



# HEXAGON

Product Description

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## **GeoMedia WebMap 2020**

Product Description

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## Product Summary

GeoMedia® WebMap is a web-based map visualization and analysis server product from Hexagon's Geospatial division. From easily creating standards-compliant web services to providing sophisticated visualization and analysis within interactive web mapping applications, GeoMedia WebMap enables building powerful solutions for worldwide sharing and using rich geospatial data.

GeoMedia WebMap supports a broad range of customers who need to visualize and examine geographic data on the web. GeoMedia WebMap provides real-time access to customer's geospatial data or to the geospatial data from any organization that has chosen to make it available through industry-standard methods.

Click on a link below for quick navigation:

[GeoMedia WebMap Essentials](#)

[GeoMedia WebMap Advantage](#)

[GeoMedia WebMap Professional](#)

## Features vs. Tiers Comparison Chart

Capability	GeoMedia WebMap Essentials	GeoMedia WebMap Advantage	GeoMedia WebMap Professional
<b>Access and Publish Huge Volumes of Geospatial Vector and Raster Data</b>			
Build and deploy basic OGC® web services, including WMS, WMTS, WFS, WFS-G, WCTS, WPS-CT	X	X	X
Transform database information into highly differentiated features displayed on a map	X	X	X
Real-time access to enterprise geospatial data	X	X	X
View, query, and analyze geospatial data from many formats (without any pre-translation)	X	X	X
Leverage powerful APIs to create your own web applications	X	X	X
Pre-configured, harmonized thin client included	X	X	X
Administer GeoMedia WebMap sites and services on the web server using the Administration Console	X	X	X
Use GeoMedia desktop as a publishing platform to create high-performance web applications with the click of a mouse	X	X	X
Build and deploy an OGC OpenLS (Open Location Service/Location Utility Web Service) to perform address geocoding (and reverse)	X	X	X

Display vector and raster data in 3D with advanced myVR technology	X	X	X
<b>Data Editing and Advanced Client Functionality</b>			
Build and deploy an OGC WFS-T (Transactional)		X	X
Advanced, harmonized thin client Connects WMS, WFS, WFS-T, WFS-G, WMTS, WMPS, GeoRSS, ERDAS APOLLO		X	X
Browser-based data editing in web client (Geospatial Portal classic layout)		X	X
GeoMedia WebMap Mobile application for online and offline data editing in the native mobile app		X	X
Capture spatial data in accordance with a central data model and write directly to Microsoft® Access®, SQL Server®, Oracle®, or PostgreSQL® with PostGIS		X	X
Create and update attribute data, with help from drop-down lists and integrity checks during data capture		X	X
Create and run pre-defined business workflows and integrate attribute-based enterprise processes with map operations		X	X
<b>High-End Analysis Functionality</b>			
Build and deploy an Open Location Service implementation to perform routing			X
Conduct dynamic segmentation and linear analysis quickly over the web			X
<b>GeoMedia WebMap Mobile</b>			
Mobile application for online and offline access and update of enterprise vector data		X	X
Configure data access and functions for individual users of GeoMedia WebMap Mobile application		X	X
Unlimited number of concurrent GeoMedia WebMap Mobile users			X

# GeoMedia WebMap Essentials

GeoMedia WebMap Essentials tier allows organizations to launch a fully scalable server solution with web services and thin client applications to provide extended GIS functionality, including real-time enterprise data access, sophisticated geospatial analysis, and map generation. All data publishing and subsequent end-user access to volumes of structured vector and raster data are available through basic OGC-Services. GeoMedia WebMap Publisher Portal, a preconfigured thin client application, is bundled with the product. An API is also available to create your own custom web applications.

NOTE: See detailed information for GeoMedia WebMap Publisher Portal features in the [Geospatial Portal 2020 product description](#).

For rapid image delivery to WebMap client applications, this product may be integrated with ERDAS APOLLO Essentials. Easy administration of client application and services are available in an interoperable, web-based Administration Console.

