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# File Formats

A number of distinctions for different file types used by **Surfer** are compiled in the tables below. The tables are organized first by the type of content and then alphabetically by the abbreviation for the file format. The tables provide links to detailed information about the file formats. Some file types have more than one content type and this is noted in the tables. Beneath the table are remarks about the file formats that have drawing properties or text blocks.

## Content Types

Files can contain raster (image) information, vector (lines) information, or both. There is no raster to vector conversion in **Surfer**. If you have an image on the screen and try to export it as a vector format, such as a DXF, the resulting file will be blank. If you have an image on the screen and have drawn polylines or polygons and export as a vector format, only the drawing objects are included in the file. In addition to the raster and vector content types, **Surfer** supports [data](#), [grid](#), and other file formats.

## Coordinate Types

Different types of [coordinate systems](#) control how the coordinates are shown on the map. In the tables below, the coordinate systems for the file types are noted as one of these three:

- Real world coordinates are those such as latitude/longitude, UTM, etc.,
- Pixel coordinates,
- Other coordinates such as page coordinates, metafile coordinates, etc.

**Surfer** automatically converts real world coordinate systems to the map's [target coordinate system](#), so maps with different coordinate systems can be easily combined in **Surfer**.

## Raster (image) Files

Unless otherwise noted in the table, use the [File | Import](#) command in the plot window, the [Import](#) dialog (i.e. **Home | New Map | Base**) or the [Open Grid](#) dialog (i.e. **Home | New Map | Contour**) to open the format.

To export most raster files, use the [File | Export](#) command in the plot window.

File Format	File Name	More Than One Content Type	Coordinate Type	Import	Export

<a href="#">AN?</a>	ACR-NEMA Medical Image		Pixel	X	
<a href="#">ASI</a>	Amira Stacked Images	Raster and Vector		X	
<a href="#">BMP</a>	Windows Bitmap		Pixel	X	X
<a href="#">CLP</a>	Windows Clipboard	Raster and Vector	Other	Paste	Copy
<a href="#">DCM</a>	DICOM 3 Medical Image		Pixel	X	
<a href="#">DIC</a>	DICOM3 Medical Image	Raster and Vector	Pixel	X	
<a href="#">ECW</a>	ER Mapper		Real world	X	
<a href="#">EMF</a>	Windows Enhanced Metafile	Raster and Vector	Other	X	X
<a href="#">EPS</a>	Encapsulated Postscript		Pixel		X
<a href="#">GIF</a>	Image		Pixel	X	X
<a href="#">GSI</a>	Golden Software Interchange	Raster and Vector	Real world	X	X
<a href="#">HDF</a>	Hierarchical Data			X	X
<a href="#">IMG</a>	Analyze 7.5 Medical Image			X	X
<a href="#">IMG</a>	ERDAS Imagine Image	Raster and/or Grid	Pixel, Real world	X	
<a href="#">IMG</a>	Idrisi Raster Image			X	
<a href="#">INFO</a>	Leica Confocal Raw Slices			X	
<a href="#">JP2</a>	JPEG2000 Image		Real world	X	X

<a href="#">JPG</a>	JPEG Compressed Bitmap		Pixel, Real world	X	X
<a href="#">PBM</a>	Image		Pixel	X	
<a href="#">PDF</a>	Portable Document File (Raster)		Pixel	X	X
<a href="#">PGM</a>	Image		Pixel	X	
<a href="#">PNG</a>	Portable Network Graphics		Pixel	X	X
<a href="#">PNM</a>	Image		Pixel	X	X
<a href="#">PPM</a>	Image		Pixel	X	
<a href="#">RAS</a>	Sun Raster Image	Raster and Vector	Pixel	X	X
<a href="#">RGB</a>	SGI-RGB Image		Pixel	X	X
<a href="#">RGBA</a>	SGI-RGB Image		Pixel	X	X
<a href="#">RST</a>	Idrisi Raster Image		Pixel	X	
<a href="#">SID</a>	LizardTech MrSID Image		Pixel, Real world	X	
<a href="#">STK</a>	Metamorph			X	
<a href="#">SUN</a>	Sun Raster Image		Pixel	X	X
<a href="#">SVG</a>	Scalable Vector Graphics	Raster and Vector	Real world		X
<a href="#">TGA</a>	Targa (TrueVision)		Pixel	X	X
<a href="#">TIF</a>	Tagged Image		Pixel, Real world	X	X
<a href="#">WME</a>	Windows Metafile	Raster and Vector	Other	X	X

# Vector (lines) Files

Most vector files can be opened or imported using the **Home | New Map | Base** command and the [Import](#) dialog. A blank cell means the file cannot be imported.

