![UCA International Users Group logo]

IEC 61850 Certificate Level A[1]

No. 10249965-INC 20-2833

Issued to:

EKRA Research and Production
Enterprise, Ltd
STE 541-3 Yakovlev prospect
428020 Cheboksary
Russian Federation

For the client system:

EKRASCADA
SCADA System
Software version: 2.7.1.11801
IEC 61850 client interface version: 1.3
DELL Latitude E7470, Windows 10 Enterprise 64bit

The client system 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 in substations

The conformance test has been performed according to IEC 61850-10 Edition 2, the UCA International Users Group Edition 2 Client Conformance Test Procedures version 1.1.2 with product's protocol, model and technical issue implementation conformance statements: "Protocol Implementation Conformance Statement (PICS)
for the IEC 61850 Client interface in EKRASCADA, dated September 7, 2020", "Model Implementation Conformance Statement (MICS) for the IEC 61850 Client interface in EKRASCADA, dated September 7, 2020" , "Tissue Conformance Statement (TICS) for the IEC 61850 Client interface in EKRASCADA, dated September 7, 2020" and product's extra information for testing: "Protocol Implementation eXtra Information for Testing (PIXIT) for the IEC 61850 Client interface in EKRASCADA, dated September 7, 2020".

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 (24/24)	9 GOOSE Control Block (1/2)
2 Data Sets (6/10)	12a Direct Control (7/9)
2+ Data Set Definition (8/8)	12b SBO Control (9/11)
3 Substitution (3/3)	12c Enhanced Direct Control (7/9)
4 Setting Group Selection (3/3)	12d Enhanced SBO Control (9/11)
5 Unbuffered Reporting (24/24)	13 Time Synchronization (3/4)
6 Buffered Reporting (28/28)	14 File Transfer (4/8)
	15 Service Tracking (7/17)

This certificate includes a summary of the test results as carried out at DNV GL in the Netherlands with UniCA 61850 IED Simulator version 6.1.31.19 and UniCA 61850 Analyzer version 6.40.01. This document has been issued for information purposes only, and the archived DNV GL report No. 10249965-INC 20-2832.rev3 will prevail.

The test has been carried out on one single specimen of the product as referred above and submitted to DNV GL by EKRA. 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, September 16, 2020

N. Heijker
Business Leader
Interoperability of smart power systems

Issued by:

![DNV·GL logo]
DNV KEMA is now DNV GL

R. Schimmel
Verification Manager

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

Applicable Test Procedures from the UCA International Users Group Edition 2 Client Conformance Test Procedures version 1.1.2

Conformance Block	Mandatory	Conditional
1: Basic Exchange	cAss1, cAss2, cAss3, cAssN1, cAssN4, cAssN5, cAssN6	cAssN7 cSrv1, cSrv2, cSrv3, cSrv4, cSrv5, cSrv6, cSrv7, cSrv8, cSrv9, cSrv10 cSrvN1, cSrvN2, cSrvN3, cSrvN4, cSrvN5, cSrvN6
2: Data Sets		cDs1, cDs2, cDs5, cDs6 cDsN1a, cDsN1b
2+: Data Set Definition		cDs10, cDs11, cDs12, cDs13, cDs14, cDsN10a, CdsN10b, cDsN11
3: Substitution	cSub1, cSub3	cSub2
4: Setting Group Selection	cSg2, cSgN1	cSg1
5: Unbuffered Reporting	cRp3, cRp4, cRp5, cRp8, cRp9, cRp10, cRp11, cRp13a, cRp14, cRp15, cRp19, cRpN2, cRpN5, cRpN6	cRp1, cRp2, cRp6, cRp7, cRp12, cRp13b, cRp16, cRp17, cRp18, cRpN1
6: Buffered Reporting	cBr3, cBr4, cBr5, cBr8, cBr9, cBr10, cBr11, cBr13a, cBr14, cBr15, cBr19, cBr30, cBr31, cBrN2, cBrN5, cBrN6	cBr1, cBr2, cBr6, cBr7, cBr12, cBr13b, cBr16, cBr17, cBr18, cBr32, cBr33, cBrN1
9: GOOSE control block		cGcb1
12a: Direct Control	cCtl4, cCtl5, cDOns1, cDOns2	cCtl1, cCtl2, cCtl3
12b: SBO Control	cCtl4, cCtl5, cSBOns1, cSBOns2, cSBOns3	cCtl1, cCtl2, cCtl3, cSBOns4
12c: Enhanced Direct Control	cCtl4, cCtl5, cDOes1, cDOes2	cCtl1, cCtl2, cCtl3
12d: Enhanced SBO Control	cCtl4, cCtl5, cSBOes1, cSBOes2, cSBOes3	cCtl1, cCtl2, cCtl3, cSBOes4
13: Time sync	cTm1, cTmN1	cTm2
14: File transfer	cFt1, cFt3, cFtN1	cFt5
15: Service Tracking		cTrk1, cTrk2, cTrk4, cTrk7, cTrk8, cTrk9, cTrk11