

MRA TYPE 1

The world's smallest and lightest radar altimeter in its class.



The MRA Type 1 is a compact and lightweight radar altimeter designed for small aerial platforms. It comprises a transceiver unit and separate antenna which allows system integrators flexibility in positioning the antenna within the platform. Designed for plug-and-play installation, the MRA Type 1, is environmentally robust and will operate in dusty or misty conditions and over water. The MRA Type 1 is an ideal fit for target drones which operate at high speeds and require high manoeuvrability.

BENEFITS & FEATURES

- **HIGH ALTITUDE RANGE**
Operational range is up to 700m and down to 5m which allows for both low-level and sea-skimming flights
- **HIGH VELOCITY**
Can operate on platforms with ground speeds of up to 300 m/s (580 knots)
- **HIGH MANOEUVRABILITY**
Wide tolerance in pitch and roll allows the MRA Type 1 to operate on high manoeuvrability platforms
- **LIGHTWEIGHT**
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- **LOW POWER**
Consumes less than 3W (on average)



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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.

It is the responsibility of the purchaser/end user to ensure that they comply with any licencing requirements, including but not limited to Radio Frequency spectrum usage, for their end use in the countries/locations in which the unit will be operated. Roke Manor Research Ltd does not accept any liability for any such infringements when the unit is in operation.

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