CHARGING

CHARGING SYSTEM

Integrated charging solutions for busy car park operators

Charging System • Central Management System (CMS) • Payment
Load Management System • License Plate Recognition System
• Streamlined Car Park System

CORNERSTONE TECHNOLOGIES

We know there's a lot involved in maintaining a car park, it's no easy task. To make your life easier, Cornerstone Technologies has developed an all-encompassing charging system designed to integrate the chargers, the customers, the car park operators and our charging systems into one.

By activating the charger, the user connects to the entire network and sets our intricate software systems into motion. It's a dream come true for operators like you; just set it and forget it.

EV made possible

CORNERSTONE TECHNOLOGIES

CENTRAL MANAGEMENT SYSTEM (CMS)

- Integration with Parking System
- Remote Management
  - Start/Stop Charging
  - Enable/Disable Charger
- Database Reporting

LICENSE PLATE RECOGNITION SYSTEM (LPRS)

CHARGING SYSTEM

PAYMENT

- Payment Method
  - Membership
    - NFC
    - Mobile App
  - EnerPay
  - Onboard
    - NFC
    - QR Code Payments
- Payment Gateway
  - Alipay
  - ApplePay
  - FPS
  - Google Pay
  - Mastercard Contactless
  - Octopus
  - PayMe
  - Visa Pay Wave
  - WeChat Pay

LOAD MANAGEMENT SYSTEM (LMS)

- Averaging Current
- Dynamic Change
- Priority Setting (Charger)
- Independent Setting
- Uninterrupted Operation Mode
- Fail-Safe Protection Mode

CENTRAL MANAGEMENT SYSTEM (CMS)

You're in complete control

As with any system, charging an EV vehicle can have many moving parts. Our Central Management System is the answer to keeping things in place, connecting the EV charging and payment gateways together.

MONITOR

Keep an eye on everything. Charging and payment records are all at your fingertips. Works in the background with Daily EV charging operations, fault monitoring, charger error fault active notification and power management.

CONTROL

Leave nothing to chance with extensive control over the process. Remotely enable or disable EV chargers. Enable unattended charging systems. You're in the driver's seat.

CONNECT

Form an EV charging network station, connecting all installed chargers while integrating them with the payment kiosk. Supports Octopus Card, credit card, QR code scan payments and more.

REPORTING

Know how resources are being used. Import or export data to analyse and draw insights on usage behaviour to optimise processes.

CUSTOMISE

Infinite ways to make the system your own. Change charging sessions and fees, rates of charging for different schemes, enable or disable a charger, charging current rate for individual chargers and pre-paid or post-paid modes.

PAYMENT

Full flexibility in payments

We make it easy to pay for everyone. Your customers are able to pay with any payment method available on the market, and you as the operator have complete control over how you charge. Whether you want to have your customers pre-pay or post-pay, and take payment through time or energy, the choice is yours.

There are three ways customers can pay:

MEMBERSHIP

Customers sign up for membership through the mobile app and connect with your choice of payment method. These include PayMe, credit cards, WeChat Pay, Google Pay, AliPay, ApplePay and NFC.

ENERPAY

EnerPay is our self-service payment kiosk that is networked with our EV chargers. It also offers a range of functions to users such as printed receipts, a physical reader as well as checking your charging information.

ONBOARD

The onboard payment system allows users to pay directly on the Slate and Chargic without requiring the presence of EnerPay payment kiosk. Onboard supports NFC card or QR Code payment methods.

LOAD MANAGEMENT SYSTEM (LMS)

More chargers installed without increasing your electricity load

Load Management System (LMS) is used so more EV Chargers can be installed without having to increase electricity load while optimising the power supply. LMS protects your car park from overloading the power supply of the EV Chargers.

There are a number of combinations that the Load Management System can be used with, either in tandem or independently.

AVERAGING CURRENT

In the Averaging Current system, the current is shared among all cars that are parked equally.

DYNAMIC CHANGE

In dynamic charging, the current will increase and decrease. If there are only two cars, the current will not be shared. To protect the battery, when one car is almost fully charged the current will drop and be transferred to the second car.

