SuperMap GIS 9D

SuperMap Software Co., Ltd.
SuperMap GIS 9D is the new GIS platform software integrating four major technical architectures including cross-platform GIS, cloud & client integration GIS, new 3D GIS and big data GIS, fulfilling multi-layer GIS needs from various industries.

Cross-platform GIS

SuperMap GIS platform software supports multiple CPUs including x86, ARM, MIPS, Alpha, IBM Power and Itanium. It also runs efficiently on multiple operating systems including Windows, LINUX, UNIX, Android and iOS.

Cloud & Terminal Integration GIS

With a brand-new cloud & terminal integration GIS technical architecture, SuperMap GIS brings powerful cloud server GIS platform software with various GIS application terminals.

Intensive GIS cloud: cloud GIS system is based on the major technologies including efficient cross-platform, 2D & 3D integration, multi-layer intelligent cluster, parallel spatial analysis, etc., realizing intensive use on calculation resources, and ensuring the reliability of GIS services.

Various GIS terminals: providing multiple SDK and APP for Desktop, Web and Mobile terminals. Connecting GIS cloud services with unified interface, the terminals are able to realize cross-terminal GIS application development and resources access.

New Generation of 3D GIS

Using the framework of 2D & 3D integration technology, SuperMap GIS combines 3D technologies including oblique photogrammetry, BIM, point cloud, etc., integrating new IT technologies like WebGL, VR, 3D printer, which set the new 3D GIS technical architecture, advancing wider and deeper applications of 3D GIS.

Big Data GIS

Technology innovation for SuperMap can be found in the entire process of spatial big data. SuperMap GIS fully integrates technologies from big data storage management to spatial analysis and real-time streaming, forming a completely new big data GIS technical architecture.

- Realise effective and stable storage management of spatial big data through the extension for distributed file system, distributed database;
- Provides spatial big data component (SuperMap iObjects for Spark), extending Spark spatial data model from SuperMap GIS kernel, not only reconstructed spatial analysis algorithms which highly improved spatial analysis efficiency but also developed new spatial analysis algorithms for big data which can run directly on Spark, solving the analysis and application problems of spatial big data;
- SuperMap iServer provides brand-new Web services including data catalog, distributed spatial analysis, real-time data, etc., and embeds Spark running library, lowering the threshold of big data environment deployment;
- Provides various rich 2D & 3D spatial big data visualization technologies like cluster map, density map, relation map, heat map, etc.;
- SuperMap iManager realizes big data maintenance and management through intelligent deploying, mission automatic dispatching, resource monitoring and alarming.
SuperMap GIS 9D includes Cloud GIS platform and multiple GIS development platforms including PC, mobile, browser, fully supporting big data.

SuperMap GIS 9D embraces big data technology, bringing completely new upgrades on spatial big data, micro services, container, automatic maintenance, etc. It also improves the cloud & terminal integration GIS functions, constructing new 3D technology, fulfilling wider application needs.

Spatial Big Data
SuperMap GIS 9D extended the spatial big data module, providing technologies like spatial big data storage management, analysis and digging, real-time streaming and visualization. SuperMap components can run directly in Spark, realizing seamless docking with spatial big data. SuperMap GIS 9D reconstructed the original spatial analysis algorithms based on Spark distribution architecture, realizing performance improvement.

3D GIS
Merging with 3D technologies like oblique photogrammetry, BIM, point cloud, etc., supporting large scale 3D scene construction and multi-source data merging, adding 3D entity data model, supporting 3D Boolean calculation, 3D spatial relation judging, advancing 3D GIS for more practical development.

Mobile GIS
Provides Indoor 3D navigation, JavaScript API and more data visualization functionalities, online/offline data viewing. GL map tiles are added which could lower space occupation and improve the map viewing experience.

Visualization Modeling
Added visualization modeling module, providing over 150 data processing models and visualization modeling tools. It also supports cross-platform, automatic resolving, parallel executing, lowering the interaction work.

Data Insight Client
SuperMap iDataInsights, a lightweight web application is added to SuperMap 9D, providing multi-source spatial data accessing, dynamic visualization, interaction graph analysis and spatial analysis, etc., helping spatial data digging and Geo-information value insight.

SuperMap iServer
SuperMap iServer is a Cloud GIS application server based on high-efficiency cross-platform GIS kernel, functioning with features like 2D & 3D integration service publishing, management and cluster, providing multi-layer extension development abilities. SuperMap iServer provides brand-new web services like data catalog, distributed spatial analysis, real-time data, etc., and embeds Spark running library, lowering the deployment environment threshold of big data. Users can quickly construct spatial big data application system through various SDKs including mobile, web, and PC terminals.

