

LizardTech

ExpressView Browser Plug-in 6.5

User Manual

Copyrights

Copyright © 2009–2010 LizardTech. All rights reserved. Information in this document is subject to change without notice. The software described in this document is furnished under a license agreement or nondisclosure agreement. The software may be used or copied only in accordance with the terms of those agreements. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or any means electronic or mechanical, including photocopying and recording for any purpose other than the purchaser's personal use without the written permission of LizardTech.

LizardTech acknowledges and thanks the many individuals and organizations whose efforts have made our products possible. A full list of copyright, trademark and credit information is available in the document "Copyrights Trademarks and Credits" installed automatically with your product.

LizardTech
1008 Western Avenue, Suite 200
Seattle, Washington, U.S.A. 98104
206.652.5211
www.lizardtech.com

Table of Contents


Introduction	1
System Requirements.....	1
Enabling ExpressView on Vista.....	1
Getting Oriented in ExpressView.....	2
Viewing and Navigating Images	5
Opening Images.....	5
Zooming In and Out.....	5
Panning.....	7
Viewing an Image in Full Screen Mode.....	7
Restoring Original View.....	7
Measuring Distance	9
Displaying Information	11
Image Properties.....	11
Coordinate and Measurement Information.....	14
ExpressView Version Information.....	15
Online Help.....	15
Printing and Saving Images	17
Printing an Image.....	17
Saving an Image.....	18
Advanced Features and Settings	21
Selecting Bands.....	21
Coordinate Options.....	21
Express Server Options.....	23
Appendix	27
About LizardTech.....	27
Other LizardTech Products.....	27
ExpressView and Patents.....	28
Index	29

Introduction

Thank you for using LizardTech® ExpressView™ Browser Plug-in. ExpressView enables you to view, zoom, pan, and navigate native MrSID® and JPEG 2000 imagery in either Internet Explorer or Firefox (for more information see "System Requirements" on page 1).

Whether you're viewing imagery on your computer's hard drive, across a local area network (LAN), or from LizardTech Express Server®, ExpressView makes rapid viewing of large images possible while maintaining maximum image quality. ExpressView supports raster images compressed to the MrSID Generation 4 (MG4) format.

ExpressView supports the JPIP protocol, which enables JPEG 2000 images to be viewed efficiently in bandwidth-constrained environments.

This help is designed to give you quick information about how to open and navigate MrSID and JPEG 2000 images, and is organized by task. The most common navigational tasks are covered in "Viewing and Navigating Images" starting on page 5. Getting and displaying image and other information, printing and saving, and more involved procedures and options are covered in separate chapters. To access this documentation as WebHelp within the application, click the question mark icon  in the upper right corner of the plug-in.

The topics in this section cover system requirements and orient you to the ExpressView interface.

System Requirements

The following system requirements represent the minimum for running the ExpressView Browser Plug-in. Performance will increase with an increase in RAM or processor MHz.

- Microsoft Windows XP, Windows 2003, Windows Vista, or Windows 7
- 200-MHz PC processor
- 64 MB RAM
- Firefox 2 or 3 or Internet Explorer 7, 8 or 9.

NOTE: The ExpressView Browser Plug-in supports U.S. English only.

Enabling ExpressView on Vista

The ExpressView Browser Plug-in can be installed automatically via web download or manually from a product CD-ROM or DVD-ROM. On Windows Vista, if you install ExpressView manually you must subsequently enable it in Vista's Manage Add-ons dialog in order for it to open.

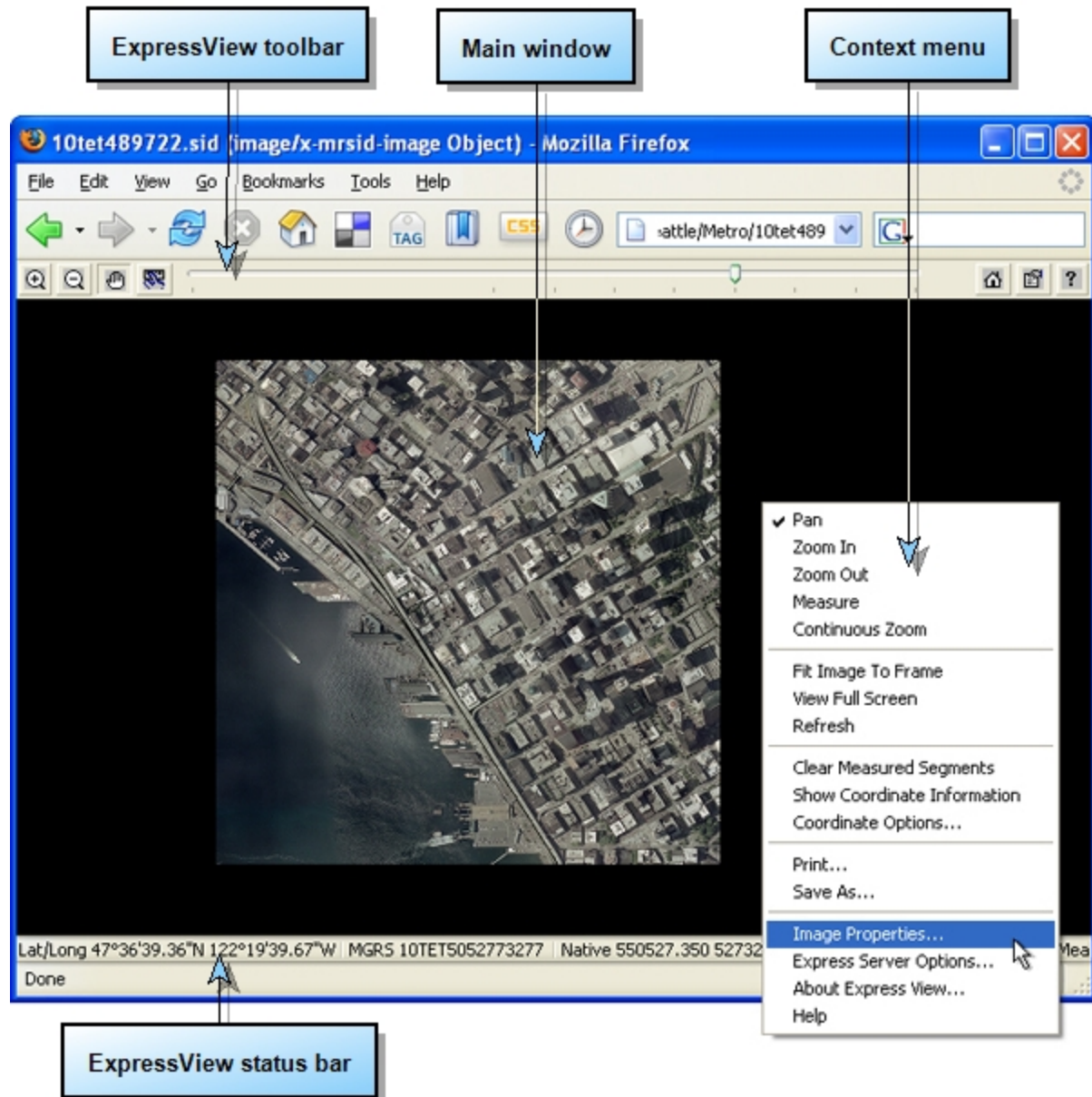
To enable ExpressView on Vista:

