



## 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:

- 10mm 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 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 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.



#### CIR Gen2 Industries

Mining | Ports | Marine | Logistics | Agriculture | Construction

# CIR Gen2: Technical specifications

## Performance

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

## 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

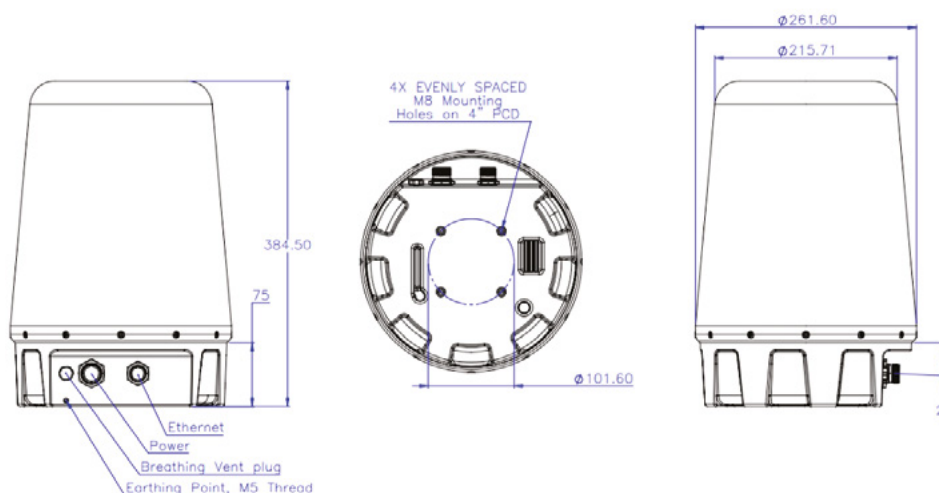
Dimensions	Diameter - 262mm Height - 385mm	Weight (without cables)	7.5Kg
Mounting	4x M8 mounting holes on 101.6mm equally spaced PCD	Operating Voltage	24V DC
Power Consumption	<sup>2</sup> 24W	Ingress Protection Rating	IP66, UL50/50E Type 4x
Operating Temperature	<sup>3</sup> -20 + 60°C	Shock	500 m/s <sup>2</sup> amplitude, 11 ms duration
Vibration	5 Hz to 1,000 Hz, 3 Grms	Connector Options	F   G
Power Connector (by code)	D38999   M12	Data Connector (by code)	D38999   M12 X-Code

## Compliance

Compliance	EMC Directive -2014/30/EU Low Voltage Directive - 2014/35/EU Radio Equipment Directive - 2014/53/EU ROHS
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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](mailto:industrial.automation@navtechradar.com)
3. For applications in environments outside of operating temperature range, please contact [industrial.automation@navtechradar.com](mailto:industrial.automation@navtechradar.com)

## Dimensions



For more information and the opportunity to order, please contact:  
[industrial.automation@navtechradar.com](mailto:industrial.automation@navtechradar.com)

