LizardTech

GeoExpress 10

Read Me

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GeoExpress overview

GeoExpress is a software solution for compressing and manipulating geospatial data. GeoExpress supports a broad range of file formats, including the industry standard MrSID format and the ISO standard JPEG 2000 format.

Some of the tasks that you can perform with GeoExpress include:

- Compress raster and LiDAR data;
- Create seamless mosaics;
- Specify separate compression ratios for individual bands in a multispectral image;
- Reproject raster images to another coordinate reference system;
- Perform color balancing;
- Crop and demosaick raster images;
- Despeckle raster images;
- Edit image metadata.

You can save images that you create with GeoExpress to your computer or a LizardTech Express Server. Then, view the images in the geographic information system (GIS) software of your choice, including Esri®, Bentley®, Autodesk®, and more.

Installation Notes

IMPORTANT: GeoExpress 10 is a 64-bit application and requires a 64-bit operating system.

You can install GeoExpress on the following operating systems:

Windows

- Windows 10
- Windows 8
- Windows 7
- Windows Server 2016
- Windows Server 2012 R2 Update
- Windows Server 2012
- Windows Server 2008 R2 SP1

Linux

- Red Hat Enterprise Linux 7.0
- Red Hat Enterprise Linux 6.1
- CentOS 7

NOTE: On Linux, GeoExpress runs as a command line-only program.

Installing on Windows

Download the GeoExpress installer from https://www.lizardtech.com/support/geoexpress/installers.

Once you run `setup.exe`, the installation process creates a shortcut in the **LizardTech** entry on the **Start** menu.

Installing on Linux

The Linux installer is available on the DVD ISO image available from
https://www.lizardtech.com/support/geoexpress/installers.

You can burn the image to a DVD or use software that mounts it as a virtual disc.

To install GeoExpress on Linux, navigate to the directory that corresponds to your operating system and run the `install.sh` script.By default, GeoExpress is installed in the following directory:

    /usr/local/LizardTech/

What's new
Version 10.0
New features

GeoExpress 10 has a greatly improved user interface that can help streamline your workflow. Among the improvements are:

- **Reworked Job Properties panel:** The new organization reinforces workflow from the top down, showing the same types of information about each job and allowing you to easily identify, review, and edit modifications made to each job.
- **Reduced number of dialogs**
- **Improved mosaic creation**
- **New crop options**
- **Simplified reprojection:** Improved CRS selection and editing, new CRS source, simplified WKT viewing and editing, and improved error checking
- **Jobs:** You can now pause or cancel jobs individually or en masse, and can manually re-order running jobs.

GeoExpress 10 also includes these new and enhanced capabilities:

- You can now crop and reproject LiDAR point clouds
- You can now create mosaics from multiple sources, including:
    - Create an MG2 mosaic from MrSID sources
    - Create a TIFF mosaic
    - Create a multiresolution MG2 mosaic
- Encoding NITF imagery no longer requires a separate license. Note that encoding NITF imagery will incur a charge against the data cartridge.
- The **Crop** window always displays an image preview. You can cancel the preview if it is taking too long to render, at which point you can enter crop coordinates manually.

Version 9.5.x
New feature highlights

- **Enhanced multi-core support:** GeoExpress no longer limits the number of concurrent jobs and threads to eight.
- **LiDAR Compression:** GeoExpress supports compressing LiDAR point clouds in plain-text or LAS or LAZ formats.
- **Multipolygon Shapefile Cropping:** Define the area that you want to crop with a shapefile that can contain multiple polygons.
- **Command line tools:** We improved the method used to create MrSID mosaics from the command line.
- **BPF support:** GeoExpress supports input and output of Binary Point Files often used in Geiger Mode LiDAR imagery.
- **NAD83 2011 support:** GeoExpress now supports EPSG Coordinate Reference Systems and Coordinate Transformations related to NOAA's National Adjustment of 2011.
- **PIX support:** GeoExpress supports PCIDSK (PIX) files as input files.
- **Improved transparency conversion:** GeoExpress uses the **nodata** value of the input image as the transparency for the alpha band when converting to MG4 format.
- **Color balancing improvements**
- **Simplified licensing**

Version 9.0 and 9.1
New feature highlights

- **Floating Point Support for MrSID Generation 4:** GeoExpress uses quantization to create 32-bit floating point images in the MrSID Generation 4 format.
- **Dynamic Range Metadata Generation:** Use GeoExpress to write dynamic range metadata for images.
- **Improved Metadata for Auxiliary Files**
- **Command Line Image Statistics**
- **Simple Job List:** Any images that you add to the GeoExpress graphical user interface appear in a single simplified job list.
- **Intelligent Encoding:** GeoExpress automatically performs a subset of image compression and manipulation operations without re-encoding images.
- **Image Rotation:** For images that include rotation metadata, GeoExpress creates rotated output images.
- **Custom Watermarks:** GeoExpress supports watermark images in BMP, PNG, and JPEG formats.
- **Mosaic Enhancements for the Command Line:** Create mosaics using multiple coordinate reference systems from the command line.
- **PNG Support**
- **NITF RPC Support:** GeoExpress can now interpret NITF files with RPC metadata.

