



**HEXAGON**

Product Description

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# **GeoMedia Smart Client 2020**

Product Description

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# About GeoMedia Smart Client

GeoMedia® Smart Client enables your organization to access and utilize rich geospatial data in its business processes. It delivers an enterprise geospatial platform engineered to support large numbers of users who need to operate full desktop products, but whose workflows need advanced geospatial functionality that cannot be supported by browser-based, web mapping tools. With GeoMedia Smart Client, a single deployment can be configured for an unlimited number of applications – making it the perfect GIS for a smarter organization. GeoMedia Smart Client provides:

- Focused Business Workflows – Rules definition and workflow configuration tools enable highly focused and efficient workflows without the need for expensive custom code.
- Intuitive Interface – Simple interface configured for specific business workflows reduces training overhead while increasing productivity.
- Data Validation – Task-specific forms and workflows offer built-in data validation for quality assurance.
- Coordinated Data Access, Models, and Workflows – Better information sharing, coordination, and reuse prevents inefficiencies, errors, and risks that arise when departments work in data silos.

GeoMedia Smart Client is available in three product tiers to complement a broad range of customers – from a small business with few users doing simple vector editing to large, multi-disciplinary environments supporting multiple business workflows across various departments.

## Features Comparison Chart

CAPABILITY	GEOMEDIA SMART CLIENT ESSENTIALS	GEOMEDIA SMART CLIENT ADVANTAGE	GEOMEDIA SMART CLIENT PROFESSIONAL
<b>EASY GEOSPATIAL WEB EDITING FOR AN UNLIMITED NUMBER OF USERS</b>			
Enable high-level cartographic maps of raster and vector data for an unlimited number of users	•	•	•
Provide high-end vector tools including snapping, redlining, dimensioning, and measurement	•	•	•
Enable attribute and spatial queries by filtering geographic objects based on specified attributive and spatial constraints	•	•	•
Use of intelligent caching for raster and vector data to support high-performance display	•	•	•
Enable high-quality, true-to-scale printing	•	•	•
Create easy-to-read reports with detailed map content	•	•	•
Present analysis results within pie charts, bar graphs, heat maps, and symbol clustering	•	•	•
Manage user-defined map configurations (bookmarks)	•	•	•
Ability to directly read ORACLE® and Microsoft SQL Server® based vector features	•	•	•
TIFF, JPG, PNG raster format support	•	•	•
Use GeoMedia Desktop for initial Smart Client project setup, in lieu of administration console	•	•	•

Configure (geospatial) plot layouts	•	•	•
Use with ERDAS APOLLO Essentials for optimized image delivery via ECWP protocol	•	•	•
Use with GeoMedia WebMap for broader access to various data and web service types	•	•	•
Define user and rights settings through a connection to Active Directory or LDAP	•	•	•
<b>ENABLE HIGHLY FOCUSED GEOSPATIAL WORKFLOWS</b>			
Enable pre-defined, geospatially enabled workflows with Workflow Manager – Runtime		•	•
Edit attributes or capture and change spatial data on the web client and push the changes back to the server database (based on pre-defined workflows)		•	•
Configure and deliver simple maps to the browser		•	•
<b>DEFINE EFFICIENT GEOSPATIALLY ENABLED BUSINESS WORKFLOWS</b>			
Define and develop geospatially enabled workflows or revise the structure, process, and forms of existing ones with Workflow Designer			•
Define automatic validation and conditions for each workflow node			•
Define task-specific forms (for queries, analysis, editing, reports, and more) using XML files			•
Define workflow steps and forms based on user and rights management			•
Integrate external applications on the server			•
Create multilingual workflows and forms			•

## GeoMedia Smart Client Essentials

Organizations can provide high-end vector redlining functionality and the ability for an unlimited number of users to display raster and vector maps, analyze and query data, print, measure, and use dimensioning functions.

### Key Features

#### Client Application

On the client-side, GeoMedia Smart Client is a Java application. Deployment is based on standard Hexagon App Launcher, and it runs as a self-configuring and updating smart client.

The client uses web protocols and standards for communications (SOAP Web Services via standard HTTP or HTTPS protocol), but it is entirely separate and does not need to run in web browsers. Client features include:

- One-click start-up to begin working with the client
- Automatic application configuration based on user profile



- Automatic updates without user action

## High-level Cartographic Map Display

- Extended style capabilities for GeoMedia Smart Client based on OGC standard Symbology Encoding (SE)
- Definition of complex and scale-dependent styles
- Coordinate system support
  - Including support for geographic (Lat/Lon) and custom coordinate systems within the primary database (Oracle® and Microsoft® SQL Server)
- Use of SVG icons to style points, line strings, and area fills
- Support of Rich Text Format (rtf) and halo effects
- Style Editor
- Raster backdrop supported by file-based image formats and web services
  - Raster format support for TIFF, JPG, and PNG
  - Client-side integration of WMTS including on the fly coordinate transformation
  - Client-side Bing Maps (street maps, imagery, and imagery with labels) integration including coordinate transformation on the fly
  - OpenStreetMap imagery and vector-based data integration
  - Client-side ECWP integration
    - Imagery is scaled and delivered on the fly (no need for pre-cached tile set)

## Measurement

Includes various commands to perform point, linear, circle, and area measurements on features. The measure results are represented in the client as a working level.