Use the [File | Export](#) command in the plot window to export most vector files.

File Format	File Name	More Than One Content Type	Coordinate Type	Import	Export
<a href="#">000</a>	S-57 Electronic Navigation Chart		Real world	X	
<a href="#">ASI</a>	Amira Stacked Images	Vector and Raster		X	
<a href="#">BNA</a>	Atlas Boundary	Vector, Data	Real world	X	X
<a href="#">CLP</a>	Windows Clipboard	Vector and Raster	Other	<a href="#">Paste</a>	<a href="#">Copy</a>
<a href="#">DCM</a>	DICOM 3 Medical Image		Pixel		
<a href="#">DDF</a>	SDTS Topological Vector Profile		Real world	X	
<a href="#">DGN</a>	Microstation Design v7		Other	X	
<a href="#">DIC</a>	DICOM3 Medical Image	Vector and Raster	Pixel	X	
<a href="#">DLG</a>	USGS Digital Line Graph		Real world	X	
<a href="#">DXF</a>	AutoCAD DXF		Real world, Other	X	X
<a href="#">EQO</a>	Esri ArcInfo Export Format*see note at bottom of page		Real world	X	
<a href="#">EMF</a>	Windows Enhanced Metafile	Vector and Raster	Other	X	X

<a href="#">GDB</a>	Esri File Geodatabase		Real world	X	
<a href="#">GEOJSON</a>	GeoJSON Data Interchange		Real world	X	
<a href="#">GML</a>	Geography Markup Language		Real world	X	
<a href="#">GPX</a>	GPS Exchange File		Real world	X	X
<a href="#">GSB</a>	Golden Software Boundary		Real world	X	X
<a href="#">GSI</a>	Golden Software Interchange	Raster and Vector	Real world	X	X
<a href="#">HTM</a>	HTML Image Map		Pixel		X
<a href="#">KML</a>	Google Earth KML		Pixel, Real world	X	X
<a href="#">KMZ</a>	Google Earth KMZ		Pixel, Real world	X	X
<a href="#">LGO</a>	USGS Digital Line Graph		Real world	X	
<a href="#">LGS</a>	USGS Digital Line Graph		Real world	X	
<a href="#">MDB</a>	Esri Personal Geodatabase		Real world	X	
<a href="#">MIF</a>	MapInfo Interchange		Real world	X	X
<a href="#">PDE</a>	Portable Document File (Vector)		Other, Real world		X
<a href="#">PLT</a>	Golden Software PlotCall		Other	X	
<a href="#">PLY</a>	Stanford Polygon		Real world	X	

<a href="#">RAS</a>	Sun Raster Image	Raster and Vector	Real world	X	X
<a href="#">RT*</a>	TIGER/Line File		Real world	X	
<a href="#">SEG</a>	SEG-P1 Exchange Format	Data and Vector	Real world	X	X
<a href="#">SHP</a>	Esri Shapefile		Real world	X	X
<a href="#">SP1</a>	SEG-P1 Exchange Format	Data and Vector	Real world	X	X
<a href="#">SVG</a>	Scalable Vector Graphics	Vector and Raster	Real world		X
<a href="#">TAB</a>	MapInfo Table		Real world	X	
<a href="#">TAR</a>	SDTS Topological Vector Profile		Real world	X	
<a href="#">TAR.GZ</a>	SDTS Topological Vector Profile		Real world	X	
<a href="#">TGZ</a>	SDTS Topological Vector Profile		Real world	X	
<a href="#">VCT</a>	IDRISI Binary Vector File		Real world	X	
<a href="#">VTK</a>	Visualization Toolkit		Pixel		X
<a href="#">WME</a>	Windows Metafile	Vector and Raster	Other	X	X
<a href="#">ZIP</a>	SDTS Topological Vector Profile	Vector	Real world	X	

## Grid Files

Most grid files can be opened with the [Open Grid](#) dialog (i.e. Home | New Map | Contour).

