

ONWA[®]

MARINE ELECTRONICS



MODEL

KS-200A

Class B+ AIS Transponder
Black Box



MODEL

KS-200A_SART

Class B+ AIS Transponder
Black Box with SART button



AIS Technology

exactTrax[™]

exactTrax TRACKING SERVICE

CLASS B+

Built-in AIS Transponder

RS232

Electrical Interface
and Programming

NMEA0183

Interface

➤ AIS TECHNOLOGY AND ONWA AIS SOFTWARE

AIS TECHNOLOGY

The ONWA Class B+ AIS Transponder transmits and receives all AIS data of nearby targets around your boat (*with suitable VHF Antenna*)



Class B+ AIS Technology

- **SOTDMA Technology** - Same technology used by Class A
 - Guaranteed time slot allocation
- **5W Transmission Power** - increases the range and AIS Satellite reception enabling Global tracking
- **Increased Transmission Rate** (Based on speed)

ONWA AIS SOFTWARE

AIS data of your vessel such as MMSI, Call Sign, Vessel name, etc. can be configured with the ONWA AIS Software

The screenshot shows the 'ONWA AIS-Config' window. At the top, there is a 'Serial(??)' section with a 'Serial port' dropdown menu set to 'COM1' and a 'NOT Connect(???)' button. Below this is the 'AIS information(??)' section, which contains several input fields: 'MMSI Number (MMSI ??)' with '0', 'SART Number (SART ??)' with '0', 'Call Sign (??)', 'IMO (IMO??)' with '0', 'Name (??)', and 'Tracking Group ID(???????)' with '0'. There are also fields for 'Ship Type (???)', 'Distance A (??A)', 'Distance B (??B)', 'Distance C (??C)', 'Distance D (??D)', and 'Version(???)', all with '0' or blank values. To the right of these fields is a diagram of a GPS antenna (labeled 'GPS Antenna (天线)') with dimensions A, B, C, and D. Below the diagram are two radio button options: 'TX Switch(????)' with 'TX_ON (????)' selected and 'TX_OFF (????)' unselected. Below that are two radio button options: 'Mode(????)' with 'SO-TDMA' selected and 'CS-TDMA' unselected. At the bottom of the window are 'Read(??)' and 'Write(??)' buttons.

exactTrax™

exactTrax Tracking

**Specify when ordering*

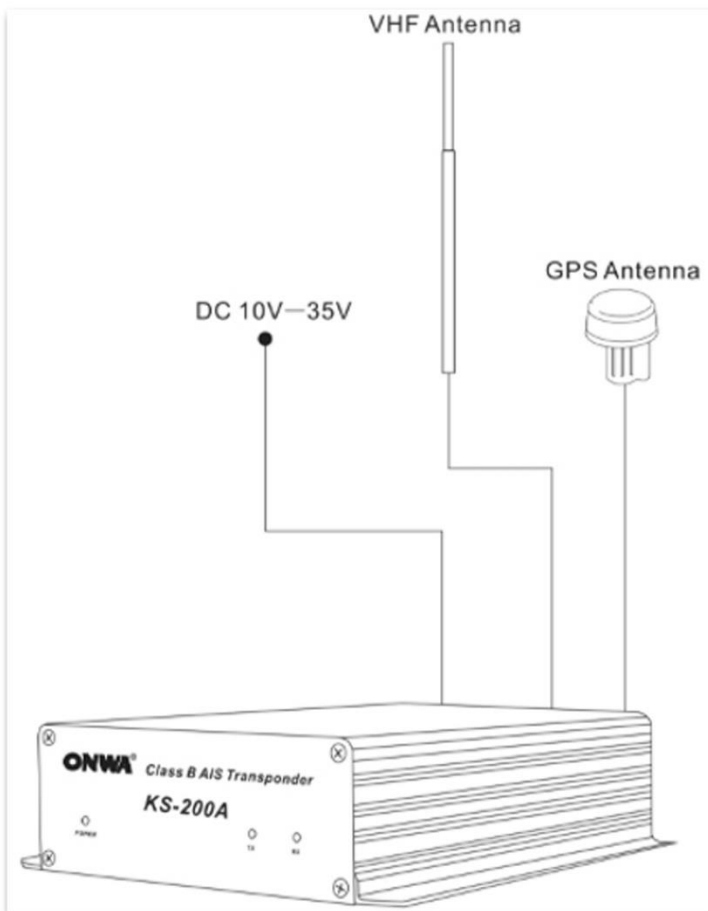
- Track fishing boats and small commercial vessels with AIS Class B type transceivers across the globe
- Can send standard AIS message and exactTrax message (exactTrax message shows MMSI and position only)
- ONWA AIS can connect other sensors to the AIS module, such as ultrasonic weather sensor and speed log, to send with exactTrax message

