

Pix4Dreact Quick Start Guide

Introduction

Pix4Dreact is a fast-mapping software designed for situational awareness and quick response management. The software creates 2D maps from aerial imagery at rapid rates without the need for advanced technical specifications. Large amounts of images can be processed within minutes and analyzed with tools found within the interface to identify, measure, compare and mark features, all of which can be shared without requiring an internet connection.

The help documentation for Pix4Dreact can be found on the [Pix4D website](#).

To install and activate Pix4Dreact, please refer to the Pix4Dreact Installation Guide available on the GTAC website at <https://apps.fs.usda.gov/gtac/file/1633/download?token=aKOEbWro>.

Part 1: Getting Started

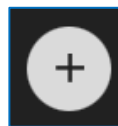
A. Getting Started

1. In your **Start Menu**, search **Pix4Dreact** and click on the application icon to launch (see following note).

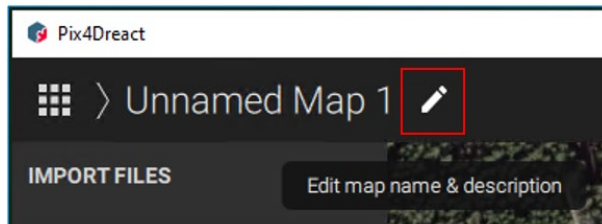
NOTE: Some cameras, such as the Workswell WIRIS, are not currently supported by Pix4Dreact. Before you import your images, go to the [Pix4D website](#) to see if your camera is supported. If you don't see it on the list, you will need to add a Camera Parameter file for your set of images. We have put together a Camera Parameter file for the most common Forest Service UAS Program sensors, which can be downloaded from Box at <https://usfs.box.com/s/lu8q7l1jrdz47uw84bqvi1h8l79sp963>.

After downloading the file to your local drive, click on the **Settings** button in Pix4Dreact and select **Camera parameters file**. Click on **Select file**, navigate to and select **additional_sensors.xml**, and click **Open**. A link to the XML should now be visible under your Camera Parameters file settings on the right-hand side of your screen. Click on the back arrow and "x" out of settings to get back to the start screen.

2. Click on the "+" button (see following figure) to be taken to the main window.



3. Rename your project and add a brief project description by clicking on the edit button next to the default project name.



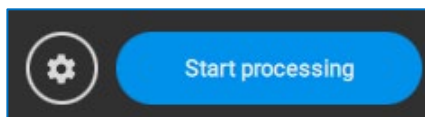
Part 2: Adding Image Files to Create an Orthomosaic

A. Adding Images

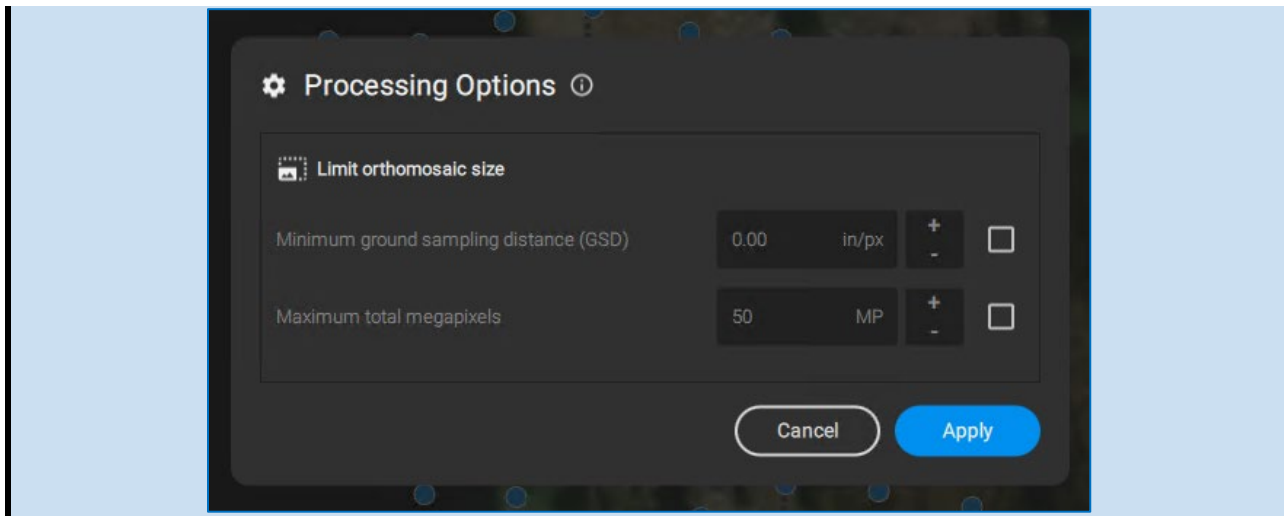
1. In the left-hand side panel, under **Import Files**, select either **Import Files** or **Import Folder** depending on whether all the images you want to import are stored in the same place.
2. Track the progress bar at the bottom of the screen to see when the import has completed. If the images are geotagged, once your imagery has been successfully imported, the basemap in Pix4Dreact will represent the area where your images were taken (see following note).

