



# High Performance Integratable Data Link

## ADL Foundation



The ADL Foundation is a 0.1-1.0 Watt UHF transceiver designed for integration into products that require either a one- or two-way radio communication link. This sophisticated 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.

Integrating the latest modem technology from the leader in radio frequency data communications instantly puts your products in touch with the world's largest installed base of GNSS precise positioning systems. And with Pacific Crest's system integration expertise, you are buying a solution, not just a modem.

## Features

- **40 MHz Bandwidth**  
390-430 and 430-470 MHz models  
Advanced Data Link design for high performance over entire band
- **High Over-the-Air Link Rate**  
19,200 bps (both GMSK and 4FSK)  
Supports 1Hz RTK corrections for multi-GNSS receivers
- **Configurable Transmit Power**  
0.1 - 0.5 W for low power consumption  
1.0 W for longer range
- **Software-Derived Channel Bandwidth**  
Compatible with both 12.5 and 25 kHz radios
- **Robust Environmental Capabilities**  
High vibration tolerance  
Wide temperature specification

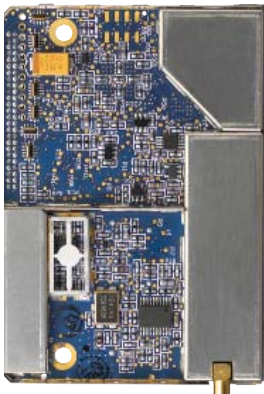
## Solutions



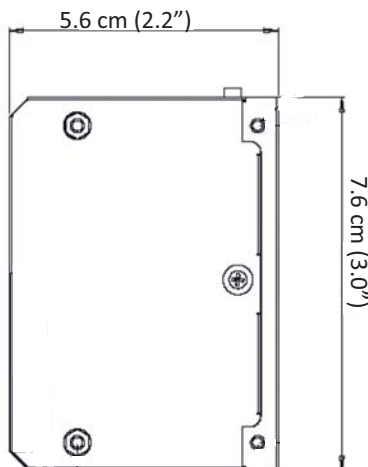
# ADL FOUNDATION SPECIFICATIONS



Top View



Bottom View



Dimensions

General Specifications	
DTE - DCE Interface	RS-232 or CMOS , 115.2 kbps maximum
User Interface	Refer to Pin-Outs in Integrator's Guide
Power	
External	6.0 – 30.0 VDC, +/- 0.50 VDC
During RX	0.6 Watts nominal
During TX	6 Watts nominal @ 1 Watt output
Antenna	
External	50 Ohm, MMCX
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, Packet-switched, Trimble®, SATEL®, OEM-specific
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	0.0 Watt (RX-only) and 0.1 – 1 Watt (Programmable)
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
Environmental Specifications	
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	7.6 cm L x 5.6 cm W x 1.1 cm H (3.0" L x 2.2" W x 0.4" H)
Weight	70 grams (2.5 oz.)
Data/Power Connector	11 Pin: Molex 53015-1110 (mates with Molex 51004-1100) 20 Pin: Samtec TFM-110-11-S-D (mates with Samtec SFM , SFMC , TFMDL , FHSC , ISDF , SFSD , SFLX )
Mount	4x #4 – 40 Threaded Inserts

Pacific Crest

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