



C E R T I F I C A T E

Certificate registration number: G3.1508.046.1.A

Certificate holder: STMicroelectronics S.r.l.

Platform designation: STM32F4-NaPoLi-1,
Hardware version motherboard: STM32F4-PLM rev2.0, daughterboard: ST-PLC-AFE_DE v1.0,
Firmware version PACK A2.2.0

Certification date: August 7th, 2015

This certificate indicates the above mentioned platform successfully completed certification testing with regards to the reference specification ITU G.9903 (02-2014) plus the changes listed in the annex to this certificate. The optional feature coherent mode of the G3-PLC protocol is also covered by this certification.

The certificate applies to certification profile Metering Cenelec A 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 July 2015. The results and remarks can be found in the complete test report.

Table with 3 columns: Applied tests, Performed by, Document evidence. Row 1: Conformance and interoperability testing according to the test specification referenced by the test report, Laboratoire des Applications Numériques (LAN), TR_LAN15AF041

The device tested is a G3-PLC platform: a solution providing an implementation of the G3-PLC specification. This certificate is valid from August 7th, 2015.

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. The certificate may only be reproduced in full.

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, August 7th, 2015

For the G3-PLC Alliance:

Handwritten signature of Marc Boillot

Marc Boillot
Chairman

Handwritten signature of Madeleine Francillard

Madeleine Francillard
Chair Certification Program





Annex 1: Reference Version for Certification

The reference version for this certificate is published in 'Narrowband OFDM PLC specifications for G3-PLC network, October 2014'.

The reference version for this certification is:

ITU-T G.9903 (02-2014)

- + CCTT #24-25-30: Implementation of MAC security (anti-replay) solution F1
- + CCTT #61 : ADPM-Buffer behavior clarification
- + CCTT #143: AC Phase Detection v2
- + CCTT #144: Hop Limit usage during route repair v3
- + CCTT #145: Value of RCCoord when the node is at adpMaxHops hops from the coordinator
- + CCTT #146: Pilot tone generation
- + CCTT #147: Link-cost computation for Path discovery v2
- + CCTT #148: Path discovery frame routing v3
- + CCTT #152: Scrambler reset
- + CCTT #154: Clarification of PANCount and PANDescriptor
- + CCTT #156: Clarification of ADPM-NETWORK-STATUS.indication
- + CCTT #157: Interleaver Equation v2
- + CCTT #158: Unicast Routing Process
- + CCTT #159: Correct the windowing function description
- + CCTT #160: Clarify 16QAM quantisation and optionality
- + CCTT #161: Correct aMaxFrameSize and aMinFrameSize for FCC/ARIB bandplans
- + CCTT #162: Interleaver co-prime number clarification v2
- + CCTT #163: CRC5 and CRC8 packing order
- + CCTT #164: Route Repair v2
- + CCTT #165: Clarification Neighbour Table v2
- + CCTT #167: HOP COUNT metric identifier v2
- + CCTT #169: Clarification on PLME_GET v4
- + CCTT #170: Clarification to Frame Counter Handling Mechanism v2
- + CCTT #173: Clarification of LOADng mechanism used to detect bidirectional links



Annex 2: Protocol Implementation Conformance Statement (PICS)

Feature implementation statement

| Name | Value | Description |
|-----------------------------|-----------|---|
| BAND_PLAN | CENELEC A | Indicate the band-plan supported by the device. |
| 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 |

Annex 3: Copy of test report cover sheet



G3-PLC Certification Test Report

STM
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STM32F4-NAPOLi-1 rev 9.0 rev based STM32F4-PLM rev 2.0 Daughter Board : ST-PLC-AFE_DE v1.0 FW : PACK A2 2.0

G3-PLC
Alliance

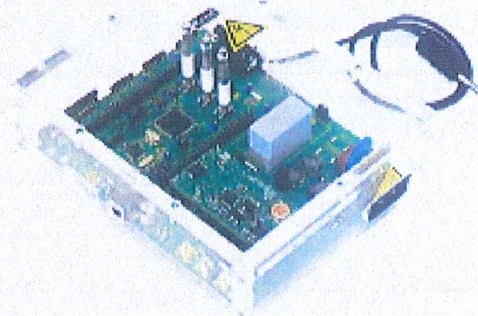
G3-PLC Platform Certification Test Report

Vendor Name **STM**
Model Name **STM32F4-NAPOLi-1**
Serial N° **D5**
HW version **Mother Board : STM32F4-PLM rev2.0**
Daughter Board : ST-PLC-AFE_DE v1.0
PACK A2 2.0
FW version
Test Report # **TR_LAN15AF041 Ed.00**
Date **August 4, 2015**

CONF Tests Specification **version 0.14. 19/11/2014**
CONF Tests Suite **version 1.10. 05/2015**
IQT Tests Specification **version 0.6. 12/12/2014**
IQT Tests Suite **version 1.4. 05/2015**

Test Tool **version 1.6**
Tester Modem **version 1.09**
Certification Test Procedures **version 1.4 10/06/2015**

Certification Profile **A (GENELEC A)**
Role **PAN Device**
Overall Verdict **PASS**



| Initiation | Date | Description of modification | Ed. |
|-------------|--------------------|-----------------------------|--------------------|
| Omar DJOUF | August 4, 2015 | Creation | 01 |
| Name | Realised by | Checked by | Approved by |
| Date | Omar DJOUF | Vincent BUCCHIGLIOSI | Tierry DOLIGEZ |
| | August 4, 2015 | August 4, 2015 | August 4, 2015 |
| Sign | | | |