

AIS AtoN Station

Type I, III AIS AtoN with Extended Interfaces

i-ais-AN1 is an AIS Aids to Navigation (AtoN) Station which basically broadcasts AIS Message 21 about the location and real-time status of the AtoN on which it is physically or virtually located. i-ais-AN1 transmits static and dynamic data such as name, type, MMSI, position, Lantern status, Rotating Beacon status, battery voltage etc. to the other AIS devices. i-ais-AN1 is operated to enhance the safe and efficient navigation of vessels and/or vessel traffic by maritime authorities. It can also be securely queried and configured over VDL (VHF Data Link) using encrypted AIS Message 6.

With its powerful CPU, i-ais-AN1 offers simultaneous NMEA communication via separate interfaces for various AtoN devices (i.e. RACON, MOS, Lantern, etc). Flexible Lantern Interface provides communication with well known LED lantern brands. What is more, RS-232 serial communication with Rotating Beacons via optional Rotating Beacon Interface Unit is supported.

Thanks to the optional i-kon-CGW Communication Gateway module, i-ais-AN1 provides redundant communication channels between AIS AtoN Station and Monitoring & Management Center. System works either through Ethernet connection (ADSL, DSL, etc) or GPRS, as available.

i-ais-AN1 can collect meteorological /oceanographic sensor (MOS) data from a compatible data collection unit connected on its MOS port and broadcasts this data over AIS VDL network using Message 8 and / or send to the Monitoring & Management Center via connections provided by i-kon-CGW.

i-ais-AN1 provides both monitoring and control functions via local or remote access. With the help of user-friendly "Monitoring & Management SW", maritime authorities can monitor marine traffic and status of system or manage the operation of AIS AtoN stations, Lanterns, RACONs and Rotating Beacons, etc.

- Periodical AIS AtoN static and dynamic data broadcast (Message 21)
- Remote AtoN monitoring and configuration (Message 6)
- Meteorological & hydrological message broadcast (Message 8)
- Support for Type 1 besides standard Type 3 operation
- Transmission of AIS messages (6, 7, 8, 12, 13, 14, 21)
- Reception of all AIS messages (1 to 27)
- Virtual and Synthetic AIS AtoN Transmissions (up to 4 AtoNs)
- Protection zone definition (transmits warning message to vessels)
- Remote operation through Ethernet or GPRS connection (optional)
- Robust housing (IP66)
- Fully compliant with IEC and ITU standards
- BSH and CE certified
- Compatible with i-SEA Platform



GENERAL

- > Operating Temperature Range -15 °C to +55 °C
- > Storage Temperature Range -30 °C to +70 °C
- > Humidity Up to 93% at 40 °C non-condensing
- > Power Supply Voltage 12 - 24V DC (min/max:10-30 V DC)
- > Supply Current Type-1 (FATDMA only mode)
30mA nominal, 4A peak (during Tx) @ 12V
Type-III (RATDMA + FATDMA mode)
220mA nominal, 4A peak (during Tx) @ 12V
- > Power Consumption < 0.8Ah/day @ 12V
(Type - I, FATDMA only mode - Transmission of Msg 21 every 3 minutes in accordance with IEC 62320-2)
- > Size 152mm x 174mm x 146mm
- > Weight 1.75kg
- > Connectors VHF Antenna: N Female
GPS Antenna: TNC Female
Circular Plastic Connectors for NMEA0, NMEA1, NMEA2, POWER, LANTERN, AC-RELAY
- > Case Aluminum Alloy (AlMg0,5Si) 6063
- > Case IP Rating IP-66
- > Interfaces 4 x RS-232 (NMEA I/F with ready drivers for LANTERN, MOS, RACON, Solar Charge Controller)
3 x Digital Input (Dry Contact)
2 x Analog Input (0-12V)
1 x Open Collector Output

TRANSMITTER

- > Operating Frequency Range 156.025 – 162.025 MHz
- > Channel Spacing 25 kHz
- > Transmitter Output Power 12.5W (41dBm) nominal
1W (30dBm) low power mode
- > Modulation GMSK

RECEIVER

- > # of Receivers 2 (simultaneous operation for Type III)
- > Operating Frequency Range 156.025 – 162.025 MHz
- > Channel Spacing 25 kHz
- > Receiver Sensitivity Better than -107dBm
- > Co-Channel Rejection Better than 10 dB
- > Adjacent Channel Selectivity > 70 dB
- > Spurious Response Rejection > 70 dB
- > Intermodulation Response Rejection > 65 dB
- > Blocking or Desensitization > 86 dB
- > Spurious Radiation (conducted) < -57 dBm

GPS RECEIVER

- > # of Channels 50
- > Time to First Fix 29s Cold Start
29s Warm Start
<1s Hot Start
- > Receiver Sensitivity -160 dBm Tracking
-160 dBm Reacquisition
-144 dBm Cold Start

STANDARDS

- > AIS IEC 62320-2
ITU-R M.1371-4
IMO Res. MSC.74(69), Annex 3
- > Environmental & EMC IEC 60945
- > Safety IEC 60950-1

APPROVALS

- > CE Type Approval per R&TTE Directive-99/5/EC
- > BSH, Statement of Conformity per IEC62320-2 & ITU-R M.1371-4

AUTHORIZED DEALER

Technical specifications are subject to change without prior notice.