If a third car comes, car two and three will share the same current.

PRIORITY SETTING

This is based on the customer's subscription. If the customer has paid extra, he or she can get priority on how much current the EV car will get during charging.

In the first example, if there are two cars in the regular tier and no car is occupying the priority space, they can both get 16A each. Once the priority car arrives, the priority car takes the full 16A and the other two cars will share the remaining 16A of current.

INDEPENDENT SETTING

The Independent Setting is based on membership. The current is completely reserved for the registered car owner, meaning even if the owner is not there the other cars do not get extra current.

UNINTERRUPTED

In case of interruptions, the cars that have started to charge will be able to continue to charge, however charging cannot be started for new incoming cars.

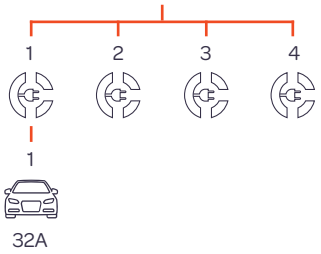
FAIL SAFE

In case of technical failure, the electric supply will automatically drop to the minimum 6A or 0A.

AVERAGE CURRENT

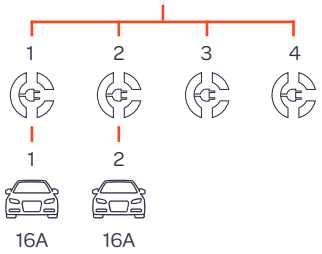
SCENARIO 1

Average Current
Supply 32A



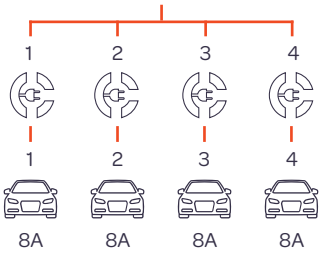
SCENARIO 2

Average Current
Supply 32A



SCENARIO 3

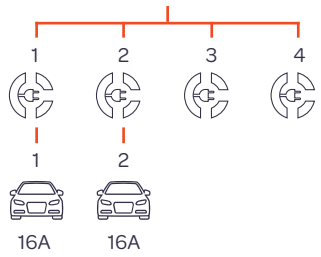
Average Current
Supply 32A



DYNAMIC CHANGE

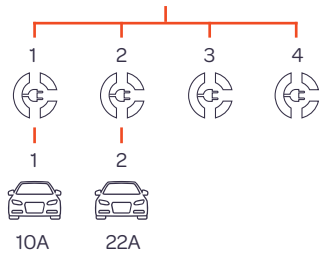
SCENARIO 1

Dynamic Change
Supply 32A



SCENARIO 2

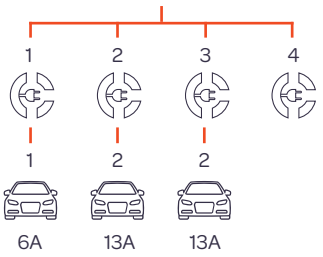
Dynamic Change
Supply 32A



When the charge is almost full it will drop to 10A, the remaining current will be sent to the other car

SCENARIO 3

Dynamic Change
Supply 32A

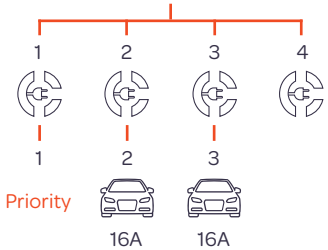


When a third car requires charge, car number 2 and number 3 will share the same current

PRIORITY SETTING

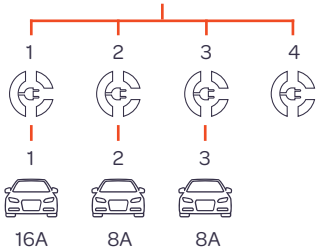
SCENARIO 1

Priority Setting
Supply 32A



SCENARIO 2

Priority Setting
Supply 32A

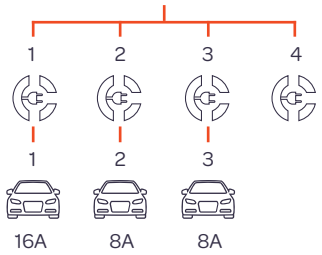


When the car receiving priority arrives, the other 2 existing cars will automatically share the remaining current

