

# GISsurfer

## Link Parameters

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This PDF file is online at  
<https://mappingsupport.com/p2/help/GISsurfer-link-parameters.pdf>

GISsurfer (<https://gissurfer.com>) is a general purpose web map with broad support for displaying data hosted on various kinds of geographic information system (GIS) servers. For a list of **video and PDF tutorials** see <https://mappingsupport.com/p2/gissurfer-help.html>.

Below are examples of GISsurfer map links followed by an **alphabetical list** of the parameters that you can include in a GISsurfer map link. These parameters determine how the map looks when it opens. As additional features are added to GISsurfer, this list will be updated with additional link parameters.

**Main GISsurfer version 3.0 syntax change:** GISsurfer map links can now include a **&data** parameter. The parameters &inline, &overlay, &txtfile and &textfile have been deprecated and replaced by the &data parameter. The deprecated parameters should still work but new GISsurfer map links should use the &data parameter instead.

**Tip:** There should not be any spaces in a map link. Look at any basemap and/or overlay parameter. If there are spaces in any of those names, then replace the space with an underline character.

**Special symbols:** Some GISsurfer map links include special symbols. There are four types.

1. ? comes at the end of the basic map link and before any parameters.
2. & indicates that the following word is a parameter that controls how the map looks or works when it opens. Parameters are always followed by an equal sign and a value.
3. || only appears as part of the &data parameter. This symbol indicates the start of a new line.
4. ^ only appears as part of the &data parameter. This symbol separates pieces of information that are on the same line.

**Reminder:** GISsurfer is for **non-commercial use only**. If you have not done so already, please take a moment to read the [GISsurfer terms of service and privacy policy](#).

## Example GISsurfer map links

Open the map with geolocation turned on. The default basemap (USA basemap) will be displayed.

<https://mappingsupport.com/p2/gissurfer.php?mylocation=on>

Open the map with a specified center and zoom level. For the basemap show scanned USNG 1:24,000 topographic maps.

[https://mappingsupport.com/p2/gissurfer.php?center=46.785897,-121.740875&zoom=14&basemap=USA\\_scanned\\_topo](https://mappingsupport.com/p2/gissurfer.php?center=46.785897,-121.740875&zoom=14&basemap=USA_scanned_topo)

Open the map with a specified center and zoom level. For the basemap show an aerial. Turn on the build-in overlay that shows road names. Show a red paddle at a specified coordinate.

[https://mappingsupport.com/p2/gissurfer.php?center=47.861837,-121.814947&zoom=15&basemap=World\\_imagery&overlay=World\\_transportation&data=47.862106,-121.810772](https://mappingsupport.com/p2/gissurfer.php?center=47.861837,-121.814947&zoom=15&basemap=World_imagery&overlay=World_transportation&data=47.862106,-121.810772)

Open the map with U.S. National Grid (USNG) turn on.

[https://mappingsupport.com/p2/gissurfer.php?center=17R NM 2430 5810&zoom=11&basemap=USA\\_basemap](https://mappingsupport.com/p2/gissurfer.php?center=17R NM 2430 5810&zoom=11&basemap=USA_basemap)

Open the map and display a GIS overlay showing weather stations. Zoom in, click a symbol and follow the link for data collected by that station.

[https://mappingsupport.com/p2/gissurfer.php?center=42.899567,-79.892578&zoom=6&basemap=ESRI\\_navigation&overlay=Weather\\_station&data=overlay^name=Weather\\_station^url=https://maps1.arcgisonline.com/arcgis/rest/services/NWS\\_Weather\\_Stations/MapServer^layers=2-4](https://mappingsupport.com/p2/gissurfer.php?center=42.899567,-79.892578&zoom=6&basemap=ESRI_navigation&overlay=Weather_station&data=overlay^name=Weather_station^url=https://maps1.arcgisonline.com/arcgis/rest/services/NWS_Weather_Stations/MapServer^layers=2-4)

## Alphabetical list of parameters that can be included in a GISsurfer map link

### basemap

Default: &basemap=USA\_basemap

This basemap will be displayed when the map opens. The basemap button (next to the “Menu” button) always displays the name of the current basemap.

**Tip:** If you turn on an aerial basemap then you might also want to display roads by turning on the overlay “World transportation” or “ESRI roads and labels”.

**Tip:** If you are having trouble seeing data on the map then try changing the basemap to “All white basemap”

### center

Default: &center=37.000000,-100.000000

Specifies the center of the map when it opens

Allowable types of coordinates are:

latitude,longitude (decimal degrees)

&center=37.744934,-119.591377

UTM &center=11S\_271679\_4180677

MGRS &center=11SKB71678067

USNG &center=11S\_KB\_7167\_8067

GISsurfer will automatically recognize the type of coordinate used for the “center” parameter. **Tip:** That same type of coordinate will then be used as the default way to display coordinate data.

