OCPP 1.6
Full Certificate

OCPP 1.6
Fully Certified

Certificate holder:	Klinelex
Certificate number:	OCA.0016.0037.CSMS
Product type:	Charging Station Management System
Product designation:	Klinelex_K-Charger OCPP Software version: 1.0
Certification date:	November 30, 2021

This certificate attests that the above mentioned product successfully completed certification testing in conformance with the reference specification OCPP 1.6 – Edition 2 with OCPP 1.6 Errata sheet (v4.0 Release, 2019-10-23). The optional features of the protocol are also covered by this certification.

Test cases have been performed as described in the test report referred to below. The results and remarks can be found in the complete test report.

Applied tests	Performed by / on	Document evidence
Conformance testing according to the test specification referenced by the test report	*Korea Smart Grid Association,* November 30, 2021	*KSGA_20211130_Test Report_Klinelex_V104*

The abstract of test report in the Annex is an integral part of this certificate. This certificate is valid from the Certification Date specified above. This certificate is only applicable to the product designation described above and permits the use of the OCPP logo as laid down in the OCA certification logo license agreement on this product only.

This certificate shall neither be tendered nor accepted by any party as a guarantee covering quality of a product which includes OCPP. The Open Charge Alliance, and/or its agents, including, inter-alia, test laboratories, disclaim liability for any damages or losses incurred by the certified company or by any other party resulting from reliance on the results of OCPP certification testing.

For the Open Charge Alliance:

ONOPH CARON
Chairman

Abstract of test report

Test Result Summary

Test Report OCPP 1.6 Certification	
Test laboratory:	**Korea Smart Grid Association**
Location:	Seoul / Korea
Test Report Reference:	KSGA_20211130_Test Report_Klinelex_V104
Vendor name:	**Klinelex**
Device Under Test:	CSMS
Communication:	JSON
OCPP Software version:	1,0

Test Result Summary for the certified functionalities		
Functionalities	**OCPP 1.6 Certification Test Results**	**Description**
Core	Pass	Basic Charging Station functionality for booting, authorization (incl. cache if available), configuration, transactions, remote control.
Firmware Management	Pass	Support for (remote) firmware update management and diagnostic log file download.
Smart Charging	Pass	Support for Smart Charging (all profile types, including stacking), to control charging.
Reservation	Pass	Support for reservation of a connector of a Charging Station.
Local Authorization List Management	Pass	Features to manage a local list in the charging station containing authorization data for whitelisting users.
Remote Trigger	Pass	Support for remotely triggering messages that originate from a Charging Station. This can be used for resending messages or for getting the latest information from the Charging Station.

Performance Measurement Results

Performance Measurement Results			
Name	**PICS value**	**Measured value**	**Description**
OCPP response timeout:	5s	00:00:01	The response time for when waiting for an OCPP response message.
Response time Authorize:	5s	00:00:00	The response time for the Authorize message.

Test Configuration

Test Configuration	
Vendor	**Klinelex**
DUT / SUT	CSMS
Communication	JSON
OCPP Software version	1,0
OCTT version	OCTT 1.6 v1.4.2

All relevant limits and non-OCPP settings that are relevant for the test laboratory and for the correct functioning of the CSMS:	
Limit / setting	**Value**
Device supports sending milliseconds in timestamps:	Yes

Statement of Approval

Vendor		Date: 2021.11.30	
Name	Lee Hyo Young	Signature	
Company	Klinelex Co., Ltd.		
Department	Headquarters		
Position	CEO		
Location	Korea		

Test laboratory		Date: 2021.11.30	
Name	Philip YANG	Signature	
Company	Korea Smart Grid Association		
Department	Quality Certification Center		
Position	Senior Researcher		
Location	Seoul, Korea		