





# Our Projects Energy storage





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# Our Projects Nigeria-energy storage





# Our Projects South Africa-energy storage



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# MULTIPURPOSE FIBER-OPTIC CABINET MFOC

The latest street cabinet revolutionized by IPT PowerTech Group, embeds a Fiber optic cabinet and a modular EV charging station.

MFOC is designed to respond to the raising needs for faster internet connection while accommodating the ideal charging interface of the EV future cars.

**MODULAR**  
3 compartments :



**EXPANDABLE:**  
Batteries can be extended as needed



**EASILY DEPLOYABLE:**  
Optimized footprint



## FIBER OPTIC CABINET Main Features

- Energy counter compartment independently accessible
- Power Redundancy through Emergency Socket
- Built-in Power System of 2400W
- Li-Ion Batteries of 40Ah extendable to 200Ah
- 10U space for MSAN equipment's and ODF's
- Up to 600 pairs of Connection ports in a separate compartment
- Smart heat dissipation

## EV CHARGING STATION Main Features

- AC & DC Charging
- Safe, fast and flexible
- Fast charging down to 20 minutes
- Control & monitoring of charging process.
- Standardized charging types for USA/Japan, Europe, GB/China.
- Built-in POS payment.
- Independent energy counter for separate invoicing

## Advantages

- Easy deployable due to its plug and play feature.
- Small foot-print all in one compartment using edge technologies in energy density.
- Easy expandable/upgradable module design that allows expansion and upgrade any time during operation.
- Light stock management one cabinet fits all installation scenarios along with the upgrade/expansion kits.
- Camouflage option due to a painting that makes the cabinet blind in its surroundings.
- Anti-graffiti option due to a special painting that prevent graffiti paint from bonding to surfaces.



# SAVINGS TELEKOM ROMANIA PROJECT 2019

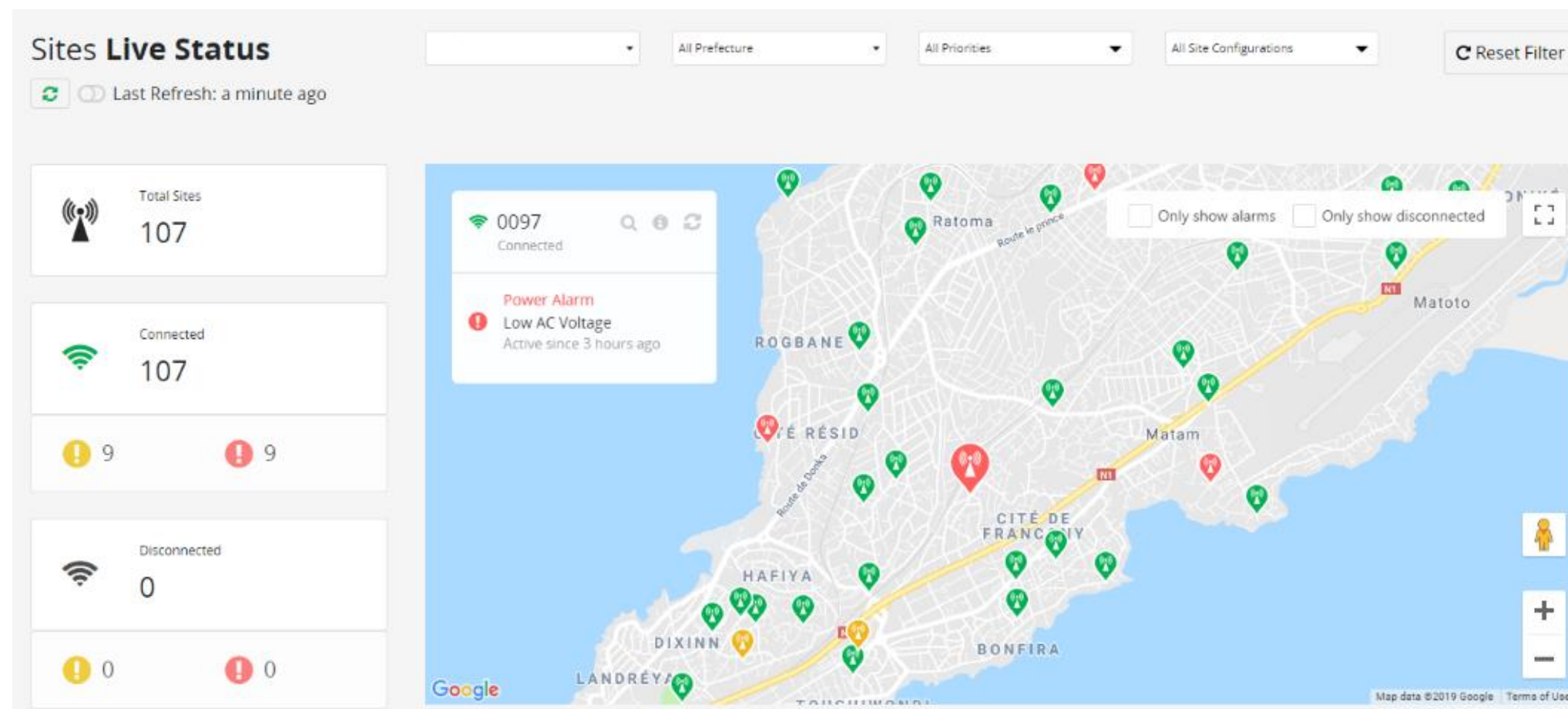
OUR SOLUTION - YOUR BENEFITS - Manage different solution sites





