PIX4Dmatic 1.71

Features		Advantages
INPUTS		
Aerial and terrestrial images in .jpg .jpeg .tiff formats	🖥	Process any RGB images that support basic EXIF/XMP tags
LiDAR and RGB images from PIX4Dcatch	🖥	Process both LiDAR and RGB images outputs from PIX4Dcatch for a full terrestrial workflow
Multi-camera support in the same project	🖥	Create a project using images from different cameras and process them together
Import image geolocations and orientations as .csv or .txt	🖥	Text file import (.csv/.txt) for image geolocation and orientation
Ground Control Points (GCPs)	🖥	Import and mark ground control points to improve the absolute accuracy of the project
Known reference coordinate system support	🖥	Select EPSG or ESRI codes from known coordinate systems libraries. Select a default coordinate reference system for easy setup
Geoid support	🖥	Support of most commonly used geoid models. You can select a geoid height even if there are geoids available
Arbitrary coordinate reference system support	🖥	Georeferencing of the project with GCPs in local or site specific coordinate systems
Site localization	🖥	Import a .wkt created with PIX4Dcatch, or a .prj file and set your custom coordinate system
Region of interest (ROI)	🖥	Define a region of interest to delimit an area in order to reduce the extent of outputs generated for a project, speed up the processing, or create sharper outputs
Scale constraint	🖥	Define a scale constraint with a distance and an accuracy, which enables scaling a project based on that input at the Calibration step
Orientation constraint	🖥	Define an orientation constraint with a direction and an assigned axis, which enables orienting a project without orientation information at the Calibration step
Open Photogrammetry Format (OPF) 1.0	🖥	Import a project created with the Open Photogrammetry Format (OPF) 1.0 specifications
Edit Camera Internals and Externals	🖥	Fine-tune camera settings for enhanced control over calibration and data accuracy
Geometries (.dxf, .shp, zipped .shp)	🖥	Import geometry files in .dxf, .shp, zipped .shp or .GeoJSON to view in your project
PROCESSING		
Multicore CPU + GPU support	🖥	Increase the processing speed by leveraging the power of CPU cores and threads, as well as GPUs
Backup mechanism	🖥	An automatic backup mechanism ensures that you do not lose your work when something unexpected stops PIX4Dmatic
Save copy	🖥	Save copy allows you to easily create a copy of your project, so that you can continue your work while being sure you have a copy of a previous state
Calibration	🖥	Define the *Template, Pipeline, Image Scale, Keypoints* and *Internals confidence* parameters for the optimization of internal camera parameters (e.g. focal length, principal point of autocollimation and lens distortions) and external camera parameters (position, orientation) during calibration
Reoptimize	🖥	Reoptimize internal and external camera parameters based on GCPs, MTPs, VTPs, or mITPs to improve the reconstruction
Auto-mark	🖥	Auto-mark will find more marks in images for tie points or geometry vertices, as long as you marked at least 2 images
AutoGCP	🖥	Automatic detection of control targets of known shape for faster marking experience
Intersection Tie Points (ITPs)	🖥	Generate intersection tie points as part of the calibration for improved calibration e.g. for indoor scenes
Merge & Register projects	🖥	Merge & register two projects
Depth point cloud	🖥	Create a depth point cloud based on LiDAR inputs from PIX4Dcatch
Point cloud densification	🖥	Define the point cloud Density, Number of Matches, Image Scale, Noise filter, and Sky filter parameters to create a dense point cloud based on the sparse point cloud created during calibration
Depth & dense fusion	🖥	Create a single point cloud based on the depth point cloud and the dense point cloud
Mesh	🖥	Define the mesh Input, Template, Texture size, Deghosting, Decimation, Sky mask, Smoothing parameters to create a 3D Textured Mesh
Digital Surface Model	🖥	Define the Resolution cm/px, enable Surface smoothing with its Median filter radius (px) and enable Interpolation for the digital surface model creation
Orthomosaic	🖥	Create an orthomosaic based on the digital surface model and the images and set Deghosting or Oblique parameters
Quality report	🖥	Assess the quality of the reconstruction between processing steps with the detailed quality report
Processing templates	🖥	Select the Nadir, Oblique, PIX4Dcatch or Custom processing template

