



中国船级社  
CHINA CLASSIFICATION SOCIETY

证书编号/Certificate No.  
HK25PTB00003

型式认可证书  
CERTIFICATE OF TYPE APPROVAL

兹证明本证书所述制造厂具备按照下列标准的要求生产本证书所列产品的能力和条件。

**This is to certify** that the manufacturer stated in the certificate meets the requirements of the standards listed below and is available with the ability and conditions to produce the products described in the certificate.

品牌拥有方/ Licensor

**Netwave Systems B.V.**

Blauw-roodlaan 100, 2718 SJ Zoetermeer, The Netherlands

授权制造企业/Authorized Manufacturer

**全科综电股份有限公司**

**Alltek Marine Electronics Corporation**

中國台灣新北市汐止區大同路一段237號14F-2  
14F-2., No.237, Sec.1, Datong Rd., Xizhi Dist., New Taipei City 22161, CHINESE TAIWAN

产品名称/Product

导航设备

Navigation Equipment

附加标志/Notations

无/Ni1.



证书有效期至/ This Certificate is valid until 2030年02月24日/ Feb. 24, 2030

发证机构 中国船级社香港分社  
Issued by CHINA CLASSIFICATION SOCIETY Hong Kong Branch

签发日期 2025年02月21日  
Date Feb. 21, 2025

本证书根据中国船级社规范和相关规定签发。所有证书页为一个整体，必须同时使用。纸质证书每页均须由本社盖章方为有效，电子证书含数字签名方为有效，本证书复印件无效。任何单位和个人均不应摘录或节选本证书的部分内容。有关方对所持证书的真实性有疑问时，可以向本社检验机构咨询。本证书凡是未注明版本的规范，其（发证时）最新版本适用于本证书。  
This Certificate is issued pursuant to the Rules of the Society and related regulation. All pages of the certificate are taken as a whole and are used simultaneously. No paper certificate page is valid without bearing the stamp of the Society, no electronic certificates is valid without the digital signature, and no copied form of the certificate is regarded as valid. Any part of the certificate is not to be extracted or abridged by any unit or individual in any form. Related parties who are doubted about the authenticity of the certificate may inquire of the Society or its offices. **For Rules with no version indication, their latest version (at the time of issuance of the certificate) applies to the this certificate.**



Form No: T02.

联系方式/Contact Us, 见本社官方网站/See official web site of the Society (<http://www.ccs.org.cn>)

UTN:P025-55372507

**认可标准/Approval Standard**

1. 国际海事组织海上安全委员会决议IMO MSC. 246 (83) 《供搜救作业使用的救生艇筏搜救AIS应答器 (AIS-SART) 性能标准》  
IMO Resolution MSC.246(83) Performance Standards for Survival Craft AIS Search and Rescue Transmitters (AIS-SART) for Use In Search and Rescue Operations
2. ITU-R M. 1371-5 (2014) 《在VHF水上移动频带内使用时分多址的自动识别系统的技术特性》  
ITU-R M.1371-5(2014) Technical Characteristics for An Automatic Identification System Using Time-Division Multiple Access In The VHF Maritime Mobile Band
3. IEC 61097-14:2010 《全球海上遇险和安全系统 (GMDSS) 第14部分: 自动识别系统搜救发射机 (AIS-SART) 操作与性能要求、测试方法和要求的测试结果》  
IEC 61097-14:2010 Global Maritime Distress and Safety System (GMDSS) - Part 14 - AIS Search and Rescue Transmitter (AIS-SART) - Operational and Performance Requirements, Methods of Testing and Required Test Results
4. IEC 60945:2002/COR1:2008 《船用航行和无线电通信设备及系统-通用要求-试验方法和试验结果的要求》  
IEC 60945:2002/COR1:2008 Maritime navigation and radiocommunication equipment and systems - General requirements - Methods of testing and required test results
5. 国际海事组织大会决议A. 694 (17) 《作为全球海上遇险和安全系统 (遇险和安全系统) 组成部分的船载无线电设备和电子助航设备的一般要求》  
IMO Resolution A.694(17) General Requirements for Shipborne Radio Equipment Forming Part of the Global Maritime Distress and Safety System (GMDSS) and for Electronic Navigational Aids

