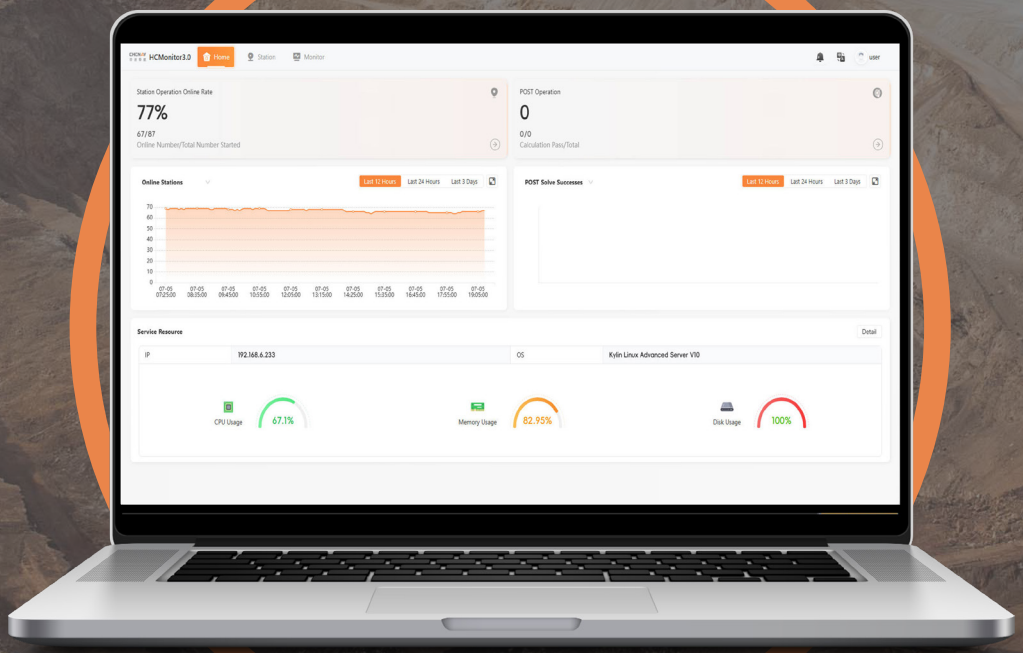
CHCNAV

HCMonitor

HIGH-PRECISION DEFORMATION MONITORING AND CALCULATION SOFTWARE



MONITORING

CHCNAV

PROFESSIONAL GNSS+ MEMS-BASED MONITORING SOLUTION

HCMonitor is a professional software platform designed to capture precise position data and track dynamic changes in real time. It integrates information from multiple satellite constellations (BDS, GPS, GLONASS, Galileo, QZSS) with MEMS sensors including tiltmeters and accelerometers. The software supports multiple data formats and protocols, while offering station management tools with real-time status display. Adaptable to diverse monitoring scenarios, HCMonitor provides stable and reliable support for applications such as landslide risk management, reservoir and dam monitoring, engineering projects, and open-pit mining.

PRECISE DISPLACEMENT MONITORING

HCMonitor features dual calculation modes for comprehensive displacement analysis. The POST mode supports post-processing with high-precision baseline calculations through data reading, baseline solving, and network adjustment, ensuring accurate tracking of long-term displacement. The RTK mode provides real-time baseline monitoring, enabling the detection of sudden position changes with clear status indicators such as fixed or floating. The software supports multi-source data reception from global navigation satellite systems, including BeiDou, GPS, GLONASS, Galileo, and QZSS.

ROBUST STATION MANAGEMENT

Full lifecycle management of monitoring stations is supported, including setup, editing, start/stop control, and data import/export. Real-time displays of station status, satellite availability, and data quality indicators such as signal-to-noise ratio ensure dependable data collection. Detailed station information, including satellite charts and connection status, provides comprehensive insights for reliable operation.

INTEGRATED MEMS SENSOR DATA

HCMonitor integrates data from tiltmeters and accelerometers to enhance accuracy and reliability. This combination enables real-time detection of subtle micro-deformations, triggering alerts that help identify potential risks at an early stage.

FLEXIBLE DATA STORAGE & OUTPUT

Configurable data storage tasks are supported, with options for file format (RINEX v3.02, v3.04), sampling intervals, and upload strategies such as immediate or scheduled transfer. Results can be stored in databases, exported as CSV files, or delivered to third-party platforms through customized parameters, meeting a wide range of data management requirements.





Engineering Construction



Geological Disaster



Reservoir Dam



Open Pit Mines

SPECIFICATIONS

System Recommendations	
Operating system	Windows Server 2012 and above CentOS 7.9 and above Ubuntu 18.04 LTS and above
Database	MySQL 5.7 and above, the default installation package is the portable version 8.4.4
Hardware	
Processor	8vCPUs
CPU Architecture	x86_64
RAM	16 GB
Hard disk	500GB
Recommend Browser	
Google Chrome	
Microsoft Edge	
Software License	
Software registration code	
Supported Languages	
English	
Simplified Chinese	
Module Specifications	
Foundation module	1.Multi-level user permission management: Supports role creation with permission lists and user-role binding, enabling access control and operation log recording. 2.Data monitoring: Real-time tracking of station status, network connectivity, and data age, with timely alerts for anomalies. 3.Data storage: Configurable storage tasks covering file format, sampling interval, and upload strategies.
Displacement Monitoring Module	1.POST post-processing: Conducts high-precision baseline calculation through data reading, baseline solving, and network adjustment, with quality control via relevant indicators. 2.RTK real-time calculation: Performs instant baseline monitoring, displaying statuses like fixed or floating. 3.Result output: Supports storing results in databases, as CSV files, or pushing to third-party platforms.
MEMS Monitoring Module	1. Real-time Data Display: Presents tiltmeter and acceleration data in real-time, enabling users to monitor orientation and movement. 2. Enhanced Reporting: When hardware allows, it activates enhanced reporting for imperceptible changes, promptly alerting users to potential risks.
Coordinate System & Third-Party Modules	1.Coordinate systems: Manages coordinate systems with support for addition, editing, deletion, import, export, and custom conversions. 2.Third-party integration: Configures push URLs and parameters to ensure accurate data transmission to third-party platforms.

* Specifications are subject to change without notice.

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