



Certificate Holder: LUOYANG GRASEN POWER TECHNOLOGY CO., LTD.
Certificate Number: OCA.0016.0850.CSMS
Product Type: Charging Station Management System
Product Designation: GRASEN CSMS
OCPP Software Version: v1.0.0
Certification Date: September 11, 2024

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	DNV Singapore Pte. Ltd. August 12, 2024	DNV_OCPP1.6 PICS_CSMS_Grasen_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 1.6 Certification

Test laboratory:	DNV Singapore Pte. Ltd.
Location:	Singapore
Test Report Reference:	DNV_OCPP 1.6 TEST_CSMS_Grasen
Product Designation:	GRASEN CSMS
Vendor name:	LUOYANG GRASEN POWER TECHNOLOGY CO., LTD.
Device Under Test:	Charging Station Management System
OCPP Software Version	v1.0.0

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.
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	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



Performance Measurement Result

Name	Max Value	Unit	Description
OCPP response time	20	seconds	The timeout used for exchanging OCPP response messages. Messages to the DUT can be handled within this timeout.
Response time Authorize	10	seconds	The response time for the Authorize message.

Name	Min Value	Max Value	Average Value	Unit
OCPP response time	0.03	0.11	0.05	seconds
Response time Authorize	0.03	0.08	0.05	seconds

Communication technology used during performance measurement:	Ethernet
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Statement of Approval

Vendor		
Name	Jie Zhang	Date: 2024-09-11
Company	LUOYANG GRASEN POWER TECHNOLOGY CO., LTD.	Signature:
Department	Research and Development Department (R&D)	
Position	R&D Director	
Location	Wending Science and Technology Park, No. 1 Chuncheng Road, Luoyang Area (High-tech), China (Henan) Pilot Free Trade Zone, 471000	

Test Laboratory		
Name	Liu Xinyang	Date: 2024-09-11
Company	DNV Singapore Pte. Ltd.	Signature:
Department	Energy Systems	
Position	Consultant	
Location	Singapore	