The [File | Save As](#) command in the grid editor or one of the [grid menu](#) commands in the plot window can be used to save this format with the **Save Grid As** dialog.

<b>File Format</b>	<b>File Name</b>	<b>More than One Content Type</b>	<b>Coordinate Type</b>	<b>Import</b>	<b>Export</b>
<a href="#">?10G</a>	Globe DEM			X	
<a href="#">ADF</a>	Esri ArcInfo Binary Grid			X	X
<a href="#">AGR</a>	ArcInfo ASCII Grid			X	X
<a href="#">AIG</a>	ArcInfo ASCII Grid			X	X
<a href="#">AM</a>	Amira Mesh			X	
<a href="#">ASC</a>	ArcInfo ASCII Grid			X	X
<a href="#">ASC</a>	CPS-3 Grid Format			X	X
<a href="#">ASC</a>	Z-Map Plus Grid Format			X	
<a href="#">BIL</a>	Banded Interleave Grid By Line			X	X
<a href="#">BIN</a>	Raw Binary Grid			X	X
<a href="#">BIP</a>	Banded Interleave Grid By Pixel				X
<a href="#">BSQ</a>	Banded Sequential Grid			X	X
<a href="#">BW</a>	SGI-RGB Image		Pixel		
<a href="#">COL</a>	Amira Mesh			X	
<a href="#">CPS</a>	CPS-3 Grid			X	

<a href="#">CPS3</a>	CPS-3 Grid			X	X
<a href="#">CSV</a>	Formatted Text Grid			X	
<a href="#">DAT</a>	ETOPO-5			X	
<a href="#">DAT</a>	Z-Map Plus Grid			X	
<a href="#">DDF</a>	SDTS Digital Elevation Model			X	
<a href="#">DEM</a>	USGS Digital Elevation Model			X	X
<a href="#">DOS</a>	ETOPO-5			X	
<a href="#">DTED</a>	Digital Terrain Elevation Data			X	
<a href="#">E00<sup>8</sup></a>	Esri Grid Format		Real world	X	
<a href="#">ERS</a>	ER Mapper Grid			X	X
<a href="#">ERS</a>	ER Mapper Grid			X	X
<a href="#">FLD</a>	AVS Field			X	X
<a href="#">FLT</a>	Esri Float Grid Format			X	X
<a href="#">FTG</a>	Formatted Text Grid			X	
<a href="#">GGF</a>	Geosoft Binary Grid				X
<a href="#">GRB</a>	World Meteorological Organization Grid			X	
<a href="#">GRD</a>	ArcInfo ASCII Grid			X	X
<a href="#">GRD</a>	CPS-3 Grid Format			X	X



<a href="#">GRD</a>	NetCDF Grid File			X	
<a href="#">GRD</a>	Surfer Grid			X	X
<a href="#">GRD</a>	Geosoft Binary Grid			X	X
<a href="#">GRD</a>	Z-Map Plus Grid Format			X	
<a href="#">GXF</a>	Grid Exchange			X	X
<a href="#">HDR</a>	GTopo-30		Real world	X	
<a href="#">HGT</a>	SRTM Elevation Data		Real world	X	
<a href="#">IMG</a>	ERDAS Imagine Image	Raster and/or Grid	Pixel, Real world	X	
<a href="#">LAT</a>	Iris Explorer			X	X
<a href="#">NC</a>	NetCDF Grid File			X	X
<a href="#">RAW</a>	Binary Grid			X	X
<a href="#">TAR</a>	SDTS Digital Elevation Model			X	
<a href="#">TAR.GZ</a>	SDTS Digital Elevation Model			X	
<a href="#">TGZ</a>	SDTS Digital Elevation Model			X	
<a href="#">TXI</a>	Text Data	Data and Grid		X	X
<a href="#">TXI</a>	Formatted Text Grid			X	
<a href="#">XYZ</a>	Z-Map Plus Grid Format			X	
<a href="#">ZIP</a>	SDTS Digital Elevation Model			X	