INDEPENDENT/RESERVE SETTING

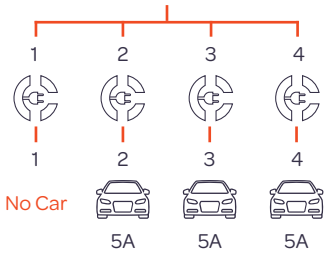
SCENARIO 1

Independent/Reserve Setting
Supply 32A



SCENARIO 2

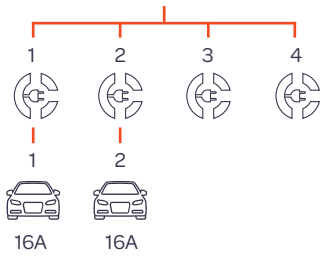
Dynamic Change
Supply 32A



UNINTERRUPTED

SCENARIO 1

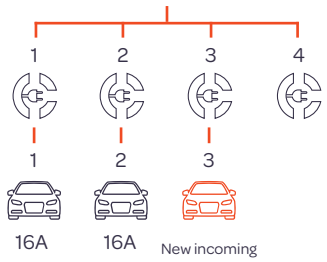
Uninterrupted
Supply 32A



In case of interruptions, the cars that have started to charge will be able to continue to charge, however charging cannot be started for new incoming cars

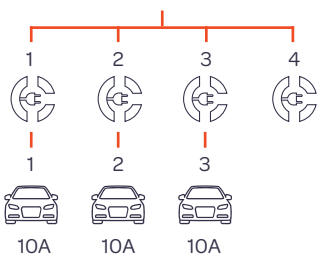
SCENARIO 2

Uninterrupted
Supply 32A

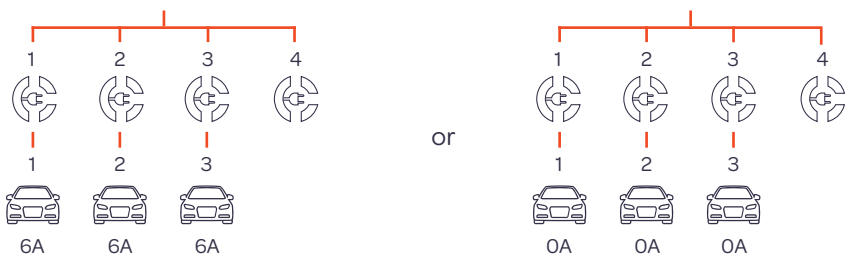


FAIL SAFE

SCENARIO 1



SCENARIO 2



In case of technical failure, the electric supply will automatically drop to the minimum 6A or 0A

LICENSE PLATE RECOGNITION SYSTEM (LPRS)

Monitoring on autopilot

The License Plate Recognition System (LPRS) enables automatic sensor when a non EV car is parked. Automatic detection and billing of EV Charging upon exiting the car park will be applied. It eliminates unauthorised cars in your space, empowering operators to take control.

STREAMLINED CARPARK SYSTEM

STEP 1:
REGISTERED USER ENTERS CAR PARK

Without any human intervention, a registered user arrives at the gate which then triggers our LPRS system to open the gates.

STEP 2:
ARRIVAL AT EV CHARGING BAY

Once parked at the charging bay, the customer is able to start charging right away because the charger is already activated.

STEP 3:
NO-CONTACT EXIT AND PAYMENT

The customer can then exit the parking gate without any interaction.
The payment automatically processes through the registered account.
The parking and charging fees will be calculated according to usage.

STREAMLINED BUSINESS SOLUTIONS

At Cornerstone Technologies, our sophisticated systems are made for EV charging but also open up the doors for other use cases.

CHARGING

It’s time to streamline your car park and improve the customer experience. Please contact us to see how our system can be tailored to your needs.

GET IN TOUCH

General CS Hotline +852 6115 2143

Charging Sales Hotline +852 6700 0047

CORNERSTONE TECHNOLOGIES