

SPAT-1000A Universal AIS Transponder (Class A) is a universal ship-borne AIS device that builds a bridge between ships or between a ship and a coast station to exchange information by means of self-organized time division multiple address (SOTDMA). As an important part of digital marine traffic management, it functions mainly to on one hand, avoid ship collision and thus make the waterway safer, on the other hand, provide the travel information of ships to the water transport administration for better management of harbor frontage. This device conforms to Appendix 3 of IMMSC 74(69), A.694, IMO A.917 22, ITU-R M.1371, ITU-R M.825, IEC 61993-2 and IEC 60945. The SPAT-1000A consists of VHF and GPS antenna, a transponder unit, a monitor unit, and several associated units. The transponder contains a VHF transmitter, two TDMA receivers on two parallel VHF channels, a DSC channel 70 receiver, interface, and internal GPS receiver, etc..

## Main Features

### Transponder Unit

Ship collision avoidance: automatically exchange information with other ships and the coastal stations, informing all ships and coastal stations around with the dynamic and static information of all ships in the adjacent sea, greatly benefiting the ships safety. Actively and continuously sending the static information, dynamic information and relevant information of voyage of the ship. Static information includes: MMSI, IMO, catchword, ship name, length and molded breadth of ship, type of ship, location of locating antenna on the ship. Dynamic information includes: UTC, course over ground (COG), speed over ground (SOG), heading and rate of turning. Relevant information of voyage includes: ship draft, sailing status, destination, forecast time of arrival, number of people. Receiving and sending SMS: able to receive and save broadcasting and addressing information. Also, able to send information by broadcasting or addressing.

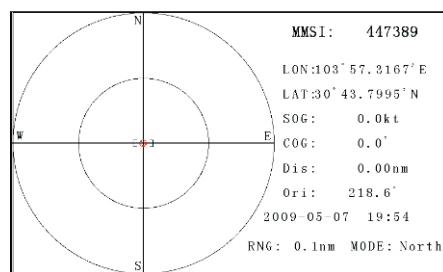
| send message                   |         | receive message |         |
|--------------------------------|---------|-----------------|---------|
| Message Type: Broadcast & Text | 000.1kt | 30° 43.7884' N  | 000.1kt |
| Dest.: All Boats Channel: AUTO | 000.0   | 103° 57.2988' E | 000.0   |
| Message Content                |         | NUM:29 (01/02)  |         |
| ( 2/161)                       |         |                 |         |
| English Send Return            |         |                 |         |

Providing adequate external interfaces: AIS host provides multiple RS422 and RS232 serial ports in accordance with NMEA-0183 and compatible with different kinds of shipboard sensors, and these ports can be used to connect radar, ECDIS, GPS, compass and sensors. Approaching alarm function: Capable of setting TCPA and DCPA and computing TCPA and DCPA of two ships. When reaching the set threshold, the driver will be warned by an audible-and-visual alarm. Ship listing function: Capable of displaying current information that can be received, like number of ships.

| Ship listing    |         | ship information             |  |
|-----------------|---------|------------------------------|--|
| 30° 43.7884' N  | 000.1kt | AIS Vessel Information (1/3) |  |
| 103° 57.2988' E | 000.0   | MMSI: 542918205              |  |
|                 |         | Name: TEST SOURCE            |  |
|                 |         | Call sign:-----              |  |
|                 |         | Type:--                      |  |
|                 |         | IMO No.: -----               |  |
|                 |         | Antenna:A:0 B:0 C:0 D:0      |  |

Radar attitude display function: Display the position relation of own ship with other ships by radar scope. The display mode can be set by oneself to north-up display or own ship head-up display, making it convenient

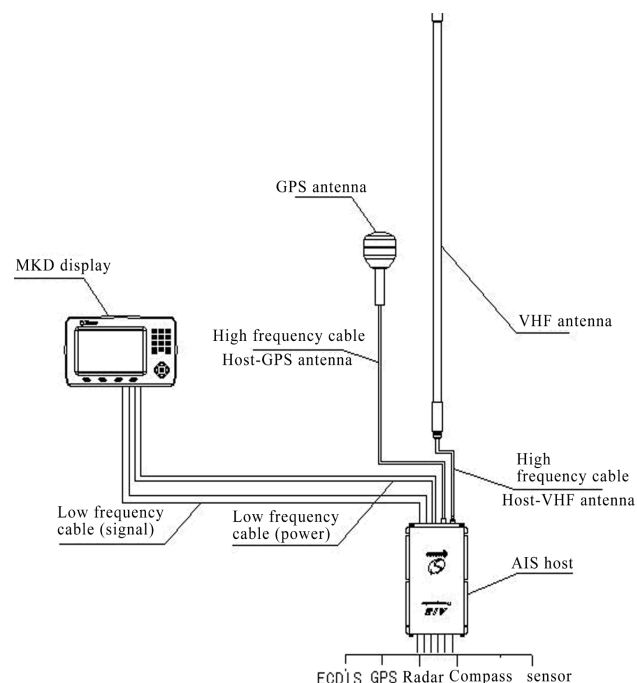
for users to observe the attitude of navigation.