# SAVINGS TELEKOM ROMANIA PROJECT 2019

## OUR SOLUTION - YOUR BENEFITS - Sites Live Status





## 2019 NEW GOALS

- Energy Efficiency solutions for Romanian households and telecom sites
- EV chargers
- Integration of telecom equipment and testing

Energy storage needs are increasing. Solutions for site efficiency  
(Outages made by natural calamities, storm)

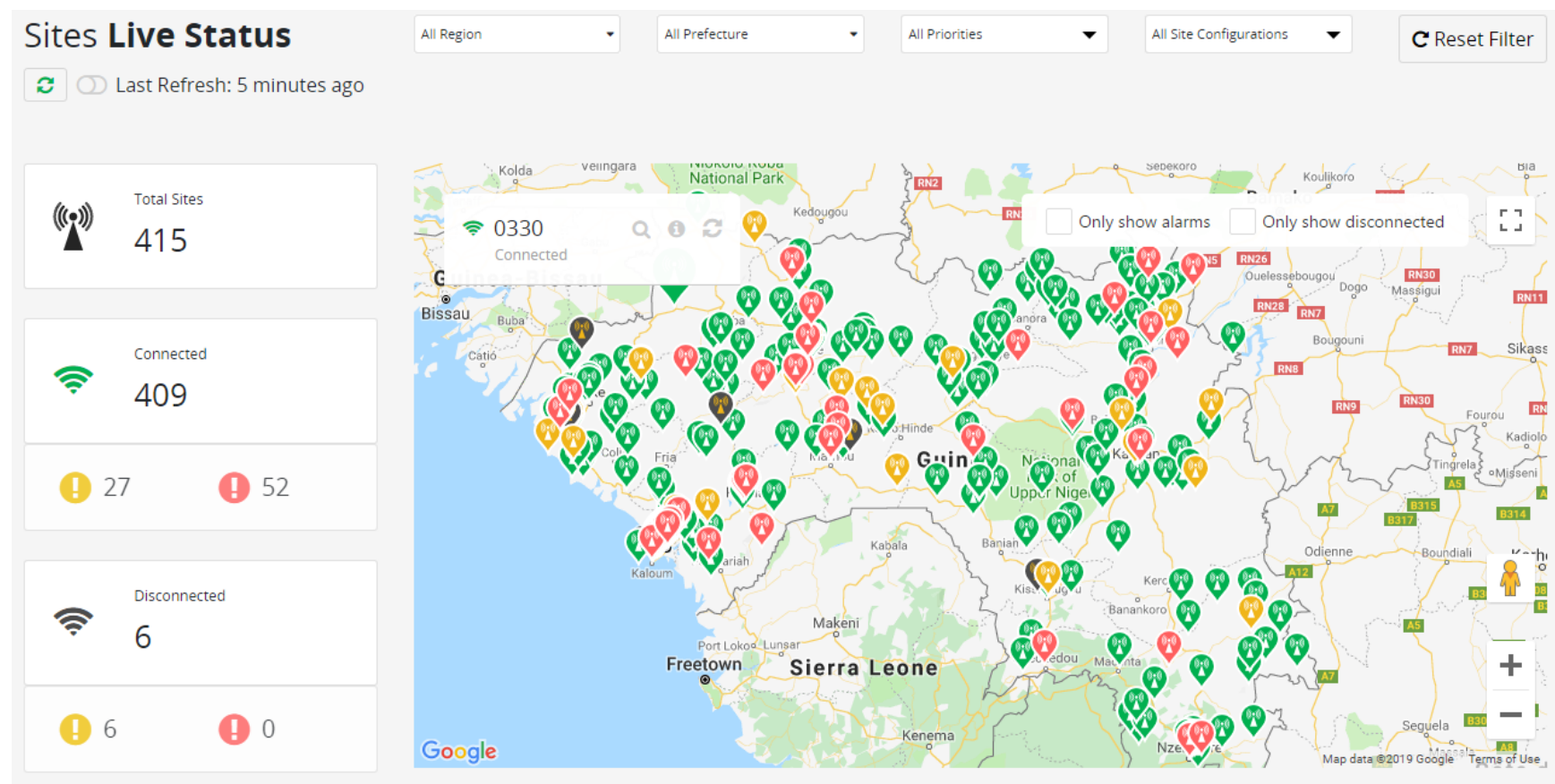
Cybersecurity,  
IOT,  
AI,  
Smart Cities,  
Industry 4.0,  
Smart Metering.





