

Ocular LTE v3

HOME ASSISTANT INTEGRATION

SUPPLEMENTARY CONFIGURATION GUIDE

Ocular LTE Plus v3 | Document Version 1.0 | Supplement to: OCPP LTE Configuration Guide

1. INTRODUCTION

This guide supplements the Ocular LTE Plus v3 OCPP LTE Configuration Guide. It provides step-by-step instructions for integrating the LTE charger with a Home Assistant (HA) server as your OCPP backend, in place of a commercial OCPP provider such as Exploren.

Prerequisites: Before proceeding, ensure you have completed all steps in the main OCPP LTE Configuration Guide — the charger must be in Online Mode with a working Ethernet/internet connection (Section 2–4.4 of the main guide) before configuring Home Assistant.

Support note: When the charger is configured to use a third-party or self-hosted OCPP server (including Home Assistant), Ocular technical support is limited to hardware-related issues. Software and connectivity issues relating to the OCPP server configuration should be directed to your Home Assistant community or integration maintainer.

Home Assistant is a popular open-source home automation platform. With the OCPP integration installed, it can act as an OCPP 1.6 central system, allowing you to monitor and control your Ocular LTE charger locally without relying on a cloud-based OCPP provider.

2. WHAT YOU WILL NEED

- An Ocular LTE Plus v3 charger, connected to your network via Ethernet (see main guide, Section 2)
- A Home Assistant server accessible on your local network (Home Assistant OS, Supervised, or Container)
- The OCPPSetTool mobile application installed on your smartphone (see main guide, Section 3)
- The Home Assistant OCPP integration installed (available via HACS or the HA Add-on Store)
- The IP address of your Home Assistant server on your local network

3. INSTALL THE OCPP INTEGRATION IN HOME ASSISTANT

Before configuring the charger, you must install and configure the OCPP integration within Home Assistant. The OCPP integration enables HA to act as a central system that the charger connects to.

3.1. Install the Integration

- In Home Assistant, navigate to Settings > Add-ons (or HACS if using the community store) and search for the OCPP integration.
- Install the integration and restart Home Assistant if prompted.

3.2. Configure the OCPP Integration

Once installed, configure the OCPP integration with the following settings:

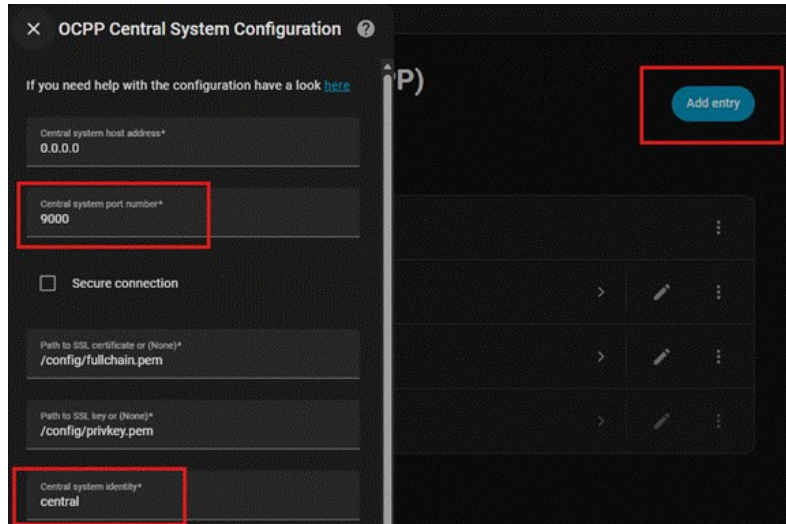


Figure 1 — Home Assistant OCPP integration configuration screen

Key configuration fields:

- Central System Port: Set a port number for the OCPP WebSocket server (e.g. 9000). Note this value — you will need it when configuring the charger.
- Central System Identity: This is the URL path segment the charger connects to. The default value is central. Note this value — it must be included in the charger's OCPP URL.

Important: The Central System Identity value (e.g. "central") must appear in the OCPP URL path configured on the charger. This is a commonly missed step that prevents the charger from connecting.

