

TECHNICAL PRODUCT FACT SHEET

ChargeSphere.OCPP

OCPP software component for charging-station and wallbox manufacturers

Clemios provides ChargeSphere.OCPP, an OCPP software component for manufacturers of charging stations and wallboxes. ChargeSphere.OCPP connects charging stations with backend systems and can be integrated into existing OEM architectures.

Product at a glance

OCPP VERSIONS

OCPP 2.0.1 and OCPP 2.1

FUNCTIONAL SCOPE

ChargeSphere.OCPP implements all standard-defined Functional Blocks of OCPP 2.0.1 and OCPP 2.1.

AVAILABILITY

The released functional scope of ChargeSphere.OCPP is commercially available.

ENGAGEMENT CONTEXT

Defined OEM integration projects

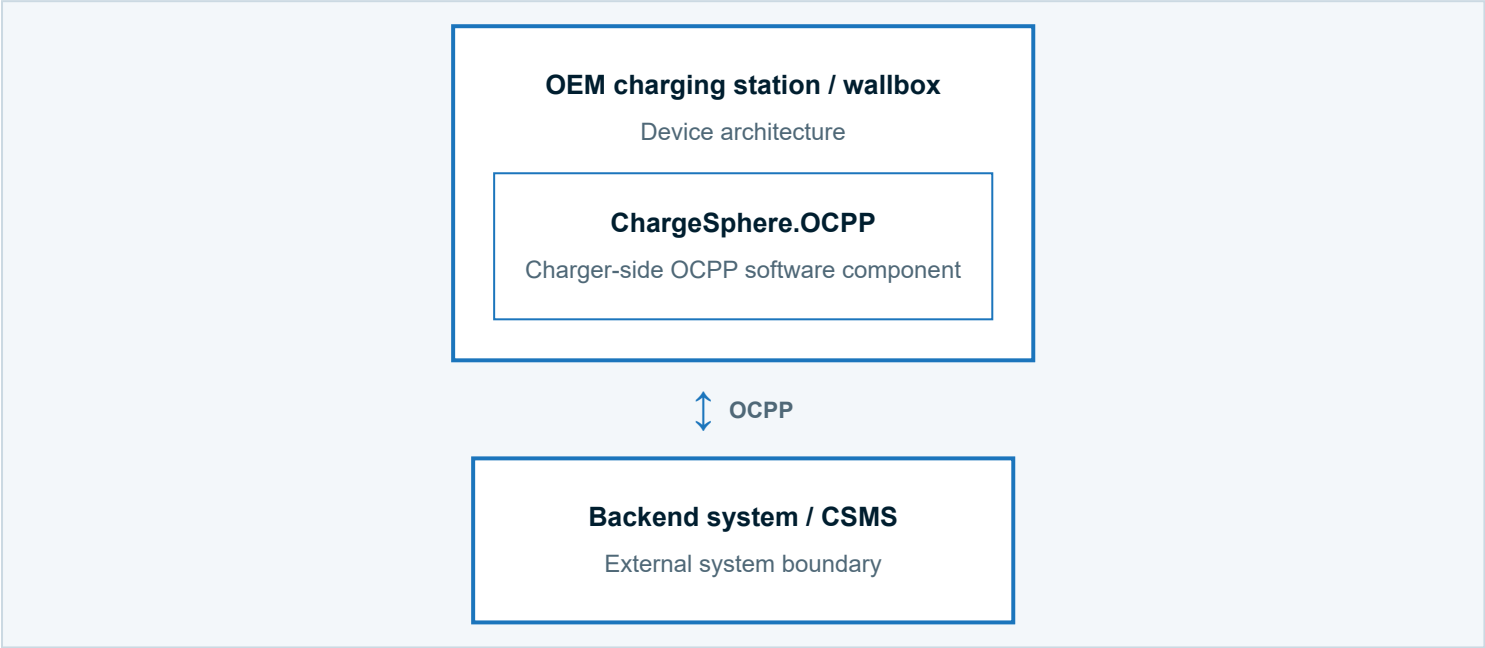
Certification status: ChargeSphere.OCPP is currently not formally OCPP-certified.

