# IEC 61850 Certificate Level A[1]

No. 30107032-Consulting 10-1519

Issued to:

U2S Co.,Ltd
102-901, SK Ventium Building 522,
Dangjeong-dong, Gunpo-si, Gyeonggi-do,
Korea 435-776

For the product:

SAMCAS
IEC61850 Client
V1.0

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 with client system's protocol, model and technical issue implementation conformance statements: "Protocol Implementation Conformance Statement for the IEC 61850 interface in SAMCAS", "Model Implementation Conformance Statement for the IEC 61850 interface in SAMCAS", "TISSUE Implementation Conformance Statement for the IEC 61850 interface in SAMCAS" and product's extra information for testing: "Protocol Implementation eXtra Information for Testing for the IEC 61850 interface in SAMCAS".

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 as defined in the UCA IUG Client Test procedures revision 1.1):

| | | | |
|---|---|---|---|
| 1 | Basic Exchange (18/22) | 12a | Direct Control (6/7) |
| 2+ | Data Set Definition (7/12) | 12b | SBO Control (8/9) |
| 4 | Setting Group Selection (3/4) | 12c | Enhanced Direct Control (6/7) |
| 5 | Unbuffered Reporting (16/18) | 12d | Enhanced SBO Control (8/9) |
| 6 | Buffered Reporting (20/22) | 13 | Time Synchronization (3/4) |
| | | 14 | File Transfer (5/8) |

This Certificate includes a summary of the test results as carried out at KEMA in The Netherlands with UniCA Multi IED Simulator version 1.20.0.0 and UniCA 61850 Analyzer version 4.21.03. The test is based on the UCA IUG "Conformance Test Procedures for Client System with IEC 61850-8-1 interface, revision 1.1". This document has been issued for information purposes only, and the original paper copy of the test report: No. 30107032-Consulting 10-1518 will prevail.

The test has been carried out on one single specimen of the client system as referred above and submitted to KEMA by U2S Co, Ltd. The manufacturer's production process has not been assessed. This Certificate does not imply that KEMA has certified or approved any product other than the specimen tested.

Arnhem, July 19, 2010

W. Strabbing
Manager Intelligent Network and Communications

T.Xu
Test Engineer

1 Level A - Independent Test lab with certified ISO 9000 or ISO 17025 Quality System

Applicable Test Procedures from the UCA IUG "Conformance Test Procedures for Client System with IEC 61850-8-1 interface, revision 1.1"

| | Conformance Block | Mandatory | Conditional |
|---|---|---|---|
| 1: | Basic Exchange | cAss1, cAss2, cAss3, cAss4, cAssN1, cAssN4, cAssN5, cAssN6, cSrv5, cSrvN3 | cSrv1, cSrv2, cSrv3, cSrv4, Srv6, cSrvN1, cSrvN5, cSrvN6 |
| 2+: | Data Set Definition | cDs1, cDs2, cDs5, cDs6, cDsN4 | cDs7, cDsN5 |
| 4: | Setting Group Selection | cSg2, cSgN1 | cSg1 |
| 5: | Unbuffered Reporting | cRp2, cRp3, cRp4, cRp5, cRp8, cRp9, cRp10<br>cRpN2, cRpN3, cRpN7, cRpN8 | cRp1, cRp6, cRp7, cRpN1, cRpN4 |
| 6: | Buffered Reporting | cBr2, cBr3, cBr4, cRp5, cBr8, cBr9, cBr10, cBr11, cBr12, cBrN2, cBrN3, cBrN7, cBrN8, cBrN9 | cBr1, cBr6, cBr7, cBr13, cBrN1, cBrN4 |
| 12a: | Direct control | cCtl4, cCtlN1, cDOns1, cDOns2 | cCtl1, cCtl2 |
| 12b: | SBO control | cCtl4, cCtlN1<br>cSBOns1, cSBOns2, cSBOns3 | cCtl1, cCtl2, cSBOns4 |
| 12c: | Enhanced Direct Control | cCtl4, cCtlN1, cDOes1, cDOes2 | cCtl1, cCtl2 |
| 12d: | Enhanced SBO control | cCtl4, cCtlN1<br>cSBOes1, cSBOes2, cSBOes3 | cCtl1, cCtl2, cSBOes4 |
| 13: | Time sync | cTm1 | cTm2, cTmN1 |
| 14: | File transfer | cFt1, cFt2, cFt3, cFtN1, cFtN2 | |