

ATONIS –R

AIS Repeater Station

ATONIS-R is a unique, state-of-the-art, modular, AIS simplex repeater station. The ATONIS-R's primary function is to extend the AIS coverage for AIS base station networks, or to overcome limitations in radio propagation due to topographical obstacles inhibiting line of sight communication.

The AIS repeater receives AIS messages data from ships within its coverage area and retransmits the received information using RATDMA protocol. The AIS messages to be repeated can be filtered based on message type to meet the requirement of the competent authority.

The ATONIS-Repeater is an economical, stand-alone installation that does not require integration with landline or non-AIS VHF communication networks.

Due to the low power consumption, the ATONIS-repeater can be powered by an inexpensive battery/solar panel power system, making it suitable for installations on floating Aids-to Navigation and at remote sites where electrical power is not available.

The ATONIS-Repeater can also be combined with the ATONIS AIS Aids-to-Navigation monitoring functionality.

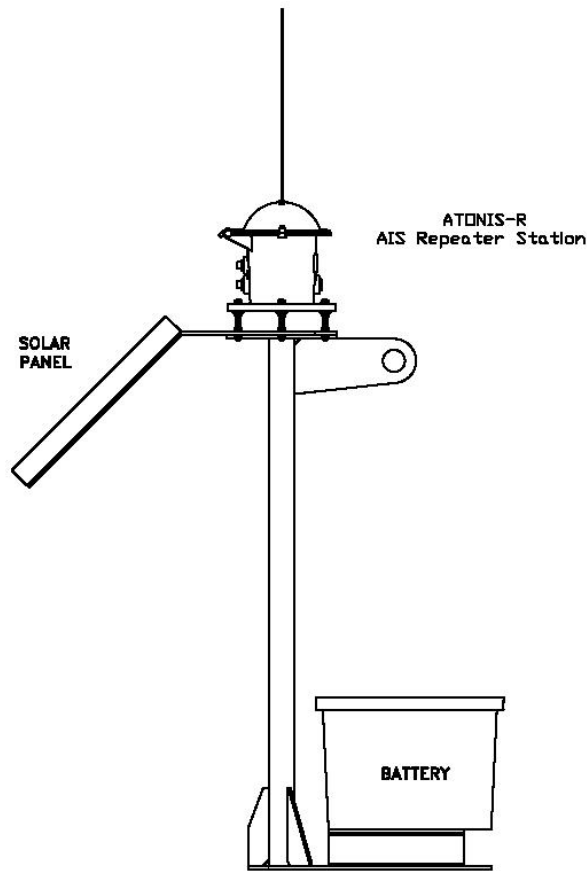
Specifications		
Fitting	Mounted in IP67 enclosure; approx 254mm x 254mm < 4.5 kg	
Input Voltage	9 to 36 VDC	
Repeater Capabilities	The repeater repeats all successfully received messages using RATDMA access scheme according to ITU-R M.1371-1, IALA A-124 and IALA-126.	
Power Consumption	Idle (No or low traffic load):	7 Watts
	Medium (approx 100 vessels):	10 Watts
	High (approx 200 vessels):	13 Watts
Temperature Range	-15 ° to +50°C	
Humidity	95% relative humidity at 30°C	
Configuration/Control	Via RS-232	
Options	AIS Aids-to-Navigation Reporting via message 21 AIS Met/Hydro reporting via message 8 Selective repeating based on information in AIS messages Remote Control/Monitoring of installation on repeater site via the AIS via message 6 Remote Control and Configuration via AIS, GSM/GPRS or Inmarsat D+	
VHF Antenna	External (50 Ohm)	
GPS Antenna	Internal or External	
Standards	IALA A-124, IALA A-126; IEC 60945 and IEC 62320-2	
Certifications	(pending) CE, R&TTE Directive (EC/1999/5) FCC, IC	
Transmitter Module	FM-GMSK	
Frequency Range	155 – 163 MHZ, 25kHz bandwidth, configurable	
Power Output	1, 5, and 12.5 Watts, configurable	
Frequency Stability	± 2.5 ppm	



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Specifications (continued)	
Receiver Module	
Type	FM-GMSK
Frequency Range	155 – 163 MHZ, 25kHz bandwidth, frequency agile
Frequency Stability	± 2.5 ppm
Sensitivity	< -112 dBm for PER 20%
Spurious response rejection	> 70 dB
Adjacent Channel selectivity	> 70dB
Intermodulation response rejection	> 80dB@-112dBm
Blocking or desensitization	> 84dB
Spurious radiation, conducted:	< -57dBm
Co-channel rejection:	Better than -10 dB



**ATONIS-R
Typical Stand-alone Installation**



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