1. After manual installation, open Internet Explorer and click **Tools** from the menu bar.
2. Choose **Internet Options**, then select the **Programs** tab.
3. Click the **Manage Add-ons** button. The Manage Add-ons dialog appears.

4. Select **ExpressView Class** in the window, then select the **Enable** radio button at the bottom of the dialog.
5. Click **OK**.

Getting Oriented in ExpressView

The ExpressView Browser Plug-in consists of a main window, a toolbar, a status bar and a hidden context menu.



The Main Window

The main window displays your MrSID or JPEG 2000 image.

Right-clicking anywhere inside the main window displays the context menu.

The ExpressView Toolbar

The ExpressView toolbar sits directly above the main window and provides controls for navigating images. Details about these controls and how to use them are given in "Viewing and Navigating Images" starting on page 5.



Most of these controls can also be found on the context menu, along with other options not found on the toolbar.

The Context Menu

The context menu, known by many Windows users as the “right-click” menu and sometimes called a “pop-up” menu, can be used to perform many common functions as an alternative to tools on the ExpressView toolbar. Consequently, throughout this help you will see the instructions “From the context menu, choose...”.



To access options on the ExpressView context menu:

1. Right-click in the main window. The context menu appears as shown above.
2. Click to select any available option.

Particular options of the context menu are described on their appropriate topic pages.

The ExpressView Status Bar

The ExpressView status bar appears at the bottom of the main window, as shown in the illustration at the top of this page. It is displayed above any browser-specific status bar that may be present.

The status bar displays cursor position coordinates and measured distances. For more information, see "Measuring Distance" on page 9 and "Coordinate Options" on page 21.

Viewing and Navigating Images

Viewing images with the ExpressView Browser Plug-in is easy and fast. The topics in this section show you how to open, zoom and pan around MrSID and JPEG 2000 images.

Opening Images

ExpressView opens MrSID and JPEG 2000 files stored locally or served by LizardTech Express Server or other image servers.

MrSID files have a ".sid" extension. JPEG 2000 files have a ".jp2" extension.

To open a MrSID or JPEG 2000 image use one of the following methods:

- Drag a MrSID or JPEG 2000 file icon into the main window of the ExpressView Browser Plug-in.
- Select **Open** from the **File** menu, then browse directories to locate desired image.
- Double-click a MrSID or JPEG 2000 file or email attachment. (**Note:** It is not necessary to open the ExpressView Browser Plug-in separately before opening images.)
- Enter a URL or file path into your Web browser's address field.

Zooming In and Out


You can zoom in and out of an image by any of the following methods:

- The Zoom In tool
- The Zoom Out tool
- The Zoom bar
- Continuous zoom


The Zoom In Tool

The Zoom In tool can be used either by clicking on the image or by clicking and dragging to create a selected zoom area. Zoom In is the default mode when an image opens in the ExpressView Browser Plug-in, before you select one of the other zoom or pan tools.

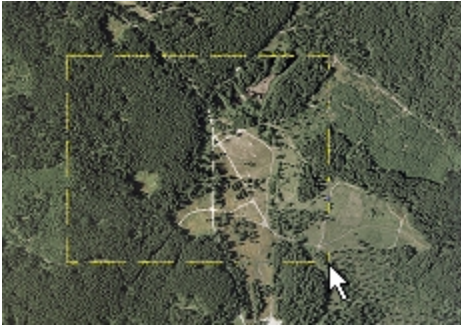
To use the Zoom In tool by clicking on the image:

1. Click the **Zoom In** button  on the ExpressView toolbar if it is not already active.
2. Click on the image where you wish to see a closer view. The view refreshes at the next zoom level in, centered where you clicked.

To use the Zoom In tool to select a region to view:


1. Click the **Zoom In** button  on the ExpressView toolbar if it is not already active.
2. Select a region to view by clicking and dragging to form a rectangle, as shown below. The view

refreshes so that the area you selected fills the main window.



The Zoom Out Tool

To use the Zoom Out tool:

1. Click the **Zoom Out** button  on the ExpressView toolbar if it is not already active.
2. Click on the image where you wish to center a wider view. The view refreshes at the next zoom level out, centered where you clicked.

The Zoom Bar

The Zoom bar comprises the middle section of the ExpressView toolbar and can be used to quickly set the desired zoom level.



To use the Zoom bar do one of the following:

- Click and drag the “slider” on the Zoom bar to the left or right any number of notches. The view continues to change to the next zoom level in or out as you continue to move the slider past each notch.
- Click on the Zoom bar to the left or right of the slider to adjust the view by a single zoom level in or out, respectively.

