



C E R T I F I C A T E

Certificate registration number: P2P.2304.571.1.C6

Certificate holder: Renesas Electronics Corporation

Platform designation: R9A06G061GNP,
Hardware version R9A06G061GNP,
Firmware version 4.06.00

Certification date: April 27th, 2023

This P2P-PLC ("Point-to-Point") certificate indicates the above-mentioned platform successfully completed certification testing with regards to the G3-Alliance reference specification 06/2021.

This certificate applies to certification profile FCC Multipurpose Worldwide but only covers the PHY and MAC layers of the G3-PLC protocol. The optional feature coherent mode of the G3-PLC protocol is also covered by this certification.

Test cases have been performed as described in the test report referred to below. This certificate is granted on account of tests conducted by TÜV Rheinland in Yokohama, Japan in April 2023. The results and remarks can be found in the complete test report.

Applied tests	Performed by	Document evidence
Conformance, interoperability and performance testing according to the test specification referenced by the test report	TÜV Rheinland Japan	JP23HG00 001

The device tested is a P2P-PLC platform: a solution providing an implementation of the G3-PLC specification. The P2P-PLC certificate is issued for the part of the platform running the PHY/MAC layers.

The certificate is only applicable to the platform described above and permits the use of the P2P-PLC™ logo as laid down in the G3-Alliance 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, April 27th 2023

For the G3-Alliance:

Marc Delandre
Chairman

Madeleine Francillard
Chair Certification Program





Annex 1: Protocol Implementation Conformance Statement (PICS)

Feature implementation statement

Name	Value	Description
BAND_PLAN	FCC	Indicates the band-plan supported by the device
FEATURE_COHERENT_MODULATION	TRUE	Indicates whether coherent modulation is supported
FEATURE_D8PSK_MODULATION	TRUE	Indicates whether D8PSK modulation is supported
FEATURE_SECURITY	F1	Indicates the security implemented by the device. Possible values are: F1, F2
FEATURE_ACTIVE_SCAN	TRUE	Indicates whether the active scan process is done by the IUT after power-up
FEATURE_PREAMBLE_COEXISTENCE_MECHANISM	FALSE	Indicates whether the preamble-based coexistence mechanism is used by the IUT
FEATURE_P2P_COMMAND_FRAMES	FALSE	Indicates whether the P2P implementation supports MAC command frames
FEATURE_P2P_TABLES	FALSE	Indicates whether the P2P implementation supports MAC tables







Annex 2: Protocol Implementation Conformance Statement (PICS)

PICS related to performance

The device tested is a P2P-PLC FCC platform. Testing was performed on phase 1. Operating voltage applied for certification testing was AC230V/50Hz .

Name	Value	Unit	Description
<i>PICS related to performance are available through vendor only.</i>			

Annex 3: Copy of test report cover sheet

Test Report – Products <i>Prüfbericht - Produkte</i>		
Test report no.: <i>Prüfbericht-Nr.:</i>	JP23HG00 001	Order No.: 150277246 10 <i>Auftragsnr.:</i>
Client reference no.: <i>Kunden-Referenz-Nr.:</i>	IACS-AF-23-0002	Order date: 2023-04-17 <i>Auftragsdatum:</i>
Client: <i>Auftraggeber:</i>	Renesas Electronics Corporation 5-20-1 Josuihon-cho, 1878-588 Kodaira-shi, Tokyo, Japan	
Test item: <i>Prüfgegenstand:</i>	G3-PLC Platform (FCC)	
Identification / Type no.: <i>Bezeichnung / Typ-Nr.:</i>	R9A06G061GNP	
Order content: <i>Auftrags-Inhalt:</i>	G3-PLC Certification Test	
Test specification <i>Prüfgrundlage:</i>	G3-PLC Alliance - Conformance Tests Suite Specification - v0.37 G3-PLC Alliance - 1to1-PHY-Interoperability-Tests-Specification-v0.14 G3-PLC Alliance - Performance Test Suite Specification - v0.27 G3-PLC Certification Test Procedures version 6.02	
Date of sample receipt: <i>Wareneingangsdatum:</i>	2023-04-17	
Test sample no.: <i>Prüfmuster-Nr.:</i>	A003458069-001	
Testing period: <i>Prüfzeitraum:</i>	2023-04-18 - 2023-04-20	
Place of testing: <i>Ort der Prüfung:</i>	4-25-2 Kita-Yamata, Tsuzuki-ku Yokohama 224-0021, Japan	
Testing laboratory: <i>Prüflaboratorium:</i>	TÜV Rheinland Japan Ltd.	
Test result*: <i>Prüfergebnis*:</i>	Pass	
tested by: <i>geprüft von:</i>	 Martin Zietz	authorized by: <i>genehmigt von:</i>
Date: 2023-04-20 <i>Datum:</i>		 Shuji Saito
Position / Stellung:	Tester	Issue date: 2023-04-21 <i>Ausstellungsdatum:</i>
Other: <i>Sonstiges:</i>		Position / Stellung: Reviewer
Condition of the test item at delivery: <i>Zustand des Prüfgegenstandes bei Anlieferung:</i>	Test item complete and undamaged Prüfmuster vollständig und unbeschädigt	
<small>* Legend: P(ass) = passed a.m. test specification(s) F(ail) = failed a.m. test specification(s) N/A = not applicable N/T = not tested * Legende: P(ass) = entspricht o.g. Prüfgrundlage(n) F(ail) = entspricht nicht o.g. Prüfgrundlage(n) N/A = nicht anwendbar N/T = nicht getestet</small>		
This test report only relates to the above mentioned test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark. <i>Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens.</i>		
TÜV Rheinland Japan Ltd., Global Technology Assessment Center 4-25-2 Kita-Yamata, Tsuzuki-ku Yokohama 224-0021, Japan Mail: g3plc@tuv.com · Web: www.tuv.com/		



Annex 4: Additional details of the certified platform

Platform model name:	R9A06G061GNP
Platform hardware version:	R9A06G061GNP
Platform firmware version:	4.06.00
Exact part number of all the chips running G3-PLC stack in the certified platform:	R9A06G061GNP
What each part number runs: lower MAC (incl. CSMA/CA) or PHY or other parts of the stack:	PHY and MAC
Hardware version of this chip:	R9A06G061GNP
Software version running on this chip:	4.06.00
Internal CPU frequency:	92 MHz

[Handwritten signatures]