OCPP 1.6
Full Certificate

OCPP 1.6 Fully Certified

Certificate holder:	Koolsign Co., Ltd.
Certificate number:	OCA.0016.0760.CS
Product type:	Charging Station
Product designation:	KCD100P-C27L5G OCPP Software version: v1.1.0 Hardware feature set as stated below
Certification date:	May 14, 2024

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 Testing Certification institute,* May 14, 2024	*KTC2024-00354_Test report*

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 Testing Certification institute**
Location:	Gyeonggi-do Korea
Test execution location:	Gyeonggi-do Korea
Test Report Reference:	KTC2024-00354
Vendor name:	**Koolsign Co., Ltd**
Device Under Test:	Charging Station
Communication:	JSON
OCPP Software version:	v1.1.0
Product designation:	KCD100P-C27L5G

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:	30 s	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:	30 s	00:00:05	The response time for when waiting for an OCPP response message.
Response time RemoteStartTransaction:	10 s	00:00:00	The response time for the RemoteStartTransaction message.

Test Configuration

Vendor	Koolsign Co., Ltd
DUT / SUT	Charge Point
Communication	JSON
Type	KCD100P-C27L5G
OCPP Software version	v1.1.0
OCTT version	OCTT 1.6 v1.4.4

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	FALSE
AuthorizationCacheEnabled	FALSE
AuthorizeRemoteTxRequests	TRUE
BlinkRepeat	3
ClockAlignedDataInterval	0
ConnectionTimeOut	60
ConnectorPhaseRotation	Unknown
ConnectorPhaseRotationMaxLength	0
GetConfigurationMaxKeys	10
HeartbeatInterval	30
LightIntensity	80
LocalAuthorizeOffline	FALSE
LocalPreAuthorize	FALSE
MaxEnergyOnInvalidId	0
MessageTimeout	-
MeterValuesAlignedData	Energy.Active.Import.Register,Current.Export,Temperature
MeterValuesAlignedDataMaxLength	5
MeterValuesSampledData	Energy.Active.Import.Register,Temperature
MeterValuesSampledDataMaxLength	10
MeterValueSampleInterval	10
MinimumStatusDuration	0
NumberOfConnectors	2
ResetRetries	3
StopTransactionMaxMeterValues	-
StopTransactionOnEVSideDisconnect	TRUE
StopTransactionOnInvalidId	TRUE
StopTxnAlignedData	Sample.Periodic
StopTxnAlignedDataMaxLength	5
StopTxnSampledData	Energy.Active.Import.Register,Current.Export,Temperature
StopTxnSampledDataMaxLength	5
SupportedFeatureProfiles	Core,LocalAuthListManagement,Reservation,RemoteTrigger,SmartCharging
SupportedFeatureProfilesMaxLength	0
TransactionMessageAttempts	3
TransactionMessageRetryInterval	60
UnlockConnectorOnEVSideDisconnect	FALSE
WebSocketPingInterval	30
LocalAuthListEnabled	FALSE
LocalAuthListMaxLength	10
SendLocalListMaxLength	10
ReserveConnectorZeroSupported	TRUE
ChargeProfileMaxStackLevel	3
ChargingScheduleAllowedChargingRateUnit	Power
ChargingScheduleMaxPeriods	0
ConnectorSwitch3to1PhaseSupported	FALSE
MaxChargingProfilesInstalled	5
SupportedFileTransferProtocols	HTTP,HTTPS,FTP,SFTP

Statement of Approval

Vendor		Date: 2024-05-14
Name	Inseok Seo	Signature
Company	Koolsign Co., Ltd	
Department	Software Development	
Position	Principal Research engineer	
Location	Seoul, Korea	

Test laboratory		Date: 2024-05-14
Name	Sol Cho	Signature
Company	Korea Testing Certification institute	
Department	EV Charging & Power Transfer Center	
Position	Research engineer	
Location	Gyeonggi-do, Korea	