GMAP FOR X-PLANE 2.0 (FREEWARE)

INTRODUCTION

FSWidgets GMap for X-Plane is a **FREEWARE** moving map that displays your current position in X-Plane on **Google Maps**, the wonderful free online mapping solution developed by the famous search engine (Note**: Google Maps** should not be confused with **Google Earth** – the 3D virtual globe application).

According to the Google Terms of Use, Google Maps can be utilized for services that are not restricted in any way or for which a fee is not charged. This would be an appropriate moment to thank Google and its hard-working developers for making this marvelous resource available to the general public. - http://maps.google.com

For the curious among you who may be wondering, this application is basically an Internet Explorer web browser housed inside a simulated avionics panel which displays the map exactly the same way your normal browser does. Combining the wonders of the X-Plane API, Google Maps API and JavaScript functions it shows the current X-Plane aircraft position and overlays X-Plane FMS plans on the map.

FSWIDGETS GMAP – ACKNOWLEGEMENT/AGREEMENT/DISCLAIMER

Use of this FSWidgets Application means you understand and agree to the following:

All content displayed via the Google Maps™ system is copyright of Google Inc. and their respective map data providers. The application itself is copyright of FSWidgets and must not be modified, hacked or reverse-engineered in any way.

The use of Google Maps does not imply that Google endorses and/or is affiliated with FSWidgets in any way. The use of Google Maps by this FSWidgets application has been implemented using the Google Maps API only and follows the Google Maps Terms of Use, the main element being that the Google Map services not be restricted in any way, and that no fee be charged for access to those services.

FSWidgets cannot warrant or guarantee the continued availability of any third-party mapping services, including Google Maps, in connection with this application and is not responsible for the accuracy, or otherwise, of the data presented. This application is **not to be used for real aeronautical navigation** – it must only be used for Flight Simulation purposes.

The display of Google Maps relies in part on a small amount of data (HTML, JavaScript and image files) being accessed and loaded from the FSWidgets server. **This service is provided for free** and FSWidgets will do everything it reasonably can to ensure the reliability and continued availability of this data. However, 100% server uptime cannot be guaranteed, especially if there are times of extraordinarily heavy demand.

FSWidgets reserves the right to disable access to these files if it is deemed necessary to prevent the server from becoming unstable, or if the simultaneous usage by an extreme number of users results in an insurmountable financial burden to FSWidgets.

THIS APPLICATION IS RELEASED BY FSWIDGETS AS COPYRIGHTED FREEWARE AND FSWIDGETS RETAINS ALL RIGHTS WITH REGARDS TO DISTRIBUTION OF THE APPLICATION

DO NOT UPLOAD TO ANY WEBSITE OR FS FILE LIBRARY – FSWIDGETS WILL BE UPDATING IT REGULARY AND DUE TO THE NATURE OF THIS PRODUCT ONLY ONE OFFICIAL EDITION MUST BE IN CIRCULATION AT ANY TIME

PLEASE CHECK REGULARLY FOR UPDATES TO THIS PROGRAM IF YOU INTEND USING IT, ONLY THE VERY LATEST EDITION WILL BE SUPPORTED. UPGRADES, IMPROVEMENTS AND OTHER CHANGES TO MAPPING FILES ON THE FSWIDGETS SERVER COULD MEAN OLDER EDITIONS MAY NOT FUNCTION ANYMORE, A MESSAGE WITHIN THE GMAP UNIT WILL INFORM YOU

DO NOT HOTLINK TO THE DOWNLOAD FILE ON THE FSWIDGETS WEBSITE – THE FILENAME WILL NOT ALWAYS REMAIN CONSTANT AND YOUR LINK WILL BE INVALID – PLEASE ONLY LINK TO THE FSWIDGETS FRONT PAGE (FSWIDGETS.COM)

GMAP BASIC FEATURES

- Communicates with X-Plane via included plug-in.
- Loads and displays X-Plane FMS plans on Google Maps.
- Displays Aeronautical charts (see separate Chart Supplement PDF files).
- "Stay on Top" (of the X-Plane window) option for in-cockpit use.
- Can be dragged to and displayed on a second monitor.
- Stand-alone EXE file; requires simple manual installation only.
- Little or no impact on X-Plane frame rates; runs as separate process.
- Can be used as a module under **EFBXP** (Electronic Flight Bag for X-Plane).

See page 4 for details on how to add GMap functionality to **EFBXP**.

