



FEATURES

Carbon is an internationally certified Type 1 and Type 3 AIS AtoN with the world's lowest power consumption. Offering a full range of features, including transmission of virtual AtoN targets, simple integration with lanterns and external sensors, plus over the air configuration and chaining. The toughened enclosure is designed for continuous, long term use in the even the most extreme environments from the equator to the poles.

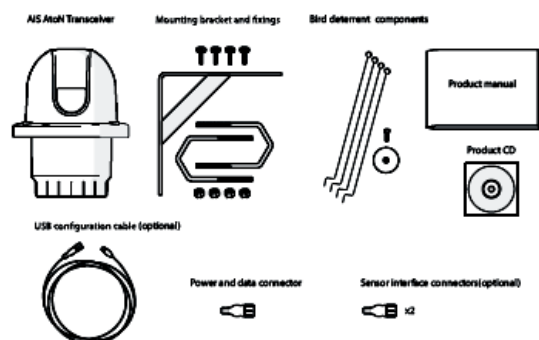
- International Certified Type 1 and Type 3
- Ultra low power consumption in all operating modes
- Designed and manufactured for the toughest of environments
- Integrated GPS antenna with optional external input
- Multiple flexible sensor interfaces (with sensor board)
- Proven operational reliability
- Full feature set
- Virtual/Synthetic AtoN support – up to 10 units
- Remote configuration (over the air) support

CERTIFICATION

This product is fully tested and certified to the relevant international standards and product specifications (FCC (USA), Industry Canada and R&TTE (CE) Type Approval).

SUPPLIED WITH (in the box)

- AIS AtoN Transceiver with integrated GPS antenna (optional external input)
- Mounting bracket and fixings
- Bird deterrent components
- USB configuration cable (optional)
- Product manual and CD
- Power and data connector
- Sensor interface connectors x2 (optional)



SPECIFICATIONS

AtoN Functions

- Type 1 and Type 3 options available
- Supports configuration by VDL command
- Chaining option available
- Customisable sensor interfacing
- Virtual/Synthetic AtoN support – up to 10 units

Physical

- Dimensions: 284 x 180mm (H x D)
- Weight: 1.2kg

Electrical

- 12 to 24VDC
- Power consumption: Type 1 AtoN (FATDMA) less than 0.09Ah/day*
- Power consumption: Type 3 AtoN (RATDMA) less than 0.8 Ah/day*
- * with 3 minute position reporting rate

VHF Transceiver

- Transmitter: x 1
- Receiver : x 2
- Frequency: 156.025 to 162.025MHz in 25KHz steps
- Output power: 1W, 2W, 5W or 12.5W
- Channel bandwidth: 25KHz
- Channel step: 25KHz
- Modulation modes: 25KHz GMSK (AIS, transmit and receive)
- Bit rate: 9600 b/s (GMSK)
- Receiver sensitivity: < -110dBm @ 20% PER
- Adjacent channel: selectivity 70dB

GPS Receiver and Antenna

- Channels: 50
- IEC 61108-1: Compliant
- GPS antenna: Internal or external options
- Spurious response rejection: 70dB
- Glonass: Option available

Environmental

- Waterproof: IPx6 and IPx7 rated for water ingress
- IEC 60945: 'Exposed' category
- Operating temperature: -25°C to +55°C
- Relative humidity: up to 95%

Standards – Design Criteria

- ITU-R M.1371-4 Universal AIS Technical Characteristics
- IEC61162-1/2 Edn. 2.0 - Digital Interfaces
- IEC61108-1 - GPS receiver equipment
- EC62320-2 Edition 1 - AIS Aids to Navigation
- IEC60945 Edition 4 – Environmental
- Safety: EN60950-1 2006, +A11 2009, +A1 2010, +A12 2011

Interfaces

- **Basic AtoN**
- USB (for configuration)
- IEC61162-1 ports: Two (NMEA0183) at 38400 baud
- Logic level I/O lines: 5 configurable
- **Via optional sensor interface**
- Five isolated digital inputs
- Two isolated analogue inputs – 0 to 36VDC
- Three non-isolated analogue inputs
- Two relay drive outputs
- Analogue current sense (up to 5A)
- Five non-isolated logic level input / output channels
- NMEA0183 (IEC61162-1/2) port
- Two RS232 ports – configurable baud rates
- SDI-12 interface

OTHER PRODUCT



Specifications and features may change without prior notice.