OCPP 1.6 Subset Certificate

Certificate holder:	Blue Networks Co. Ltd.
Certificate number:	OCA.0016.0607.CS
Product type:	Charging Station
Product designation:	ECU-040S1
	OCPP Software version: ECU-040S1-BLE001
	Hardware feature set as stated below
Certification date:	December 21, 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 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 21, 2023	*(KSGA)Blue Networks_Test Report_ECU-040S1_v1.5*

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 execution location:	Cheonan, Korea (Blue Networks Co. Ltd.)
Test Report Reference:	KSGA-OCPP1.6TEST-237-2023
Vendor name:	**Blue Networks Co. Ltd.**
Device Under Test:	Charging Station
Communication:	JSON
OCPP Software version:	ECU-040S1-BLE001
Product designation:	ECU-040S1

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 Management	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.

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Performance Measurement Results

Name	PICS value	Measured value	Description
OCPP triggered function timeout:	60s	00:00:54	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:	30s	00:00:06	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

Vendor	Blue Networks Co. Ltd.
DUT / SUT	Charging Station
Communication	JSON
Type	ECU-040S1
OCPP Software version	ECU-040S1-BLE001
OCTT version	OCTT 1.6 v1.4.3
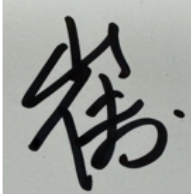
Hardware feature set	
Feature	Configuration
Socket(s) / connector(s)	Single
Fixed cable	<Yes>
Communication technology	Ethernet
RFID readers	Single

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	-
AuthorizationCacheEnabled	-
AuthorizeRemoteTxRequests	TRUE
BlinkRepeat	-
ClockAlignedDataInterval	0
ConnectionTimeOut	30
ConnectorPhaseRotation	-
ConnectorPhaseRotationMaxLength	-
GetConfigurationMaxKeys	1
HeartbeatInterval	60
LightIntensity	-
LocalAuthorizeOffline	FALSE
LocalPreAuthorize	FALSE
MaxEnergyOnInvalidId	-
MessageTimeout	-
MeterValuesAlignedData	Energy.Active.Import.Register
MeterValuesAlignedDataMaxLength	1
MeterValuesSampledData	Energy.Active.Import.Register
MeterValuesSampledDataMaxLength	1
MeterValueSampleInterval	15
MinimumStatusDuration	30
NumberOfConnectors	1
ResetRetries	1
StopTransactionMaxMeterValues	1
StopTransactionOnEVSideDisconnect	TRUE
StopTransactionOnInvalidId	FALSE
StopTxnAlignedData	Energy.Active.Import.Register
StopTxnAlignedDataMaxLength	1
StopTxnSampledData	Energy.Active.Import.Register
StopTxnSampledDataMaxLength	1
SupportedFeatureProfiles	Core
SupportedFeatureProfilesMaxLength	-
TransactionMessageAttempts	1
TransactionMessageRetryInterval	1
UnlockConnectorOnEVSideDisconnect	FALSE
WebSocketPingInterval	55
LocalAuthListEnabled	-
LocalAuthListMaxLength	-
SendLocalListMaxLength	-
ReserveConnectorZeroSupported	-
ChargeProfileMaxStackLevel	-
ChargingScheduleAllowedChargingRateUnit	-
ChargingScheduleMaxPeriods	-
ConnectorSwitch3to1PhaseSupported	-
MaxChargingProfilesInstalled	-
SupportedFileTransferProtocols	-

Statement of Approval

Vendor			Date: 2023.12.21
Name	Choi, Jaehoon		Signature
Company	Blue Networks Co. Ltd.		
Department	R&D Team		
Position	Director		
Location	Seoul, Korea		

Test laboratory			Date: 2023.12.21
Name	Philip YANG		Signature
Company	Korea Smart Grid Association		
Department	Quality Certification Center		
Position	Chief Researcher		
Location	Seoul, Korea		