

No. 10058714-INC 17-2863

Issued to:

NARI Technology Co. Ltd.
No.19 Chengxin Avenue
211106 Nanjing
People's Republic of China

For the server product:

NSR-321
Breaker failure protection
Software version: 2.11
Hardware version: 1.10 CDFDE96B
and S/N: 7004 45010 000 173501 0002 000
00775435 11 090

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 1.0 with TPCL² 1.2.4 with product's protocol, model and technical issue implementation conformance statements: "Protocol Implementation Conformance Statement for the IEC 61850 interface in NSR-321, V1.00, dated 09-11-2017", "Model Implementation Conformance Statement for the IEC 61850 interface in NSR-321, V1.00, dated 10-11-2017" and "TISSUES Implementation Conformance Statement for the IEC 61850 Ed2 interface in NSR-321, V2.11, dated 10-11-2017" and the extra information for testing: "Protocol Implementation eXtra Information for Testing (PIXIT) for the IEC 61850 interface in NSR-321, V1.00, dated 11-11-2017".

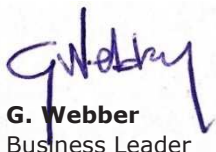
The following IEC 61850 conformance blocks have been tested with a positive result (number of relevant and executed test cases / total number of test cases):

1 Basic Exchange (21/26)	9a GOOSE Publish (12/13)
2 Data Sets (4/7)	9b GOOSE Subscribe (14/14)
3 Substitution (3/3)	12a Direct Control (5/18)
4 Setting Group Selection (4/4)	12d Enhanced SBO Control (13/28)
4+ Setting Group Definition (12/13)	13 Time Synchronization (4/7)
5 Unbuffered Reporting (19/21)	14 File Transfer (5/8)
6 Buffered Reporting (28/30)	15 Service Tracking (4/17)

This certificate includes a summary of the test results as carried out at SGEPRI in China with UniGrid SA 1.3.95.41 with test suite 1.0.46 and UniCA 61850 Analyzer 5.31.00. This document has been issued for information purposes only, and the original paper copy of the DNV GL verification report No. 10058714-INC 17-2862 will prevail.

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

Arnhem, November 16, 2017



G. Webber
Business Leader

Intelligent Networks and Communication

Issued by:



DNV KEMA is now DNV GL



R. Schimmel
Verification Manager

¹ Level A - Independent test lab with certified ISO 9001 Quality System

² TPCL - Test procedures change list

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Applicable Test Procedures from the UCA International Users Group Edition 2 Server Test Procedures version 1.0 with TPCL 1.2.4

Conformance Block	Mandatory	Conditional
1: Basic Exchange	sAss1, sAss2, sAss3, sAssN2, sAssN3, sAssN4, sAssN5, sSrv1, sSrv2, sSrv3, sSrv4, sSrv5, sSrvN1abcd, sSrvN4	sAssN6, sSrv6, sSrv8, sSrv9, sSrvN1e, sSrvN1f, sSrvN3
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, sSg7, sSg8, sSg10, sSg12, sSgN2, sSgN3, sSgN4, sSgN5	sSg5, sSg9
5: Unbuffered Reporting	sRp1, sRp2, sRp3, sRp4, sRp5, sRp9, sRp14, sRp15, sRpN1, sRpN2, sRpN3, sRpN4, sRpN8	sRp8, sRp10, sRp11, sRp12, sRp13, sRpN5
6: Buffered Reporting	sBr1, sBr2, sBr3, sBr4, sBr5, sBr9, sBr14, sBr15, sBr20, sBr21, sBr22, sBr25, sBr26, sBr27, sBr28, sBrN1, sBrN2, sBrN3, sBrN4, sBrN5, sBrN8	sBr8, sBr10, sBr11, sBr12, sBr13, sBr23, sBr24
9a: GOOSE publish	sGop2a, sGop3, sGop4, sGop9, sGop10, sGop11	sGop1, sGop5, sGop6, sGop7, sGopN1, sGopN2
9b: GOOSE subscribe	sGos1, sGos2, sGos3, sGos5, sGos6a, sGos7, sGosN1, sGosN2, sGosN3, sGosN4, sGosN5, sGosN6	sGos4, sGos6b
12a: Direct control	sCtl5, sCtl10, sDOns1, sDOns2	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	
15: Service tracking		sTrk1, sTrk2, sTrk7, sTrk8