



# High Performance Advanced Data Link for Remote Communications

## ADL Sentry



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.

## 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

## Solutions



# ADL SENTRY SPECIFICATIONS

General Specifications	
Communication	1 RS-232 port, 115.2 kbps maximum
User Interface	4 LEDs: TX, PWR, RX, PGM
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
Modem Specifications	
Link Rate/Modulation	19,200 bps/4FSK 9600 bps/4FSK 19,200 bps/GMSK 16000 bps/GMSK 9600 bps/GMSK 8000 bps/GMSK 4800 bps/GMSK
Link Protocols	Transparent EOT/EOC/FST, Packet-switched, Trimble®, TT450S (HW), SATEL®
Forward Error Correction	Yes
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., Europe, Australia, New Zealand, Russia and Canada
Environmental Specifications	
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 (Receiver/Transmitter)	-55° to +85° C (-67° to +185° F)
Vibration Specification	MIL-STD-810F
Mechanical Specifications	
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



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