IEC 61850 Certificate Level A[1]

No. 10124892-INC 18-3170

Issued to:

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

For the server product:

NSD500M Bay Control Unit
Software version: 6.02.1
Hardware version: R1.10
S/N: 7010 57435 000 183701 0003 000 20134041 10 020

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 TPCL[2] 1.2.6 with product's protocol, model and technical issue implementation conformance statements: "Protocol Implementation Conformance Statement for the IEC 61850 interface in NSD500M, V1.00", "Model Implementation Conformance Statement for the IEC 61850 interface in NSD500M, V1.00" and "TISSUES Implementation Conformance Statement for the IEC 61850 Ed2 interface in NSD500M, V1.00" and product's extra information for testing: "Protocol Implementation eXtra Information for Testing (PIXIT) for the IEC 61850 interface in NSD500M, V1.00".
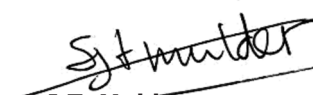
The following IEC 61850 conformance blocks have been tested with a positive result (number of relevant and executed test cases / total number of test cases):

1	Basic Exchange (18/26)		12d	Enhanced SBO Control (13/28)
2	Data Sets (4/7)		13	Time Synchronization (4/7)
3	Substitution (3/3)		14	File Transfer (5/8)
5	Unbuffered Reporting (19/21)			
6	Buffered Reporting (28/30)			

This certificate includes a summary of the test results as carried out at NARI in China with UniGrid SA Simulator 1.4.440 with test suite 1.0.55 and UniCA 61850 Analyzer 5.34.02. This document has been issued for information purposes only, and the archived DNV GL verification report No. 10124892-INC 18-3171 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. 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 30, 2018

S.J.T. Mulder
Business Leader
Interoperability of Smart Power Systems

Issued by:

DNV·GL
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

Applicable Test Procedures from the UCA International Users Group Edition 2 Server Test Procedures version 1.0 with TPCL 1.2.6

Conformance Block		Mandatory	Conditional
1:	Basic Exchange	sAss1, sAss2, sAss3, sAssN2, sAssN3, sAssN4, sAssN5, sSrv1, sSrv2, sSrv3, sSrv4, sSrv5, sSrvN1abcd, sSrvN4	sAssN6, sSrv8, sSrv9, sSrvN1f
2:	Data Sets	sDs1, sDs10a, sDsN1ae	sDs15
3:	Substitution	sSub1, sSub2, sSub3	
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
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	