

IEC 61850 Certificate Level A¹

Page 1/2
No. 25-000681-01-1

Issued to:
HANSHIN ELECTRIC Co., Ltd.
42, Sanbon-ro 48beon-gil,
Gunpo-si, Gyeonggi-do,
Republic of Korea, 15846

For the server product:
SA Local Information processing Device(SA-LID)
HS-LID
Software Version 1.0
HW : ADVANTECH ECU-4784-BTO
OS : Windows Server 2019
S/N : HS24-LID-002

Issued by: **Korea Testing Laboratory**

**The server product has not been shown to be non-conforming to:
IEC 61850 Edition 2 Parts 6, 7-1, 7-2, 7-3, 7-4 and 8-1
Communication networks and systems for power utility automation**

The conformance test has been performed according to IEC 61850-10 Edition 2, the UCA International Users Group Edition 2 Server Test Procedures version 2.0.6 with product's protocol, model and technical issue implementation conformance statements: "HANSHIN_HS-LID_Ed.2.0_PICS_v.1.0", "HANSHIN_HS-LID_Ed.2.0_MICS_v.1.0", "HANSHIN_HS-LID_Ed.2.0_TICS_v.1.0" and the extra information for testing: "HANSHIN_HS-LID_Ed.2.0_PIXIT_v.1.0".

The following IEC 61850 conformance blocks have been tested with a positive result (number of relevant and executed test cases / total number of test):

| | | | |
|----|------------------------------|-----|------------------------------|
| 1 | Basic Exchange (24/26) | 9b | GOOSE Subscribe (20/21) |
| 2 | Data Sets (7/7) | 12a | Direct Control (7/18) |
| 2+ | Data Set Definition (24/24) | 12d | Enhanced SBO Control (15/28) |
| 5 | Unbuffered Reporting (23/23) | 13 | Time Sync (4/7) |
| 6 | Buffered Reporting (33/33) | 14 | File Transfer (8/8) |
| 9a | GOOSE Publish (13/13) | 15 | Service Tracking (4/17) |

This Certificate includes a summary of the test results as carried out at Korea Testing Laboratory in Republic of Korea with IEC 61850 Ed2 KTL Testing Tool 1.0 with test suite IEC 61850 Ed2 Server Conformance Test V.1.0 and IEC 61850 Ed2 KTL Trace Manager V.1.0. This document has been issued for information purposes only, and the original paper copy of the KTL report: No. TR-25-000681-01-1 will prevail.

The test has been carried out on one single specimen of the product as referred above and submitted to KTL by HANSHIN ELECTRIC Co., Ltd. The manufacturer's production process has not been assessed. This certificate does not imply that KTL has certified or approved any product other than the specimen tested.

Seoul, March, 17, 2025

A. Han

Ah Han
Principal Engineer
IT Convergence Technology Center

윤영광

YoungKwang Yun
Assistant Research Engineer
IT Convergence Technology Center

1 Level A - Independent Test lab with accredited ISO/IEC 17025 Quality System

Applicable Test Procedures from the UCA International Users Group Edition 2 Server Device Test Procedures version 2.0.6

| Conformance Block | Mandatory | Conditional |
|---------------------------|--|--|
| 1: Basic Exchange | sAss1, sAss2, sAss3, sAss4, sAssN2, sAssN3, sAssN4, sAssN5, sSrv1, sSrv2, sSrv3, sSrv4, sSrv5, sSrv8, sSrvN1abcdef, sSrvN4 | sAssN6, sSrv6, sSrv9, sSrv10, sSrv12, sSrvN1e, sSrvN2, sSrvN3 |
| 2: Data Sets | sDs1, sDs10a, sDsN1ae | sDs10b, sDs15, sDsN1b, sDsN13 |
| 2+: Data Set Definition | sDs2, sDs3, sDs4, sDs5, sDs6, sDs7, sDs8, sDs9, sDs13, sDs14, sDsN1cd, sDsN2, sDsN3, sDsN4, sDsN5, sDsN6, sDsN7, sDsN8, sDsN9, sDsN10 | sDs11, sDs12, sDsN11, sDsN12 |
| 5: Unbuffered Reporting | sRp1, sRp2, sRp3, sRp4, sRp5, sRp9, sRp14, sRp16, sRpN1, sRpN2, sRpN3, sRpN4, sRpN8 | sRp6, sRp7, sRp8, sRp10, sRp11, sRp12, sRp13, sRp15, sRp17, sRpN5 |
| 6: Buffered Reporting | sBr1, sBr2, sBr3, sBr4, sBr5, sBr9, sBr14, sBr16, sBr20, sBr21, sBr22, sBr25, sBr26, sBr27, sBr28, sBr29, sBrN1, sBrN2, sBrN3, sBrN4, sBrN5, sBrN8 | sBr6, sBr7, sBr8, sBr10, sBr11, sBr12, sBr13, sBr15, sBr17, sBr23, sBr24 |
| 9a: GOOSE Publish | sGop2a, sGop3, sGop4, sGop9, sGop10, sGop11, sGop12 | sGop1, sGop2b, sGop5, sGop6, sGopN1, sGopN2 |
| 9b: GOOSE Subscribe | sGos1, sGos2, sGos3, sGos5, sGos6a, sGos7, sGos8, sGos9, sGos10, sGos11, sGos12, sGos23, sGosN1, sGosN2, sGosN3, sGosN4, sGosN5, sGosN6 | sGos4, sGos6b |
| 12a: Direct Control | sCtl5, sCtl10, sDOs1, sDOs2 | sCtl7, sCtl15, sCtl16 |
| 12d: Enhanced SBO Control | sCtl5, sCtl8, sCtl9, sCtl10, sCtl11, sCtl25, sSBOes1, sSBOes2, sSBOes6, sSBOes8 | sCtl4, sCtl6, sCtl7, sCtl15, sCtl16 |
| 13: Time Sync | sTm1, sTm2, sTmN1 | sTmN2 |
| 14: File Transfer | sFt1, sFt2ab, sFt4, sFt5, sFtN1ab | sFt2c, sFt3, sFtN1c |
| 15: Service Tracking | | sTrk1, sTrk2, sTrk8, sTrk9 |