



中国船级社  
CHINA CLASSIFICATION SOCIETY

证书编号/Certificate No.  
ML20PTB00012\_02

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.

制造厂/Manufacturer

NAVICO RBU Italia S.r.l.

地址/Address

Via Romita 26, 50025 Montagnana V.P. Montespertoli ( FI), Italy

产品名称/Product

雷达设备  
Radar Equipment  
雷达设备CAT 3  
Radar Equipment Cat 3

认可标准/Approval Standard

1. 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
2. 国际海事组织海安会决议MSC. 191 (79) 《船载航行显示器有关航行信息显示的性能标准》  
IMO Resolution MSC.191(79) Performance Standards for the Presentation of Navigation-Related Information on Shipborne Navigational Displays
3. 国际海事组织海安会决议MSC. 192 (79) 《采用经修订的〈关于雷达设备性能标准的建议书〉》  
IMO Resolution MSC.192(79) Adoption of the Revised Performance Standards for Radar Equipment
4. 国际海事组织大会决议Res. A. 278 (VIII) 《航海雷达设备控制符号》  
IMO Res.A.278(VIII) Control Symbol of Navigation Radar Equipment
5. 国际电讯联盟建议书ITU-R M. 1177-4 (04/2011) 《对于雷达系统无用发射的测量技术》  
ITU-R M.1177-4(04/2011) Techniques for Measurement of Unwanted Emissions of Radar Systems
6. IEC 62388:2013/COR1:2014 Edition 2.0 (2014-02-12) 《导航和无线电设备-船用雷达-性能要求、测试方法和要求的测试结果》  
IEC 62388:2013/COR1:2014 Edition 2.0 (2014-02-12) Maritime navigation and radiocommunication equipment and systems - Shipborne radar - Performance requirements, methods of testing and required test results
7. 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

证书有效期至/ This Certificate is valid until 2025年01月03日/ Jan. 03,2025

发证机构/ Issued by 中国船级社泉州三办事处  
CCS Fujian Office

签发日期/ Date 2021年01月04日  
Jan. 04,2021

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。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.



Form No: T01.

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:P020-03181961

**用于/Intended for**

International sea-going ships up to 500 gross tonnage

**产品明细/Product Description****雷达设备CAT 3/Radar Equipment Cat 3 (M0001)**

名称/Name	属性(值)/Value	单位/Unit
型号/Type	R3016 12U/6X	
系统组成/System Component	Refer to additional page	
额定电压/Rated Voltage	24	VDC
峰值功率/Peak of Output Power	12	kW
天线长度/Length of Antenna	6	Ft.
软件版本号/Software Version	R3016 12U/6X Software: 1. 00. X Radar Application Software: 6. 00. XX SRT Software Version: 81. XX SRT Protocol: I	
工作频率/Operating Frequency	9410 (X-Band)	MHz
最小操作显示区直径/Minimum Operation Display Area Diameter	180	mm
最小显示区域/Minimum Display Area	195 x 195	mm
是否具有自动捕获目标功能/Whether Includes Auto Acquisition of Targets Function	否 NO	
最少被捕获的雷达目标数/Minimum Acquired Radar Targets Capacity	20	
最少被激活的AIS 目标数/Minimum Acquired Ais Targets Capacity	20	
最少休眠AIS 目标数/Minimum Sleeping Ais Targets Capacity	100	
是否具有试操船功能/Whether Includes Trial Manoeuvre Function	否 No	
罗经安全距离/Compass Safe Distance	To the Standard Magnetic Compass: R3016 Unit: 0.65 m 12kW X-Brand SRT Transceiver: 1.43 m R3016 Power Supply Unit: 0.3 m To the Steering Magnetic Compass: R3016 Control Unit: 0.43 m 12kW X-Brand SRT Transceiver: 0.87 m R301 Power Supply Unit: 0.24 m	
性能监测器型号/Performance Monitor Type	内置 Built-in	
是否集成电子标绘 (EPA) 功能/Whether Electric Plotting Aid Function Be Integrated Into The Radar Equipment	否 No	
是否集成自动目标跟踪 (ATA) 功能/Whether Automatic Tracking Aid Function Be Integrated Into The Radar Equipment	否 No	
是否集成自动雷达标绘 (ARPA) 功能/Whether Automatic Radar Plotting Aid Function Be Integrated Into The Radar Equipment	是 Yes	

