OCPP 1.6 CORE CERTIFIED

Certificate Holder:	**Zhuhai Sino Energy Technology Co., Ltd.**
Certificate Number:	**OCA.0016.1310.CS**
Product Type:	**Charging Station**
Product Designation:	**PEVC3107E-60K1000D2/CCS2+CCS2**
Firmware Version:	**V4.03**
Certification Date:	**October 21, 2026**

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 2025-04) and Security Whitepaper Edition 4 (Improved security for OCPP 1.6-J v1.4, 2026-02-05). 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. October 21, 2026	PRJ_10584026_SINO_DC_4

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:	DNV Lab, Singapore, Singapore
Test Report Reference:	PRJ_10584026_SINO_DC_4
Test Location	Singapore

Product Designation:	PEVC3107E-60K1000D2/CCS2+CCS2
Vendor name:	Zhuhai Sino Energy Technology Co., Ltd.
Device Under Test:	Charging Station
Firmware Version:	V4.03
Config ID:	F4847A2E-2B0596D6

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, secure firmware updates and Security Profile 2.
Advanced Security	Pass	Support for TLS with client authentication.
Smart Charging	Pass	Support for Smart Charging, to control charging.

Hardware Feature Set

The Hardware Feature set is the actual set of relevant hardware properties of the product tested, that influence the OCPP messaging behavior. In the table below you can see for each hardware feature relevant for OCPP whether this is applicable for this product.

ID	Feature	Supported / Present
HFS-1	Has a detachable cable	No
HFS-2	Has a fixed cable	Yes
HFS-3	Has AC support	No
HFS-4	Has DC support	Yes
HFS-5	Has 1 phase support	No
HFS-6	Has 2 phase support	No
HFS-7	Has 3 phase support	No
HFS-8	No. Connectors	2
HFS-9	Communication technology	Ethernet, Mobile network
HFS-10	RFID readers	Single
HFS-11	DC power level	60

Connector	Current	Phases	Type	Cable Type
1	DC		cCCS2	Fixed Cable
2	DC		cCCS2	Fixed Cable



Optional Features

The OCPP specification contains many implementation options that can be selected by a vendor, often in the form of optional message fields or configuration variables, that can be used to support advanced functions. Whereas the certification profiles determine which OCPP functionality is implemented, the features describe how much of a certain functionality in a profile has been implemented. The tables below indicate per certification profiles, for each available optional feature within this profile, whether this has been implemented in this product and tested for conformance or not.

Core		
ID	**Core Features**	**Supported / Present**
C-01	Support for offline authorization of transactions	Yes
C-02	Support for allowing Offline Authorization for Unknown Ids	Yes
C-03	Support for maximizing energy for invalid ids	No
C-04	Authorization Cache	Yes
C-05	Support to limit StatusNotifications	No
C-06	Authorization status after cable disconnected on EV side	
C-06.1	Support for maintaining authorization when cable disconnected on EV side	No
C-06.2	Support for not maintaining authorization when cable disconnected on EV side	Yes
C-07	Support for local start	Yes
C-08	Support for local stop	Yes
C-10	Unlocking of connector when cable disconnected on EV side	
C-10.1	Support for unlocking connector when cable disconnected on EV side	No
C-10.2	Support for not unlocking when cable disconnected on EV side	Yes
C-11	Support for Security Profile 1: Unsecured Transport with Basic Authentication	Yes

ID	Metervalues	Tested During Certification	Supported According to Vendor
C-09	Supported MeterValue Measurands		

ID	Metervalues	Tested During Certification	Supported According to Vendor
C-09.1	MeterValuesSampled Data	Energy.Active.Import.Register Current.Import Power.Active.Import SoC Power.Offered Voltage	Voltage Current.Import Energy.Active.Import.Register SoC Power.Active.Import Power.Offered
C-09.2	MeterValuesAligned Data	Energy.Active.Import.Register	Voltage Current.Import Energy.Active.Import.Register SoC Power.Active.Import Power.Offered

ID	Cipher Suites	Supported / Present
C-12	Supported Cipher Suites	TLS_RSA_WITH_AES_128_GCM_SHA256 TLS_RSA_WITH_AES_256_GCM_SHA384

ID	Local Authorization List Management	Supported / Present
LA-0	Support for Local Authorization List Management	Yes

ID	Remote Trigger	Supported / Present
RT-0	Support for Remote Trigger	Yes

ID	Reservations	Supported / Present
R-0	Support for Reservations	Yes
R-1	Support reservations of entire Charging Station	Yes

Smart Charging

ID	Certification Profile: Smart Charging	Supported / Present
SC-1	Supported charging rate units	
SC-1.1	A	Yes
SC-1.2	W	Yes

Additional Questions

The table below lists a number of questions that are needed for determining the complete list of conformance test for this product.

