IEC 61850 Certificate Level A[1]

No. 74102161-MOC/INC 12-02295

Issued to:
Sanion Co., Ltd
#208, ACETECHNO tower
12 Dangsan-Ro 2-Gil, Yeongdeungpo-Gu
Seoul
Republic of Korea

For the product:
STP-K110
Hardware Version 1.0
Firmware Version 1.0
Software Version 1.0

Issued by: **KEMA**

The product has not shown to be non-conforming to:

IEC 61850-6, 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, the UCA International Users Group Device Test Procedures version 2.3 with TPCL[2] version 1.5, the product's protocol, model and technical issue implementation conformance statements: "Protocol Implementation Conformance Statement for the IEC 61850 interface in STP-K110 v1.1", "Model Implementation Conformance Statement for the IEC 61850 interface in STP-K110 v1.2" and "TISSUES Implementation Conformance Statement for the IEC 61850 interface in STP-K110 v1.1" and the extra information for testing: "Protocol Implementation eXtra Information for Testing (PIXIT) for the IEC 61850 interface in STP-K110 v1.2".

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 (21/24)		9a	GOOSE Publish (8/13)
2	Data Sets (3/6)		9b	GOOSE Subscribe (11/11)
2+	Data Set Definition (23/23)		12a	Direct Control (6/12)
4	Setting Group Selection (2/3)		12d	Enhanced SBO Control (12/19)
5	Unbuffered Reporting (16/19)		13	Time Synchronization (4/5)
6	Buffered Reporting (18/21)		14	File Transfer (4/7)

This certificate includes a summary of the test results as carried out at Sanion Co. in Korea with UniCA 61850 Client simulator 4.26.04 with test suite 3.26.00 and UniCA 61850 Analyzer 4.26.04. This document has been issued for information purposes only, and the original paper copy of the KEMA report: No. 74102161-MOC/INC 12-02294 will prevail.

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

Arnhem, December 13, 2012

M. Adriaensen
Director Intelligent Networks & Communication

R. Schimmel
Certification Manager

1 Level A - Independent test lab with certified ISO 9000 or ISO 17025 quality system
2 TPCL - Test procedures change list

Applicable Test Procedures from the UCA International Users Group Device Test Procedures version 2.3 with TPCL version 1.5

Conformance Block	Mandatory	Conditional
1: Basic Exchange	Ass1, Ass2, Ass3, AssN2, AssN3, AssN4, AssN5	
	Srv1, Srv2, Srv3, Srv4, Srv5, SrvN1abcd, SrvN4	Srv6, Srv7, Srv8, SrvN1e, SrvN1f, SrvN2, SrvN3
2: Data Sets	Dset1, Dset10a, DsetN1ae	
2+: Data Set Definition	Dset2, Dset3, Dset4, Dset5, Dset6, Dset7, Dset8, Dset9	
	DsetN1cd, DsetN2, DsetN3, DsetN4, DsetN5, DsetN6, DsetN7, DsetN8, DsetN9, DsetN10, DsetN11, DsetN12, DsetN13, DsetN14, DsetN15	
4: Setting Group Selection	Sg1, SgN1a	
5: Unbuffered Reporting	Rp1, Rp2, Rp3, Rp4, Rp7, Rp10, Rp12 RpN1, RpN2, RpN3, RpN4	Rp5, Rp6, Rp8, Rp9, RpN5
6: Buffered Reporting	Br1, Br2, Br3, Br4, Br7, Br8, Br9, Br12, Br14 BrN1, BrN2, BrN3, BrN4, BrN5	Br5, Br6, Br10, Br11
9a: GOOSE publish	Gop2, Gop3, Gop4, Gop7, Gop10a	Gop1, Gop5, Gop10b
9b: GOOSE subscribe	Gos1a, Gos2, Gos3, GosN1, GosN2, GosN3, GosN4, GosN5, GosN6	Gos1b, Gos4
12a: Direct control	CtlN3, CtlN8 DOns1, DOns3	Ctl2, CtlN11
12d: Enhanced SBO control	Ctl3, CtlN1, CtlN2, CtlN3, CtlN4, CtlN9 SBOes1, SBOes2, SBOes3	Ctl2, Ctl7, CtlN11
13: Time sync	Tm1, Tm2, TmN1	TmN2
14: File transfer	Ft1, Ft2ab, Ft4, FtN1ab	