

CERTIFICATE

EU -TYPE EXAMINATION

Module B

No. 221299076

issued in accordance with Annex III to Directive 2014/53/EU

Applicant: AJAX SYSTEMS CYPRUS HOLDINGS LTD
Ifigeneias, 17
Strovolos, 2007
Nicosia, Cyprus

Manufacturer: AJAX SYSTEMS MANUFACTURING LLC
Sklyarenka, 5
Kyiv, 04073 Ukraine

Product: **Security control panel**
the product specification and the technical documentation identification are listed
in the annex to this certificate

Trade mark: **AJAX**

Model: **Ajax Hub 2 (4G)**

Hardware version: **HB2.003.MBR.001v1**

Firmware version: **EU**

Software version: **2.12.2**

With this certificate TSÚ Piešťany, š.p. as Notified Body confirms the conformity of the stated type of product with the essential requirements of the following Directive as amended:

2014/53/EU Radio equipment (RED)

Essential Requirement: **Article 3.1(a) Safety**
Article 3.1(a) Health
Article 3.1(b) EMC
Article 3.2 Radio

The technical design of the assessed type has been verified on the technical documentation presented by the manufacturer according to Annex III, Module B of the Directive.

Certificate has been issued on the basis of this document: Conformity assessment report No. 220500044 dated 15.03.2022



the manufacturer shall affix the CE marking to each item of radio equipment that is in conformity with the type described in the EU-type examination certificate and meets the requirements of all applicable EC/EU Directives

Issue date: 16.03.2022
Expiry date: 15.03.2027
Issue: 1




Ing. Dušan HANKO
on behalf of TSU Piešťany, š.p., NB 1299

Standards used for the conformity assessment

Article of directive 2014/53/EU	Harmonized Standards	Other Standards
3.1(a) Safety	EN 62368-1:2014/AC:2015	EN 62368-1:2014/A11:2017
3.1(a) Health	EN 62311:2008	
3.1(b) EMC	EN 55035:2017/A11:2020	EN 301 489-1 V2.2.3 EN 301 489-3 V2.1.1 EN 301 489-52 V1.1.2
3.2 Radio	EN 300 220-2 V3.1.1 EN 301 511 V12.5.1 EN 301 908-1 V13.1.1 EN 301 908-2 V13.1.1 EN 301 908-13 V13.1.1	EN 300 220-1 V3.1.1

As far as the essential requirements indicated, the Notified Body of TSÚ Piešťany, š.p. confirms, that the technical design of the product meets the essential requirements of the Directive 2014/53/EU Article 3.

Remarks:

This certificate EU-type examination does not include the assessment of the manufacturing product and does not use the identification number of the Notified Body TSÚ Piešťany, š.p.

The rules for use of this certificate

1. Based on Annex III, Module C of Directive 2014/53/EU, the manufacturer shall take all measures necessary so that the manufacturing process and its monitoring ensure conformity of the manufactured radio equipment with the approved type described in the EU-type examination certificate.
2. Validity of this EU-type examination certificate is limited to the versions of the applied standards. If versions of standards change or modifications are made to the product, this certificate will be invalidated.
3. It is forbidden to modify, amend or rewrite the data in the certificate
4. The holder of this certificate must keep the conditions specified in the General Rules for Product Certification, which are freely available at www.tsu.eu



Annex to the certificate EU-type examination No. 221299076

Product Radio Specifications

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Transceiver module 1	
Manufacturer name:	HOPE Microelectronics
Product designation.:	RFM 66
Product description:	ISM band RF transceiver module optimized for use in the 868 MHz band
Details of operation	
Frequency band:	868.0 – 868.6 MHz
Frequency channels:	868.1, 868.5 MHz
Transmit Power:	< 14 dBm (conducted)
Modulation:	GFSK

Antenna Designation:	1. Integrated inverted L antenna, gain: -5 dBi 2. Integrated inverted F antenna, gain: -6 dBi
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Transceiver module 2	
Manufacturer name:	HOPE Microelectronics
Product designation.:	RFM 66
Product description:	ISM band RF transceiver module optimized for use in the 868 MHz band
Details of operation	
Frequency band	868.0 – 868.6 MHz
Frequency channels	868.3 MHz
Transmit Power:	< 14 dBm (conducted)
Modulation:	GFSK

