



C E R T I F I C A T E

Certificate registration number: G3.2609.828.2.A7

Certificate holder: SHENZHEN STAR INSTRUMENT CO.,LTD.

Product designation: TJ40

Hardware version MH541, Firmware version V7.00

Certification date: September 29th 2026

This certificate indicates the above-mentioned product 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> 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, frequency hopping and support of 12 SYNCP symbols are also covered by this certification. The certificate applies to certification profile CENELEC A 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 LANPARK in Tauxigny, France in August – September 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	LAN26AF046

The device tested is a G3-Hybrid PLC+RF CENELEC A 3-phase Data Concentrator. The product is equipped with the G3-Alliance certified platform TJ40 with certificate no. G3.2609.827.1.A7. 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 29th 2026.

The certificate is only applicable to the product 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, September 29th 2026

For the G3-Alliance:

Wassim Ballout
Chairman

Madeleine Francillard
Chair Certification Program

G3-Alliance

Annex 1:

Reference Version for Certification

The reference version for this certificate is 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>, plus the following three changes:

- HYB_C_067: Clarification on Media Probing for PLC with valid tone-map
- HYB_C_068: Guard time for broadcast and slot alignment
- HYB_C_069: 802.15.4 Cor1 Reference

Annex 2: Protocol Implementation Conformance Statement (PICS)

Feature implementation statement

Name	Value	Description
BAND_PLAN	CENELEC A	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_EAP_SERVER	TRUE	Indicates whether an EAP-PASK server is implemented by the DUT Applies only if FEATURE_PAN_COORDINATOR = true
FEATURE_D8PSK_MODULATION	TRUE	Indicates whether D8PSK modulation is supported
FEATURE_ROUTING	TRUE	Indicates whether 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_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 (1/2)

The device tested is a G3-Hybrid CENELEC A 3-phase Data Concentrator, communicating on 3 phases. Testing was performed on phase 1.
Operating voltage applied for certification testing was 3 x 230V / 50 Hz.

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 PLC performance (2/2)

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 CENELEC A 3-phase Data Concentrator.
Operating voltage applied for certification testing was 3 x 230V / 50 Hz.

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-PLC Certification Test Report

SHENZHEN STAR
INSTRUMENT

TJ40 HW:MH541 FW: V7.00

LAN26AF046

Ed.00

September 24, 2026

Page 1/70

G3-Alliance

G3 Hybrid Product Certification

Test Report

Vendor Name

SHENZHEN STAR INSTRUMENT CO.,LTD.

Model Name

TJ40

Serial N°

038500001

HW version

MH541

FW version

V7.00

Test Report #

TR_LAN26AF046 Ed.00

Date

September 24, 2026

CONF G3-PLC Tests Specification

version 0.39

06/06/2023

CONF G3-PLC Tests Suite

version 2.15.p4.

08/2025

CONF HYBRID Tests Specification

version 0.13.

29/09/2023

CONF HYBRID Tests Suite

version 1.5.p9.

08/2025

IOT G3-PLC Tests Specification

version 0.15.

06/06/20

IOT G3-PLC Tests Suite

version 2.8p1.

10/2023

IOT HYBRID Tests Specification

version 0.8.

06/06/2023

IOT RF Tests Suite

version 1.5.

10/2023

PERF G3-PLC Tests Specification

version 0.28.

06/06/2023

PERF G3-PLC Tests Suite

version 2.15.p4.

08/2025

PERF HYBRID Tests Specification

version 0.5.

24/12/2024

PERF HYBRID Tests Suite

version 1.5.p9.

08/2025

Test Tool PLC+RF

version 3.3.1

Tester Modem PLC

version 2.0.1

Tester Modem RF

G3_RF_Tester_Modem_v17_official

Certification Test Procedures

version 7.2

20/12/2023

Certification Profile

HYBRID : CENELEC A - RF

Role

Data Concentrator

Overall Verdict

PASS



Initiation	Date	Description of modification	Ed.
Omar DIOUF	September 24, 2026	Creation	00
Name	Realised by	Checked by	Approved by
	Omar DIOUF	Vincent BUCHOUX	Thierry DOLIGEZ
Date	September 24, 2026	September 24, 2026	September 24, 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.