NOTE: If you get a message saying, “Your camera is not supported at this time”, go back to the note on first page and make sure the Camera Parameters file was added correctly. If you continue to get the message, you may need to create your own Camera Parameters file using Pix4Dmapper, as explained on the [Pix4D website](#) or contact GTAC to have your sensor added to the **additional_sensors.xml** file.

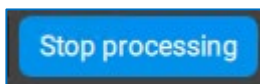
3. Click on **Start Processing** at the bottom left-hand side of the user interface.



NOTE: There is a settings button next to Start Processing that will enable the selection of the orthomosaic size if you wish to specify this prior to running the tool (see following figure). Here, you can increase the minimum ground sampling distance and the maximum total megapixels. These settings will affect the overall quality of your output and the time it takes to process the imagery. Default values will be used if the settings are not changed by the end-user.



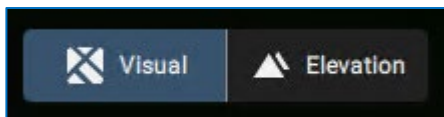
4. If you wish to stop the process at any point in time, click on the bottom right-hand side button, **Stop Processing**.



Part 3: Using Pix4Dreact Tools

A. Viewing an Orthomosaic

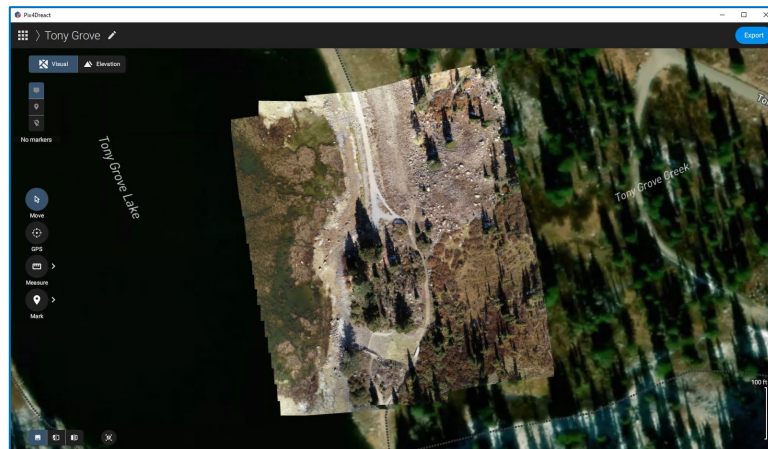
1. To toggle between viewing your orthomosaic or a digital elevation model (DEM), click on the buttons located at the top left-hand side of the interface labeled **Visual** and **Elevation**.



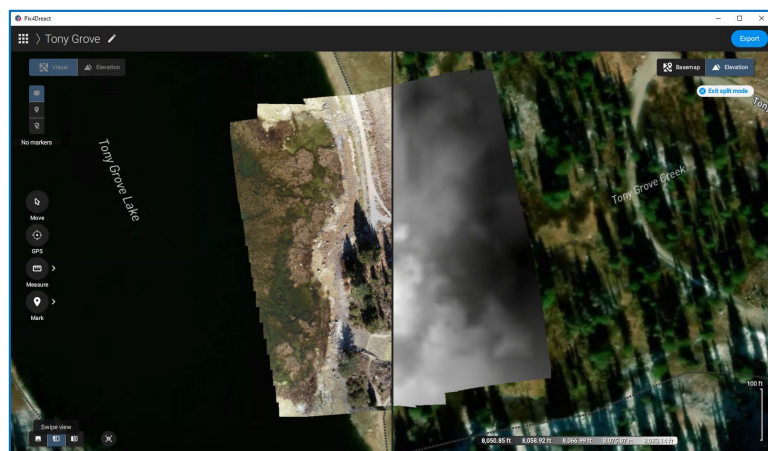
2. To change the way you view the orthomosaic or elevation data, locate the view option buttons at the bottom left of the screen (see following figure).



