

# L-3 AR Maritime Products

## PROTEC ATO N AIS



The L-3 PROTEC Aids to Navigation (AtoN) AIS is an IALA and IEC compliant marine aid that provides vital information to on-board navigation devices, Vessel Traffic Systems (VTS) and buoy tender services. The AtoN not only has the ability to transmit meteorological and hydrological data when interfaced to sensors, but it can also help prevent collisions by transmitting the position of a floating AtoN and provide off-position status. L-3 offers a full range of AtoN devices from transmit only configurations (IEC Type 1) to dual receiver/transmit (IEC Type 3).



### KEY FEATURES

- Fully compliant with IEC 62320-2, IALA A.126 and IEC 60945 (exposed)
- Low power consumption of less than 400 mAh/day
- For use on floating or fixed AtoN's
- Supports VDL configuration and monitoring
- Provides reference points on a ship's RADAR and ECDIS
- Provides health status of the AtoN device, including battery life and light burnouts
- Supports VDL configuration and monitoring
- Designed to support chaining and RATDMA (Type 3 configuration only)
- Capable of supporting synthetic and virtual transmissions
- Type 3 units support message 7 and message 13



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## PROTEC AIS ATON

### PHYSICAL DIMENSIONS

|         |                      |
|---------|----------------------|
| Height: | 134 mm (5.28 inches) |
| Width:  | 127 mm (5.0 inches)  |
| Depth:  | 127 mm (5.0 inches)  |
| Weight: | 1.6 kg (3.53 pounds) |

### POWER REQUIREMENTS

|         |               |
|---------|---------------|
| Input:  | 12VDC         |
| Rating: | <375mAHr/day* |

### DATA I/O

|                     |                      |
|---------------------|----------------------|
| Bi-directional I/O: | (1) RS232 38.4k BAUD |
| Diagnostic I/O:     | (1) RS232 38.4k BAUD |

### TRANSMITTER PERFORMANCE

|                     |                      |
|---------------------|----------------------|
| TX Frequency Range: | 156.025 - 162.025MHz |
| Tuning Resolution:  | 25kHz                |
| Modulation:         | GMSK                 |
| TX Power Control:   | 1-12.5W              |
| TX Power Accuracy:  | ±0.7dB               |
| TX Frequency Drift: | ±500Hz               |
| Nominal Impedance:  | 50Ω                  |
| Antenna Connection: | Type N               |

### RECEIVER PERFORMANCE

|                         |                      |
|-------------------------|----------------------|
| # of Receivers:         | 2                    |
| RX Frequency Range:     | 156.025 - 162.025MHz |
| Tuning Resolution:      | 25kHz                |
| Dynamic Range:          | ≥100dB               |
| Co-Channel Rejection:   | ≥10dB                |
| Adj. Channel Rejection: | ≥72dB                |
| Intermod. Rejection:    | ≥65dB                |
| In-Band Blocking:       | ≥86dB                |
| Noise Figure:           | ≤5dB                 |
| Nominal Impedance:      | 50Ω                  |
| Max Input:              | +10dBm (no damage)   |
| Minimum Sensitivity:    | ≤-107dBm             |

### RECEIVER PERFORMANCE cont'd

|               |            |
|---------------|------------|
| GPS Receiver: | 16 Channel |
|---------------|------------|

### ENVIRONMENTAL

|                       |                |
|-----------------------|----------------|
| Operating Temp Range: | -25° to +55° C |
| Relative Humidity:    | 0 to 95%       |

\*NOTE: All Specifications Tested @ 25° C

### TECHNICAL STANDARDS

|                     |
|---------------------|
| IEC 60945 (exposed) |
| ITU 1371-3          |
| IEC 62320-2         |

### REGULATORY APPROVALS

|             |
|-------------|
| BSH pending |
|-------------|

L-3 Aviation Recorders Quality Management System is ISO 9001:2000 and AS9100:2004 Rev. B Certified

### Aviation Recorders

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**communications**  
Aviation Recorders

**L-3. Leading.** Headquartered in New York City, L-3 Communications employs over 64,000 people worldwide and is a prime contractor in aircraft modernization and maintenance, C<sup>3</sup>ISR (Command, Control, Communications, Intelligence, Surveillance and Reconnaissance) systems and government services. L-3 is also a leading provider of high technology products, subsystems and systems. The company reported 2007 sales of \$14 billion.

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