

IEC 61850 Certificate Level A¹

No. 10010206-OPE/INC 16-1806

Issued to:

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

For the client system:

GSC1000 Station Computer Software version: C

Hardware version: GSU100

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

IEC 61850 Edition 2 Parts 6, 7-1, 7-2, 7-3, 7-4 and 8-1

Communication networks and systems for power utility automation

The conformance test has been performed according to IEC 61850-10 Edition 2, the UCA International Users Group Edition 2 Client Conformance Test Procedures version 1.0 with TPCL² 1.0 with product's protocol, model and technical issue implementation conformance statements: "Protocol Implementation Conformance Statement (PICS) for the IEC 61850 Client Interface in GSC1000, 6F2M1166, Rev.0", "Model Implementation Conformance Statement (MICS) for the IEC 61850 Client Interface in GSC1000, 6F2M1164, Rev.0" and "TISSUES Implementation Conformance Statement (TICS) for the IEC 61850 Client Interface in GSC1000, 6F2M1165, Rev.0" and the extra information for testing: "Protocol Implementation Extra Information for Testing (PIXIT) for the IEC 61850 Client Interface in GSC1000, 6F2M1167, Rev.0".

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	(10/24)
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- 4 Setting Group Selection (2/3)
- 5 Unbuffered Reporting (16/23)
- 6 Buffered Reporting (19/28)

12a Direct Control (6/9)

12b SBO Control (8/11)

12c Enhanced Direct Control (6/9)

12d Enhanced SBO Control (8/11)

This certificate includes a summary of the test results as carried out at TOSHIBA Corporation in Japan with UniCA 61850 IED simulator 5.31.00 and UniCA 61850 Analyzer 5.29.02. This document has been issued for information purposes only, and the original paper copy of the DNV GL verification report No. 10010206-OPE/INC 16-1807 will prevail.

The test has been carried out on one single specimen of the product as referred above and submitted to DNV GL by TOSHIBA Corporation. 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, March 10, 2016

M. Adriaensen

Head of Department Operational Excellence Issued by:

DNV-GL

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 UCA International Users Group Edition 2 Client Conformance Test Procedures version 1.0 with TPCL 1.0

Conformance Block	Mandatory	Conditional
1: Basic Exchange	cAss1, cAss2, cAss3, cAssN1, cAssN4, cAssN5, cAssN6	cAssN7, cSrvN5, cSrvN6
4: Setting Group	cSg2, cSgN1	
5: Unbuffered Reporting	cRp3, cRp4, cRp5, cRp8, cRp9, cRp10, cRp11, cRp13a, cRp14, cRp15, cRpN2, cRpN5, cRpN6	cRp2, cRp7, cRp16
6: Buffered Reporting	cBr3, cBr4, cBr5, cBr8, cBr9, cBr10, cBr11, cBr13a, cBr14, cBr15, cBr30, cBr31, cBrN2, cBrN5, cBrN6, cBrN20	cBr2, cBr7, cBr16
12a: Direct Control	cCtl4, cCtl5, cDOns1, cDOns2	cCtl1, cCtl2
12b: SBO Control	cCtl4, cCtl5, cSBOns1, cSBOns2, cSBOns3	cCtl1, cCtl2, cSBOns4
12c: Enhanced Direct Control	cCtl4, cCtl5, cDOes1, cDOes2	cCtl1, cCtl2
12d: Enhanced SBO Control	cCtl4, cCtl5, cSBOes1, cSBOes2, cSBOes3	cCtl1, cCtl2, cSBOes4