

ABB E-MOBILITY

Electric Vehicle Infrastructure

Global product portfolio



ABB is leading the e-mobility revolution by offering a complete solution to enhance your business: charging infrastructure for any location combined with connected services. ABB EV chargers work seamlessly with service and payment applications, and support all EV charging standards.

ABB is a global leader in power and automation technologies. Based in Zurich, Switzerland, the ABB Group of companies operates in roughly 100 countries and employs about 130,000 people.

Benefit from ABB's experience and expertise installing and servicing 6000+ DC fast chargers worldwide.

Global leader in EV charging infrastructure

Writing the future together

ABB has years of experience in designing, manufacturing, installing and maintaining electric vehicle charging infrastructure, including several nationwide charger networks

ABB EV infrastructure

ABB has been serving customers for over a century with reliable energy efficient solutions for utilities, industry, infrastructure and transport. Since 2010, ABB is leading the e-mobility revolution with charging infrastructure for any location combined with connected services.

Main features of all ABB chargers

ABB chargers are designed to be durable, reliable and easy to service. Main advantages include:

- Modular and redundant construction to ensure continuous operation
- Industry-grade components to ensure long lifetime and robust operation
- Future-proof, easily upgradable technology
- Remote maintenance and support for an effective, timely response to any irregularity
- Supports the open communication protocol OCPP
- Stainless steel powder coated cabinets for durability, even in cold or humid climates
- User centered design validated by user tests
- Remote charger's power management

ABB Ability™ Connected Services

ABB's Connected Services offering is based on a 24/7/365 monitored platform, which ensures the highest availability. A network operator can select from a modular offering supporting a smooth and seamless integration to back office processes via APIs, and giving access to value adding Web tools for configuration, advanced monitoring and notification.

Key advantages of connected chargers

ABB Ability Connected Services offer four key advantages:

- **Flexibility:** connect to any charging network, back office, payment platform or energy management solution
- **Upgradability:** benefit from the latest industry standards
- **High availability of the service:** based on Microsoft Azure's robust platform
- **Cost efficiency:** avoid development and maintenance costs of proprietary software solutions

Manufacturing and quality system

Key components in ABB DC fast chargers are designed and manufactured by ABB. This ensures full control over hardware and firmware. ABB chargers are manufactured in factories with strict quality systems in place. These factories undergo rigorous quality audits by independent external parties, as well as by automotive OEM clients.

Partnerships with automotive OEMs

ABB EVI has R&D partnerships with many automotive OEMs to support joint development and testing as well as to ensure optimal compatibility between DC fast charger and electric vehicle.

Supporting all EV charging standards

ABB supports all currently available open charging standards, which enables providing charging services to widely available electric vehicles. All chargers can be combined with comprehensive solutions for user authorization, payment and network connectivity.



The key elements

to run an EV charging operation

ABB provides all elements to run a successful charging operation.
One stop for hardware, software, connectivity and services.

DC fast chargers

Reliable, robust, modular hardware:

Products	
DC fast chargers for cars	• 350 kW High Power charging • 50 kW Fast charging • 24 kW DC wallbox
Heavy vehicle chargers for trucks and buses	• Opportunity charging from 150 kW to 600 kW • Depot/overnight charging from 50 kW to 150 kW

Payment and Authentication

Global platform to support local payment and authentication solutions:

- RFID
- Smart phone
- PIN code
- Credit card payment module

Service Level Agreements

Configure a service agreement to match the needs of your organization:

- Proactive monitoring and remote diagnosis
- Certified service teams
- Preventive and corrective maintenance
- Over-the-air software updates and upgrades
- Training programs
- Clear communication and overview via ABB Web tools

ABB Ability™ Connected Services

Integrate with back offices and added value systems:

Charger Connect	
Charger Connect	Giving access to the ABB Ability Connected Services platform.
APIs for back office integration	
Ocpp API	Connect to back office systems
Service API	Support your call center to help EV drivers
Basic Demand Response API	Manage input power of a charger
Web tools	
Browser based tools for real-time charger access	
Driver Care	Status, statistics, access management, etc.
Charger Care	Advanced trouble shooting and service tool
Payment	Configure and support payment terminals

Car charging infrastructure

Terra 53 series – 50 kW

ABB Terra 53 is the best-selling 50 kW DC charging station in Europe and North America. It complies with all relevant international standards, including the EMC Class B norm mandated for safe user operation on residential, office, retail and petrol station locations.