Product features
- Cross-platform, supports multiple CPU architectures and Operating Systems;
- Spatial big data storage ability, multiple storage plans are embedded such as SQL, NoSQL, distributed file system, realizing integration storage management on multiple data;
- Provides density analysis, cluster analysis, area summary, etc. based on distributed spatial analysis abilities of Spark framework;
- Vector tile generation and publishing, realizing quick rendering, dynamic map style switching, dynamic generation without cache, saving server resources and network bandwidth;
- Highly automatic intelligent cluster, realizing flexible resource management;
- Multi-instantiation mechanism based on micro-services architecture, fully using the hardware resources.
SuperMap iPortal

SuperMap iPortal is a GIS portal platform with GIS resource aggregation, discovery, sharing and management abilities, it also has the cutting-edge technologies and abilities like customization, multi-source heterogeneous service registration, system monitor dashboard, etc.

Product features

◇ New system monitoring dashboard, direct access to the situation of portal and resource utilization;
◇ Code-free customization, solving the difficulties of time/energy consuming of platform implementation;
◇ Multi-source access control, ensuring the integrated management of contents;
◇ New online mapping web application, letting users easily create various thematic maps;
◇ Provides SuperMap iDataInsights extension, realizing spatial data online exploration and insights;
◇ Supports spatial big data storage, providing distributed storage ability.

SuperMap iExpress

SuperMap iExpress is a GIS distribution Server based on cloud computing technology. As the medium for GIS Cloud and application terminals, it improves the terminal accessing experience through service proxy and cache acceleration technology. It also provides map, 3D tile publishing, multi-node update and pushing abilities. SuperMap iExpress can be used to quickly construct cross-platform and low-cost WebGIS application system.

Product features

◇ Multi-source service proxy and cluster, realizing quick, in-batch service publishing;
◇ Supports diverse service publishing interfaces, improving distribution ability;
◇ Direct publishing of 2D & 3D tiles, remote service-free;
◇ Supports 2D & 3D tile intelligent distribution and update, fulfilling personal needs;
◇ Provides Geo-CDN acceleration solution, improving prompt response and access ability;
◇ Innovative front-end processor solution for system fault tolerance and service decompression.
SuperMap iManager

SuperMap iManager is a comprehensive GIS operation & management center, which can be used for application service management, infrastructure management, and big data management. It provides a Docker solution based on container technology, supporting one-click creation of SuperMap GIS big data sites, quick deployment and experience of big data service. It can not only monitor multiple GIS data nodes, GIS service nodes or any web site but also monitor hardware resource utilization, map access hotspots, node health status, etc., realizing integration maintenance & monitoring management of GIS system.

Product features
- Diverse monitoring indicators, supporting overview diagram, topology diagram, real-time alert;
- Loading balance embedded, single node failure solution;
- Supports one-click GIS system deployment, adapt to multiple cloud platforms;
- Quick construction of big data GIS site, experiencing big data GIS functions immediately.

SuperMap Online GIS Platform(www.supermapol.com) provides renting services of online GIS data, GIS platform and application hosting, building one-stop online GIS data and application platform. SuperMap Online aims to build more convenient and effective GIS applications by presenting to public for rent rather than for sale, which efficiently helps lower the threshold as well as the cost.

Product features
- Provides Cloud GIS host, easily to construct public GIS servers;
- Online hosting and publishing data, shared by multiple terminals, easy-to-use;
- Massive geographic thematic data, ready to use;
- Rich SaaS applications and online Geo-APIs;
- Data collection tool, iCollector, map viewing tool, iExplorer.

Online hosting and publishing business data, sharing by multiple terminals
Convenient public network GIS Server construction
Use SuperMap Online's sample data to create thematic maps online
SuperMap iDataInsights

SuperMap iDataInsights is a simple and effective geographic insight web terminal application. It provides local and online multi-source spatial data accessing, dynamic visualization, interactive chart analysis and spatial analysis abilities. With easy operation methods and data linking effects, it can help users to dig the value in spatial data, providing decision support aiding.

**Product features**
- Full access to cloud platform, use private and public cloud versions through SuperMap iPortal and SuperMap Online;
- Multi-source data access, supporting uploading CSV, Excel, cloud data and services, etc.;
- Quick spatial data visualization, one-click uploading map, creating single value, range field, heat map;
- Rich chart visualization, attribute data generation, etc., real-time preview editing;
- Flexible linkage between chart and sheet, quickly publishing data distribution pattern and linkage;
- Easy-to-use spatial analysis, no need to configure or develop, can use after login;
- User data can be stored to the cloud, can be shared to other parts and application, like online map.

SuperMap iObjects Java

Big data oriented application, component GIS development platform based on 2D & 3D integration, applicable for Java environment, providing quick construction of large scale GIS application ability.

SuperMap iObjects .NET

Big data oriented application, component GIS development platform based on 2D & 3D integration, applicable for .NET environment, providing quick construction of large scale GIS application ability.

SuperMap iObjects C++

Big data oriented application, component GIS development platform based on 2D & 3D integration, applicable for C++ environment, providing quick construction of large scale GIS application ability.

