

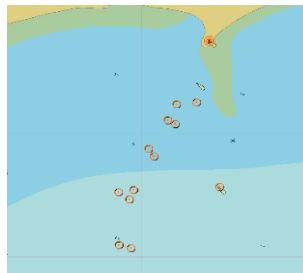
SPAT-1010A Digital AIS AtoN Terminal is installed on navigation indicating facilities such as light buoys, light vessel, light beacon, light house etc. in the coverage area of AIS base station, becomes a part of the navigation indication system, and connects the navigation indicating facilities with management departments, thus providing digital navigation services for navigating ships. The equipment not only can locate accurately, but also is not influenced by poor weather such as heavy fog, rain, snow etc. It can send Navigation-Supporting Information to ships on navigation channels, and indicate it on the electronic chart. At the same time, it can send information such as status of navigation light, storage battery, and solar panels, as well as warning information etc. to management departments, which will greatly improve navigation safety, and is easy for maintenance and management for navigation indicatings.

Main Features >

- SPAT-1010A Digital AIS AtoN Terminal is III type navigation indicating equipment, completely covering type I and type II equipments on functions.
- Telemetry & telecontrol and AIS information relay transmission functions.
- Adopt highly efficient solar power/electric power conversion and low power consumption plan.
- Adopt modularization and integrated design (with built-in antenna), has good maintenance.
- The design and test meet requirements of ITU-RM.1371-3, IEC 62320-2, IEC 60945, and have obtained the Practical New Type Patent Certification (No. 1777859 certificate) of State Intellectual Property Office of the People's Republic of China.

Basic Functions >

Digital navigation aid: this equipment can send the navigation-supporting information to ships on navigation channel without being influenced by poor weather such as heavy fog, rain, and snow etc, and indicate on electronic chart, thus improving the navigation aid efficiency of navigation indicating facilities.



Monitoring status of navigation indicating facilities: this equipment can send the information of status of navigation lights, storage battery, and solar panel, as well as the detailed current and voltage etc. in real time to the monitoring center.

General info for AtoN

MMSI: 994131636
 Name: HAI YANG 7
 Type: Shoalward band Mark/Obst
 Visual Aid: RED ALARM
 Length of AtoN: 20METER
 Width of AtoN: 20METER
 Longitude: EAST 121.82334°
 Latitude: NORTH 36.83917°
 Off-position indicator: ON POSITION
 Reporting time: 2011-09-17 13:59

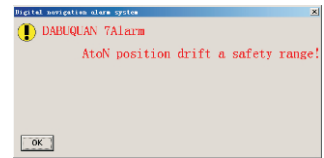
Extended info for AtoN

Reporting time: 2011-09-17 13:59
 Solar panel status: Work
 Light status: Light
 Storage battery status: Normal/Not full of
 Storage battery voltage: 13.56V
 Light current: 0.0A
 Solar panel voltage: 13.46V
 Solar panel current: 0.5A
 Work mode: Continuous work

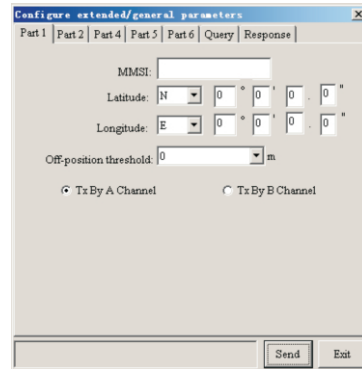
Listing of received other AtoN

| MMSI of AtoN | Name of AtoN |
|--------------|---------------------|
| 994131629 | HEI HU 202 |
| 994131630 | HAI YANG 1 |
| 994131631 | HAI YANG 2 |
| 994131632 | HAI YANG 3 |
| 994131633 | HAI YANG 4 |
| 994131634 | HAI YANG 5 |
| 994131635 | HAI YANG 6 |
| 994131636 | HAI YANG 7 |
| 994131637 | HAI YANG 8 |
| 994131639 | HAI YANG 10 |
| 994131640 | HAI YANG 11 |
| 994131641 | HAI YANG 12 |
| 994131642 | LAO LONG TOU |
| 994131646 | DONOHAKOU 213 |
| 994131650 | DONOHAKOU 217 |
| 994131651 | DONOHAKOU 219 |
| 994131654 | DONOHAKOU 222 |
| 994136502 | CHANGSHANTONG EAST |
| 994136601 | XIN YI TONG WEST/CK |
| 999000537 | HAI YANG 9 |
| 999000708 | DONGHAKOU L12 |
| 999000710 | DONGHAKOU L14 |
| 999413003 | PRECEDITION AREA |
| 999999999 | |

Warning for abnormal status: dislocation warning, guard warning (distance between ships is too small), undervoltage/overvoltage warning for storage battery, and light failure warning etc.



