



IEC 61850 Certificate Level A¹

No. GCP20211625

Issued to:

NARI Technology Co., Ltd.
Industrial Building 3rd Floor,
No.19 Chengxin Avenue,
211106,Nanjing,
China

For the server product:

NSR-378 TRANSFORMER PROTECTION
Software version: V2.00
Hardware version:1.10
S/N: 70044501000021350100020000077543511092

Issued by:

Experiment and Verification Center
State Grid Electric Power Research Institute

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 2.0.4 with product's protocol, model and technical issue implementation conformance statements: "Protocol Implementation Conformance Statement for the IEC 61850 interface in NSR-378,V 2.00", "Model Implementation Conformance Statement for the IEC 61850 interface in NSR-378,V 2.00", "TISSUES Implementation Conformance Statement for the IEC 61850 Ed2 interface in NSR-378,V 2.00" and product's extra information for testing: "Protocol Implementation eXtra Information for Testing(PIXIT) for the IEC 61850 interface in NSR-378,V 2.00".

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 (18/26)	9a GOOSE Publish (11/13)
2 Data Sets (4/7)	9b GOOSE Subscribe (18/20)
3 Substitution (3/3)	12a Direct Control (5/19)
4 Setting Group Selection (4/4)	12d Enhanced SBO Control (13/29)
4+ Setting Group Definition (13/13)	13 Time Synchronization (4/7)
5 Unbuffered Reporting (19/23)	14 File Transfer (5/8)
6 Buffered Reporting (27/33)	

This Certificate includes a summary of the test results as carried out at SGEPRI in China with UniGrid SA 1.7.1.0 with test suite 2.0. and UniCA 61850 Analyzer 6.40.01. This document has been issued for information purposes only, and the original paper copy of the PAL verification report: No. GCP20211625 will prevail.

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

Nanjing, May 10, 2021

Wang Shanxiang
Verification President

Sun Dan
Verification Manager

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

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Applicable Test Procedures from the UCA International Users Group Edition 2 Server Test Procedures version 2.0.4

Conformance Block	Mandatory	Conditional
1: Basic Exchange	sAss1, sAss2, sAss3, sAss4, sAssN2, sAssN3, sAssN4, sAssN5, sSrv1, sSrv2, sSrv3, sSrv4, sSrv5, sSrv8, sSrvN1abcd, sSrvN4	sAssN6, sSrv9
2: Data Sets	sDs1, sDs10a, sDsN1ae	sDs15
3: Substitution	sSub1, sSub2, sSub3	
4: Setting Group Selection	sSg1, sSg3, sSgN1	sSg11
4+: Setting Group Definition	sSg2, sSg4, sSg6, sSg7, sSg8, sSg10, sSg12, sSgN2, sSgN3, sSgN4, sSgN5	sSg5, sSg9
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	sGop1, sGop6, sGopN1, sGopN2
9b: GOOSE subscribe	sGos1, sGos2, sGos3, sGos5, sGos6a, sGos7, sGos8, sGos9, sGos10, sGos11, sGos12, sGosN1, sGosN2, sGosN3, sGosN4, sGosN5, sGosN6	sGos13
12a Direct control	sCtl5, sCtl10, sDOs1, sDOs2	sCtl16
12d Enhanced SBO control	sCtl5, sCtl8, sCtl9, sCtl10, sCtl11, sCtl25, sSBOes1, sSBOes2, sSBOes6, sSBOes8	sCtl6, sCtl16, sCtl26
13 Time sync	sTm1, sTm2, sTmN1	sTm3
14 File transfer	sFt1, sFt2ab, sFt4, sFt5, sFtN1ab	