G3-Hybrid CERTIFIED FCC

C E R T I F I C A T E

Certificate registration number: G3.2611.834.1.A8

Certificate holder: STMicroelectronics S.r.l

Platform designation: ST8500 + S2-LP
Hardware version EVLKST8500GH-2, Firmware version 7.5.0 - v1A711661 - r2_2_rc0

Certification date: November 3rd 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 four 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-Device.

Test cases have been performed as described in the test report referred to below. This certificate is granted on account of tests conducted by LANPARK in Tauxigny, France in October 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	LANPARK	LAN26AF061

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 November 3rd 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, November 3rd 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 four 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
- CCTT_263 – Trialog_Typo in Link Cost computation for RF noise penalty_v01.

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	FALSE	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	FALSE	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_SYNCP	TRUE	Indicates whether the device supports the transmission and reception of frames with preamble of 12 SYNCP 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	FALSE	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 230V/50Hz .

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

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 230V / 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

G3-Alliance

G3 Hybrid Platform Certification Test Report

Vendor Name	STMicroelectronics S.r.l
Model Name	ST8500 + S2-PL
Serial N°	500F59FFFE31CFD1
HW version	EVLKST8500GH-2
FW version	7.5.0 - v1A711661 - r2_2_rc0



Test Report #	TR_LAN26AF061 Ed.00
Date	October 29, 2026

CONF G3-PLC Tests Specification	version 0.41.	26/03/2026
CONF G3-PLC Tests Suite	version 2.16p3.	08/2026
CONF HYBRID Tests Specification	version 0.16.	04/06/2026
CONF HYBRID Tests Suite	version 1.6p4.	10/2026
IOT G3-PLC Tests Specification	version 0.16.	14/10/2025
IOT G3-PLC Tests Suite	version 2.9p3.	10/2026
IOT HYBRID Tests Specification	version 0.9.	20/03/2026
IOT RF Tests Suite	version 1.6p3.	08/2026
PERF G3-PLC Tests Specification	version 0.29.	17/10/2025
PERF G3-PLC Tests Suite	version 2.16p3.	08/2026
PERF HYBRID Tests Specification	version 0.6.	14/10/2025
PERF HYBRID Tests Suite	version 1.6p4.	10/2026

Test Tool PLC+RF	version 3.4.1	
Tester Modem PLC	version 2.1.0	
Tester Modem RF	G3_RF_Tester_Modem_v19_official.bin	
Certification Test Procedures	version 8.3	14/10/2026

Certification Profile	HYBRID : FCC - RF
Role	PAN Device
Overall Verdict	PASS

Initiation	Date	Description of modification	Ed.
Omar DIOUF	October 29, 2026	Creation	00

	Realised by	Checked by	Approved by
Name	Omar DIOUF	Vincent BUCHOUX	Thierry DOLIGEZ
Date	October 29, 2026	October 29, 2026	October 29, 2026
Sign			

The current report and the test results produced in this current are given for information only and must not be relied on by any third person for any reason.

This report contains an assessment of the apparatus carried out on samples submitted to the laboratory. The results in this report relate only to the items tested and were obtained in the period between the initial receipt of samples and the issue of the report. It should be noted that technical hardware or software modifications on the apparatus may impact the results reported in this document.

Annex 5: Additional details of the certified platform

Platform model name:	ST8500 + S2-LP	
Platform hardware version:	EVLKST8500GH-2	
Platform firmware version:	7.5.0 - v1A711661 - r2_2_rc0	
Exact part number of all the chips running G3 stack in the certified platform:	Chip #1: ST8500	S2-LP
What each part number runs: lower MAC (incl. CSMA/CA) or PHY or other parts of the stack:	PLC PHY, PLC MAC, RF MAC, 6LowPAN	RF PHY
Hardware version of this chip:	RevBB	2.1
Software version running on this chip:	7.5.0 - v1A711661 - r2_2_rc0	n/a
Internal CPU frequency:	Cortex @ 100 MHz, RTE @ 400 MHz	n/a