



C E R T I F I C A T E

Certificate registration number: G3.2608.820.1.C8

Certificate holder: Renesas Electronics Europe GmbH

Platform designation: REL-G3PLC-CPX3+TRG

Hardware version R9A06G037GNP+RAA604S002GNP, Firmware version 3.08.00

Certification date: August 7th 2026

This certificate indicates the above-mentioned platform successfully completed certification testing with regards to the G3-Alliance G3 Specifications (July 2025) as published for G3-Alliance members on <https://g3-alliance.com/technologies/specifications-user-guidelines/>, plus the three changes listed in Annex 1.

The device is certified for both G3-PLC and G3-Hybrid. The optional features of the G3 protocol coherent mode, support of 12 SYNCP symbols, support of AES-256 for MAC layer ciphering, frequency hopping and parenting are also covered by this certification. This certificate applies to certification profile FCC Multipurpose Worldwide and the device was configured as a PAN-Coordinator.

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 June - July 2026. 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	JP265N0L 001

The device tested is a G3-Hybrid PLC+RF platform: a solution providing an implementation of the G3 specification. 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 August 7th 2026.

The certificate is only applicable to the platform described above and permits the use of the G3-Hybrid 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-Hybrid. 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, August 7th 2026

For the G3-Alliance.

Wassim Ballout
Chairman

Madeleine Francillard
Chair Certification Program

G3-Alliance



Annex 1:

Reference Version for Certification

The G3-Alliance G3 Specifications (July 2025) as published for G3-Alliance members on <https://g3-alliance.com/technologies/specifications-user-guidelines/>, plus the following three changes:

- HYB_C_90_APC oscillation in presence of noise v1.3
- HYB_C_91_Renesas_LN_Duplicate_TTL_v1.0
- HYB_C_92_Renesas_LN_POS_Table_Missing_Elements_v0.1.

Annex 2: Protocol Implementation Conformance Statement (PICS)

Feature implementation statement

Name	Value	Description
BAND_PLAN	FCC	Indicates the band-plan supported by the device
BAND_PLAN_RF	863_Mode#1 / 863_Mode#2 866_Mode#1 / 866_Mode#2 870_Mode#1 / 870_Mode#2 915_Mode#1 / 915_Mode#3 915-a_Mode#1 / 915-a_Mode#4 915-b_Mode#1 / 915-b_Mode#4 915-c_Mode#1 / 915-c_Mode#4 919_Mode#1 / 919_Mode#4 920_Mode#1 / 920_Mode#6 920-b_Mode#1 / 920-b_Mode#4	Indicates the RF band plan(s) supported by the device
FEATURE_PAN_COORDINATOR	TRUE	Indicates whether the device is a PAN-Coordinator (true) or a normal device (false)
FEATURE_COHERENT_MODULATION	TRUE	Indicates whether coherent modulation is supported
FEATURE_D8PSK_MODULATION	TRUE	Indicates whether D8PSK modulation is supported
FEATURE_EAP_SERVER	TRUE	Indicates whether an EAP-PASK server is implemented by the DUT. Applies only if FEATURE_PAN_COORDINATOR = true
FEATURE_ROUTING	TRUE	Indicates whether the routing is implemented by the IUT
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_HYBRID_RF	TRUE	Indicates whether Hybrid PLC+RF feature is supported
FEATURE_FREQUENCY_HOPPING	TRUE	Indicates whether the Frequency Hopping mechanism is supported
FEATURE_PREAMBLE_12_SYNCNP	TRUE	Indicates whether the device supports the transmission and reception of frames with preamble of 12 SYNCNP symbols
FEATURE_PARENTING_DAS	TRUE	Indicates whether the parenting feature is supported for 6LoWPAN routing delegation (DAS registration)
FEATURE_PARENTING_BP	TRUE	Indicates whether the parenting feature for battery-powered device is supported in RF MAC layer
FEATURE_PARENTING_FRAME_PENDING	TRUE	Indicates whether continuous transmission (frame pending) is supported
FEATURE_AES_256_GMK	TRUE	Indicates whether the device supports AES-256 for the MAC Layer ciphering

Annex 3: Protocol Implementation Conformance Statement (PICS)

PICS related to PLC performance

The device tested is a G3-Hybrid PLC+RF FCC platform. Testing was performed on phase 1.
Operating voltage applied for certification testing was AC230V/50Hz .

