CITA Smart Charger

CITA Smart 44 (Gen 3)
User Manual

www.citaevcharger.co.uk


CITA
CARD
Scan RFID Card
to Start Charging

Contents

Preface

Before any operation, please read the user manual carefully to understand the correct use of the device. After reading, please keep the user manual for future review.

Warning

The input and output voltages of this device are dangerously high, which can endanger human life. Please strictly observe all warnings and operating instructions on the device and in the manual. Unauthorized and non- professional service personnel should not remove the cover of this device

Thank you for your support on our products, our company focus on new energy field of electric vehicle charging, dedicated to providing customers with excellent charging device and complete solutions. The EV chargers have the characteristics of advanced function, steady performance, wide application range and strong practicability, winning a good reputation in the industry.

Safety Instructions

- Keep the explosive or flammable materials, chemicals, vapors, and other hazardous objects away from the charger.
- Keep the charging socket clean and dry. If dirty, please wipe with clean dry cloth. Touching the socket core is strictly forbidden when powered on.
- Do not use the charger in case the device has defects, crack, abrasion, bare leakage and so on.
- Please contact the working staff in case of above conditions.
- Do not attempt to dissemble, repair or refit the charger. If necessary, please contact the working staff. Improper operation will result in device damage, electric leakage, etc.
- In case any abnormal condition happens, please press the emergency stop button immediately, cut off all input and output power supply.
- Please charge cautiously in rainy or lightning weather.
- Children should not get close to or use the charger to avoid being hurt.
- During charging, the EV is not allowed to drive. Charge only when the EV stops still. For Hybrid cars, charging is allowed only when switching the engine off.

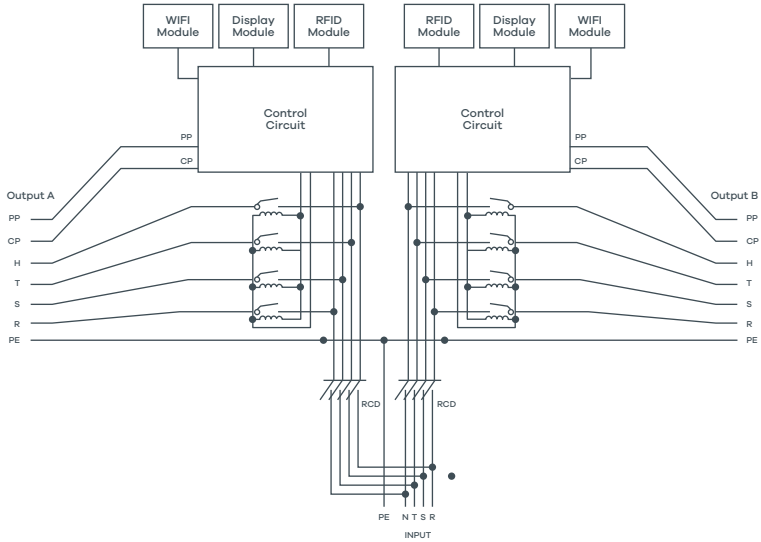
Product Overview

CITA Smart 44 Gen 3

The three phase 44KW charger is combination of two 22KW chargers in a floor-standing housing, which provides AC charging to two electric vehicles simultaneously. It's equipped with the function of charging by scanning the RFID card. The RFID card is a key component to start or stop the charging session. The LED indicators on the left and right panels help you understand what is happening with the charger by indicating different colors.

With internet connection via a built-in Gate Way, more functions like monitoring, operation management and remote upgrade are available on the backend named Charge Management System. Compatible with all types of cables, the socket locks the charging cable into the charger to ensure a safe charging. The protection grade of the charger is high as IP54, with the excellent capacity of water and rust proof, assuring the safe outdoor operation and maintenance. Designed according to Electric Vehicle Charging System Standard EN 61851-1: 2011 and EN 61851-22: 2002, the charger is compliant with the industrial standards and safe for usage.

Schematic Diagram



Specification Parameter

	Model no.	CITA Smart 44 Gen 3
Configuration	User Interface	Green/Yellow/Red colour notification on CITA logo
	Housing Material	Galvanized Steel
	Installation Way	Floor-stand
	Accessory	Charging cable (Optional)
	RFID Card Quantity	5 cards
	Charging Outlet	Type 2 charging socket
	Product Dimension	290*230*1200mm (L*W*H)
	Net Weight	32.5kg
	Gross Weight	43.5kg

Electrical Parameters	Input Voltage	3 phase + netural+ PE (Optional: 1 phase + netural+ PE)
	Input Frequency	50/60Hz
	Max Power	2x22kW programmable
	Max Output Current	2x32A programmable
	Standby Power	<8W
	Application Place	Indoor / Outdoor
Environmental Index	Working Temp	-30°C ~ +55°C
	Working Humidity	5% ~ 95% without condensation
	Working Altitude	<2000m
	Protection Grade	IP54
	Safety Standard	IEC 61851-1:2017, IEC 62196-2:2016
	Special Protection	Anti UV design
Safety Design	Over/Under voltage protection, Overload protection, Short circuit protection, Current leakage protection, Grounding protection, Surge protection, Over/Under temperature protection	
Communication	Ethernet/Wi-Fi/4G communication	

Performance and Characteristics

Performance:

- LED Indicator: Different light color indicates different working status of the charger.
- LCD Touchscreen: Real-time display the charging status and charging data with touchscreen operation.
- RFID Card: Built-in card reader to realize the function of charging with RFID card. Scan RFID card first to start charging, and scan RFID card again to end charging.

