		×			
1H		×			
UG A					
tatus		Available		Charge relay	_*
	\sim			Active energy (kWh)	535,440
ar connected	1-1			Partial active energy (kWh)	0,000
onnector lock	9	Lock	Unlock	Charge request date	
eserved	0	Reserve	Release	Charge begin date	
harge	Remote start	Remote stop	Paused	Charge end date	
nable		Enable	Disable	Charge time	-
eakage	*	Reset	OFF	Last charge stop	Stopped by user
UG B					
tatus		Avai	lable	Charge relay	-*
	\sim			Active energy (kWh)	45,440
ar connected	100-2			Partial active energy (kWh)	0,000
onnector lock	9	Lock	Unlock	Charge request date	
eserved	0	Reserve	Release	Charge begin date	
harge	Remote start	Remote stop	Paused	Charge end date	
nable		Enable	Disable	Charge time	-
eakage	v	Reset	OFF	Last charge stop	Stopped by user



ELECTRICAL DATA							
MODEL : URBAN MASTER							
	M2	T2	M2-C1	T2-C2			
Power supply	1P+N+PE	3P+N+PE	1P+N+PE	3P+N+PE			
Input voltage	230V~±10%	400V~±10%	230V~±10%	400V~±10%			
Frequency	50Hz / 60Hz						
Number of sockets	2						
Socket Power	7.4 kW	22 kW	7.4 kW	22 kW			
Socket current	32 A						
Connectors type	Туре 2	Socket	Type 1 Cable	Type 2 Cable			
Min. cable cross-section ⁽⁴⁾	25 mm ²						
MODEL : URBAN SLAVE							
	M2	T2	M2-C1	T2-C2			
Power supply	1P+N+PE	3P+N+PE	1P+N+PE	3P+N+PE			
Input voltage	230V~±10%	400V~±10%	230V~±10%	400V~±10%			
Frequency	50Hz / 60Hz						
Number of sockets	2						
Socket Power	7.4 kW	22 kW	7.4 kW	22 kW			
Socket current	32 A						
Connectors type	Type 2 Socket Type 1 Cable Type 2			Type 2 Cable			
Min. cable cross-section ⁽⁴⁾	25 mm ²						
MODEL :	URBAN-W	B MASTER	URBAN-WB SLAVE				
	М	Т	M2	T2			
Power supply	1P+N+PE	3P+N+PE	1P+N+PE	3P+N+PE			
Input voltage	230V~±10%	400V~±10%	230V~±10%	400V~±10%			
Frequency	50Hz / 60Hz						
Number of sockets	1	1	2 2				
Socket Power	7.4 kW	22 kW	7.4 kW 22 kW				
Socket current	32 A						
Connectors type	Type 2 Socket						

Technical Data

ELECTRICAL DATA							
MODEL :	URBAN-WB MASTER		URBAN-WB SLAVE				
Min. cable cross-section ⁽⁴⁾	10 mm ²		25 mm ²				
URBAN MASTER - URBAN SLAVE - URBAN-WB MASTER - URBAN-WB SLAVE							
Meter		MID Class	1 - EN504	470-3			
Overcurrent protection		MCB 40	A (Curve	C)			
Safety protection		RCD Type A (3	0 mA) / ⁻	Туре В ⁽³⁾			
Overvoltage protection ⁽³⁾	Tra	nsient surge prote	ctor IEC 6	61643-1 (Class II)			
URBAN MASTER - URBAN-WB MASTER							
Display	Touch screen 8"						
RFID reader	ISO / IEC 14443A/B, MIFARE Classic/Desfire EV1, ISO 18092 / ECMA-340, NFC 13.56MHz						
Ethernet	10/100BaseTX (TCP-IP)						
Cellular (optional)	Modem 4G LTE/WiFi Hotspot/GRPS/GSM						
Interface protocol	ОСРР						
	ENVIRONM	ENTAL CONDITIC	NS				
Operating temperature -5°C +45°C							
Operating temperature with Low temperature kit ⁽³⁾ -30°C +45°C							
Storage temperature		-20°C +60°C					
Operating humidity	5% 95% Non-condensing						
	MEC	HANICAL DATA					
Light beacon	RGB Colour indicator						
Enclosure rating	IP54 / IK10						
Enclosure material	Aluminium & ABS						
Enclosure door	Frontal key locked door						
Net weight		URBAN MAS URBAN SLA	TER VE	URBAN-WB MASTER URBAN-WB SLAVE			
		55 Kg		30 Kg (25Kg) ⁽⁵⁾			
Dimensions (W x H x D)	450 x 290 x 155	0 mm	382 x 928(628) ⁽⁵⁾ x 222 mm				
Connectors ⁽³⁾	Shutter Type 2 Socket, Type 1 Cable, Type 2 Cable						

⁽³⁾ Optional

⁽⁴⁾ This is the minimum cable section recommended for the maximum AC input current, the final section must be calculated by a qualified technician taking into account the specific conditions of installation

 $\ensuremath{^{\text{(5)}}}$ Version without integrated protections.

Instruction Manual

Need help?

In case of any query in relation to unit operation or malfunction, please contact the **CIRCUTOR**, SA Technical Support Service.

Technical Assistance Service

Vial Sant Jordi, s/n, 08232 - Viladecavalls (Barcelona) Tel: 902 449 459 (Spain) / +34 937 452 919 (outside of Spain) email: sat@circutor.com

Guarantee

CIRCUTOR guarantees its products against any manufacturing defect for two years after the delivery of the units.

CIRCUTOR will repair or replace any defective factory product returned during the guarantee period.



CIRCUTOR, SA.

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