ID	Additional Questions for Lab Testing	Answer
AQ-1	Can the last CentralSystemRootCertificate can be removed?	Yes
AQ-2	Does the Charging Station have a cable lock, which prevents the EV driver to connect the EV and EVSE before authorization?	No
AQ-3	Can the last ChargePointCertificate be removed?	No
AQ-4	Is your Charging Station able to download firmware while there is an ongoing transaction?	No
AQ-5	Does your Charging Station enforce a selection of EVSE prior to authorization?	Yes
AQ-6	Does your Charging Station support charging an EV using IEC 61851-1?	No
AQ-7	Reporting of StopTransaction after power loss	
AQ-7.1	Charge Point configured to report StopTransaction before going down.	No
AQ-7.2	Charge Point configured to report StopTransaction after going down and being back online again.	Yes
AQ-9	Does your Charging Station have at least one connector with an mechanized locking mechanism on Charging Station side?	No
AQ-11	Does your Charging Station support an authorization method, that does not rely on the communication between EV and Charging Station?	Yes
AQ-12	Does your charging Station either have a physical or on screen button to stop an ongoing transaction AND is this the only local method to do so?	No

Other Relevant Settings

The table below lists a number of settings that are needed for configuring the test setup for the conformance test for this product.

ID	Limit / Setting	Value
ORS-1	GetConfigurationMaxKeys	70
ORS-2	MeterValuesAlignedDataMaxLength	20
ORS-3	MeterValuesSampledDataMaxLength	20
ORS-4	Minimum MeterValueSampleInterval supported	5
ORS-5	Maximum MeterValueSampleInterval supported	900
ORS-6	Minimum HeartbeatInterval supported	10
ORS-7	Maximum HeartbeatInterval supported	7200
ORS-9	StopTxnAlignedDataMaxLength	21
ORS-10	StopTxnSampledDataMaxLength	21
ORS-11	WebSocketPingInterval	30
ORS-12	LocalAuthListMaxLength	10
ORS-13	SendLocalListMaxLength	10

ID	Certification Profile: Smart Charging	Value
ORS-14	ChargingProfileMaxStackLevel	20
ORS-15	ChargingScheduleMaxPeriods	12
ORS-19	MaxChargingProfilesInstalled	3

ID	Firmware Management Settings	Value
ORS-16	Supported file transfer protocols	FTP

Performance Measurement Result

The tables below shows the list of key performance indicators that are measured during the conformance test. The first table indicates the values that the vendor indicates that are valid maximum values for this product. The second table lists the actual performance measurements during the tests performed in a controlled environment.

Name	Max Value	Unit	Description
OCPP response timeout	5	seconds	The timeout used for exchanging OCPP response messages. Messages to the DUT can be handled within this timeout.
OCPP triggered function timeout	5	seconds	The timeout used for when waiting for an OCPP function with its corresponding request message. Messages to the DUT can be handled within this timeout. This value excludes firmware, diagnostics and rebooting
Transaction authorization time by RemoteStartTransaction	5	seconds	The time between the RemoteStartTransaction.req message and the corresponding StartTransaction.req. Only cases where the RemoteStartTransaction immediately results in an authorization followed by a StartTransaction.req are included.
Transaction authorization end time by RemoteStopTransaction	20	seconds	The time between the RemoteStopTransaction.req message and the corresponding StopTransaction.req. Only cases where the RemoteStopTransaction immediately results in an end of the authorization followed by a StopTransaction.req are included.

Name	Min Value	Max Value	Average Value	Unit
OCPP response timeout	0.19	0.50	0.30	seconds
OCPP triggered function timeout	0.30	0.59	0.43	seconds
Transaction authorization time by RemoteStartTransaction	4.66	4.66	4.66	seconds
Transaction authorization end time by RemoteStopTransaction	3.26	3.53	3.46	seconds

Communication technology used during performance measurement	Ethernet

Statement of Approval

Vendor		
Name	Wei Qiang	Date: 2026-10-21
Company	Zhuhai Sino Energy Technology Co., Ltd.	Signature:
Department	R&D Department	
Position	R&D Director	
Location	Zhuhai, China	

Test Laboratory		
Name	Sean Ooi	Date: 2026-10-21
Name reviewer	Huang Qilin	Signature:
Company	DNV Singapore Pte. Ltd.	
Department	Energy Systems	
Position	Consultant	
Location	DNV Lab, Singapore, Singapore	

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