If you have not yet panned away from the original view (“Home” position), using the Zoom bar brings you in and out of an image centered on the image’s own centerpoint. Otherwise, the zoom function centers on the last point in the image that was at the center of the view.

Continuous Zoom

Continuous Zoom mode enables you to zoom in and out quickly without incremental stages.


To use Continuous Zoom:

1. Select **Continuous Zoom** from the context menu.
2. Click and drag downward to zoom in.
3. Click and drag upward to zoom out.
4. To pan while zooming, click and drag (upward or downward) at an angle.

Panning

Panning is repositioning the image in the viewing area. You may wish to pan an image when you have zoomed in to look at details.

To use the Pan tool:

1. Click the **Pan** button  on the ExpressView toolbar if it is not already active.
2. Click on the image and drag to reposition it in relation to the main window. The image moves in the direction you drag it.

Viewing an Image in Full Screen Mode

To view an image in Full Screen mode select "View Full Screen" from the context menu.

While Full Screen mode is engaged, all toolbars are hidden. To use any tools in Full Screen mode you must select them from the context menu, which remains hidden but available.

To disengage Full Screen mode and return to the regular view deselect "View Full Screen" on the context menu.

Restoring Original View

The original or "Home" view is the view you see when you first open an image. It represents the best fit of the entire image in the window frame.

To restore the original view do one of the following:

- Click the **Home** button  on the ExpressView toolbar.
- Select **Fit Image to Frame** from the context menu.

Measuring Distance


The ExpressView Browser Plug-in allows you to measure distances between points in your geo-referenced MrSID and JPEG 2000 images.

NOTE: A coordinate reference unit ("image unit") must be set for the image before measurements can be made (see "Specifying Image Unit" on page 23)

Marking the Points to be Measured

Marking the points to be measured is accomplished in the main window. You must mark two or more points to enable a valid measurement.

To mark points to be measured using the Measure tool:

1. Zoom and pan the image until the first point you wish to mark is in view. (Consult the ExpressView status bar for the coordinates of the cursor position.)
2. Click the **Measure**  button on the ExpressView toolbar.
3. Click the image at the point where you wish to begin measuring.
4. Click the image again at a second point. A red line connects the two points. The length between the points is indicated as "Measured Length" in the status bar. (**Note:** by default, measurements are displayed in pixels. To change measurement display unit, see "Specifying Measurement Display Unit" on page 22.)
5. Continue clicking the image to mark additional points. With each point added the status bar displays the cumulative distance among all the points.

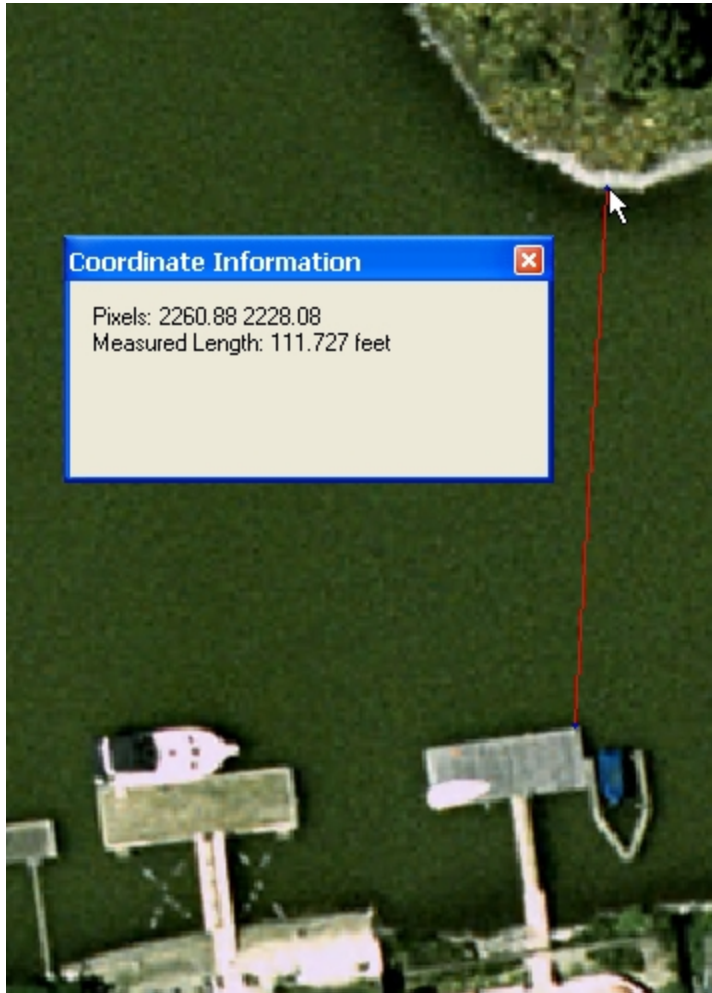
To mark points using the Ctrl key (Windows):

1. Hold down the **control (Ctrl)** key and click on the image to mark the first point.
2. If necessary, zoom and pan until the next point which you wish to mark is in view.
3. Hold down the **control (Ctrl)** key and click on that point.

To clear the points you have marked and start over select "Clear Measured Segments" from the context menu.

Viewing Measurement Results

Besides being displayed instantly in the ExpressView status bar, the measurements are displayed in the Coordinate Information box, as shown below, if it is visible (see "Viewing the Coordinate Information Box" on page 14).



Displaying Information


The ExpressView Browser Plug-in enables you to display information about the image you are viewing in the plug-in, measurement results and coordinates, information about which version of the plug-in you are using, and this help documentation.