**用于/Intended for**

船舶与海上设施/Ships and Offshore Installations

**产品明细/Product Description****AIS SART 设备/AIS SART Equipment (M0001)**

名称/Name	属性 (值) /Value	单位/Unit
型号/Type	Z650 (McMurdo SMARTFIND S5A AIS SART) Z650 (Kannad Marine SAFELINK AIS SART2) Z650 (Cobham SAILOR 5052 AIS SART)	
输出功率/Output Power	1.0 W / 30 dBm	
调制/Modulation	16K0GXW	
发射种类/Type of Emissions	GMSK	
工作频率/Operating Frequency	161.975 MHz (AIS 1) and 162.025 MHz (AIS 2)	
工作时长/Working Hours	96h	
罗经安全距离/Compass Safe Distance	Standard Magnetic compass: 0.6 m Steering Magnetic compass: 0.4 m	
电池类型/Battery Type	Manganese Dioxide Primary Lithium Battery	
电池型号/Battery Model	2CR17450ES-CM1	
电池电压/Battery Voltage	6 V	
电池容量/Battery Capacity	2400 mAh	
电池厂家/Battery Manufacturer	FDK TAIWAN LTD	

**批准的图纸/Approved Drawings**

图纸批准号/ Drawings Approval No. : NP20PPP04473

**产品认可试验报告/ Approval Test Report**

试验报告编号/ Test Report No. : F112488E1, 2nd Version  
 试验报告日期/ Test Report Date : 2012-01-16  
 试验单位/ Laboratory: PHOENIX TESTLAB GmbH  
 试验单位地址/ Test Address: Königswinkel 10, D-32825 Blomberg

试验报告编号/ Test Report No. : BSH/4615/4361928/12-1

试验报告日期/ Test Report Date : 2012-04-11

试验单位/ Laboratory: BSH

试验单位地址/ Test Address: Bernhard-Nocht-Str. 78, D-20359 Hamburg, Germany

试验报告编号/ Test Report No. : HS1108300140A

试验报告日期/ Test Report Date : 2011-09-07

试验单位/ Laboratory: Integrated Service Technology Inc.

试验单位地址/ Test Address: 1F, No.19, Pu-ding Rd., Hsin - chu City, Taiwan

试验报告编号/ Test Report No. : HS1106290042A-2, Version B

试验报告日期/ Test Report Date : 2011-07-27

试验单位/ Laboratory: Integrated Service Technology Inc.

试验单位地址/ Test Address: 1F, No.19, Pu-ding Rd., Hsin - chu City, Taiwan

试验报告编号/ Test Report No. : Certificate No. 693

试验报告日期/ Test Report Date : 2012-01-30

试验单位/ Laboratory: BSH

试验单位地址/ Test Address: Bernhard-Nocht-Str. 78, D-20359 Hamburg, Germany

试验报告编号/ Test Report No. : BSH/46162/4321542/11-2

试验报告日期/ Test Report Date : 2011-06-23

试验单位/ Laboratory: BSH

试验单位地址/ Test Address: Bernhard-Nocht-Str. 78, D-20359 Hamburg, Germany

试验报告编号/ Test Report No. : AS500-TR-1202-Q01-01

试验报告日期/ Test Report Date : 2012-02-08

试验单位/ Laboratory: AMEC

试验单位地址/ Test Address: 7F, No.605, Ruei Guang Rd., Neihu, Taipei, Taiwan

试验报告编号/ Test Report No. : HC70207A/2011

试验报告日期/ Test Report Date : 2011-09-22

试验单位/ Laboratory: SGS Taiwan Ltd.

试验单位地址/ Test Address: No.31, No.33, No.35, Wu Chyuan Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan

试验报告编号/ Test Report No. : HC60189A/2018

试验报告日期/ Test Report Date : 2018-07-17

试验单位/ Laboratory: SGS Taiwan Ltd.

试验单位地址/ Test Address: No.31, No.33, No.35, Wu Chyuan Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan

试验报告编号/ Test Report No. : 118010R-RFCEP76V01

试验报告日期/ Test Report Date : 2011-08-19

试验单位/ Laboratory: QuieTek

试验单位地址/ Test Address: No. 5-22, Ruei-Shu Valley, Ruei-Ping Tsuen, Lin-Kou Shiang, Taipei