Request technical evaluation

<https://clemios.com/contact/>

System boundary and technical properties

ChargeSphere.OCPP is the charger-side OCPP software component and is integrated into the existing OEM target architecture.



Technical properties

- **Programming language:** C
- **C++ integration:** C++ wrapper available
- **Supported operating system:** Linux

Responsibility boundaries

- The backend system or CSMS is not part of the ChargeSphere.OCPP software component.
- Integration takes place within a defined OEM target architecture.
- Technical acceptance of the agreed operational scope is performed by the OEM.

Technical integration model

The integration model is defined for the agreed OEM target architecture. Technical evaluation establishes the relevant interfaces, dependencies, configuration assumptions, project-specific modifications, and validation activities for that scope.

OEM acceptance is not formal OCPP certification and not general production or series release by Clemios.

OCPP versions and functional blocks

ChargeSphere.OCPP implements all standard-defined Functional Blocks of OCPP 2.0.1 and OCPP 2.1.

OCPP 2.1 continues the 15 functional blocks from OCPP 2.0.1 and adds four new functional blocks. Existing functional areas may be extended or adapted in OCPP 2.1.

Tariff and Cost

Bidirectional Charging

DER Control

Battery Swapping

OCPP 2.0.1

A defined OCPP 2.0.1 functional scope for OEM integration projects is released for ChargeSphere.OCPP.

OCPP 2.1

A defined OCPP 2.1 functional scope for OEM integration projects is released for ChargeSphere.OCPP.

Implemented functional blocks by OCPP version

Block	Functional area	OCPP 2.0.1	OCPP 2.1
A	Security	Implemented	Implemented
B	Provisioning	Implemented	Implemented
C	Authorization	Implemented	Implemented
D	Local Authorization List Management	Implemented	Implemented
E	Transactions	Implemented	Implemented
F	Remote Control	Implemented	Implemented
G	Availability	Implemented	Implemented
H	Reservation	Implemented	Implemented
I	Tariff and Cost	Not part of OCPP 2.0.1	Implemented, new in OCPP 2.1
J	Meter Values	Implemented	Implemented
K	Smart Charging	Implemented	Implemented, expanded in OCPP 2.1
L	Firmware Management	Implemented	Implemented
M	ISO 15118 Certificate Management	Implemented	Implemented
N	Diagnostics	Implemented	Implemented
O	Display Message	Implemented	Implemented
P	Data Transfer	Implemented	Implemented
Q	Bidirectional Charging	Not part of OCPP 2.0.1	Implemented, new in OCPP 2.1
R	DER Control	Not part of OCPP 2.0.1	Implemented, new in OCPP 2.1
S	Battery Swapping	Not part of OCPP 2.0.1	Implemented, new in OCPP 2.1

Technical evaluation and OEM integration

The specific operational scope, interfaces, project-specific modifications, and known limitations are defined and documented for each OEM integration project.

- 1 Review target architecture and technical prerequisites
- 2 Define OCPP version and operational scope
- 3 Document interfaces and dependencies
- 4 Define project-specific modifications
- 5 Agree integration, testing, and validation activities
- 6 Document known limitations
- 7 Technical acceptance by the OEM

Evaluation outcome

Technical evaluation documents the agreed ChargeSphere.OCPP operational scope for the target architecture. Depending on the project agreement, this includes:

- Product and version scope
- Required interfaces
- Project-specific modifications
- Integration assumptions and dependencies
- Known limitations
- Agreed testing and validation activities
- Technical documentation for OEM assessment and acceptance

Validation and interoperability scope

Validation activities and any interoperability assessment are defined for the agreed project scope and documented with the applicable technical assumptions, environments, and known limitations. Technical validation is not equivalent to formal OCPP certification, complete conformance, or universal interoperability.

Request technical evaluation

Contact: <https://clemios.com/contact/>