Robust Automation Sensor - RAS6

High resolution 360° imaging radar

Sensing that drives automation

Designed to solve industrial challenges where high-resolution data is required to facilitate automation and autonomous vehicles, the Robust Automation Sensor - RAS6 is a significant update to Navtech's flagship imaging radar sensor, the CIR.

A market-leading, millimetre-wave radar with a 360° field of view that provides best-in-class high-resolution radar images, the RAS6 works in all weather, light and environmental conditions delivering unrivalled outdoor sensing for automation with zero compromise.

Features of RAS6

- All weather performance with zero downtime through dust, rain, fog and snow.
- Long range with an instrumented range of up to 600m.
- 360° field of view with consistent scanning performance.
- Best-in-class, high-resolution radar images with access to raw data.
- Antenna options for different beam profiles.
- Compatible with Navtech's other radar solution SafeGuard.

New 8Hz refresh mode for rapid updates.

New precision time protocol (PTP) functionality for time synchronisation.

New ruggedised features:

- 8mm thick radome for increased impact resistance.
- Ruggedised rotating assembly for high shock and vibration environments.
- Ultra-robust D38999 Mil spec connectors for power and data.

Benefits of using RAS6

Increased uptime

Unrivalled availability, able to perform whatever the conditions.

Improved safety

Designed for mission-critical applications where safety is essential.

High quality

Built and designed in Oxford by radar experts for the past 20 years.

Easy to install

Compact design with Software Development Kit for quick integration.

Robust design

Designed for long-term automation projects in the harshest environments.

RAS6 Industries

Mining | Ports | Marine | Logistics | Agriculture | Construction

RAS6: Technical specifications

Performance

Operating Frequency	76-77 GHz	**Instrumented Range**	330m | 600m
Range Resolution	0.044m |0.175m	**Antenna Options (code)**	A | E | X
Azimuth Beamwidth (by code)	1.8° | 1.8° | 1.8°	**Elevation Beamwidth (by code)**	3.6° | 1.8° | [1]1.8°
Field of View	360°		

Output and Integration

Data Format	Timestamped azimuth with FFT	**Measurement Rate per rotation**	400 | 800
Update Rate	4Hz/8Hz	**Time Synchronisation**	NTP | PTP
Data Connection	TCP over gigabit ethernet		

Physical

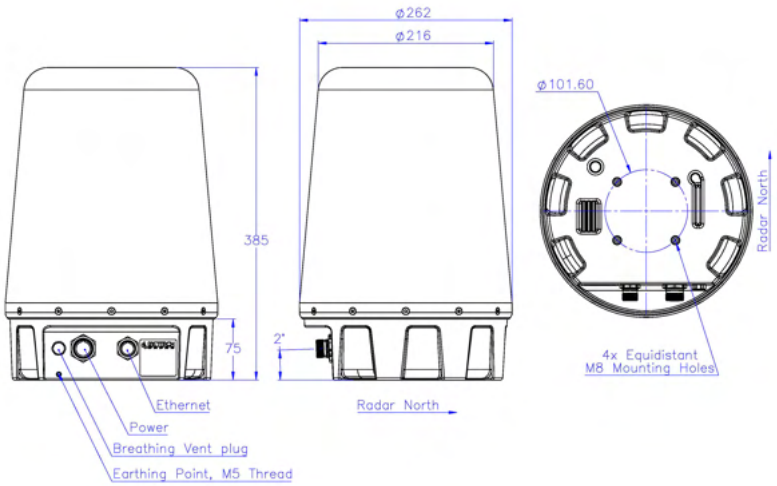
Dimensions	Diameter - 262mm Height - 385mm	**Weight (without cables)**	7.5Kg
Mounting	4x M8 mounting holes on 101.6mm equally spaced PCD	**Operating Voltage**	24V DC
Power Consumption	[2]24W	**Ingress Protection Rating**	IP67 & IP66K, UL50/50E Type 4x
Operating Temperature	[3]-20 + 60°C	**Shock**	[4]400 m/s^2 (40g), 11ms duration
Vibration	[4]5g RMS to 1,000Hz	**Power and Data Connectors**	D38999 | D38999

Compliance

Compliance	EMC Directive -2014/30/EU Low Voltage Directive - 2014/35/EU Radio Equipment Directive - 2014/53/EU ROHS

1. Includes cosec feature that directs portion of main beam energy down to create infill minimising blind spot when the radar is placed at height
2. When heater is used this can increase power consumption up to 50W, for more information please contact industrial.automation@navtechradar.com
3. For applications in environments outside of operating temperature range, please contact industrial.automation@navtechradar.com
4. Environmental Test Criteria for the Acceptability of Mine Instrumentation, DEF STAN 00-035

Dimensions



For more information and the opportunity to order, please contact:
industrial.automation@navtechradar.com

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