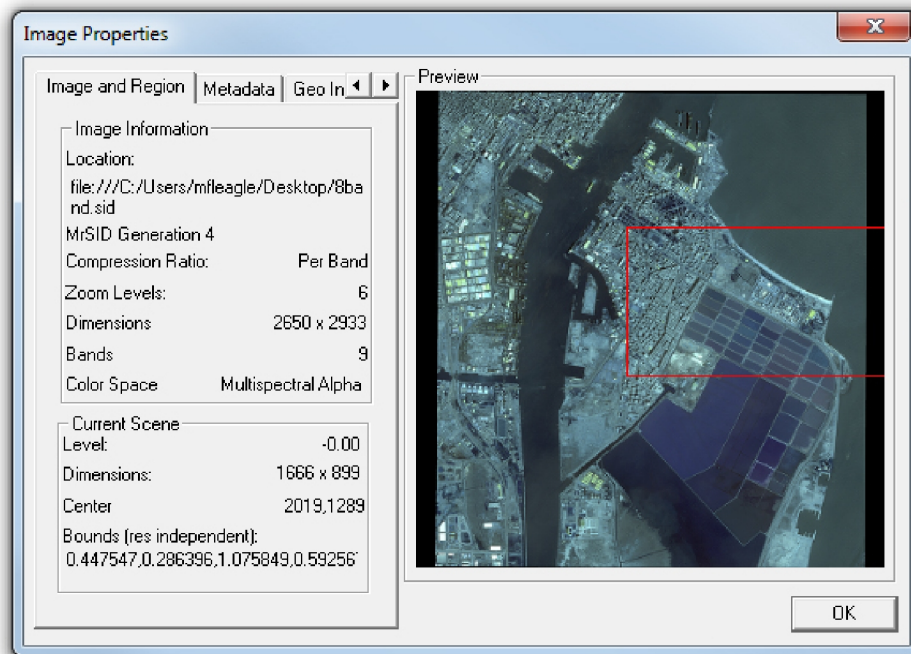
Image Properties



The Image Properties dialog box displays detailed information about your MrSID or JPEG 2000 image. The information is divided into four categories, each with its own tab:

- Image and Region
- Metadata
- Geo Info
- Bands

To view Image Properties information:

1. Click the **Image Properties** button  on the ExpressView toolbar. The Image Properties dialog appears as shown below, with tabs on the left and a preview of the current view on the right.



2. Use the arrow buttons   located to the right of the tab names to bring more tabs into view.
3. Click the desired tab to bring it to the foreground.

The right half of the Image Properties dialog displays a miniature rendering of the entire image with red lines indicating your current view in relation to the whole.

Image and Region

The Image and Region tab, shown above, is displayed by default when you access the Image Properties dialog box. This tab has two panels, Image Information and Current Scene.

Image Information

The Image Information panel offers information about the entire original image:

- **Location** – the file name and where it is located on your computer or network
- **File Format and Version** – the format the image is in
- **Compression Ratio** – what ratio the image was compressed at, or "Per Band" if different ratios were used for different bands (those ratios are listed on the metadata tab)
- **Zoom Levels** – how many zoom levels the image contains
- **Dimensions** – size of the original image in pixels
- **Colorspace** – which color spectrum (RGB, Greyscale, Multispectral, etc.) the image occupies. RGB images with an alpha band are listed as "Multispectral Alpha"

NOTE: RGB images with an alpha band are listed as "Multispectral Alpha". Multispectral images that were encoded with the RGB transform are listed as "Multispectral Alpha with RGB Color Transform".

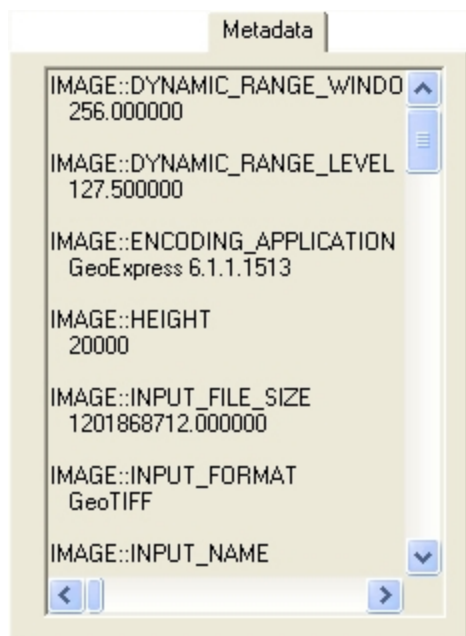
Current Scene

The Current Scene panel offers information about the selected region:

- **Level** – the zoom level of that region of the image visible in the main window
- **Dimensions** – size in pixels of the region that makes up the current scene
- **Center** – which point (by x,y coordinates) in the original image the current scene is centered on
- **Bounds** – boundaries of the current scene in resolution-independent coordinates

Metadata

The Metadata tab displays information about the parameters used in creating the image, including the individual compression ratios used in per-band compression. Use the scrollbars on the side and bottom to see information outside the initial view.



For images that were compressed using per-band compression ratios, the per-band metadata is added according to the following example, in which the bands are listed in order starting with Band 1 and ending with the alpha band.

```
IMAGE::ACTUAL_PERBAND_COMPRESSIONRATIOS
15.329692
15.329692
15.329692
1.881806
1.854109
1.985572
2.058918
2.260265
597880.769231
```

Geo Info

The Geo Info tab displays the geospatial information about the image and the current scene, including the coordinates of the upper-left point, the dimensions and the resolution.

The geospatial coordinates of the cursor's position in the main window are given in the Scene Information panel. No information is displayed if the cursor is resting at a point outside the window.

Geo Info	
Image Information	
Upper Left X	527900.150000
Upper Left Y	5213699.850000
Width	0.000000
Height	9830.399994
X Resolution	0.300000
Y Resolution	-0.300000
Scene Information	
Upper Left	523669.612,5214609.615
Lower Right	537177.094,5206790.085
Cursor	525700.222,5210570.833

Bands

See "Selecting Bands" on page 21.