- Create and delete the following measurements:
  - Point (coordinates)
  - Line (angle and length)
  - Cumulative distance (segment length, angle, and polyline length)
  - Circle (radius, perimeter, and area)
  - Polygon (side length, perimeter, area, and angles)

## Dimensioning

Includes various commands to dimension features on the map. The dimensioning results are stored in the database and represented in the client as a working level.

- Utilize snapping with any dimensioning function
- Simple Dimensioning – Depict the distance between two points of a feature



- Orthogonal Dimensioning – Depict the distance between two points of a feature, drawing the line orthogonally displaced from the existing line feature
- Free Dimensioning – Dimensioning line can be placed "free" regarding the vertical orientation
- Radial Dimensioning – Create radial dimensions for circle and arc features
- Chain Dimensioning – Includes Orthogonal Chain Dimensioning, Chain Absolute Dimensioning, and Chain Difference Dimensioning
- Edit/delete dimensioning text and position

## Redlining

Enables drawing new graphics on the map such as points, polylines, polygons, buffers, or text. The graphics can be stored in the database or just in the local cache directory and represented in the client as a working level. Redlining commands include:

- Draw text features, polylines, polygons, rectangles, and buffers
- Edit existing redline features
- Copy existing features to the redline working level
- Delete an existing feature(s)

## Feature Selection

Enables selecting features on the map, which is essential for conducting queries. Features can be selected by clicking on the map or may be based on spatial "fences" represented by geometric objects such as circle or polygons.

- Select active features by:
  - Point, circular, polyline, rectangular, polygonal fence
  - Map window extent
  - Click on the map

## Attribute and Spatial Queries

Enables filtering of geographic objects based on specified attributive and spatial constraints. Results of the query can be observed in the corresponding data window while objects are highlighted in the map. Results can also be sorted and exported to a CSV file for use in a spreadsheet program.

- Search with attributive input (Input-Query) – Execute queries based on attributive constraints
- Search with map selection (Selection-Query) – Conduct queries based on a spatial map selection; the selection could be created by clicking on objects or by defining spatial fences
- Combined Search – Run an Input-Query on pre-selected objects

## Snapping Tools

Enables accurate creation, editing, measurement, or dimensioning of features by snapping to existing vertices, midpoints, endpoints, intersections, and tangents. Most tools are also supported by assigned F keys.

- Midpoint snapping – Snap to the midpoint of a line segment

- Intersection snapping – Snap to the intersection point of two or more feature line segments
- Tangent snapping – Snap to tangent points of a circle or arc
- Perpendicular snapping – Snap one feature line to another where the two lines are exactly perpendicular (right-angle)
- Vertex snapping – Snap to single points of a feature
- Endpoint snapping – Snap to the endpoint of a feature
- Detail settings – Set snapping tolerance and feature class selection and de-activate smart snapping

## Advanced Geo-caching

Uses intelligent geospatial data caching for raster and vector data, supporting high performance, and disconnected mobile editing.

- Raster and vector data cached either on the server in the LAN or on the client
- Client caches kept current through a fully automated process using timestamps, without any need for user intervention
- Manually synchronize the client and server cache
  - Statistics panel shows static and dynamic information concerning the cache synchronization process, including:
    - How many feature classes are selected and are hence considered for cache synchronization
    - How many tiles those feature classes contain, including how many tiles have been successfully synchronized, or synchronized with failures

## Printing

Enabling high-quality, true-to-scale printing.

- Including large-format plotting in A4 to A0 formats (Letter to E size)
- Rotate content
- Enlarge or diminish the map extract to be printed
- Specify page title, subtitle, and any additional info text
- Dynamic attributive information
- Save print settings
- Page preview
- Create snapshots
- Include scale bar

## Reports and Graphics

Create easy-to-read reports with detailed map content

- Present results of analysis as pie charts, bar graphs, heat maps, and symbol clustering



- Reports contain rich map content and attributes using online, server-side templates or file-based reports
- Export as .pdf, .xlsx, and .docx

## Useful Application Tools

- Bookmarks
  - Create, delete, import, and open user-defined map configurations
    - Save your current map settings (that is, the map extract and contents) at any time, and then call them back again later
    - Capture thumbnail automatically from the map for visual context in the bookmark
- Smart Search
  - Use a single point of input to search and set legend entries, bookmarks, queries, map center, and scale