OPERATIONAL REQUIREMENTS/LIMITATIONS

- Windows application for XP/Vista only, not MAC OS X compatible.
- Internet Explorer 7 or higher is required (GMap uses the IE7 engine).
- Requires a live internet connection (broadband recommended).
- JavaScript must not be disabled or blocked on your system.
- Firewalls/Anti-Virus must give GMap EXE permission to connect and serve.
- Using/clicking GMap de-focuses X-Plane; after use click back on X-Plane. #
- X-Plane in Windowed Mode only, full screen mode not supported. ^
- Not resizable (size is 600x755px); min required screen res is 1024x768px.

The GMap is an out-of-process, stand-alone application and because of this clicking the GMap window will defocus the X-Plane window and will also pause X-Plane sound. Additional capabilities, including…

1. Ability to float on top of X-Plane, no pause to sound or the simulation.
2. Saving user-selected GMap type and zoom level options.
3. Custom flight plan folder location.
4. Networking support, ability to run on a separate machine.

…are available if running the **GMap** as a ***module*** under its big brother, the **EFBXP** (Electronic Flight Bag for X-Plane). This capability is now available in **EFBXP Version 1.2** or later.

^ Please see page 10 for a suggested workaround regarding screen resolution with some versions of X-Plane (may not apply to later editions).

INSTALLATION

FSWidgets GMap for X-Plane is a **stand-alone** EXE (Windows application) file and is installed manually as follows:

1. Extract the **FSWidgetsGMap.exe** file from the ZIP archive and copy it to the **[X-Plane]\EFBXP** folder on your hard drive. If you do not have EFBXP installed then just create the folder manually with the Windows Explorer.

   The **FSWidgetsGMap.exe** file **must** be run from the **EFBXP** folder under the main X-Plane installation folder, even if you do not have EFBXP installed.

2. Drag and drop the entire **FSWidgetsVARS** folder (including contents) into the [**X-Plane]\Resources\plugins** folder.

   If you are updating from a previous edition of GMap, you must **delete** the old **fswvars.xpl** file from the X-Plane **plugins** folder

HOW TO USE GMAP AS A MODULE UNDER EFBXP

The **EFBXP** (Electronic Flight Bag for X-Plane) is **not required** to use the GMap, but if you are a registered (or non-registered demo) user and wish include this moving map page in the EFBXP with additional features and benefits you can do it as follows:

1. Install the latest release of **EFBXP** (Version 1.2 or later).
2. Drop the **FSWidgetsGMap.exe** file into same folder as **EFBXP.EXE** file. #
3. Start **EFBXP** – the **GMap** option will be available from the **Map** page.

Note: Must be the latest X-Plane edition of GMap, ***not*** the FSX/FS2004 editions.

GMAP OVERVIEW

When you first start up GMap you will be presented with the opening screen which closely resembles the EFBXP Map page.

There are two large onscreen buttons:

1. **VECTOR** – Vector Map is only available when running GMap as a module under EFBXP.
2. **GMAP** – Displays GMap page.

There are also two small lighted buttons on the lower surround or bezel:

1. Bottom Left – Shutdown GMap.
2. Bottom Right – Toggle **Stay on Top** Mode (on by default).

The GMap window can be moved around the screen by clicking anywhere on the surrounding faceplate and dragging it to a new location, including a second monitor (extended Desktop).

TIP: GMap also has a Show/Hide Hotkey: **CTRL+SHIFT+Z**

CONNECTING GMAP TO X-PLANE

To connect GMap to X-Plane click the GMAP button. This will instruct GMap to look for X-Plane; there may be a short delay while it establishes a connection.