NOTE: In order to use exactTrax, user must avail ExactEarth Service



ExactTrax showing position of a vessel sailing for 1 week from Hong kong to Malaysia in multi-hour vessel track

► SYSTEM CONFIGURATION



**Suitable VHF Antenna*

• **KA-159**

(not included in the set, specify when ordering)



**GPS Antenna*

• **KA-07**

(not included in the set, specify when ordering)



SPECIFICATIONS

GPS Receiver (AIS Internal) Connectors

IEC 61108-1 compliant
VHF Antenna connector PL259 female
GPS Antenna connector BNC female
Power/data connector 8 pins male

PHYSICAL

Dimension: 207mm (length) x 155.8mm (width) x 50mm (height)
Weight: 0.8kg

POWER

Input: 10~35VDC
Power Consumption: 0,35A nominal, 2A peak

Electrical Interface

RS232 38.4kbaud bi-directional

Environmental

Operating Temperature: -25°C to +55°C

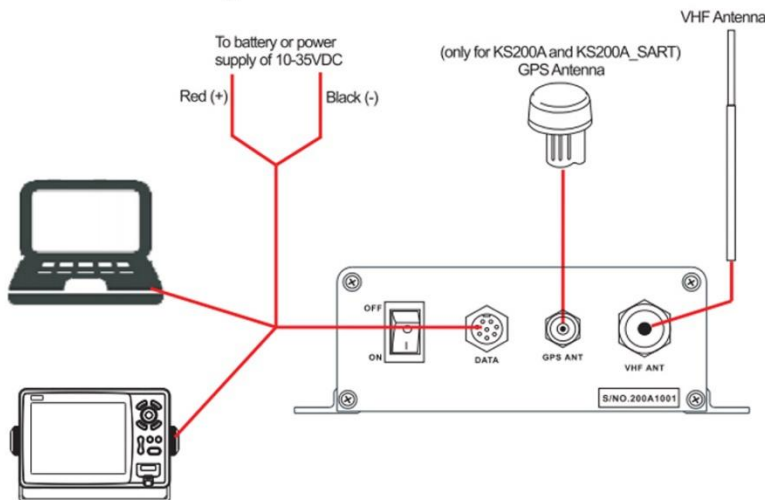
NMEA Sentence Supported

VDM, VDO, RMC, GSV, GGA, GSA

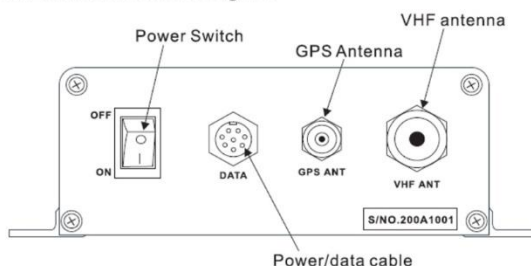
AIS CHARACTERISTICS

| | | | |
|----------------------------|-------------------------|--------------------|------------------------------------|
| Frequency Rate: | 156.025 MHz~162.025 MHz | AIS Channel 1: | CH 87B (161.975 MHz) |
| Access Scheme: | SOTDMA | AIS Channel 2: | CH 88B (162.025 MHz) |
| Channel Bandwidth: | 25 KHz | Tx Power Output: | > 5 Watt (37 dBm ± 1.5 dB) |
| Modulation: | GMSK | RX Sensitivity: | < -123dBm @ 20% PER |
| Data Rate: | 9,600 bps | RX Message Format: | AIS Class A and B messages |
| Number of AIS Transmitter: | 1 | Comply Standard: | IEC-62287 IEC 62287-2 Ed. 2.0:2017 |
| Number of AIS Receiver: | 2 | | |

Interconnection diagram



KS200A Connection Diagram



DIMENSION