<a href="#">ZMAP</a>	Z-Map Plus Grid Format			X	X
<a href="#">ZYC</a>	Z-Map Plus Grid Format			X	X
<a href="#">ZYCOR</a>	Z-Map Plus Grid Format			X	X

## Data Files

The [File | Open](#) or [Data | Merge](#) command in the worksheet can be used to open data files or merge the contents of data files into an existing worksheet.

Use the [File | Save As](#) command to save data files or the [File | Export](#) command to export data files.

<b>File Format</b>	<b>File Name</b>	<b>More than One Content Type</b>	<b>Coordinate Type</b>	<b>Import</b>	<b>Export</b>
<a href="#">ACCDB</a>	Microsoft Access			X	
<a href="#">ASCII Data</a>	ASCII Data Files		Real world	X	X
<a href="#">BNA</a>	Atlas Boundary	Vector, Data	Real world	X	X
<a href="#">CSV</a>	Comma Separated Variable			X	X
<a href="#">DAT</a>	Data			X	X
<a href="#">DBF</a>	Database			X	X
<a href="#">LAS</a>	LiDAR LAS Binary Data		Real world	X	
<a href="#">LAZ</a>	LiDAR LAS Binary Data		Real world	X	
<a href="#">MDB</a>	Microsoft Access				
<a href="#">MID</a>	MapInfo Data			X	X

<a href="#">SLK</a>	Sylk Spreadsheet		Real world	X	X
<a href="#">SP1</a>	SEG-P1 Exchange Format	Data and Vector	Real world	X	X
<a href="#">TXT</a>	Text Data	Data and Grid		X	X
<a href="#">XLS</a>	Excel Spreadsheet		Pixel	X	X
<a href="#">XLSM</a>	Excel Spreadsheet 2007			X	
<a href="#">XLSX</a>	Excel Spreadsheet 2007			X	X

## Other File Formats

Export STL files with the [Save Grid As](#) dialog. Convert an existing grid to STL with the [Grids | Edit | Convert](#) command, or save a grid in the grid editor with [File | Save As](#).

File Format	File Name	Content Type	Coordinate Type	Import	Export
<a href="#">STL</a>	Stereolithography 3D Mesh				X

## Drawing Properties

The following file types have drawing properties such as line color, fill, etc.:

- CLP Windows Clipboard, EMF Windows Enhanced Metafile,
- Encapsulated Postscript,
- KML Google Earth KML and
- Google Earth KMZ,
- MIF MapInfo Interchange,
- SVG Scalable Vector Graphics,
- TAB MapInfo Table,
- WMF Windows Metafile

The DGN Microstation Design v7 and DXF AutoCAD DSF have some drawing properties.

## Editable Text Blocks

The following file types have text blocks that are editable. Note that when the *All text as lines* option is chosen in the export options, the text is not editable.

- CLP Windows Clipboard,
- E00 Esri ArcInfo Export Format, ,
- EMF Windows Enhanced Metafile,
- GSI Golden Software Exchange,
- PLT Golden Software PlotCall,
- WMF Windows Metafile

The DXF AutoCAD DXF file format has some editable text block properties.

## Remark about .E00 File Format

The .E00 file format is not publicly documented by Esri. Although Golden Software has tested this .E00 import filter software with a number of publicly available .E00 files, it may not be compatible with all .E00 files created by all versions of Esri application programs. Golden Software is not affiliated with Esri, and this import filter software is not a product of, nor endorsed by, Esri.

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### See Also

[Import](#)

[Export](#)

[Save](#)

[Save As](#)

[Save Grid As](#)

[Data File Formats](#)

[ASCII Grid File Format](#)

[Color Spectrum File Format](#)

[Level File Format](#)

[Surfer Grid File Format](#)