Remote control function: this equipment can control operation mode and deploy working parameters through remote wireless method.

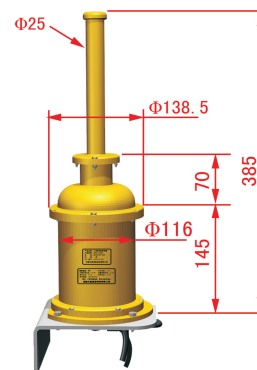


Information statistics: the monitoring center can add up warning information reported by this equipment in time, providing conveniences for arrangement of maintenance of navigation indicating facilities and accurate determination of ships hitting indications and causing accident, which effectively improves working efficiency.

| Time | MMSI of AtoN | Vessel amount | Listing of | | |
|------------------|--------------|---------------|------------|-----------|---------------------|
| 2011-09-17 14:22 | 999000534 | 3 | 970100082 | 970100094 | 970100095 |
| 2011-09-17 14:23 | 999000534 | 4 | 970100082 | 970100087 | 970100094 970100095 |

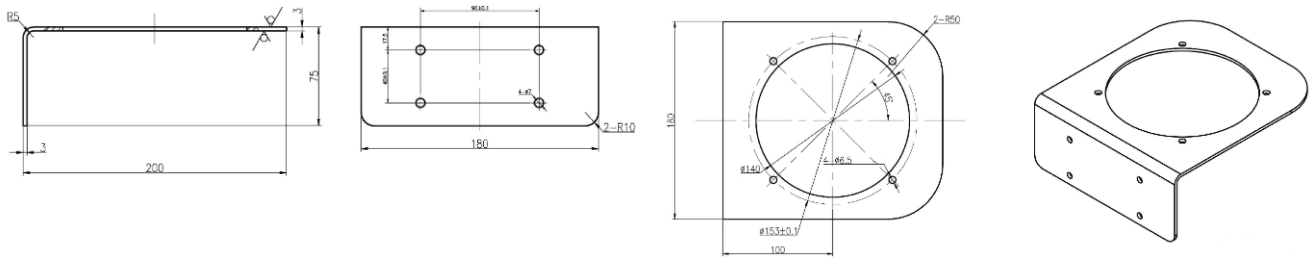
| Time | MMSI of AtoN | Re-Channel A malfunction | GPS malfunction | Direct synchronization failure |
|------------------|--------------|--------------------------|-----------------|--------------------------------|
| 2011-09-17 14:14 | 994131639 | | | Fault |
| 2011-09-17 14:14 | 994131639 | | | Fault |
| 2011-09-17 14:14 | 994131639 | | | Fault |
| 2011-09-17 14:14 | 994131639 | | | Fault |
| 2011-09-17 14:14 | 994131639 | | | Fault |

Product Size >





Size of mounting plate



Technical Specifications >

| AIS receiver | | |
|--|---|---|
| RX frequency | 156.025MHz~162.025MHz | |
| Operation frequency | CH2087 (161.975MHz) | |
| | CH2088 (162.025MHz) | |
| Receiving sensitivity | <-107dBm | |
| Dynamic range | >100dB | |
| Frequency stability | 2.5ppm | |
| AIS transmitter | | |
| TX frequency | 156.025MHz~162.025MHz | |
| Operation frequency | CH2087(161.975MHz) | |
| | CH2088(162.025MHz) | |
| Transmitting power | 2W/6W | |
| Error of transmitting frequency | <500Hz | |
| Transmitting cycle | 1~255min (can be deployed) | |
| Messages transmitted | Message 21、Message 6 | |
| Operating mode | RATDMA/FATDMA | |
| GPS Receiver (built-in) | | |
| Receiving sensitivity | <-140dBm | |
| Number of receiving channels | 50 channels | |
| Receiving frequency | 1575.42MHz | |
| Positioning accuracy | <10 m | |
| Time needed for repositioning | <10 seconds | |
| Interface Description | | |
| RS232 serial port | 1, parameter injection interface | |
| Power interface | 3 groups (solar panel, storage battery, navigation light) | |
| Power Supply | | |
| Continuous mode | <3W | |
| Low power consumption mode | <1W | |
| Nominal voltage | DC 12V | |
| Power supply range | DC 9~18V | |
| Environment | | |
| Operating temperature | -20℃~60℃ | |
| Storage temperature | -40℃~70℃ | |
| Humidity | Meet IEC60945 | |
| Vibration | Meet IEC60945 | |
| Degree of protection provided by enclosure | Ip65 | |
| Equipment list | | |
| Standard configuration | Main unit | 1 |
| | Mounting base | 1 |
| | Installation fasteners | 1 |

Technical support >

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