## Key Features

### OGC Web Services

#### Web Map Service

- Generate a map from one or more data source
- Configure hierarchical legends and watermarks
- Publish WMS, version 1.3.0
  - OGC 06-042 OpenGIS® Web Map Server Implementation Specification (ISO 19128)
  - Technical Guidance for the implementation of INSPIRE View Services - version 3.11
- Publish WMS version 1.1.1
  - OGC 01-068r3 Web Map Service Implementation Specification
  - Technical Guidance for the implementation of INSPIRE View Services - version 3.11

#### Web Feature Service

- Retrieve or manipulate one or more features
- Publish WFS version 2.0.0
  - OGC 09-025r1 OpenGIS Web Feature Service 2.0 Interface Standard (ISO 19142)
  - Technical Guidance for the implementation of INSPIRE Download Services - version 3.1
- Publish WFS version 1.1.0
  - OGC 04-094 Web Feature Service Implementation Specification
  - Technical Guidance for the implementation of INSPIRE Download Services - version 3.1
- Export vector data to GeoRSS, KML, CSV and GeoJSON

#### Geocoding

- Find the coordinates of a given location
- OGC 03-006r3 OpenGIS Location Services (OpenLS): Core Services, Part - 3

### Reverse Geocoding

- Find the location (address) of a given set of coordinates
- OGC 03-006r3 OpenGIS Location Services (OpenLS): Core Services, Part - 3

### Web Map Tile Service

- Serve tiled data with high performance
- Publish WMTS version 1.0.0:
  - OGC 07-057r7 OpenGIS Web Map Tile Service Implementation Standard
  - Technical Guidance for the implementation of INSPIRE View Services - version 3.11

### Gazetteer Service

- Enable querying by place name
- Publish Gazetteer based on the standard WFS interface, version 1.1.0
  - OGC 11-122r1 Gazetteer Service - Application Profile of the Web Feature Service Best Practice

### Transformation

- Convert coordinates on the fly
- Publish WPS-CT, version 1.0.0:
  - OGC 05-007r7 OpenGIS Web Processing Service, version 1.0.0
  - INSPIRE Draft Technical Guidance Coordinate Transformation Services - version 2.1
- Publish WCTS, version 0.3.0 (deprecated)
  - OGC 05-013 Web Coordinate Transformation Service (WCTS) draft Implementation Specification

### GeoMedia WebMap Publisher Service

WMPS is a custom web service that allows for publishing of multiple legends (map compositions). The legends (map compositions) are available in raster and vector formats. WMPS combines the standard WMS and WFS capabilities making geographical data display, analysis, and querying more powerful.

- Multiple map compositions offered in one service
- Cross-composition predefined queries
- Multi-dataset analyses

### GeoMedia WebMap Publisher Portal

Using GeoMedia as a visual authoring environment, GeoMedia WebMap enables the publishing of high-performance web applications with the simple click of a mouse. GeoMedia WebMap Publisher Portal, the preconfigured, thin client application, provides an interface to view, query, and analyze data using web services. GeoMedia WebMap Publisher Portal uses GeoMedia as the visual-authoring environment.

- Create an interactive web application based on a GeoMedia GeoWorkspace
- Perform real-time GIS analysis