Main features and key benefits

- DC fast charger supporting 50 kW CCS and CHAdeMO, and 60 kW GB
- Designed to deliver full output power continuously
- Simultaneous AC charging via optional 22/43 kW cable or 22 kW socket
- IEC 61000 EMC Class B certified for industrial and residential areas (including petrol stations, retail outlets, offices, etc.)
- Future-proof connection via open industry standards:
 - Flexible interfacing with added value systems
 - Remote uptime monitoring and assistance
 - Remote updates and upgrades
- Easy to use:
 - Daylight readable touchscreen display
 - Graphic visualization of the charging progress
 - RFID/PIN/Remote authorization

Configurations

- European, US, and China versions available, for 400 V, 480 V and 380 V AC grid inputs
- Many combinations of the open protocols CCS, CHAdeMO, GB and AC charging
- 50 to 500 VDC, and up to 125 A output



— Terra 53 C3



— Terra 53 CT



— Terra 53 C3G
with optional
payment terminal



— Terra 53 C3
(USA)



— Terra 63 Z
(China)

Terra HP – 175 kW to 350 kW

Fast charging just got faster. High power for next gen EVs.

Several EV models with larger batteries and longer range are coming. Infrastructure needs are growing. More fast charging points with higher power demands will be needed for drivers to adopt the next generation of electric transportation. ABB has solutions today that will enable this future.

Main features and key benefits

- Ultra-high current of 375 A per individual power cabinet
- Dynamic DC functionality: 500 A per charge post, to charge multiple EVs simultaneously
- Wide voltage range: 150 – 920 V
- Modular system: 175 – 500 kW
- Suited for current and next generation EVs
- Supports CCS (500 A liquid-cooled cables), CHAdeMO (200 A) and GB (500 A) charging standards
- Flexible charge cables, advanced liquid-cooling system
- Robust, all-weather enclosure for indoor and outdoor use
- EU and US models available



DC Wallbox – 24 kW

A compact DC charger for car dealerships, offices, shopping areas and homes.

With EV battery capacity increasing, DC charging will emerge in more and more locations. ABB introduces a DC wallbox supporting public and private use.

Main features and key benefits

- 24 kW DC fast charging
- 60 A high output current
- Single or dual outlet: CCS and CHAdeMO
- 7" full color touchscreen display
- Future-proof connectivity
- Robust, all-weather enclosure for indoor and outdoor use
- EU models: 3 phase input
- US models: single phase input



Heavy vehicle charging infrastructure

Overnight charging for electric buses and trucks

Charge electric buses and trucks with a connector.



Increase efficiency and reduce costs with ABB's depot smart charging solution. This system allows up to three electric buses or trucks to be connected and charged sequentially while parked at the depot. The logic programmed into the depot feeding station "wakes up" each vehicle in turn for charging, and puts them back into "sleep mode" once the charge is complete.

Main features and key benefits

- Smart charging with up to three vehicles per charger
- Small infrastructure footprint
- Easy to upgrade power capacity on-site
- CCS protocol compliant
- Compatible with multiple vehicle brands and types
- OCPP compliant
- Remote management and support
- Safe and reliable connection
- EU and US models available



150 kW overnight charging system
with three depot charge boxes

Opportunity charging for electric buses

Charge electric buses in 3 to 6 minutes at endpoints.

ABB's opportunity charging solution allows electric buses to be quickly recharged at endpoints; thus enabling true zero-emission public transportation in cities. With its automated rooftop connection and typical charge time of 3 to 6 minutes, the system can easily be integrated in existing bus routes using the often existing lay over times at end points to charge the bus.

Main features and key benefits

- Charge electric buses in 3 to 6 minutes
- Easy integration into existing bus lines
- Automated 4-pole rooftop connection
- OCPP compliant for remote management
- Based on international IEC 61851-23 standard
- Compatible with multiple vehicle brands and types
- Safe and reliable connection
- Remote diagnosis and service
- EU and US models available



300 kW opportunity charging system

ABB Ability™ Connected Services

Enabling your charging operation

To successfully run a commercial charging network in a dynamic environment it is crucial to connect EV chargers to the Internet. Choosing ABB as supplier for charging infrastructure means having access to best-in-class connected services.

