IEC 61850 Certificate Level A[1]

No. 24TC200133

Issued to:
DAEWOONG ELECTRIC Co, Ltd.
Hwanggeumro 127beon-gil 10, Yangchon-eup,
Gimpo-si, Gyeonggi-do, 10048,
Republic of Korea

For the server product:
SA-ICD (Substation Automation Information Connecting Device)
Model: SPiN-CNAS
Software version: 1.0.0
HW: SPiN-SC2
OS: Windows Server 2019 Standard
S/N: DWE-SNGW2301

Issued by:
Korea Electrotechnology Research Institute
111, Hanggaul-ro, Sangrok-gu, Ansan-si, Gyeonggi-do, 15588, Republic of Korea

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: "Protocol Implementation Conformance Statement for the IEC 61850 interface in <<SPiN-CNAS_PICS v.1.1>>", "Model Implementation Conformance Statement for the IEC 61850 interface in <<SPiN-CNAS_MICS v.1.1>>", "TISSUES Implementation Conformance Statement for the IEC 61850 interface in <<SPiN-CNAS_TICS v.1.1>>" and product's extra information for testing: "Protocol Implementation eXtra Information for Testing for the IEC 61850 interface in <<SPiN-CNAS_PIXIT v.1.1>>".

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 (23/26)	12a Direct Control (8/18)
2 Data Sets (4/7)	12b SBO Control (15/27)
2+ Data Set Definition (24/24)	12c Enhanced Direct Control (9/20)
5 Unbuffered Reporting (22/23)	12d Enhanced SBO Control (15/28)
6 Buffered Reporting (32/33)	13 Time Synchronization (4/7)
	14 File Transfer (8/8)
	15 Service Tracking (5/17)

This certificate includes a summary of the test results as carried out at KERI in Republic of Korea with UniGrid v.2.0.1 with test suite Ed2_Server_TP2.0.5_v1.1.1+755 and UniCA Analyzer v.5.40.01. This document has been issued for information purposes only, and the original paper copy of the KERI report: No. 24TC200133 will prevail.

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

Republic of Korea, February 19, 2024

W. H. Seo
Technical Manager
Electrification & Energy Evaluation Division

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Principal Engineer

[1] Level A - Independent Test lab with certified ISO/IEC 17025 Quality System
UCA Users Group, P.O. Box 315, Shell Knob, MO 65747, USA

Applicable Test Procedures from the UCA International Users Group Edition 2 Server 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, sSrvN1abcdf, sSrvN4	sAssN6, sSrv6, sSrv10, sSrv12, sSrvN1e, sSrvN2, sSrvN3
2: Data Sets	sDs1, sDs10a, sDsN1ae	sDs15
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, 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, sBr23, sBr24
12a Direct control	sCtl5, sCtl10, sDOns1, sDOns2	sCtl2, sCtl13, sCtl15, sCtl16
12b SBO control	sCtl5, sCtl8, sCtl9, sCtl10, sCtl11, sCtl25, sSBOns1, sSBOns2, sSBOns6	sCtl2, sCtl4, sCtl6, sCtl15, sCtl16, sCtl27
12c Enhanced direct control	sCtl5, sCtl10, sDOes1, sDOes2	sCtl2, sCtl13, sCtl14, sCtl15, sCtl16
12d Enhanced SBO control	sCtl5, sCtl8, sCtl9, sCtl10, sCtl11, sCtl25, sSBOes1, sSBOes2, sSBOes6, sSBOes8	sCtl2, sCtl4, sCtl6, 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, sTrk11