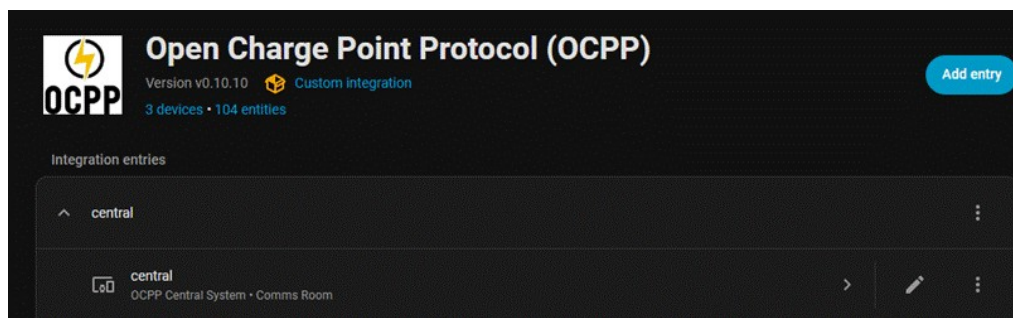


Figure 2 — Example Home Assistant OCPP configuration showing port 9000 and identity "central"

4. CONFIGURE THE CHARGER (OCPPSetTool)

With Home Assistant configured, return to the OCPPSetTool app to point the charger at your HA server. If you have not yet completed the initial charger setup (Online Mode, DHCP, Ethernet connection), complete Sections 2–4.4 of the main OCPP LTE Configuration Guide first.

4.1. Determine Your Home Assistant IP Address

You must use the local IP address of your Home Assistant server — not the local hostname (e.g. homeassistant.local). Using the hostname may prevent the charger from connecting successfully.

- In Home Assistant, go to Settings > System > Network to find the IP address.
- Alternatively, check your router's connected device list.
- Example IP address: 10.14.1.22

4.2. Enter the OCPP Server URL in OCPPSetTool

Open the OCPPSetTool app and connect to your charger via Bluetooth (refer to Section 4.1–4.2 of the main guide). On the home screen, enter the following:

Charger ID: Enter a name for your charger. This name must match exactly what you enter in Home Assistant when the charger first connects (e.g. LTE).

Set URL — The OCPP server URL follows this format:

```
Home Assistant IP address>:<Central System Port>/<Central System Identity>
```

Using the example values from Section 3.2:

```
10.14.1.22:9000/central
```

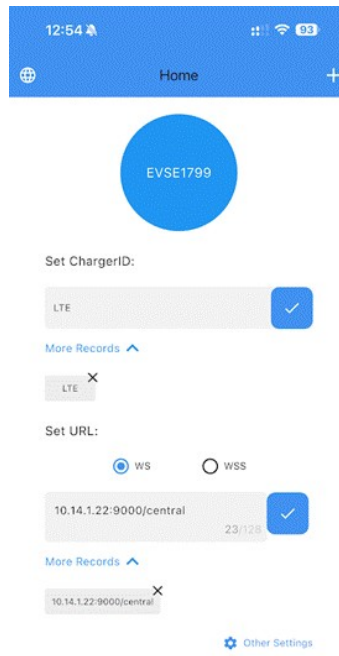


Figure 3 — OCPPSetTool app showing charger ID and server URL configuration

URL format notes:

- Use ws (non-secure WebSocket) for local Home Assistant connections. WSS (secure) is typically only needed for remote/cloud connections.
- The port number must match the Central System Port set in the HA OCPP integration (e.g. 9000).
- The path segment (e.g. /central) must match the Central System Identity in HA. This is the most commonly missed configuration step.

Once the correct values are entered, tap the tick (✓) next to each field to save. The app will display "Setup Successful" when the configuration is saved to the charger.



4.3. Reboot the Charger

After saving the OCPP URL settings, reboot the charger to apply the new configuration. You can do this by cycling power to the charger, or via the OCPPSetTool if a reboot option is available.

5. VERIFY THE CONNECTION

5.1. Check the Charger Display Icons

After rebooting, monitor the status icons at the top of the charger's display screen:

- Internet icon : When the charger is connected to the network but searching for the OCPP server, this icon may periodically cycle between showing and not showing an X. This is normal behaviour. Once the OCPP connection is established, the icon becomes stable.
- OCPP icon : Once the charger has successfully connected to your Home Assistant OCPP server, the OCPP icon appears and remains stable.

Both icons should be stable and without an X before proceeding. If the OCPP icon does not appear, refer to Section 6 (Troubleshooting).

