

AIS RX PRO

The AIS tool for professional users



THE SOLUTION TO FULL CONTROL ON AIS

The AIS RX PRO, AIS receiver is designed to meet the all the existing requirements for AIS Base Stations but with receive capacity only . The AIS RX PRO will help fulfill needed requirements for a port to meet ISPS requirements. The AIS RX PRO is the best friend when designing a coastal AIS coverage in terms of accomplishing high coverage and surveillance at a affordable price since it can be used as a tool in the planning of a AIS system to measure and verify your coverage.

By implementing AIS RX PRO in a existing AIS infrastructure extended coverage and improved capacity can be accomplished at low cost. For blue light forces

and navies it is the best way to have the most secure means to see all the AIS traffic transmitted within the available coverage, even addressed messages between other ships (everything on the VHF Data Link, VDL, will be available).

- Demodulated HDLC mode
- Raw mode HDLC
- Time stamp information
- RSSI level (dBm) measurement
- Slot number (referenced to UTC) information
- Jitter measurement
- Signal to noise ratio information

KEY FEATURES

- Professional 2 channel AIS receiver
- Slot timing measurements
- Built-in GPS receiver
- Powered from external 12VDC or USB
- Signal strength measurements
- RS 232 interface

TECHNICAL SPECIFICATIONS

General

Power supply: 12 VDC
Power consumption: Less than 5 W
Temperature range: -15 - +55 deg. C
EMC: Designed to meet CE, FCC part 15

Physical for 19" rack mount:

Height: 1 HE
Depth: 245 mm (incl. connectors)
Weight: 1,6 kg

LED Indicators:

- Reception Channel A
- Reception Channel B
- GPS 1PPS
- Status (OK/NOK) – Constant/Flashing

Receiver RF specification

Frequency Range: 155 MHz to 163 MHz
Maximum Usable Sensitivity: -112dBm for 20% PER
Overall Noise Figure: < 10dB
Input Impedance: 50 ohm
Co-channel rejection: Better than -10dB
Adjacent Channel selectivity: > 70dB normal cond.
Spurious response rejection: > 70dB
Intermodulation response rejection: > 80dB@-112dBm
Blocking or desensitization: > 84dB
Spurious radiation, conducted: < -57dBm

Functional specification

The receiver supports the following functions and modes:

Set-up: Frequency /channel settings Operational mode settings
Data port settings
Operational mode: Demodulated HDLC
Raw mode HDLC
Time stamp
RSSI level (dBm)
Slot number (referenced to UTC)
Jitter measurement
Signal to noise ratio
Message statistics

Output messages:

Sentence	Comment
VDM	Messages 1-27
BRM	Once per received VDL message according to IALA A-124
ALR	Integrity Alarm
TXT	BIIT Warning/Notification
RMC	Position, Navstatus, SOG, COG, Mode indicator, UTC Date and Time (once per second) with optional GPS receiver
!PTHAR	VDL Raw data with CRC error

Alarm messages:

- Rx channel 1 malfunction
- Rx channel 2 malfunction
- General failure
- No sensor position in use

Text messages:

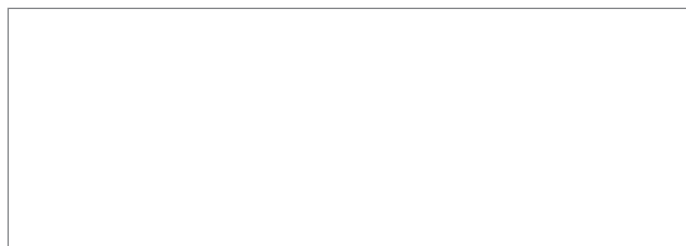
- UTC clock lost
- UTC clock OK
- Internal GNSS in use

Input messages:

Acknowledgement of alarm message
Configuration of MMSI, position source, fixed
Position, frequencies, talker ID
Reboot
Configuration of optional information

Interfaces:

- Input/output: RS232 (RS 422 optional)
- AIS Antenna: 50 ohm, BNC connector
- GPS Antenna: 50 ohm, TNC connector (3,3 VDC supply to antenna)
- DC supply: 12 VDC /5W
- ETHERNET (optional)
- MIL std connectors (optional)



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