

EUROPEAN SPACE IMAGING

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European Space Imaging is a leading supplier of global very high-resolution (VHR) satellite imagery and derived services to customers in Europe, North Africa and CIS countries.

Operating a multi-mission capable ground station enables optimized image collection results taking into account real-time weather information and giving customers the highest degree of flexibility.

With a reputation for expert and personalized customer service it has been providing tailored VHR imagery solutions to meet the diverse project requirements of its customers since 2002.



30 CM RESOLUTION IMAGERY

European Space Imaging currently has access to two satellites - WorldView-3 and WorldView-4 - capable of delivering 30 cm very high resolution imagery. WorldView-3 has an average revisit time higher than once a day and is capable of collecting up to 680,000 km² per day.

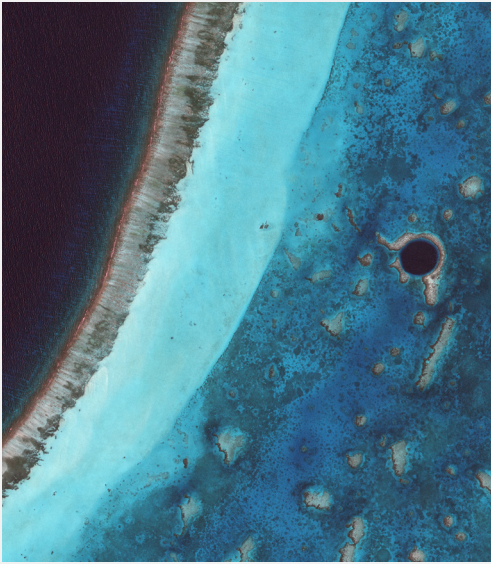
WorldView-4 operates in co-ordination with WorldView-3 and combined they are able to image a location an average of 4.5 times a day at 1 m ground sample distance or less. The European Space Imaging archive has more than 4,000,000,000 km² of imagery. In addition, our customers may request direct access tasking to ensure they get the right image every time.

SPECIFICATIONS AND BENEFITS

- 30 cm panchromatic resolution, 1.24 multispectral resolution, 3.7 m short-wave infrared resolution and 30 m CAVIS resolution
- Industry-leading geolocation accuracy
- Large area single-pass (synoptic) collection eliminates temporal variations
- Direct access tasking from and image transmission to customer sites
- Rapid retargeting using Control Moment Gyros (>2x faster than any competitor)
- Daily revisits



CONSTELLATION DIRECT ACCESS FACILITY



Our constellation direct access facility is a multi-mission ground station capable of directly tasking the WorldView satellites as they pass over Europe and North Africa. Detailed collection scheduling and the local downlink of data provide unparalleled capabilities for optimised collections and near real-time delivery of imagery.

By utilizing our ability to local task, European Space Imaging can greatly increase the effective collection capacity of our satellites to obtain the greatest quality image with minimal cloud coverage. We use real-time weather assessments that are updated every 15 minutes to maximise the pass collection and react quickly to our customers needs and project requirements. We are able to directly task and receive all WorldView satellites - WorldView-1, WorldView-2, WorldView-3 and WorldView-4. In addition, we can locally plan and receive images from GeoEye-1 and fully utilize all DigitalGlobe VHR satellites.

SPECIFICATIONS AND BENEFITS



Detailed collection planning to meet customer requirements



Rapid delivery for emergency response mapping



Optimized collection strategy and flexibility



Direct uplink and downlink to the WorldView satellites over Europe, Middle East and North Africa



Ability to directly task all WorldView satellites and locally plan GeoEye-1



Real time weather assessment for improved image quality and cloud-free area collections





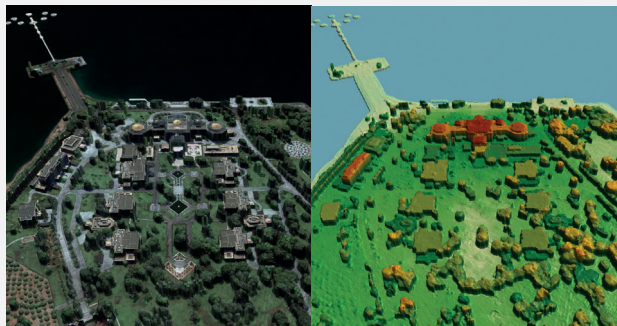
GAF AG

MUTLI-STEREO ELEVATION SUITE

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GAF AG was founded as a private sector enterprise by Dr. Rupert Haydn in 1985. Nowadays it is an e-GEOS (Telespazio/ASI) company seated in Munich, Germany. It is a leading solutions provider with an international reputation as skilled and reliable supplier of data, products and services in the fields of geo-information, satellite remote sensing, spatial IT and consulting for private and public clients.



MULTI-STEREO DATA

Very high resolution (VHR) and **high resolution (HR)** optical stereo satellite imagery with global coverage is available from a range of systems.

