

# Secure Class A AIS Transponder

## Secure Communication over AIS Network

i-ais-STA AIS Transponder is a Class-A AIS mobile device, which provides secure communication functionality in addition to the standard AIS features.

i-ais-STA has three operating modes:

**Active:** Standard AIS mode (acts as a standard Class-A Transponder)

**Passive:** Receive only mode (only listens, without any transmission)

**Protected:** Secure mode (encrypts transmitted AIS data)



The secure mode of the i-ais-STA is provided with well known AES encryption algorithm. The key for AES is loaded to the device with a special SW over serial communication channel.

- Operating modes (Active / Passive / Protected)
- 8 x RS-422 ports (IEC61162-2 comp.)
- Robust housing (IP66)
- Fully compliant with IEC and ITU standards
- RTCA/DO-160E compatibility
- Compatible with i-SEA Platform



7" MKD

i-ais-STA

## 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 500mA nominal @ 12V
- > Size 200mm x 220mm x 140mm
- > Weight 4.4 kg
- > Connectors VHF Antenna: N Female  
GPS Antenna: TNC Female  
Data Connector (MIL-DTL-38999 comp.)  
Power Connector (MIL-DTL-38999 comp.)
- > Case Aluminum Alloy (AlMg0,5Si) 6063
- > Case IP Rating IP-66 (Water Resistant)
- > Interfaces 8 x RS-422 (IEC61162-2 comp. Hi-speed)  
Alarm Output  
Tx Pre-Pulse Output

## 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 2xAIS / 1xDSC (all simultaneous)
- > 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 > 86 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 69993-2  
ITU-R M.1371-4  
IMO Res. MSC.74(69), Annex 3
- > Environmental & EMC IEC 60945
- > Safety IEC 60950-1

## MINIMUM KEYBOARD DISPLAY

- > Display 7" 16:10 TFT LCD
- > Resolution 1280 x 800 px.
- > Max. Color 262 K
- > Weight 560 gr.
- > Dimension 136.6mm x 218mm x 21mm

AUTHORIZED DEALER

Technical specifications are subject to change without prior notice.