AIS AQ610

KONGSBERG

AUTOMATIC IDENTIFICATION SYSTEM - MARITIME OPERATIONS

The AIS AQ610 is based upon the new generation AIS Base Station range from Kongsberg, designed in accordance with all relevant international standards including IEC 62320-1/-2 and ITU M-1371-5. It has a sensitivity better than -115 dBm and a 1U 19" rack mountable smooth design.

The Kongsberg AIS AQ610 is specially designed for use in offshore maritime operations, such as wind energy- and aquaculture farms. The AIS AQ610 receives and communicates AIS data from all AIS sources: AIS mobile stations, AIS base stations, AIS Aids to Navigation units, Search and Rescue (AIS SAR) units, and Man-over-Board (AIS MOB) units within the VHF coverage area. The AIS system has proven to be a valuable tool to increase the situation awareness and the efficiency of operations and safety.

Special functions

- Electronic AIS marking of real position of infrastructure, and virtual marking of the outer perimeter of the operational area. All vessels equipped with AIS will receive information indicating the area of operation of the aquaculture location.
- Integration with meteorological sensors for local distribution of weather data.
- Local vessel AIS monitoring in order to track own work boats within the location as well as vessels entering/ leaving the area of operation.
- Remote monitoring of vessel activity from the main control centre for logistic purposes.

Remote configuration and operation

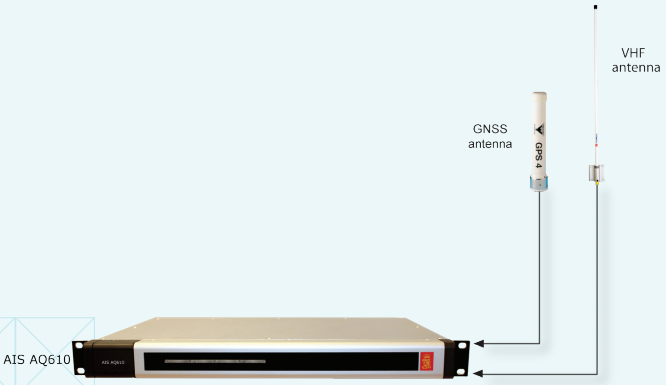
The AIS AQ610 has an Ethernet/LAN interface, making it easy to interface the unit to other equipment or data networks. From the AIS Central Monitor Application, a single AIS AQ610, or a network of these, can be remotely operated and maintained. The AIS AQ610 supports configuration and firmware update via a web interface.

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 AQ610. The increased sensitivity exceeds the requirements in international standards and regulations, and is an incredible enhancement in terms of signal reception.

FEATURES

- Sensitivity better than -115 dBm
- SNMP v.2
- WEB interface for remote configuration and software update
- Three remotely configurable receivers (TDMA/DSC)
- USB interface for firmware update
- Transmission of virtual AtoN, implementation of a subset of IEC 62320-2 functionality
- Serial interface, data (RS-232)
- Optional combined 100 to 240 V AC and 24 V DC version
- Supporting NTP as client and server
- Interface to meterological sensors (option)
- Own position message (synthetic VDO) for map presentation



TECHNICAL SPECIFICATIONS

AIS AQ610

INTERFACES

Communication ports	Service and redundancy, RS-232
Message formats	NMEA
LAN	100 Mbs BaseT Ethernet

RADIO MODULE

VHF transmitter	12.5 W or 1 W (remotely switchable)
Sensitivity	Better than -115 dBm
Bandwidth	25 kHz
Frequencies	156.025 to 162.025 MHz Default Ch. 87B (161.975 MHz) Default Ch. 88B (162.025 MHz)
Protocol	FATDMA

GNSS MODULE

GNSS receivers	50 channels

WEIGHT AND DIMENSIONS

AIS Unit	3 kg, 44 mm x 485 mm x 345 mm
AIS Unit 24 V DC	3.3 kg, 44 mm x 485 mm x 345 mm
GNSS antenna	0.15 kg, 230 mm x 33 mm
VHF antenna	1.0 kg, 1250 mm

POWER SPECIFICATIONS

AIS Unit	100 to 240 V AC (50 to 60 Hz)
AIS Unit 24 V DC	Optional combined 100 to 240 V AC and 24 V DC
AIS Unit power consumption	Average 9 W, peak 39 W
GNSS antenna	5 V DC from AIS Unit

ENVIRONMENTAL SPECIFICATIONS

Operating temperature range

AIS Unit	-15 to +55 °C
GNSS antenna	-50 to +70 °C
VHF antenna	-55 to +70 °C

Humidity

AIS Unit	< 95 % relative, non-condensing
GNSS antenna	100 %, hermetically sealed
VHF antenna	100 %, hermetically sealed

STANDARDS AND REGULATIONS

Electrical safety	EN 60950-1
Electromagnetic compatibility	EN 60945/EN 61000-6-3/6-2
Electrical interface	IEC 61162-1/2
IALA recommendation	A-124
Base station operation	IEC 62320-1 (where relevant)
Radio	IEC 61993-2 (clause 15) ITU-R M. 1371-5
MTBF (hours)	>100.000 (designed to meet)

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Specifications subject to change without any further notice.

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