OCPP 2.0.1 CORE CERTIFIED

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|---|---|
| **Certificate Holder:** | **Noodoe Inc.** |
| **Certificate Number:** | **OCA.0201.0024.CSMS** |
| **Product Type:** | **Charging Station Management System** |
| **Product Designation:** | **Noodoe EV OS** |
| **OCPP Software Version:** | **v2.0** |
| **Certification Date:** | **May 16, 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 2024-02). 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. March 28, 2024 | Noodoe_OCPP-2.0.1-PICS-CSMS-v1.2 |

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-Noodoe |

| Product Designation: | Noodoe EV OS |
|---|---|
| Vendor name: | Noodoe Inc. |
| Device Under Test: | Charging Station Management System |
| OCPP Software Version | v2.0 |

## 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 | Yes |
| 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 | Yes |
| 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 | No |
| 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? | Yes |
| 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 | 10 | seconds | The response time for the Authorize message. |

| Name | Min Value | Max Value | Average Value | Unit |
|---|---|---|---|---|
| OCPP response time | 0.12 | 0.18 | 0.13 | seconds |
| Response time Authorize | 0.12 | 0.14 | 0.12 | seconds |

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

## Statement of Approval

| Vendor | | |
|---|---|---|
| Name | Will Chiang | Date: 16-05-2024 |
| Company | Noodoe Inc. | Signature: |
| Department | Product Management |  |
| Position | Product Manager | |
| Location | 2600 Technology Drive, Suite 100,<br>Plano, Texas | |

| Test Laboratory | | |
|---|---|---|
| Name | Sukoco | Date: 16-05-2024 |
| Company | DNV Singapore Pte. Ltd. | Signature: |
| Department | Energy System |  |
| Position | Senior Consultant | |
| Location | Singapore | |