

## Team intelligent management system

### ► Overview

Team intelligent management system (TIMS) is based on the actual needs of crew management, using intelligent wearing, sign detection, intelligent perception and other technologies, to achieve personnel boarding and departure registration, personnel perception positioning, vital signs detection, information platform push and other service integration management platform.

Through the combination of multi-channel and multi identification methods, the system provides efficient, convenient and intelligent management and control means for ship management personnel. Through data visualization technology, the information of personnel such as activity habits, safety situation and on-the-job status is displayed in the system management page in real time, and through the analysis, prediction and prompt of historical data to provide fast, efficient and intuitive technical support for managers to do a good job in personnel density deployment, key area monitoring and abnormal behavior tracking in advance.

### ► System architecture

■ Scheme 1 (WiFi)



**■ Scheme 2 (Bluetooth)**

**■ Scheme 3 (WiFi + Bluetooth)**

**■ Scheme comparison**

	Scheme 1 (WiFi)	Scheme 2 (Bluetooth)	Scheme 3 (WiFi+Bluetooth)
Equipment composition	<input checked="" type="checkbox"/> special cabinet <input checked="" type="checkbox"/> Wireless AC <input checked="" type="checkbox"/> Wireless AP <input type="checkbox"/> communication base station <input type="checkbox"/> iBeacon positioning beacon <input checked="" type="checkbox"/> boarding / disembarking card reader <input type="checkbox"/> Portable boarding and disembarking card reader <input type="checkbox"/> Tablet PC <input checked="" type="checkbox"/> SmartWatch <input type="checkbox"/> Personnel card	<input checked="" type="checkbox"/> special cabinet <input type="checkbox"/> Wireless AC <input type="checkbox"/> Wireless AP <input checked="" type="checkbox"/> communication base station <input checked="" type="checkbox"/> iBeacon positioning beacon <input checked="" type="checkbox"/> boarding / disembarking card reader <input type="checkbox"/> Portable boarding and disembarking card reader <input type="checkbox"/> Tablet PC <input type="checkbox"/> SmartWatch <input checked="" type="checkbox"/> Personnel card	<input checked="" type="checkbox"/> special cabinet <input checked="" type="checkbox"/> Wireless AC <input checked="" type="checkbox"/> Wireless AP <input checked="" type="checkbox"/> communication base station <input checked="" type="checkbox"/> iBeacon positioning beacon <input checked="" type="checkbox"/> boarding / disembarking card reader <input type="checkbox"/> Portable boarding and disembarking card reader <input type="checkbox"/> Tablet PC <input checked="" type="checkbox"/> SmartWatch <input checked="" type="checkbox"/> Personnel card
function	<input checked="" type="checkbox"/> personnel positioning (regional fuzzy positioning) <input checked="" type="checkbox"/> vital signs <input checked="" type="checkbox"/> message push <input checked="" type="checkbox"/> monitoring alarm <input checked="" type="checkbox"/> Personnel boarding and disembarking management	<input checked="" type="checkbox"/> personnel positioning (regional fuzzy positioning) <input type="checkbox"/> vital signs <input type="checkbox"/> message push <input type="checkbox"/> monitoring alarm <input type="checkbox"/> Personnel boarding and disembarking management	<input checked="" type="checkbox"/> personnel positioning (regional fuzzy positioning) <input checked="" type="checkbox"/> vital signs <input checked="" type="checkbox"/> message push <input checked="" type="checkbox"/> monitoring alarm <input checked="" type="checkbox"/> Personnel boarding and disembarking management

Note: ■ is optional equipment

## ► Product features

- Efficiency
  - Realtime interaction, quick response and decision support
- Reliable
  - Marine standard, system self-inspection and power supply monitoring
- Safety
  - Staff safety, operation safety and information safety
- Convenient
  - Batch management, batch notification, easy to wearan be used without learning
- Scalable
  - expand and integrate multiple systemsegrated and deployed
  - Life culture system
  - Comprehensive support system
  - ....

