



Certificate Holder: NongHyup Agribusiness Group Inc.
Certificate Number: OCA.0016.1003.CSMS
Product Type: Charging Station Management System
Product Designation: NHCharge CSMS 1.6
OCPP Software Version: 1.6.01
Certification Date: February 11, 2025

This certificate attests that the above mentioned product successfully completed certification testing in conformance with the reference specification OCPP 1.6 (Edition 2 FINAL, 2017-09-28 including Errata v4.0 Release, 2019-10-23) and Security Whitepaper Edition 3 (Improved security for OCPP 1.6-J v1.3, 2022-02-17). 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	Korea Smart Grid Association February 11, 2025	NongHyup_PICS 1.6 CSMS_v1.0.1

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 1.6 Certification

Test laboratory:	Korea Smart Grid Association
Location:	Seoul, Korea
Test Report Reference:	KSGA-OCPP1.6TEST-005-2025
Product Designation:	NHCharge CSMS 1.6
Vendor name:	NongHyup Agribusiness Group Inc.
Device Under Test:	Charging Station Management System
OCPP Software Version	1.6.01

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.
Firmware Management	Pass	Support for firmware update management and diagnostic log file download.
Local Authorization List Management	Pass	Features to manage a local list in the charging station containing authorization data for whitelisting users.
Smart Charging	Pass	Support for Smart Charging, to control charging.
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.
Reservation	Pass	Support for reservation of a connector of a Charging Station.

Certification Extension	Test Result	Description
Security extension	Pass	Implementation of the whitepaper: Improved security for OCPP 1.6-J



Security Extension

ID	Security Extension	Supported / Present
SEC-1	Security Profile 1: Unsecured Transport with Basic Authentication	Yes
SEC-2	Security Profile 2: TLS with Basic Authentication	Yes
SEC-3	Security Profile 3: TLS with Client Side Certificates	No

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



Performance Measurement Result

Name	Max Value	Unit	Description
OCPP response time	5	seconds	The timeout used for exchanging OCPP response messages. Messages to the DUT can be handled within this timeout.
Response time Authorize	5	seconds	The response time for the Authorize message.

Name	Min Value	Max Value	Average Value	Unit
OCPP response time	0.27	0.37	0.28	seconds
Response time Authorize	0.27	0.30	0.28	seconds

Communication technology used during performance measurement:	Ethernet
---	----------



Statement of Approval

Vendor		
Name	JeongHyeon Park	Date: 2025-02-11
Company	NongHyup Agribusiness Group Inc.	Signature:
Department	New&Renewable Energy Center	
Position	Assistant	
Location	Seoul, Korea	

Test Laboratory		
Name	Philip YANG	Date: 2025-02-11
Name reviewer	Joe Lee	Signature:
Company	Korea Smart Grid Association	
Department	Quality Certification Center	
Position	Chief Researcher	
Location	Seoul, Korea	