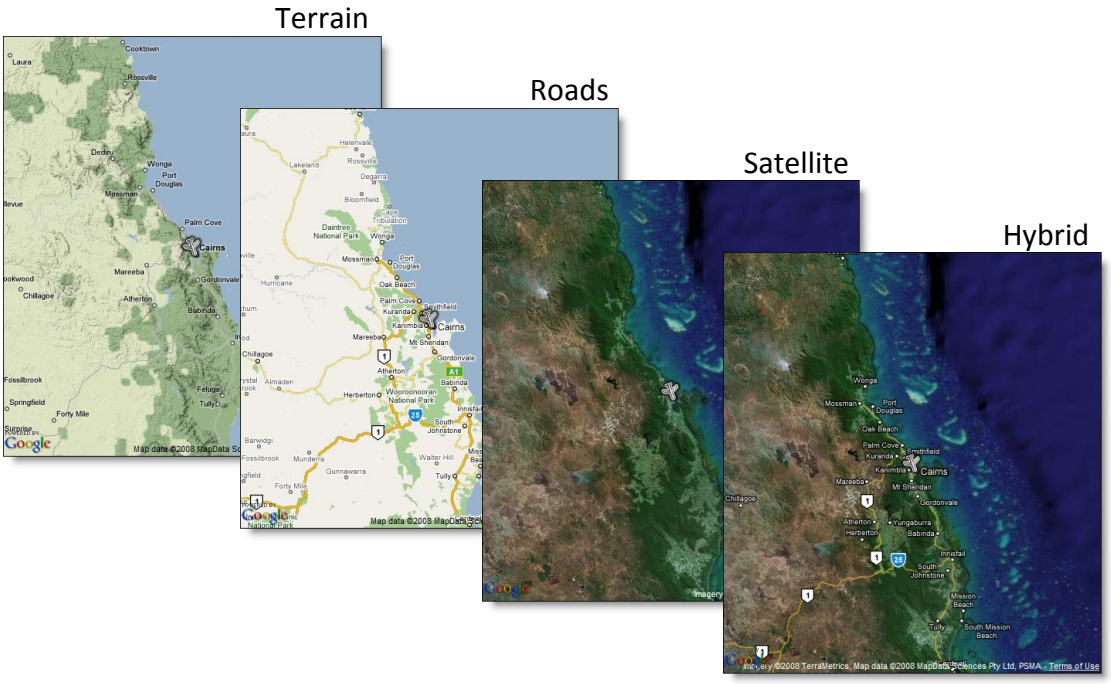
If X-Plane is running and found GMap will automatically load and display your current position in X-Plane (default is Lat 0, Lon 0 – just off Africa).

GMap will also perform a check for the required XPL files in the **[X-Plane]\Resources\plugins** folder. If not found it will advise you.

If X-Plane is not running, or cannot be found you will be informed and you will need to start X-Plane and attempt another connection.

GOOGLE MAP TYPES

Google Maps has a new map class called **Terrain (or Physical)** which is ideal for simulated aviation because it displays a terrain relief as well as other topographical information. Due to its usefulness this is the default startup map display type. There are four map types to choose from - **Terrain**, **Roads**, **Satellite** and **Hybrid**:



EXTENDING GMAP

GMap 2.0 or later now supports **Cloud Based** Aero Chart and Nav Data products from FSWidgets.

Cloud Based means there is nothing to download, you simply purchase the product and after registering, the button to display the chart automatically appears within your copy of GMap next time you launch it.

The Chart and Nav Data is seamless and is loaded on-the-fly as you need it.

Please see the **GMap Cloud Based Chart Supplement PDF** document included in the ZIP file or visit FSWidgets for a fuller description of this feature

GMAP ACCURACY

The accuracy of the Google Maps data is remarkable and in most cases will more than suffice for Flight Simulation use.

In many places the satellite data is so accurate it can be used for taxi guidance at busy and complex airports as shown on the right. This alignment will of course depend on how accurate the X-Plane data is, but in most cases it should be seamless.

However, please be aware this may not always be the case in all places. In many areas satellite data is very low resolution and cannot be used as depicted on the image on the right, but many major cities are covered by high-resolution satellite data.

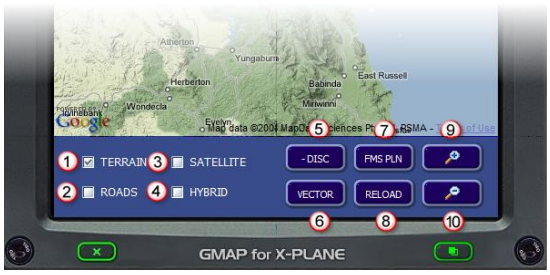
Please also keep in mind some of the map data types (*e.g.* Roads) were not specifically designed for aeronautical use and some features may not line up perfectly with what you see in X-Plane. Even where the data is accurate there may be some divergence from the X-Plane data which is a few years old now and can pre-date the Google Maps data.

Given the above, the flight plan waypoints displayed on the map should also be rather accurate. The aircraft symbol depicting the current direction is not designed to display the exact heading down to individual degrees, accuracy is +/- 5 degrees.

GMAP CONTROLS

Along the bottom of the screen is a series of checkboxes and buttons that control how the GMap is displayed:

Checkbox Options



1. **TERRAIN** – Displays terrain map.
2. **ROADS** – Display road map.
3. **SATELLITE** – Display the Satellite tiles on the map.
4. **HYBRID** – A combination of 2 & 3.

