OCPP 1.6
Full Certificate

OCPP 1.6
Fully Certified

Certificate holder:	SK ELECTLINK. Co., LTD.
Certificate number:	OCA.0016.0541.CS
Product type:	Charging Station
Product designation:	SKEL-2304-40501 OCPP Software version: 1.0.0 Hardware feature set as stated below
Certification date:	October 17, 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
Conformance testing according to the test specification referenced by the test report	*Korea Smart Grid Association,* October 17, 2023	*(KSGA)SK Electlink_Test Report template_SKEL-2304-40501_231017*

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

<table>
<tr><td colspan="2">Test Report OCPP 1.6 Certification</td></tr>
<tr><td>Test laboratory:</td><td>Korea Smart Grid Association</td></tr>
<tr><td>Location:</td><td>Seoul, Korea</td></tr>
<tr><td>Test execution location:</td><td>SK Electlink Co., Ltd(Seongnam, Korea)</td></tr>
<tr><td>Test Report Reference:</td><td>KSGA-OCPP1.6TEST-190-2023</td></tr>
<tr><td>Vendor name:</td><td>SK Electlink Co., Ltd</td></tr>
<tr><td>Device Under Test:</td><td>Charging Station</td></tr>
<tr><td>Communication:</td><td>JSON</td></tr>
<tr><td>OCPP Software version:</td><td>1.0.0</td></tr>
<tr><td>Product designation:</td><td>SKEL-2304-40501</td></tr>
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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 Managemer	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:	60s	00:00:27	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:	10s	00:00:04	The response time for when waiting for an OCPP response message.
Response time RemoteStartTransaction:	10s	00:00:01	The response time for the RemoteStartTransaction message.

Test Configuration

Vendor	SK Electlink Co., Ltd
DUT / SUT	Charge Point
Communication	JSON
Type	SKEL-2304-40501
OCPP Software version	1.0.0
OCTT version	OCTT 1.6 v1.4.3

Hardware feature set	
Feature	Configuration
Socket(s) / connector(s)	Single
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	FALSE
AuthorizationCacheEnabled	TRUE
AuthorizeRemoteTxRequests	TRUE
BlinkRepeat	60
ClockAlignedDataInterval	60
ConnectionTimeOut	60
ConnectorPhaseRotation	-
ConnectorPhaseRotationMaxLength	-
GetConfigurationMaxKeys	20
HeartbeatInterval	60
LightIntensity	60
LocalAuthorizeOffline	TRUE
LocalPreAuthorize	FALSE
MaxEnergyOnInvalidId	60
MessageTimeout	-
MeterValuesAlignedData	-
MeterValuesAlignedDataMaxLength	20
MeterValuesSampledData	-
MeterValuesSampledDataMaxLength	20
MeterValueSampleInterval	60
MinimumStatusDuration	60
NumberOfConnectors	1
ResetRetries	0
StopTransactionMaxMeterValues	150
StopTransactionOnEVSideDisconnect	TRUE
StopTransactionOnInvalidId	FALSE
StopTxnAlignedData	-
StopTxnAlignedDataMaxLength	20
StopTxnSampledData	-
StopTxnSampledDataMaxLength	20
SupportedFeatureProfiles	Core,FirmwareManagement,LocalAuthListManagement,Reservation,SmartCharging,RemoteTrigger
SupportedFeatureProfilesMaxLength	-
TransactionMessageAttempts	0
TransactionMessageRetryInterval	60
UnlockConnectorOnEVSideDisconnect	FALSE
WebSocketPingInterval	60
LocalAuthListEnabled	FALSE
LocalAuthListMaxLength	60
SendLocalListMaxLength	60
ReserveConnectorZeroSupported	TRUE
ChargeProfileMaxStackLevel	60
ChargingScheduleAllowedChargingRateUnit	Ampere,Watt
ChargingScheduleMaxPeriods	60
ConnectorSwitch3to1PhaseSupported	FALSE
MaxChargingProfilesInstalled	60
SupportedFileTransferProtocols	ftp

Statement of Approval

Vendor		Date: 2023.10.17
Name	Dongil Kwon	Signature
Company	SK Electlink Co., Ltd	
Department	EV. Charger Development Manager	
Position	Professional Manager	
Location	Seoul, Korea	

Test laboratory		Date: 2023.10.17
Name	Philip YANG	Signature
Company	Korea Smart Grid Association	
Department	Quality Certification Center	
Position	Chief Researcher	
Location	Seoul, Korea	