

CIR Gen2

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 CIR Gen2 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 CIR Gen2 works in all weather, light and environmental conditions delivering unrivalled outdoor sensing for automation with zero compromise.



Features of CIR Gen2

- ✓ 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 full spectrum.
- ✓ Antenna options for different beam profiles.
- ✓ Compatible with Navtech's other radar solutions - Terran360 and Safeguard

New 8Hz refresh mode for rapid updates.

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

New ruggedised features:

- New ruggedised 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 CIR Gen2



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 over 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.



CIR Gen2 Industries

Mining | Ports | Marine | Logistics | Agriculture | Construction

CIR Gen2: Technical specifications

Performance

Operating Frequency	76 - 77 GHz	Instrumented Range	330m 600m
Field of View	360°	Range Resolution	⁵ 4.4cm 17.5cm
Azimuth Beamwidth	1.8°		
Elevation Beamwidth	1.8° 1.8° with near field infill		

Output and Integration

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

Physical

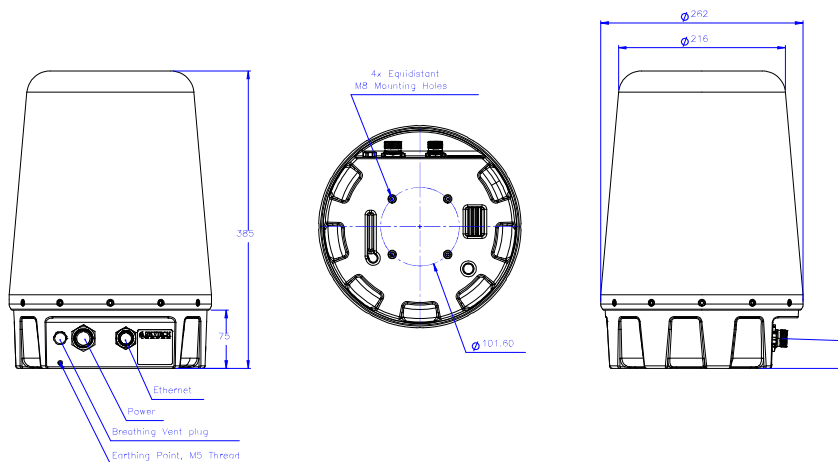
Dimensions	Diameter - 262mm Height - 385mm	Weight (without cables)	7.8kg
Mounting	4x M8 mounting holes on 101.6mm equally spaced PCD	Operating Voltage	24V DC
Power Consumption	24W (² 50W Max)	Ingress Protection Rating	IP66K, IP67
Operating Temperature	³ -20 + 60°C	Shock	⁴ 40 g Max
Data Connector	D38999	Vibration	45 Hz to 1,000 Hz, 5 g rms
Power Connector	D38999		

Compliance

Compliance	CE UKCA ACMA	FCC ISED
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1. Includes near field infill 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. DEF STAN 00-035, MIL-STD-810H
5. High resolution mode will reduce instrumented range of the radar

Dimensions



Specifications are subject to change without prior notice.

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