Characteristics:

- Dust & Waterproof: IP54 protection grade, workable under severe conditions, no need of extra shelter.
- Low Standby Power Consumption: The standby power is as low as 8W, energy saving and green.
- Compatible Application: The product is equipped with type 2 charging sockets, compatible for all Electric Vehicle by using type 2 charging cable.
- Easy Installation: The floor-standing design makes it easy for installation. One installation, but two 22KW chargers, which increases the usage rate and saves the installation cost.
- All Direction Protection: Protections from over voltage, under voltage, over load, short circuit, current leakage, ground fault, over temperature, under temperature, lightning & surge to ensure the product working safely and avoid accidents effectively.
- Safety Design: The charger is designed with over-current and ground fault protection components that constantly monitor safety status. No voltage is present in the charging socket until your vehicle is properly connected. Each charger is locked with keys, allowing access to its interior only by maintenance professionals

Package Contents

A. CITA Smart 44 EV Charger

B. User Manual

C. RFID Cards

D. Lock Keys

E. Screw Sets

F. Wire Crimp Connector
(1xBlue 1xRed 1xYellow 1xBlack)

Package Verification

- Unpack to check and verify following items after receiving the charger:
- Visual inspection on external appearance. In case there is any broken or damage, notify the seller immediately.
- Check accessory type and quantity. If there is quantity in short or type in conformity, make the record in time and contact the seller at once.

Installing CITA Smart 44 Gen 3

Warning Electric Shock

INSTALLATION OF ANY ELECTRICAL DEVICE SHOULD BE CARRIED OUT BY A SUITABLY QUALIFIED AND COMPETENT PERSON.

A qualified person is one who has the skills and knowledge related to the construction, installation, and operation of electrical devices and who has received safety training to recognise and avoid the hazards involved.

Things to keep in mind during the installation of CITA Smart 44 Gen 3

a) Before installing the CITA Smart 44 (Gen 3), make sure that the power line you're using is switched off on your service panel.

b) Make sure that the power line to CITA Smart 44 (Gen 3) is installed on a dedicated circuit breaker (MCB) on your service panel.

c) The installation must incorporate an adequate residual current device (RCD).

d) The MCB must be in line with the capacity of the charging cable (22 kW).

e) In case the amperage rating of the charging cable is different than the amperage rating of the (MCB), the installer/user must change the station settings in the mobile app and/or web platform for station management as provided by the operator or service provider for this product.

THIS IS A GLOBAL PRODUCT, AND LOCAL WIRING REGULATIONS AND SAFETY PRECAUTIONS WITHIN THE COUNTRY OF INSTALLATION SHOULD BE ADHERED TO AT ALL TIMES.

Note:

The CITA Smart 44 (Gen 3) requires Wi-Fi/Ethernet/LTE to bring it online. Before installation, it is advised to ensure that you have one of the communications methods.

Tools Needed For The Installation

Included in the box

CITA Smart 44 Gen 3

4 x Bolts Set 304

Wire Crimp Connector
(1xBlue 1xRed 1xYellow 1xBlack)

Required Tools

Multimeter

Cross Screwdriver
PH2x150mm / PH3x250mm

Insulated
Spanner

Insulated
Torque Wrench

Combination
Wrench

Hydraulic Clamp

Percussion
Drill

Diagonal Pliers

Cables & Materials

Power supply cable	≥5*25mm2 three-phase power supply cable	Depend on actual requirement
Network cable	STP, Category 5 Enhanced, 8 cores	Depend on actual requirement
Network cable plug	RJ45	Depend on actual requirement
Insulated tape	0.15mm*18mm, 0~600V, 0˚C~80˚C	Depend on actual requirement
Cable tie	4*200mm	Depend on actual requirement
Gland Plate & Gland	Plate size as per the cable used	Depend on actual requirement

Installation Process

1) Installation Notice

a) Electrical product should be installed, operated, serviced, and maintainedonly by qualified personnel. No responsibility is assumed by the manufacturer for any consequences arising out of the installation of this product.

b) A qualified person is one who has skills and knowledge related to the construction, installation & operation of electrical product & who has received safety training to recognize & avoid the hazards involved.

c) All applicable local, regional, & national regulations must be respected when installing, repairing, & maintaining this product.

2) Layout Cables

Select the standing positions of the charger on the ground. Lay network cables and power supply cables under the ground. Cables come out of the ground from the center ofstanding position with about 100cm length above the ground.

3) Fix Charger

Locate the footprint of the charger on the ground of standing position.
Drill the four screw holes as indicated below on the ground for the fixation of the charger.
Place the charger on the standing position and fix the four screws.

