

IEC 61850 Certificate Level A¹

No. 74108592-OPE/INC 15-2845

Issued to:

CG Automation Solutions 60 Fadem Road Springfield, NJ 07081 USA

For the client system:

ePAQ-9425 Multifunction Gateway Software version: Link 80-01000-001Q Hardware version: SR CPLD 0.14

The client system has not been shown to be non-conforming to:

IEC 61850 First Edition 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 and UCAIug Conformance Test Procedures for Client System with IEC 61850-8-1 interface, revision 1.1 with TPCL² version 1.2 with client system's protocol, model and technical issue implementation conformance statements: "Protocol Implementation Conformance Statement for the IEC 61850 interface in ePaq94xx, November 2015, rev 1.1", "Model Implementation Conformance Statement for the IEC 61850 interface in ePAQ94xx, November 12, 2015, rev 1" and "TISSUES Implementation Conformance Statement for the IEC 61850 interface in ePAQ 94xx, April 15, 2015, Rev A" and product's extra information for testing: "Protocol Implementation eXtra Information for Testing (PIXIT) for the IEC 61850 interface in ePaq94xx, November 12, 2015".

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 (11/22)
- 2 Data Sets (1/9)
- 5 Unbuffered Reporting (10/18)

- 12a Direct Control (4/7)
- 12b SBO Control (5/9)
- 12c Enhanced Direct Control (4/7)
- 12d Enhanced SBO Control (5/9)
- 13 Time Synchronization (1/4)

This certificate includes a summary of the test results as carried out at CG Automation Solutions in the USA with UniCA IED Simulator version 5.29.06 and UniCA 61850 Analyzer version 5.29.00. This document has been issued for information purposes only, and the original paper copy of the DNV GL report No. 74108592-OPE/INC 15-2846 will prevail.

The test has been carried out on one single specimen of the product as referred above and submitted to DNV GL by CG Automation Solutions. 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 17, 2015

M. Adriaensen

Head of Department Operational Excellence Issued by:



DNV KEMA is now DNV GL

R. Schimmel

Verification Manager

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

² TPCL - Test procedures change list



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Applicable Test Procedures from the UCAIug Conformance Test Procedures for Client System with IEC 61850-8-1 interface, revision 1.1 with TPCL version 1.2

Conformance Block	Mandatory	Conditional
1: Basic Exchange	cAss1, cAss2, cAss3, cAss4, cAssN1, cAssN4, cAssN5, cAssN6	cAssN7, cSrv5, cSrvN3
2: Data Sets		cDs5
5: Unbuffered Reporting	cRp3, cRp4, cRp5, cRp8, cRp9, cRp10, cRpN2, cRpN3, cRpN7, cRpN8	
12a: Direct Control	cCtl4, cCtlN1, cDOns1, cDOns2	
12b: SBO Control	cCtl4, cCtlN1, cSBOns1, cSBOns2, cSBOns3	
12c: Enhanced Direct Control	cCtl4, cCtlN1, cDOes1, cDOes2	``````````````````````````````````````
12d: Enhanced SBO Control	cCtl4, cCtlN1, cSBOes1, cSBOes2, cSBOes3	<i>*</i>
13: Time sync	cTm1	