

IEC 61850 Certificate Level A¹

Issued to:

NARI Technology Co., Ltd.
Industrial Building 3rd Floor
No.19 Chengxin Avenue
211106 Nanjing
People's Republic of China

For the server product:

NS3560 Bay Control Unit
Software version: V1.02
S/N: 70000045016005150909010020220629000843

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 NS3560, dated 2023/11/1", "Model Implementation Conformance Statement for the IEC 61850 interface in NS3560, dated 2023/11/1" and "TISSUES Implementation Conformance Statement for the IEC 61850 Edition 2 server interface in NS3560, dated 2023/11/1" and the extra information for testing: "Protocol Implementation eXtra Information for Testing (PIXIT) for the IEC 61850 Edition 2 server interface in NS3560, dated 2023/11/1".

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

| | |
|--------------------------------|----------------------------------|
| 1 Basic Exchange (22/26) | 9a GOOSE Publish (8/13) |
| 2 Data Sets (4/7) | 9b GOOSE Subscribe (19/21) |
| 3 Substitution (3/3) | 12d Enhanced SBO Control (13/28) |
| 5 Unbuffered Reporting (19/23) | 13 Time Synchronization (3/7) |
| 6 Buffered Reporting (27/33) | 14 File Transfer (5/8) |

This certificate includes a summary of the test results as carried out at SGEPRI in China with UniGrid SA Simulator 2.2.1 with test suite 20231116.1 and UniCA 61850 Analyzer 6.45.02. This document has been issued for information purposes only, and the archived DNV verification report No. 10484111-DSO 24-4011 rev 2 will prevail.

The test has been carried out on one single specimen of the product as referred above and submitted to DNV by NARI Technology. The manufacturer's production process has not been assessed. This certificate does not imply that DNV has approved any product other than the specimen tested.

Arnhem, January 9, 2024



G. Akse

Business Development Manager
Interoperability of Power Systems

Issued by:




R. Schimmel
Verification Manager

¹ Level A - Independent test lab with certified ISO 9001 Quality System
UCA International Users Group P.O. Box 315, Shell Knob, MO 65747 USA

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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, sSrvN1abcd, sSrvN4 | sAssN6, sSrv6, sSrv9, sSrv10, sSrvN1e, sSrvN3 |
| 2: Data Sets | sDs1, sDs10a, sDsN1ae | sDs15 |
| 3: Substitution | sSub1, sSub2, sSub3 | |
| 5: Unbuffered Reporting | sRp1, sRp2, sRp3, sRp4, sRp5, sRp9, sRp14, sRp16, sRpN1, sRpN2, sRpN3, sRpN4, sRpN8 | sRp8, sRp10, sRp11, sRp12, 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 | sBr8, sBr10, sBr11, sBr12, sBr15 |
| 9a: GOOSE publish | sGop2a, sGop3, sGop4, sGop9, sGop10, sGop11, sGop12 | sGopN2 |
| 9b: GOOSE subscribe | sGos1, sGos2, sGos3, sGos5, sGos6a, sGos7, sGos8, sGos9, sGos10, sGos11, sGos12, sGos23, sGosN1, sGosN2, sGosN3, sGosN4, sGosN5, sGosN6 | sGos13 |
| 12d: Enhanced SBO Control | sCtl5, sCtl8, sCtl9, sCtl10, sCtl11, sCtl25, sSBOes1, sSBOes2, sSBOes6, sSBOes8 | sCtl6, sCtl16, sCtl26 |
| 13: Time sync | sTm1, sTm2, sTmN1 | |
| 14: File transfer | sFt1, sFt2ab, sFt4, sFt5, sFtN1ab | |