



C E R T I F I C A T E

Certificate registration number: G3.2409.626.1.C7

Certificate holder: Microchip Technology Inc.

Platform designation: SAMD20+PLx60,
Hardware version SAMD20-XPRO + PL460-EK REV 4,
Firmware version SE G3 v1.0

Certification date: September 30th 2024

This certificate indicates the above-mentioned platform successfully completed certification testing with regards to the G3-Alliance reference specification ITU G.9903 (08-2017) including Amendment 1 (05/21), Amendment 2 (03/23) and Corrigendum 1 (03/23), as published on <https://www.itu.int/rec/T-REC-G.9903>.

The certificate applies to certification profile FCC Multipurpose Worldwide and the device was configured as a PAN-Device. The optional features of the G3 protocol coherent mode and support of 12 SYNCP symbols are 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 LANPARK in Tauxigny, France in August 2024. 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	LAN24AF041

The device tested is a G3-PLC 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 September 30th 2024.

The certificate is only applicable to the platform described above and permits the use of the G3-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, September 30th 2024

For the G3-Alliance:

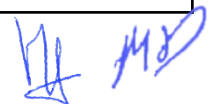

Marc Delandre
Chairman

Madeleine Francillard
Chair Certification Program



Annex 2: Protocol Implementation Conformance Statement (PICS)

Name	Value	Description
BAND_PLAN	FCC	Indicates the band-plan supported by the device
BAND_PLAN_RF	n/a	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	FALSE	Indicates whether Hybrid PLC+RF feature is supported
FEATURE_FREQUENCY_HOPPING	FALSE	Indicates whether the Frequency Hopping mechanism is supported
FEATURE_PREAMBLE_12_SY_NCP	TRUE	Indicates whether the device supports the transmission and reception of frames with preamble of 12 SYNCP symbols





Annex 3: Protocol Implementation Conformance Statement (PICS)

PICS related to PLC performance

The device tested is a G3-PLC FCC platform. Testing was performed on phase 1. Operating voltage applied for certification testing was 230V/50Hz .

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

Handwritten signature

Annex 4: Copy of test report cover sheet



G3-PLC Certification Test Report

Microchip Technology Inc.	SAMD20+PLx60 HW:SAMD20-XPRO + PL460-EK REV 4 FW: SE G3 v1.0	
LAN24AF041	Ed.00	August 20, 2024
		Page 1/48

G3-Alliance G3-PLC Platform Certification Test Report

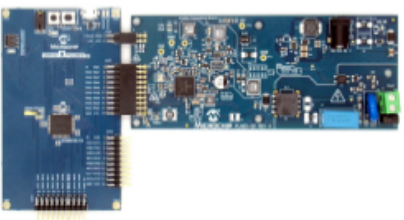
Vendor Name **Microchip Technology Inc.**
 Model Name **SAMD20+PLx60**
 Serial N° **RYN000351**
 HW version **SAMD20-XPRO + PL460-EK REV 4**
 FW version **SE G3 v1.0**

Test Report # **TR_LAN24AF041 Ed.00**
 Date **August 20, 2024**




CONF Tests Specification	version 0.39.	06/06/2023
CONF Tests Suite	version 2.15p3.	08/2024
IOT Tests Specification	version 0.15.	06/06/2023
IOT Tests Suite	version 2.8p1.	10/2023
PERF Tests Specification	version 0.28.	06/09/2023
PERF Tests Suite	version 2.15p3.	08/2024

Test Tool **version 3.3.1**
 Tester Modem **version 2.0.1**
 Certification Test Procedures **version 7.2** 20/12/2023

Certification Profile **C (FCC)**
 Role **PAND**
 Overall Verdict **PASS**



Initiation	Date	Description of modification	Ed.
Omar DIOUF	August 20, 2024	Creation	00

	Realised by	Checked by	Approved by
Name	Omar DIOUF	Vincent BUCHOUX	Thierry DOLIGEZ
Date	August 20, 2024	August 20, 2024	August 20, 2024
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:	SAMD20+PLx60	
Platform hardware version:	SAMD20-XPRO + PL460-EK REV 4	
Platform firmware version:	SE G3 v1.0	
Exact part number of all the chips running G3-PLC stack in the certified platform:	Chip #1: MPL460A	Chip #2: ATSAMD20J18
What each part number runs: lower MAC (incl. CSMA/CA) or PHY or other parts of the stack:	PLC PHY + PLC lower MAC	PLC MAC & 6LowPAN
Hardware version of this chip:	A	E
Software version running on this chip:	36.01.05	SE G3 v1.0
Internal CPU frequency:	216 MHz	48 MHz