



Certificate Holder: I-Charge Solutions International Co. Ltd.
Certificate Number: OCA.0201.0015.CSMS
Product Type: Charging Station Management System
Product Designation: ICS CSMS20
OCPP Software Version: 1.0
Certification Date: January 18, 2024

This certificate attests that the above mentioned product successfully completed certification testing in conformance with the reference specification OCPP 2.0.1 (Edition 2 FINAL, 2022-12-15 including Errata 2023-12). The optional OCPP protocol features that are covered by this certificate can be found in the Abstract of the Test Report that is part 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 this complete test report.

Applied	Performed by / On	Document Evidence
Conformance testing according to the test specification referenced by the test report	DNV Singapore Pte. Ltd. / January 5, 2024	OCPP 2.0.1 PICS CSMS-I-charge-v1.1.0_signed

The abstract of test report 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 the Test Report

Test Report OCPP 2.0.1 Certification

Test laboratory:	DNV Singapore Pte. Ltd.
Location:	Singapore
Test Report Reference:	DNV-OCPP201-00003
Product Designation:	ICS CSMS20
Vendor name:	I-Charge Solutions International Co. Ltd.
Device Under Test:	Charging Station Management System
OCPP Software Version	1.0

Test Result Summary for the Certified Functionalities

Certification Profile	Test Result	Description
Core	Pass	Basic Charging Station functionality for booting, authorization, configuration, transactions, remote control, including basic security.
Advanced Security	Pass	Support for TLS with client authentication.
Local Authorization List Management	Not Tested	Support for local authorization list management and optionally of an authorization cache.
Smart Charging	Not Tested	Support for Smart Charging, to control charging.
Advanced Device Management	Not Tested	Support for the OCPP Device Model and advanced logging and monitoring.
Reservation	Not Tested	Support for reservation of a connector of a Charging Station.
Advanced User Interface	Not Tested	Support for tariff & cost and DisplayMessage functionality.
ISO 15118 Support	Not Tested	Support for ISO 15118 Smart Charging and Plug and Charge authorization.

Optional Features

Core

Id	Core Features	Supported / Present
C-11	Support for unlocking connector for charging station with detachable cable.	Yes
C-13	Support for Reset per EVSE	Yes
C-14	Support for retrieving / deleting CustomerInformation - CustomerIdentifier	Yes
C-15	Support for scheduled firmware updates	Yes
C-16	Support for checking the TransactionStatus	Yes
C-17	Support for retrieving the ConfigurationInventory	Yes
C-29	TriggerMessage	Select all supported suboptions
C-29.1	Trigger message - MeterValues	Yes
C-29.2	Trigger message - TransactionEvent	Yes
C-29.3	Trigger message - LogStatusNotification	Yes
C-29.4	Trigger message - FirmwareStatusNotification	No
C-29.5	Trigger message - StatusNotification	Yes

Id	Authorization Options for Local Start	Tested During Certification
C-30	Authorization - using RFID ISO14443	Yes
C-31	Authorization - using RFID ISO15693	Yes
C-32	Authorization - using KeyCode	No
C-33	Authorization - using locally generated id	Yes
C-34	Authorization - MacAddress	No
C-35	Authorization - NoAuthorization	Yes

Id	Authorization Options for Remote Start	Tested During Certification
C-36	Authorization - using RFID ISO14443	Yes
C-37	Authorization - using RFID ISO15693	Yes
C-38	Authorization - using centrally, in the CSMS generated id	Yes
C-39	Authorization - NoAuthorization	Yes

Id	Core Features	Supported / Present
C-44	Support for sending a BootNotification Pending before Accepting	No
C-45	Support for Multiple elements GetVariablesRequest	Yes
C-46	Support for Multiple elements SetVariablesRequest	Yes
C-50	GetBaseReport - FullInventory	
C-50.1	GetBaseReport - FullInventory - During onboarding	Yes
C-50.2	GetBaseReport - FullInventory - Manual trigger	Yes

Additional Questions

Id	Additional Questions for Lab Testing:	Supported / Present
AQ-1	Can your CSMS be configured to first respond to a BootNotificationRequest with status Pending or Rejected?	No
AQ-2	Is a FullInventory requested during onboarding / booting test cases?	No
AQ-6	Does the CSMS reject unknown Charging Stations during websocket connection setup?	Yes

Performance Measurement Result

Name	Max Value	Unit	Description
OCPP response time	10	seconds	The response time for when waiting for an OCPP response message after sending an OCPP request message. This entails all OCPP messages, excluding Authorize. Messages to the DUT can be handled within this timeout.
Response time Authorize	1	seconds	The response time for the Authorize message.

Name	Min Value	Max Value	Average Value	Unit
OCPP response time	0.26	1.29	0.29	seconds
Response time Authorize	0.27	0.38	0.28	seconds

Communication technology used during performance measurement:	Ethernet
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Statement of Approval

Vendor		
Name	Clement Chan	Date: 18-01-2024
Company	I-Charge Solutions International Co. Ltd.	Signature:
Department	Research and Development	
Position	Manager	
Location	Hong Kong	

Test laboratory		
Name	Sukoco	Date: 18-01-2024
Company	DNV Singapore Pte. Ltd.	Signature:
Department	Energy System	
Position	Senior Consultant	
Location	Singapore	