CENTRAL POWER RESEARCH INSTITUTE

Prof. Sir C V Raman Road, PO Box 8066, Sadashivanagar PO, BANGALORE 560 080. I N D I A

UCA International Users Group IEC 61850 Certificate Level A[1]

No.: CPRIBLRMUADSASL21TC0001

Issued to:

M/s. GE T&D INDIA LIMITED
19/1, G.S.T. ROAD, PALLAVARAM,
CHENNAI – 600043, T.N.,
INDIA

For the server product:

NUMERICAL BUSBAR DIFFERENTIAL
PROTECTION RELAY
Type: MiCOM AGILE P741 (CENTRAL UNIT)
Model No.: P741956A6M0700K
Serial No.: 34580813/07/20
Hardware Version: P741-K Hardware
Software Version: 70

Issued by: CENTRAL POWER RESEARCH INSTITUTE, India

The server product 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 Server Test Procedures version 2.0_rev4 with product's protocol, model and technical issue implementation conformance statements: "PICS version PX4X-EN-PC2-D", "MICS version P741/EN MC2/PC7", "TICS version P74X/EN TC2/PC7" and product's extra information for testing: "PIXIT version P74X/EN PX2/PC7.2".

The following IEC 61850 conformance blocks have been tested with a positive result (number of relevant and executed test cases / total number of test):

1	Basic Exchange (23/28)	12a	Direct Control (5/17)
2	Data Sets (4/7)	12b	SBO Control (11/26)
4	Setting Group Selection (4/4)	12c	Enhanced Direct Control (5/19)
5	Unbuffered Reporting (19/22)	12d	Enhanced SBO Control (11/27)
6	Buffered Reporting (27/32)	13	Time Synchronization (4/7)
9a	GOOSE Publish (12/13)	14	File Transfer (7/8)
9b	GOOSE Subscribe (18/18)		

This Certificate includes a summary of the test results as carried out at Central Power Research Institute (CPRI), Bangalore in India with Client Simulator UniCASim version 4.31.02.5461 and UniGrid SA Simulator version 1.7.1.0 with test suit version IEC61850Ed2_Server_TP_2.0_20201005.1 and UniCA 61850 analyzer version 6.40.01.1. This document has been issued for information purposes only, and the original paper copy of the CPRI report No.: CPRIBLRMUADSASL21T0001; dated 23 June, 2021 will prevail.

The test has been carried out on one single specimen of the product as referred above and submitted to CPRI by GE T&D India Limited, 19/1, G.S.T. Road, Pallavaram, Chennai – 600043, T.N., INDIA. The manufacturer's production process has not been assessed. This certificate does not imply that CPRI has certified or approved any product other than the specimen tested.

Bangalore; 23 June, 2021

(Harinath Babu P V)
Joint Director

(Pradish M)
Test Engineer

1 Level A – Independent Test lab with certified ISO/IEC 17025 Quality System.

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Applicable Test Procedures from the UCA International Users Group Edition 2 Server Test Procedures version 2.0_rev4

Conformance Block	Mandatory	Conditional
1: Basic Exchange	sAss1, sAss2, sAss3, sAss4, sAssN2, sAssN3, sAssN4, sAssN5, sSrv1, sSrv2, sSrv3, sSrv4, sSrv5, sSrvN1abcd, sSrvN4	sAssN6, sSrv6, sSrv8, sSrv10, sSrv12, sSrvN1e, sSrvN1f, sSrvN3
2: Data Sets	sDs1, sDs10a, sDsN1ae	sDs15
4: Setting Group Selection	sSg1, sSg3, sSgN1	sSg11
5: Unbuffered Reporting	sRp1, sRp2, sRp3, sRp4, sRp5, sRp9, sRp14, sRp16, sRpN1, sRpN2, sRpN3, sRpN4, sRpN8	sRp8, sRp10, sRp11, sRp12, sRp15, sRpN5
6: Buffered Reporting	sBr1, sBr2, sBr3, sBr4, sBr5, sBr9, sBr14, sBr16, sBr20, sBr21, sBr22, sBr25, sBr26, sBr27, sBr28, sBr29, sBrN1, sBrN2, sBrN3, sBrN4, sBrN5, sBrN8	sBr8, sBr10, sBr11, sBr12, sBr15
9a: GOOSE publish	sGop2a, sGop3, sGop4, sGop9, sGop10, sGop11, sGop12	sGop1, sGop5, sGop6, sGopN1, sGopN2
9b: GOOSE subscribe	sGos1, sGos2, sGos3, sGos5, sGos6a, sGos7, sGos8, sGos9, sGos10, sGos11, sGosN1, sGosN2, sGosN3, sGosN4, sGosN5, sGosN6	sGos4, sGos6b
12a: Direct control	sCtl5, sCtl10, sDOns1, sDOns2	sCtl13
12b: SBO control	sCtl5, sCtl8, sCtl9, sCtl10, sCtl11, sCtl25, sSBOns1, sSBOns2, sSBOns6	sCtl6, sCtl27
12c: Enhanced Direct Control	sCtl5, sCtl10, sDOes1, sDOes2	sCtl13
12d: Enhanced SBO control	sCtl5, sCtl8, sCtl9, sCtl10, sCtl11, sCtl25, sSBOes1, sSBOes2, sSBOes6, sSBOes8	sCtl6
13: Time sync	sTm1, sTm2, sTmN1	sTm3
14: File transfer	sFt1, sFt2ab, sFt4, sFt5, sFtN1ab	sFt2c, sFtN1c

23/6/21

(Harinath Babu P V)
Joint Director

(Pradish M)
Test Engineer