### MKD

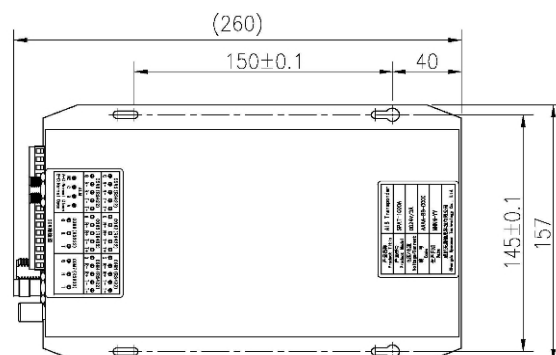
MKD display unit is a high-definition LCD that can not only show dynamic, static and navigation information of ships, but also send and receive SMS, AIS host's parameter settings, etc. International standard data interface can be used with all kinds of AIS. It is free to switch between Chinese and English display interfaces. Friendly human-machine interface makes it easy to operate.

## System connection

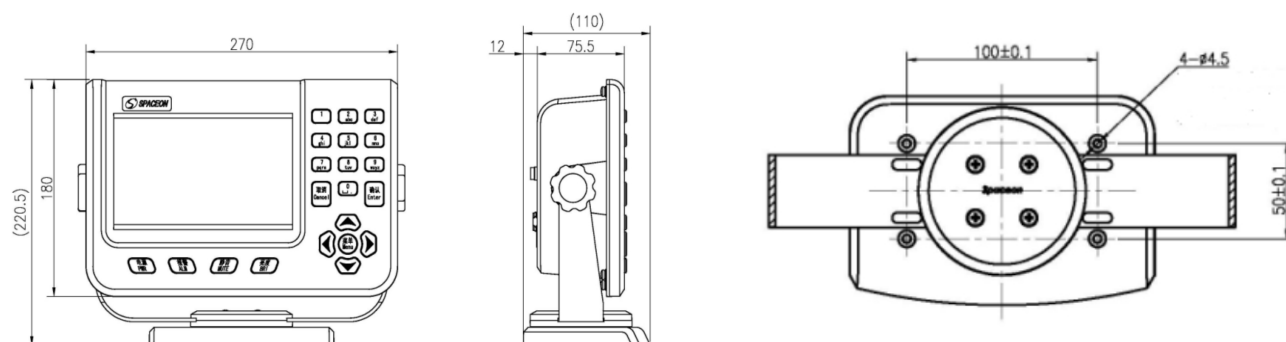


## Product Size

### AIS Transponder



## MKD



## Technical Specifications >

| AIS Host                      |                          |                             |
|-------------------------------|--------------------------|-----------------------------|
| TX/RX frequency               |                          | 156.025MHz - 162.025MHz     |
| Channel bandwidth             |                          | 25kHz                       |
| Output power                  |                          | 12.5 W /2W±1.5dB (optional) |
| Receiving sensitivity         |                          | -107dBm                     |
| Output impedance              |                          | 50 Ω                        |
| DSC receiver                  |                          | CH70 channel, 156.525MHz    |
| MKD Display Unit              |                          |                             |
| Display                       |                          | 7-inch TFT                  |
| Size of the display           |                          | 154mm×85mm                  |
| Screen resolution             |                          | 800×480                     |
| Interface description         |                          |                             |
| COM1-COM6                     |                          | RS422, 4800bps - 115200bps  |
| COM7-COM8                     |                          | RS232, 4800bps - 115200bps  |
| LAN interface                 |                          | 10M/100M                    |
| Transport protocol            |                          | IEC61162-2, NMEA0183        |
| Alarm output                  |                          | Relay switch                |
| Power supply                  |                          |                             |
| Nominal voltage               |                          | DC 13.8/24V                 |
| Power supply                  |                          | DC 9 - 38V                  |
| Environment                   |                          |                             |
| Operating temperature         |                          | -15℃ - 55℃                  |
| Electromagnetic compatibility |                          | IEC60945                    |
| Humidity                      |                          | IEC60945                    |
| Vibration                     |                          | IEC60945                    |
| Equipment list                |                          |                             |
| Standard configuration        | AIS Host                 | 1                           |
|                               | MKD                      | 1                           |
|                               | Power cord               | 1                           |
|                               | Data wire                | 1                           |
|                               | Installation accessories | 1                           |

## Technical support >

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