

# AIS RX PRO



The AIS RX PRO, AIS receiver is designed to meet the all the existing requirements for AIS Base Stations but only with receive capacity. 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).

AIS RX PRO features such modes as:

- 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
- Message statistics

**AIS RX PRO**  
**YOUR SOLUTION TO FULL CONTROL AND FULL COVERAGE**  
**AT LOWEST POSSIBLE COST**

TRUE HEADING AB  
NYBERGSGATAN 6B  
SE-114 45 STOCKHOLM  
SWEDEN

Phone: +46 8 660 90 60  
Fax: + 46 8 661 80 20  
E-mail: [info@trueheading.se](mailto:info@trueheading.se)  
[www.trueheading.se](http://www.trueheading.se)



# AIS RX PRO

## 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:

Box mount 19 inch  
Height: 40 mm 1 HE  
Depth: 130 mm 285 mm  
Width 190 mm  
Weight 1,8 kg 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 1-22
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 (5VDC supply to antenna)
- DC supply: 12 VDC /5W

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