# OCPP 1.6 Subset Certificate



Certificate holder: HUMAX EV

Certificate number: OCA.0016.0422.CS

Product type: Charging Station

Product designation: HEV-Q2100

OCPP Software version: 02.00.01

Hardware feature set as stated below

Certification date: June 29, 2023

This certificate attests that the above mentioned product successfully completed certification testing in conformance with the reference specification OCPP 1.6 - Edition 2 with OCPP 1.6 Errata sheet (v4.0 Release, 2019-10-23). The optional features of the protocol covered by this certificate can be found in the abstract 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 the complete test report.

| Applied tests   | Performed by / on                                 | Document evidence                                      |
|---|---|--|
| Conformance testing according to the test specification referenced by the test report | Korea Smart Grid<br>Association,<br>June 29, 2023 | (KSGA)HUMAXEV_Test Report<br>template_HEV-Q2050_230710 |

The abstract of test report in the Annex 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 test report

Test Result Summary

| Test Report                        | OCDD 16                      | Certification                            |  |
|------------------------------------|------------------------------|--|--|
| rest Report                        |                              |  |  |
| Test laboratory:                   | Korea Smart Grid Association |  |  |
| Location:                          | Seoul , Korea                |  |  |
| Test Report Reference:             | KSGA-OCPP1.6TEST-115-2023    |  |  |
| Vendor name:                       | HUMAX EV                     |  |  |
| Device Under Test:                 | Charging Stat                | ion                                      |  |
| Communication:                     | JSON                         |  |  |
| OCPP Software version:             | 02.00.01                     |  |  |
| Test Result Summary                | for the ce                   | ertified functionalities                 |  |
| Functionalities                    | OCPP 1.6                     | Description                              |  |
|                                    | Certification                |  |  |
|                                    | Test Results                 |  |  |
| Core                               | Pass                         | Basic Charging Station functionality for |  |
|                                    |                              | booting, authorization (incl. cache if   |  |
|                                    |                              | available), configuration, transactions, |  |
|                                    |                              | remote control.                          |  |
|                                    |                              |  |  |
| Optional features                  |                              |  |  |
| Firmware Management                | N/A                          | Support for (remote) firmware update     |  |
|                                    |                              | management and diagnostic log file       |  |
|                                    |                              | download.                                |  |
| Smart Charging                     | N/A                          | Support for Smart Charging (all profile  |  |
|                                    |                              | types, including stacking), to control   |  |
|                                    |                              | charging.                                |  |
| Reservation                        | N/A                          | Support for reservation of a connector   |  |
|                                    |                              | of a Charging Station.                   |  |
|                                    |                              |  |  |
| Local Authorization List Managemen | N/A                          | Features to manage a local list in the   |  |
|                                    |                              | charging station containing              |  |
|                                    |                              | authorization data for whitelisting      |  |
|                                    |                              | users.                                   |  |
| Remote Trigger                     | N/A                          | 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.                                 |  |

Page 1 from 4



#### Performance Measurement Results

| Name                                     | PICS value | Measured value | Description   |
|--|------------|----------------|---|
| OCPP triggered function timeout:         | 10s        | 00:00:05       | The response time for when waiting for an OCPP function with its corresponding request message. (Firmware update, Diagnostics and Reboot are excluded from this measurement.) |
| OCPP response timeout:                   | 10s        | 00:00:06       | The response time for when waiting for an OCPP response message.  |
| Response time<br>RemoteStartTransaction: | 10s        | 00:00:00       | The response time for the RemoteStartTransaction message.   |

### Test Configuration

| Vendor                | HUMAX EV         |
|-----------------------|------------------|
| DUT / SUT             | Charging Station |
| Communication         | JSON             |
| Туре                  | HEV-Q2100        |
| OCPP Software version | 02.00.01         |
| OCTT version          | OCTT 1.6 v1.4.3  |

| Hardware feature set     |                          |  |  |
|--------------------------|--------------------------|--|--|
| Feature                  | Configuration            |  |  |
| Socket(s) / connector(s) | Multiple                 |  |  |
| Fixed cable              | <yes></yes>              |  |  |
| Communication technology | Ethernet, Mobile network |  |  |
| RFID readers             | Single                   |  |  |

| Non-OCPP Charge Point Configuration |       |  |  |
|-------------------------------------|-------|--|--|
| Configuration key                   | Value |  |  |
| <>                                  | <>    |  |  |
|                                     |       |  |  |