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

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Annex 3: Protocol Implementation Conformance Statement (PICS)

PICS related to RF performance

The device tested is a G3-Hybrid PLC+RF FCC platform.
Operating voltage applied for certification testing was AC230V / 50Hz.

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

* Note: The values for [HYB_MESH_XXX] have been determined on a fixed RF channel. With Frequency Hopping enabled, these values may be different.

Annex 4:

Copy of test report cover sheet

Test Report – Products
Prüfbericht - Produkte



Test report no.: Prüfbericht-Nr.:	JP265N0L 001	Order No.: Auftragsnr.:	150331285 10	Page 1 of 82 Seite 1 von 82
Client reference no.: Kunden-Referenz-Nr.:	4500276581	Order date: Auftragsdatum:	2024-11-26	
Client: Auftraggeber:	Renesas Electronics Europe GmbH Arcadiastr. 10, 40472 Düsseldorf, Germany			
Test item: Prüfgegenstand:	Platform V8 (FCC PANC)			
Identification / Type no.: Bezeichnung / Typ-Nr.:	REL-G3PLC-CPX3+TRG			
Order content: Auftrags-Inhalt:	G3 Certification Test			
Test specification Prüfgrundlage:	Certification Test Procedures for G3-Alliance Certification - v8.2 G3-Alliance - G3 Conformance Tests Suite Specification - v0.41 G3-Alliance - 1to1 PHY PLC Interoperability Tests Suite Specification - v0.16 G3-Alliance - Performance Test Suite Specification - v0.29 G3-Alliance - G3-Hybrid PLC&RF Conformance Tests Suite Specification - v0.16 G3-Alliance - 1to1 PHY RF Interoperability Tests Suite Specification - v0.9 G3-Alliance - G3-Hybrid PLC&RF Performance Tests Suite Specification - v0.6			
Date of sample receipt: Wareneingangsdatum:	2026-06-22			
Test sample no.: Prüfmuster-Nr.:	A004314800-001			
Testing period: Prüfzeitraum:	2026-06-23 - 2026-07-27			
Place of testing: Ort der Prüfung:	4-25-2 Kita-Yamata, Tsuzuki-ku Yokohama 224-0021, Japan			
Testing laboratory: Prüflaboratorium:	TÜV Rheinland Japan Ltd.			
Test result*: Prüfergebnis*:	Pass			
tested by: geprüft von:		authorized by: genehmigt von:		
Date: 2026-08-04 Datum:	Martin Zietz	Issue date: 2026-08-04 Ausstellungsdatum:	Shuji Saito	
Position / Stellung:	Tester	Position / Stellung:	Authorizer	
Other: Sonstiges:				
Condition of the test item at delivery: Zustand des Prüfgegenstandes bei Anlieferung:	Test item complete and undamaged Prüfmuster vollständig und unbeschädigt			
* Legend: P(ass) = passed a.m. test specification(s) F(ail) = failed a.m. test specification(s) N/A = not applicable NT = not tested				
* Legende: P(ass) = entspricht o.g. Prüfgrundlage(n) F(ail) = entspricht nicht o.g. Prüfgrundlage(n) N/A = nicht anwendbar NT = nicht getestet				
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. 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.				

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 5: Additional details of the certified platform

Platform model name:	REL-G3PLC-CPX3+TRG	
Platform hardware version:	R9A06G037GNP+RAA604S002GNP	
Platform firmware version:	3.08.00	
Exact part number of all the chips running G3 stack in the certified platform:	Chip #1: R9A06G037GNP#AA0	Chip #2: RAA604S002GNP
What each part number runs: lower MAC (incl. CSMA/CA) or PHY or other parts of the stack:	PLC PHY, MAC and 6LowPAN	RF PHY
Hardware version of this chip:	R9A06G037GNP	RAA604S002GNP
Software version running on this chip:	v8.00	n/a
Internal CPU frequency:	138 MHz	n/a

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