GEOSYSTEMS
THE GEOSPATIAL EXPERTS
An OHB Company

PHOTOMESH

High-Precision Photogrammetric Data Production for 3D Mapping, Digital Twins, and Infrastructure

PhotoMesh by Skyline Software Systems is a powerful photogrammetry software solution for the automated production of high-quality 2D and 3D geospatial data. Using aerial imagery, drone images, ground photos, and LiDAR data, PhotoMesh generates accurate 3D meshes, orthophotos, point clouds, and elevation models.

With intelligent automation and scalable cloud and cluster processing, PhotoMesh is suitable for both small drone surveys and large-scale mapping projects.

Benefit from shorter project times, outstanding data quality, and seamless integration into existing GIS and digital twin workflows.

Key Benefits

Accurate Digital Twins

Create highly realistic 3D city models, infrastructure models, and industrial facilities with photogrammetric accuracy. Even small details such as buildings, roads, vegetation, and technical assets are captured with high precision.

Efficient Inspection and Asset Management

Skyline's Inspection solution allows users to work seamlessly with 3D models and the original source imagery for virtual inspections. Damage, measurements, and annotations can be recorded directly within the digital twin, enabling faster, safer, and more cost-effective inspection workflows while reducing the need for on-site visits.

HIgh-Quality 2D Products

Automatically generate Quick Orthophotos, True Orthophotos, Digital Surface Models (DSM), and Digital Terrain Models (DTM/DEM) with high accuracy for mapping, infrastructure, and environmental applications.

Future-Ready Data for AI

Open output formats and high-quality geospatial data provide the ideal foundation for AI-powered analytics and machine learning applications.

Maximum Performance and Scalability

PhotoMesh is designed to process very large datasets. Intelligent tiling, multi-core processing, and distributed computing across computer clusters or cloud infrastructure enable efficient processing of projects containing hundreds of thousands of images.

Flexible Integration

PhotoMesh supports a wide range of input data, including standard imagery, LiDAR point clouds, multispectral sensors, aerial triangulation data, and video. Results can be exported as 3D meshes, point clouds, orthophotos, or elevation models in all common GIS and 3D formats.

Technical Highlights

- Gaussian Splatting for modern and efficient 3D visualization
- Outstanding orthophoto quality with accurate color balancing
- Quick Orthophotos (Quick DOP) for ultra-fast results
- Hybrid processing of imagery and LiDAR data
- Cloud- and cluster-ready architecture
- Scales from single workstations to hundreds of processing servers
- REST API for process automation and workflow integration
- Multispectral processing (e.g. NDVI, GRVI)
- Automatic quality reports and validation checks
- Seamless integration with the Skyline platform and TerraExplorer

Typical Applications

- Urban planning and Smart City projects
- Infrastructure and asset management
- Government and public authorities
- Disaster management and emergency response
- Utilities and energy companies
- Industrial facilities and asset management
- Surveying and Geographic Information Systems (GIS)

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GEOSYSTEMS is your integration partner for professional GeoIT systems. We develop customized solutions that combine geospatial data, technologies, and existing IT systems into one future-ready solution. Our promise: Your idea. Our solution. No standard products.

For more than 37 years, we have helped public authorities, companies, and research organizations turn complex geospatial data into reliable decision support. We develop innovative and highly automated downstream services that combine satellite, aerial, UAV, and sensor data with many other data sources. Using powerful analysis methods, including AI-based technologies, automated workflows, and easy-to-use applications, we provide complete solutions – from data collection and processing to ready-to-use information platforms.

A key focus of our work is the seamless integration of our solutions into existing IT environments in companies and public organizations. Open interfaces and high interoperability allow smooth connection with existing systems and workflows. This creates scalable GeoIT solutions that fit into existing processes and deliver long-term value.

GEOSYSTEMS solutions are used in many application areas, including sustainable urban development, infrastructure management, natural resource protection, land surveying, climate adaptation, CO_2 compensation, smart farming, climate-friendly forest management, and security-related applications.

Our portfolio includes remote sensing, photogrammetry, GIS, 3D visualization, digital twins, data management, browser-based applications, and 4D real-time solutions. Together with our technology partners Octave (Diamond Partner) and Skyline Software Systems (Platinum Partner), we deliver complete end-to-end solutions – from data acquisition and analysis to visualization and operational use.

GEOSYSTEMS is a subsidiary of OHB SE, located in Gilching near Munich, Germany.
More information: www.geosystems.de.

OHB DIGITAL

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