Pix4Dmapper

Generate 3D models and maps, purely from images

Pix4D

PIX4D
MAPPER

GETTING STARTED WIZARD

NEW PROJECT

START A NEW PROJECT

IMPORT IMAGES

CHOOSE A TEMPLATE

START PROCESSING

VERSATILE

Multiple:
· Industries
· Applications
· Inputs
· Outputs

License options:
· Monthly, yearly, perpetual licenses
· Two devices
· Unlimited processing (fair usage policy on cloud)
· Desktop + cloud

Multiple languages: English, Japanese, German, Spanish, French, Chinese (Traditional and Simplified), Italian, Russian, Korean

Support: Count on our personal technical support, expert community, a detailed knowledge base online and expanding training programs to help you keep learning.

ACCURATE

Achieve survey-grade results from lightweight and compact cameras to large-frame metric cameras:
· 1-2 pixel GSD in X, Y directions
· 1-3 pixels GSD in the Z direction

Precise measurements even for projects without geolocations by assigning linear scales.

Quality results: Get the results you require. Customize your projects by defining the area of interest, customizing processing options, or adding ground control points.

Automation: High-speed processing using GPUs and multi-thread CPUs. Let the software handle all the calibration, image processing, and object classification.

Pix4Dmapper Pro Preview
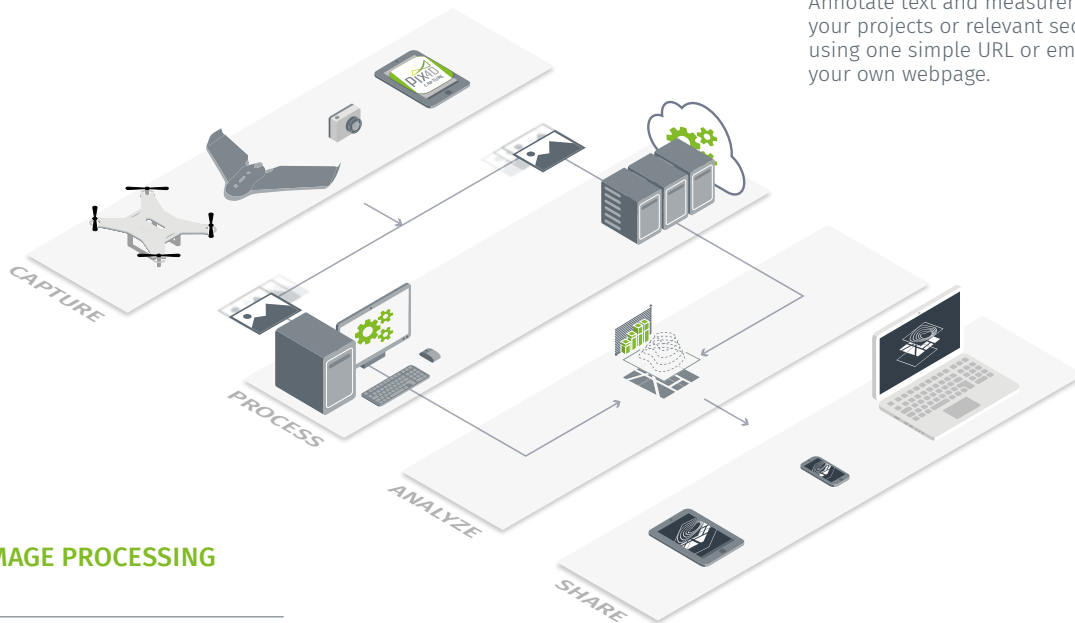
Project   Process   View   rayCloud   Help

Project   Process   View   Navigation   Clipping   Point Cloud Editing   Unclassified   Assign

Home
Map View
rayCloud
Volumes
Mosaic Editor
Index Calculator

Processing

Properties

▼ Selection

Densified Point
  Number of Images Visible (n):   44
  Computed Position (m):   308099.68, 5153836.25, 405.60

Help

▼ Images

Image Size   Zoom Level

EP-11-16323_0068_0270.JPG

EP-11-16323_0068_0272.JPG

rayCloud ™
The power of understanding photogrammetry

A unique environment where 3D models and images interact. A novel, visual way of understanding photogrammetry, performing virtual inspections, and giving you complete control over quality.

Import, mark and edit ground control points and manual tie points using both original images and 3D information to improve the accuracy of your project.

HYBRID DESKTOP + CLOUD

COLLABORATE

Annotate & share
Annotate text and measurements and share your projects or relevant section with anyone using one simple URL or embed results on your own webpage.

CAPTURE

PROCESS

ANALYZE

SHARE

FLEXIBLE IMAGE PROCESSING OPTIONS

Processing templates
Use default templates for automatic processing or custom settings for full control of quality, data, and projects.

ENHANCE PRODUCTIVITY WITH MACHINE LEARNING OBJECT CLASSIFICATION

Automatic point cloud classification
Organizes points into specific classes to distinguish vegetation, buildings, man-made objects and ground points to extract bare-earth terrain or for many other applications.

ELIMINATE NOISE FOR MORE DEFINITIVE RESULTS

Point-cloud editor
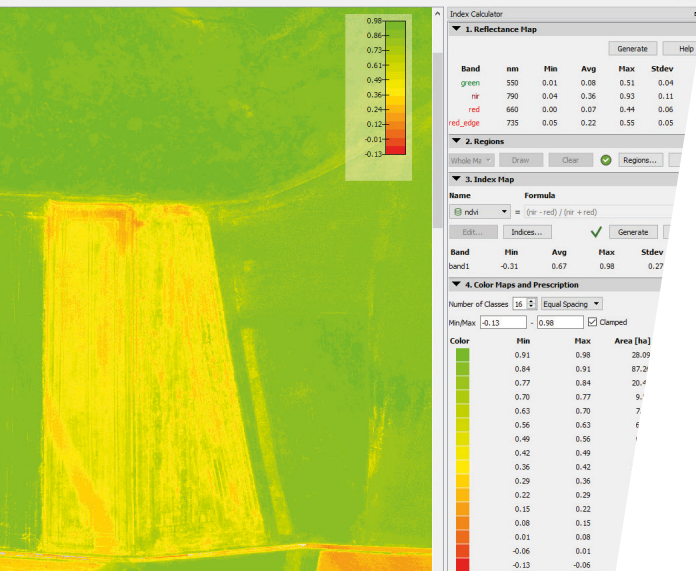Select or delete points from the point cloud using various selection and editing tools.

IMPROVE VISUAL INTEGRITY

Orthomosaic editor
Create and edit regions in the orthomosaic. Choose the best content from multiple underlying images to remove moving objects or artifacts.

UNLOCK THE FULL POTENTIAL OF MULTISPECTRAL DATA

Index calculator
Create and customize index maps using multispectral imagery with radiometric accuracy. Produce application maps by integrating the results, such as prescription maps, into all major farm management software.

Index Calculator

1. Reflectance Map

Generate   Help

Band	nm	Min	Avg	Max	Stdev
green	550	0.01	0.08	0.51	0.04
nir	790	0.04	0.36	0.93	0.11
red	660	0.00	0.07	0.44	0.06
red_edge	735	0.05	0.22	0.55	0.05

2. Regions

Whole Ma   Draw   Clear   Regions...

3. Index Map

Name   Formula

ndvi   = (nir - red) / (nir + red)

Edit...   Indices...   Generate

Band	Min	Avg	Max	Stdev
band1	-0.31	0.67	0.98	0.27

4. Color Maps and Prescription

Number of Classes 16   Equal Spacing

Min/Max -0.13 – 0.98   Clamped

Color	Min	Max	Area [ha]
	0.91	0.98	28.09
	0.84	0.91	87.2
	0.77	0.84	20.4
	0.70	0.77	9.
	0.63	0.70	7
	0.56	0.63	6
	0.49	0.56	
	0.42	0.49	
	0.36	0.42	
	0.29	0.36	
	0.22	0.29	
	0.15	0.22	
	0.08	0.15	
	0.01	0.08	
	-0.06	0.01	
	-0.13	-0.06	

SHARPEN EDGES, SMOOTH SURFACES, IMPROVE RESULTS

DSM and mesh editing
Create surfaces in the 3D model to flatten an area, or to fill up holes caused by insufficient image content.
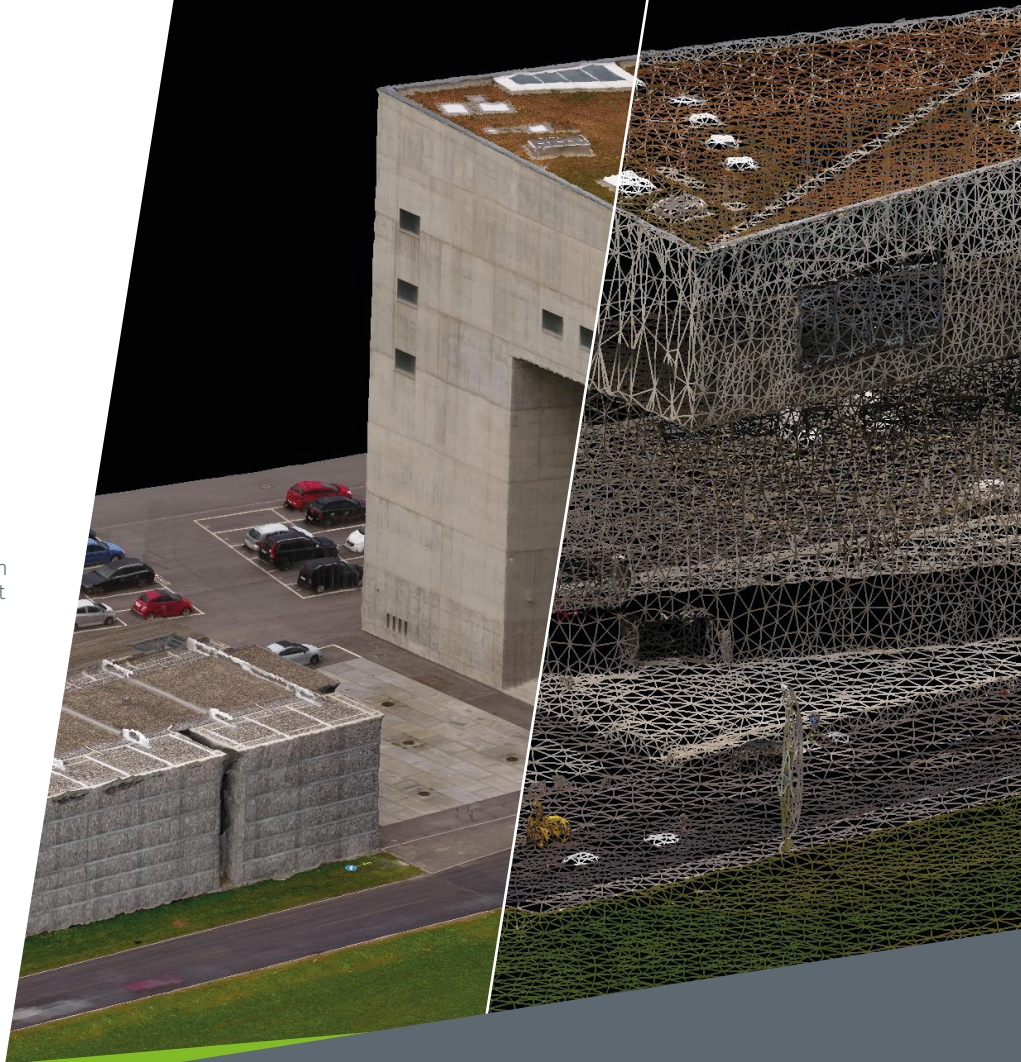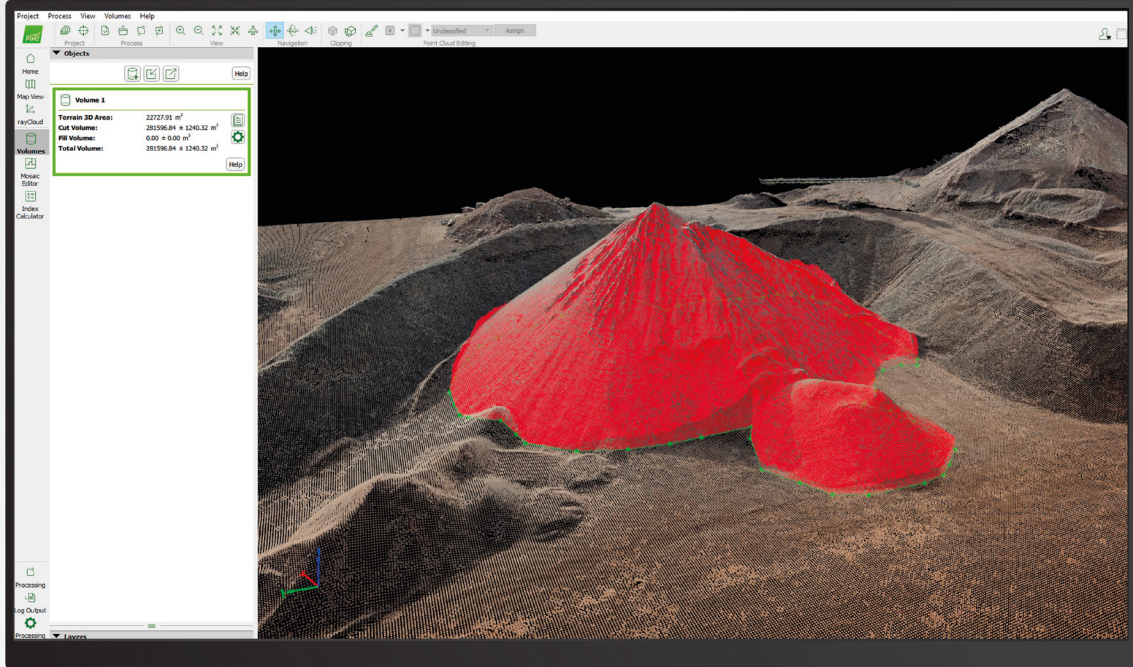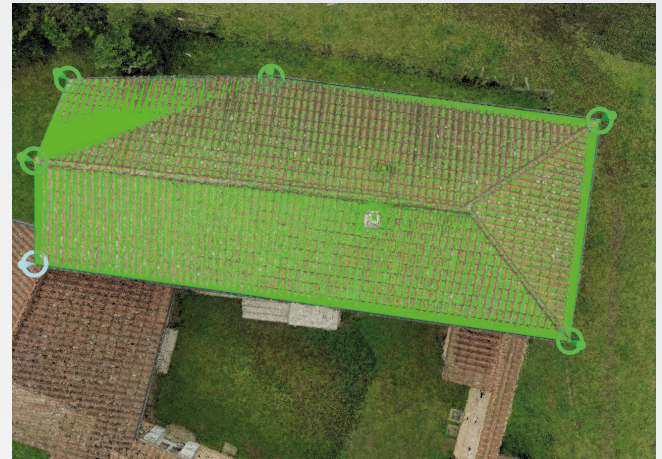
MEASURE

