

ICS 47.020.70  
CCS U60



**NATIONAL STANDARD OF THE  
PEOPLE'S REPUBLIC OF CHINA**

**GB/T 43975-2024**

---

**Technical specification for integrated data processor of vessel  
traffic services**

船舶交通管理系统数据综合处理器技术规范

**Issued on: April 25, 2024**

**Implemented on: November 1, 2024**

---

**Issued by: State Administration for Market Regulation;  
Standardization Administration of the PRC**

## Table of Contents

|                                                |    |
|------------------------------------------------|----|
| 1 Scope .....                                  | 1  |
| 2 Normative references .....                   | 1  |
| 3 Terms and Definitions .....                  | 1  |
| 4 Abbreviations .....                          | 2  |
| 5 Composition .....                            | 2  |
| 3 Multi-sensor integrated processor .....      | 6  |
| 4 Multi-sensor integrated processor test ..... | 11 |
| 5 Factory Inspection .....                     | 16 |
| 18 Reference .....                             | 22 |

## Foreword

This document is in accordance with the provisions of GB/T 1:1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting: Please note that some of the contents of this document may involve patents: The issuing organization of this document does not assume the responsibility for identifying patents: This document is proposed and coordinated by the National Technical Committee for Standardization of Marine Electrical and Electronic Equipment (SAC/TC531): This document was drafted by: China Shipbuilding Industry Corporation 724 Research Institute, Ministry of Transport Planning and Research Institute, CSSC Pengli (Nanjing) Atmosphere and Ocean Information Systems Co., Ltd., Jiangsu Maritime Safety Administration, Wuhan University of Technology: The main drafters of this document are: Tian Chi, Zhao Xianfeng, Sun Xuetao, Jiang Xiaozhu, Xie Haibing, Li Xiao, Zong Chengming, Wang Chen, Sun Dajin, Ma Jie, Zhang Can, Xia Liang, Xia Jinfeng, Chen Yang, Liu Shengli, Chen Zhangyi, Wang Fuzhai, Yu Jing, Yang Qingxin, Huang Xiaopeng, Liu Xihui, Yang Zhikun, Wang Haitao, and Lv Yafang: Vessel Traffic Management System Data Integration Processor Technical Specifications

## 1 Scope

GB/T 43975-2024 specifies the integrated data processor of a vessel traffic service system, the component that fuses radar, AIS, direction finding, CCTV, hydrological and meteorological inputs into the single traffic picture a VTS operator works from. It is the part of the system on which everything else depends: if track fusion is wrong, the operator sees two vessels where there is one, or one where there are two, and the safety function of the service is lost. The standard sets the composition and functional architecture, then the

technical requirements: the data acquisition and interfaces to each sensor type, the track processing, association and fusion, the target identification and the correlation of AIS with radar, the situation display and the alarm generation for collision, grounding and area infringement, the data recording and replay, the system performance in capacity, latency and accuracy, the reliability and availability, and the security. It then covers the test methods and the inspection rules. It takes effect on 1 November 2024, and for a supplier of VTS equipment to Chinese maritime authorities it is the governing specification.

This document specifies the composition, technical requirements, test methods, inspection rules, marking, package Packaging, transportation and storage: This document applies to the design, development, production and acceptance of data integrated processors for vessel traffic management systems: The visual data integration processor is executed for reference:

## 2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document: For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to This document:

GB/T 191 Pictorial markings for packaging, storage and transportation

GB/T 2423:1-2008 Environmental testing for electric and electronic products Part 2: Test methods Test A: Low temperature

GB/T 2423:2-2008 Environmental testing for electric and electronic products Part 2: Test methods Test B: High temperature GB/T 2423:

## 3 Terms and definitions

The terms and definitions defined in GB/T 3784-2009 and GB/T 39277-2020 and the following apply to this document: