



Number: 222340134/AA/00
Issue Date: 22 July 2022
Expiration Date: 31 December 2027
Page 1 of 5

UKCA TYPE EXAMINATION CERTIFICATE (Module B)

In compliance with the procedure specified in M009, Kiwa Ltd. declares as approved body for UKCA 0558 for the Radio Equipment Regulation 2017, that the stated product, complies with the essential requirements, in accordance with part 2 (chapter 1) of Radio Equipment Regulation, as indicated under Annex 1 of this certificate, based on the applicable Technical Standards and Specifications as listed under Annex 2 of this Certificate.

Product description:	AIS Class B SOTDMA transceiver
Trademark:	Ocean Signal
Type designation:	ATB1
Hardware / Software version:	01.00 / 01.00

This certificate is granted to manufacturer:

Name:	Ocean Signal Ltd.
Address:	Unit 1 Ocivan Way
City:	CT9 4NN Margate
Country:	GB

This certificate remains valid as long as the stated product stays in compliance with the essential requirements of the Radio Equipment Regulation 2017.

This certificate has THREE Annexes.

Signed on behalf of Kiwa Ltd.
(UK Approved Body Number 0558)

Ramy Nabod
Product Assessor

CERTIFICATE

Kiwa Gastec
Kiwa House
Malvern View Business Park
Stella Way
Bishops Cleeve
Cheltenham
GL52 7DQ
United Kingdom
T +44 (0)1242 677877
F +44 (0)1242 676506
www.kiwa.co.uk

UK CA



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UKCA Type Examination Certificate (page 2 of 5)

Annex 1 to certificate 222340134/AA/00

General Conditions

For each product to which this type examination relates, it has complied to the essential requirements as follows:

Article 6.1

Radio equipment shall be constructed so as to ensure:

- C (a) The protection of health and safety of persons and of domestic animals and the protection of property, including the objectives with respect to safety requirements set out in Directive 2014/35/EU, but with no voltage limit applying;
- C (b) An adequate level of electromagnetic compatibility as set out in Directive 2014/30/EU.

Article 6.2

- C Radio equipment shall be so constructed that it both effectively uses and supports the efficient use of radio spectrum in order to avoid harmful interference.

Legend

- C = Conform
- NC = Not Conform
- NA = Not applicable (for this equipment)
- NP = Not performed (in this statement)

UKCA Type Examination Certificate (page 3 of 5)

Annex 1 to certificate 222340134/AA/00

- This UKCA-type examination certificate is limited to the Radio Equipment Regulation.
- This UKCA-type examination certificate is part of the Conformity Assessment procedure Module B, as described in annex III of the Radio Equipment Regulation.
- The validity of this UKCA type examination certificate is limited to products, which are equal to the one(s) assessed for this type Examination.
- The manufacturer has to draw up and issue a self Declaration of Conformity, declaring that the product(s) described in this UKCA-type examination certificate, are in compliance with Radio Equipment Regulation 2017 and any other applicable harmonization legislation.
- Each product shall be identified by means of type, batch and/or serial numbers and the name of the manufacturer and/or importer.
- If the equipment is to be modified, Kiwa Ltd. shall be notified immediately. Depending on the modifications, Kiwa Ltd. may have additional examinations carried out in consultation with the applicant.
- Enforcement of a new amending directive voids the validity of this UKCA-type examination certificate.
- In case any referenced standard in this UKCA-type examination certificate is withdrawn or superseded and the presumption of conformity with the essential requirements has ceased, investigation by Kiwa Ltd. is needed to determine the validity of this type examination.

Remarks and observations

The following conditions are applicable:

- The wifi-module ESP-WROOM-02 (manufacturer Espressif Systems (Shanghai) Pte Ltd), which is incorporated in the product, has not been part of the assessment; the module already has received the EU-type examination (certificate number: B2000622) from Notified Body Bay Area Compliance Labs Corp. (NB nr.:1313).

- The GNSS Receiver module L76-L (manufacturer Quectel Wireless Solutions Co., Ltd.), which is incorporated in the product, has not been part of the assessment; the module already has received the RED Module-B (certificate number: RE-17062707) from Notified Body Siemic Milpitas USA (NB nr.:2200).

The module RF compliance standards, which are shown on the Module certificates, have been copied into this certificate.

UKCA Type Examination Certificate (page 4 of 5)

Annex 2 to certificate 222340134/AA/00

Documentation lodged for this type examination

Test Reports:

- TÜV SUD Product Service: 75936859-03, 09 October 2018
- TÜV SUD Product Service: 75936859-05, 12 October 2018
- TÜV SUD Product Service: 75936859-04, 19 October 2018
- TÜV SUD Product Service: 75936859-02, 23 October 2018
- TÜV SUD Product Service: 75936859-01, 26 October 2018
- TÜV SUD Product Service: 071-75936859-000, 03 October 2018
- Ocean Signal Ltd.: TA0016, 07 November 2018

Product Documentation:

- Assembly drawings
- Bill of materials
- Block diagram
- Electrical diagrams
- Internal photos
- External photos
- Manual
- Label and label placement
- Test setup photos

Technical Standards and Specifications

The product is compliant with:

BS EN 62311	May, 2008	
Draft EN 301 489-17	December, 2019	V3.2.2
EN 300 328	July, 2019	V2.2.2
EN 301 489-1	November, 2019	V2.2.3
EN 301 489-19	April, 2019	V2.1.1
EN 303 413	June, 2017	V1.1.1
IEC 60945	August, 2002	Edition 4
IEC 61108-1	July, 2003	2nd Ed.
IEC 62287-2	February, 2017	Ed. 2.0
IEC 62368-1	February, 2014	

Technical features and characteristics

The product includes the following features and characteristics:

GPS receiver

- Operating frequency range: 1575.42 MHz

GLONASS receiver

- Operating frequency range: 1602 MHz (14 channels)

AIS equipment

- Operating frequency range: 156.025 - 162.025 MHz
- Maximum output power: 5W rated
- Class B SOTDMA

IEEE 802.11 b/g/n (20 MHz)

- Operating frequency range: 2412 - 2472 MHz (13/9 channels)
- Maximum output power: 19.29 dBm EIRP average (calculated)
- Maximum antenna gain: 2.0 dBi

UKCA Type Examination Certificate (page 5 of 5)

Annex 3 to certificate 222340134/AA/00

The product as described in this type examination includes the following type designations:

- Product description: AIS Class B SOTDMA transceiver
- Trademark: Ocean Signal
- Type designation: ATB1
- Hardware version: 01.00
- Software version: 01.00