IEC 61850 Certificate Level A[1]

No. 10117336-INC 19-2214

Issued to:

ARTECHE/SAC
Derio Bidea 28, Zabalondo Industrialdea
48100 Mungia, Bizkaia,
Spain

For the server product:

saTECH BCU 152
Bay Control Unit
Software version: 2.0.0
Hardware version: 152-55FMA4A2B3F5X-LT
S/N: 1801582302

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 BCU 152, February 13, 2019", "Model Implementation Conformance Statement for the IEC 61850 interface in saTECH BCU 152, February 13, 2019" and "Tissues Implementation Conformance Statement for the IEC 61850 Ed2 interface in saTECH BCU 152, February 13, 2019" and the extra information for testing: "Protocol Implementation eXtra Information for Testing (PIXIT) for the IEC 61850 interface in BCU 152, February 13, 2019".
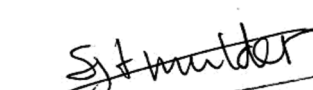
The following IEC 61850 conformance blocks have been tested with a positive result (number of relevant and executed test cases / total number of test cases):

1	Basic Exchange (22/26)	12a	Direct Control (7/18)
2	Data Sets (4/7)	12b	SBO Control (13/27)
5	Unbuffered Reporting (18/21)	12c	Enhanced Direct Control (9/20)
6	Buffered Reporting (25/30)	12d	Enhanced SBO Control (14/28)
9a	GOOSE Publish (11/13)	13	Time Synchronization (6/7)
9b	GOOSE Subscribe (12/14)		

This certificate includes a summary of the test results as carried out at DNV GL in Spain with UniGrid SA Simulator 1.4.431 with test suite 1.0.12 and UniCA 61850 Analyzer 5.34.02. This document has been issued for information purposes only, and the archived DNV GL verification report No. 10117336-INC 19-2213 will prevail.

The test has been carried out on one single specimen of the product as referred above and submitted to DNV GL by SAC. 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, February 22, 2019

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, sSrv6, sSrv8, sSrv9, sSrv10, sSrvN1e, sSrvN1f, sSrvN3
2:	Data Sets	sDs1, sDs10a, sDsN1ae	sDs15
5:	Unbuffered Reporting	sRp1, sRp2, sRp3, sRp4, sRp5, sRp9, sRp14, sRp15, sRpN1, sRpN2, sRpN3, sRpN4, sRpN8	sRp8, sRp10, sRp11, sRp12, 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
9a:	GOOSE publish	sGop2a, sGop3, sGop4, sGop9, sGop10, sGop11	sGop1, sGop6, sGop7, sGopN1, sGopN2
9b:	GOOSE subscribe	sGos1, sGos2, sGos3, sGos5, sGos6a, sGos7, sGosN1, sGosN2, sGosN3, sGosN4, sGosN5, sGosN6	
12a:	Direct control	sCtl5, sCtl10, sDOns1, sDOns2	sCtl7, sCtl13, sCtl16
12b:	SBO control	sCtl5, sCtl8, sCtl9, sCtl10, sCtl11, sCtl25, sSBOns1, sSBOns2, sSBOns6	sCtl6, sCtl7, sCtl16, sCtl27
12c:	Enhanced Direct Control	sCtl5, sCtl10, sDOes1, sDOes2	sCtl7, sCtl13, sCtl14, sCtl16, sCtl26
12d:	Enhanced SBO Control	sCtl5, sCtl8, sCtl9, sCtl10, sCtl11, sCtl25, sSBOes1, sSBOes2, sSBOes6, sSBOes8	sCtl6, sCtl7, sCtl16, sCtl26
13:	Time sync	sTm1, sTm2, sTmN1	sTm4, sTm5, sTmN2