OCPP 1.6 Subset Certificate

Certificate holder:	**KERI** (Korea Electrotechnology Research Institute)
Certificate number:	OCA.0016.0089.CS
Product type:	Charging Station
Product subtype:	Mode 1/2-only Charging Station
Product designation:	KM12CP-001 OCPP Software version: 1.0 Hardware feature set as stated below
Certification date:	May 17, 2022

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 covered by this certificate can be found in the abstract of this certificate.

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*, May 17, 2022	*KSGA_20220517_Test Report _Mode 1,2-only CS_KERI*

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-OCPP1.6TEST-038-2022
Vendor name:	**KERI**
Device Under Test:	Mode 1/2-only Charging Station
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.
Optional features		
Firmware Management	Pass	Support for (remote) firmware update management and diagnostic log file download.
Smart Charging	N/A	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 Manageme	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 triggered function timeout:	60s	00:00:05	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:	60s	00:00:01	The response time for when waiting for an OCPP response message.
Response time RemoteStartTransaction:	60s	00:00:00	The response time for the RemoteStartTransaction message.

Test Configuration

Test Configuration	
Vendor	KERI
DUT / SUT	Mode 1/2-only Charging Station
Communication	JSON
Type	KM12CP-001
OCPP Software version	1,0
OCTT version	OCTT 1.6 v1.4.3

Hardware feature set	
Feature	Configuration
Socket(s) / connector(s)	Single
Fixed cable	<No>
Communication technology	Wifi
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	TRUE
AuthorizationCacheEnabled	TRUE
AuthorizeRemoteTxRequests	TRUE
BlinkRepeat	5
ClockAlignedDataInterval	0
ConnectionTimeOut	60
ConnectorPhaseRotation	RST
ConnectorPhaseRotationMaxLength	1
GetConfigurationMaxKeys	20
HeartbeatInterval	10
LightIntensity	10
LocalAuthorizeOffline	TRUE
LocalPreAuthorize	FALSE
MaxEnergyOnInvalidId	0
MessageTimeout	-
MeterValuesAlignedData	Energy.Active.Import.Register
MeterValuesAlignedDataMaxLength	10
MeterValuesSampledData	Energy.Active.Import.Register
MeterValuesSampledDataMaxLength	10
MeterValueSampleInterval	10
MinimumStatusDuration	0
NumberOfConnectors	1
ResetRetries	3
StopTransactionMaxMeterValues	-
StopTransactionOnEVSideDisconnect	TRUE
StopTransactionOnInvalidId	FALSE
StopTxnAlignedData	Energy.Active.Import.Register
StopTxnAlignedDataMaxLength	10
StopTxnSampledData	Energy.Active.Import.Register
StopTxnSampledDataMaxLength	10
SupportedFeatureProfiles	Core, LocalAuthListManagement, FirmwareManagement, Reservation, SmartCharging
SupportedFeatureProfilesMaxLength	10
TransactionMessageAttempts	3
TransactionMessageRetryInterval	60
UnlockConnectorOnEVSideDisconnect	FALSE
WebSocketPingInterval	0
LocalAuthListEnabled	FALSE
LocalAuthListMaxLength	1000000
SendLocalListMaxLength	45000
ReserveConnectorZeroSupported	TRUE
ChargeProfileMaxStackLevel	
ChargingScheduleAllowedChargingRateUnit	
ChargingScheduleMaxPeriods	
ConnectorSwitch3to1PhaseSupported	
MaxChargingProfilesInstalled	
SupportedFileTransferProtocols	http,https,ftp

Statement of Approval

Vendor		Date: 2022.04.05	
Name	Jae Jo Lee	Signature	
Company	KERI		
Department	Power ICT Research Center		
Position	Principal Researcher		
Location	Gyeonggi-do, Korea		

Test laboratory		Date: 2022.04.05	
Name	Philip YANG	Signature	
Company	Korea Smart Grid Association		
Department	Quality Certification Center		
Position	Senior Researcher		
Location	Seoul, Korea		