# EU-TYPE EXAMINATION (MODULE B) CERTIFICATE

## Radio Equipment Directive (RED) 2014/53/EU

### PHOENIX TESTLAB

**Notified Body Number 0700**

Recognised by Bundesnetzagentur

BNetzA-bS-02/51-55

This is to certify that:
PHOENIX TESTLAB did undertake the relevant type examination procedures for the radio equipment identified below which was found to be in compliance with the essential requirements of Radio Equipment Directive (RED) 2014/53/EU subject to any conditions in the annex attached hereto.

| | |
|---|---|
| Certificate No. | 24-111041 - 24-122362 |
| Manufacturer | Alltek Marine Electronics Corp. |
| Address | 14F-2, No. 237, Sec. 1, Datong Rd.,<br>Xizhi Dist., New Taipei City 22161, Taiwan |
| Product Description | AIS Class B transponder, with GPS<br>(McMurdo Smartfind Z603 (M10W): with WLAN option) |
| Brand Name / Model Name | McMurdo Smartfind / Z602 (M10), Z603 (M10W) |

**The radio equipment meets the following essential requirements**

| | |
|---|---|
| Article 3.1 a): Health and Safety | **Conform** |
| Article 3.1 b): Electromagnetic Compatibility | **Conform** |
| Article 3.2: Effective and Efficient Use of Radio Spectrum | **Conform** |
| Article 3.3 g) Access to emergency services | **Conform** |

Date of issue: **2024-07-23** Expiry date: **2029-07-22**

This certificate remains valid unless cancelled or revoked, provided the conditions in the attached annex are complied with. The conditions for the validity of this certificate are listed in the Annex.

The attached Annex forms part of this certificate. This certificate consists of 5 pages.

Seal

Klaus Knörig
23.07.2024

Signed by Klaus Knörig
Notified Body

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# Annex

**Technical description**

| | |
|---|---|
| Frequency Range | 156.025 MHz to 162.025 MHz (AIS Transponder)<br>2412 MHz to 2472 MHz (WLAN)<br>1575.42 MHz (GPS, receive-only) |
| Channel Separation | 25 kHz (AIS Transponder) |
| Modulation scheme | GMSK / FM (AIS Transponder) |
| Transmit Power | 33 dBm ± 1.5 dB conducted (AIS Transponder)<br>19.33 dBm EIRP (WLAN) |
| Hardware Version | M-PCB-B108MBV11 (McMurdo Smartfind Z602 / M10)<br>M-PCB-WFB002V2 (Option for McMurdo Smartfind Z603 / M10W) |
| Software Version | V1.2.8 |
| Operating temperature range | -15°C to +55°C |

**System Components**

| | |
|---|---|
| Main Unit | AIS Class B Transponder |
| VHF antenna | TENTA-11, max. gain 2.86 dBi |
| GPS antenna | GA-22, GA-25 |
| WLAN antenna | MS / 55P006-OOO5-A, max. gain 2,72 dBi |

**Approval documentation**

| | |
|---|---|
| Operator's Manual | Smartfind M10 AIS Class B Transponder User Manual, 21-235-001 Issue 21 |
| Block Diagram | Block Diagram of CAMINO-108 / CAMINO-108W |
| Circuit Diagram | Schematic_M-PCB-B108IOBV1 |
| | Schematic_M-PCB-B108MBV11, 2018-04-11 |
| | Schematic_M-PCB-WFB002V2 |
| Operational Description | Operational Description |
| PCB Layout | PCB layout_M-PCB-B108IOBV1 |
| | PCB layout_M-PCB-B108MBV11, 2018-04-11 |
| | PCB layout_M-PCB-WFB002V2 |
| Parts List | Parts list_M-PCB-B108IOBV1 |
| | Parts list_M-PCB-B108MBV11, 2020-02-10 |
| | Parts list_M-PCB-WFB002V2 |
| Antenna Data Sheet | GPS Antenna GA-22, v1.3<br>GNSS Antenna GA-25, v1.1<br>MS / 55P006-OOO5-A<br>Antennas v1.5 (TENTA-11, GA-22) |

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**Approval documentation**

| | |
|---|---|
| EU Declaration of Conformity | Declaration of Conformity, 2024-06-19 |
| Declaration of compliance Article 10(2) and Article 10(10) | Declaration of Compliance, 2016-09-07 |
| Declaration letters | Declaration of CAMINO-108W Changing Wi-Fi Board, 2024-04-16 |
| | Declaration of Equality for GPS Module EVA-M8M, 2024-04-16 |
| | Declaration of Equality for McMurdo M10 series |
| Risk Assessment | Risk Assessment of McMurdo M10 Series |
| Label | Label drawing M10, M10W |
| External / Internal photos | External and internal photos CAMINO-108, CAMINO-108W |
| Hardware / Software information | Hardware and software versions CAMINO-108, CAMINO-108W |
| TCF Waiver Document | Technical Construction File Waiver Document AIS Class B Transponder, CAMINO-108, CAMINO-108W |
| Description of modifications | Modified area of CAMINO-108/108W, new GNSS receiver |
| | Technical Note: Compatibility Test of CAMINO-108 GPS Function between u-blox AMY-6M and u-blox EVA-M8M, document no. TN-CAMINO-108-GPS-01, Issue 1.0, 2019-12-11 |
| EU-Type Examination Certificates | Based on EU-Type Examination Certificate 24-110680 - 24-121484 issued by the Notified Body PHOENIX TESTLAB GmbH |