RAYCLOUD

Feature		Description
Project visualization	🖥	Visually assess the accuracy of the camera geotags, the quality of optimized camera positions, automatic tie points, dense point cloud, mesh, digital surface model and orthomosaic. In Perspective or Orthographic views
GCPs	🖥	Annotate GCPs with the highest accuracy, using both original images and 3D information at the same time
Checkpoints	🖥	Annotate Checkpoints with the highest accuracy, using both original images and 3D information at the same time to verify the absolute accuracy of the project
Manual Tie Points (MTPs) 🔗	🖥	Create and mark manual tie points to improve the calibration of your project
Intersection Tie Points (ITPs) 🔗	🖥	Create and mark manual ITPs or edit and delete automatic ITPs to improve the calibration of your project
Vertex Tie Points (VTPs)	🖥	A geometry vertex can be converted to a vertex tie point (VTP), so that image marks of geometries are taken into account in Reoptimization or Calibration
Undo/Redo your changes	🖥	Undo/Redo actions
History 🔗	🖥	All actions of a given session are available in the history panel. Revert to the project at any stage, while keeping the other steps that were done as items in the history
Status center 🔗	🖥	The status center displays tracking notifications and progress reports of different processing steps
Distance measurement	🖥	Measure a distance in the 2D or 3D views, refine in the images for higher accuracy. Option to take projection distortions into account
Marker	🖥	Create a marker to measure or highlight a specific point in your project
Polyline	🖥	Create a polyline to vectorize linear objects
Polygon	🖥	Create a polygon to vectorize a surface with the option to add a planarity constraint, add polygon holes, edit polygons or connect polygons into a polygonal mesh surface
Vector layers and Layers templates	🖥	Enhance workflow with customizable vector layers and pre-defined layer templates for efficient data management
ASPRS Classes 🔗	🖥	Classify point clouds from your projects. You can edit classes membership, export per class, delete, or show/hide each class
Section view	🖥	Create vertical or horizontal sections, or sections along a polyline, in order to vectorize a scene in a plane or to verify the quality of the results
Base maps	🖥	Get context about your scene by displaying map or satellite data in the background of your scene in the 2D viewer
Point Cloud editing	🖥	Edit and optimize your point clouds for higher-quality meshes, DSMs, and orthomosaics. Disabled points are always stored in the "Disabled points" panel
Clipping box	🖥	Isolate and focus on specific regions within your point cloud for more targeted analysis
Videos & views	🖥	Create views of your project to easily access the same view point again, to document your scene in a custom report or to create a video animation of your project
Invert selection	🖥	Allows to invert the selected point clouds
Color by elevation	🖥	Use a histogram and a selection of spectrums to interactively display your point clouds by elevation value
Color by relative confidence	🖥	A color by relative confidence tool for advanced users to assess their data accuracy
Minimum number of matches slider	🖥	Display the Automatic Tie Points (ATPs), dense point cloud, or fused point cloud based on the number of matches each point has to assess the quality
Snapping window	🖥	Facilitates the picking of points when creating a geometry in the 3D view by giving a sense of depth
Object selection tool	🖥	A smart object selection tool for point cloud classification
Image masks	🖥	Create masks in images to improve the point cloud or mesh

PIX4D

EXPORT	Export GCPs	🖥	Export GCPs for enhanced workflow flexibility
	Export MTPs, mITPS, ITPs (.txt, .csv)	🖥	Export tie point marks
	Point cloud (.laz, .las 1.4, .las 1.2, .XYZ) 🔗	🖥	Export generated point clouds in .laz, .las (1.2 and 1.4 for better compatibility) and .xyz file formats
	Mesh (.obj, Cesium 3D tiles, .slpk) 🔗	🖥	Export a generated digital surface model in a single cloud optimized .geotiff or in tiles. Optionally with .tfw and .prj files. Select the compression rate of the file. LZW compression available
	Point cloud from Mesh (.laz) 🔗	🖥	Export a point cloud from your mesh for better modeling in Revit
	Digital Surface Model (.tiff, .tfw, .prj) 🔗	🖥	Export generated digital surface model in a single .tiff or in tiles. Optionally with .tfw and .prj files. Select the compression rate of the file. LZW compression available
	Orthomosaic (.tiff, .tfw, .prj, .jpg, .jgw) 🔗	🖥	Export a generated orthomosaic in a single or tiled cloud optimized .geotiff with optional .tfw and .prj files, or as .jpg with a .jgw file for geolocation. Select the compression rate of the file. LZW or JPEG compression available
	Quality report (.pdf) 🔗	🖥	Export the quality report to assess the accuracy and quality of projects
	Custom report (.pdf)	🖥	Export custom reports with your logo containing an Overview plan, Views, and an Inventory describing your project
	Geometries (.dxf, zipped .shp, .shp or .GeoJSON)	🖥	Export created geometries (Markers, Polylines, Polygons) and layers to .dxf, zipped .shp, .shp or .GeoJSON
	Direct export to PIX4Dsurvey	🖥	Seamless export of processed PIX4Dmatic projects (.p4m) into PIX4Dsurvey
	Share to PIX4Dcloud 🔗	🖥	Upload results from PIX4Dmatic to PIX4Dcloud for sharing and collaboration
	Open Photogrammetry Format (OPF) 1.0	🖥	Export a project in the Open Photogrammetry Format (OPF) 1.0 specifications
	Video (.webm)	🖥	Export a video of your project to share on social media or with stakeholders
LANGUAGE	Language option 🔗	🖥	English, Japanese, Spanish, French, Simplified Chinese, Traditional Chinese, Korean, German, Portuguese, Turkish
LICENSING OPTIONS	Organizational license support 🔗	🖥	If you are in a Pix4D organization, you can access those organizational licenses and see how many are available
	SSO support 🔗	🖥	SSO-enrolled companies can use their defined SSO provider to log in
	Offline license 🔗	🖥	Fully offline licensing available
	Proxy configuration	🖥	The usage of proxys is supported for system or manual proxy configurations

HARDWARE SPECS 🔗

CPU: Quad-core or hexa-core Intel i5

GPU: Any NVIDIA GPU that supports OpenGL 4.1 or higher

Disk Space: 150 GB Free Space (2000-5000 images at 20MP). 350 GB Free Space (5000-10000 images at 20MP)

OS: Windows 10, 11 (64 bit) or macOS Sonoma (14.x) + Ventura (13.x)

RAM: 32GB (2000-5000 images at 20MP). 64GB (5000-10000 images at 20MP)

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Get in touch:
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