**Product features**
- New spatial big data component, supporting distributed spatial big data processing and analysis;
- New big data visualization ability;
- New 3D geographic design module (3D Designer);
- Powerful data processing ability, supporting rich data formats;
- Professional mapping ability, supporting quickly creating elegant, high-efficiency maps;
- Overall 2D & 3D analysis abilities;
- Nautical map management ability, supporting storage, displaying, editing and publishing of nautical map data;
- Provides 2D & 3D dynamic plotting ability, accurately displays the emergency treatment schema.
SuperMap iDesktop

SuperMap iDesktop is a plugin desktop GIS application and development platform, with functions of 2D & 3D integration data management and processing, mapping, analysis, nautical map, 2D & 3D plotting. It supports seamless accessing online map services and collaborative sharing of cloud resources. SuperMap iDesktop can be used for production, processing, analysis on spatial data and quick construction of industrial application system.

Product features

◇ Overall 2D & 3D analysis abilities;
◇ Professional data production and map creating abilities;
◇ Big data visualization rendering ability;
◇ Spatial data chart, showing and digging data value;
◇ New mosaic dataset, effectively manage massive image data;
◇ Supports management and display of oblique photogrammetry model, BIM, and point cloud data;
◇ New 3D geographic design module (3D Designer);
◇ Supports VR wearable, experiencing virtual geographic environment.
SuperMap iDesktop Cross

SuperMap iDesktop Cross is the first open source cross-platform desktop GIS software with full functionalities, breaking the limit that the professional desktop GIS software can only run in Windows environment. The functions like spatial big data management & analysis, mission dispatching and visualization are added in SuperMap 9D, suitable for data production, processing, analyzing and mapping.

Product features
◇ Cross-platform, open source, customizable;
◇ Multi-source data management, processing, analysis and visualization;
◇ High efficiency multi-process map cache production;
◇ New visualization modeling module;
◇ Easy-to-use data production and mapping;

SuperMap iClient for JavaScript

SuperMap iClient for JavaScript is a Cloud GIS online terminal development platform. Being constructed based on modern web technologies, it’s a unified JS client of SuperMap Cloud GIS products and SuperMap Online. It integrates advanced open source map library, visualization library, and the core codes are completely open using Apache2 protocol, connecting SuperMap GIS and open source community. It provides brand-new big data visualization, real-time data visualization functions, supporting multi-source map, multi-terminal and multi-browser. Map viewing and spatial analysis can be quickly realized using this product.

Product features
◇ Fully access commonly used map libraries, sheet and chart libraries like Leaflet, OpenLayers, Mapbox GL JS, ECharts, D3, MapV, etc.;
◇ Completely reconstructed based on web technologies like H5, WebGL, WebSocket, ES6, RequireJS, ReactJS, etc.;
◇ The core source codes are published based on Apache License 2.0 open source agreement, which can be downloaded and used on open source forums like github, oschina, etc.;
◇ Provides unified API and visualization like big data analysis, real-time big data for SuperMap iServer, supporting heat map, hexagonal map, grid map, cluster map, vector tile, etc.;
◇ Unified service access of SuperMap iServer, iExpress, iPortal, iManager and SuperMap Online, providing easy-to-use APIs and more functions.
SuperMap iClient3D for WebGL

SuperMap iClient3D for WebGL is a 3D client development platform based on WebGL technology, suitable for constructing plugin-free, cross-platform, cross-browser 3D GIS application.

Product features

- No need to install plugin;
- Cross browser, cross OS;
- Supports data like oblique photogrammetry, BIM, point cloud, etc.;
- Provides 3D spatial analysis like skyline analysis, visibility analysis, viewshed analysis, profile analysis, etc.;
- Supports adding online published 3D symbols in 3D scene;
- Supports real-time data drawing and dynamic display.

SuperMap iClient3D for Plugin

SuperMap iClient3D for Plugin is a professional 3D GIS network client development platform based on SuperMap UGC (Universal GIS Core). It is comprised of Web 3D GIS plugin and JavaScript API, which can be used to construct full-featured, high-efficiency and cross-browser 3D GIS applications.

Product features

- Developed based on universal GIS kernel(SuperMap UGC), providing unified 3D scene experience;
- Integrating OGC services, docking multiple network resources;
- Provides multiple 3D spatial analysis, supporting real-time analysis and display.
Mobile GIS Development Platform

SuperMap iMobile for Android/iOS

It’s a comprehensive, professional mobile GIS development platform, which can be used for quick construction of online and offline mobile GIS applications.

Product features
- GL map tiles improve map operation performance;
- Professional spatial analysis helps data digging;
- New JavaScript API, supporting cross platform on mobile terminals;
- Rich visualization insight data;
- Supports 3D indoor cross-floor path analysis and navigation;
- Provides full capabilities of 3D displaying and analysis.

2D Indoor Navigation 3D Indoor Navigation

Light-weight Mobile SDK

SuperMap iClient for Android

It’s an online GIS development platform based on Android, which can be used to construct light-weight mobile map application program.

SuperMap iClient for iOS

It’s an online GIS development platform based on iOS, providing online map interface for iPhone and iPad, it can be used to construct light-weight mobile map application program.
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