OCPP 1.6
Subset Certificate

Certificate holder:	ULVAC KOREA
Certificate number:	OCA.0016.0253.CS
Product type:	Charging Station
Product designation:	UK-QC100D-DC OCPP Software version: 1.0.3 Hardware feature set as stated below
Certification date:	December 6, 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*, December 6, 2022	*KSGA_20221206_Test Report ULVACKOREA_UK-QC100D-DC*

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-140-2022
Vendor name:	ULVAC KOREA
Device Under Test:	Charging Station
Communication:	JSON
OCPP Software version:	1.0.3

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	N/A	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	N/A	Support for reservation of a connector of a Charging Station.
Local Authorization List Manageme	N/A	Features to manage a local list in the charging station containing authorization data for whitelisting users.
Remote Trigger	N/A	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:	90s	00:01:20	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	00:00:01	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

Test Configuration	
Vendor	**ULVAC KOREA**
DUT / SUT	Charging Station
Communication	JSON
Type	UK-QC100D-DC
OCPP Software version	1.0.3
OCTT version	OCTT 1.6 v1.4.3

Hardware feature set	
Feature	**Configuration**
Socket(s) / connector(s)	Multiple
Fixed cable	<Yes>
Communication technology	Ethernet
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	-
ClockAlignedDataInterval	15
ConnectionTimeOut	60
ConnectorPhaseRotation	NotApplicable
ConnectorPhaseRotationMaxLength	-
GetConfigurationMaxKeys	20
HeartbeatInterval	30
LightIntensity	-
LocalAuthorizeOffline	TRUE
LocalPreAuthorize	TRUE
MaxEnergyOnInvalidId	-
MessageTimeout	-
MeterValuesAlignedData	Energy.Active.Import.Register
MeterValuesAlignedDataMaxLength	
MeterValuesSampledData	Energy.Active.Import.Register
MeterValuesSampledDataMaxLength	
MeterValueSampleInterval	15
MinimumStatusDuration	-
NumberOfConnectors	2
ResetRetries	3
StopTransactionMaxMeterValues	
StopTransactionOnEVSideDisconnect	FALSE
StopTransactionOnInvalidId	TRUE
StopTxnAlignedData	-
StopTxnAlignedDataMaxLength	
StopTxnSampledData	-
StopTxnSampledDataMaxLength	
SupportedFeatureProfiles	Core
SupportedFeatureProfilesMaxLength	-
TransactionMessageAttempts	3
TransactionMessageRetryInterval	10
UnlockConnectorOnEVSideDisconnect	FALSE
WebSocketPingInterval	60
LocalAuthListEnabled	-
LocalAuthListMaxLength	-
SendLocalListMaxLength	-
ReserveConnectorZeroSupported	-
ChargeProfileMaxStackLevel	-
ChargingScheduleAllowedChargingRateUnit	-
ChargingScheduleMaxPeriods	-
ConnectorSwitch3to1PhaseSupported	-
MaxChargingProfilesInstalled	-
SupportedFileTransferProtocols	-

Statement of Approval

Vendor			Date: 2022.12.06
Name	Pilhong PARK		Signature
Company	ULVAC KOREA		
Department	Components Division		
Position	Senior Engineer		
Location	Pyeongtaek, Korea		

Test laboratory			Date: 2022.12.06
Name	Philip YANG		Signature
Company	Korea Smart Grid Association		
Department	Quality Certification Center		
Position	Senior Researcher		
Location	Seoul, Korea		