试验报告编号/ Test Report No. : BSH/4615/4361928/11-2

试验报告日期/ Test Report Date : 2011-06-30

试验单位/ Laboratory: BSH

试验单位地址/ Test Address: Bernhard-Nocht-Str. 78, D-20359 Hamburg, Germany

试验报告编号/ Test Report No. : BSH/46121/4142396/12

试验报告日期/ Test Report Date : 2012-11-16

试验单位/ Laboratory: BSH

试验单位地址/ Test Address: Bernhard-Nocht-Str. 78, D-20359 Hamburg, Germany

试验报告编号/ Test Report No. : U181129E1

试验报告日期/ Test Report Date : 2018-08-08

试验单位/ Laboratory: PHOENIX TESTLAB GmbH

试验单位地址/ Test Address: Königswinkel 10, D-32825 Blomberg

试验报告编号/ Test Report No. : F181129E1

试验报告日期/ Test Report Date : 2018-08-08

试验单位/ Laboratory: PHOENIX TESTLAB GmbH

试验单位地址/ Test Address: Königswinkel 10, D-32825 Blomberg

试验报告编号/ Test Report No. : 129031R-ITCEP26V01

试验报告日期/ Test Report Date : 2012-09-13

试验单位/ Laboratory: QuieTek

试验单位地址/ Test Address: No. 5-22, Ruei-Shu Valley, Ruei-Ping Tsuen, Lin-Kou Shiang, Taipei

试验报告编号/ Test Report No. : U112488E1, 3rd Version

试验报告日期/ Test Report Date : 2012-07-30

试验单位/ Laboratory: PHOENIX TESTLAB GmbH

试验单位地址/ Test Address: Königswinkel 10, D-32825 Blomberg

### 认可后的产品检验方式/ Method of Product Inspection after Approval

按规范认可后应进行产品检验的产品/The product should be inspected in term of the rules:

认可后的产品检验应由本社验船师根据本社规范规定按批准的产品检验计划进行检验，经检验合格后由本社颁发船用产品证书。

After approval, product inspection should be carried out by the Surveyor of the Society in accordance with the approved product inspection scheme, and the Marine Product Certificate will be issued by the Society upon satisfactory inspection.

### 认可保持条件/ Maintenance Requirements of Approval

1. 型式认可后，如果产品及其重要零部件的设计、所用材料或制造方法有所改变，且影响到产品的主要特性、特征；或产品的性能指标有所更改，且超过认可的范围，则有关图纸和文件应经检验机构审批。并在检验机构认为必要时，经本社检验人员见证有关试验和进行检查，其结果应能证实仍符合认可条件。

After type approval, if there are changes to the design, materials used or manufacturing method of the product and important components and such changes affect major characteristics and properties of the product, or property indexes of the product are changed and exceed the scope of approval, related drawings and documents are to be examined and approved by the concerned survey office. Where deemed necessary by the survey office, the surveyor to the Society will go to witness relevant tests and conduct inspection and the results should be able to demonstrate compliance with the approval conditions.

2. 工厂的质量管理体系应保持有效运行，并且与认可时一致。如果质量管理体系发生改变，应经原体系认证机构审核并报本社批准。

The quality management system of the factory shall be ensure effective operation, and shall be the same as the situation of approval. If there are any changes to the quality management system, auditing of the original certification organization for quality management system and the society's approval shall be obtained.

3. 认可证书有效期内，如果出现可能导致本社取消认可的情况，工厂应及时采取有效的纠正措施。

Within the validity of the approval certificate, if cases occur that may cause the Society to withdraw the approval, the manufacturer should take corrective actions in a prompt and effective manner.

4. 在认可证书有效期内，本社检验人员可在未经事先通知的情况下对工厂的产品制造过程进行审核，以验证产品的生产是否符合业经本社批准的图纸和文件。工厂应予以配合。

Within the validity of the approval certificate, the surveyor to the Society may pay unannounced audit to the manufacturing process of the product in order to confirm whether it is in compliance with the drawings and documents approved by the Society. The factory should provide an active cooperation and necessary for the surveyor.

5. 在本证书有效期内，品牌拥有方和产品制造企业之间的授权协议的失效将自动导致本证书的失效。

During the period of validity, this certificate will automatically be ineffective in case of the invalidity of the authorization agreement between the licensor and the manufacturer(s).

### 备注/Remarks

本社已审核了产品厂无石棉声明，但本社的审核不免除产品厂按照合同关系向订货方保证产品无石棉的责任。

The declaration of asbestos-free submitted by manufacturer has been reviewed by the Society. However, liability of the manufacturer to guarantee the products are asbestos-free to purchaser under contract will not be exempted.

本证书由原型式认可证书 (No. HK23PTB00002) 换新并替代原证书。

This certificate is renewed from and supersedes the previous Type Approval Certificate No. HK23PTB00002.

中国船级社香港分社  
CCS Hong Kong Branch