IEC 61850 Certificate Level A[1]

No. 30820075-Consulting 08-0634

Issued to:
TOSHIBA Corporation
Power Systems Protection and Control
Fuchu Complex 1, TOSHIBA-Cho
Fuchu-Shi, Tokyo, 183-8511
Japan

For the product:
Hardware: GRL100
Main software: GSPLM1-01-A
IEC61850 communication firmware:
GPM850-01-D

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 product's protocol, model and technical issue implementation conformance statements: "IEC61850 ASCI conformance statement GRL100 6F2S1146 ver.0.0", "IEC61850 Model Implementation Conformance Statement (MICS) GRL100: 6F2S1145 ver.0.0", "IEC61850 Tissues Conformance Statement (TICS) of the IEC 61850 communication interface in GRL100: 6F2S1148 ver 0.1" and product's extra information for testing: "Protocol implementation extra information for testing (PIXIT) of the IEC 61850 communication interface in GRL100: 6F2S1147 ver 0.1".

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 International Users Group Device Test procedures v1.1):

1	Basic Exchange (18/23)	9a	GOOSE Publish (7/11)
2	Data Sets (2/5)	9b	GOOSE Subscribe (9/9)
4	Setting Group Selection (2/3)	12c	Enhanced Direct Control (4/11)
5	Unbuffered Reporting (12/13)	13	Time Synchronization (4/4)
6	Buffered Reporting (14/15)	14	File Transfer (3/6)

This Certificate includes a summary of the test results as carried out at TOSHIBA Corporation, Japan with UniCAsim 61850 version 3.16.00 with test suite 3.16.06 and UniCA 61850 analyzer 4.16.00. The test is based on the UCA International Users Group Device Test Procedures version 1.1. This document has been issued for information purposes only, and the original paper copy of the KEMA report: No. 30820075-Consulting 08-0633 will prevail.

The test has been carried out on one single specimen of the products as referred above and submitted to KEMA by TOSHIBA. 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, April 1, 2008

W. Strabbing
Manager Intelligent Networks and Communication

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

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Applicable Test Procedures from the UCA International Users Group Device Test Procedures version 1.1

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
2: Data Sets	Dset1, DsetN1ae	
4: Setting Group Selection	Sg1, SgN1	
5: Unbuffered Reporting	Rp1, Rp2, Rp3, Rp4, Rp7 RpN1, RpN2, RpN3, RpN4	Rp5, RpN5, RpN6
6: Buffered Reporting	(Br1)[2], Br2, Br3, Br4, Br7, Br8, Br9 BrN1, BrN2, BrN3, BrN4, BrN5	Br5, BrN6
9a: GOOSE publish	Gop2, Gop3, Gop4, Gop7	Gop1, Gop6, GopN1
9b: GOOSE subscribe	Gos1, Gos2, Gos3, GosN1, GosN2, GosN3, GosN4, GosN5, GosN6	
12c: Enhanced Direct Control	CltN3, CtlN8 DOes2, DOes5	
13: Time sync	Tm1, Tm2, TmN1	TmN2
14: File transfer	Ft1, Ft2ab, FtN1ab	

[2] Tissue #344 “TimeOfEntry” has been implemented, compare test report for details