# LIVE STATUS 2019

## OUR SOLUTION - YOUR BENEFITS - Sites Live Status

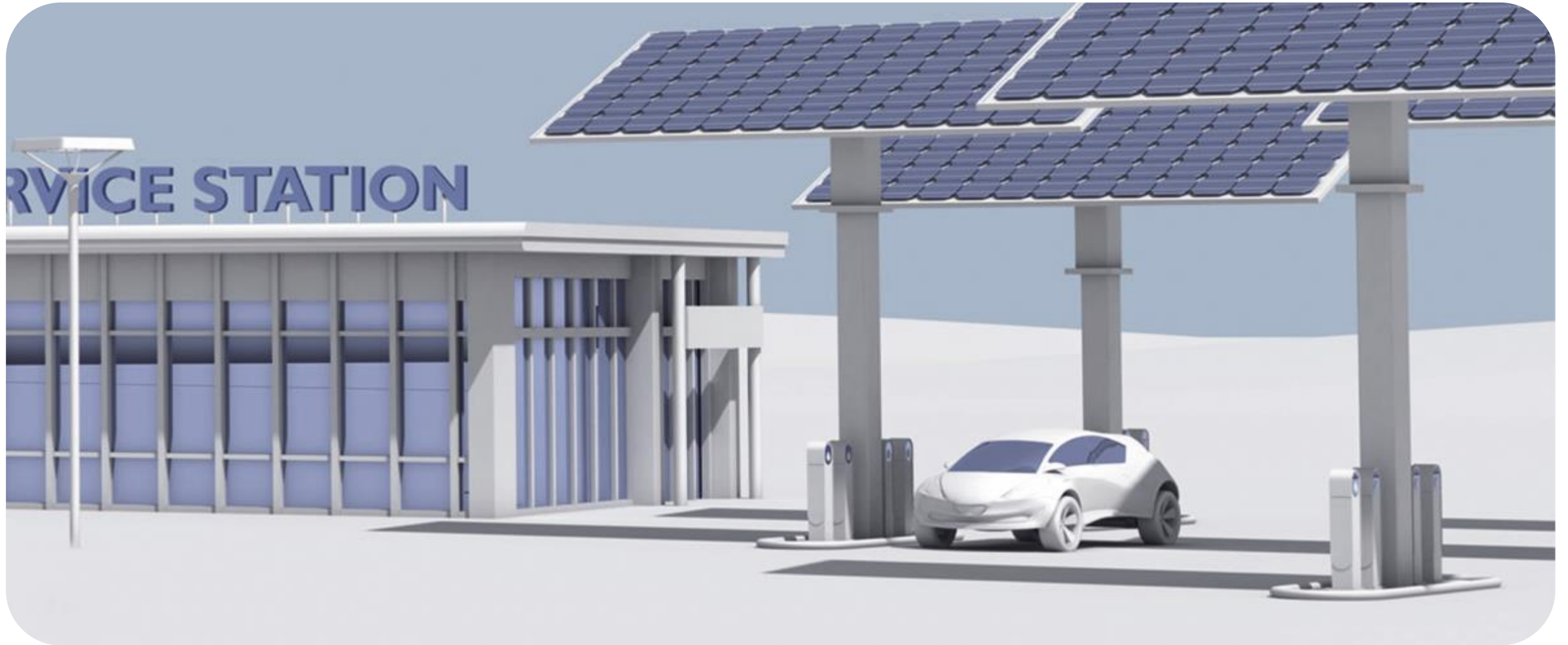




EV-Charging

AC CHARGING







## EV-Charging



## CHARGING SITES







stand-alone solution:



Charging station:



## EV-Charging AC CHARGING



## CHARGING SITES

**EV SUPERCHARGER**

**stratum**  
Supercharger,  
The Best Choice!

Supercharging with up to  
**80**  
Ampere in AC

Supercharging with up to  
**200**  
Ampere in DC

A collage of images showing Stratum EV Supercharger stations in various settings, including a car charging station and a car parked next to a charging station.



# EV-Charging AC CHARGING 2x22KW

## CHARGING SITES

Input	
AC connection	3 phases + N + PE
AC voltage	400 V <sub>RMS</sub> (L-L) ± 10 %
Frequency	50/60 Hz
Nominal current	312 A <sub>RMS</sub> at maximum power (150 kW DC + 65 kW AC)
Power factor	0.99
Mains terminal	Terminal blocks
Transient OVP	Class II/C protection

DC charging points: CCS + CHAdeMO	
DC output voltage range	170 to 550 V <sub>DC</sub> 170 to 1000 V <sub>DC</sub> optional