**Applied Standards and Test Reports**

| Specification | Laboratory | Test Report Number / Version |
|---|---|---|
| IEC 62368-1 Ed. 4.0 (2023-05) | DEKRA | SN2312003 |
| EN IEC 62311:2020 | SGS Compliance Certification Services Inc. | TMWK2308002842KS |
| EN 301 843-1 V2.1.1<br>EN 301 843-2 V2.1.1 | QuieTek Corporation | 1620048R-RFCEP01V00-A |
| EN 60945 Ed. 4:2002 clauses 9, 10, 12.2 | QuieTek Corporation | 135096R-ITCEP26V01 V2.0 |
| IEC 60945: 2002-08 Clause 9.3 | SGS Compliance Certification Services Inc. | TMXD2309004071DT |
| IEC 60529 Ed: 2.2: 2013 | SGS | HC70065B/2021 |
| IEC 60945: 2002-08 Clause 8.8 | SGS | HC70065C/2021 |
| IEC 60945: 2002-08 Clause 8.2, 8.3, 8.4, 8.7 | SGS | HC70065E/2021 |
| IEC 60945: 2002-08 Clauses 9, 10 | DEKRA | 1720081A-S-CUSTOM |
| IEC 60945 Ed. 4.0:2002 | SGS | HC20045/2017 |
| IEC 60945 Ed. 4.0:2002 | SGS | HC50235A/2018 |
| IEC 60945 Ed. 4.0:2002, Clause 8.7 | SGS | HHD0021A/2016 |
| EN 301 489-1 V2.1.0<br>EN 301 489-3 V2.1.0 | QuieTek Corporation | 1620048R-RFCEP01V00 |

**Applied Standards and Test Reports**

| Specification | Laboratory | Test Report Number / Version |
|---|---|---|
| EN 301 489-1 V2.2.3<br>EN 301 489-17 V3.2.4 | SGS Compliance Certification Services Inc. | TMXD2308003384DE |
| IEC 62287-1 Ed. 2:2010<br>Clause 11 and Annex C.4 | PHOENIX TESTLAB | F130840E1 |
| EN 303 413 V1.2.1 | SGS Compliance Certification Services Inc. | TMWK2109000581KR |
| EN 300 328 V2.1.1 | PHOENIX TESTLAB | F170297E1 |
| EN 300 328 V2.2.2 | PHOENIX TESTLAB | F200955E1 |
| EN 300 328 V2.2.2 | SGS Compliance Certification Services Inc. | TMWK2308002841KR |
| IEC 61108-1 Ed. 2:2003 | BSH | BSH/4543/001/4143083/16 |
| IEC 62287-1 Ed. 2:2010 + A1:2013<br>Clause 12 and Annex C.3 | BSH | BSH/4542/001/4322516/13 |
| ITU-R M.1371-4 (2010)<br>IEC 61162-1 Ed. 4.0:2010<br>IEC 61162-2 Ed. 1.0:1998 | BSH | Certificate No. BSH/4542/001/4322516/13 |
| ITU-R M.1371-5 (2014) | AMEC | B108 Technical Note TN-B108-2020-001, 2020-09-18 |
| IEC 62287-1 Ed. 2:2010 + A1:2013<br>Clauses 10,12,13 and Annex C.3 | PHOENIX TESTLAB | F130840E2 2nd Version |
| IEC 62287-1 Ed. 2.1:2013<br>Clause 10.6.1.3 | PHOENIX TESTLAB | F162340E1 |
| IEC 62287-1 Ed. 3.0:2017<br>Clauses 11.2, 11.3.1, 11.1.2, 11.3.2 | PHOENIX TESTLAB | F172634E1 |
| EN 60945 Ed. 4:2002<br>IEC 62287-1 Ed. 2:2010<br>EN 60068-2-1:2008<br>EN 60068-2-2:2008<br>EN 60068-2-78:2002 | PHOENIX TESTLAB | U130840E1, 4th Version |
| EN 60945 Ed. 4:2002<br>Clause 8.12 | ETC Taiwan | 21-11-EAT-053-E02 |
| IEC 62287-1 Ed. 2:2010<br>Clause 9.2.1 | SGS Taiwan | HC30037A/2013 |
| IEC 60068-2-52 Ed. 2:1996 | IST | HS1303150050A-1 |
| EN 60945<br>Clause 11.2 | BSH | Compass safe distance, Certificate No. 813/1 |
| IEC 62287-1 Ed. 2:2010<br>Clause 9.4 | QuieTek Corporation | SN1307032-A, Rev. 2 |
| IEC 62287-1 Ed. 2:2010<br>Clause 9.2.2 | SGS Taiwan | HCD0137A/2009 |
| IEC 60529 Ed. 2.1:2001 | SGS Taiwan | HCD0137A/2009 |
| IEC 60529 Ed: 2.2: 2013 | SGS | HH40002A/2017 |
| IEC 60529 Ed: 2.2: 2013 | SGS | HHD0021B/2016 |

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**Limitations / Restrictions**

- None -

**Notes**

1. This certificate will not be valid if the manufacturer makes any changes or modifications to the approved equipment, which have not been notified to, and agreed with PHOENIX TESTLAB.

2. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/them being placed on the market.

3. 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 and with the requirements of Directive 2014/53/EU that apply to it.

4. CE 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 satisfies the applicable requirements of the Directive.

5. The manufacturer shall draw up a written EU declaration of conformity for each radio equipment type and keep it at the disposal of the national authorities for 10 years after the radio equipment has been placed on the market. The EU declaration of conformity shall identify the radio equipment type for which it has been drawn up. A copy of the EU declaration of conformity shall be made available to the relevant authorities upon request.

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