

EU-TYPE EXAMINATION (MODULE B) CERTIFICATE

Radio Equipment Directive (RED) 2014/53/EU

PHOENIX TESTLAB
Notified Body Number **0700**



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.	17-111017
Manufacturer	Alltek Marine Electronics Corp.
Address	14F-2, No. 237, Sec. 1, Datong Rd., Xizhi Dist., New Taipei City 22161, Taiwan
Product Description	AIS Class B Transponder (SOTDMA)
Brand Name	AMEC
Model Name	WideLink B600 / B600W

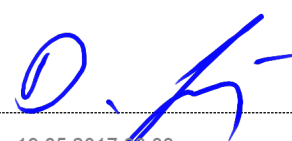
The radio equipment meets the following essential requirements

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
Additional Essential Requirements: Article 3.3 g) Access to emergency services	Conform

Date of issue	2017-05-19	Expiry date:	2022-05-18
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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 4 pages.



Signed by Dieter Niep
Notified Body

Annex

Technical description

Frequency Range	156.025 MHz to 162.025 MHz (AIS Transponder) 2412 MHz to 2472 MHz (Wi-Fi) 1575.42 MHz (GPS, receive-only)
Channel Separation	25 kHz (AIS Transponder)
Modulation Scheme	GMSK / FM (AIS Transponder)
Transmit Power	37 dBm +/- 1.5 dB conducted (AIS Transponder) 30 dBm +/- 1.5dB conducted (AIS Transponder) 19.53 dBm EIRP (Wi-Fi)
Hardware Version	Main Board: M-PCB-B601MBV2 Wi-Fi Board (Option, B600W): M-PCB-601WFBV1
Software Version	V1.1.5
Operating temperature range	-15°C to +55°C

System Components

Main Unit	AIS Class B Transponder
VHF antenna	ANT-11 / TENTA-11, max. gain 2.86 dBi
GPS antenna	AMEC Aggressor-111-C or AMEC Aggressor-21 or AMEC ANT-21 or GA-22
Wi-Fi antenna	Dipole Antenna M-ANT-GY196HT695-001, 2.94 dBi Chip Antenna ACA-5020-A2-MC-S, 1.00 dBi

Approval documentation

User Manual	WideLink B600, AIS Class B Transponder (SOTDMA) USER MANUAL
Block Diagram	Block Diagram of WideLink B600/B600W
Circuit Diagram	Schematic_IO Board Schematic_Main Board Schematic_Power Board Schematic_Wi-Fi Board
Parts List	Parts list_IO Board Parts list_Main Board Parts list_Power Board Parts list_Wi-Fi Board
PCB Layout and Parts Placement	Layout_IO Board Layout_Main Board Layout_Power Board Layout_Wi-Fi Board
External / Internal Photos	Internal & External Photos of WideLink B600 Internal & External Photos of WideLink B600W



Approval documentation

Operational Description	Operational Description
EU Declaration of Conformity	Declaration of EU Conformity for WideLink B600 & B600W 2 pages, 2017-04-24
Explanation of compliance Article 10(2) and Article 10(10)	Declaration of Compliance, 1 page, 2017-03-23
TCF Waiver Document	Technical Construction File Waiver Document AIS Class B Transponder WideLink B600, WideLink B600W, 7 pages
Label	Label drawings WideLink B600, WideLink B600W
Declaration of Identity	Statement of Identity between AMEC Aggressor-111-C and AMEC Aggressor-21 / ANT-21 GPS Antenna, 1 page, 2013-05-02
Hardware and Software Version Statement	Attestation Statement of AIS Class B Transponder (SOTDMA) (Model: WideLink B600 / B600W) Hardware and Software Version
Antenna specifications	Antennas v1.4, 2 pages Antennas v1.5, 2 pages
EU-Type Examination Certificate 17-110740	Based on EU-Type Examination Certificate 17-110740 of Notified Body PHOENIX TESTLAB GmbH

Applied Standards and Test Reports

Specification	Laboratory	Test Report Number / Version
EN 60950-1: 2006 + A11: 2009 + A1 2010 + A12: 2011 + A2: 2013	Compliance Certification Services Inc.	T160222W01-LV
EN 62311: 2008	Compliance Certification Services Inc.	T160222W01-MC
EN 60945: 2002, Clauses 9, 10	Compliance Certification Services Inc.	T160222W01-E
EN 301 489-1 V2.2.0 EN 301 489-3 V2.1.1	Compliance Certification Services Inc.	T170309W02-RE1
EN 301 489-1 V2.2.0 EN 301 489-17 V3.2.0	Compliance Certification Services Inc.	T170309W02-RE
EN 60945:2002, Claus 10.9	Phoenix Testlab	U092663E1
IEC 60945: 2002-08 Chapter 9 and Chapter 10	DEKRA	1720081A-S-CUSTOM
IEC 62287-2 Ed. 1.0:2013 Clauses 11, A.5	Phoenix Testlab	F161141E1
EN 300 328 V2.1.1	Compliance Certification Services Inc.	T160222W01-RT2
IEC 61108-1:2003	BSH	BSH/4543/001/4143083/16
EN 300 440 V2.1.1	Compliance Certification Services Inc.	T160222W01-RT1



Specification	Laboratory	Test Report Number / Version
EN 300 440 V2.1.1	DEKRA	1720081A-S-2-CUSTOM
IEC 60529 Ed. 2.2:2013	SGS Taiwan	HC70174C/2016
IEC 60945 Ed. 4:2002, Clause 12.2	Compliance Certification Services Inc.	T160222W01
IEC 60945 Ed. 4:2002 Clauses 8.2, 8.3, 8.4, 8.12	SGS Taiwan	HC20045/2017
IEC 60945 Ed. 4:2002, Clause 8.7	SGS Taiwan	HHD0021A/2016
IEC 60529 Ed. 2.2:2013	SGS Taiwan	HHD0021B/2016
EN 60945: 2002 Clauses 8.2, 8.3, 8.4, 8.7	Phoenix Testlab	U092025E1
EN 60945:2002, Claus 8.12	Phoenix Testlab	U092663E1
IEC 60529 Ed. 2.1:2001-02	SGS Taiwan	HCD0137A/2009
IEC 62287-2: 2017, Clause 9.3	SGS Taiwan	HCD0137A/2009
IEC 62287-2: 2017, Clauses 10, 12, 13	BSH	BSH/4542/001/4322986/16-1
IEC 60945 Ed. 4:2002 Clauses 8.2, 8.3, 8.4, 8.7	SGS Taiwan	HC50044E/2016
IEC 60945 Ed. 4:2002, Clause 8.12	SGS Taiwan	HC60208B/2016
IEC 60945 Ed. 4:2002, Clause 11.2	BSH	Compass safe distance, Certificate No. 950
IEC 60529 Ed. 2.2: 2013	SGS	HH40002A/2017

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.  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.