Fixes

Recent versions of GeoExpress include the following fixes:

Version 10.0.0

BUG ID	DESCRIPTION
LT-3169	Fixed an issue where the command line version of GeoExpress would crash while processing some .ecw files.

Version 9.5.4

BUG ID	DESCRIPTION
LT-2226	Fixed an issue where resampling an image could result in a slight change to the image extents (corner locations).
LT-2149	Fixed an issue where setting advanced alpha options for a multi-file job would sometimes result in a crash.
LT-1990	Fixed an issue where a mosaic that includes a low resolution image would shift the lo res tile by 1 pixel.
LT-1720	Addressed an issue where the GeoExpress installer could not install a required library if an earlier version was already installed.
LT-1682	Fixed an issue where the Express Cartridge Server installer was not installing some required libraries.
LT-1642	Fixed an issue where creating a mosaic from multispectral images using a subset of the available bands and an opaque alpha band would yield an image with an incorrect alpha band.

Version 9.5.3

BUG ID	DESCRIPTION
LT-1302	NITF files larger than 4GB are not read correctly.
LT-1293	Both Reprojection and Color Balancing now respect the operating system's setting for number format. Specifically, if your region's standard number format uses a comma (,) to separate integral from decimal portions of a number, these values are now stored correctly.

Version 9.5

BUG ID	DESCRIPTION
18449	You cannot create images from world files that contain rotation information.
18009	When you change the resolution of an image, the image may not be aligned properly. Now you can align images to an integer multiple of the output resolution.

Version 9.1

BUG ID	DESCRIPTION
16133	When you generate dynamic range values for an image in GeoExpress, the dynamic range values are stored in a metadata file with the .aux file extension. If you attempt to view the dynamic range values in ArcGIS 9.3.1 or earlier, the values are ignored.

Version 9.0

BUG ID	DESCRIPTION
14362	When you reproject a mosaic, the component tiles do not rotate.
14330	When you request a license using the license fulfillment option in GeoExpress, there is not enough space to enter the entire serial key that you received in your order confirmation email.
14038	If you change part of the image metadata, GeoExpress may discard the existing metadata value for the image origin.
13766	If you use the wcommute Commuter Licensing utility to check out a license, GeoExpress may not use the license that you check out.
13760	The documentation does not include the name of the service for the LizardTech License Server.
13730	GeoExpress may fail to open images in the IMG format.
13565	Reprojecting images in GeoExpress may take longer than expected.
13522	You cannot create images with custom watermarks.
13283	If you specify that an input image has transparency information in its metadata, GeoExpress may not create output images with the MrSID Generation 4 output format.
13273	If you run Windows 7, you cannot use remote desktop to access GeoExpress Remote Edition.
13272	When you install GeoExpress Remote Edition, you cannot use that instance of GeoExpress from the local system.
13251	If you use the mrsidgeoencodercommand line tool to enter your locking code, the locking code may not save correctly.
13241	If you view the locking code in the user interface, you may only see part of the locking code.
13179	Create a mosaic with input tiles in multiple projections. If you use world files to specify the input projections, GeoExpress cannot calculate the correct amount of data to charge to the data cartridge.
13034	When you search for coordinate reference systems in the user interface, you have to use the exact word order.
12719	The GeoExpress trial period cannot be extended.
12250	When you use the band selector on the Preview tab, the band selector may stay open after you navigate to another tab.
9021	You cannot use the command line to create a mosaic from input tiles in multiple projections.

Known Limitations
Version 10.0

No known limitations were introduced in this release.

Version 9.5

No known limitations were introduced in this release.

Version 9.1

BUG ID	DESCRIPTION
15750	After you update your web browser, the GeoExpress help appears blank.
15329	GeoExpress only supports color lookup tables with eight bits and three bands. If you attempt to view an image with a color lookup table that is not eight bits, the image may not display correctly.

Version 9.0

No known limitations were introduced in this release.

Customer Support

To contact LizardTech Customer Support, visit https://www.lizardtech.com/support/.

You can also call one of the following phone numbers:

- 866-725-5211
- 206-652-5211