



Radar Altimeter Model 4504

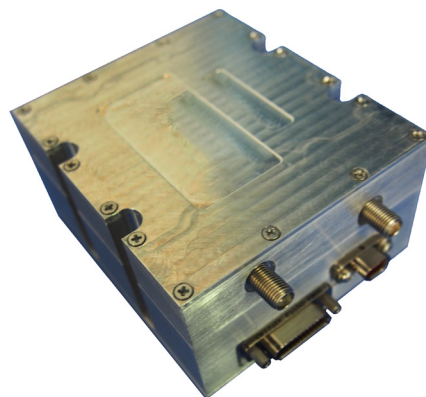
Supplying high performance RF/microwave assemblies, power amplifiers, IFF and data acquisition systems for severe environments.

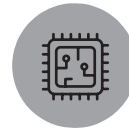
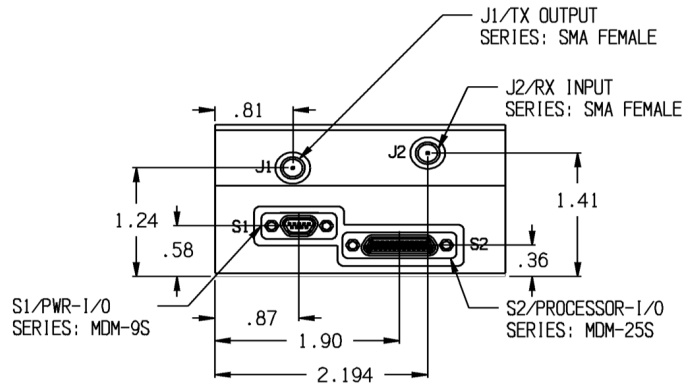
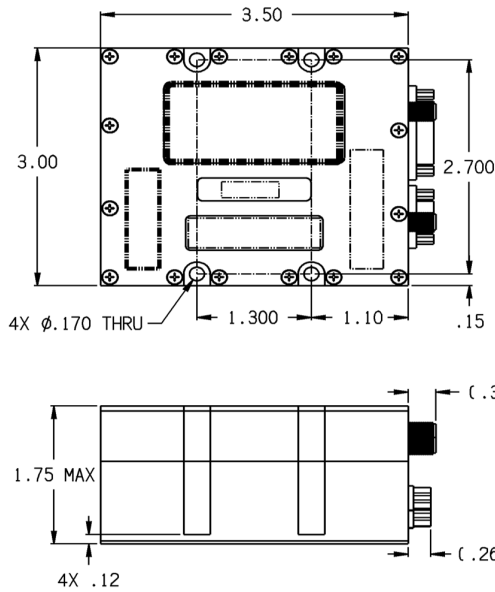
Features

- 5G Compatible
- Digital Signal Processor Based
- Leading Edge Tracking
- FM/CW Waveform
- Spread Spectrum with >100 MHz Deviation
- Dynamic Adaptive Power Control (APC) Based on Measured Receiver Signal Strength
- Configurable maximum transmit power up to +26 dBm
- Doppler Immunity

Overview

The Ultra 4504 Radar Altimeter (RALT) is a low cost, all-weather system that meets the demanding performance requirements of manned and unmanned systems, including hypersonic platforms. It does so in a small volume package with low power consumption. The 4054 design is an evolution of production, flight proven, Ultra RALT for unmanned systems. The 4504 is operationally resilient to potential 5G interference through optimized front end filtering and waveform tolerance compared to traditional pulsed RADAR Altimeters.





Specifications

- Altitude Range: 0 - 8,000 ft.
- Altitude Accuracy:
<900ft: +/- 1ft + 1% altitude
>900ft: +/- 10 ft
- Analog Accuracy: +/- 50 mV
- Track Rate: >5000 ft./sec. supporting Hypersonic Operations
- Frequency: 4200-4400 MHz
- Maximum Transmitter Output Power: +26 dBm typical
- Update Rate: 50 Hz
- Minimum Tx/Rx Isolation at or below 4000 ft.: 75 dB Enables Dual-port, Single Antenna Options
 - 80 dB at 8000 ft.

Outputs

- Analog Output: 20 VDC max., programmable slope and offsets -5 VDC to +20 VDC, with programmable slopes and offsets
- Digital Output: RS-422, ARINC 429
- Configuration I/F: RS-232 (not an altitude output)
- Out-of-Range Indicator: 5 VDC TTL
- Size (excluding connectors): 3.5" X 3.0" X 1.75" (88.9 mm X 76.2 mm X 44.5 mm)
- Weight: 1.2 lbs.
- EMI: MIL-STD-461E
- Environmental: MIL-STD-810F

Power, Mechanical, Environmental

- Power: 18-36 VDC, Ripple <3V pk-to-pk
- Reverse Polarity Protection included
- Power 9-15W DC Max, Maximum Altitude Configuration Dependent
- Temperature:
 - 40°C to +77°C, Operating
 - 55°C to +125°C, Storage
- Connectors: SMA(F) for Tx & Rx Ports, 9-Pin Micro-D for Power Port, 25-Pin Micro-D for RS-422, Analog, and Discrete Outputs

Additional Features

- Built-In Self Test
- Configurable Analog and Digital Altitude Outputs
- User Configurable Options:
 - RS-422 Output Format
 - Maximum Altitude
 - Analog Scaling
 - Zero Offset
 - Maximum Tx Power
 - Redundant Unit Operation

Ultra reserves the right to vary these specifications without notice.

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1012.4-I&C-en-REV0422

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