RAS6
DATA SHEET

KEY FEATURES

Pencil Beam
1.8°

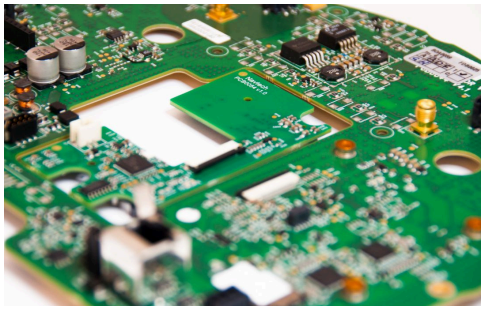
Range
300m | 600m | 1000m

Field of view
360°

Weather
All weather conditions

BUILD WITH OUR SDK

Our software development kit provides developers an interface which works with our radar sensors and recorded data. The SDK is suitable for prototyping and evaluation, offering extensive documentation, sample codes, and technical support for seamless integration and development.



Ruggedised Design for Mission-Critical Applications

Unrestricted performance: the ultimate sensor

Navtech Radar's Robust Automation Sensors (RAS), are market-leading, long-range, millimetre wave radars. With a 360° field of view, they provide ultra, high-resolution radar images, in all weather, light and environmental conditions. As a result, they overcome some of the fundamental limitations of other sensing technologies.

Our radars provide a live view of their environment, presenting solid or reflective objects distinctly from their surroundings. The high-resolution sensors produce output in either streamed 'radar video' or as a network source of range and bearing point data. Compact in design, yet engineered to withstand extreme vibration and temperatures, our sensors are the most reliable for us in automation applications.

TECHNICAL SPECIFICATIONS

PERFORMANCE

Operating Frequency	76-77 GHz
Range Resolution	0.044m | 0.175m | 0.292m
Instrumented Range	300m | 600m| 1000m
Azimuth Beamwidth	1.8°
Elevation Beamwidth	1.8° | [1]1.8° with infill | 3.6°
Field of View	360°
Update Rate	4Hz | [2]8Hz

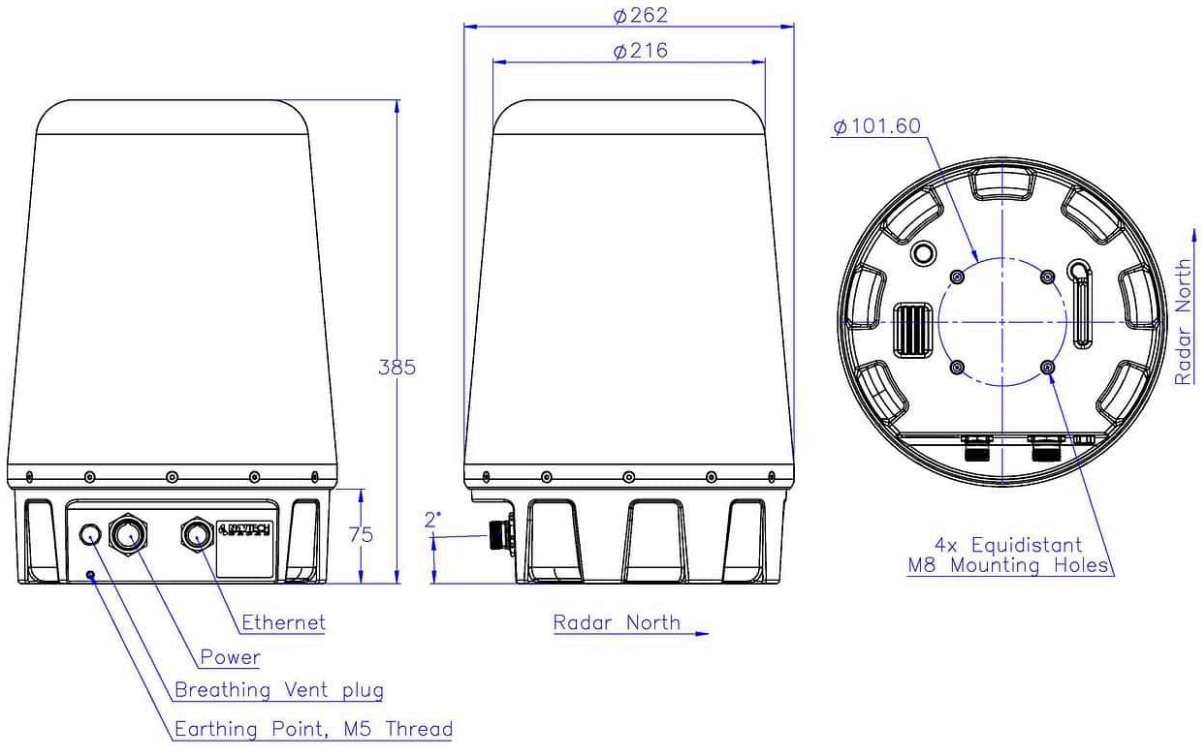
OUTPUT AND INTEGRATION

Data Format	Timestamped azimuth with FFT Navigation Mode “Sub resolved Peaks” CFAR "Point Cloud" ASTERIX CAT-240 "Radar Video"
Measurement Rate	400 | [3]800
Time Synchronisation	NTP | PTP
Data Connection	TCP | UDP over gigabit ethernet

PHYSICAL

Diameter	262mm
Height	385mm
Mounting	4 x M8 mounting holes on 4” (101.6mm) equally spaced PCD
Weight (without cables)	7.8kg
Power Consumption	[4] 24W
Operation Voltage	24V DC
Operating Temperature	[5] -20°C +60°C
Power and Data Connector Type	D38999 Mil Spec
Vibration	[6] 5g RMS to 1,000Hz
Shock	[6] 400 m/s (40g) 11ms duration
Ingress	IP69K, UL50/50E Type 4x
Compliance	EMC Directive - 2014/30/EU Low Voltage Directive - 2014/35/EU Radio Equipment Directive - 2014/53/EU IEC60945 ROHS

DIMENSIONS



1 - Includes a cosecant squared antenna which directs portion of main beam energy down to create infill, minimising the blind spot when installed above ground level
2- By request only, for more information please contact industrial.automation@navtechradar.com
3 - By request only, for more information please contact industrial.automation@navtechradar.com
4 - When heater is used this can increase power consumption up to 50W, for more information please contact industrial.automation@navtechradar.com
5 - For applications in environments outside of operating temperature range, please contact industrial.automation@navtechradar.com
6 - Environment Test Criteria for the Acceptability of Mine Instrumentation, DEF STAN 00-035

Navtech complies with the following ISO standards

ISO 9001:2015 Quality
ISO 27001 Information Security
ISO 20000 IT Service Management
ISO 45001 Health and Safety
ISO 14001 Environmental

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Safety is everything.