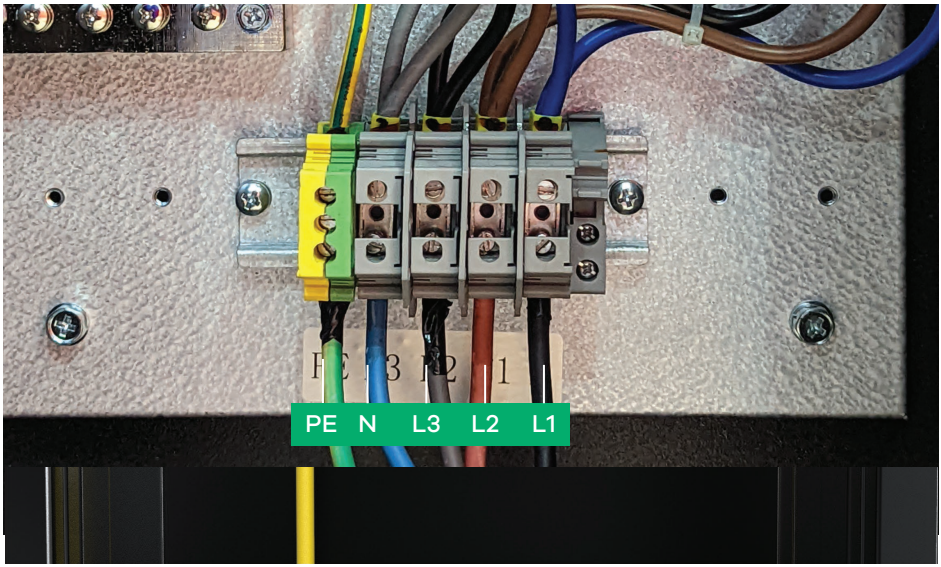
Note:

Make sure that the charger is installed on a concrete base or platform above the ground level.

Commissioning

Connect Power Cables

The power supply cables go through the input cable inlet at the charger's bottom, and connect to the corresponding L1, L2, L3, N and PE terminals inside the charger. Please note that L1, L2, L3, N correspond to R, S, T, N phases.



Check before Power-on

a) The charger's location is easy for operation and repairing.

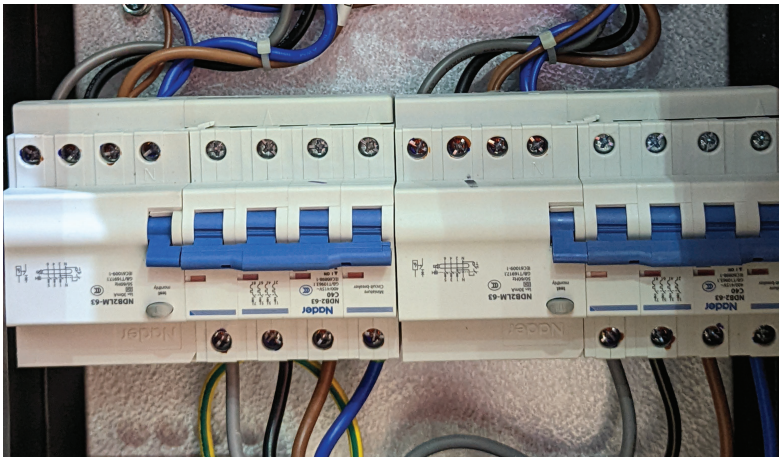
b) Double confirm the charger is installed properly.

c) AC input's current leakage protection switch is reasonable.

d) No other stuff or component left on the top of the charger.

Powering-on and lock charger

Turn on the breaker switch inside the charger and close the back door of the charger.
Use the equipped keys to lock the charger.



a) Make sure all checking is done according to the above items.

b) Turn on the current leakage protection switch of AC input.

c) Power-on the charger and observe the LED indicator, which should be standby status.

d) Observe the screen display and the symbol on the top right corner. The screen should display as the following picture

LED Status Indicator Meaning

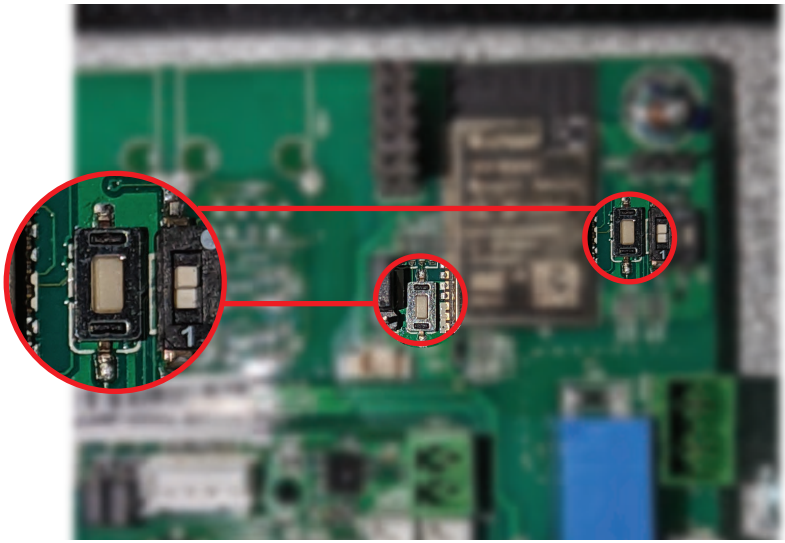
State	Description	LED Status
Standby	Power-on, but no gun plug-in	 Flashing green, 2S on 2S off
Ready to charger	Gun plug-in, but not start charging yet	 Flashing yellow, 2S on 2S off
In charging	Gun plug-in, and start charging by RFID	 Breathing green, on/off gradually
Stop charging	Charging stop, but gun is still plug-in	 Solid green
Fault	Error happens	 Solid red

Wi-Fi Reset on CITA Smart 44 Gen 3

Warning

This device's input & output voltages are dangerously high, which can endanger human life. Please strictly observe all warnings & operating instructions on the device and in the manual. Unauthorised & non-professional service personnel should not remove the cover of this device

1. Open the CITA Smart 44 Gen 3 black cover and unscrew the transparent body cover.



2. Please press hold each highlighted white buttons for 5-10 secs as soon as you turn on the charger.

3. This will reset the Wi-Fi and Bluetooth configuration on the EV Charger and be ready for new network pairing.

Meaning of the LED notification

Solid Red: Ready to Pair

Blinking Red: Has Wi-Fi details and waiting to pair to a network

Solid Red Left, Blinking Green Right: Connected to the Wi-Fi network & communicating to the backend.

