



C E R T I F I C A T E

Certificate registration number: G3.1606.091.2.B

Certificate holder: Sumitomo Electric Industries Ltd.

Device designation: MM2303-H1,
Hardware version 2, Firmware version MM2303 G1.0

Certification date: June 28th, 2016

This certificate indicates the above mentioned device successfully completed certification testing with regards to the reference specification ITU G.9903 (05-2013) plus the changes listed in an annex to this certificate.

The certificate applies to certification profile Japan Route B and the device was configured as a PAN-Device.

Test cases have been performed as described in the test reports referred to below. This certificate is granted on account of tests conducted by TÜV Rheinland in Yokohama, Japan in June 2016. The results and remarks can be found in the complete test reports.

Applied tests	Performed by	Document evidence
Conformance, performance and interoperability testing according to the test specification referenced by the test report	TÜV Rheinland Japan	Test report # 5004 4782 001

The device tested is an embedded G3-PLC Communication Module for HEMS Controller. The communication unit is equipped with the G3-PLC certified platform REL-G3PLC-CPX2 with certificate no. G3.1410.003.1.2 and was directly tested at its PLC terminals, which is further detailed in the test report. The Protocol Implementation Conformance Statement in the Annex includes the PICS related to performance and is an integral part of this certificate. This certificate is valid from June 28th, 2016.

The certificate is only applicable to the product described above and permits the use of the G3-PLC™ logo as laid down in the G3-PLC logo license agreement.

This certificate does not imply assessment of the production. This certificate shall not be defined, or used as a guarantee covering quality of a product which includes G3- PLC. The liability of the Alliance and the test laboratory or any of her representatives is excluded for any damages or losses of the certified company.

Paris, June 28th, 2016

For the G3-PLC Alliance:


Bernard Lassus
Chairman



Madeleine Francillard
Chair Certification Program

G3-PLC
Alliance



Annex 1: Reference Version for Certification

The reference version for this certificate is:

Recommendation ITU-T G.9903 (05-2013)

- + CCTT_121: Correction of Beacon payload encoding
- + CCTT_122: Japan HEMS requirements for ID_S and ID_P
- + ETT_DLL30 and ETT_DLL32: Routing disabling
- + ETT_PHY14: Interleaver fix (conditional swapping)
- + CCTT_171: Implementation of MAC security solution F2

A handwritten signature in blue ink, consisting of a stylized 'H' followed by a cursive 'K'.

Annex 2: Protocol Implementation Conformance Statement (PICS)

Feature implementation statement

Name	Value	Description
BAND_PLAN	ARIB	Indicate the band-plan supported by the device.
FEATURE_PAN_COORDINATOR	FALSE	Indicate if the device is a PAN-Coordinator (true) or a normal device (false)
FEATURE_COHERENT_MODULATION	FALSE	Indicate if coherent modulation is supported
FEATURE_EAP_SERVER	FALSE	Indicate if an EAP-PASK server is implemented by the DUT. Apply only if FEATURE_PAN_COORDINATOR = true
FEATURE_D8PSK_MODULATION	FALSE	True / False
FEATURE_ROUTING	FALSE	Indicate if the routing is implemented by the IUT
FEATURE_SECURITY	F2	Indicate the security implemented by the device. Possible values are: F1, F2.
FEATURE_ACTIVE_SCAN	TRUE	Indicate if the active scan process is done by the IUT after power-up
FEATURE_PREAMBLE_COEXISTENCE_MECHANISM	FALSE	Indicate if the preamble-based coexistence mechanism is used by the IUT.

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Annex 2: Protocol Implementation Conformance Statement (PICS)

PICS related to performance (1/2)

The device tested is an embedded G3-PLC Communication Module for HEMS Controller which has separate cables for power supply and for PLC. The communication unit was equipped with the G3-PLC certified platform REL-G3PLC-CPX2 with certificate no. G3.1410.003.1.2 and was directly tested at its PLC terminals. In the certification testing (including the performance testing) only the PLC part was tested.

Operating voltage applied for certification testing was 100V/50Hz.

Name	Value	Unit	Description
P			
P			
P			
P			
P			
P			
P			
P			
P			
P			
P			
P			
C			

PICS related to performance
are available
through vendor only.

Annex 2: Protocol Implementation Conformance Statement (PICS)

PICS related to performance (2/2)

Name	Value	Unit	Description
PICS related to performance are available through vendor only.			

Annex 3: Copy of test report cover sheet

Produkte
Products



Prüfbericht - Nr.: 5004 4782 001		Seite 1 von 41													
<i>Test Report No.</i>		<i>Page of</i>													
Auftraggeber: <i>Client:</i>	Sumitomo Electric Industries, Ltd. 5-33, Kitahama 4-chome, Chuo-ku, Osaka 541-0041, Japan														
Gegenstand der Prüfung: <i>Test item:</i>	Embedded G3-PLC Communication Module for HEMS Controller														
Bezeichnung: <i>Identification:</i>	MM2303-H1	Serien-Nr.: <i>Serial No.</i>	10787												
Wareneingangs-Nr.: <i>Receipt No.:</i>	A000374558	Eingangdatum: <i>Date of receipt:</i>	2016-05-25												
Zustand des Prüfgegenstandes bei Anlieferung: <i>Condition of test item at delivery:</i>	Test item complete and undamaged														
Prüfört: <i>Testing location:</i>	TÜV Rheinland Japan Ltd. Global Technology Assessment Center 4-25-2 Kita-Yamata, Tsuzuki-ku Yokohama 224-0021, Japan														
Prüfgrundlage: <i>Test specification:</i>	G3-PLC Conformance L1-L2 Tests Suite Specification v0.19 G3-PLC Conformance L3-L4 Test Suite Specification v1.6 G3-PLC 1-to-1 Interoperability Tests Suite Specification v0.7 G3-PLC Performance Test Suite Specification v0.15 G3-PLC Certification Test Procedures v1.7														
Prüfresultat: <i>Test Result:</i>	Der Prüfgegenstand entspricht oben genannter Prüfgrundlage(n). <i>The test item passed the test specification(s).</i>														
Prüflaboratorium: <i>Testing Laboratory:</i>	TÜV Rheinland Japan Ltd. Global Technology Assessment Center 4-25-2 Kita-Yamata, Tsuzuki-ku Yokohama 224-0021, Japan														
geprüft/ tested by:		kontrolliert/ reviewed by:													
2016-06-09	Olga Kozaruk		Tran Thanh Tam												
<i>Date</i>	<i>Name/Position</i>	<i>Unterschrift</i> <i>Signature</i>	<i>Unterschrift</i> <i>Signature</i>												
Sonstiges / Other Aspects:															
<table border="0"> <tr> <td>Abkürzungen:</td> <td>OK, Pass = entspricht Prüfgrundlage</td> <td>Abbreviations:</td> <td>OK, Pass = passed</td> </tr> <tr> <td></td> <td>Fail = entspricht nicht Prüfgrundlage</td> <td></td> <td>Fail = failed</td> </tr> <tr> <td></td> <td>N/A = nicht anwendbar</td> <td></td> <td>N/A = not applicable</td> </tr> </table>				Abkürzungen:	OK, Pass = entspricht Prüfgrundlage	Abbreviations:	OK, Pass = passed		Fail = entspricht nicht Prüfgrundlage		Fail = failed		N/A = nicht anwendbar		N/A = not applicable
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