

ER Mapper ERS Reader/Writer

FORMAT NOTES:

- This format is not supported by FME Base Edition.

The ERS Reader/Writer allows FME to read and write data in ER Mapper's ERS format.

Overview

The ERS format is a raw format that uses a header file (*.ers) and a data file, which can have different extensions. The header file contains information about the data itself, like the number of rows and columns, the data byte order, etc., and about the raster itself, like georeferencing information, cell spacing, and ground control points (GCPs). The data file normally contains only plain data, without any header or information on how to interpret it.

The ERS format supports nodata values, although the current FME implementation only supports reading nodata values, but not writing them. The format also supports storing rotation as an angle, which will be ignored by FME upon reading, and applied to the raster upon writing, which might imply slight data loss or distortion.

Some ERS files also contain algorithms for image creation and manipulation, which are not currently supported either.

An ERS file using an ECW file as data will not work properly. In this case, you can open the ECW file directly with FME, although you will not get all the metadata contained in the ERS file itself.

ERS Quick Facts

Format Type Identifier	ERS
Reader/Writer	Both
Licensing Level	Professional
Dependencies	None
Dataset Type	Reader: File, Writer: Directory
Feature Type	ERS or <source_dataset_filename>
Typical File Extensions	.ers
Automated Translation Support	Yes
User-Defined Attributes	Through TAB files
Coordinate System Support	Yes
Generic Color Support	No
Spatial Index	Never
Schema Required	No
Transaction Support	No
Encoding Support	No
Geometry Type	ers_type

Geometry Support			
Geometry	Supported?	Geometry	Supported?
aggregate	no	point	no
circles	no	polygon	no
circular arc	no	raster	yes
donut polygon	no	solid	no
elliptical arc	no	surface	no
ellipses	no	text	no
line	no	z values	no
none	no		

Band Interpretations	Red8, Red16, Green8, Green16, Blue8, Blue16, Alpha8, Alpha16, Gray8, Gray16, UInt8, Int16, UInt16, Int32, UInt32, Real32, Real64
Palette Key Interpretations	not applicable
Palette Value Interpretations	not applicable
Nodata Value	Any (cannot be written)
Cell Origin (x, y)	0.5, 0.5
Rotation Support	No
GCP Support	Yes

World File Support	No
TAB File Support	Yes

Reader Overview

The FME considers a single ERS file to be a dataset.

Reader Directives

The directives processed by the ERS reader are listed below. The suffixes shown are prefixed by the current <ReaderKeyword> in a mapping file. By default, the <ReaderKeyword> for the ERS reader is `ERS`.

DATASET

Required/Optional: *Required*

The value for this directive is the name of a single ERS file. The normal extension for the file is `.ers`.

An example of the `DATASET` directive in use is:

```
ERS_DATASET "C:\DATA\ERS\san-diego.ers"
```

APPLY_GCPS

Required/Optional: *Required*

The value for this keyword is either YES or NO. If set to YES, GCP information, including a GCP projection, will be read from the file and applied to the raster data as an affine transformation. If set to NO, the GCP information is preserved as properties on the raster geometry.

Default value: *NO*

Example:

```
APPLY_GCPS "YES"
```

GCP_INTERPOLATION_METHOD

Required/Optional: *Required*

The value for this keyword is one of `NearestNeighbor`, `Bilinear` or `Bicubic`. If `APPLY_GCPS` is set to Yes, this directive must be specified.

Default value: *NearestNeighbor*

Example:

```
GCP_INTERPOLATION_METHOD "Bilinear"
```

GROUP_BY_DATASET

Required/Optional: *Required*

The value for this directive is either Yes or No. When the value is set to No, the only feature type this reader will use is the reader type name, which in this case is ERS. When the value is set to Yes, the feature type of each dataset is the filename (without the path or the extension) of the dataset. The default value for this directive is No.

An example of the GROUP_BY_DATASET keyword in use is:

```
GROUP_BY_DATASET "Yes"
```

Writer Overview

The ERS writer creates and writes data into a single directory specified by the DATASET directive. The ERS writer distinguishes duplicate output files by appending numbers to the filenames. Please see *About FME Rasters* on page 13 for details.

Note that writing nodata is not currently supported.

Writer Directives

The directives processed by the ERS writer are listed below. The suffixes shown are prefixed by the current <WriterKeyword> in a mapping file. By default, the <WriterKeyword> for the ERS writer is ERS.

DATASET

Required/Optional: *Required*

The value for this directive is the path of the output directory where the data will be written.

An example of the DATASET directive in use is:

```
ERS_DATASET "C:\DATA\ERS\OUTPUT"
```

FME Raster Features

FME raster features represent raster data and use several concepts that are unlike those used in the handling of vector data. See *About FME Rasters* on page 13.

ERS supports rasters with an arbitrary number of bands, provided all bands are the same data type and no band has a palette.

Feature Representation

In addition to the generic FME feature attributes that FME Workbench adds to all features (see *About Feature Attributes* on page 7), this format adds the format-specific attributes described in this section.

Attribute Name	Contents
<code>ers_type</code>	This will always be <code>ers_raster</code> .
<code>ers_tab_file_generation</code>	Enables or disables the generation of a TAB file along with the output image. The value can be yes or no. The default value is no. This is a writer attribute.

