

No. 10124892-INC 18-3167

**Issued to:**

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

**For the server product:**

NSD500M4 Bay Control Unit  
Software version: 6.02.1  
Hardware version: R1.10  
S/N: 7010 96183 000 183301 0009 000 20126695  
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<sup>2</sup> 1.2.6 with product's protocol, model and technical issue implementation conformance statements: "Protocol Implementation Conformance Statement for the IEC 61850 interface in NSD500M4, V1.00", "Model Implementation Conformance Statement for the IEC 61850 interface in NSD500M4, V1.00" and "ISSUES Implementation Conformance Statement for the IEC 61850 Ed2 interface in NSD500M4, V1.00" and product's extra information for testing: "Protocol Implementation eXtra Information for Testing (PIXIT) for the IEC 61850 interface in NSD500M4, 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 18-3168 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.F. Mulder**  
Business Leader  
Interoperability of Smart Power Systems

**Issued by:**  
  
**DNV-GL**

DNV KEMA is now DNV GL

  
**R. Schimmel**  
Verification Manager

<sup>1</sup> Level A - Independent test lab with certified ISO 9001 Quality System

<sup>2</sup> TPCL - Test procedures change list

Copyright © DNV GL Netherlands B.V. Arnhem, the Netherlands. All rights reserved. It is prohibited to update or change this certificate in any manner whatsoever, including but not limited to dividing it into parts.

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	