- Query GIS data warehouses and see information described in a map
- Perform advanced analyses
  - Attribute query
  - Spatial query
  - Buffer zoning
  - Spatial intersection
  - Spatial difference
  - Analytical merge
  - Aggregation
  - Functional attributes
  - Join
  - Coordinate geocoding
  - Address geocoding
  - Find address
  - Measure length and angle
- Click map feature to see selected database information about that particular feature
- Display 3D vector data
- Display the data on 3D globe based on myVR technology
  - Display base map and raster data sources in 3D
    - Display 3D Tiles and 3D Objects
    - Display underground features
    - Consume imagery from APOLLO Essentials for extremely fast imagery streaming and rendering
  - Use extended 3D WFS service capabilities offered within GeoMedia WebMap Essentials to display vector data on the globe
    - Extrude 2D vector data based on the selected feature attribute values to rapidly build 3D scenes
  - Apply First Person Perspective view
  - Use interactive tool tips and hot spots
- Choose from a variety of map output types:
  - JPEG image format
  - PNG image format
  - Improved SVG (can be rendered with Adobe SVG Viewer or natively in Web browser)
  - Differentiating between features based on single or multiple attribute values
  - Translucency of all raster data and area color fill
  - Dynamic label generation with conflict detection
    - Identify different text features as you pan and zoom
- Additional advanced rendering features:
  - Text/symbol masking with a halo
  - User-defined area hatching, symbol, and text display in a single legend entry
  - Endcap, and midline joint specification
  - User-defined styles
  - View-independent text and symbols
- Choose from a variety of map output types



- Cache on the client
  - Files are maintained automatically
- Server-side geocaching for feature classes that are not frequently updated

NOTE: See detailed information for GeoMedia WebMap Publisher Portal features in the [Geospatial Portal 2020 product description](#).

## Data Access and Interoperability

Access geospatial data warehouses of all GeoMedia-supported data formats

- GeoMedia Grid raster engine
- Google Maps™, Bing® Maps
- Oracle® Spatial, Microsoft® SQL Server®, Microsoft Access®, PostgreSQL® with PostGIS
- Esri® File Geodatabase (FGDB)
- ArcView, ArcInfo, MapInfo®
- MicroStation®, AutoCAD®
- MGE, FRAMME, G/Technology
- Text file, ODBC source
- OGC WMS, WFS, GML
- Bitmap, JPEG, TIFF, GeoTIFF, MrSID, ECW, USGS DOQ, CCITTG4
- Export to AutoCAD, MicroStation, ArcView, MapInfo, Microsoft SQL Server

## Map Tools and High-Fidelity Rendering

GeoMedia WebMap generates both raster and vector maps, rendering them on the web using native browser functionality.

Instances are created automatically using simplified publishing workflows for GeoMedia WebMap, reducing the service and portal publishing process to a single page in GeoMedia WebMap Publisher Administrator. Suitable instances are created automatically in the Administration Console without requiring additional steps.

Publishing GeoMedia GeoWorkspaces with dynamic labelling configurations result in automatic LRF file creation. Administrators no longer need to create the file manually. This feature, combined with the other Simplified Publishing enhancements, reduces the time to set up GeoMedia WebMap's services and portals.

## Remote Service Publishing

Using the new GeoMedia WebMap Publisher capabilities, the Administrator can easily create fully operational services (WMS and WFS), as well as remotely create GeoMedia WebMap Publisher Portals. The enhanced wizard performs all the necessary actions; creating the Service Source, and creating the Service (or Portal) Instance, and then binding them together so that the remaining action is publishing the data.

## Administration Console

Administration Console is used for creating and configuring all aspects of server-side engines, web services, and web applications in one location.





- Web service instances (for any type of service) can be created, configured, and removed

The following features can be configured:

- Service metadata (OGC and INSPIRE) for WMS, WMTS, WFS. GeoMedia WebMap Administration Console provides a dedicated user interface to support editing of service metadata
- Logging capabilities for the service to log its performance data to a selected location (this feature can be turned on and off)
- Source of data for the service (depending on service type)
- Administration Console provides users with the ability to change GeoMedia WebMap engine parameters and test services being instantiated:
  - Configuring server parameters (timeouts, thresholds, number of parallel map servers, and so forth)
  - WebMap logging configuration
  - WebMap cache configuration
  - Virtual folders configuration

### Web Application Deployment

- Deploy Web applications with
- VMWare ESX
- Amazon EC2

## GeoMedia WebMap Advantage

GeoMedia WebMap Advantage tier bundles the complete Geospatial Portal, read/write (R/W) data servers for Oracle, Microsoft SQL Server or PostgreSQL with PostGIS, and the ability to create WFS-T (transactional WFS). In addition, it provides 3D vector data display, including underground features and 2D vector data extrusion for rapidly building 3D scenes, as well as first-person perspective view for 3D scene walkthrough.

