



# ADL Sentry

## HIGH PERFORMANCE ADVANCED DATA LINK FOR REMOTE COMMUNICATIONS

ADL Sentry is an advanced, high speed, wireless data link built to survive the rigors of precise positioning and environmental monitoring applications. This sophisticated 0.1-4.0 Watt radio modem utilizes Pacific Crest's next generation Advanced Data Link (ADL) technology while remaining backward compatible with existing Pacific Crest, Trimble and other products. The ADL Sentry is ideal for remote sensing, machine control, and environmental monitoring applications. For the most rugged and reliable digital data link, go with the new standard in wireless communications – ADL Sentry.



### Key Features

- ▶ Heavy-Duty Construction
  - All metal construction for the ultimate in impact and EMI resistance
- ▶ Environmentally Sealed
  - The radio and both the antenna and data/power ports are environmentally sealed to IP67 standard
  - Screw-on connectors ensure even the cables stay watertight
- ▶ High Over-the-Air Link Rate
  - 19,200 bps (both GMSK and 4FSK)
  - Higher data rates allow shorter transmission times for increased battery life
- ▶ Configurable Transmit Power
  - 0.1-2 W for longer battery life
  - 4.0 W for longer range (where permitted)
- ▶ Advanced 40 MHz Bandwidth
  - 390-430 and 430-470 MHz models
  - Advanced Data Link design for high performance over the entire band
- ▶ Software-Derived Channel Bandwidth
  - All models support both 12.5 and 25 kHz channel spacing

**GENERAL SPECIFICATIONS**

- Communication
  - 1 RS-232 port
  - 115.2 kbps maximum
- User Interface
  - 4 LEDs: TX, PWR, RX, PGM

**RADIO SPECIFICATIONS**

- Frequency Bands
  - 390-430, 430-470 MHz
- Frequency Control
  - Synthesized 6.25 kHz tuning resolution
  - Frequency stability +/- 1 PPM
- Channel Bandwidth
  - 12.5 kHz and 25 kHz, software derived
- RF Transmitter Output
  - Programmable to 0.1 - 4 Watts (where permitted)
- Sensitivity
  - -110 dBm BER 10<sup>-5</sup>
- Type Certification
  - All models are type accepted and certified for operation in the U.S., European Union, Russia, Australia, New Zealand and Canada

**MODEM SPECIFICATIONS**

- Link Rate/Modulation
  - 4 Level FSK
    - > 9600 bps
    - > 19,200 bps
  - GMSK
    - > 4800 bps
    - > 8000 bps
    - > 9600 bps
    - > 16,000 bps
    - > 19,200 bps
- Link Protocols
  - Transparent EOT/EOC/FST
  - Packet-switched
  - SATEL<sup>®</sup>
  - Trimble<sup>®</sup>
  - TT450S (HW)
- Forward Error Correction
  - Yes

**ENVIRONMENTAL**

- Enclosure
  - IP67 (Watertight to depth of 1 meter for 30 minutes)
- Operating Temperature
  - Receiver: -40° to +85° C (-40° to +185°F)
- Operating Temperature
  - Transmitter: -40° to +65° C (-40° to +149°F)
- Storage Temperature
  - -55° to +85° C (-67° to +185°F)
- Shock and Vibration
  - MIL-STD-810F

**POWER**

- External
  - 9.0 – 30.0 VDC, 2 Amp maximum; applying 9V in less than 200 ms automatically turns unit on
- During RX
  - 0.6 Watts nominal @ 12.0 VDC
- During TX
  - 7 Watts nominal @ 12.0 VDC, 1 W RF output
  - 13.4 Watts nominal @ 12.0 VDC, 4 W RF output

**PHYSICAL**

- Dimensions
  - 8.89 cm L x 4.6 cm W x 16.0 cm H
  - 3.5" L x 1.809" W x 6.3" H
- Weight
  - 690 grams (1.52 lbs.)
- Data/Power Connector
  - 8-pin Turck
- RF Connector
  - 50 Ohm, TNC Female

**ORDERING INFORMATION**

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|--------------------------------|--------|
| • ADL Sentry Radio 390-430 MHz | K01138 |
| • ADL Sentry Radio 430-470 MHz | K01139 |

Specifications subject to change without notice.

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