TerraExplorer® Family

Product Capabilities and Comparison

Version 8.0

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TERRAEXPLORER FOR DESKTOP

TerraExplorer for Desktop is a cutting-edge 3D GIS viewer and creator that provides powerful tools and a high resolution 3D environment in which to view, query, analyze and present geospatial data. With TerraExplorer's robust and extensive capabilities and seamless interoperability, users can overlay the terrain with unlimited data layers, 3D models, virtual objects and more to create stunningly realistic visualizations.

All TerraExplorer for Desktop products are based on TerraExplorer Pro, with each offering a different subset of TerraExplorer commands.

- **Viewer** – Users can navigate through and perform advanced terrain analysis of high resolution 3D world environments created by fusing aerial and satellite photography, terrain elevation data and other 2D and 3D information layers. TerraExplorer Viewer also provides basic editing capabilities, including loading of online 2D and 3D layers as well as selected offline formats.
- **Plus** – Adds loading of all 2D and 3D offline formats, feature layer editing and querying, advanced objects and drawing tools, a set of tools for professional usage, and the advanced Pro API interfaces.
- **Pro** – Adds publishing capabilities as well as uploading of data to SkylineGlobe cloud, and advanced data conversion tools.

TERRAEXPLORER FUSION

TerraExplorer Fusion is a powerful 3D geospatial viewer that enables you to view and analyze high-resolution, stunningly realistic 3D content right in your web browser with no download or installation required. TerraExplorer Fusion enables viewing of most online layers and objects published to SkylineGlobe Server, performing powerful measurements and analysis operations, and dynamically exploring the 3D World via presentations which merge a custom flight path with distinct displays of the project. Built on HTML5/ WebGL standards, TerraExplorer Fusion ensures compatibility with multiple platforms and browsers.

TerraExplorer Fusion is based on TerraExplorer Desktop source code converted to WebAssembly. This conversion technology provides exceptional compatibility, enabling most of the original TerraExplorer Desktop code to run as-is in web browsers with numerous advantages, including support for nearly all the layers and objects supported by the Desktop version, consistent API for code sharing, and powerful performance.

TERRAEXPLORER FOR MOBILE

TerraExplorer for Mobile is a customizable 3D GIS viewer for Android and Apple iOS devices that enables you to view high-resolution SkylineGlobe 3D content. The TerraExplorer for Mobile app can display most of your spatial databases including 3D city layers and feature layers, and it provides powerful tools to query, analyze and present your data on the go. TerraExplorer for Mobile seamlessly accesses online data from Skyline’s SkylineGlobe server and other OGC-compliant servers, and quickly loads online TerraExplorer projects.

COMPARISON TABLE

Legend

✓ – Available in the User Interface and the API

Online – Available only from SkylineGlobe Server

Limited – Only some of the capabilities are available

Capability	Fusion (Web)	Mobile	Desktop Viewer	Desktop Plus	Desktop Pro
View and Navigate					
View objects, layers, and features	✓	✓	✓	✓	✓
Free flight	✓	✓	✓	✓	✓
Fly to locations and objects	✓	✓	✓	✓	✓
Play presentations with a series of different views of the 3D World	✓	✓	✓	✓	✓
Underground mode	✓		✓	✓	✓
Indoor navigation			✓	✓	✓
Multiple coordinate systems			✓	✓	✓
Navigation tools (GPS tracking and target)				✓	✓
VR - Oculus Rift and Quest				✓	✓
Stereo viewing				✓	✓
Multi-user collaborative sessions				✓	✓
Change project settings				✓	✓
Create presentations			✓	✓	✓
Create movie from presentation				✓	✓
Inspect photos used to generate PhotoMesh model				✓	✓
Analysis					
Distance and area measurement	✓	✓	✓	✓	✓
Volume analysis	✓	✓	✓	✓	✓
Contour and slope maps	✓	✓	✓	✓	✓
Shadow effect	✓	✓	✓	✓	✓
Viewshed and line of sight	✓	✓	✓	✓	✓
Terrain profile	✓	✓	✓	✓	✓
Viewshed and shadow queries			✓	✓	✓
Cross section and clip box	Limited		✓	✓	✓