Maximum charging current	300 A <sub>DC</sub>
Maximum charging power	150 kW <sub>DC</sub>
Cable / access length	3.5 m / 2.5 m
Protections	Overcurrent circuit breaker Short circuit protection Overvoltage protection Undervoltage protection Isolation monitoring Ground monitoring

DC charge points: CCS	
Rating cable and gun	200 A <sub>DC</sub> / 850 V <sub>DC</sub>
Compliance	IEC 61851-23 / -24 IEC 62198-3 DIN 70121

DC charge points: CHAdeMO	
Rating cable and gun	125 A <sub>DC</sub> / 500 V <sub>DC</sub>
Compliance	IEC 61851-23 / -24 JEVS G 105 Rev. 1.0.1 compliant

AC charging points	
Compliance	IEC 61851-22
AC plug at 43 kW charging point	IEC 62196-2 Mode 3, Type 2
AC socket at 22 kW charging point	IEC 62196-2 Mode 3, Type 2
Nominal AC voltage	400 V <sub>RMS</sub>
Maximum charging current	
at 43 kW charging point	3 x 63 A <sub>RMS</sub> at 43 kW
at 22 kW charging point	3 x 32 A <sub>RMS</sub> at 22 kW
Cable / access length	3.5 m / 2.5 m
Protections	RCD Type B Overcurrent circuit breaker Ground monitoring

