IEC 61850 Certificate Level A[1]

No. 30720466-Consulting 07-1603

Issued to:

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

For the product:

GBU100 Bay Control Unit
Software Version LBXP-S1-A
Communication Firmware GPM850-02-A

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 ACSI conformance statement (PICS) 6F2M0350 Rev. 2", "IEC61850 Model Implementation Conformance Statement (MICS) GBU100 6F2M0349 Rev. 1", "IEC61850 Tissues Conformance Statement (TICS) of the IEC 61850 communication interface in GBU100 6F2M0352", and extra information for testing (PIXIT) "Protocol implementation extra information for testing (PIXIT) of the IEC 61850 communication interface in GBU100 6F2M0351 Rev. 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 as defined in the UCA International Users Group Device Test procedures v1.1):

1	Basic Exchange	(19/23)	9a	GOOSE Publish	(7/11)
2	Data Set	(2/5)	9b	GOOSE Subscribe	(9/9)
4	Setting Group Selection	(2/3)	12d	Enhanced SBO Control	(11/17)
6	Buffered Reporting	(14/15)	13	Time Synchronization	(3/4)
			14	File Transfer	(3/6)

This Certificate includes a summary of the test results as carried out at Toshiba Corporation in Japan with UniCAsim 61850 version 2.15.01 with test suite 3.16.02 and UniCA 61850 analyzer 4.15.00 and UniCAsim GOOSE v2.14.02 with test suite 2.12.05. 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. 30720466-Consulting 07-1602 will prevail.

The test have 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, August 8, 2007

S.J.L.M. Janssen
Managing Director KEMA Consulting

E.F. Melenhorst
Senior Test Engineer

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

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

1: Basic Exchange	Ass1, Ass2, Ass3, AssN2, AssN3, AssN4, AssN5, Srv1, Srv2, Srv3, Srv4, Srv5, SrvN1abcd, SrvN4	Srv6, Srv7, Srv8, SrvN1e, SrvN3
2: Data Sets	Dset1, DsetN1ae	
4: Setting Group Selection	Sg1, SgN1	
6: Buffered Reporting	Br1, 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	
12d Enhanced SBO	Ctl3, CtlN1, CtlN2, CtlN3, CtlN4, CtlN9, SBOes1, SBOes2, SBOes3	Ctl2, Ctl7
13 Time sync	Tm1, Tm2, TmN1	
14 File transfer	Ft1, Ft2ab, FtN1ab	