

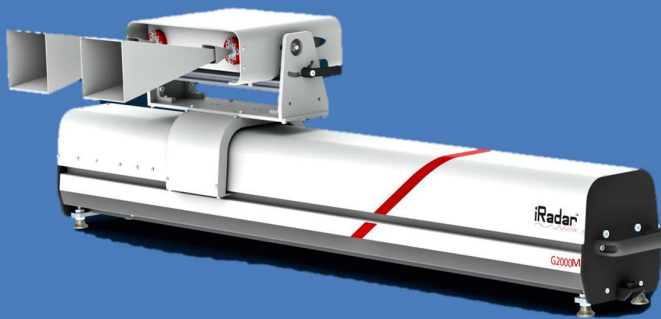


# Light Weight Surface Deformation Monitoring Radar – G2000

Quick setup ♦ Sub-mm change detection ♦ All weather monitoring

## Overview

Interferometric synthetic aperture radar (InSAR) is a radar technique uses two or more synthetic aperture radar (SAR) images to produce images of surface deformation. This technique can achieve sub-millimeter changes in deformation over spans of days to years. Its applications include geophysical monitoring of earth environments such as landslides, terrain subsidence, falling rocks, glaciers, avalanches and volcanoes, as well as remote monitoring of engineering structures such as bridges, buildings, towers, dams and roads.



## Feature Highlights 2000

- ✓ Interferometric SAR (InSAR) imaging
- ✓ Spatial Resolution: up to 0.5 m (range) x 5.81\* mrad (azimuth) @ 1000 m
- ✓ Change detection: 0.5 mm
- ✓ Sensing distance: 100 - 2000 m
- ✓ All weather, 24/7 periodic monitoring
- ✓ Quick and easy installation
- ✓ Instant risk assessment and early warning

*\* Depend on the model of GBSAR*



Surface Deformation Monitoring Radar



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# Technical Specifications

Model	G2000M	G2000L
Operating Frequency	17.2 GHz (Ku-band)	17.2 GHz (Ku-band)
Sweep bandwidth	300 MHz <sup>[1]</sup>	200 MHz <sup>[1]</sup>
Waveform	FMCW	FMCW
Polarization	Single (VV or HH)	Single (VV or HH)
Antenna gain	15 dBi (Pyramidal Horn)	15 dBi (Pyramidal Horn)
Antenna 3dB beamwidth	50° (azimuth), 25° (elevation)	25° (azimuth), 25° (elevation)
Synthetic length	1.5 m	1 m
Resolution	0.5 m <sup>[2]</sup> (range), 5.81 mrad (azimuth) @ 1000 m	0.75 m <sup>[2]</sup> (range), 8.7 mrad (azimuth)
Change detection precision	0.5 mm	1 mm
Sensing distance	Up to 2000 m	Up to 1000 m
Swath width	440 m @ 1000 m	440 m (at 1000 m)
Transmit power	+26 dBm	+26 dBm
Typical Scanning time	5 minutes per image	15 minutes per image
Mode of operation	Auto scan	Auto scan
Warranty	1-year warranty covers all parts and technical support	1-year warranty covers all parts and technical support

<sup>[1]</sup> Depending on the bandwidth allocation by local authorities, the highest sweep bandwidth can be configured is 800 MHz

<sup>[2]</sup> The highest achievable range resolution is 0.1875 m (with 800 MHz bandwidth)

## Ordering Information

Product ID	Descriptions	Remarks
G2000M	Slope Stability Monitoring System	Inclusive of radar front end, on-board SAR processor, linear scanner, and standard accessories
G2000L	Light Weight Surface Deformation Monitoring Radar	Inclusive of radar front end, on-board SAR processor, linear scanner, and standard accessories

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