User interface	
Display	7" graphical color display
Keypad	5 buttons, backlit
Local authentication	RFID reader

General	
Height (overall)	2079 mm
Width (body)	852 mm
Depth (overall)	998 mm
Weight (System)	400 kg
Protection degree	IP 55
Enclosure protection	IK 10
Efficiency rectifier	94 %
Operating temperature range	-25 °C to +45 °C
Maximum relative humidity	95 %, non-condensing
Compliance and safety	RoHS: EN 50581 CE compliance IEC 61851-1
EMC	IEC 61851-21-2 EN 61000-6-1 / -2 / -4



# EV-Charging    DC SUPERCHARGER 50KW up to 150KW

# CHARGING SITES

## Available options

Number of Charge Points	DC out Plug configuration	AC out configuration	Standard power configuration	Communication
3 (2x DC, 1x AC)	CCS and CHAdeMO	Type 2 plug	50 kW	LAN
4 (2x DC, 2x AC)	2 x CCS	Type 2 socket	100 kW	Wireless GPRS / 3G
6 (4x DC, 2x AC)	2 x CHAdeMO	Type 2 plug and Type 2 socket	150 kW	Tosibox (WLAN + 3G)
		No AC		

Customized configurations on request





# EV-Charging DC SUPERCHARGER 50KW up to 150KW

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EV-Charging DC SUPERCHARGER 350KW

CHARGING SITES

E-Mobility is becoming suitable for everyday use





EV-Charging DC SUPERCHARGER 350KW

CHARGING SITES

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In addition to the standardized plug-in charging systems, we are offering high-performance DC charging of large battery units. The DC replacement battery concept is particularly suitable for utility vehicles used by local and municipal authorities as well as for forklift trucks, haulage vehicles, and passenger transport vehicles

### **Important advantages at a glance**

Current: Up to 400A

Voltage: Up to 750VDC

Tolerance compensation for the plug-in process and vibration damping during the journey

10000 cycles

Battery and thermal management well as charging state monitoring via integrated data module





## Fast battery replacement

The replacement of the battery units is performed by fully automated robots within the space of a few minutes, thereby reducing downtimes to a minimum.



*The empty battery is removed.*



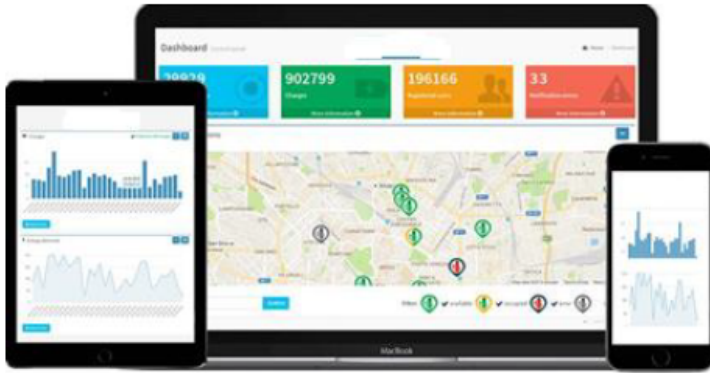
*The empty battery is inserted into the charging unit. The charging process with up to 400 A is then started.*

In order to reduce exhaust gas emissions the public transport network operates numerous electric buses. These vehicles are based on the replacement battery concept. The battery units of over 40 buses are replaced two or three times each day at the battery replacement station. To date, well in excess of 100,000 batteries have been replaced.

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## Charge Point Management



- Number of stations
  - Amount of energy delivered for each station per each connector
  - Number of registered users.
  - Error notifications
  - Remote control and monitoring: Start charge, Stop charge, unlock connector, etc.
- 
- Map and status overview
  - Diagnostic reports of stations(via web portal or email)
  - Dashboards, history
  - Charts for:
    - energy delivered
    - number of charges
    - Revenues



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What to do while waiting..



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## Make your own itinerary

Make your own itinerary and check if you reach the destination with the battery of the car. Choose the type of electric and PHEV.