Comparison tools	Limited		✓	✓	✓
Threat dome				✓	✓
Flood analysis				✓	✓
Buffer penetration query				✓	✓
Elevation difference				✓	✓
Data Layers					
View imagery, elevation, 3D mesh, point cloud and feature layers	✓	✓	✓	✓	✓
Load imagery and elevation layers			Online	✓	✓
Load 3D Mesh layers (3DML)			✓	✓	✓
Load 3D Tiles			✓	✓	✓
Load feature layers			Limited	✓	✓
Load point cloud layers			✓	✓	✓
Load BIM (3DML)			✓	✓	✓
Feature layer: Spatial and attribute queries	✓			✓	✓
Feature layer: Edit attributes				✓	✓
Feature layer: Edit geometry				✓	✓
Feature layer: Create new layers				✓	✓
Classify 3D Mesh layer				✓	✓
Scale and Rotate 3D Mesh Layer				✓	✓
Objects and Effects					
View 2D and 3D primitives and objects	✓	✓	✓	✓	✓
View dynamic objects	✓	✓	✓	✓	✓
View water and particle effects	✓	✓	✓	✓	✓
Add weather and environment effects			✓	✓	✓
Add 2D and 3D primitives and objects		✓	Limited	✓	✓
Add and edit dynamic objects				✓	✓
Add and edit video objects				✓	✓
Flatten and cut terrain and mesh layers				✓	✓
Add and edit particle objects				✓	✓
Add and edit water effects				✓	✓
Advanced drawing tools (Duplicate Objects, Create Pipe Lines, Create Power Lines and more)				✓	✓
Mark mesh imperfections for implementation in PhotoMesh				✓	✓

Conversion Tools			
Create raster layer LOD pyramid		✓	✓
Convert and import BIM (IFC/FBX)		✓	✓
Convert and import LAS/LAZ/E57		✓	✓
Convert and import 3D Tiles and OSGB			✓
Convert model to XPL			✓
Export 3DML to 3D Tiles and SLPK			✓
Export 3DML to OBJ			✓
Publishing Tools			
Save project to Fly, KML and KMZ formats	✓	✓	✓
Publish online kit (desktop, mobile, web)			✓
Publish offline kit (desktop, mobile)			✓
Extract layers in area			✓
Upload data layers to SkylineGlobe cloud			✓

(*) TerraExplorer for Desktop commands are accessible programmatically either from the standard API or from the ICommand interface. ICommand is an API call that simulates a user click on the TerraExplorer ribbon or menus, activating a TerraExplorer command.

Most operations can be performed by both of the methods. To create a polygon, for example, you can use the Creator.CreatePolygon(...) API to create a polygon and set all the parameters programmatically. Alternatively, you can call ICommand.Execute (1012,5) (the equivalent of clicking Create Polygon on the ribbon). This call opens the Properties Sheet and lets the user add the polygon and set its properties manually, like in TerraExplorer Pro.

A few commands (e.g., Publish Project) are only available via the GUI or the ICommand interface, and not programmatically from the standard API.

Note: When an online project (from a SkylineGlobe Server) is opened in TerraExplorer Viewer, the API is automatically upgraded to Plus level. Plus level API allows you to utilize all TerraExplorer Plus functionalities using API calls, including the ICommand interface.

SOFTWARE AND HARDWARE REQUIREMENTS

TerraExplorer for Desktop

Operating System: Windows® /10 /11 – 64 bit.

System Memory: 2 GB of RAM (4 GB or more recommended). For 4K render mode - 4 GB of RAM (8 GB or more recommended).

Graphics Processing Unit (GPU): 1 GB of memory (2 GB or more recommended). Dedicated GPU is recommended. For 4K render mode - 2 GB of memory (4 GB or more recommended).

Processor: 4 cores (8 cores recommended).

Browser: Microsoft Internet Explorer 11 or higher.

Additional Software: .Net Framework 4.6.1 required.

TerraExplorer Fusion

Operating System: Windows / Linux / MacOS.

System Memory: 2GB of RAM (4 GB or more recommended).

Processor: 4 cores (8 cores recommended).

Browser: Chrome, Edge. FireFox and Safai supported with some limitations.

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