**批准的图纸/Approved Drawings**

图纸批准号/ Drawings Approval No. : NP16A02023

**产品认可试验报告/ Approval Test Report**

试验报告编号/ Test Report No. : BSH/4543/001/4372911/15

试验报告日期/ Test Report Date : 2015-11-27

试验单位/ Laboratory: Federal Maritime and Hydrographic Agency  
试验单位地址/ Test Address: Bernhard-Nocht-Str. 78, 20359 Hamburg, Germany

试验报告编号/ Test Report No. : BSH/4543/001/4372988/16-1  
试验报告日期/ Test Report Date : 2016-02-03  
试验单位/ Laboratory: Federal Maritime and Hydrographic Agency  
试验单位地址/ Test Address: Bernhard-Nocht-Str. 78, 20359 Hamburg, Germany

试验报告编号/ Test Report No. : BSH/4543/001/4372988/16-2  
试验报告日期/ Test Report Date : 2016-04-29  
试验单位/ Laboratory: Federal Maritime and Hydrographic Agency  
试验单位地址/ Test Address: Bernhard-Nocht-Str. 78, 20359 Hamburg, Germany

试验报告编号/ Test Report No. : SH/4612/4340779/08-1  
试验报告日期/ Test Report Date : 2009-06-26  
试验单位/ Laboratory: Federal Maritime and Hydrographic Agency  
试验单位地址/ Test Address: Bernhard-Nocht-Str. 78, 20359 Hamburg, Germany

试验报告编号/ Test Report No. : BSH/4612/4340337/08  
试验报告日期/ Test Report Date : 2008-01-25  
试验单位/ Laboratory: Federal Maritime and Hydrographic Agency  
试验单位地址/ Test Address: Bernhard-Nocht-Str. 78, 20359 Hamburg, Germany

试验报告编号/ Test Report No. : P036-15PC  
试验报告日期/ Test Report Date : 2015-09-14  
试验单位/ Laboratory: Politecnico di Milano  
试验单位地址/ Test Address: 20154 Milano, Italy

试验报告编号/ Test Report No. : 3F-RT15008  
试验报告日期/ Test Report Date : 2015-11-26  
试验单位/ Laboratory: Istituto Nazionale di Ottica  
试验单位地址/ Test Address: 50125 Firenze, Italy

试验报告编号/ Test Report No. : 21520-B-2015-164  
试验报告日期/ Test Report Date : 2015-11-05  
试验单位/ Laboratory: Koncar Institute  
试验单位地址/ Test Address: HR-10002 Zagreb

试验报告编号/ Test Report No. : 21520-B-2015-164-1  
试验报告日期/ Test Report Date : 2015-11-05  
试验单位/ Laboratory: Koncar Institute  
试验单位地址/ Test Address: HR-10002 Zagreb

试验报告编号/ Test Report No. : 21520-B-2016-026  
试验报告日期/ Test Report Date : 2016-02-19  
试验单位/ Laboratory: Koncar Institute  
试验单位地址/ Test Address: HR-10002 Zagreb

试验报告编号/ Test Report No. : 21520-B-2015-165  
试验报告日期/ Test Report Date : 2015-11-05  
试验单位/ Laboratory: Koncar Institute  
试验单位地址/ Test Address: HR-10002 Zagreb

试验报告编号/ Test Report No. : 21520-B-2015-166  
试验报告日期/ Test Report Date : 2015-11-05  
试验单位/ Laboratory: Koncar Institute  
试验单位地址/ Test Address: HR-10002 Zagreb

