



## LinkRay – EV Charger Local Controller



LINKRAY has two main modes of operation:

### Online

Sitting between the cloud billing platform (CSMS) and the EV charge points allowing on-site local load balancing without interfering with back-office control and billing.

### Offline

Local authorisation using an RFID whitelist, LinkRay will manage on-site local load balancing without connection to a back-office control. A contactless payment terminal can be added to LinkRay to take payment from any number of connected chargers.

**LINKRAY (online)** will seamlessly relay messages between the cloud billing platform and connected charge points, acting as a transparent proxy. In the event of an internet outage **LINKRAY** will cache messages and forward them when communications are restored.

**LINKRAY** is on-site and local to the chargers, it will respond quickly to local energy needs, monitoring for power usage and adjusting accordingly. **LINKRAY** can interface to a site meter using TCP/IP or Modbus to dynamically balance power. Alternatively, it can have a simple static limit.



**LINKRAY** can be accessed remotely via a dedicated secure web-portal in order to access all your **LINKRAY** devices, showing you the online status, and a seamless click through to monitor your site. Remote access is optional but recommended, alternatively you may wish to have **LINKRAY** on a private network and only communicate to it locally if you wish.

**LINKRAY** is easy to install requiring only OCPP 1.6J compatible chargers to successfully connect. **LINKRAY** is optionally configured with the back office (CSMS) connection URL and any chargers connected to **LINKRAY** will be forwarded.

**LINKRAY** is compatible with most chargers and can operate in mixed environments, i.e. DC and single/3-phase AC chargers. Load balancing can be enabled on a per charger basis.

Chargers can also be easily grouped and additionally prioritised for control management ease.

The built-in web app controls how **LINKRAY** interacts with the chargers, enabling adjustment of charge profiles according to on-site energy demands.

**LINKRAY** allows access to live and historic transaction data, visualising data in day-by-day graphs to allow verification of site configuration and usage.

**LINKRAY** can even be used to manage other IP devices adjacent to it, this allows emergency configuration of devices that could not otherwise be monitored or configured when remote from the site.



## Technical specification

<b>Supply Voltage</b>	8-15V DC
<b>Power Consumption</b>	Nominal 2 Watt
<b>Processor</b>	High processing power, ARM applications processor with Flash storage and DDR memory
<b>Security</b>	Secure Boot TPM
<b>Communication</b>	On board LTE CAT-M1 / GPRS modem 10/100Mbit RJ45 Ethernet connection 802.11b/g/n Wi-Fi 2.4 GHz
<b>Input/Output</b>	RS485 Reset Button LED indication
<b>kWh-meter interface</b>	Modbus RS485 connection to meter (contact Versinetic to see supported meters)
<b>Mechanical Enclosure</b>	DIN rail mounted
<b>Workable temperature</b>	-25 °C till +70 °C, 5% till 95%, non-condensing
<b>Temperature Control</b>	On-board temperature sensor on PCB
<b>Back office compatibility</b>	OCPP (JSON) 1.6J over Ethernet, Wi-Fi or LTE CAT-M1/GPRS
<b>Updates</b>	Automatic remote firmware updates (signed)



## Physical Dimensions