RFID Operation

a. After the charger is connected to the EV, a yellow light will switch on indicating that it is ready for charging.

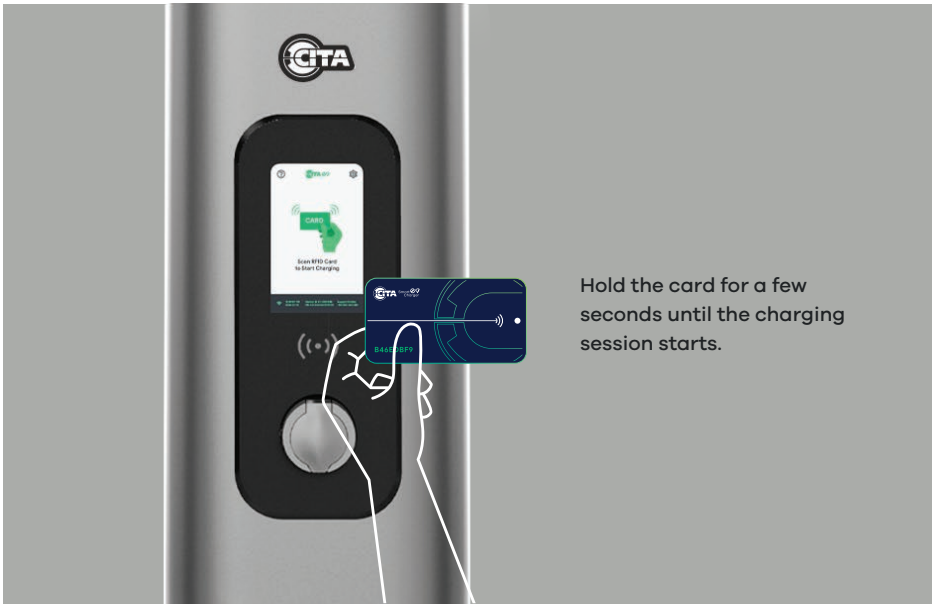
b. Scan the RFID card once on the identification area of the front panel after which the charging starts. When the charging starts, the gun will be locked into the charger socket. The charger LED will change to a slow green pulse to indicate charging.

c. Charging will automatically stop when the EV is fully charged, and the charger LED indicator will be solid green.

d. Please end the charging session by scanning the RFID card for a second time. If you do not scan the RFID card again, the charger will not unlock the gun on the charger side, and the user cannot unplug the charging gun.

e. When an EV is being charged, the user can stop charging by scanning the RFID card for a second time. The charging session will end, and the gun on the charger side will be unlocked.

f. Another solution to stop charging is to end the charging session from the EV side. After the gun on the EV side is unlocked and plugged out, the charging session will end, and the gun on the charger side will be unlocked automatically.



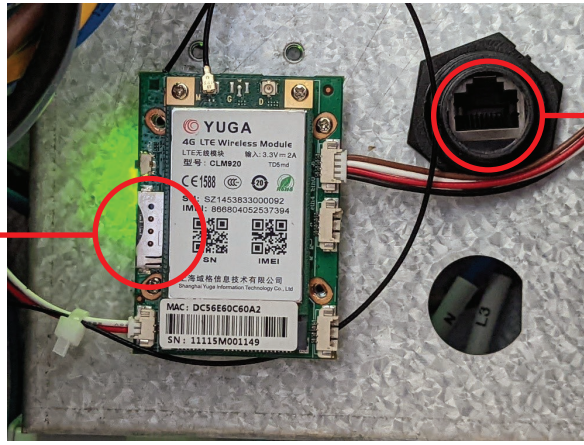
4G Router Configuration Guide

Foreword: 4G router is an optional internet access device installed in the charger, which can provide a 4G internet access point for the charger. If there is not a local Wi-Fi access point at installation site, 4G router can be your choice.

Usually the charger isn't connected to the 4G router when factory out. Please follow the steps to connect
charger to the 4G router.

1. Insert SIM or Ethernet:
Insert a 4G SIM Card into the SIM card port at the edge of the 4G router. Or insert the ethernet cable with RJ45 connector.

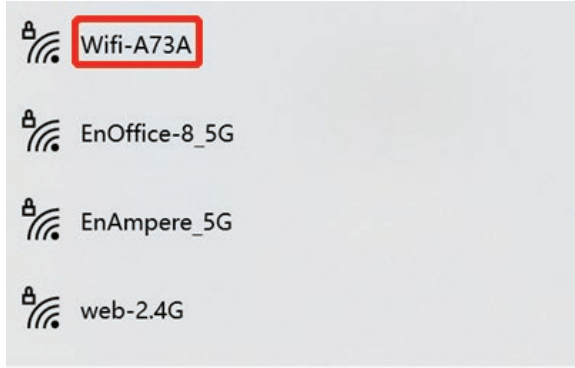
Note: Please make sure your SIM card is valid and internet service active before installation



2. Connect to the Router:
Connect your smartphone or computer to the Wi-Fi of the 4G router

Wi-Fi Name(SSID):
WiFi-****, (**** is the last 4 digitals of the router MAC)

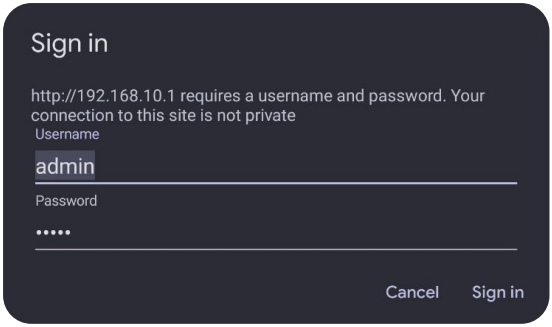
Password: 12345678



3. Log in to the Router Settings:
Log in to the setting page of the 4G router and input 192.168.10.1 (IP of the 4G router) in your web browser.