- Intelligent management
  - Multi channels, multi identifications and multi-dimensional algorithm
- Smooth communication
  - Two way and fast
- Flexible configuration
  - Staff information sharing, data function expansion and multiple deployment schemes

## ► Product function

- Personnel positioning:
  - Staff location service
  - Activity path tracing
  - The activity area is abnormal
  - Thermal diagram of each section
  - Information analysis and personnel trend
- Vital signs:
  - Health monitoring
  - Long term health status analysis
  - Emergency alarm
- Message push: the administrator can inform the wearable watch of the message
  - The designated person
  - instant messaging
  - Time message
  - Cycle message (alarm clock, medication, etc.)
- Personnel boarding and disembarkation Management: realize boarding and disembarkation management through various means
  - Registration of boarding and disembarking
  - History query
  - The management of asking for and canceling leave

- Expand functions
  - Integrated cultural life system:
  - Unified user management function
  - Expand the application of tablet, and complete the management and supervision of personnel on board at the same time of leisure and entertainment
  - Personnel personality data display
  - Integrated comprehensive support system
  - Unified user management
  - Integrated allocation of rights and responsibilities of crew, post and equipment
  - Data record of personnel on duty and patrol
  - Integrated fire, flooding and other safety systems
  - Centralized situation display
  - Guide for personnel escape route
  - Emergency decision support
  - CCTV
  - Realtime switching of video data

## ► Product technical parameters

- Special cabinet
  - CPU: server CPU, main frequency  $\geq 2.1\text{GHz}$ ;
  - Memory:  $\geq 32\text{GB}$ ;
  - Hard disk:  $\geq 3\text{TB}$ ;
  - Power supply: AC  $220V \pm 10\% 50 / 60\text{Hz}$ ;
- Wireless AC (installed in cabinet)



- Maximum number of manageable APS: 128
- Wireless user access capacity: 2000
- Power supply: AC  $220V \pm 10\% 50 / 60\text{Hz}$

### ■ Wireless AP



- Maximum user: 256
- Location service: support the location of WiFi terminal
- Power supply: PoE

### ■ Portable boarding and disembarking card reader



- RFID: ISO/IEC 14443A 13.56MHz
- WiFi: IEEE 802.1b/g/n
- Handheld
- Protection grade: IP65

### ■ Wireless AP (identification type)



- Maximum users: 128
- Power supply: POE
- Working temperature:  $-15^{\circ}\text{C} \sim +55^{\circ}\text{C}$
- Overall dimension:  $290\text{mm} \times 140\text{mm} \times 88\text{mm}$
- Protection grade: IP44
- Electromagnetic compatibility: meet the requirements of GB151A-97

### ■ Boarding and disembarking card reader



- RFID: ISO/IEC 14443A 13.56MHz
- Width×height×depth:  $380\text{mm} \times 400\text{mm} \times 163\text{ mm}$
- Protection grade: IP56
- Installation mode: wall mounted
- Power supply: AC  $220V \pm 10\% 50 / 60\text{Hz}$

**■ iBeacon positioning beacon**


- Communication mode: BLE 4.0
- Endurance: 2 years
- Diameter x thickness: 60mm x 27mm

**■ Tablet RT-P105**


- Processor: 4 cores, 1.8GHz
- Memory + storage: ≥2GB RAM + 16GB ROM
- Operating system: Android 5.1

**■ Smartwatch RW-A03**

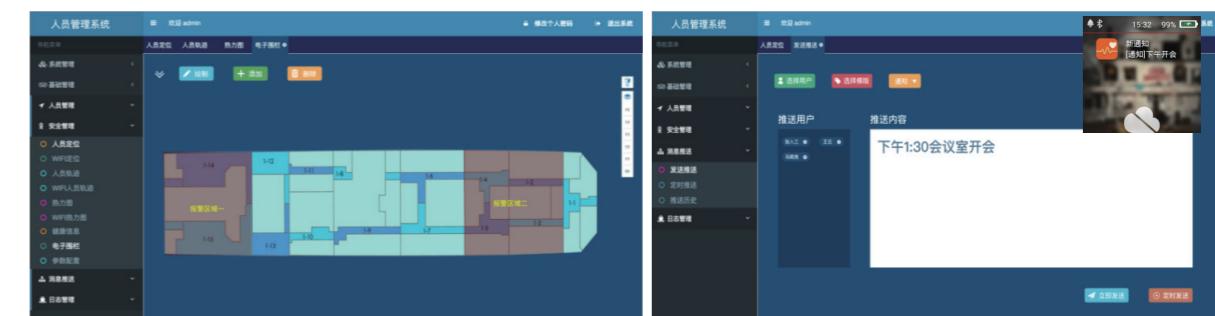

- CPU: dual core, main frequency not less than 1.2GHz
- Touch screen: single point capacitive touch
- Gravity sensor, heart rate sensor
- Protection grade: IP66

**■ Smart Bracelet RW-B01**


- Gravity sensor, heart rate sensor
- Strap: can be embedded with RFID tag
- Protection grade: IP66
- Diameter x thickness: 60mm x 27mm

**► software interface**


Personnel positioning personnel heat map



Electronic fence

Message push