

vCharM

Enterprise-Grade Charging Station Management System

What is vCharM?

vCharM is a charging and load management back end. It is designed to operate many charge points at high availability. Once a charging station has been connected to vCharM, each charge point can be conveniently configured, monitored and controlled.

Various Use Cases

vCharM covers a variety of use cases in the E-Mobility Ecosystem. It can be applied to manage the charging stations of fleet depots, in building complexes, companies or shops. Moreover, vCharM provides numerous features tailored to charge point operators and charging station manufacturers. Thus, it can also be used for the installation and maintenance of charge points. To ensure a seamless operation, vCharM can either be used as a stand-alone software or integrated into present fleet or depot management systems.

The vCharM Core Suite provides all necessary features to get started and can steadily be extended with add-ons for your future needs. Features only relevant for e-bus depots are clustered in the E-Bus Suite.

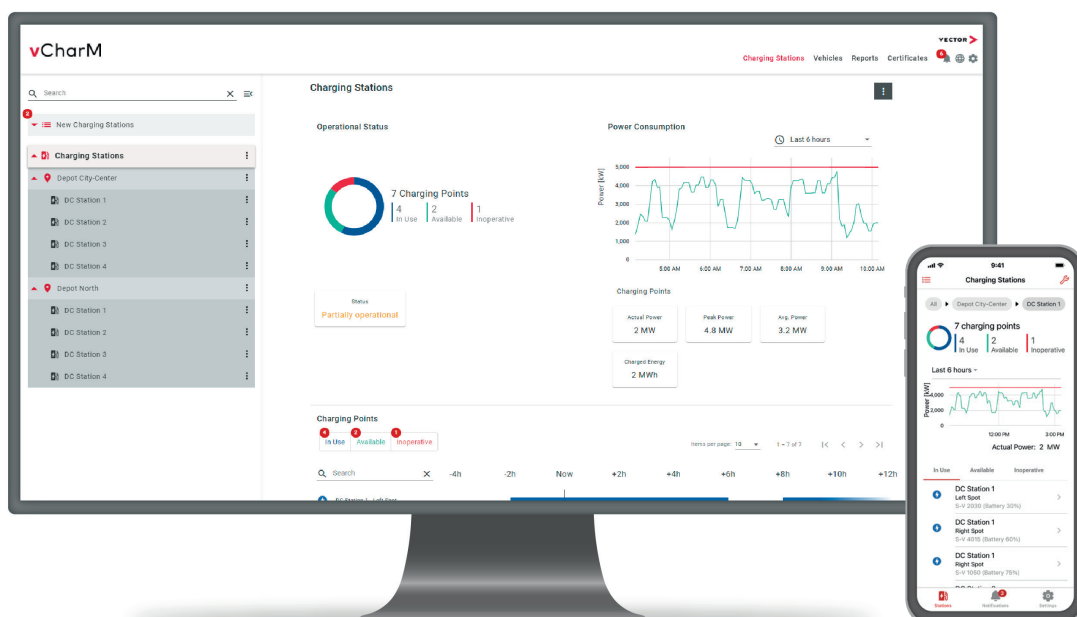
Overview of Advantages

- > Charging station manufacturer-independent solution using standardized communication protocols OCPP 1.6J, OCPP 2.0 and OCPP 2.0.1
- > Optimized for semi-public charge points e.g in fleet depots, building complexes, parking lots
- > Extend your charging infrastructure step-by-step without vendor lock-in
- > Optimized load management for vehicles with and without smart charging according to ISO 15118 and DIN 70121
- > Connection to fleet management systems for automated exchange of vehicle data
- > Vehicle authorization via RFID, PnC, Autocharge and other methods
- > Control of vehicle preconditioning via Value-Added-Service according to VDV 261

Hosting Variants

vCharM can be operated on a local hardware device and in the cloud. For cloud usage, the hardware device can establish an internet connection between the charging stations and the cloud.

More information: www.vector.com/vcharm



The browser-based frontend provides easy access to all information and controls required for the operation of electric vehicle fleets.

Core Suite

- > **Charging Station Administration**
Add, configure and monitor your charging stations via OCPP 1.6, 2.0 and 2.0.1.
- > **Charging Station Control**
Change the availability, restart the charging stations and update their firmware.
- > **Notifications**
React fast with notifications on events and failures. The event history provides detailed information.
- > **Vehicle Authorization**
Manage and verify vehicle authorization requests.
- > **Reporting**
Evaluate the usage of your charging infrastructure with comprehensive reports.
- > **Browser User Interface**
Keep track of your charging infrastructure via web browser.
- > **Role Management**
Grant different rights to specific user groups.
- > **Mobile App**
Stay informed anywhere thanks to our mobile app and push notifications.

E-Bus Suite

E-Bus specific features + Core Suite

- > **Depot Management Interface**
Automate the data exchange for departure times and other important planning data in your depot via VDV 463.
- > **Vehicle Preconditioning**
Monitor and control the vehicle preconditioning via VDV 261.
- > **Extended Reporting**
Provide the special report for German NOW (Minimaldatenset).

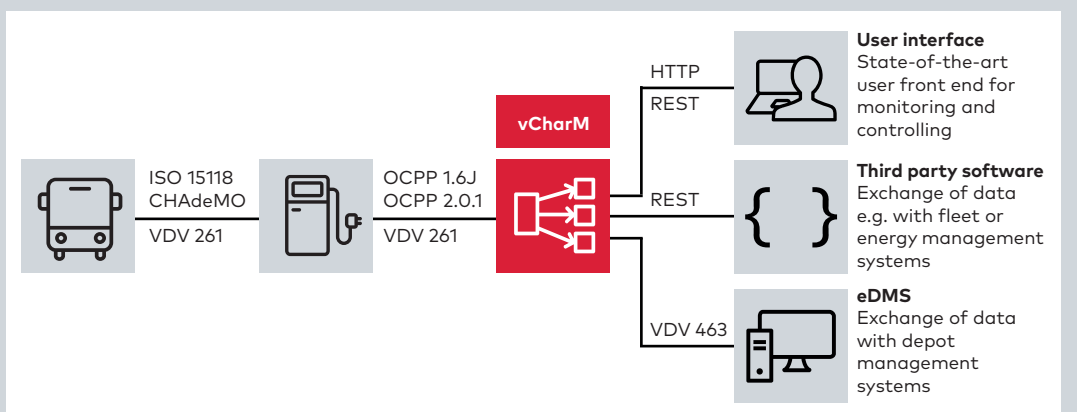
Add-ons

- vCharM grows with your needs!
Add more features whenever you need them.
- > **Load Management: Static/Dynamic**
Manage the maximum load statically or dynamically and benefit from a variety of charging strategies.
 - > **Expert Control**
Get access to expert functions such as device model editing, log file upload, security certificate management.
 - > **Clearing Interface**
Log billing-relevant data from charging sessions in a lawful manner (CDR) and exchange it with payment systems via OCPI.
 - > **Plug and Charge**
Authorize vehicles without driver interaction based on digital certificates.
 - > **Whitelabeling**
Adapt the look & feel to your corporate identity.
 - > **Multi-Client Management**
Manage all your customer sites together in one vCharM instance.
 - > **Data Interface**
Automate the data exchange e.g. for important planning data with other management systems.
 - > **VDV 261 Tester (E-Bus Suite only)**
Test the VDV 261 message exchange via fault-injection.

Supported Standards

- > OCPP 1.6J, OCPP 2.0 and OCPP 2.0.1
- > VAS/VDV 261
- > VDV 463
- > ISO 15118
- > DIN 70121
- > IEC 61851
- > IEC 63110 (planned)

The vCharM architecture provides a data interface for the integration into other management systems. The exchanged data can be used to optimize the charging sessions and business processes.



Glossary

API: Application programming interface
EMS: Energy Management System

OCPP: Open Charge Point Protocol
PnC: Plug & Charge
REST: Representational State Transfer

RFID: Radio-frequency identification
VAS: Value Added Services
VDV: Verband Deutscher Verkehrsunternehmen