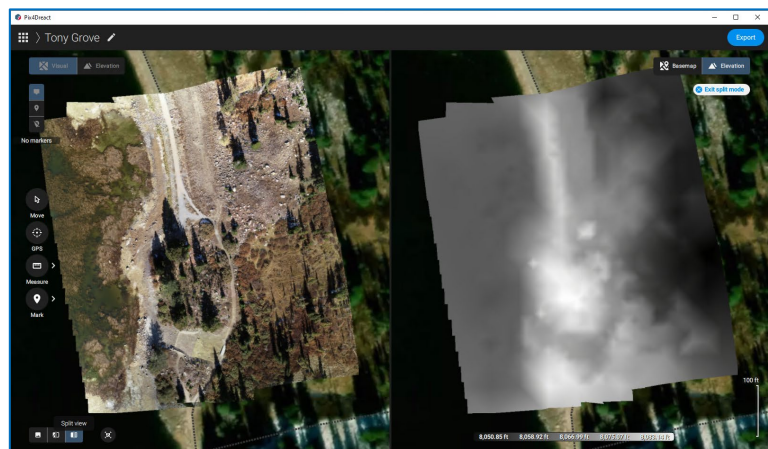
- i. When the first option is selected, you are in Normal View mode. This mode will display just your orthomosaic.



ii. When the second option is selected, you are in Slide View mode. This option allows you to slide between your orthomosaic and DEM as two layers atop one another.



iii. When the third option is selected, you are in Split View mode. Split view mode enables you to analyze both the orthomosaic and DEM as side-by-side images.



3. To pan around the orthomosaic, ensure the **Move** button is highlighted on the left-hand side panel and left click your mouse or trackpad, then drag the image around the screen.

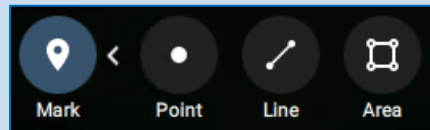
- To zoom in and out of the image, use your mouse scroll wheel or pinch motion on your trackpad. To return the image to its full extent within the viewing window, locate the **Zoom on map** button to the right of the view option buttons.



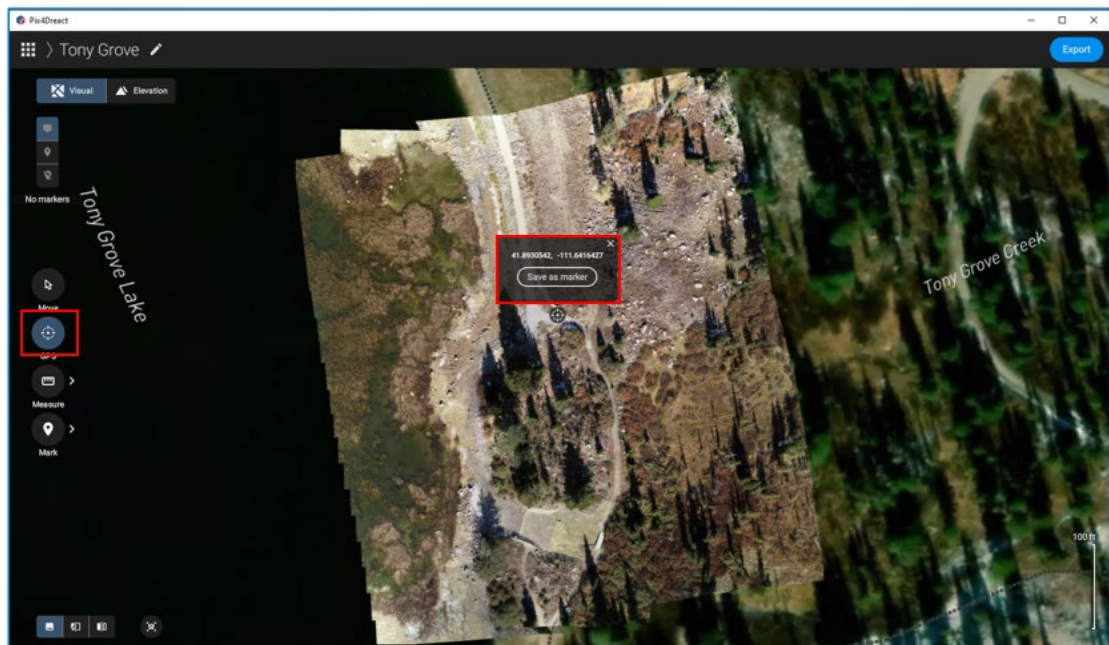
B. Using Markers and Making Measurements