Username: admin

Password: admin



4. Router Configuration:
Click "Mode" in the top navigation bar, choose the following

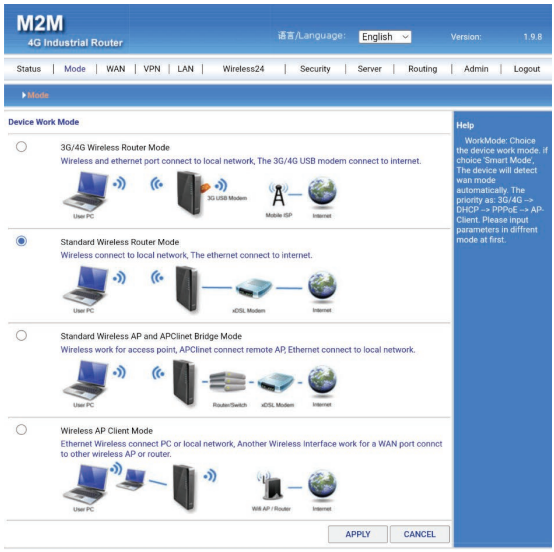
SIM Card Operation: Choose "3G/4G Wireless Routing Mode" and apply. (or)

Ethernet Cable Operation: Choose "Standard Wireless Router Mode" and apply.

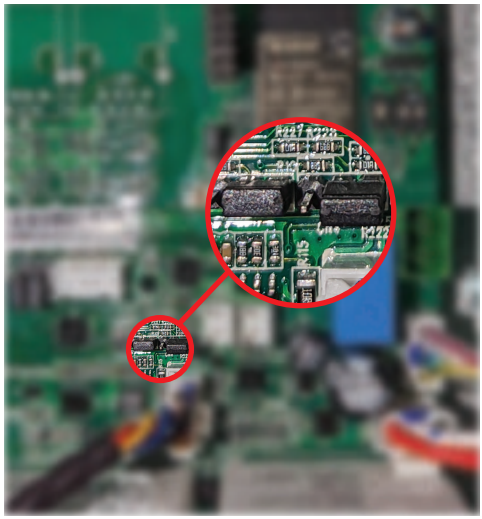
After "apply" the 4G router will reboot and switch to 4G mode

5. OCPP Backend Configuration:
If you find your mobile or computer is connected to the internet via the Wi-Fi of the 4G router means the 4G router is online now. Use the 4G router's Wi-Fi as the source of internet and connect the chargers individually using the EVSE Mesh app by following the instructions from the User manual or OCPP integration guide provided by CITA EV.

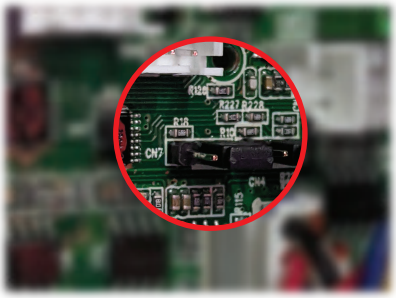
If you have any questions during this process please reach out to CITA EV Support team at +44 800 368 6362 or email at supportuk@citaevcharger.co.uk



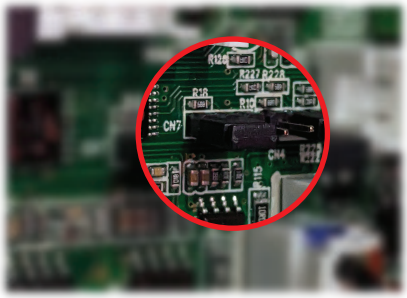
Switching between **Online & Plug-n-Play Mode**



Look for Jumper Name CN7 to change between Online & Plug & Play mode operation.



Jumper in 2-3: Online Mode
(Default)



Jumper in 1-2: Plug & Play Mode

How to connect **CITA Smart 44** Gen 3 **to Monta & other OCPP backend providers**

Foreword:

EVSE MESH is an APP for the network configuration for CITA EV Commercial EV Chargers.
Through this app, you can connect your charger to CITA EV or your own OCPP server or backend.

Attention:

EVSE MESH connect to WiFi by bluetooth. The charger will turn off it's bluetooth automatically when finished connecting. Do not try to connect the bluetooth to the charger directly.

Configuration steps

Step 1. Install APP (Available on Android)

1). Scan the iOS App QR code below or search for "EVSE Mesh" on the App Store.
2). Scan the Android App QR code below or search for "EVSE Mesh" on the Google Play Store.

