



FEATURES		ADVANTAGES
INTERFACE	Python SDK interface for easy integration	Design your pipelines using the industry-standard scripting language and semantically versioned SDK
	Simplified access to 3rd party integrations	Integrate 3rd party solutions within processing pipelines
	OPF	https://www.pix4d.com/labs/opf-open-photogrammetry-format/
OPERATIONS	Short processing times	Get SLAs of your deliveries under control. Process more data faster within the same amount of time
	OS: Windows (64 bit) + Ubuntu22 (64 bit)	Administration friendly OS suitable for VM, virtualization, containerization
	Multicore CPU	Leverage the power of all assigned physical cores and hyperthreading
	GPU processing	Improve processing speeds significantly when suitable GPU is available compared to standard CPU
	HW resource management	Control your hardware resource usage for all major processing steps
	Creative custom pipelines	Feel free to create pipelines for any scenarios
	Custom I/O directories (images, exports, logs, reports, etc.)	Decide on and define locations of all your files with extended non-ASCII character support
	Processing step timeouts	Set timeout for processing steps
	Large data sets 10'000+ images	Scale up your operations
	Large frame images	Process images with resolutions even over 100Mpx
INPUTS	Internal camera database	User modifiable precalibrated camera modes with known camera parameters
	Multispectral images in camera rig	Import images from multispectral sensors
	RGB images	Import images from standard RGB sensors in JPEG format
	Aerial and terrestrial captures	Process images from any aerial, terrestrial platforms (perspective and fisheye lens)
	Multi-camera datasets	Create projects using images captured by different cameras models
	LiDAR + RGB images from PIX4Dcatch	Process both LiDAR and RGB image outputs from PIX4Dcatch as full terrestrial workflows
	RTK/PPK accurate geolocations	Get faster and more accurate project outputs runs when processing images with high accuracies
	Externally supplied image geotags	Supply your values of image geolocations and orientations from a file
	Ground Control Points (GCPs) and Checkpoints	Import 3D GCPs or/and 3D checkpoints to improve or check project absolute geolocation accuracies
	Manual Tie Points (MTPs) and Manual Tie Checkpoints	Import MTPs to improve the scene reconstructions or check the quality of the processed projects
	Known or custom CRS	Select EPSG code, WKT of custom WKT to create your 2D/3D transformations
	Local vertical CRS	60+ geoid models available
	Site localization CRS	Import a WKT to set your custom coordinate system for the Site Localization projects
	Arbitrary CRS	Create local/site coordinate system
	Region of interest (ROI)	Draw area multipolygons to generate results inside/outside specific boundaries
	Assets with non-ASCII characters	Non-ASCII characters may be used in the input, output directories, file names, etc.
	Radiometry calibration panels	Add orthogonal layer of reflectance accuracy
	Image masks	Create masks in images to improve the point cloud, mesh, by hiding or removing objects
	OPF	Import your photogrammetry project from PIX4Dmatic, PIX4Dcloud or from an external source
PROCESSING	CS coordinates 2D/3D transformations	Transform your input CS coordinates into desired output cartesian CS coordinates
	Processing templates and/or advanced settings access	Fast, accurate, large scenes, multispectral, legacy processing...
	Automatic ITPs	Generate tie points out of the structural line intersections (indoor/outdoor)
	Fast processing	Generate high-resolution 2D maps from aerial images in minutes (available for plain surfaces)
	Accurate processing	The King of the photogrammetry precision and accuracy.
	AutoGCPs	Let PIX4Dengine automatically mark images at the GCP locations
	Sky & Water segment detection (filter)	Automatically remove the sky/water segments from images to remove noise from project outputs
	Depth point cloud	Create point cloud from PIX4Dcatch LiDAR inputs
	Point cloud densification	Produce a detailed dense 3D point cloud with automatic brightness, and color balancing compensations
	Depth & dense fusion	Fuse depth point clouds points into dense point clouds
	Mesh	Generate geometries and textures to create 3D meshes
	DSM & DTM	Create digital surface and terrain models
	Orthomosaic	Create orthomosaic based on the digital surface model and captured images
	Rig relative calibration	Optimizing rig relatives to improve band alignment for supported multispectral camera rigs
	Radiometric correction	Generate orthomosaics / indices considering specific weather conditions
	Index calculator	Create custom indices by calculating index formulas (NDRE, NDVI, TGI, VARI...- available also for RGB)
	Pan-sharpening	Use the Pan-sharpening function to get higher resolution outputs
EXPORTS	Point cloud (LAS,LAZ)	Export generated point clouds in .laz/.las format (v1.4 and v1.2) for depth, fusion and densified point clouds
	Point cloud (Cesium 3D tiles, SLPK)	Export a point cloud in tiled Level-of-detail (LOD) Cesium 3D tiles (.b3dm, json) and .slpk file format
	3D Mesh (OBJ, cesium 3D tiles, SLPK)	Export a 3D textured mesh in tiled Level-of-detail (LOD), OBJ for legacy mesh algorithm only
	DSM, DTM, Orthomosaic, reflectance, index maps (.GeoTiff/COG)	Export generated geotiffs in a single .tiff or tiles, cloud optimized geotiff format with GDAL settings
	OPF	Export your photogrammetry process into files, re-import back later or to other processing tool
Misc.	Quality report	Assess quality metrics of scene reconstructions via JSON or generated HTML report
	Onboarding services included	
	Benchmark metrics on selected AWS EC2 available upon request	