

# Multi-platform Mobile Mapping - Walk - Drive - Fly



Central Alliance is the first surveying company to offer the ground-breaking **ROBIN** LiDAR mapping system that provides three alternative mounting options rolled into one solution, allowing the user to map a variety of areas via walking, driving or flying.

ROBIN captures millions of measurable points that can then be used to map the environment in 3D and extract information suitable for your needs. Mobile Mapping systems are extremely versatile and can be used in many sectors including: rail; highways; energy; environment and construction.

## Benefits

Mobile mapping using the **ROBIN** will benefit our customers in a number of ways:

- **Time Saving** - using the technology offers a significant reduction in the amount of time spent on site in comparison to more traditional surveying methods. Of course, this will depend on the requirements of the individual project, but the savings incurred by this reduction in time spent on site can ultimately be passed on to the customer.
- **Remote Location work** - over the last couple of years, Central Alliance has built up a reputation as the go-to 'emergency response' team for pre-construction services on emergency works in various sectors. The ROBIN is perfect for difficult to access locations where terrestrial surveying methods might struggle to obtain useful data.
- **Health & Safety** - on site locations which pose more of a risk to the health and safety of staff, using the **ROBIN** means a reduction in people required on site and the number of shifts required in places of potential danger. Focus is shifted from gathering data in the field to processing data in the office!
- **Fast data capture** using **ROBIN** means we collect more data in a shorter time period, preventing site re-visits. Also means we can accommodate retrospective changes in project spec more easily and cost effectively.
- **Complete mobile mapping offering** - mobile mapping using the ROBIN ties in with a larger terrestrial & remote surveying/monitoring proposition from Central Alliance which includes UAV surveying, photogrammetry and aerial imaging in addition to precise satellite monitoring capability.
- **BIM** - the absolute data capture offered by the ROBIN can assist the production of BIM compliant 3d Models to further benefit clients who are looking to move towards a more complete asset management/BIM strategy.

## What can mobile mapping do for your business?

- **Improve the quality of your measurements**
- **Increase the safety of your staff**
- **Save your business money**
- **Make you stand out from the competition**

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# Multi-platform Mobile Mapping

## Technical Features

	Back Pack	Vehicle Mount	Fly (UAV)
Size (H x W x D)	620 x 470 x 330mm	475 x 1010 x 620 x 335mm	350 x 175 x 150mm
Weight	4.5KG	5KG	6KG

Hardware Features	ROBIN Precision
	High accuracy laser scanner (precision 3mm)
	12MP camera
	2 GNSS antennas
	Survey grade IMU navigation system
	Touch screen control unit
	3 mounting systems (walk/fly/drive)

Navigation	
IMU Type	<b>FOG</b>
Position	<0.02m
Velocity	0.005m/s
Roll/Pitch	0.015 deg
True Heading	0.03 deg
Data Rate	400 Hz
Gyro-Bias	1 deg/h
Gyro-RW	0.07 deg/ $\sqrt{\text{hr}}$
Accelerometer Bias	0.1 mg

**“With a reputation for providing innovative solutions for challenging projects, Central Alliance is gaining a reputation as the ‘go-to’ provider of pre-construction services when disaster strikes! Our ‘Emergency Response’ teams have been called in to assist some of the larger contractors on major landslide sites that have seriously affected rail routes over the last year**

**With the challenges of acquiring data in often difficult to access locations that pose a severe safety risk, gathering LiDAR data quickly and accurately becomes invaluable for this type of emergency work. When making assessments on a failing slope for example, we need to know exact information about the existing condition of the slope so that we can provide accurate and timely information to our client in order that they can assess how it has failed, what the mechanism of failure is and how to tackle this in remediation**

**It helps immensely in this situation to have a detailed 3D model of the site which we can provide using the ROBIN - the multi-platform laser scanning capability of the technology means that we can capture all required mobile mapping data on any site by walking, driving or flying over it”.**

Richard Pidcock, Technical Director, Central Alliance Pre-construction Services Limited.

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