Scan to download
Android App QR Code
Only available on Android

Note: Your EV charger will be connected to the same WiFi, please choose the one with a strong signal to avoid going offline

Step 2. Enable Bluetooth of your smartphone, & then connect to any available

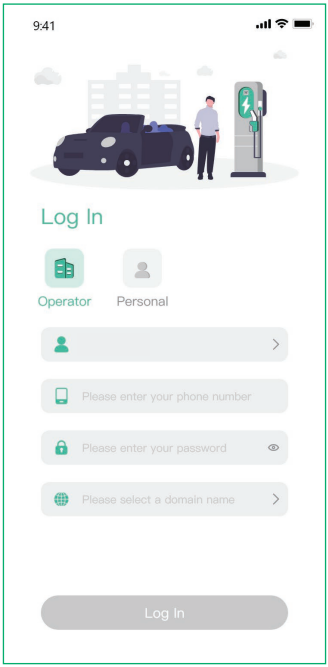
Note:

Your EV charger will be connected to the same WiFi, please choose theone with strong signal to avoid offline

Step 3. Start the APP and log in (the account server needto choose " OCPP Platform ")

Note:

If you are unable to register with a personal account, pleaseuse the below operator login details of CITA EV.



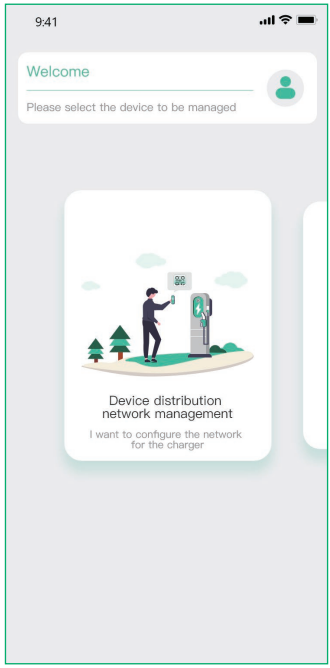
Country: UAE +971 **Username: 544245866** **Password: 24586**

Step 4. Add charger to group

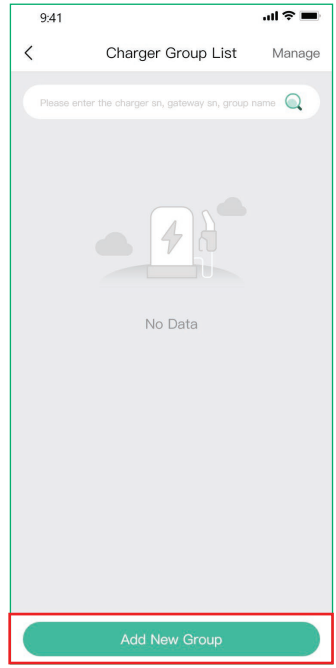
Note:
1). Follow step A~G to add a charger & repeat step C~G until other chargers are added to the same group.

2). Every group support 8 chargers, if there is more than that, please divide them into multiple groups.

A



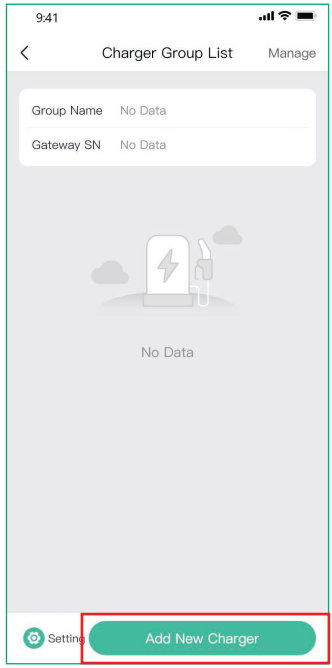
B



A. Choose the " Device distribution network management" page

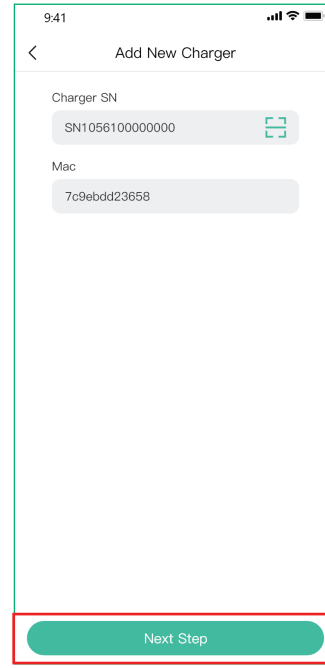
B. Click " Add New Charger Group " to create a new group.

C



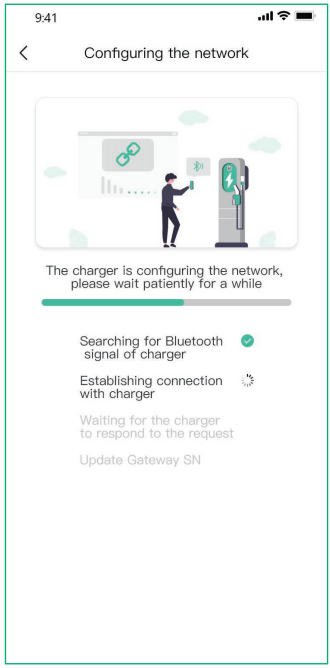
C. Add a charger to the group

D

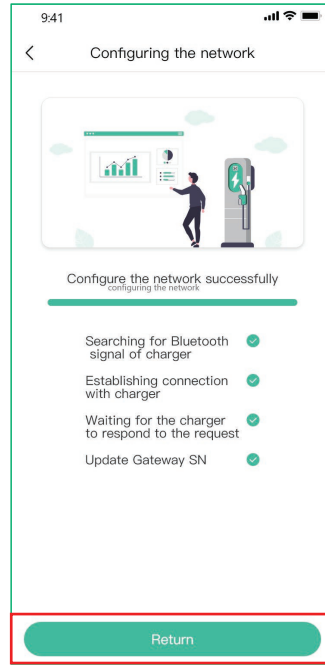


D. Click " Scan Add " to scan QR code on the charger.

E



F



E. During the process, all information will be shown on the screen.

F. After all these steps are done, the interface will look like picture F.

Note:

