CHCNAV

PS-2000

MULTI-POINT DEFORMATION MONITORING SYSTEM



MONITORING &
INFRASTRUCTURE

MOBILE LONG-RANGE SLOPE AND MONITORING SYSTEM

The PS-2000 Monitoring System is an innovative solution for monitoring slope stability and deformation. It uses advanced techniques such as differential interferometric measurement and circular synthetic aperture imaging to provide non-contact, high-precision measurements. With a wide monitoring range of 360°, it excels in large-scale monitoring. Its high data update rate ensures real-time insights, while its robust performance is unaffected by weather and lighting conditions. Compact and lightweight, it offers fast and flexible deployment, making it ideal for public and railway embankments, open-cast mines, landslides, dams and scientific research.

HIGHLY ACCURATE, NON-CONTACT MONITORING

The PS-2000 Monitoring System is designed for exceptional accuracy, achieving a level of precision down to 0.1 mm. Its remarkable accuracy is made possible by the application of advanced techniques, including differential interferometric measurement and circular synthetic aperture imaging. High accuracy is achieved without physical contact with the monitored surface, ensuring precise and reliable data for slope stability and deformation analysis.

PORTABLE AND RUGGED DESIGN

The PS-2000 Monitoring System delivers exceptional performance in a lightweight, portable design. The main unit weighs only 25 kg, making it incredibly convenient for mobility and installation. Its high level of protection and rugged construction ensure adaptability to demanding surveillance conditions. Regardless of the environment, it remains a reliable and portable solution for slope stability and deformation monitoring.

360° MONITORING RANGE

The PS-2000 adopts the third-generation circular arc imaging synthesis technology and integrates a high-precision turntable to achieve aperture synthesis. So it can achieve 360 ° comprehensive scanning and monitoring with the device as the center, no longer affected by the antenna angle, and the monitoring range is greatly increased. Very suitable for open-pit mining and other scenarios, making work more efficient.

REAL-TIME DATA UPDATES

The system's high data update rate ensures that users have access to real-time insight into the monitored area. Potential problems or changes are identified quickly, enabling timely decision making and risk management.

MULTIPLE INDUSTRY APPLICATIONS





Open Pit Mines



Tailing Dam



Geological Hazards



Emergency

SPECIFICATIONS

Characteristics	
Spatial resolution[1]	Range 0.3 m, Cross Range: 5.2 mrad @1 km, 0.3 m by 5.2 m @2 km, 0.3 m by 10.4 m
Field of view	360°
Accuracy[2]	< 0.1 mm (Line of sight displacement)
Radio frequency band[1]	Ku
Modulation	Frequency Modulated Continuous Wave (FMCW)
Max. Operating range	5000 m
Antenna adjustment	Vertical: ±30°
Maximum antenna gain (Tx)	10 dB
Polarisation method	Vertical
Communication	LAN
Data update rate	360° in 120 s; 180° in 60 s

Hardware	
Size (L × W × H)	1130 mm × 420 mm × 730 mm
Weight	25 kg (without support)
Environment[3]	Operating: -35°C to +55 °C Storage: -40°C to +60°C
Operational wind speed	Up to 100 km/h
Ingress protection	IP65
Electrical	
Power consumption	≤50 W
Power supply	22 - 25 V DC

*Specifications are subject to change without notice.

(1) Range resolution depends on the frequency bandwidth permitted by local radio regulation. As an example, in USA and Europe the bandwidth is limited to 200 MHz and the range resolution is 0.75 m. (2) Typical instrumental accuracy not considering environmental effect. The accuracy is measured as Line of Sight displacement standard deviation evaluated in one hour assuming a stable reference target providing a Signal to Noise Ratio (SNR) better than 20dB. (3) The operating environment temperature of the equipment. If it is subjected to extremely low or high temperatures for a long period of time, the service life of the equipment will be affected, and it is recommended that a protective room be used and maintained in the temperature range of -20°C to 35°C.

©2025 Shanghai Huace Navigation Technology Ltd. All rights reserved. The CHCNAV and CHCNAV logo are trademarks of Shanghai Huace Navigation Technology Limited. All other trademarks are the property of their respective owners. Revision December 2025.

WWW.CHCNAV.COM | MARKETING@CHCNAV.COM

CHC Navigation Headquarter
Shanghai Huace Navigation Technology Ltd.
577 Songying Road, Qingpu,
201703 Shanghai, China
+86 21 54260273

CHC Navigation Europe
Office Campus, Building A,
Gubacsi út 6, 1097 Budapest, Hungary
+36 20 421 6430
Europe_office@chcnav.com

CHC Navigation USA LLC
6380 S. Valley View Blvd, Suite 246,
Las Vegas, NV 89118, USA
+1 702 405 6578

CHC Navigation India
409 Trade Center, Khokhra Circle,
Maninagar East, Ahmedabad,
Gujarat, India
+91 90 99 98 08 02