



# C E R T I F I C A T E

**Certificate registration number:** G3.2106.444.1.C5

**Certificate holder:** Microchip Technology Inc.

**Platform designation:** PL360G55CF+ATREB215,  
Hardware version PL360G55CF-EK v1+ATREB215-XPRO-A,  
Firmware version G3\_v2.0.0

**Certification date:** June 7<sup>th</sup>,2021

This certificate indicates the above mentioned platform successfully completed certification testing with regards to the reference specification ITU G.9903 (08-2017). The optional features Hybrid PLC&RF and coherent mode of the G3-PLC protocol are also covered by this certification.

The reference version for the optional hybrid feature is the G3-PLC Hybrid PLC&RF companion specification v0.11 (31-07-2020). The 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 Laboratoire des Applications Numériques (LAN) in Tauxigny, France in May 2021. 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	Laboratoire des Applications Numériques (LAN)	LAN21AF021

The device tested is a G3-PLC platform: a solution providing an implementation of the G3-PLC 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 June 7<sup>th</sup>, 2021.

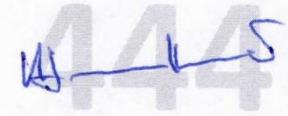
The certificate is only applicable to the platform described above and permits the use of the G3-PLC™ logo as laid down in the G3-PLC logo license agreement.

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 7<sup>th</sup> 2021

For the G3-PLC 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	Indicate the band-plan supported by the device.
BAND_PLAN_RF	863-870 MHz, mode #1	Indicate the RF band-plan.
FEATURE_HYBRID_RF	TRUE	Indicate if Hybrid PLC&RF feature is supported.
FEATURE_PAN_COORDINATOR	FALSE	Indicate if the device is a PAN-Coordinator (true) or a normal device (false).
FEATURE_COHERENT_MODULATION	TRUE	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	TRUE	True / False
FEATURE_ROUTING	TRUE	Indicate if the routing is implemented by the IUT.
FEATURE_SECURITY	F1	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.





# Annex 2: Protocol Implementation Conformance Statement (PICS)

## PICS related to performance

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

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

# Annex 3: Copy of test report cover sheet



**G3-PLC Certification Test Report**

Microchip Technology Inc.	PL360G55CF+ATREB215 HW: PL360G55CF-EK v1+ATREB215-XPRO-A FW: G3_v2.0.0
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## G3-PLC Hybrid Platform Certification Test Report

Vendor Name            **Microchip Technology Inc.**  
 Model Name            **PL360G55CF+ATREB215**  
 Serial N°                **ZAR200210100**  
 HW version             **PL360G55CF-EK v1+ATREB215-XPRO-A**  
 FW version             **G3\_v2.0.0**

Test Report #          **TR\_LAN21AF021 Ed.00**  
 Date                     **June 3, 2021**

CONF G3-PLC Tests Specification	version 0.32.	15/03/2021
CONF G3-PLC Tests Suite	version 2.11.p2.	04/2021
CONF HYBRID Tests Specification	version 0.7.	15/03/2021
CONF HYBRID Tests Suite	version 1.2.p3.	05/2021
IOT G3-PLC Tests Specification	version 0.13.	28/12/2018
IOT G3-PLC Tests Suite	version 2.6.p2.	03/2021
IOT HYBRID Tests Specification	version 0.4.	15/03/2021
IOT RF Tests Suite	version 1.2.p1.	03/2021
PERF G3-PLC Tests Specification	version 0.27.	05/03/2019
PERF G3-PLC Tests Suite	version 2.11.p2.	04/2021



Test Tool PLC	version 2.3	
Tester Modem PLC	version 2.0	
Test Tool PLC+RF	version 3.1	
Tester Modem PLC+RF	version 6	
Certification Test Procedures	version 2.0	12/04/2021

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

Initiation	Date	Description of modification	Ed.
Omar DIOUF	June 3, 2021	Creation	00

	Realised by	Checked by	Approved by
<b>Name</b>	Omar DIOUF	Vincent BUCHOUX	Thierry DOLIGEZ
<b>Date</b>	June 3, 2021	June 3, 2021	June 3, 2021

<b>Sign</b>			
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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 4: Additional details of the certified platform

<b>Platform model name:</b>	PL360G55CF+ATREB215		
<b>Platform hardware version:</b>	PL360G55CF-EK v1+ATREB215-XPRO-A		
<b>Platform firmware version:</b>	G3_v2.0.0		
<b>Exact part number of all the chips running G3-PLC stack in the certified platform:</b>	Chip #1: PL360B	Chip #2: ATSAMG55J19-MU	Chip #3: AT86RF215
<b>What each part number runs: lower MAC (incl. CSMA/CA) or PHY or other parts of the stack:</b>	PLC PHY + PLC lower MAC	PLC MAC & RF MAC & 6LowPAN	RF PHY
<b>Hardware version of this chip:</b>	B	B	V3
<b>Software version running on this chip:</b>	36.02.05	G3_v2.0.0	V3
<b>Internal CPU frequency:</b>	216 MHz	96 MHz	26 MHz

*[Handwritten signatures]*