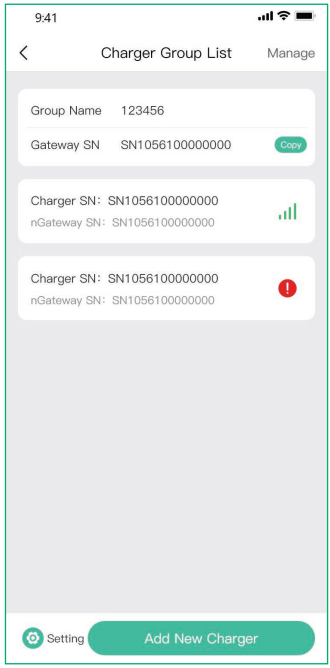
If failed, click 'Return' to reset the parameter & retry connecting.

Step 5. Check status

If the status show "❗" ,please check both cases.

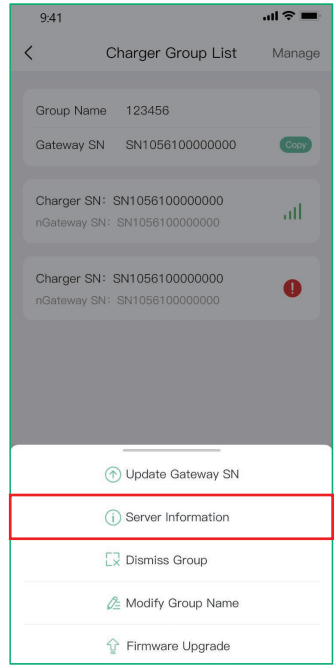
Condition A: server information was not set. If the charger needs to connect to the CITA EV backend, then there is no need to set it. If the charger needs to be connected to a third-party platform, **please follow the steps below from H**

G



G. After the screen shows 'synchronise complete,' it will refresh the data and go back to the group automatically.

H

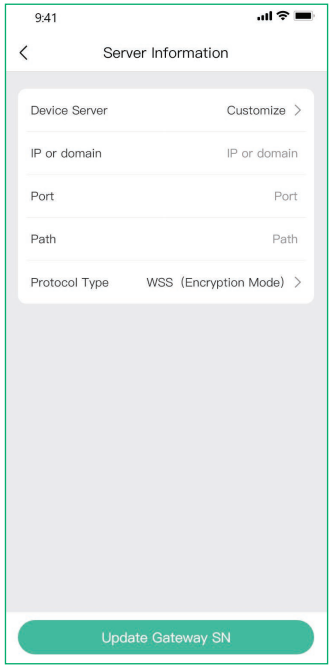


H. Click on 'Settings' at the bottom left corner & choose 'Server Information.'

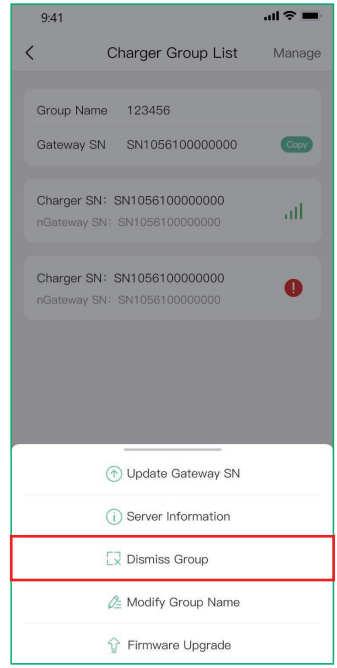
I . Fill in the IP address or domain that you wish to connect to.

J. Select the Update Gateway SN and wait for a little while. The server information will be changed on the charger and will connect to the new OCPP backend immediately.

I



J



Monta Server Information

IP/Domain: ocpp.monta.app
Path: Blank
Port: 443
Protocol Type : WSS

Condition B: the network maybe not well at that moment, please refresh the interface several times until you see the connection status is green

Troubleshooting

Problems	Possible Causes	Solutions
Input over voltage	AC input voltage may be too high.	• Check the input voltage from the backend
		• If the voltage is over 456Vac for a short time, wait till the power grid recovers to the normal voltage range
Input lower voltage	AC input voltage may be too low.	• Check the input voltage from the backend
		• If the voltage is under 230VAC for a short time, wait till the power grid recovers to the normal voltage range
Input over current	AC input current may be too large.	• Shut off the leakage current protection switch of the power distribution cabinet immediately
		• Check whether there is a low resistance connection between the AC output cables of the charger
Input over frequency	AC input frequency may be too high	• Check the input voltage frequency from the backend
		• If the frequency exceeds 55Hz for a short time, wait till power grid recover to normal voltage range.
Input lower frequency	AC input frequency may be too low	• Check the input voltage frequency from the backend.
		• If the frequency is lower than 45Hz for short time, wait till power grid recover to normal voltage range.
Over temperature	Temperature may be too low inside the charger.	• Check the surrounding conditions of chargers installed for a heating device nearby. Make sure the environmental temperature is under 60°C
Over leakage current	Leakage current to the earth may be too high.	• Shut off the leakage current protection switch of the power distribution cabinet immediately
		• Check whether there is broken AC output cables or a low resistance connection to the earth

Leakage current sensor abnormal	Detection of leakage current sensor is abnormal.	• Shut off the leakage current protection switch of power distribution cabinet immediately
		• Check whether there is a broken AC output cables or low resistance connection to the earth
Grounding fault	inappropriate grounding connection of input/output cables or inverse connection of L/N input cables	• Shut off the leakage current protection switch of power distribution cabinet immediately
		• Check if AC input/output cables are normal and if inverse connection of L/N input cables
CAN communication abnormal	Poor connection between AC charger and CITA-GATEWAY.	• Check whether CAN bus connection is reliable and correct.
Charging cable connection abnormal	Poor connection of charging cable with EV/Charger.	• Check if charging cable connection is correct and firm.

