

AIS BS610

Kongsberg AIS Base Station

AIS BS610 is a product in the new generation AIS Base Station range from Kongsberg Seatex. The AIS BS610 has a sensitivity better than -115 dBm and 1U 19" rack mountable smooth design. The AIS BS610 is designed and tested in accordance with all relevant international standards including IEC 62320-1 and ITU M-1371-4.

The AIS Base Station is the primary component in an AIS Physical Shore Station (PSS), and therefore the most vital component in a coastal AIS network. The AIS BS610 receives and communicates AIS data from all AIS sources: AIS mobile stations, other AIS Base Stations, AIS Aids to Navigation units, Search and Rescue units etc, within the VHF coverage area.

The AIS system provides a valuable tool to increase the situation awareness, the efficiency of operations and safety. Experience shows that the workload for operators involved in vessel tracking and monitoring is considerably reduced after the introduction of AIS.

Remote configuration and operation

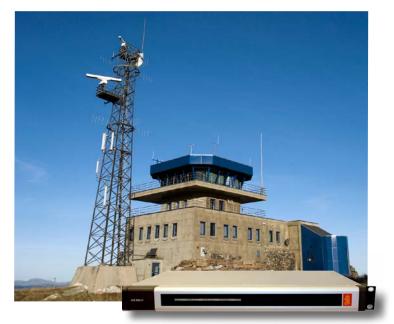
The AIS BS610 has an Ethernet/LAN interface, making it easy to interface the base station to other equipment or data networks. From the AIS Service Management Application Suite a single AIS BS610, or a network of base stations, can be remotely operated and maintained. The AIS BS610 supports configuration and firmware upgrade via a web interface. All base station functions can be configured and effectuated remotely via this interface.

Hot stand-by

In order to obtain a very high level of service and availability, a redundant base station configuration can be established. Two AIS BS610 units will operate autonomously in such a configuration when connecting them with a 0-modem cable and enabling the redundancy functionality. In case of an automatic change in the redundancy configuration, the control centre will be notified.

Sensitivity

Kongsberg Seatex has also developed satellite based AIS receivers and this space-based AIS technology has strong focus on receiver sensitivity. The high sensitivity has been incorporated in the AIS BS610. The increased sensitivity exceeds the requirements in international standards and regulations, and is an incredible enhancement in terms of signal reception.



DGNSS correction distribution

The AIS BS610 is able to broadcast DGNSS corrections through the standardized AIS message 17. Hence, differential corrections can be transmitted to all vessels which carry an AIS mobile station if the vessel is located within the base station's coverage area.

Functionality	BS 600	BS610
Extended sensivity	x	×
Web configuration interface	x	x
SNMP v.2 support	x	х
Configurable channels	3	3
SW upgrade via USB interface	x	×
Remote SW update via WEB interface	x	x
LAN Interface	x	×
RTCM support via LAN, for msg17 transmission	x	×
Virtual AIS AToN support, subset of IEC62320-2 functionality	x	x
Redundancy support	x	×
Built-In IALA DGPS receiver (option), for msg17 transmission	x	
RTCM support via serial line, for msg17 transmission	x	
PI serial interface	x	
Local storage	x	
AIS data filtering	×	
Display for status monitoring and IP config	x	
Retransmission of AIS data (repeating)	x	

Differences between the AIS BS600 and AIS BS610

Features AIS BS610

- Sensitivity better than -115 dBm
- SNMP v.2
- WEB interface for remote configuration and SW upgrade
- RTCM v.2.3 support for reception of DGPS corrections on LAN
- Three remotely configurable receivers (TDMA/DSC)
- USB interface for firmware upgrade
- Transmission of virtual AtoN, implementation of a subset of IEC62320-2 functionality
- Redundancy support (RS-232)

A broad range of auxiliary equipment can be interfaced to enable functionality such as:

- Separate or combined transmitting and receiving antennas
- Remotely controlled hard power reset of PSS equipment
- DGNSS reference and monitor stations



< 95 % relative, non-condensing

100 %, hermetically sealed

100 %, hermetically sealed

EN 60945/EN 61000-6-3/6-2

IEC 61993-2 (clause 15)

>100.000 (designed to meet)

EN 60950-1

A-124

IEC 61162-1/2

IEC 62320-1

ITU-R M. 1371-4

Technical specifications

Interfaces

Communication ports

Message formats LAN Service and redundancy, RS-232

12.5 W or 2 W (Remote switchable)

Default Ch. 87B (161.975 MHz)

Default Ch. 88B (162.025 MHz)

3 kg, 44 mm x 485 mm x 345 mm

0.15 kg, 230 mm (h) x 33 mm (d)

100 to 240 V AC (50 to 60 Hz)

100 Mbs BaseT Ethernet

Better than -115 dBm

156.025 to 162.025 MHz

25 kHz

FATDMA

12 channel

1 Hz

15 W

30 W

Radio module

VHF transmitter Sensitivity Bandwidth Frequencies

Protocol

GPS module

GPS receiver Output rate

Physical dimensions

AIS BS610 GPS antenna VHF antenna

Power AIS BS610

Power consumption Continuous

Peak

Operating temperature AIS BS610

GPS antenna VHF antenna -15 to +55 °C -30 to +70 °C -55 to +70 °C

1.0 kg, 1250 mm



AIS BS610 GPS antenna VHF antenna

Standards and regulations

Electrical safety Electromagnetic compatibility Electrical interface IALA recommendation Base station operation Radio

MTBF (hours)

Specification subject to change without further notice.

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