ABB Ability Connected Services incorporate many years of experience in connecting chargers to the Internet, and enable operators to:

- Remotely monitor and configure charge points
- Adapt business and pricing models over time
- Support drivers in case they have issues
- Service the equipment efficiently and with minimal operational effort
- Keep charging services up-to-date with software updates

Charger Connect

Charger Connect gives access to the ABB Ability Connected Services Platform. Connected chargers receive over-the-air software updates, and are activated in ABB Service Tools. The connection to the chargers and the platform is monitored 24/7/365 by the Network Operation Center (NOC). The platform is based on leading cloud technology with four redundantly operating server environments on two different geographical locations in Europe. It complies with the highest security standards.

APIs for back office integration

ABB offers standards based APIs supporting smooth integration with back office systems, energy management solutions, and payment services.

Available APIs:

- Open Charge Point Protocol (OCPP) API to integrate with back office systems
- Service API with technical status data from the charger for simpler remote diagnostics, helping to improve availability of a charger and to better support EV drivers
- Basic Demand/Response API to dynamically manage the input power of a charger

ABB APIs are based on OCPP – the industry-wide accepted communication protocol – and therefore ensure seamless integration to customers' back office systems. All ABB APIs have openly available specifications.

Web tools

ABB offers advanced Web tools to operate and monitor chargers. Web tools allow to see the real-time status of a charger, to configure settings related to authentication, notification and case management and to obtain valuable insights into usage statistics. For chargers equipped with a credit card payment terminal, a Web tool is available to configure the payment device including pricing per session, currency and language. All data is available directly via an Internet browser and can be exported for further processing.

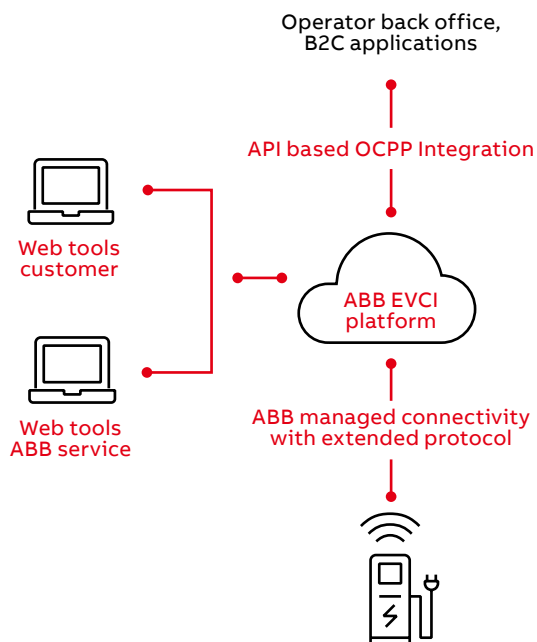


ABB Charger Care

Secure the availability, performance and safety of your EV chargers

Benefit from ABB's experience and expertise servicing 6000+ fast chargers world wide

ABB Charger Care

With an ABB Charger Care service agreement, the uptime of charger networks can be optimized and a fast remote and on-site response time can be guaranteed.

ABB Charger Care is available for all ABB EV charging products: Terra 23 and 53 fast chargers, Terra HP high-power chargers, HVC e-bus chargers, DC wallboxes, and AC chargers.

The ABB EVI Service team can tailor a Service Level Agreement (SLA) matching the wishes of the customer's organization. Several modules are available, including proactive monitoring, preventive and corrective maintenance, training programs, spare parts, and software updates and upgrades.

By connecting chargers, service solutions and people, ABB has been able to diagnose more than 90% of the service cases remotely, solving over 60% of these cases without any site intervention in the past two years. This results in significant savings on down-time, travelling, transportation, man-hours and resources.

Main features and key benefits

- Highest uptime and reliability by adequate preventive maintenance.
- Operational savings by remote monitoring, trouble shooting and repairs without site visit.
- Quick on-site repairs by remote diagnosis, modular design, and local spare parts availability.
- Repairs are exclusively performed by ABB certified personnel. This could be ABB's service organization, or the service organization selected by the customer after training and certification by ABB.
- Training modules are available for end-users, customer care personnel and service engineers. Trainings can be hosted at customer location on request.
- Clear communication and case tracking via ABB Web tools.
- Over-the-air software updates and upgrades will be installed on all chargers covered by an SLA.



—
For more information please contact:

ABB EV Infrastructure

Delftweg 65

2289 BA Rijswijk

The Netherlands

Phone: +31 70 307 6200

E-mail: info.evci@nl.abb.com

www.abb.com/evcharging