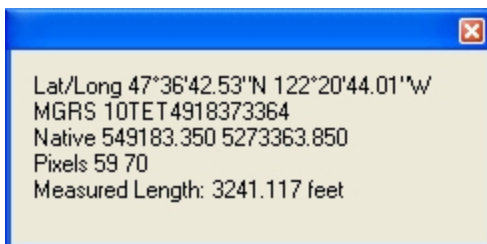
Coordinate and Measurement Information

Coordinate and measurement information are always visible on the ExpressView status bar below the main window. The same information is also available in the Coordinate Information box, which is accessed from the context menu.

Viewing the Coordinate Information Box

To view the Coordinate Information box:

1. Select **Show Coordinate Information** from the context menu. The Coordinate Information box appears overlaying the main window and remains open while you pan and zoom.



2. When finished viewing results, click the X to close the box. (**Note:** by default, measurements are displayed in pixels. To change measurement display unit, see "Specifying Measurement Display Unit".)

Both on the status bar and in the Coordinate Information box, measurement results are listed after any reported cursor position coordinates. Cursor position coordinates are shown for all coordinated reference systems that have been selected. For more information on selecting coordinate reference systems to be displayed, see "Selecting Reported Position Systems".

ExpressView Version Information

The About box displays information about the product, notably the version and build numbers, which appear on the right side below the image.


NOTE: The build number shown in the illustration below may not be the actual build number of the product.



To display the About box select "About ExpressView..." from the context menu.

Online Help

To display the ExpressView online WebHelp do one of the following:

- Click the **Help** button  on the ExpressView toolbar.
- Select **Help** from the context menu.

Printing and Saving Images

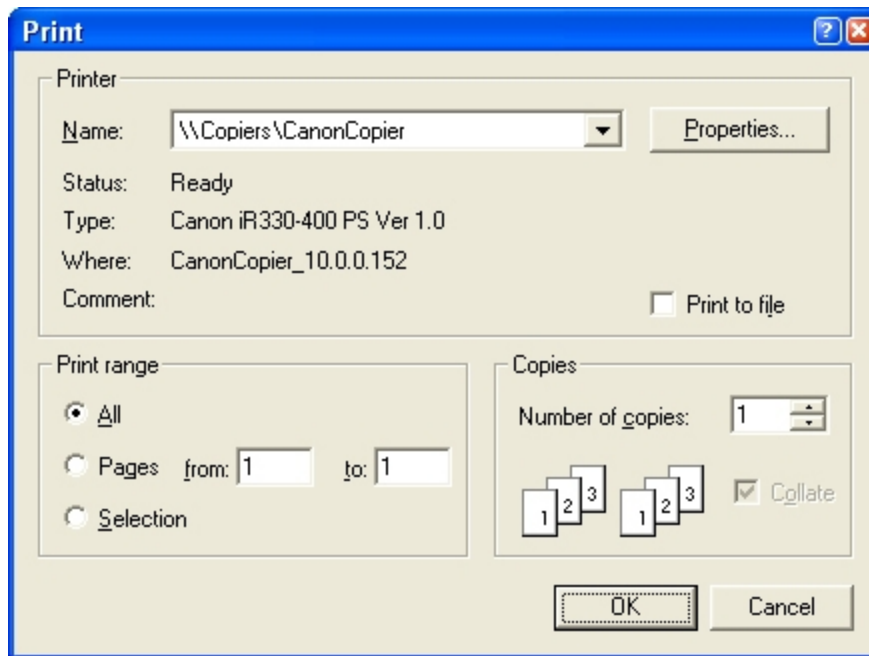
The ExpressView Browser Plug-in enables you to print MrSID and JPEG 2000 images and save images in a variety of other file formats.

Printing an Image

Using the context menu, you may print a MrSID or JPEG 2000 image or a portion of an image.

To print an image in ExpressView:

1. Use the navigation controls to view the entire image at its best fit in the browser window.
2. Select **Print...** from the context menu. The Print dialog box appears as shown below.
3. Select desired printing parameters and click **OK**.



To print a portion of an image in ExpressView:

1. Use the navigation controls to zoom in on a portion of the image.
2. Select **Print...** from the context menu. The Print dialog box appears as shown above.
3. Select desired printing parameters and click **OK**.

NOTE: Regardless of which radio button is selected in the "Print range" subpanel of the Print dialog box, printing from the ExpressView Browser Plug-in always operates as if the "Selection" option were selected. What you see in the browser window is what the application sends to the printer. Accordingly, if you are currently viewing the entire image, the entire image is printed. If you have zoomed in on a portion of the image, only that portion of the image is printed. (Similarly, if you are viewing an image or a portion of an image in grayscale, that image or image portion is sent to the