USNG example:

[https://mappingsupport.com/p2/gissurfer.php?center=11S\\_KB\\_7200\\_8070&zoom=15&basemap=ESRI\\_scanned\\_topo\\_USA](https://mappingsupport.com/p2/gissurfer.php?center=11S_KB_7200_8070&zoom=15&basemap=ESRI_scanned_topo_USA)

**Tip:** Sometimes GISsurfer can **automatically center and zoom the map such that all of the data is on the screen**. This works for GISsurfer links that display GPX files, georeferenced jpg files and delimited data. Try making a GISsurfer link that does not include a center or zoom parameter and see if the map opens the way you prefer.

The &format parameter below (see below) can override the coordinate style determined from the &center parameter.

#### **crosshair**

Default: &crosshair=on  
Allowed values: on, off

This setting controls whether a crosshair is displayed at the center of the map.

#### **data**

This parameter does not have a default value.

The &data parameter **must be the last parameter** in the GISsurfer map link. References to **“delimited”** syntax refer to the &data parameter.

This parameter is used to specify:

- Map title
- GIS basemaps (in addition to the built-in basemaps)
- GIS overlays (in addition to the built-in overlays)
- Georeferenced JPG files
- Markers
- Line color and width
- GPX files
- Text files that specify any of the above

The &data parameter is what gives GISsurfer the ability to display the information that you want to see. For details on how to use the &data parameter to produce useful GISsurfer map links, please see this PDF file:

<https://mappingsupport.com/p2/help/GISsurfer-data-parameter.pdf>

The &data parameter replaces the &inline, &overlay, &txtfile and &textfile parameters. Existing GISsurfer links that use those parameters will continue to work but new GISsurfer links should use the &data parameter instead.

## **format**

Default: &format=latlng-d

Allowed values: latlng-d, latlng-dm, latlng-dms, utm, mgrs, usng

This parameter determines how coordinates are displayed on the map for:

Map center

Cursor location

My location (geolocation)

It also determines whether grid lines are displayed on the map.

latlng-d      Latitude longitude, decimal degrees

latlng-dm     Latitude longitude, degrees and decimal minutes

latlng-dms    Latitude longitude, degrees minutes seconds

utm            Universal transverse mercator and gridlines

mgrs           Military grid reference system and gridlines

usng           U.S. national grid and gridlines

For example, the following map uses latitude longitude in decimal degrees for the center parameter but when the map opens the coordinate format is set to latitude longitude expressed as degrees and decimal minutes.

[https://mappingsupport.com/p2/gissurfer.php?center=37.745231,-119.587707&zoom=15&basemap=ESRI\\_scanned\\_topo\\_USA&format=latlng-dm](https://mappingsupport.com/p2/gissurfer.php?center=37.745231,-119.587707&zoom=15&basemap=ESRI_scanned_topo_USA&format=latlng-dm)

## **grid**

Default: &grid=coarse      **parameter added 6/21/2025**

Allowed values: coarse, fine

This parameter only affects the USNG and MGRS grid.

&grid=coarse    1km grid displays at zoom level 15 and 16

&grid=fine       100m grid displays at zoom level 15 and 16

## **iframezoom**

Default: &iframezoom=off

Allowed values: off, on

**You likely will never need to use this parameter.**

If you are looking at a full screen map, then this parameter does nothing. But if you are looking at a map embedded on a web page then the default setting means the mousewheel will not zoom the map. Instead, the mousewheel will scroll the web page. This is a much preferred user experience.

## interface

Default for mobile devices:	&interface=touch
Default for non-mobile devices:	&interface=mouse
Allowable values:	touch, mouse

GISsurfer automatically determines whether you are using a mobile or non-mobile device and then displays the appropriate interface. Likely the only time you might want to use this parameter is if you are using a laptop or desktop with a touch screen. You can tell GISsurfer to display the touch-friendly interface by including &interface=touch in any GISsurfer map link.

## mylocation

Default: &mylocation=off^automatic\_map\_pan=on  
Allowable values:

- &mylocation=off (automatic\_map\_pan will be 'on')
- &mylocation=on (automatic\_map\_pan will be 'on')
- &mylocation=off^automatic\_map\_pan=on (default)
- &mylocation=off^automatic\_map\_pan=off
- &mylocation=on^automatic\_map\_pan=on
- &mylocation=on^automatic\_map\_pan=off

If the map link includes &mylocation=on, then the geolocation feature will be on when the map opens. The user must have location services turned on in their device. **Also iPhone users must give their browser (Safari, Chrome, etc) permission to use the location services.** This is done on the same screen where location services are turned on/off.

