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roke

Miniature Radar Altimeter

MRA Type 1 – 5-700m range

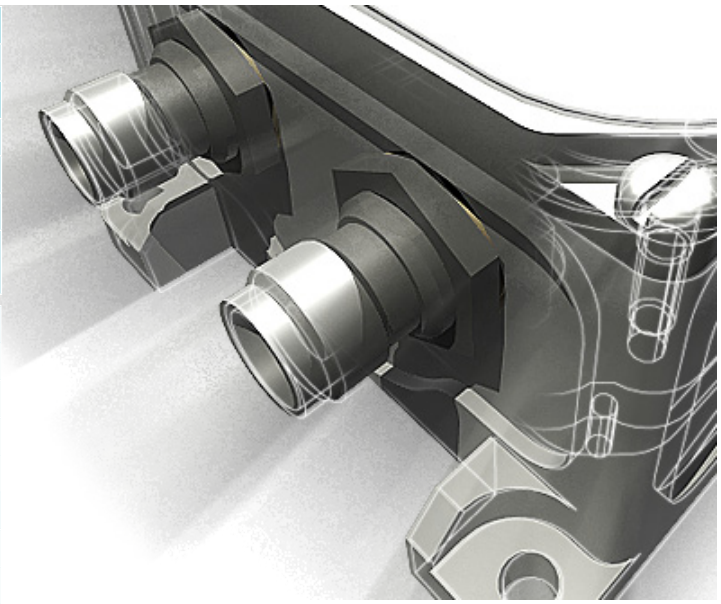
The Miniature Radar Altimeter (MRA) Type 1 is a market leading product primarily aimed at Unmanned Air Vehicles (UAVs) and airborne/aerial targets. Precise altitude Above Ground Level (AGL) measurements from the MRA Type 1 can provide information to automatic flight control, systems instrumentation and Terrain Awareness and Warning Systems (TAWS).

Key Features

- Compact
- Low cost
- Lightweight and low power
- Superior reliability
- Single compact antenna
- RoHS compliant
- Ease of installation

MRA Type 1 – system specification

Altitude	
Nominal Range	5 to 700m
Resolution	
Normal	0.5m (5 to 700m)
High	0.125m (5 to 50m)
Low	5m (5 to 700m)
Automatic Resolution Selection	Automatically selects the resolution for optimum performance
Physical	
Length	140 mm
Width	75 mm
Height	46 mm
Weight	400g
External antenna dimensions	
Length	140 mm
Width	75 mm
Height	14.2 mm
Environmental	
Temperature	-40°C to +55°C operational -40°C to +85°C storage
Platform Velocity	300ms-1 max
Acceleration	10g max
Rainfall	16mmh-1 max
System power requirements	
Input Power	9 VDC to 32 VDC Typical consumption 3W Peak consumption 7W
Interfaces	
Signalling and control	RS232 (RS485 and RS422 options are available on request)
Altitude update	10 Hz (100 ms)
RF connector types	TNC 50ohm
RF specification	
Frequency	4.2 to 4.4 GHz
RF output power	+17 dBm nominal
Antenna 3dB beamwidth	70° typical nominal (regular pattern)
Antenna gain	6 dBi
Warranty and Safety	
Warranty	12 Months
Hazardous Substances	RoHS compliant



Applications

- Unmanned Air Vehicles (UAVs)
- Aerial targets
- Vertical take off and landing (VTOL)
- Terrain Awareness and Warning System (TAWS)
- Wave height monitoring
- Surveying applications

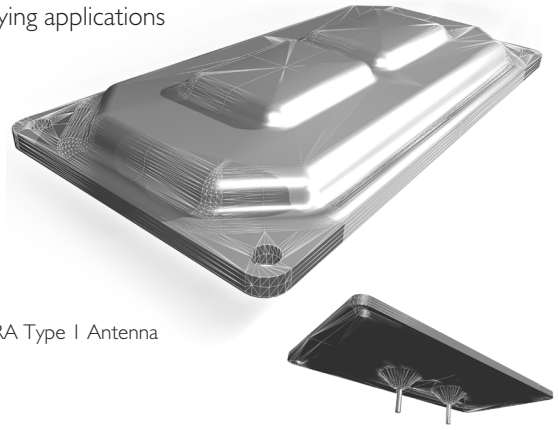


Figure: MRA Type 1 Antenna

The specification is typical of the performance that can be expected when the system is fitted in a UAV environment. Actual performance will be influenced by the specific operating environment.

For further information please contact:

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