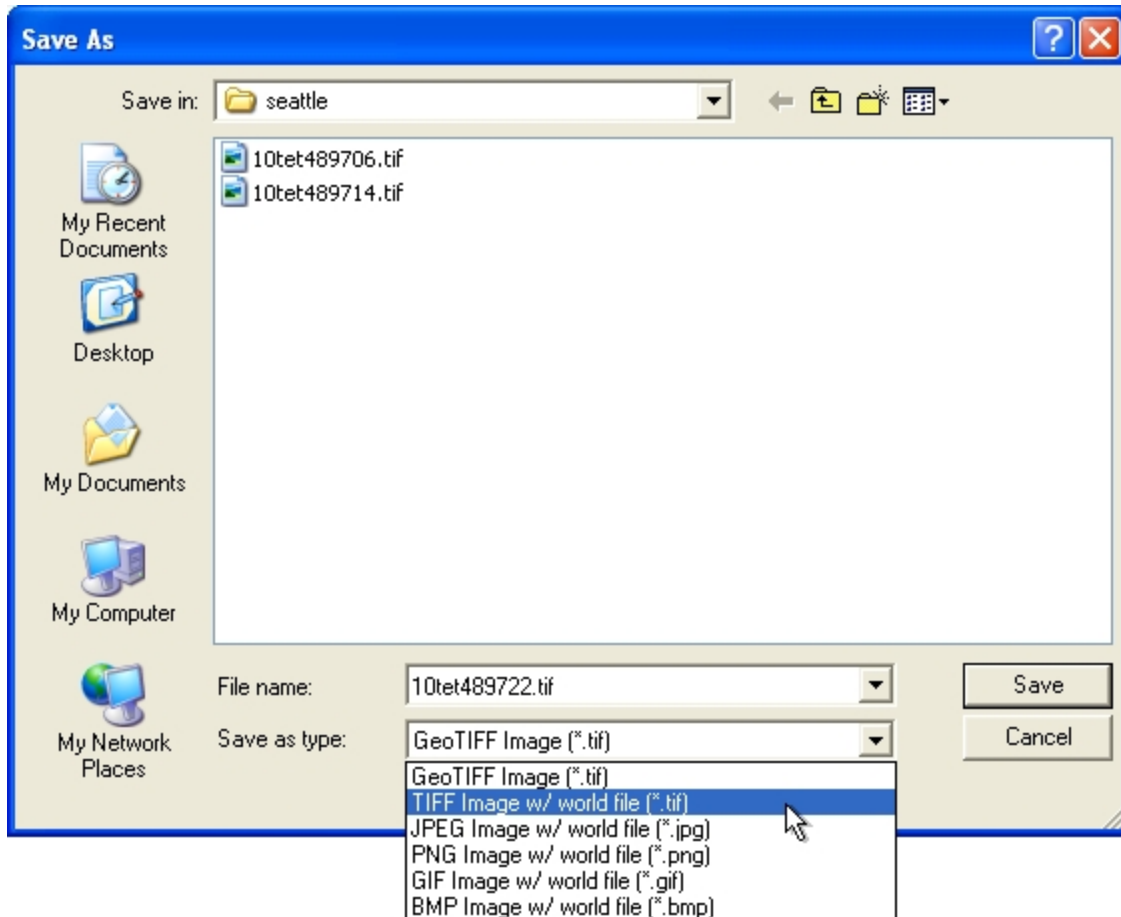
printer in grayscale.) For the ExpressView Browser Plug-in, there is no difference among the "Print range" options and there is no need to choose "Selection".

Saving an Image

You may save a MrSID or JPEG 2000 image or a portion of an image as a GeoTIFF, or as a TIFF, JPEG, BMP, PNG or GIF file with a world file.

To save an image in a different file format:

1. Use the navigation controls to view the entire image at its best fit in the browser window.
2. Select **Save As...** from the context menu. The Save As dialog box appears as shown below.
3. Select a folder and name the file.
4. Select a file format from the **Save as type** drop-down list, then click **Save**.



To save a portion of an image in a different file format:

1. Use the navigation controls to zoom in on a portion of the image.
2. Select **Save As...** from the context menu. The Save As dialog box appears as shown above.

3. Select a folder and name the file.
4. Select a file format from the **Save as type** drop-down list, then click **Save**.

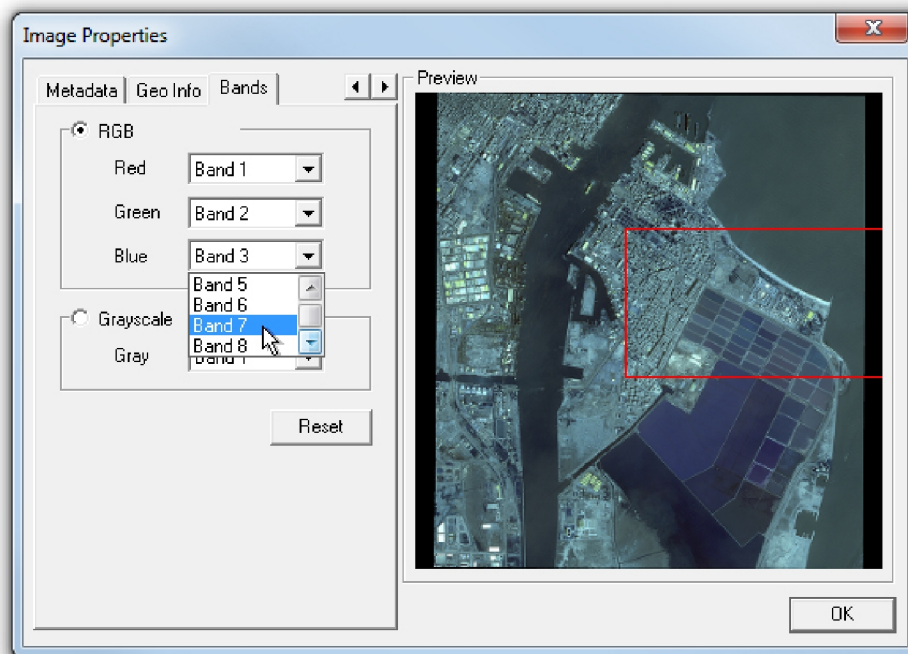
NOTE: What you see in the browser window is what the application saves as a separate file. Accordingly, if you are currently viewing the entire image, the entire image is saved. If you have zoomed in on a portion of the image, only that portion of the image is saved. (Similarly, if you are viewing an image or a portion of an image in grayscale, that image or image portion is saved as a new grayscale image.)

Advanced Features and Settings




This section covers advanced features and options.

Selecting Bands

The band selection drop-down menus enable you to rearrange the bands in an RGB image, select which bands of a multispectral image you wish to display as the R, G and B bands, or which band from an RGB or multispectral image to display as the grayscale band.



To access the Bands tab:

1. Click the **Image Properties** button  on the ExpressView toolbar.
2. Use the arrow buttons   located to the right of the tab names to bring more tabs into view.
3. Select the **Bands** tab.

