# Altimeter RADAR Test

## Key Features:

- Altitude range 1 to 100,000 feet
- Display Delay, Round-trip Distance, Range or Altitude
- Customizable Steps
- Supports frequencies from DC up to 6 GHz
- Pulse and CW
- Delay accuracy of 0.1%
- Customized solution with short delivery time
- High Dynamic Range
- Excellent Phase Noise
- USB API for automated tests

## Options:

- RF and Optical bypass
- DC Power
- External Delay
- Amplitude Control
- Optical Power Meter
- Built in diagnostics

## Monitoring:

- Managed remotely by software or manually via a navigation switch

## Applications:

- Radar Calibration Testing
- Altimeter RADAR Testing

RFOptic's high frequency Altimeter RADAR test provides a high-performance solution for testing and calibration of radar altimeter systems.

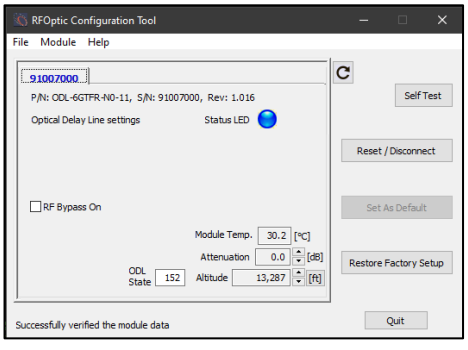
The RF input signal is converted into a modulated optical signal, which is then transmitted into a single mode fiber, creating a fixed time delay defined by the fiber length corresponding to a desired altitude. After passing through the fiber, the optical signal is converted back into an electrical RF signal, identical to the input RF signal.

The Altimeter RADAR test can be configured to emulate a single altitude or up to 4,096 altitude steps.

RFOptic's Altimeter RADAR test is a compact solution, which provides superb signal performance and altitude simulation accuracy with an ultra-silent operation.

The control and monitoring is done using a front panel a navigation switch and a LCD display or over a USB connection using RFOptic's configuration tool software. USB API is available for Automated testing applications as well as Ethernet Remote management with RFOptic's HTML/SNMP/REST remote management solution.

The Altimeter RADAR test offers very high accuracy up to 0.3ns for altitude steps under 6ft and > 0.1% above. The maximum altitude can reach 100,000 feet or 30Km in one enclosure.




USB GUI Screen


LCD Panel (in m and ft.)


Tel. Int.:+972-76-540 0771 • Tel. USA: +1 732 543 5738
Yagia Kapaim 21, Building C, 3rd Floor 4913020 Petah Tikva, Israel
www.rfoptic.com

# Altimeter RADAR test

| Electrical | Unit | Specifications (Typical) |
|---|---|---|
| Frequency Range [1] | GHz | 0.1-6 |
| Delay Range [2] | ft | 1 - 100,000 |
| Delay steps | ft | Custom (1ft, 2ft, etc.) |
| Number of Delays | each | 1 to 4,096 |
| Delay Accuracy | % | 0.1 |
| Delay Repeatability at +/- 5°C variations | % | 0.01 |
| Switching time | ms | 10 |
| 1dB Compression Point | dB | -2 |
| Minimum Noise Figure -LNA On | dB | 6 |
| SFDR | $dB/Hz^{2/3}$ | 105 |
| Gain Flatness | dB | ±2.5 |
| Maximum Input No damage | dBm | 20 |
| Spurious | dBm | -80 |
| Phase Noise at 6 GHz at 10KHz offset | dBc/Hz | -130 |
| VSWR Input / Output | dBm | 2.1 |
| Input / Output impedance | Ohm | 50 |

| Optical and Electrical | | |
|---|---|---|
| Main AC Supply [3] | VAC | 220/110 |
| RF Connectors | | SMA or N Type |
| Control – Manual (front panel) | | Navigation Switch |
| Control – Remote (rear panel) | | USB |

| Mechanical and Environmental Parameters | | |
|---|---|---|
| Operating Temperature | C° | 0 to +60 |
| Storage Temperature | C° | -45 to +85 |
| Dimensions | mm | Rack 19’ -3U |

[1] Other frequencies upon request
[2] Other Optical Delay Lines upon request
[3] For additional fibers spools

**To order or for more information, please contact your local RFOptic distributor or send an email to sales@rfoptic.com**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