| All other relevant limits and non-OCPP settings that are relevant for the test laboratory and for the correct functioning of the CSMS: |       |  |
|--|-------|--|
| Limit / setting  | Value |  |
| Device supports sending milliseconds in timestamps.  | Yes   |  |
|  |       |  |



| OCPP Charging Station Configuration     |                                   |  |  |
|---|-----------------------------------|--|--|
| Configuration key                       | Value                             |  |  |
| AllowOfflineTxForUnknownId              | -                                 |  |  |
| AuthorizationCacheEnabled               | _                                 |  |  |
| AuthorizeRemoteTxRequests               | TRUE                              |  |  |
| BlinkRepeat                             | 3                                 |  |  |
| ClockAlignedDataInterval                | 0                                 |  |  |
| ConnectionTimeOut                       | 3000                              |  |  |
| ConnectorPhaseRotation                  | -                                 |  |  |
| ConnectorPhaseRotationMaxLength         | 5                                 |  |  |
| GetConfigurationMaxKeys                 | 20                                |  |  |
| HeartbeatInterval                       | 20                                |  |  |
| LightIntensity                          | 100                               |  |  |
| LocalAuthorizeOffline                   | TRUE                              |  |  |
| LocalPreAuthorize                       | FALSE                             |  |  |
| MaxEnergyOnInvalidId                    | 1000                              |  |  |
| MessageTimeout                          | -                                 |  |  |
| MeterValuesAlignedData                  | Energy, Active, Import, Register  |  |  |
| MeterValuesAlignedDataMaxLength         | n Chergy: Active:Import: Negister |  |  |
| MeterValuesSampledData                  | Power. Active. Import             |  |  |
| MeterValuesSampledDataMaxLength         | 1                                 |  |  |
| MeterValueSampleInterval                | 10                                |  |  |
| MinimumStatusDuration                   | 0                                 |  |  |
| NumberOfConnectors                      | 2                                 |  |  |
| ResetRetries                            | 1                                 |  |  |
|   | ·                                 |  |  |
| StopTransactionMaxMeterValues           | 20                                |  |  |
| StopTransactionOnEVSideDisconnect       | TRUE                              |  |  |
| StopTransactionOnInvalidId              | TRUE                              |  |  |
| StopTxnAlignedData                      | -                                 |  |  |
| StopTxnAlignedDataMaxLength             | Faces Assis Incom Decises Face    |  |  |
| StopTxnSampledData                      | Energy.Active.Import.Register,Fee |  |  |
| StopTxnSampledDataMaxLength             | 1                                 |  |  |
| SupportedFeatureProfiles                | Core                              |  |  |
| SupportedFeatureProfilesMaxLength       | 5                                 |  |  |
| TransactionMessageAttempts              | 3                                 |  |  |
| TransactionMessageRetryInterval         | 15                                |  |  |
| UnlockConnectorOnEVSideDisconnect       | FALSE                             |  |  |
| WebSocketPingInterval                   | 300                               |  |  |
| LocalAuthListEnabled                    | -                                 |  |  |
| LocalAuthListMaxLength                  | -                                 |  |  |
| SendLocalListMaxLength                  | -                                 |  |  |
| ReserveConnectorZeroSupported           | -                                 |  |  |
| ChargeProfileMaxStackLevel              | -                                 |  |  |
| ChargingScheduleAllowedChargingRateUnit | -                                 |  |  |
| ChargingScheduleMaxPeriods              | -                                 |  |  |
| ConnectorSwitch3to1PhaseSupported       | -                                 |  |  |
| MaxChargingProfilesInstalled            | -                                 |  |  |
| SupportedFileTransferProtocols          | -                                 |  |  |



#### Statement of Approval

| Vendor     |               | Date: 2023.06.29 |
|------------|---------------|------------------|
| Name       | JO IL HO      | Signature        |
| Company    | HUMAX EV      | 10               |
| Department | SW Team1      | 2012             |
| Position   | Team leader   | 14               |
| Location   | Gyungi, Korea |                  |

| Test laboratory |                              | <b>Date</b> : 2023.06.29 |
|-----------------|------------------------------|--------------------------|
| Name            | Philip YANG                  | Signature                |
| Company         | Korea Smart Grid Association | la                       |
| Department      | Quality Certification Center |                          |
| Position        | Chief Researcher             |                          |
| Location        | Seoul, Korea                 |                          |