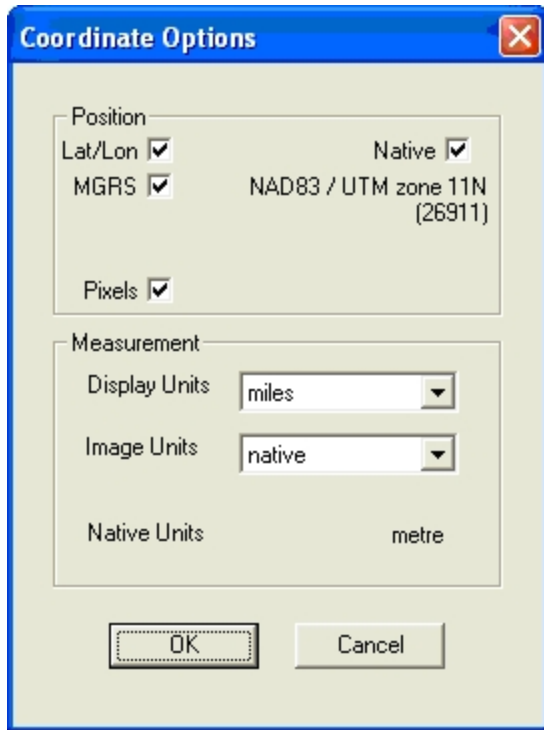
To reset the bands to the assignments they originally carried click the "Reset" button.

Coordinate Options

The Coordinate Options dialog is available from the context menu and enables the following:

- Selecting Reported Position Systems
- Specifying Measurement Display Unit

- Specifying Image Unit



Selecting Reported Position Systems

You may select the coordinate reference systems in which cursor and image positions are reported on the ExpressView status bar and in the Coordinate Information box.

To specify the coordinate reference systems to be displayed:

1. Select **Coordinate Options...** from the context menu. The Coordinate Options dialog box appears as shown above.
2. Select the checkboxes for any or all of the available coordinate reference systems listed in the Position panel. All of the selected coordinate reference systems will be displayed.
3. Click **OK** to activate your changes.

Specifying Measurement Display Unit

The display units are the units in which you would like to have measurements reported. For example, if you would like to know the number of miles between two points, select "miles" as your display unit.

To specify the display units:

1. Select **Coordinate Options...** from the context menu. The Coordinate Options dialog box appears as shown below.

2. Select one of the available units from the **Display Units** drop-down list in the Measurement panel.
3. Click **OK** to activate your changes.

Changes to the measurement unit selected here are reflected in the measurement results displayed on the ExpressView status bar and in the Coordinate Information box.

Specifying Image Unit

Georeferenced images contain information in their metadata which describes the location of the image in the world and also enables applications to display the position of the cursor in an image. However, because the units in which this information should be expressed is sometimes not natively specified in the image, the ExpressView Browser Plug-in provides a means for you to specify the image's image units.

IMPORTANT: If the CRS is defined, the native units are reported here. If not, the native units are reported as "(Default metres)". If the reported native unit is correct, you should specify **native** as the image unit. If incorrect or undefined, then it is recommended that you specify **image pixels**. That way, any measurement display units will be applied on a per-pixel basis.

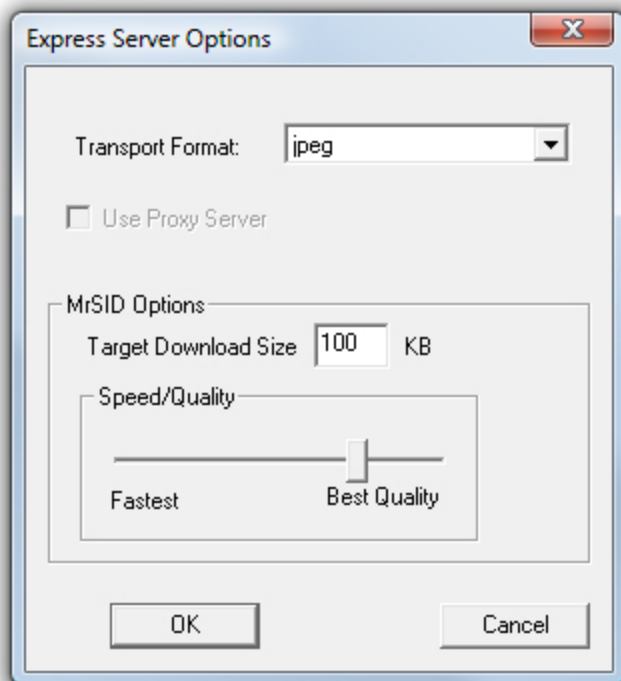
To specify the image unit:

1. Select **Coordinate Options...** from the context menu. The Coordinate Options dialog box appears as shown above.
2. Select a unit from the **Image Units** drop-down list.
3. Click **OK** to activate your changes.

Express Server Options

Several options are available for customizing the relationship between the ExpressView Browser Plug-in and Express Server.

To access Express Server options select "Express Server Options" from the context menu. The Express Server Options dialog box appears, as shown below.



General Options

Selecting Download Format

You may choose to download imagery in its original format (native) or in JPEG format. These two options are available as items on the Transport Format drop-down menu.

NOTE: A change of transport format does not take effect until the ExpressView Browser Plug-in is closed once and reopened again.

By default, images are downloaded in JPEG format.

MrSID Options

Selecting Target Download Size

You can specify the size of download packets for MrSID Generation 3 (MG3) and MrSID Generation 4 (MG4) images. The target download size is important because it determines the rate at which data is downloaded from Express Server. A small packet size will result in more frequent updates to the image window, showing the increased quality that each packet brings. Larger packet size will result in less frequent updates, but may be faster overall. By default the target download size is 100 KB. You can change it by entering any whole number from 1 to 1000 in the Target Download Size field.

Balancing Speed and Quality

By default the balance between download speed and image quality is set to favor higher image quality. If higher viewing speed is of greater priority to you, you can change the balance as desired by clicking and dragging the Fastest/Best Quality slider closer to the "Fastest" end.

Appendix

This appendix offers additional information about LizardTech and its products.

