C E R T I F I C A T E

Certificate registration number: G3.1901.272.1.B

Certificate holder: Qingdao Eastsoft Communication Technology Co., Ltd.

Platform designation: ESPLC-ARIB,
Hardware version ESPLCS1655-G3(v1.01), Firmware version ESG3SC-V000101

Certification date: January 11th, 2019

This certificate indicates the above mentioned platform successfully completed certification testing with regards to the reference specification ITU G.9903 (05-2013) plus the changes listed in the annex to this certificate.

The certificate applies to certification profile ARIB Route B and the device was configured as a PAN-Coordinator.

Test cases have been performed as described in the test reports referred to below. This certificate is granted on account of tests conducted by TÜV Rheinland in Yokohama, Japan in December 2018. The results and remarks can be found in the complete test reports.

Applied tests	Performed by	Document evidence
Conformance and interoperability testing according to the test specification referenced by the test report	TÜV Rheinland Japan	50196263 001

The device tested is a G3-PLC platform: a solution providing an implementation of the G3-PLC specification. This certificate is valid from January 11th, 2019.

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, January 11th, 2019
For the G3-PLC Alliance:

Bernard Lassus
Chairman

Madeleine Francillard
Chair Certification Program

G3-PLC Alliance

Annex 1:
Reference Version for Certification

The reference version for this certificate is:

Recommendation ITU-T G.9903 (05-2013)
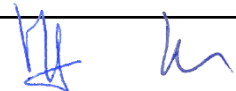
+ CCTT_121: Correction of Beacon payload encoding

+ CCTT_122: Japan HEMS requirements for ID_S and ID_P

+ ETT_DLL30 and ETT_DLL32: Routing disabling

+ ETT_PHY14: Interleaver fix (conditional swapping)

+ CCTT_171: Implementation of MAC security solution F2

Annex 2: Protocol Implementation Conformance Statement (PICS)

Feature implementation statement

Name	Value	Description
BAND_PLAN	ARIB	Indicate the band-plan supported by the device.
FEATURE_PAN_COORDINAT OR	TRUE	Indicate if the device is a PAN-Coordinator (true) or a normal device (false)
FEATURE_COHERENT_MOD ULATION	FALSE	Indicate if coherent modulation is supported
FEATURE_EAP_SERVER	TRUE	Indicate if an EAP-PASK server is implemented by the DUT. Apply only if FEATURE_PAN_COORDINATOR=true
FEATURE_D8PSK_MODULAT ION	FALSE	True / False
FEATURE_ROUTING	FALSE	Indicate if the routing is implemented by the IUT
FEATURE_SECURITY	F2	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_COEX ISTENCE_MECHANISM	FALSE	Indicate if the preamble-based coexistence mechanism is used by the IUT.

Annex 3:
Copy of test report cover sheet

Produkte
Products

TÜVRheinland®

Prüfbericht-Nr.: *Test Report No.:*	**50196263 001**	Auftrags-Nr.: *Order No.:*	**214105221**	Seite 1 von *of* 17 *Page* 1 von *of* 17

Kunden Referenz-Nr.: *Client Reference No.:*	**N/A**	Auftragsdatum: *Order date:*	**2018-10-31**

Auftraggeber:
Client:
Qingdao Eastsoft Communication Technology Co., Ltd.
16A Shangqing Road, Qingdao 266023, China

Gegenstand der Prüfung:
Test item:
G3-PLC ARIB Platform (PAN Coordinator)

Bezeichnung / Typ-Nr.:
Identification / Type No.:
ESPLC-ARIB

Auftrags-Inhalt:
Order content:
G3-PLC Certification Test

Prüfgrundlage:
Test specification:
G3-PLC Conformance L1-L2 Tests Suite Specification v0.25
G3-PLC 1-to-1 Interoperability Tests Suite Specification v0.10
G3-PLC Certification Test Procedures v1.12

Wareneingangsdatum: *Date of receipt:*	**2018-12-10**
Prüfmuster-Nr.: *Test sample No.:*	**A000853699**
Prüfzeitraum: *Testing period:*	**2018-12-13**
Ort der Prüfung: *Place of testing:*	**TÜV Rheinland Japan Ltd.** Global Technology Assessment Center 4-25-2 Kita-Yamata, Tsuzuki-ku Yokohama 224-0021, Japan
Prüflaboratorium: *Testing laboratory:*	TÜV Rheinland Japan Ltd.
Prüfergebnis: *Test results:*	*The test item passed the* *test specification(s).*

Geprüft von
Tested by:

Kontrolliert von
Reviewed by:

2018-12-17, Tam Tran Thanh			2018-12-21, Atsuhiro Endo		
Datum *Date*	Name / Stellung *Name / Position*	Unterschrift *Signature*	Datum *Date*	Name / Stellung *Name / Position*	Unterschrift *Signature*

Sonstiges / *Other Aspects:*

Zustand des Prüfgegenstandes bei Anlieferung:
Condition of the test item at delivery:
Prüfmuster vollständig und unbeschädigt
Test item complete and undamaged

*Legende: 1 = sehr gut 2 = gut 3 = befriedigend 4 = ausreichend 5 = mangelhaft
P(ass) = entspricht o.g. Prüfgrundlage(n) F(ail) = entspricht nicht o.g. Prüfgrundlage(n) N/A = nicht anwendbar N/T = nicht getestet
Legend: 1 = very good 2 = good 3 = satisfactory 4 = sufficient 5 = poor
P(ass) = passed a.m. test specification(s) F(ail) = failed a.m. test specification(s) N/A = not applicable N/T = not tested*

Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens.
This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark

Annex 4: Additional details of the certified platform

Platform model name:	ESPLC-ARIB
Platform hardware version:	ESPLCS1655-G3(v1.01)
Platform firmware version:	ESG3SC-V000101
Exact part number of all the chips running G3-PLC stack in the certified platform:	SSC1655NQ
What each part number runs: lower MAC (incl. CSMA/CA) or PHY or other parts of the stack:	PHY, MAC & 6LOWPAN
Hardware version of this chip:	Version A
Software version running on this chip:	ESG3SC-V000101
Internal CPU frequency:	20 MHz