AIS 300

KONGSBERG

0575

Automatic Identification System
Class A Mobile Station

The AIS 300 is the 4th generation AIS class A mobile station from Kongsberg and it is designed to be fully integrated in a ship's bridge environment. An improved receiver sensitivity of -115 dBm gives an increased range compared to AIS units with the standard sensitivity of -107 dBm. The AIS 300 is tested and approved in accordance with international regulations and have the Wheelmark certification. In addition, the AIS 300 is tested and approved in accordance with the inland AIS regulations.

Integration

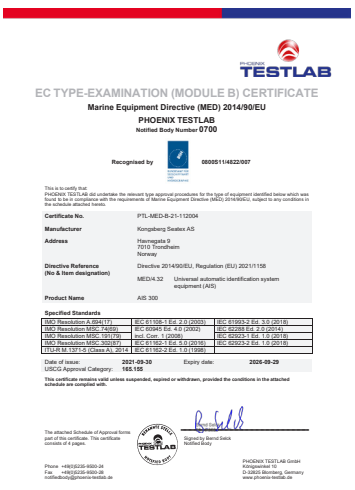
The AIS 300 is designed to be fully integrated with other navigation systems and can be delivered without an external display (MKD - Minimum Keyboard and Display), provided that the ECDIS is listed in MED-B for AIS 300. Functionalities are handled from the ECDIS in an integrated bridge system. The AIS 300 is type approved with ECDIS from different manufacturers and brands, in order to avoid installing a redundant display/keyboard. One important principle of e-navigation is to reduce the number of displays on the bridge. The navigator needs to have important information easily available in order to reduce response time for decisions. Better integration will lead to a better bridge environment as well as a simpler installation. If the AIS Unit is not to be fully integrated, an external display is needed in order to operate the system.

ECDIS/ECS, radar and sensor interface

Interface to ECDIS/ECS and radar is provided via the Presentation Interface (PI) available on network or serial interface (RS-422). It is implicit that the system supports the AIS interface. When interfacing the AIS to radar and chart systems, AIS target information such as position, heading course and speed become easily available to the mariner.

Easy to install and maintain

The AIS 300 is by default delivered with a bracket containing a solution for strain relief in both ends. The unit has a built-in WEB based user interface (UI) providing an interface for configuration and status monitoring. Software updates are supported via the WEB UI but also the USB interface will automatically detect new software when a USB flash drive is inserted. The update will be accomplished without interfering with the existing configuration. The latest software will continuously be available for download from a server hosted by Kongsberg.



TESTLAB

EC TYPE-EXAMINATION (MODULE B) CERTIFICATE

Marine Equipment Directive (MED) 2014/90/EU

PHOENIX TESTLAB

Notified Body Number 0700

Recognised by 0809511/4822/007

This is to certify that:
PHOENIX TESTLAB did undertake the relevant type approval procedures for the type of equipment identified below which was found to be in compliance with the requirements of Marine Equipment Directive (MED) 2014/90/EU, subject to any conditions in the schedule attached hereto.

Certificate No.	PTL-MED-B-21-112004
Manufacturer	Kongsberg Seatex AS
Address	Hasmagata 9 7010 Trondheim Norway
Directive Reference (No & Item designation)	Directive 2014/90/EU, Regulation (EU) 2021/1158
	MED/4.32 Universal automatic identification system equipment (AIS)
Product Name	AIS 300

Specified Standards

IMO Resolution A.804(17)	IEC 61108-1 Ed. 2.0 (2003)	IEC 61993-2 Ed. 3.0 (2016)
IMO Resolution MSC.74(69)	IEC 60945 Ed. 4.0 (2002)	IEC 62288 Ed. 2.0 (2014)
IMO Resolution MSC.191(79)	incl. Corr. 1 (2008)	IEC 62923-1 Ed. 1.0 (2018)
IMO Resolution MSC.302(87)	IEC 61162-1 Ed. 5.0 (2016)	IEC 62923-2 Ed. 1.0 (2018)
ITU-R M.1371-5 (Class A), 2014	IEC 61162-2 Ed. 1.0 (1998)	

Date of issue: 2021-09-30 Expiry date: 2026-09-29
USCG Approval Category: 165.155

This certificate remains valid unless suspended, expired or withdrawn, provided the conditions in the attached schedule are complied with.

