Express Plus

The Future of Ultra-Fast DC Charging

ChargePoint® Express Plus is a family of ultra-fast DC charging products designed to meet charging requirements of current and next-generation electric vehicles (EVs), including electric cars, buses and trucks. The innovative design of ChargePoint Express Plus employs a modular, scalable architecture that lets station owners buy just what they need and scale up as demand grows with no stranded investment along the way. It supports charging voltages ranging from 200 volts (V) to 1000 V including today's 400 V cars and 750 V buses, and tomorrow's 800 V cars.

Every station in the Express Plus system is capable of charging from 50 kilowatts (kW) to 400 kW. Dynamic power management features allow oversubscription of the utility connection, and intelligently allocate power among vehicles based on their battery's state of charge (SoC) and instantaneous maximum charge rate, so every car always charges as fast as possible to minimize driver wait times. Power consumption is managed within a site's available capacity while minimizing impact to vehicle charging rates. Power management and high-efficiency power conversion (more than 96% efficiency) reduce electricity costs and wasted energy. Fault-tolerant design, instrumentation for remote monitoring, intelligent diagnostics and machine learning techniques work together to predictively prevent failures and ensure high availability.

ChargePoint Cloud Services support the largest charging network in the world. The ChargePoint Cloud simplifies operations for station owners and offers features to maximize utilization of Express Plus systems. It also makes it easy for drivers to locate and use stations with an intuitive mobile app or in-dash systems. ChargePoint's world-class support team monitors systems remotely and provides proactive alerts of potential problems to prevent station outages and eliminate driver frustration. Automated reports offer detailed information about station utilization and energy use, making it simple to plan for ongoing investments and growth.

The ChargePoint Express Plus architecture consists of three modular building blocks, described below. They can be configured to meet the exact requirements at any site and scale incrementally as demand for charging increases.

Power Modules are a basic building block in the Express Plus architecture. Each module is a self-contained AC to DC power conversion system that operates between an output of 200 and 1000 V and delivers up to 31.25 kW at a max current of 78 amps (A). Power Modules are sealed units, easily installed in Power Cubes or Express Plus Stations in the field without any special tools or technical expertise.

Express Plus Stations dispense power to EVs and can support up to three flexible, lightweight cables compatible with all standard connector types. Each Express Plus Station houses two Power Modules and can connect with a Power Cube to deliver up to 400 kW to a single vehicle. There's a 10-inch LCD touchscreen for driver interaction, 20-inch wide-format LED display for notifications, cameras, area lighting, WiFi and Bluetooth connectivity and much more. Built-in cellular networking enables remote management through ChargePoint Cloud Services.

Power Cubes house up to 16 Power Modules in an attractive form factor that services up to eight Express Plus Stations in a fully integrated system. Power Cubes have AC input, DC outputs, cooling, system controls and networking for remote diagnostics and management.

Ultra-fast Modular DC Charging System

+ Modular architecture scales as demand for power increases
+ Delivers from 50 kW to 400 kW to a single vehicle
+ Designed for legacy and future battery pack voltages from 200 to 1000 V
+ Scales from one to eight stations without stranded investment

Innovative Engineering and Design

+ Novel modular Power Cube design allows growth in charging capacity in 31.25 kW increments
+ Highest volumetric power density in the industry, delivered through the Power Cube
+ Ergonomic, consumer-friendly Express Plus Stations delight drivers and make it easy and safe to charge
+ Attention to design details and quality construction create the best possible station owner brand perception

Dynamic Power and Energy Management

+ Intelligent management of power distribution to cars minimizes driver dwell times and maximizes station utilization
+ Total output power can optionally be configured to manage electrical costs or meet site-specific requirements

Station Management

+ Connected to the largest EV charging network in the world, serving the largest community of EV drivers
+ Access controls manage how drivers access stations and how much they pay
+ Reports cover utilization, charging sessions, energy usage, costs and much more
+ Over-the-air updates to system software ensure the latest features are always available
+ Remote diagnostics allow support teams to identify problems before they impact drivers

Driver-Friendly Express Plus Stations

+ Authentication through NFC, RFID, plug and charge, mobile apps and in-dash navigation systems
+ 24/7 phone support for drivers
+ Two displays for optimal driver interaction show state of charge, session pricing, energy dispensed, current wait times and more, all in real-time

High Reliability and Fault Tolerance

+ Minimal moving parts and liquid cooling technology increase reliability and minimize ongoing field service for maintenance
+ Configurable levels of Power Module redundancy to minimize downtime
+ Power Module duty cycle is intelligently managed to extend lifetime
+ Instrumentation for remote monitoring, intelligent diagnostics and machine learning predict failures and ensure high availability

Easy to Service

+ Modular components are field installable without any specialized tools or expertise
+ Backed by ChargePoint Assure, an industry-leading parts and on-site labor warranty

Universal Compatibility

+ Compatible with international electrical grid standards and vehicles (360–530 V, 50–60 Hz)

+ Up to 3 different connectors per Express Plus Station supporting global connector standards (CHAdeMO, CCS1, CCS2 and GB/T); other common connector types will be supported in the future

+ User interface supports touch control, works with gloves and is designed to resist vandalism

+ Lightweight charging cords on swing arms increase reach and makes it simple to plug in with one hand

+ Integrated cord management keeps cords off the ground

Mobile and In-Dash Apps for Drivers

+ Real-time availability of stations on the network

+ Queuing for charging spots

+ Typical wait times help drivers determine the most convenient time to charge

+ Charging status updates by the second with configurable desired state of charge

Express Plus Station

Cord management keeps cords off the ground and makes it easy to reach car charging port in any location

10" LCD touch display shows pricing, energy usage and more

Cameras enable license plate detection for pre-authorization, occupancy detection and additional security

—chargepoin+

IN USE

DC FAST
EV CHARGING ONLY

60%

Charge On.

Dimensions of 2230 mm x 712 mm x 420 mm (7 ft 4 in x 2 ft 4 in x 1 ft 4 in)

20" LED display shows real-time availability, wait times, state of charge, station pricing and more

Each station can dispense a maximum of 400 kW

Supports CHAdeMO, CCS1, CCS2 and GB/T connectors; other common connector types will be supported in the future

Configurable with 1, 2 or 3 connectors per station

Power Cube

+ Dimensions of 1750 mm x 1750 mm x 1750 mm (5 ft 9 in x 5 ft 9 in x 5 ft 9 in)

+ Delivers up to 500 kW of power

+ Contains 16 power modules that provide 31.25 kW each

+ Supports cars with charging voltages up to 1000 V

+ Easy to scale and upgrade by adding more Power Modules and Cubes

+ Supports legacy and future vehicle batteries with voltages from 200 V to 1000 V

Power Module

+ Self-contained AC to DC power conversion system

+ Output range between 200 V and 1000 V DC

+ Delivers up to 31.25 kW at a max current of 78 A

+ Sealed units, easily installed in Power Cubes or Express Plus Stations in the field

Learn More

To learn more about ChargePoint Express Plus:

Visit chargepoint.com/express-plus

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