

The binary raster file format

The binary raster file format is a simple format that can be used to transfer raster data between various applications. It consists of two files, the IEEE floating-point file and a supporting ASCII header file. The header file must have the same name as the data file, but with a .hdr file extension. The header data includes the following keywords and values:

- `ncols` - number of columns in the data set.
- `nrows` - number of rows in the data set.
- `xllcenter` or `xllcorner` - x-coordinate of the center or lower-left corner of the lower-left cell.
- `yllcenter` or `yllcorner` - y-coordinate of the center or lower-left corner of the lower-left cell.
- `cellsize` - cell size for the data set.
- `nodata_value` - value in the file assigned to cells whose value is unknown. This keyword and value is optional. The `nodata_value` defaults to -9999.
- `byteorder` - the byte order of the binary cell values. You can choose between two keywords, `msbfirst` or `lsbfirst`. `msbfirst` is used for cell values written with the most significant bit first. `lsbfirst` is used for cell values written with the least significant bit first.

For example,

```
ncols 480
nrows 450
xllcorner 378923
yllcorner 4072345
cellsize 30
nodata_value -32768
byteorder msbfirst
```

The data file will be a matrix of 32 bit signed IEEE floating-point values. The file will have a line of binary numbers for each row in the data set. The first line of data is the top row of the data set, moving from left to right.

The binary raster file format can only be imported or exported using the Spatial or 3D Analysts.

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