Note: If the above problems cannot be solved, please contact the seller.

Disposal

The packaging materials are environmentally friendly and can be recycled. Put the packaging in applicable containers to recycle it. Do not dispose this device with the household waste. It shall be handed over to the applicable collection point for the recycling of electrical and electronic device. For more detailed information about recycling of this device, please contact your local city office, your household waste disposal service, or the shop where you purchased the device.

Warranty

1. CITA EV warrants to Customer on delivery for three (3) years and that the Products are free from defects in material and workmanship and conform in all material aspects with the specifications as explicitly listed in the Documentation, except for charging cables, their connectors and software, for which the warranty is specified separately.

2. Subject to clause 3, CITA EV shall, at its option, repair or replace defective Products or refund the price of faulty Products if: (a) Customer gives written notice during the warranty period within fourteen (14) days after the Customer has discovered or should reasonably have discovered that some or all of the Products do not comply with the warranty as set out in clause 1;
(b) Customer returns such Products to CITA EV (at the location specified by CITA EV) at Customer's cost and following the RMA (return merchandise authorisation) instructions from CITA EV if the nature of the Product allows such return; (c) CITA EV is given a reasonable opportunity of examining such Products and provided by the Customer with all information it may reasonably require to proceed to such examination. Concerning repair, CITA EV is entitled to apply problem avoiding restrictions and Workarounds.

3. CITA EV shall not be liable for the Products' failure to comply with the warranty in clause 1 if:
(a) Customer makes any further use of such Products after giving a notice in accordance with or failed to provide notification within fourteen (14) days as set out in clause 2;
(b) The Error arises because Customer failed to follow CITA EV's oral or written instructions as to the storage, installation, commissioning, use or maintenance of the Products or (if there are none) good trade practice (such as but not limited to use of the Products with parts, accessories or software not provided or approved by CITA EV); (c) The Error arises as a result of CITA EV following any customisation or Product specification supplied by Customer; (d) Repairs or other interventions on the Products are performed by persons not trained for this purpose, against CITA EV's oral or written instructions, or with parts not supplied or approved by CITA EV; or (e) The Error arises as a result of fair wear and tear, wilful damage or negligence by Customer and/or a third party, or abnormal working conditions (such as but not limited to damages resulting from vandalism, animals, high-pressure cleaners, or Error in connected vehicles).

4. In all cases, the following are excluded from the coverage of the warranty:
(a) Travel costs and labour costs of repair, including time spent on preliminary work or disassembly and reassembly, if the repair of the Products is to take place at the installation site due to the nature of the Products; (b) Cleaning, routine maintenance and preventative maintenance operations of the Products as defined in the Documentation, as well as the supply of products necessary for these operations;
(c) Restarting operations after the Product has been secured, for example by circuit breakers, ground fault circuit interrupters (GFCIs), fuses or emergency stops; and (d) In general, all operations on-site, especially if no parts need to be replaced.

5. The Agreement shall apply to any repaired or replacement Products supplied by CITA EV. This warranty statement is subject to change without prior notice.

Please refer to **https://citaevcharger.co.uk/terms-and-conditions** for the latest version.

Declaration of conformity

CITA Smart Solution Limited and its associated brand: CITA EV
52 Deerdykes View, Westfield Park, Cumbernauld, Glasgow
G68 9HN, United Kingdom

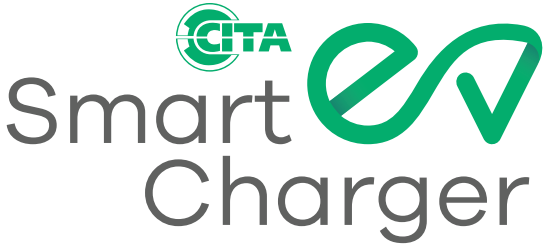
Declares under its' sole responsibility that the following Product:

CITA Smart 44 Gen 2 – 2x22kW, 2x32A, Three Phase Installation Charger

Provided that they are installed, maintained and used in the applications for which they were designed, in accordance with professional practices, relevant installation standards and manufacturer's instructions for use and installation, are CE certified and comply with the essential requirements of EMC Directive 2014/30/EU and RED Directive 2014/53/EU

In accordance with the following standards:

EN/IEC 61851-1:2017,
EN/IEC 62196-2:2016
IEC/EN 61851-21-2:2018
ETSI EN 301 489-17
ETSI EN 301 489-52
ETSI EN 301 908-13
ETSI EN 300 328
ETSI EN 301 893



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Disclaimer: Information has been carefully checked and is believed to be accurate; however, no responsibility is assumed for inaccuracies. Due to continual product development, change in specifications, colours and details of our products and those mentioned in this manual are subject to change without prior notice. For any further inquiries, please contact our nearest sales office via e-mail to info@citaevcharger.co.uk or through the phone.