Antenna designation:	1. Integrated inverted F antenna, gain: -6 dBi 2. Integrated inverted F antenna, gain: -6 dBi
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Transceiver module 3	
Manufacturer name:	Quectel Wireless Solutions.
Product Designation.:	EC21-EC
Hardware version:	R1.0
Software version:	EC21ECGAR06A05M1G
Product Description:	Quectel EC21 is a series of LTE category 1 module optimized specially for M2M and IoT applications.
Details of operation	
Operating frequency range:	Maximum output power:
GSM 900: 880-915, 925-960 MHz	30 dBm
GSM 1800: 1710-1785, 1805-1880 MHz	30 dBm
WCDMA Band I: 1920-1980, 2110-2170 MHz	24 dBm
WCDMA Band VIII: 880-915, 925-960 MHz	24 dBm
LTE FDD Band 1: 1920-1980, 2110-2170 MHz	23 dBm
LTE FDD Band 3: 1710-1785, 1805-1880 MHz	23 dBm
LTE FDD Band 7: 2500-2570, 2620-2690 MHz	23 dBm
LTE FDD Band 8: 880-915, 925-960 MHz	23 dBm
LTE FDD Band 20: 832-862, 791-821 MHz	23 dBm
LTE FDD Band 28A: 703-733, 758-788 MHz	23 dBm

Antenna Designation:	Integrated Planar Multiband Antenna, gain: -1dBi
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Annex to the certificate EU-type examination

No. 221299076

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Technical Documentation Identification

The following identified Technical Documentation has been reviewed and has been used to determine if the design of the mentioned radio equipment meets the essential requirements:

- Technical description, user manual, data of used antennas
- Analysis and assessment of the risks elaborated by the manufacturer
- Test report No.: 14736-22 issued 04.02.2022 by Ukrainian State Centre of Radio Frequencies, Test Centre UKRCHASTOTNAGLIAD, 151, Ave. Peremogy, Kyiv, 03179, Ukraine on the product Security control panel, model Ajax Hub 2 (4G), manufacturer "AJAX SYSTEM MANUFACTURING" LLC, Sklyarenka, 5, Kyiv, 04073, Ukraine.
- Test report No.: 14748-22 issued 04.02.2022 by Ukrainian State Centre of Radio Frequencies, Test Centre UKRCHASTOTNAGLIAD, 151, Ave. Peremogy, Kyiv, 03179, Ukraine on the product Security control panel, model Ajax Hub 2 (4G), manufacturer "AJAX SYSTEM MANUFACTURING" LLC, Sklyarenka, 5, Kyiv, 04073, Ukraine.
- Test report No.: 14737-22 issued 04.02.2022 by Ukrainian State Centre of Radio Frequencies, Test Centre UKRCHASTOTNAGLIAD, 151, Ave. Peremogy, Kyiv, 03179, Ukraine on the product Security control panel, model Ajax Hub 2 (4G), manufacturer "AJAX SYSTEM MANUFACTURING" LLC, Sklyarenka, 5, Kyiv, 04073, Ukraine.
- Test report No.: 14747-22 issued 04.02.2022 by Ukrainian State Centre of Radio Frequencies, Test Centre UKRCHASTOTNAGLIAD, 151, Ave. Peremogy, Kyiv, 03179, Ukraine on the product Security control panel, model Ajax Hub 2 (4G), manufacturer "AJAX SYSTEM MANUFACTURING" LLC, Sklyarenka, 5, Kyiv, 04073, Ukraine.
- RF test report no. R2101A0070-R1, dated February 26, 2021, issued by TA Technology (Shanghai) Co, No.145 , Jingtang Rd, Tangzhen Industry Park, Pudong Shanghai , China on the product: LTE module, brand: Quectel, model: EC21-EC, SW version: EC21ECGAR06A05M1G, manufacturer: Quectel wireless Solutions Co, Ltd., Building 5, Shanghai Business Park Phase III (Area B), No.1016 Tianlin Road, Minhang District, Shanghai, China 200233
- RF test report no. R2101A0070-R2, dated March 21, 2021, issued by TA Technology (Shanghai) Co, No.145 , Jingtang Rd, Tangzhen Industry Park, Pudong Shanghai , China on the product: LTE module, brand: Quectel, model: EC21-EC, SW version: EC21ECGAR06A05M1G, manufacturer: Quectel wireless Solutions Co, Ltd., Building 5, Shanghai Business Park Phase III (Area B), No.1016 Tianlin Road, Minhang District, Shanghai, China 200233
- RF test report no. R2101A0070-R3, dated February 26,2021, issued by TA Technology (Shanghai) Co, No.145 , Jingtang Rd, Tangzhen Industry Park, Pudong Shanghai , China on the product: LTE module, brand: Quectel, model: EC21-EC, SW version: EC21ECGAR06A05M1G, manufacturer: Quectel wireless Solutions Co, Ltd., Building 5, Shanghai Business Park Phase III (Area B), No.1016 Tianlin Road, Minhang District, Shanghai, China 200233

User Manual	<input checked="" type="checkbox"/>
Product Label	<input checked="" type="checkbox"/>
Block diagram	<input checked="" type="checkbox"/>
Circuit Diagram	<input checked="" type="checkbox"/>
BOM	<input checked="" type="checkbox"/>
Operational description	<input checked="" type="checkbox"/>
Risk assessment	<input checked="" type="checkbox"/>
Hardware	<input checked="" type="checkbox"/>
Test reports or Certificates	<input checked="" type="checkbox"/>

The scope of evaluation relates to the submitted documents only.

