

# OCPP 1.6 Full Certificate



**Certificate holder:** Klinelex Co., Ltd  
**Certificate number:** OCA.0016.0376.CS  
**Product type:** Charging Station  
**Product designation:** KL10  
OCPP Software version: 1.0.0  
Hardware feature set as stated below  
**Certification date:** May 26, 2023

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
<i>Conformance testing according to the test specification referenced by the test report</i>	<i>Korea Smart Grid Association, May 26, 2023</i>	<i>(KSGA)Klinelex_Test Report template_KL10_230526</i>

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

A blue ink signature of Onoph Caron, Chairman of the Open Charge Alliance.

## 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-OCPP1.6TEST-094-2023	
Vendor name:	Klinelex Co., Ltd.	
Device Under Test:	Charging Station	
Communication:	JSON	
OCPP Software version:	1.0.0	
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.
Optional features		
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

Name	PICS value	Measured value	Description
OCPP triggered function timeout:	7s	00:00:06	The response time for when waiting for an OCPP function with its corresponding request message. (Firmware update, Diagnostics and Reboot are excluded from this measurement.)
OCPP response timeout:	5s	00:00:02	The response time for when waiting for an OCPP response message.
Response time RemoteStartTransaction:	5s	00:00:00	The response time for the RemoteStartTransaction message.

### Test Configuration

<b>Vendor</b>	Klinelex Co., Ltd.
<b>DUT / SUT</b>	Charging Station
<b>Communication</b>	JSON
<b>Type</b>	KL10
<b>OCPP Software version</b>	1.0.0
<b>OCTT version</b>	OCTT 1.6 v1.4.3

#### Hardware feature set

Feature	Configuration
Socket(s) / connector(s)	Single
Fixed cable	<Yes>
Communication technology	Ethernet, Mobile Network
RFID readers	Single

#### Non-OCPP Charge Point Configuration


Configuration key	Value
<>	<>


All other 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

OCPP Charging Station Configuration	
Configuration key	Value
AllowOfflineTxForUnknownId	FALSE
AuthorizationCacheEnabled	FALSE
AuthorizeRemoteTxRequests	TRUE
BlinkRepeat	1
ClockAlignedDataInterval	0
ConnectionTimeOut	180
ConnectorPhaseRotation	RST
ConnectorPhaseRotationMaxLength	2
GetConfigurationMaxKeys	10
HeartbeatInterval	60
LightIntensity	50
LocalAuthorizeOffline	FALSE
LocalPreAuthorize	FALSE
MaxEnergyOnInvalidId	0
MessageTimeout	-
MeterValuesAlignedData	-
MeterValuesAlignedDataMaxLength	10
MeterValuesSampledData	Energy.Active.Import.Register, Voltage.Current.Import, Power.Active.Import
MeterValuesSampledDataMaxLength	10
MeterValueSampleInterval	10
MinimumStatusDuration	0
NumberOfConnectors	1
ResetRetries	1
StopTransactionMaxMeterValues	100
StopTransactionOnEVSideDisconnect	TRUE
StopTransactionOnInvalidId	FALSE
StopTxnAlignedData	-
StopTxnAlignedDataMaxLength	10
StopTxnSampledData	-
StopTxnSampledDataMaxLength	10
SupportedFeatureProfiles	Core, FirmwareManagement, RemoteTrigger
SupportedFeatureProfilesMaxLength	6
TransactionMessageAttempts	2
TransactionMessageRetryInterval	90
UnlockConnectorOnEVSideDisconnect	TRUE
WebSocketPingInterval	60
LocalAuthListEnabled	FALSE
LocalAuthListMaxLength	50
SendLocalListMaxLength	50
ReserveConnectorZeroSupported	FALSE
ChargeProfileMaxStackLevel	30
ChargingScheduleAllowedChargingRateUnit	Ampère & Watt
ChargingScheduleMaxPeriods	10
ConnectorSwitch3to1PhaseSupported	FALSE
MaxChargingProfilesInstalled	10
SupportedFileTransferProtocols	http, ftp

Statement of Approval

Vendor		Date: 2023.05.26
Name	Lee Hyo Young	Signature 
Company	Klinelex Co., Ltd.	
Department	Headquarters	
Position	CEO	
Location	Gunpo, Korea	

Test laboratory		Date: 2023.05.26
Name	Philip YANG	Signature 
Company	Korea Smart Grid Association	
Department	Quality Certification Center	
Position	Chief Researcher	
Location	Seoul, Korea	