

# Shifting to OCPP for the future of EV charging

Charge Amps has initiated the migration of its EV chargers\* from CAPI (Charge point API) to OCPP (Open Charge Point Protocol).

This transition provides Charge Amps' customers with increased flexibility through a future-proof EV charging. In 2024, Charge Amps is focusing on the OCPP standard. All new features and functionalities will be developed for OCPP as for all general improvements.

Migration will be done on all chargers that are operational and online in the field. Charge Amps will handle the entire process. The only action required from charger owners is to ensure the chargers are online with stable connectivity during over-the-air migration.

*\*Charge Amps Halo and Charge Amps Aura*

## What is OCPP?

CAPI and OCPP EV chargers share similar functionalities that enable Charge Point Operators to remotely manage and monitor their charging infrastructure. However, they differ in communication protocols, cloud maintenance, updates and technical support.

OCPP is the industry-standard international protocol for Electric Vehicle charging. It enables seamless and bidirectional communication between chargers and CMS (Central Management Systems).

Charge Amps adopted the most widely used OCPP version 1.6J to offer the best features and highest security for efficient EV fleet management.

*Please note:*

*When the upgrade is completed, "OCPP" will appear below the charger's name on the charger's page in Charge Amps Cloud:*

Charge Amps **Aura** • OCPP

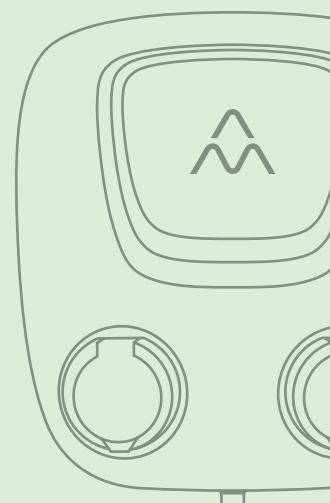
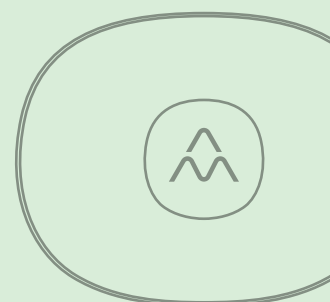
Charge Amps **Halo** • OCPP

*After OCPP upgrade, a new schedule needs to be created by the owner or administrator of the charger app. In absence of a schedule, the car will charge accordingly to the defined maximum current limit in Settings of Charge Amps Cloud – Partner portal.*

*Watch the video guide ["How to create a schedule for Aura and Halo"](#)*

*The LED behaviour will change to indicate OCPP states (with colour lights), as specified within the Charge Amps User Manuals:*

- a. [Section 4.4 \(page 11\) in Halo User Manual](#)
- b. [Section 4.6 \(page 12\) in Aura User Manual](#)



## The benefits

- **Continuous Improvements**

OCPP users will benefit from regular updates, including the latest charger's Firmware versions, Load Balancing and other functionalities of Charge Amps Cloud.

- **Backend Flexibility**

Charge Point Operators enjoy the freedom to connect to any chosen (among validated by Charge Amps) CPMS.

- **Standard Compliance**

OCPP stands as the industry recognized communication protocol for EV charging with maximized reliability.

- **Better Technical Support**

OCPP chargers are easier to troubleshoot due to uniform standard logs states.

- **Faster response**

The response time between chargers and back-end is quicker within OCPP than CAPI.

- **Improved and more stable Load Balancing**

- Dynamic Phase Allocation: during active charging session, e.g. 3-Phase to 1-Phase back to 3-Phase;
- Dynamic Phase Balancing: during active charging session, e.g. L1 to L3 to L2;
- Dynamic Phase Rotation: scaling up from 1P to 3P or scaling down from 3P to 1P allocation based on power availability during an active charging session.
- Phase Balancing: For instance, in a scenario where 3 EVs are charging on L1, one on L2 but none on L3, we can optimize by shifting an EV from L1 to L3.

## New OCPP LED statuses

### Charge Amps Halo

#### 4.4. LED indications

##### 4.4.1 General

Status	Centre light	Ring light
Ready for charging	White light	Steady light
Charging	Steady light	Circling light
Charging complete (paused by vehicle)	White light	Steady light
Charging paused* (paused by Halo)	Flashing green light	Steady light

\* Power allocation can take up to 2 minutes

##### 4.4.2 RFID tag verification

Status	Centre light	Ring light
Waiting for RFID tag	Flashing light	Steady light
RFID tag approved	Green light	Steady light
RFID tag not approved	Red light blinking once	Steady light

##### 4.4.3 Error indications

Error	Centre light	Ring light
Earth fault or vehicle error*	Red light	No light

\* Action: Make sure that the vehicle connector is intact. Shut off the power and restart after a few minutes.

### Charge Amps Aura

#### 4.6 LED indications

##### 4.6.1 General

Status	Socket light	RFID light
Ready for charging	Green light	-
Charging	Blue light	-
Charging complete (paused by vehicle)	Yellow light	-
Charging paused (paused by Aura)	Flashing blue light/yellow steady light*	-

\* Depending on version

##### 4.6.2 RFID tag verification

Status	Socket light	RFID light
Waiting for RFID verification	Yellow light	Flashing blue light
RFID tag not approved	Yellow light	Red light*
RFID tag approved	-	Green lights up

\* Auto-return to "Waiting for RFID verification"

##### 4.6.3 Other

Status	Socket light	RFID light
EV socket-outlet not available for use	No light	No light
Error	Red light	No light