The “automatic\_map\_pan” options controls whether or not the map will automatically move so your geolocation symbol is at the center of the map. When you are moving and this feature is enabled, then when your geolocation symbol gets close to the edge of the screen, the map will automatically move so your geolocation symbol is again at the center of the map. If you want to **manually pan the map** you will need to first turn geolocation off (Menu > Mylocation).

When the geolocation feature is ‘on’ the **accuracy value** is always displayed in one corner of the screen. Typically when you are standing still the accuracy value will refine to about 15 feet, sometimes a bit better depending on your device. The accuracy value will use either **feet or meters** depending on what the map ‘scale’ is showing.

If the accuracy value ever seems to be stuck on a high value then try turning mylocation ‘off’ and then back ‘on’.

To display your coordinates using the current coordinate format, tap the geolocation symbol.

If you put your phone in your pocket when geolocation is 'on', then when you take it out later the accuracy value might be quite large. This is because your body prevented the GPS antenna in your phone from having a good view of the sky.

If this geolocation feature does not seem to work then your device might need a **current copy of the almanac data**. Typically this is automatically downloaded from cell towers. The almanac data can also be downloaded from the satellites but due to the slow transmission speed this takes about 20 minutes. Leave the geolocation feature turned on and put your device someplace it has a good view of the sky.

The antenna that receives signals from the GPS satellites is at the top of your phone. If you put your phone in you pocket upsidedown, then that antenna is pointing at the ground. If the geolocation feature seems to be 'frozen' or weird then you can always close GISsurfer and reopen it.

**Caution:** This geolocation feature is intended for smartphones and tablets that include a GPS chip. If you use this feature on a desktop or laptop then the red symbol will appear but most likely it will not correctly show your location. Also, some tablets do not include a GPS chip.

## Scale

Default: &scale=feet

Allowable values: feet, meters

This setting is used for the scale bar that is displayed in one corner of the map. It is also used to display the geolocation accuracy value.

Also, the 'Menu' button includes a feature that lets you toggle back and forth between feet and meters.

## sidebar

Default: n/a

Allowable value: Internet address for any part of the table of contents for a GIS server.

The table of contents for an ArcGIS server consists of a series of web pages. The **sidebar** can point to any of those pages. Using this parameter will cause the GIS surfing sidebar to be displayed when the map opens. Data from that table of contents page will appear in the sidebar.

Here is an example that displays the GIS surfing sidebar with part of the table of contents of a FEMA ArcGIS server. You will need to drill down one more level to get to layers you can display on the map. Click a layer in the sidebar and that data appears on the map.

[https://mappingsupport.com/p2/gissurfer.php?center=38.206126,-102.143675&zoom=5&basemap=USA\\_basemap&sidebar=https://gis.fema.gov/arcgis/rest/services/Partner](https://mappingsupport.com/p2/gissurfer.php?center=38.206126,-102.143675&zoom=5&basemap=USA_basemap&sidebar=https://gis.fema.gov/arcgis/rest/services/Partner)

**Tip:** Include the **center** and **zoom** parameters in the GISsurfer map link so the map opens showing an area where the GIS server has data to display.

**Tip:** For complete details on how to ‘surf’ ArcGIS data with GISsurfer see this PDF file:

<https://mappingsupport.com/p2/help/gissurfer-surfing-tips.pdf>

## welcome

Default: &welcome=off

Allowable values: on, off

When the welcome parameter is set to ‘on’ then when GISsurfer starts a message will be displayed with basic instructions for surfing data on GIS servers.

## zoom

Default: &zoom=4

Allowable values: 2 through 21

This parameter defines the zoom level that will be used when the map opens.

Many (most?) GIS basemaps and GIS overlays are defined on the GIS server to only display data at certain zoom levels. GISsurfer has no way to change that setting.

**Tip:** Sometimes GISsurfer can automatically center and zoom the map such that all of the data is on the screen. This works for GISsurfer links that display GPX files, georeferenced jpgs and delimited data. Try making a GISsurfer link that **does not include a center or zoom parameter** and see if the map opens the way you prefer.

**Tip:** As shown above, the **&data=** parameter can specify GIS data that the map can display. **So where do you find GIS data?** Here is a link to a PDF file I am curating with the internet addresses of 3,000+ government ArcGIS servers in the USA. These servers range from the federal level down to the city level. Each link is tested by my code once per week and any bad links are either fixed or flagged.

[https://mappingsupport.com/p/surf\\_gis/list-federal-state-county-city-GIS-servers.pdf](https://mappingsupport.com/p/surf_gis/list-federal-state-county-city-GIS-servers.pdf)

**Tip:** To make your own custom GISsurfer map link:

1. Make the map look on your screen the way you want it to look when it opens. Keep in mind that the order with which you turn on any overlay layers has a large impact on the overall appearance of your map and also determines which layer is 'on top' and therefore clickable.

2. Click **Menu ==> Link to this map**

The link that is displayed will replicate the map on your screen.