- To locate GPS coordinates, select the GPS button on the left-hand side panel and click where on the image you want to know the longitude and latitude. When the coordinates display, you can choose whether you would like to save the marker. If so, click **Save as Marker**, give it a name, and click **Save**.

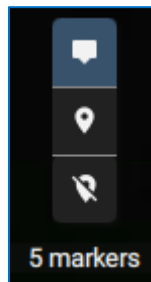
NOTE: You can also mark places by clicking on the Mark button in the left-hand side panel. The menu will expand and show options of types of markers you can place (see following figure).



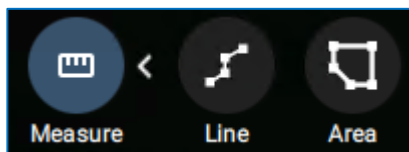
For instance, you can place a point, a line, or an area. Left click your mouse where you wish to place a point, then hit the check button when you have finished. Give your mark a name and hit **Save**. Your new marker(s) will appear in the right-hand side panel, under **Mark Tool**. Here, you can also import pre-existing marks, or zoom in on, edit, or delete the ones you have created.



- To view information about your markers, locate the Markers button on the left-hand side panel (see following figure) and click on the 1st, 2nd or 3rd option depending on whether you want to see **Markers and Titles**, **Markers (without titles)** or **No Markers**, respectively.



3. To measure a distance or an area, click on the Measure tool located on the left-hand side panel (see following figure).



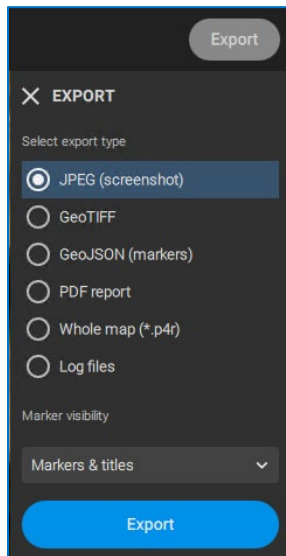
- i. To measure a line, click **Line**. Left click on the first point, then the second and hit the check mark to complete. The measurement will autogenerate in a pop-up window which you can save as a marker.
- ii. To measure an area, click **Area**. Left click on the first vertex, then continue left clicking for the vertices surrounding your area of interest. Hit the check mark to complete and the area will autogenerate in a pop-up window, which you can save as a marker.

Part 4: Closing and Exporting a Project

1. To close a project, locate the button to the left of the project title that looks like 9 squares (see following figure). Click on the button to return the project home screen with edits to your map being automatically saved.



2. To export a project, locate the Export button on the top right corner of the interface (see following figure).



3. Select which file type(s) you would like to export (see following note). You can also select if you want to include your markers in the outputs by clicking the dropdown menu under **Marker visibility**. Then click **Export**.

NOTE: *The format in which you want your file saved can be specified in the export options. The JPEG output is only a screengrab and doesn't include any georeferencing information but does provide an option to include markers. The GeoTIFF format, on the other hand, includes georeferencing information in case if you need to view it with other geospatial data as well as the option to include elevation information. The PDF report is also nice for capturing information about the imagery and getting an overview of the products. Explore all format options to see what information can be included with certain file types. You can only export one file format at a time.*