Blue Insight
Geomatics

KONGSBERG

Geomatics – powered by Blue Insight digital platform

Collect, catalogue, and distribute ocean data

In Geomatics, instrument dashboards provide a complete view of instrument performance while Ocean View allows for advanced data exploration both onboard vessel and from onshore.

Geomatics is designed to meet the increasing demand for accurate information from the oceans. It preserves and presents environmental, geospatial, and temporal data so that vessel operators can be assured their ocean data management requirements are met.

Simplified data management for vessel operators

- Manage bathymetric and water column data in one system
- One view across all observation plattforms (AUV, USV, RV)
- Adhere to FAIR data management principles (Findable, Accessible, Interoperable and Reusable)
- Faster access to interesting data

KEY BENEFITS

Operational efficiency

- Streamlined data collection: Automated data ingestion, reducing manual effort and time.
- Real-time instrument insights: Intuitive instrument dashboards, ensuring seamless performance monitoring.
- Global accessibility: Enables full access to data anytime, anywhere, whether onboard or via the cloud*

Scientific excellence

- Advanced exploration tools: Uncover valuable insights through a comprehensive toolset for in-depth data exploration.
- Metadata integrity: Complete control of metadata for chain-of-custody requirements, enhancing data reliability and traceability.
- Machine Learning (ML) integration: Automated ML-capabilities, facilitating advanced analytics and predictive modeling.

Cloud access is optional and available upon request

Sensors, data formats and protocols

Geomatics supports a large set of Kongsberg and third-party sensors

New instruments can be supported by adding custom parsing and ingestion handler

All geospatial, timeseries, mission and metadata available through Open Geospatial Consortium (OGC) APIs for support of FAIR principles (Fair, Accessible, Interoperable, Reusable)

Type of data	File formats
Water column data, incl ADCP	.raw, .netcdf. Zarr, .hdf5
Bathymetry data	.xyz, .las, .laz, .kmall/.all
Sidescan / SAS Sub-Bottom Profiler data	.xtf, .geotiff
3D models of objects from e.g., underwater laser scanner, photogrammetry	.gltf, .stl, .fbx, .obj
Videos incl. metadata	.mp4 + .geojson / companion file (lat long)
Photos / images, e.g. georeferenced	.jpg + .geojson / companion file (lat long)
Projected photos from e.g. Aerial drones, satellites	.geotiff
CTD & Sound Velocity data	.csv, json, txt, .netcdf, .svp
Hydrophone	UDP datagram, .wav

Protocol	Description
NMEA	ASCII over serial or UDP. Geomatics implements a Generic Driver for NMEA-like output from Instruments and some proprietary drivers for GPS, AIS & WeatherPak
MQTT	Publish/Subscribe interface to ingest and distribute datagrams locally on ship or to cloud
RS232/RS432	Sensors connected using a serial-to-ethernet converter to translate serial messages to UDP or TCP
Ethernet	Geomatics support sensors connected to the local network over UDP or TCP
Modbus	Application layer messaging used for sensors and automation systems

Hardware
- Requires a Hydrographic Workstation (HWS) ship-side.
- Integrates to onboard Network Attached Storage (NAS).

HWS
- Only 1U high
- 19" rack mount
- Only 3.6 kilos
- VESA mounts behind display and under-the-desk
- Supports four displays SSD or NVMe data disks IntelCore I7-8700T
- 32 GB RAM upgradable
- 115/230 VAC
- Max 170W, 65W typical, Windows® 10
- Maritime certification

Optional services
- NAS infrastructure incl HW can be provided upon request.
- Cloud access can be provided upon request.