Button Controls

5. **–DISC/+CONN** – Button to connect/disconnect the moving map. Toggles the map connection state, connected by default. The disconnected state is for loading X-Plane FMS plans in locations other than where the aircraft is currently positioned, and for manually panning the map around.
6. **VECTOR** – Display the Vector map (reserved for future EFBXP plug-in).
7. **FMS PLN** – Display the **Load FMS Flight Plan** dialog. Allows you to load any FMS flight plan you currently have in your **[X-Plane]\Output\FMS plans** folder (this is where X-Plane saves them by default).
8. **CHART** – Used to load TAC/Sectional charts, a function that overlays them directly onto the Map display. For more details on the chart loading system please see the separate **Chart Supplement PDF** included in the ZIP. Note this is ***not*** the superior **Cloud Based** chart system, but an earlier chart overlay system that allows folk to create their own charts.
9. **ZOOM IN** – Increase the zoom level. #
10. **ZOOM OUT** – Decrease the zoom level. #

Note: The zoom levels used internally by the FSWidgets GMap are **separate** from the Google server-side zoom levels. This means that if you choose to zoom in by double-clicking on the map (which you can do if you wish), after this clicking the GMap zoom buttons will resume the prior magnification levels set by the buttons, not the Google zoom levels you had set while double-clicking on the map.

LOADING A FLIGHT PLAN IN GMAP

FSWidgets GMap supports the loading of X-Plane FMS Plan files (*.FMS).

To load a flight plan:

1. Click the **FMS PLN** button.
2. Select the plan from the list.
3. Click the **LOAD** button.

If you have GMap **CONNECTED** (press **+CONN** button), loading a flight plan will not interrupt the normal movement of the map display, but if you are flying in the vicinity of the flight plan, or on the ground at the departure point you will see the flight plan overlaid on the map.

If you have GMap **DISCONNECTED** (press **-DISC** button), loading a flight plan will make the map "Zoom to Plan". It will automatically pan and zoom to display the full extents of the flight plan so you can check out the entire route.

In the **DISCONNECTED** state you can also click and drag the map display around and view surrounding terrain features:

Clicking on any of the flight plan waypoints will display a balloon pop-up window with some basic information about that waypoint, as gleaned from the flight plan (IDENT, LAT & LON).

You may disconnect/reconnect the GMap at any time during flight or on the ground.

GMAP TROUBLE-SHOOTING TIPS – MAP DISPLAY HANGING

FSWidgets GMap utilizes the **Internet Explorer 7** plug-in to display Google Maps within the unit and so is subject to the same issues we get with a full web browser.

The GMap display has a small "Status Bar" along the top of the inner screen that pops up while data is being accessed and downloaded from Google Maps:

If you see this pop-up for an extended time (say 30 sec or more) with no updating of the map display, and assuming you have broadband, this may indicate a need to perform a full refresh (click the map and press **F5** on the keyboard). Such occurrences may be rare but here are some things you may want to check:

- Internet connection drop-out
- Incorrect firewall settings or permissions
- JavaScript execution blocked on your IE7 browser settings
- Network or router requires rebooting

GMAP TROUBLE-SHOOTING TIPS – FULLSCREEN MODE HIDES WINDOW

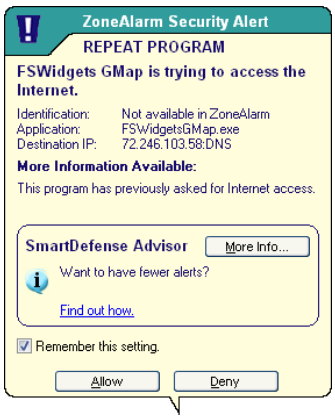
From our own observations it appears that if the X-Plane 9 screen resolution in the **Settings > Rendering Options >** dialog is set to exactly the **same resolution** as your monitor (*e.g.* 1680x1050) the result is X-Plane automatically puts the simulation into fullscreen mode, even if the related **Set Color-depth and Screen Resolution on X-Plane Startup** option is not ticked. This may result in X-Plane taking control of the desktop, including the extended desktop if any additional monitors are connected, blacking them out.

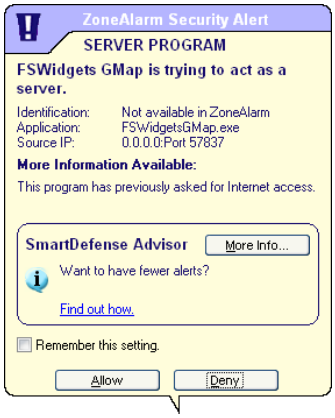
Fullscreen mode will not normally allow the GMap window to show on top of the X-Plane window.

