

Map Server Display Tool: AEROPGLG010

The GLG Map Server is a high-performance GIS engine developed by Generic Logic. It functions as an integrated display tool and visualization component within the broader GLG Toolkit ecosystem.

Developers use this combination to build mission-critical, real-time Human-Machine Interface (HMI) screens, SCADA diagrams, and moving map displays across desktop, web, and mobile environments.

Core Architecture & Integration

The tool strikes a deliberate architectural balance to optimize performance for real-time tracking:

- The Map Server Component: Acts as the backend data rendering engine. It processes millions of heavy vector points, raster imagery, and digital elevation models (DEM) in seconds to generate static map background images.
- The GLG Toolkit: Manages the frontend interactive application. It layers dynamic, highly detailed objects (such as localized icons, radar animations, or vehicle tracks) directly on top of the rendered background map without triggering full-screen repaints.

Key Display & Mapping Capabilities

- Dual Projection Modes: Supports Rectangular Projections (ideal for standard flat lat/lon grid alignments) and Orthographic Projections (which projects raster data on-the-fly to render maps into a realistic globe view).
- Layer and Zoom Logic: Features multi-layer blending, dynamic transparency, and automatic layer switching thresholds based on current zoom metrics.
- Interactive Dynamic Icons: Automatically manages geographical translations so applications can position icons using standard latitude/longitude coordinates. It natively handles interactive hover tooltips, click selection events, and real-time color changes to flag component statuses.
- Elevation Data Queries: Processes height parameters to build shaded relief layouts and enables real-time cursor coordinate tracking to extract structural elevation values at any given point.

Prototyping and Deployment

Developers can test mapping applications using the GLG Graphics Builder, a point-and-click graphical editor provided within the GLG Toolkit Download Bundle. Inside the editor, users enter "GIS Editing Mode" to lay down annotations, test automated tiling caches, and evaluate zoom scales without needing to set up an active web server first. Once completed, mappings can be written once and deployed across platforms including C/C++, Java, C#/.NET, and native HTML5 JavaScript environments like React, Angular, and Next.js.

Are you trying to configure a specific GIS dataset in the Map Server, or are you setting up the Graphics Builder to build a custom tracking interface? Let me know your exact development environment so I can provide concrete code snippets or configuration steps.

The **GLG Map Server** is a high-performance GIS software component by **Generic Logic** designed to work alongside the GLG Toolkit for building real-time HMI, SCADA, and moving-map displays. It functions as both an embedded GIS engine and a web-based server to deliver map rendering for mission-critical applications.

Core Capabilities

- **Interactive GIS Object:** The Map Server integrates directly into a GLG drawing via a specialized GIS Object. This object handles real-time user interactions like panning, zooming, and layer toggling seamlessly.
- **High-Performance Rendering:** It can process millions of vector points, raster imagery, and Digital Elevation Models (DEM) within seconds.
- **Dynamic Layers & Customization:** It features dynamic attribute thresholding and automatic layer selection based on your zoom level, allowing high efficiency at any scale.
- **Projections:** It handles orthographic projections (globe-like views) and rectangular projections (flat-map views) on the fly.
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The Display & Prototyping Tool: GLG Graphics Builder

The primary tool used to configure and test the Map Server display is the GLG Graphics Builder. It serves as a graphical point-and-click editor that streamlines setup without requiring immediate server deployment:

- **GIS Editing Mode:** Developers can drop standard or custom dynamic icons onto the map layout and link them directly to geographic Latitude/Longitude coordinates.
- **Real-Time Simulation:** It allows you to simulate changes in icon positions, test tooltip displays, alter icon colors to show system status, and verify map behavior.
- **No-Code Prototyping:** The map parameters, datasets, and layers can be entirely adjusted, tested, and debugged visually inside the editor before any code is generated.

Deployment & Integration

Drawings configured in the Graphics Builder are fully cross-platform. They can be compiled into applications using standard GLG APIs or integrated across several development ecosystems:

- **Desktop Environments:** Supported via C/C++, C#, and Java for Windows, Linux, and Unix.
- **Web & Mobile Frameworks:** Integrated using the GLG JavaScript / HTML5 Library for React, Angular, Next.js, or alternative server-side wrappers like ASP.NET and JSP.

If you are currently setting up a map workspace, let me know **which programming language or framework** you plan to build your project in, or the **type of map data format** you are using, so I can provide specific integration examples!

OS & HARDWARE SUPPORT	INDUSTRY APPLICATION

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