

ADRG Reader

FORMAT NOTES: This format requires the advanced raster pack license.

The ADRG Reader module allows the Feature Manipulation Engine (FME) to access data in the Arc-Digitized Raster Graphics (ADRG) format.

Overview

ADRG is a standard National Imagery and Mapping Agency (NIMA) digital product designed to support applications that require a raster map background display.

ADRG is a military format that conforms to the ISO 8211 standard.

ADRG data is divided into geographic data sets as Distribution Rectangles (DRs). ADRG directories contain a general information file (.GEN extension) and one or more ADRG zone distribution rectangle (ZDR) image files (.IMG extension). The GEN file provides image parameters and support data for the ZDR image files associated with a DR. For each dataset, image data within a ZDR image file is returned as a single feature, since this feature will contain the entire image data of one ZDR image file.

All ADRG data is assumed to be in LL84. Data in polar zones will be automatically converted to LL84, which may result in some distortion of the image.

ADRG Quick Facts

Format Type Identifier	ADRG
Reader/Writer	Reader
Dataset Type	File
Feature Type	Filename
Typical File Extensions	.gen and .img
Automated Translation Support	Yes
User-Defined Attributes	No
Coordinate System Support	Yes
Generic Color Support	No
Spatial Index	No
Schema Required	No
Transaction Support	No
Geometry Type Attribute	adrg_type

Geometry Support

Geometry	Supported?	Geometry	Supported?
aggregate	yes	polygon	yes
circles	no	donut polygon	yes
circular arc	no	line	yes
elliptical arc	no	point	yes

Geometry	Supported?	Geometry	Supported?
ellipses	no	text	no
none	yes	3D	no
		raster	yes

Band Interpretations	Red8, Green8, Blue8
Palette Key Interpretations	not applicable
Palette Value Interpretations	not applicable
Interleave Type	BIP (band-interleaved-by-pixel)
Nodata Value	0,0,0
Cell Origin	0.5
Multi-Band	No
Multi-Palette	No

Reader Overview

FME considers a single ADRG general information file to be a dataset. The ADRG general information file contains the ZDR image file names. The image files are raster files containing pixel data, and each pixel in the file is a point in a single FME raster feature.

Reader Directives

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

DATASET

Required/Optional: *Required*

The value for this directive is the name of a single ADRG general information file. The normal extension for the general information files is `.gen`.

An example of the DATASET keyword in use is:

```
ADRG_DATASET "C:\DATA\ADRG\AGCA0101.GEN"
```

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 11.

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.

ADRG features specify a matrix of x, y coordinates and 3-byte RGB pixels.

Attribute Name	Contents
adrg_type	This will always be <code>adrg_raster</code> .
adrg_noz	The number of zone image files.
adrg_rty	The record id number.
adrg_prt	The product type.
adrg_nam	The ZDR image name.
adrg_zna	The ARC zone number.
adrg_swo	The westernmost longitude of the extent within the zone (including the overlapped region) of the unpadded cartographic image in arc degrees.
adrg_swa	The southernmost latitude of the extent within the zone (including the overlapped region) of the unpadded cartographic image in arc degrees.
adrg_neo	The easternmost longitude of the extent within the zone (including the overlapped region) of the unpadded cartographic image in arc degrees.
adrg_nea	The northernmost latitude of the extent within the zone (including the overlapped region) of the unpadded cartographic image in arc degrees.
adrg_arv	The ARC value <i>Asz</i> (adjusted for scale and zone), which is the number of pixels per 360 degrees longitude.
adrg_brv	The ARC value <i>Bs</i> (adjusted for scale), which is the number of pixels per 360 degrees latitude.
adrg_lso	The longitude of the upper left corner of the ZDR image in WGS 84 coordinates.
adrg_pso	The latitude of the upper left corner of the ZDR image in WGS 84 coordinates.
adrg_txt	Free text (e.g., digitizing system description).
adrg_nul	The row number of the upper right corner of the ZDR image (in pixels).
adrg_nus	The column number of the upper right corner of the ZDR image (in pixels).
adrg_nll	The row number of the lower left corner of the ZDR image (in pixels).
adrg_nls	The column number of the lower left corner of the ZDR image (in pixels).
adrg_nfl	The image height (in tiles).
adrg_nfc	The image width (in tiles).

Attribute Name	Contents
adrg_pnc	The number of pixels per tile row.
adrg_pnl	The number of rows per tile.
adrg_pcb	The number of bits per pixel count.
adrg_pvb	The number of bits per pixel value.
adrg_bad	The GEO DATA FILE name.
adrg_ws1	The lower band edge wavelength in nanometers.
adrg_ws2	The upper band edge wavelength in nanometers.
adrg_tif	The tile index map flag (true indicates there are tiles with no data; false indicates that all tiles contain RGB graphic data).
adrg_tsi{}.value	The tile index map values