Certificate Holder: Autel Digital Power Co., Ltd.

Certificate Number: OCA.0016.1089.CS

Product Type: Charging Station

Product Designation: MaxiCharger DH480

Firmware Version: PFD0004 V1.01.28|V1.01.18|V3.01.44

Certification Date: July 29, 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 2025-04). 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. July 15, 2025	PRJ_10487145_072025_N +1_1_with_result

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:	PRJ_10487145_072025_N+1
Product Designation:	**MaxiCharger DH480**
Vendor name:	Autel Digital Power Co., Ltd.
Device Under Test:	Charging Station
Firmware Version:	PFD0004 V1.01.28|V1.01.18|V3.01.44
Config ID:	28D257C0-BB4E7FE

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.
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

Authenticity of this certificate can be verified at   www.openchargealliance.org

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	WiFi, Ethernet, Mobile Network
HFS-10	RFID readers	One per EVSE
HFS-11	DC power level	480

Connector	Current	Phases	Type	Cable Type
1	DC		cCCS1	Fixed Cable
2	DC		cCCS1	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

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

ID	Metervalues	Tested During Certification	Supported According to Vendor
C-O9.1	MeterValuesSampled Data	SoC Voltage Current.Import Power.Offered Current.Offered Power.Active.Import Energy.Active.Import.Register	Energy.Active.Import.Register Voltage Power.Offered Current.Import Power.Active.Import, SoC, Current.Offered
C-O9.2	MeterValuesAligned Data	SoC Voltage Current.Import Power.Offered Current.Offered Power.Active.Import Energy.Active.Import.Register	Energy.Active.Import.Register Voltage Power.Offered Current.Import Power.Active.Import, SoC, Current.Offered

Smart Charging

ID	Certification Profile: Smart Charging	Supported / Present
SC-1	Supported charging rate units	
SC-1.1	A	No
SC-1.2	W	Yes

Reservation

ID	Certification Profile: Reservation	Supported / Present
R-1	Support reservations of entire Charging Station	No

Firmware Management

ID	Certification Profile: Firmware Management	Supported / Present
F-1	Support for Secure Firmware Updates	Yes

Security

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

Security Cipher Suites

ID	Security Extension : Cipher Suites	Supported / Present
SEC-4	Supported Cipher Suites	TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256,TLS_ECDHE_ECDSA_WITH_AES_256_GCM_SHA384

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?	No
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?	No
AQ-6	Does your Charging Station support charging an EV using IEC 61851-1?	Yes
AQ-7	Reporting of StopTransaction after power loss	

ID	Additional Questions for Lab Testing	Answer
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

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	73
ORS-4	Minimum MeterValueSampleInterval supported	1
ORS-5	Maximum MeterValueSampleInterval supported	3600
ORS-6	Minimum HeartbeatInterval supported	1
ORS-7	Maximum HeartbeatInterval supported	7200
ORS-11	WebSocketPingInterval	15

ID	Certification Profile: Local Authorization List Management	Value
ORS-12	LocalAuthListMaxLength	50
ORS-13	SendLocalListMaxLength	50

ID	Certification Profile: Smart Charging	Value
ORS-14	ChargingProfileMaxStackLevel	20
ORS-15	ChargingScheduleMaxPeriods	48
ORS-19	MaxChargingProfilesInstalled	100

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

ID	Security Extension	Value
ORS-17	CertificateSignedMaxChainSize	10000
ORS-18	CertificateStoreMaxLength	4

Additional Network Communication Ports

Description	Protocol	Network Port	Direction	Secured
Remote management and maintenance	Autel Charger Maintenance Protocol	443	Outbound	Yes
Connect to Energy Managerment system	Modbus Over TCP	502	Inbound	Yes
Protocol for Autel O&M	MQTT	8883	Outbound	Yes

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	18	seconds	The timeout used for exchanging OCPP response messages. Messages to the DUT can be handled within this timeout.
OCPP triggered function timeout	10	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	40	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	10	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	0.18	17.40	0.38	seconds
OCPP triggered function timeout	0.46	0.97	0.66	seconds
Transaction authorization time by RemoteStartTransaction	39.02	39.02	39.02	seconds
Transaction authorization end time by RemoteStopTransaction	7.27	7.27	7.27	seconds

Communication technology used during performance measurement	WiFi

Statement of Approval

Vendor

Name	Jia Peixian	Date: 2025-07-29
Company	Autel Digital Power Co., Ltd.	Signature:
Department	Controller Development	
Position	Software Engineer	
Location	Shenzhen, China	

Test Laboratory

Name	Huang Qilin	Date: 2025-07-29
Company	DNV Singapore Pte. Ltd.	Signature:
Department	Energy Systems	
Position	Consultant	
Location	Singapore	

OCTT Version	Release_2025-06
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