CHCNAV

Coprocess Classic

ADVANCED LiDAR DATA PROCESSING SOFTWARE



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MAPPING & GEOSPATIAL

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ADVANCED POINT CLOUD POST-PROCESSING SOFTWARE

Coprocess Classic, developed by CHCNAV, is a powerful software solution tailored to the post-processing of massive point cloud data. As a fully integrated platform, Coprocess Classic seamlessly processes point cloud data captured in the field into a variety of multi-format deliverables. Point cloud management, measurement tools and visualization are just part of the software solution, which also features a free configuration viewer. Creation of Digital Elevation Models (DEMs) and Digital Terrain Models (DTMs), semi-automatic feature extraction, automatic data classification, road design and more are all possible with Coprocess Classic.

MASSIVE DATA CLASSIFICATION

Using state-of-the-art CHCNAV algorithms, Coprocess Classic allows both automatic and manual classification of point cloud data into different categories such as ground, vegetation, buildings, roads, power lines and more.

AUTOMATIC DEM/DSM GENERATION

Coprocess Classic serves as a comprehensive software solution for generating DEMs or DSMs from point cloud data, from the initial field data collection to the final rendering. The process includes a specialized algorithm for efficient measurement noise filtering, automatic ground point filtering, and seamless export of DEM/DSM data based on the required configuration. In addition, Coprocess Classic provides various editing functions to further enhance the quality of the DEM/DSM data.

VOLUME CALCULATION AND ANALYSIS

Coprocess Classic supports volume calculation from point clouds using the grid method, with results easily exported in DXF format. It also facilitates the analysis of volume differences between successive LiDAR data sets, providing detailed reports for informed decision making.

POWERFUL FEATURE EXTRACTION

Coprocess Classic's robust feature extraction module supports both automatic and manual extraction of road features. Extracted features can be easily converted to DAT or DXF format for seamless integration with software such as AutoCAD and ArcGIS, significantly improving work efficiency and productivity compared to traditional survey methods.

USER-FRIENDLY INTERFACE DESIGN

Coprocess Classic has an intuitive user interface with four main modules: Foundation, Terrain, Road, and Volume. The CoData point cloud format enhances the user experience when importing and visualizing large datasets. The interface and module layout are customizable to suit the user's preferred work habits. With an integrated workflow wizard and user manual, Coprocess Classic is easy to learn and master, making it an effective tool for even new users.

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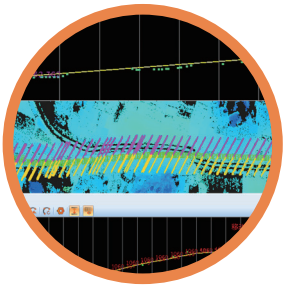
PROFESSIONAL POST-PROCESSING SOFTWARE





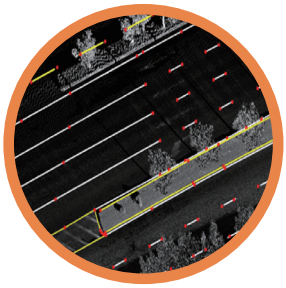
Powerful Data Engine

CHCNAV's proprietary data engine allows users to integrate massive, dense point clouds of entire cities into Coprocess Classic with no loss of productivity.



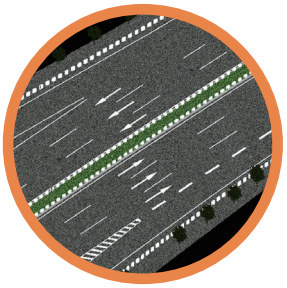
Road analysis

Road is a Coprocess Classic module that automates the extraction and calculation of key road features captured by 3D mapping systems.



2D vectorization

Assets and measurements are AI extracted from point clouds and imagery to reduce operator processing time.



3D Modeling

Automated modeling based on extracted road objects and component vectors are associated with point clouds to automatically generate the road surface.

SPECIFICATIONS

System Recommendations	
Operating system	Microsoft Windows 7, 8, 10,11 (64-bit)
Install package size	Less than 500 MB
File system	NTFS
Hardware	
Processor	Intel ® Core™ i7 (Minimum) Intel ® Core™ i9 (Recommended)
RAM	8 GB (Minimum) 32 GB or more 64 bit OS (Recommended)
Hard disk	500 GB SSD Drive (Minimum) 1 TB SSD Drive (Recommended)
Large project disk option	RAID 5, 6, or 10 w/ SATA or SAS drives
Graphics card	Nvidia GeForce 4 GB (Minimum) Nvidia GeForce 6 GB+ (Recommended)
Display	1024 × 768 (Minimum) 1920 × 1280 (Recommended)
Input	Keyboard, mouse with wheel
Software License	
License type	Time limited SW registration code USB dongle driver (Lifetime)
SW upgrade	Online version chech Manual install package
Supported Language	
English	
Chinese	

Coprocess Classic Specifications	
Foundation module	The software uses a custom format (*.codata) to quickly visualize massive point cloud data, and quickly build *.las, *.txt, *.csv, *.pts, *.xyz into *.codata through LOD technology. Covers conventional renderings such as height, intensity, RGB, classification, single, time, returns, return number, etc. It provides multi-hue rainbow, blend and mix rendering, and EDL effects improve rendering detail contrast. Realize the scene roaming of point clouds,vectors and images, perform viewpoint roaming according to the viewing angle position, and perform trajectory roaming by setting the browsing path. Overlay view of panoramic images and point clouds. Provides single point, multi-point, distance,area, density and angle measurement. In addition to basic measurement, the software also provides elevation inspection, density quality inspection and profile analysis functions. Support for semi-automatic extraction of building contours, doors, windows and parking elements.
Foundation module	Provides rectangle and polygon selection of point cloud, and the functions of inner clipping, outer clipping, clearing and saving of updated point cloud.
Terrains module	In adition to Standard Coprocess Classic module. Automatic processing to output DEM results that meet the accuracy requirements. Quickly and accurately extract ground points under complex terrains. Variety of editing methods such as elevation leveling, elevation smoothing, elevation deletion, patching invalid values, elevation patching, removing spikes, and adaptive smoothing to quickly edit DEM results. Generate contour data in dxf format based on point cloud data. Generate the elevation points in DAT format according to the square grid or diamond grid. Realize TIN browsing and point cloud and TIN synchronous editing.
Roads module	One-click to generate cross section and vertical section. Efficient editing of cross section and vertical section. Design routine automatically according to coordinates of stakes; circular curve; transition curve , etc. Add stakes in the view or according to user-defined mileage.
Volume module	Volume calculation by grid method, the result can be output in dxf format. Analyze volume difference between two phases ,and output the report. Automatic generation of bench crest and bench toe. TIN editing functions (smoothing, filtering, simplifying, cavity filling). Calculate the volume of user-defined region, and output the report.

* Specifications are subject to change without notice.
* Other modules from other tools may also be included.

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