

# AIS Shore Station

## Rack Mount AIS Shore Station

i-ais-BS1 is an AIS station designed for AIS management and monitoring functions to be performed with a shore installation.

It consists of an AIS Unit for standard AIS functions and a Communication Gateway to be able to communicate with an operation center over IP connectivity.



i-ais-BS1, AIS Shore Station, is mainly used to monitor the AIS VDL network around and to provide support for proper messaging with Class-B transponders with mission specific functions.

- Monitoring of AIS network
- Transmission of AIS messages (6, 7, 8, 12, 13, 14)
- Reception of all AIS messages (1 to 27)
- Transmission and reception of mission specific Class B messages
- Text messaging with ships (Msg 12 and 14)
- Encrypted binary messaging (Msg 6 and 8)
- Remote management (through Ethernet or GPRS)
- Standard 19" 3U form factor for rack installation
- 2 x RS-232 Ports for NMEA, 1 x RS-232 Port for AUX, 1 x ETH port for ADSL, D-IN (Digital Input)
- Compatible with i-SEA Platform
- Optional mode to send raw AIS NMEA data (non-encapsulated) over TCP/IP connection

i-ais-BS1

## GENERAL

- > Operating Temperature Range -15 °C to +55 °C
- > Storage Temperature Range -30 °C to +70 °C
- > Humidity Up to 93% at 40 °C non-condensing
- > Power Supply Voltage 12 - 24V DC (min/max:10-30 V DC)
- > Supply Current 420 mA nominal @ 12 V DC
- > Size 483 mm x 206 mm x 133 mm
- > Weight 3.5 kg
- > Connectors VHF Antenna: N Female  
GPS Antenna: TNC Female  
GSM Antenna: TNC-RP Female  
Circular Plastic Connectors for NMEA1, NMEA2, POWER, D-IN, AUX, RJ-45 (Ethernet)
- > Case Aluminum Rack Unit
- > Case Ip Rating IP-20
- > Interfaces 3 x RS-232 (NMEA)  
3 x Digital Input (Dry Contact)  
2 x Analog Input (0-12V)  
1 x Open Collector Output  
1 x Ethernet

## TRANSMITTER

- > Operating Frequency Range 156.025 – 162.025 MHz
- > Channel Spacing 25 kHz
- > Transmitter Output Power 12.5W (41dBm) nominal  
1W (30dBm) low power mode
- > Modulation GMSK

## RECEIVER

- > # of Receivers 2 (simultaneous operation)
- > Operating Frequency Range 156.025 – 162.025 MHz
- > Channel Spacing 25 kHz
- > Receiver Sensitivity Better than -107dBm
- > Co-Channel Rejection Better than 10 dB
- > Adjacent Channel Selectivity > 70 dB
- > Spurious Response Rejection > 70 dB
- > Intermodulation Response Rejection > 65 dB
- > Blocking or Desensitization > 86 dB
- > Spurious Radiation (conducted) < -57 dBm

## GPS RECEIVER

- > # of Channels 50
- > Time to First Fix 29s Cold Start  
29s Warm Start  
<1s Hot Start
- > Receiver Sensitivity -160 dBm Tracking  
-160 dBm Reacquisition  
-144 dBm Cold Start

## STANDARDS

- > AIS IEC 62320-2  
ITU-R M.1371-4  
IMO Res. MSC.74(69), Annex 3
- > Environmental & EMC IEC 60945
- > Safety IEC 60950-1

## APPROVAL

- > CE DoC per R&TTE Directive-99/5/EC

AUTHORIZED DEALER

Technical specifications are subject to change without prior notice.