NOTE: See detailed information for GeoMedia WebMap Publisher Portal features in the [Geospatial Portal 2020 product description](#).

### Key Features

In addition to all features included in GeoMedia WebMap Essentials tier, the Advantage tier offers:

#### Complete Geospatial Portal Bundled

GeoMedia WebMap Advantage includes the full Geospatial Portal product; a configurable and customizable, browser-based web portal used for finding, viewing, querying, and analyzing geospatial data published by Hexagon's Geospatial division products or other standards-based web services. Using modern services-oriented architecture, Geospatial Portal enables the user to take advantage of many data sources at the same time.

- Integrate multiple data sources into a single map view
- Easily navigate and interact with maps



- Connect ERDAS APOLLO data sources
- Connect GeoRSS

### Transactional Web Feature Service (WFS-T)

- OGC Web Feature Service – Transactional (WFS-T) allows editing of vector data and saving changes directly back to the database
- Build and deploy an OGC WFS-T (Transactional) over Microsoft SQL Server, Oracle, or PostgreSQL with PostGIS

### Read/Write Data Servers

- Build applications that edit geospatial data
- Capture spatial data in accordance with a central data model, and write directly to Microsoft Access, SQL Server, Oracle, or PostgreSQL with PostGIS

### GeoMedia WebMap Mobile Application

- Online access and update of enterprise vector data
- Offline editing and on demand synchronization capabilities
- Data access and functions can be configured for individual users

### Mobile Features of GeoMedia WebMap Publisher

- Prepare configurations for GeoMedia WebMap Mobile that address key aspects of the configuration, including user identification, field zone geometry specification, and field work definition. Based on the choices undertaken by the Administrator, GeoMedia WebMap Publisher generates the ready to use configuration for the mobile application.
- Support of both mobile configuration types: online and offline

### Support for Business Workflows

When deployed with Workflow Manager, GeoMedia WebMap can be used to automate typical business workflows that are run regularly in the enterprise environment.

- Construct automatic, highly focused attribute-based processes using Workflow Manager
- Run pre-configured workflows with Workflow Manager using Geospatial Portal thin client application provided with GeoMedia WebMap
- Intuitively use map operations when necessary for adjusting or creating workflow steps

## GeoMedia WebMap Professional

The Professional level tier of GeoMedia WebMap extends the GeoMedia WebMap Advantage tier to include advanced linear analysis functions, including routing (OpenLS routing), linear referencing system (LRS) services, and dynamic segmentation. GeoMedia WebMap Professional is the best solution where networks and network-related information matters.



## Key Features

In addition to all features included in GeoMedia WebMap Advantage, the Professional tier offers:

### Linear Referencing System (LRS)

- LRS precision location web service
- All advanced linear analysis web services can be created and configured in the Administration Console
- Overlay Web Service

### Routing

Determine the best route from one location to another or to multiple locations.

- Supports best multi-location routing
- Finds shortest route
- Supports HERE (NAVTEQ) and TomTom (TeleAtlas) data without building a separate routing network
- Supports step-by-step instructions
- Supports Z-elevation

### Dynamic Segmentation

- Analyze tabular data referenced to linear features on a map
  - Clearly visualize asset inventory
  - Click features to view attribute details
- Web services for both dynamic segmentation and reverse dynamic segmentation allow basic linear referencing

### Proximity Analysis

- Determine the distance between a selected point and other features

### Allocation Areas

- Determine the area surrounding the selected location (facility) that can be traversed in the given time interval, taking into account various factors, for example, speed limits, one-way roads.

### GeoMedia WebMap Mobile Application

- Unlimited number of concurrent GeoMedia WebMap Mobile users



## 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 at [hexagon.com](https://hexagon.com) and follow us [@HexagonAB](#).