试验报告编号/ Test Report No. : 51-14515  
试验报告日期/ Test Report Date : 2015-12-21  
试验单位/ Laboratory: Koncar Institute  
试验单位地址/ Test Address: HR-10002 Zagreb

试验报告编号/ Test Report No. : 21583EMC15046\_V3  
试验报告日期/ Test Report Date : 2015-11-10  
试验单位/ Laboratory: Koncar Institute  
试验单位地址/ Test Address: HR-10002 Zagreb

试验报告编号/ Test Report No. : 21583SIG15031

试验报告日期/ Test Report Date : 2015-11-10  
 试验单位/ Laboratory: Koncar Institute  
 试验单位地址/ Test Address: HR-10002 Zagreb

试验报告编号/ Test Report No. : 21583SIG15032  
 试验报告日期/ Test Report Date : 2015-11-10  
 试验单位/ Laboratory: Koncar Institute  
 试验单位地址/ Test Address: HR-10002 Zagreb

试验报告编号/ Test Report No. : 21583SIG15033  
 试验报告日期/ Test Report Date : 2015-11-10  
 试验单位/ Laboratory: Koncar Institute  
 试验单位地址/ Test Address: HR-10002 Zagreb

试验报告编号/ Test Report No. : 21583IP15015  
 试验报告日期/ Test Report Date : 2015-10-20  
 试验单位/ Laboratory: Koncar Institute  
 试验单位地址/ Test Address: HR-10002 Zagreb

试验报告编号/ Test Report No. : 15822  
 试验报告日期/ Test Report Date : 2015-11-04  
 试验单位/ Laboratory: Laboratories G.S.D. SRL  
 试验单位地址/ Test Address: 56121 Pisa,Italy

试验报告编号/ Test Report No. : TR20160314  
 试验报告日期/ Test Report Date : 2016-03-14  
 试验单位/ Laboratory: FINMECCANICA  
 试验单位地址/ Test Address: Italy

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

按照规范每批抽样检验的产品/The product inspected by sampling 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每批抽样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 sampling 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. 如果属于获得型式认可B 模式证书, 且无需颁发船用产品证书/等效证明文件的情况, 证书获得者应接受本社每

年一次的定期审核，定期审核日为认可证书期满之日对应的每一周年日，检查工作应在周年日的前后三个月内进行。

If belong to the situation of the product has type approval mode B certificate, and marine product certificate/equivalent document is not necessary, those who have obtained the certificate should be subject to periodical audit every year. The date of periodical audit shall be each anniversary date which corresponds to the date of expiry of the relevant certificate and the periodical audit shall be done within a time span of three months before and after the annual surveillance date.

#### 备注/Remarks

1. 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.

2. 本证书由原型式认可证书 (No. ML16T00009) 换新并替代原证书。

This certificate is renewed from and supersedes the previous Type Approval Certificate No. ML16T00009.

**中国船级社米兰办事处**

**CCS Milan Office**

注：本证书含有附页，共1页

Note: The certificate is attached with additional 1 page(s)

## System Components

### List of Components

	<b>Description</b>	<b>P/N</b>
1	12Kw SRT X-Band Lan Transceiver	000-12383-001
2	X-Band 6 Ft. Antenna	000-10324-001
3	R3016 Radar Control Unit 16"	000-12188-001
4	R3000 Power Supply Unit	000-12384-001
5	15m Power Cable	000-12387-001
6.	15m Ethernet Cable	000-12390--001
7	R3016 Bracket Mounting Kit	000-12412-001
8	High Speed NMEA0183 8WAY 2M	000-12393-001
9	1.5m HDMI DVI Cable	000-12427-001
10	S180 Simrad Signal Interface	000-10425-001

### List of Optional Components

	<b>Description</b>	<b>P/N</b>
1	Heater Upgrade kit for SRT Lan	000-12386-001
2	30m Power Cable	000-12388-001
3	65m Power Cable	000-12389-001
4	30m Ethernet Cable	000-12391-001
5	65m Ethernet Cable	000-12392-001

-END-

中国船级社米兰办事处/CCS Milan Office