The attached Schedule of Approval forms part of this certificate. This certificate consists of 4 pages.

Signed by Bernd Selck
Notified Body

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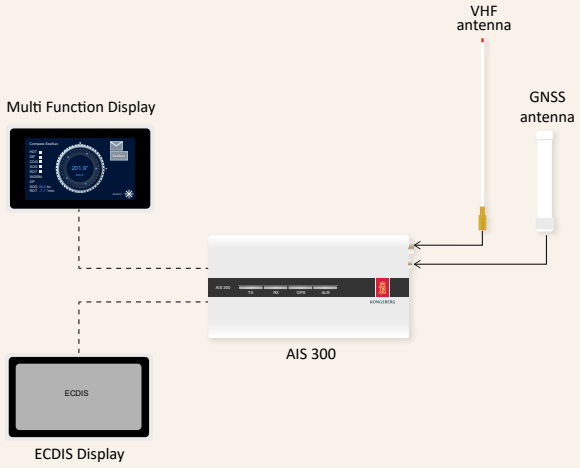
FEATURES

- Reception of all types of internationally approved AIS messages, including, but not restricted to, class A mobile, class B mobile, AtoN and AIS base station
- Three separate AIS channels
- Static data, dynamic data, voyage related data
- Safety related messaging
- Easy integration via network or serial interfaces
- Transmission of message 27 on SAT AIS frequencies
- Special tracking functionality and well valve status monitoring adapted to aquaculture live-fish carriers for documentation and reporting during transport operations in accordance with Norwegian regulations[1]
- Optional Asset Tracking System (ATS) functionality enabling a mothership to keep track of her assets using AIS



1 *"Forskrift om transport av akvakulturdyr", §9a*

Technical specifications

AIS 300

Performance

Position accuracy	5 m (DGPS optional) - 95 % CEP
Velocity	0.05 m/s (DGPS optional) - 95 %
Output rate	1 Hz

Data inputs

Gyro compass	NMEA
GPS main source	NMEA
DGPS corrections	RTCM - SC104 v2.1
Blue sign switch	Closed/open

Interfaces

Communication ports	7 x RS-422 (isolated) 2 x RS-232 (service, unisolated)
Baud rate	4800 to 115200 Baud
Message formats	NMEA
Message type	AIS message
LAN	Ethernet, 10/100 Mbit/s (autosense)
Alarm relay, blue sign switch	Open/closed
Asset Tracking System (ATS)	Option, enabled on request

Radio module

VHF transmitter	12.5 W/1 W
Receiver sensitivity	Better than -107 dBm
Protocol	SOTDMA/RATDMA/ITDMA/DSC
Modulation	GMSK/FSK
Bandwith	25 kHz
Frequencies	156.025 to 162.025 MHz band Default CH87B (161.975 MHz) Default CH88B (162.025 MHz) CH70 (156.525 MHz) SAT 1 (156.775 MHz) SAT 2 (156.825 MHz)

Weights and dimensions

AIS Unit	1.3 kg, 260 × 133 × 54 mm
GPS antenna	0.15 kg, 230 mm x 33 mm
VHF antenna	1 kg, 1250 mm

Power specifications

AIS Unit - Input voltage	+24 V DC (op. range 12 - 32 V DC)
AIS Unit - Power consumption	9 W average, 39 W peak
GPS antenna	5 V DC from AIS Unit

Environmental specifications

Operating temperature range

AIS Unit	-15 - 55 °C
GPS antenna	-50 - 70 °C
VHF antenna	-55 - 70 °C

Humidity

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

Product standards

Product safety low voltage	IEC 60945/EN 60945
Electromagnetic compatibility, immunity/radiation	IEC 60945/EN 60945
Vibration	IEC 60945/EN 60945
AIS	IEC 61993-2, ed. 2/ITU-R M. 1371-5
IWW	Inland AIS test standard (CCNR), ed. 2.0 10/2012

Options input/output

- Rate of turn (Input)
- ECDIS/ECS
- Standard PI
- Radar
- Long range communication system
- Blue sign plate

Mandatory inputs

GPS & heading data

Specifications subject to change without any further notice.

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400946/H - March 24