Polyline and surface
Measure distances and areas by setting vertexes in the 3D model and in the original images.

Volume
Measure volumes on a perfect 3D representation, with fully-adjustable base height.

*Assign any custom scale to non-georeferenced projects for accurate measurement

ADDITIONAL FEATURES

· Project merging / splitting

· Detailed quality report

· Error ellipsoid displaying MTP/GCPs accuracy in 3D

· Rolling shutter correction

· Scale and orientation constraint

· Image masking for disregarding invalid pixels among all images

· Volume management for stockpile or earthwork inventory

· Object creation and digitization

· Tiled Level-of-Detail (LoD) mesh

· Import laser points for DSM generation

· Automatic DTM generation

· Orthoplane for creating orthomosaic of any plane/facade

· Radiometric adjustment to generate accurate index and thermal maps

· Custom formula for raster computation based on reflectance values

· Multi-core CPU processing

· GPU-accelerated processing

· Fly through video

Hardware Specs

CPU: (quad-core or hexa-core Intel i7/ Xeon recommended)

GPU: Compatible with OpenGL 3.2 (GeForce 2 GB RAM recommended)

RAM: 16GB-32GB

OS: Windows 7, 8, 10 64-bit

Metric cameras, large-frame images
.jpg, .tif

DSLR RGB cameras, drone images
.jpg, .tif

Multispectral images
.jpg, .tif

Thermal images
.jpg, .tif

Fisheye cameras, GoPro images
.jpg, .tif

360° camera images
.jpg, .tif
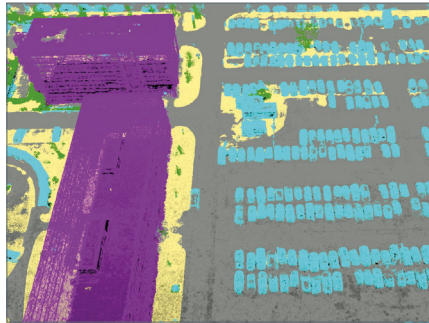
Camera rig images
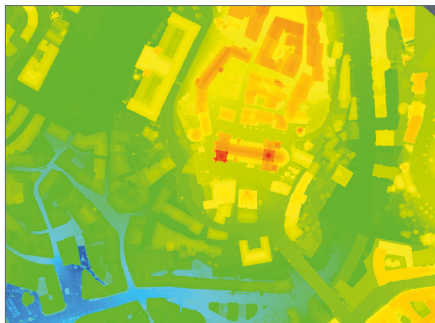.jpg, .tif

4K videos
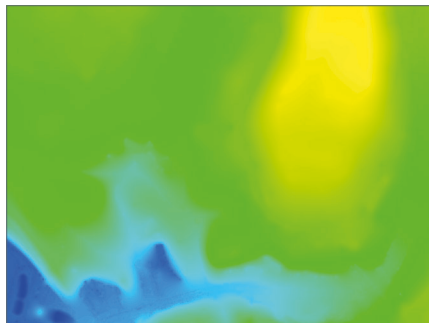.mp4,.mov, .wmv, .avi

Color point cloud
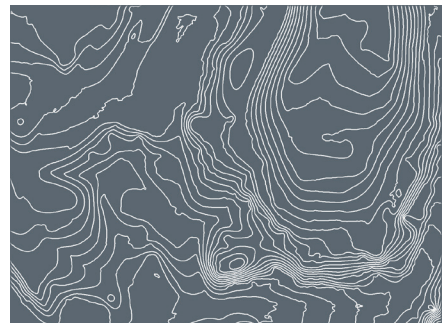.las, .laz, .ply, .xyz

Classified point cloud
.las, .laz

Orthomosaic
GeoTiff (.tif), .kml

Digital surface model (DSM)
GeoTiff (.tif), .xyz, .las, .laz

**Digital terrain model (DTM)/
Digital elevation model (DEM)**
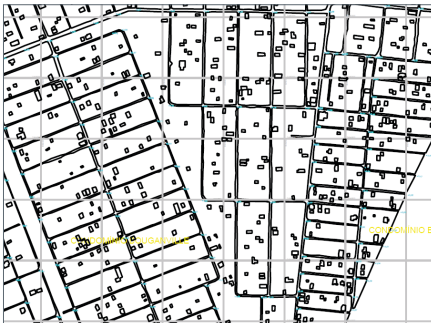GeoTiff (.tif)

Contour lines
.shp, .dxf, .pdf

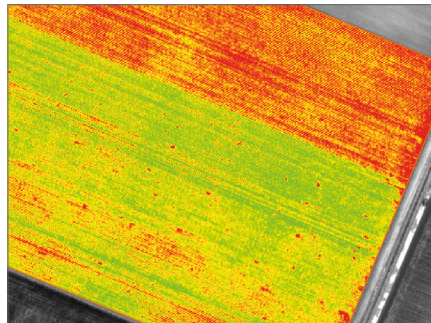**Facade digital surface model**
GeoTiff (.tif)

Facade orthomosaic
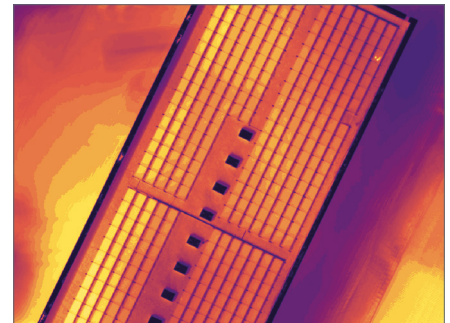GeoTiff (.tif)

3D textured mesh
.ply, .fbx, .dxf, .obj, .pdf
Level-of-detail mesh in .osgb, .slpk

Digitized vectors
.shp

Index maps
GeoTiff (.tif), .shp

Thermal maps
GeoTiff (.tif)

PIX4D

MEASURE FROM IMAGES
PROFESSIONAL DRONE MAPPING AND PHOTOGRAMMETRY SOFTWARE

LAUSANNE

BERLIN

SAN FRANCISCO

SHANGHAI

Pix4D.com