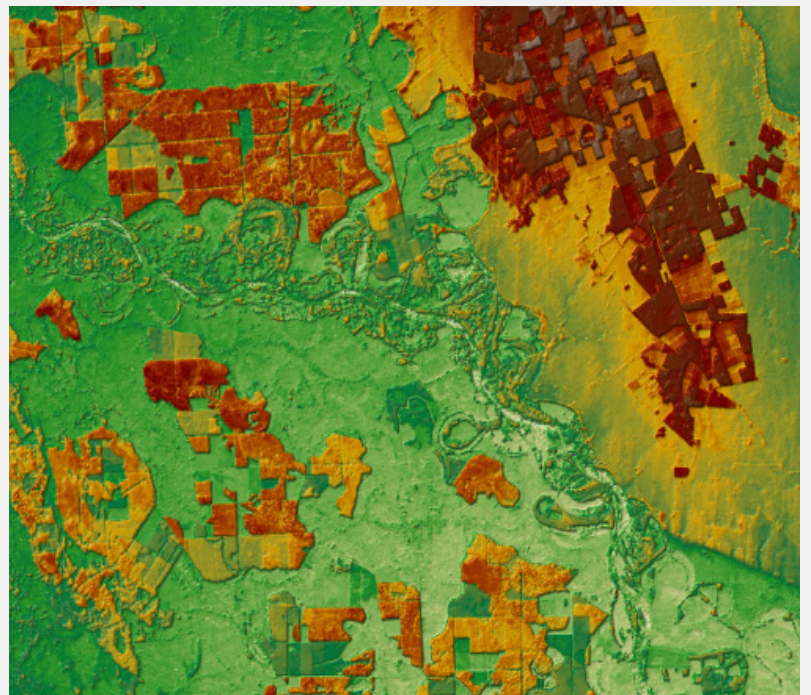
This data is well-suited to the creation of DSMs as a result of the latest developments in the data resolution quality and collection capabilities of today's optical satellite systems, as well as advances in computing technology and visualisation.

DSM PROCESSING

A production chain for highly automated and operational DSM generation based on multi-source VHR and HR satellite imagery has been developed within the context of a longstanding and close cooperation between DLR-IMF (Institute for Remote Sensing Methodology at the German Aerospace Center) and GAF.

This processing system uses a customised and specialised matching algorithm called **semi-global matching (SGM)**. The algorithm uses a pixel-based matching approach and thus utilises the **full geometric resolution** of the input imagery.

The GAF method is very flexible and offers DSM generation based on the **most recently available data** or other, specific time frames.



AREAS OF USE AND RELATED PRODUCTS

VARIATIONS

Resolution, age of data and level of control

DERIVATIONS

Terrain models, block models and contour lines

SPECIALS

Textures*, bathymetry data, stereo bundles and point clouds

* Visualisation with GAF's GIS Software GAFmap*

AREAS OF USE

Telecommunication network planning, vulnerability analysis, oil and gas exploration, hydrological applications, 3D visualisation



FINISHING

The finishing process involves quality controlling all the data using semi-automatic processes for:

- filling
- editing and
- hydro-enforcement

The product reliability can be checked using the ortho-image and pixel-level quality and traceability layers.

SERVICES OFFERED



GEO-DATA STORE AND DATA RECEPTION

- One-stop-shop for Earth observation data
- Land cover and land use data
- Digital elevation and surface models
- Bathymetry



DATA PROCESSING

- Digital image processing
- Mapping and monitoring
- Digital cartography and map production
- Virtual reality 3D/4D



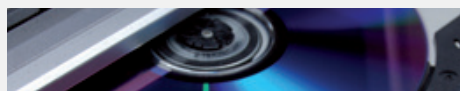
SPATIAL INFORMATION SYSTEMS

- System analysis, integration and migration
- GIS/DB-Design and implementation
- Application development
- Spatial data structure concepts



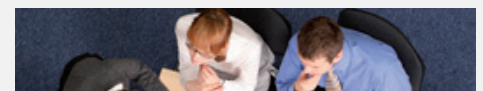
INTEGRATED SATELLITE SERVICES

- Combination of space & non-space technologies
- Integration of satellite communication, navigation and earth observation



GEO-SOFTWARE

- Development of customized spatial software
- Desktop-, Web- and Mobile-GIS
- Geo-webservices, SDI-development
- 3D and Virtual Reality



MANAGEMENT CONSULTING & TRAINING

- Project requirements analysis, definition, supervision and management
- Sector and process analysis
- Professional and institutional consulting
- Training and knowledge transfer

MULTI-STEREO DSM PRODUCTS

DSM 0.3 Fulfilling the highest requirements in terms of accuracy and reliability



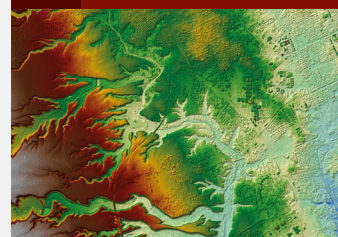
Resolution 30 cm | LE90 < 3.5 m | CE90 < 2.5 m

DSM 0.5 Ideal combination of high accuracy and good data availability



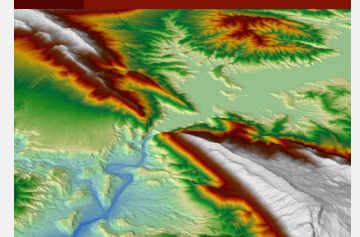
Resolution 50cm | LE90 < 3.5 m | CE90 < 2.5 m

DSM 2.0 Optimal solution for cost-efficient regional coverage with up-to-date data



Resolution 2.0 m | LE90 < 5 m | CE90 < 5 m

DSM 5.0 Good balance between detailed surface structures, coverage of transnational areas and cost efficiency



Resolution 30cm | LE90 < 3.5 m | CE90 < 2.5 m