About LizardTech

Since 1992, LizardTech has delivered state-of-the-art software products for managing and distributing massive, high-resolution geospatial data such as aerial and satellite imagery and LiDAR data. LizardTech pioneered the MrSID[®] technology, a powerful wavelet-based image encoder, viewer, and file format. LizardTech has offices in Seattle, Denver, London and Tokyo and is a division of Celarlem Technology Inc. (JASDAQ: 4330). For more information about LizardTech, visit www.lizardtech.com.

Other LizardTech Products

We at LizardTech are glad to have you as a customer. While you're "in the shop", explore LizardTech's other great products for compressing, managing and distributing geospatial imagery and LiDAR data.

For instant notification of new LizardTech product releases and patches add the following link to your favorite RSS feed reader:

<http://www.lizardtech.com/files/rss/updates.xml>

GeoViewer

Efficient Viewing and Exporting of MrSID and JPEG 2000 Layers

GeoViewer is LizardTech's free, standalone application for viewing geospatial imagery, vector overlays and LiDAR data. GeoViewer enables you to combine, view and export visual layers from varied sources, such as local repositories, Express Server catalogs, and WMS and JPIP servers. GeoViewer supports a wide range of input formats and exports to GeoTIFF, PNG and JPEG. It's the most efficient means of viewing MrSID and JPEG 2000 images.

For more information about GeoViewer visit <http://www.lizardtech.com/download/>.

GeoExpress

The Industry's Best Image Manipulation and Compression Software

With powerful tools for reprojecting, color balancing, and mosaicking, GeoExpress[®] software is the industry's choice for manipulating and compressing geospatial imagery to industry standard formats. You can configure Express Server and Spatial Express[®] software directly from GeoExpress, which makes it the ideal command center for your storage and distribution workflows.

For more information about GeoExpress visit www.lizardtech.com/products/geo/.

LiDAR Compressor

LiDAR Data Meets the MrSID Format

LizardTech LiDAR Compressor™ software enables you to turn giant point cloud datasets into efficient MrSID files that retain 100 percent of the raw data at just 25 percent or less of the original file size (lossless compression). If storage requirements are critical, you can reduce your LiDAR file sizes by 90 percent or more by choosing a higher compression ratio and letting LiDAR Compressor select the best way to reach a desired file size (lossy compression). Unlike raw LAS or ASCII data, LiDAR files compressed to MrSID are easily managed resources you can extract derivatives from again and again.

For more information about LiDAR Compressor visit www.lizardtech.com/products/lidar/.

Express Server

Image Delivery Software for Geospatial Workflows

LizardTech Express Server software is the best solution for distributing imagery in MrSID or JPEG 2000 format. With Express Server, users on any device access imagery faster, even over low-bandwidth connections. Express Server is faster, more stable and easier to use than any other solution for delivering high-resolution raster imagery.

For more information about Express Server visit www.lizardtech.com/products/exp/.

MrSID Decode SDK

Integration of MrSID Support into Third-Party Applications

The MrSID Decode SDK provides a framework for extracting raster or LiDAR data from MrSID files, including MrSID Generation 4 (MG4™). Used as the foundation for LizardTech's LiDAR Compressor™ and its Express Suite® line of geospatial products – GeoExpress, Express Server and Spatial Express software – the MrSID Decode SDK is a robust toolkit suitable for complex application development needs.

MrSID Decode SDK is available for free download at <http://developer.lizardtech.com>.

ExpressView and Patents

This software is protected by U.S. Patent Nos. 7,218,789, 7,454,084, 7,508,991 and 5,710,835; Canadian Patent No. 2,236,943; and European Patent No. 0,864,135 and by additional U.S. and Foreign Patents Pending.

Index

B

Bands 14, 21

BMP 18

C

Color

 grayscale 14, 21

 RGB 14, 21

Context menu 3

Continuous zoom 6

Coordinate and measurement information

 viewing coordinate information box 14

Coordinate options 21

Coordinate reference systems 22

Coordinate reference unit 23

Copyrights, trademarks and credits ii

Current scene 12

D

Display unit 22

Displaying coordinate reference systems 22

Displaying image properties 11

Displaying online help 15

Displaying version information 15

Download packet size 24

Download speed vs. image quality 25

E

Enabling ExpressView on Vista 1

Export formats 18

Express Server options 23

 general 24

ExpressView status bar 4

ExpressView toolbar 3

ExpressView version information 15

G

Geo information 13

Georeferencing unit 23

GIF 18

GUI 2

H

Help 15

Home view 7

I

Image formats 18

Image properties 11

 geo info 13

 image and region 12

 metadata 12

Image quality vs. download speed 25

Images

 bands 14, 21

 export formats 18

 extensions 5

 files of type 5

 full screen view 7

 opening 5

 printing 17

 properties 11

 restoring original view 7

 saving 18

Introduction 1

J		Printing an Image	17
JPEG	18	R	
JPIP support	1	Restoring original view	7
L		Right-click menu	3
LizardTech	27	S	
M		Saving an image	18
Main window	3	Scene information	12
Measurement display unit	22	Selecting download packet size	24
Measurement results	9, 14	Show coordinate information	14
Measuring distance	9	Spatial reference system	23
marking points	9	Specifying coordinate reference unit	23
viewing results	9	Specifying measurement display unit	22
Metadata	12	Status bar	4
MrSID options	24	coordinate display	22
Multiband selection	14	System requirements	1
Multispectral images	21	T	
O		TIFF	18
Online Help	15	Transport format	24
Opening images	5	U	
Options		UI	2
coordinates	21	User interface	2
Express Server	23	V	
MG3 and MG4	24	Version information	15
position reporting	22	Viewing an image at full screen	7
Other LizardTech products	27	Viewing coordinate information box	14
P		W	
Packet size	24	Windows Vista	1
Panning	7	World file	18
PNG	18	Z	
Position reporting options	22	Zoom bar	6
Printing an image		Zoom in tool	5
entire image	17	Zoom out tool	6

Zooming in	5
by clicking	5
by selecting region	5
continuous zoom	6
with zoom bar	6
Zooming out	5
continuous zoom	6
with zoom bar	6