TIP: One way around this is to set your X-Plane resolution to a height of **one pixel less** than the actual screen height (*e.g.* 1680x***1049*** – instead of 1680x1050). This will make X-Plane fill the entire main monitor screen (*e.g.* as shown in the image above) but at the same time allowing GMap to float on top. Any additional monitors should also be available for GMap or other applications.

GMAP TROUBLE-SHOOTING TIPS - FIREWALLS

FSWidgets GMap connects to online resources, so if you use a software-based firewall you can expect to receive some pop-ups asking for connection permissions.





While initially talking to X-Plane the **FSWidgetsGMap.exe** file may generate a firewall popup message about it trying to connect to the internet or locally on the IP address of 127.0.0.1 (localhost).

Assuming a successful connection to X-Plane, if you use a software-based firewall like ZoneAlarm (or similar) you may also see popup messages like those on the right as the built-in web browser attempts to load Google Maps.

If you are the curious type (and you/we know you are) you may find that the Destination IP shown on the top right popup points to **deploy.akamaitechnologies.com** when you try and resolve it. Please do not be alarmed or email us to bitterly complain! Akamai Technologies is a third-party server system (or mirror) used by many companies to deliver online content (*e.g.* Google Maps).

However, in order to communicate correctly with Google Maps, update the position or display other information the **FSWidgetsGMap.exe** needs to be allowed to do its thing. If the map does not update or freezes in any way this Firewall issue will be the first thing you may need to look at. You may need to explicitly add the EXE to the allowed list of programs.

GMAP TROUBLE-SHOOTING TIPS – IE7 RUNTIME/DEBUG ERROR

The FSWidgets GMap utilizes the Internet Explorer 7 plug-in and some users may see a Runtime Error or Debug Message similar to what is show on the right. This does not affect GMap in any way, but here is what MS Support says you can do to prevent it:

http://support.microsoft.com/kb/822521

You may need to restart the IE7 web browser to enable this change.

If you receive any other “debug” messages it may be because you have MS Visual Studio, in that case we have no other solution at this time other than to ask you try and turn that particular setting off if you can.

FSWIDGETS GMAP – VERSION HISTORY

FSWidgets GMap has a built-in bug reporting system. If you see that window at any time, sending in the report will assist us greatly. If you have any other issues, or would like to request other features feel free to email us: support@fswidgets.com

FSWidgets Website – http://fswidgets.com
FSWidgets Support Forum – http://fswidgets.com/forum

Version 2.0 (Updated Plugins Only - No Version Increase) – March 7, 2013

- **Add New 32/64 bit Support Plugins** – The recent release of **X-Plane 10.20** means the old 32 plugin will no longer load, unless you use the 32 bit edition of **X-Plane 10.20** (the filename for the 32 bit edition is **X-Plane-32.exe**). This release includes a new set of plugins that supports X-Plane 9 or later, in 32 and 64 bit. To install the new plugins, simply **delete** the old **fswvars.xpl** file from the X-Plane plugins folder, and drag and drop the **FSWidgetsVARS** folder (with contents) to the X-Plane **plugins** folder (see revised installation step on page 4).

Version 2.0 (Update Only - No Version Increase) – November 25, 2011

- **Free Metar & TAF Data (All Editions of GMap)** – The **server side mapping engine** has been updated to include free **Metar** and **TAF** weather feeds for most stations worldwide (see popup menu in map). The weather data is displayed as an icon layer which can be toggled on and off as desired, clicking on the icons brings up the associated data.

- **Airport ICAO Search Function (All Editions of GMap)** – The **mapping engine** has also been updated to include an **airport search function** for the World Nav Data. With the map in the "disconnected mode", typing in the **ICAO** indent of an airfield and pressing enter will move the map to the airport and display the associated airport information info window. The free demo of the World Nav Data limits the search to the **KSFO area**. Registered users of the World Nav Data product can search the **entire airport database**.

Version 2.0 – March 25, 2011

- **GMap Engine** – **GMap 1.x** was based on **Google Maps v2 API** which Google has deprecated and will no longer support from 2013 so a new system was written using the **v3 API**.

- **Cloud Based Aero Chart Support** – **GMap 2.0** now supports **Cloud Based** Aero Chart products from FSWidgets. Please see the **GMap Cloud Based Chart Supplement PDF** included in the ZIP for a full description.

Version 1.0 (Release 2) – September 12, 2009

GMap can now be used as a module under EFBXP (Electronic Flight Bag for X-Plane).

Version 1.0 – May 12, 2009

Initial release