SHINE MICRO

RADARPLUS® AIS-BX

LOW COST CLASS B AIS TRANSPONDER

An Automatic Identification System, or AIS, is a cutting-edge tool for:

- **Safety of Navigation**
- **Law Enforcement**
- **Collision Avoidance**
- **Port Security**

Class B AIS is a low cost safety of navigation aid. With the **RADARPLUS® AIS-BX** you can transmit vital data about your vessel while viewing the **AIS** transmissions of others in real-time. In addition, Shine Micro is an **FCC approved** issuer of the **Maritime Mobile Service Identification** number required for identifying your vessel, and provides this unique ID number **free with your purchase.** The assignment of your **MMSI**, or registration of an existing one, is **online***; making activation easy.

- **Transmit Your Position**
Operating an AIS-BX ensures you are seen by other AIS fitted vessels, including the U.S. Coast Guard, Search and Rescue Operations and most commercial ships.

- **Safety Related Message**
The Safety Related Message button allows the user to transmit a distress alert quickly and easily to all vessels and base stations within range.

Note: This feature is in addition to the international AIS specification and may not be monitored by all reception equipment. This feature does not replace use of normal VHF emergency procedures.

- **Internal GPS**
The AIS-BX includes an integral 16 channel GPS.

- **Standard NMEA Interface**
The AIS-BX can interface with any NMEA compatible GPS plotter or suitably configured PC.

- **Water Resistance**
An IP65 rated aluminum case ensures that the AIS-BX is able to operate in harsh environments.

- **Online Activation***
*Assign or register your MMSI number and activate your transponder online at **www.shinemicro.com**, or contact us to receive the forms via email or fax.

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PRODUCT FEATURES

Physical
- Dimensions: 6.75 x 4.40 x 1.90 in. (L x W x H)
- Weight: ≤ 4 lb.

Power
- 12V DC (9.6-15.6V)
- Average Power Consumption: 4W nominal (approx. 350 mA at 12V)
- Peak Power Consumption: 18W during transmit (approx. 1.5A at 12V)

GPS Receiver (Internal)
- IEC 61108-1 Compliant
- 16 Channel
- Receives message 17 for differential corrections to GPS from a transmitting base station

Electrical Interfaces
- RS232 38.4K baud bi-directional
- RS422 NMEA 38.4K baud bi-directional

Connectors
- VHF Antenna Connector: BNC female
- GPS Antenna Connector: TNC female
- RS232/RS422/Power: DB15 female

VHF Transceiver
- Transmitter x 1
- Receiver x 2 (one shared between AIS/DSC)
- Frequency: 156.025 to 162.025 in 25 KHz steps
- Output Power: 33dBm (2 watts) ± 1.5dB
- Channel Bandwidth: 25KHz
- Channel Step: 25KHz
- Modulation Modes:
  - 25KHz GMSK (AIS, TX and RX)
  - 25KHz AFSK (DSC, RX only)
- Bit Rate:
  - 9600 b/s ± 50 ppm (GMSK)
  - 1200 b/s ± 30 ppm (FSK)
- RX Sensitivity:
  - Sensitivity: -107dBm @ 20% PER
  - Co Channel: 10dB
  - Adjacent Channel: 70dB
  - IMD: 65dB
  - Blocking: 84dB

Environmental
- IEC 60945 (Cat C)
- Operating Temperature: -25°C to +55°C

Compliant with the following standards:
- IEC 62287-1
  IEC standard, Class B shipborne equipment
- IEC 60945 Edn 4.0
  IEC standard, environmental requirements
- ITU-RM.1371-1
  Universal AIS technical characteristics
- IEC 61162-1 Edn 2.0
  IEC standard, digital interfaces part 1
- IEC 61162-2 Edn 1.0
  IEC standard, digital interfaces - part 2
- IEC 61108-1
  IEC standard, GPS receiver equipment
- ITU RR AP18eWRC2000
  Radio regs., appendix 18, table of frequencies in the VHF maritime mobile band
- ITU R M.493-9
  Digital Selective Calling (DSC) system for use in the maritime mobile service
- ITU R.M 825-3
  Characteristics of a transponder system using DSC for use with VTS and ship-to-ship identification

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