5.2. Authorise the Charger in Home Assistant

When the charger connects to Home Assistant for the first time, HA will prompt you to authorise and name the new charge point:

- Home Assistant will display a notification for a newly discovered OCPP charge point.
- When prompted to name the device, use the same Charger ID you set in OCPPSetTool (e.g. LTE). Using a matching name ensures the device connects and registers correctly.
- Confirm the entry. The charger will then appear in your Home Assistant dashboard.



Figure 4 — Home Assistant dashboard showing the LTE charger connected and online

Selecting the LTE device from the dashboard opens the device detail page, from which you can monitor charging status and control the charger:

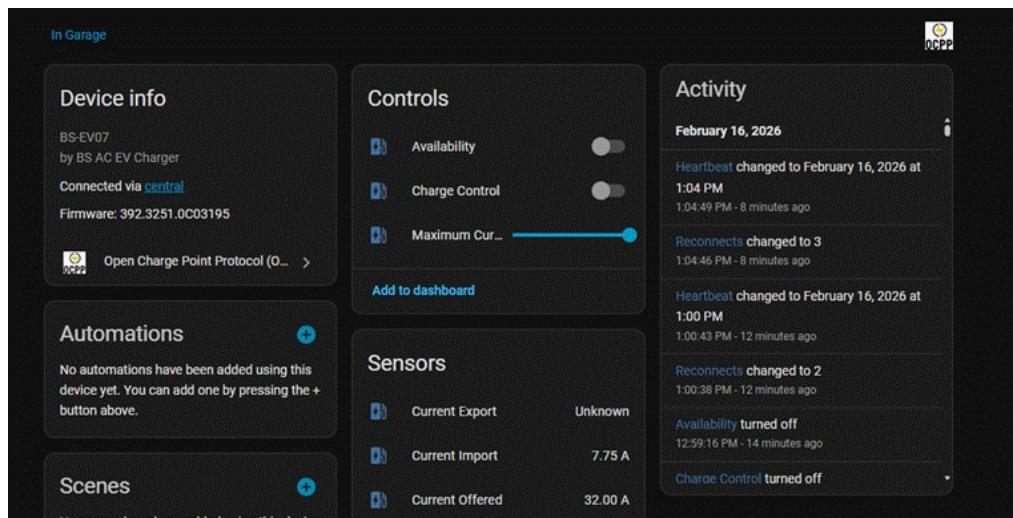


Figure 5 — Home Assistant LTE device detail page showing charger controls and status

The charger is now connected to Home Assistant. It can be further monitored and controlled using the standard Home Assistant features. Refer to Home Assistant guides for further information.

6. TROUBLESHOOTING

Symptom	Resolution
OCPP icon does not appear after reboot	Verify the OCPP URL in OCPPSetTool is correct — check IP address, port, and that the Central System Identity path (e.g. /central) is included. Confirm HA OCPP integration is running.
Internet icon cycling with X (persistent, not settling)	Confirm the Ethernet cable is securely connected and the router/switch is functioning. Ensure the charger is in Online Mode and IP is set to DHCP (main guide Section 4.3).
Charger not appearing in Home Assistant	Ensure the HA OCPP integration is started and the port is not blocked by a firewall. Try restarting the OCPP integration in HA.
Connected using hostname but charger won't link	Use the HA server's IP address in the OCPP URL instead of the local hostname (e.g. homeassistant.local). The LTE charger may not resolve mDNS hostnames reliably.
HA asks to name charger — charger won't connect after naming	Ensure the name entered in HA exactly matches the Charger ID set in OCPPSetTool. Reboot the charger after making any changes.
Cannot control charger from HA dashboard	Verify the charger is showing as online in both the charger display (OCPP icon stable) and in the HA device list. Try a charger reboot if recently connected.

7. APPENDIX — QUICK REFERENCE

Summary of the key values required for a successful Home Assistant OCPP connection:

Setting	Value / Example
Charger Mode	Online (set via OCPPSetTool > Other Settings > Set Mode)
IP Configuration	DHCP (set via OCPPSetTool > Other Settings > Set IP)
OCPP URL Protocol	ws:// (non-secure WebSocket for local HA)
HA IP Address	Use numeric IP address – not local hostname (e.g. 10.14.1.22)
Central System Port	As configured in HA OCPP integration (e.g. 9000)
Central System Identity	As configured in HA OCPP integration (default: central)
Full OCPP URL format	ws://<HA IP>:<port>/<identity> e.g. ws://10.14.1.22:9000/central
Charger ID	Set in OCPPSetTool; must match the name used in HA when prompted