




APNT IRAD -- ROKE MRA TYPE 1 RADAR ALTIMETER

PURPOSE

-  Utilize an approved radar altimeter in flight data collection experiments for alternative navigation technologies on a manned rotorcraft (pilot always in control, VFR conditions—radar altimeter for data collection only).

LOCATION/SCHEDULE

- **MOBILE:** Air & ground ops up to 7500ft MSL, centered at Culpeper, VA (38-28-15N, 77-59-40W), 35km radius
- Desired flight test date: JUN 2022



EQUIPMENT

Roke MRA Type 1 radar altimeter

TECHNICAL DATA*

Performance	
Altitude Range	5 – 700 m
Precision	12.5 cm
Horizontal Velocity (max)	300 m/s
Vertical Velocity (max)	150 m/s

Physical	
Receiver Dimensions	140mm x 75mm x 46mm
Receiver Weight	400 g
External Antenna Dimensions	140mm x 75mm x 14mm
Antenna Weight	197 g

Environmental	
Operational Temperature	-40°C to 55°C
Storage Temperature	-40°C to 85°C
IP67	Dust: No ingress Water: 30 mins immersion at 1m depth

Interfaces	
Data / Control	RS232. Contact us for alternative.
RF Connectors	TNC 50Ω

Technical	
Supply Voltage	9V – 32V DC
Frequency	4.2 – 4.4 GHz
Beamwidth	65° x 95°
RF Output Power	+16 dBm +/-2dBm
Power Consumption	3W mean**
Antenna Gain	6 dBi
Update Rate	10 Hz

Warranty and Safety	
Warranty	12 Months
Materials	RoHS compliant
Export	ITAR free UK export licence not required

Ordering Information	
NSN	5841-99-254-3329
Part No	X72/1/2434/001

* The data provided above is for reference purposes only and has been presented in order to show typical operating parameters and characteristics that may be achieved with the Roke MRA. The actual performance of this type of device may vary depending on external aspects such as ground terrain features and the physical characteristics and orientation of the platform that the equipment is deployed on. Please consult with Roke regarding your specific requirement.

** 16.5W peak and 7W during measurements.