## Administration and IT

- Automatic delivery of applications over a web HTTP or HTTPS connection
- High-level enterprise administration for users, roles, rights, functions, projects, and so forth
- Secure data access control supporting AD and LDAP and audit trails
- Integration to external data and systems
  - Including Windows® 10 Geolocation API
    - Easily integrate between your GIS and various location devices without collecting individual GPS device information
- Client is running on any Java-enabled platform
  - On operating systems including Windows®, Linux®, Mac®, and so forth
  - Supporting screen resolutions of 1024 x 768 or higher, including 4K monitor support (3840 x 2160)

## Security

- Supports username/password credentials to authenticate and authorize access from the client to its server application
- Data access control: security, audit-trails and access control (using feature-level attributes, geographic areas, functional groups, and so forth)





# GeoMedia Smart Client Advantage

The Advantage level tier of GeoMedia Smart Client contains all of the features and functionality of the Essentials product, plus the ability for an organization to utilize predefined business process workflows and edit data. The additional Workflow Manager – Runtime module enables customers to run pre-built workflows, edit attributes, or capture and change spatial data on the web client and push the changes back to the server database.

## Key Features

### Geospatial Workflows

- Enable pre-defined, geospatially enabled workflows with Workflow Manager – Runtime

### Edit Features and Attributes

- Edit attributes or capture and change spatial data
- Transact changes back to the server database, based on pre-defined workflows

### Share Maps Publicly

- Configure and deliver simple maps to the browser

# GeoMedia Smart Client Professional

The Professional level tier of GeoMedia Smart Client contains all of the features and functionality of the Advantage product, plus Workflow Manager – Editor, enabling an organization to develop new workflows or revise the structure, process, and forms of current ones.

## Key Features

### Business Logic and Efficient Workflows

Highly configurable rules and workflow engine enables organizations to implement life-cycle workflows, feature-level access control, data validation and behavior, and integration into other systems.

- Workflow Manager
  - Process experts pre-define report, form, and plot layouts
  - Configure geospatial processes (workflow trees) by drag and drop
  - Define automatic validation and conditions for each workflow node
  - Drive (remote control) the Smart Client (map content, area, scale, functions)
  - Define task-specific forms (for queries, analysis, editing, reports, and so forth) including text boxes, checkboxes, drop-down lists, and context-based help with a WYSIWYG editor
  - Integrate external applications on the server-side
  - Define workflow steps and forms based on user- and rights-management, including connection to Active Directory or LDAP
  - Define disconnected workflows and forms, which enable the end users to capture and edit attributive and spatial data while offline from the internet.
- A synchronization process enables posting edits back when the client reconnects
- Project-based conflict handling can be added via WorkFlow definitions
  - Triggering of server processes by user workflows using triggers
- Graphical Workflow Designer
  - Create your unique workflow with a modern and easy-to-use graphical interface
  - Easily extend and customize your workflow
  - Enables domain experts to define their day-to-day business workflows
  - Respond faster to business requirement changes
  - Reduce time-to-market



## Support for Other Hexagon Products

GeoMedia Smart Client provides support to, or is supported by, other Hexagon products in the following ways:

### GeoMedia Desktop

GeoMedia Desktop can be used for the initial setup of the GeoMedia Smart Client project, in lieu of using the Smart Client administration console, for adding new features and defining scale dependencies.

### GeoMedia WebMap

Provides broader access to various types of data within GeoMedia Smart Client, including:

- Additional vector support such as Esri Shapefile, Esri File Geodatabase (FGDB), MapInfo, DWG, DXF, and DGN

### I/CAD

An interface between GeoMedia Smart Client and Intergraph's Computer-Aided Dispatch (I/CAD) solution automatically synchronizes the map extents in both applications. This powerful connection enables linked navigation and display and ultimately provides enhanced map content for public safety customers, including symbology, OGC services, and edit functions for supplementary objects.

### ERDAS APOLLO Essentials

Raster data from ERDAS APOLLO Essentials can be delivered via the optimized ECWP streaming protocol and rapidly displayed as backdrops within GeoMedia Smart Client. ECWP provides superior image delivery performance in comparison to any other image serving solution on the market and substantially reduces the requirements of the client cache volume (server and client), management efforts, memory usage, and time to load.



## Contact us



<https://go.hexagongeospatial.com/contact-us-today>

## About Hexagon

Hexagon is a global leader in sensor, software and autonomous solutions. We are putting data to work to boost efficiency, productivity, and quality across industrial, manufacturing, infrastructure, safety, and mobility applications.

Our technologies are shaping urban and production ecosystems to become increasingly connected and autonomous — ensuring a scalable, sustainable future.

Hexagon's Geospatial division creates solutions that deliver a 5D smart digital reality with insight into what was, what is, what could be, what should be, and ultimately, what will be.

Hexagon (Nasdaq Stockholm: HEXA B) has approximately 20,000 employees in 50 countries and net sales of approximately 4.3bn USD. Learn more at [hexagon.com](http://hexagon.com) and follow us @HexagonAB.

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