

Model GEO-AtoN

Type 1 AIS AtoN TRANSMITTER

The AIS transmitter is an Aid to Navigation station, optimised for installation on floating or fixed platform.

Maritime and river Aid to navigation

- Adapted to maritime marking, it leads to significant advances in navigation aids. In particular, it enables:
- Radar/ECDIS screens on boats to obtain reliable data in any weather conditions regarding the identification of an AtoN
- Navigators and authorities to obtain complete data on the identification of an AtoN (MMSI, Position, etc.)
- AtoN status monitoring (light status, etc.)
- Real time warnings when buoys move off position
- AtoN collision risk reduction

Virtual and synthetic aids to navigation

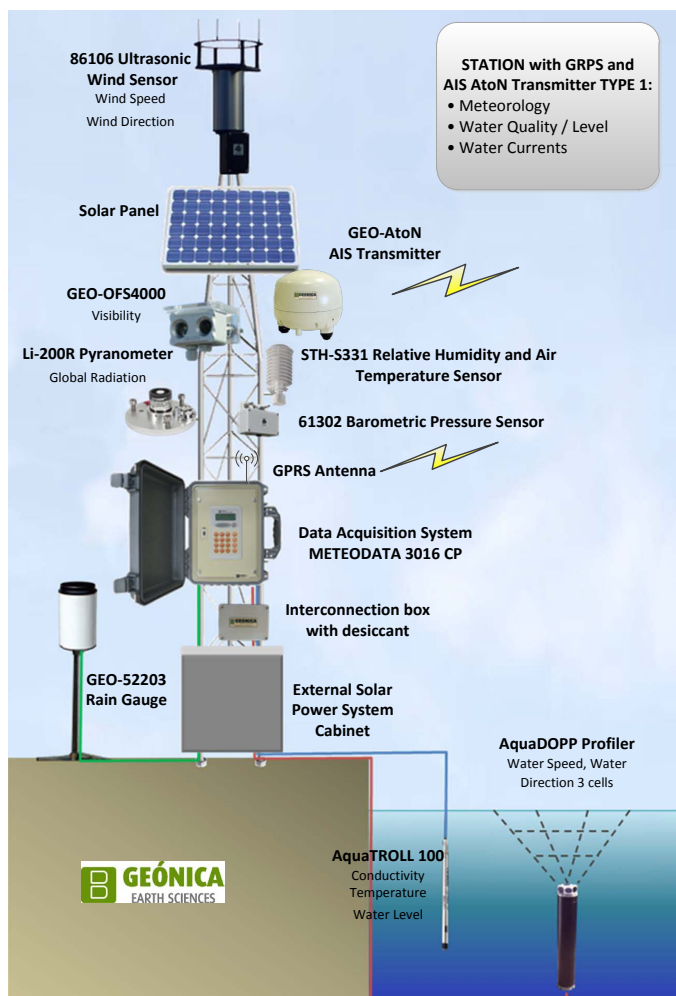
Environmental protection: Equipped with a built-in communication capability, the transponders used on coastal or sea structures, associated with sensors, enable the processing and saving of meteorological and hydrological data, providing scientists and authorities precious environmental data.

Offshore structure marking and collision prevention:

The transmitter enables to mark offshore structures, whose numbers are continually growing, (instrumented buoys, wind and wave energy farms, oil and gas platforms, offshore docks, pipelines, etc.) to improve navigational safety and prevent collisions.



METEO-3016
Datalogger/Transmitter Unit
3G / GPRS, Line, Radio or Satellite



Main Features

- Transmits messages 21, 8, 6
- Very low power consumption, compatible with solar-powered installations. Transmission period of 3 minutes on the 2 channels:- Type 1: < 0.2 Ah/day (FATDMA protocol)
- Transmission of message 6 (status message: battery charge, lights, solar panel) for tele-monitoring requirements
- Transmission of message 8 enabling a network of sensors to be deployed to measure the meteorological and hydrological parameters along the coast
- Adapts to the main meteorological and hydrological sensors
- It is possible to programme 4 virtual or synthetic AtoNs
- Very low power consumption
- Compact, lightweight casing (1 kg) which facilitates installation (the GPS antenna is built into the casing)
- Totally watertight casing
- Easy to configure using a PC on a series or USB port
- Robust power amp with ample dimensions
- Inputs protected against overvoltage



FEATURES

Type 1 (FATDMA) Transmitter in the 160MHz band: configured according to the frequency dedicated locally to **GEO-AtoN**

GEO-AtoN enables to send the following messages:

Message 21: Identification of the Aid to Navigation

- MMSI identification
- Type
- Name
- Position
- Longitude, latitude
- Dimension
- OFF position indicator (off-position buoy)
- Status, etc.
- Signalling light on off indicators

Message 8: Meteorological and hydrological messages

Geo-AtoN allows meteorological and hydrological messages to be transmitted, that can be configured according to the user's needs. These messages are received by the RS422 link according to a NMEA standard protocol.

Message 6 : Tele-monitoring of the GEO-AtoN

The message enables to send binary technical information from the GEO-AtoN according to programming adapted to the user's needs

It is possible to programme up to 4 virtual or synthetic

The **GEO-AtoN** transmitter comprises VHF and GPS antennae, the different connection cables and their connectors as well as the hardware and software tools necessary for their configuration, testing and maintenance. All the elements are integrated into a sealed casing (except for the VHF antenna) which can be mounted directly on the exterior.

TECHNICAL SPECIFICATIONS

Operating temperature:	-20 to +60° C
Polarity inversion protection:	Yes
Operating voltage:	10 to 36 V
Operating current:	<1 mA in sleep <50 mA in operation <2.5 A in transmission

Consumption

(message 21 every 3 min) type 1: <0.20AH / day

(message 21 every 3 min) type 3: <1AH/day

GPS receiver: GPS L1 C/A-code,
SPS 12 channels

Acquisition time:

- Cold start: 36 s

- Hot start: 4 s

Sensitivity:

- In acquisition (cold): -141 dBm

- In acquisition (hot, warm): -149 dBm

- In tracking: -156 dBm

Supports WAAS/EGNOS

VHF antenna connector: N female

Power connector /input output: Amphenol C16-1

AIS frequency: AIS1 161.975 MHz

AIS2 162.025 MHz

Power:

2W or 12,5 W

Transmission mode:

FATDMA

Inputs/outputs:

4 inputs insulated by optocouplers (to read data relating to light faults, lights on and Racon fault information)

Characteristics:

- Insulation voltage 5300Vrms

- Protection voltage 16V 600W for 1 ms

- Operating voltage 16V to 3,3V

1 output per solid-state relay

(for Racon disable remote control)

Characteristics:

- Insulation voltage 5300Vrms

- Max current 200mA at max 16Vx

- Ron resistance < 150 Ohms

Communication ports:

- TX and RX in RS232 for configuration and reception of technical data

- RX in RS422 for reception of meteorological data

Power on indicator:

- By tri-colour led (green/yellow/red)

Dimensions: diameter 165 mm – height 135 mm

Weight 1.1 kg

Casing material: ASA plastic

Casing colour: white

Sealing: IP67

Accessories:

- 1 VHF antenna - 2 x 7 strand shielded cables fitted with Amphenol C16-1 connector, length 5 m

- 1 RG213 coaxial cable fitted with an N male connector, length 5 m

Standards Conformity: IEC 62320-2, UN 60945, ITU-R M1371, IALA A-126