

Port of Albany 2023-02-0 - Quality Report

PIX4Dmatic 1.40.0

Cameras	DJI M3E_12.3_5280x3956
Average GSD	0.085 ftUS
Project CRS	NAD83(2011) / New York East (ftUS) + NAVD88 height (ftUS) - EPSG:6537+6360 [GEOID18]

Quality check

Matches	Median of 32713 matches per calibrated image	✓
Dataset	100.0% calibrated (536/536)	✓
Camera optimization	0.0% relative difference between initial and optimized internal camera parameters	✓
GCPs	19 GCP(s)	⚠
Checkpoints	4 Checkpoint(s), Mean RMS position error 0.037 ftUS / Sigma 0.020	✓
MTPs	0 MTP(s)	

Camera Positions

Internal Camera Parameters

DJI_M3E_12.3_5280x3956. Sensor Dimensions: 17.923 [mm] x 13.429 [mm]

	Focal length	Principal point x	Principal point y	R1	R2	R3	T1	T2
Initial	3722.120 px 12.635 mm	2644.920 px 8.978 mm	1968.030 px 6.680 mm	-0.111	0.010	-0.026	-0.000	-0.000
Optimized	3721.829 px 12.634 mm	2644.061 px 8.975 mm	1957.303 px 6.644 mm	-0.114	0.016	-0.029	-0.000	-0.000
Uncertainties (Sigma)	0.068 px 0.000 mm	0.001 px 0.000 mm	0.001 px 0.000 mm	0.000	0.000	0.000	0.000	0.000

Tie points

1. Ground control points (GCPs)

Label	Position error			Reprojection error [px]	Accuracy		Verified/Marked
	X [ftUS]	Y [ftUS]	Z [ftUS]		X/Y [ftUS]	Z [ftUS]	
MJ10					0.066	0.066	0/0
MJ11					0.066	0.066	0/0
MJ12					0.066	0.066	0/0
MJ13					0.066	0.066	0/0
MJ14					0.066	0.066	0/0
MJ15					0.066	0.066	0/0
MJ16					0.066	0.066	0/0
MJ17					0.066	0.066	0/0
MJ18					0.066	0.066	0/0
MJ19					0.066	0.066	0/0
MJ20					0.066	0.066	0/0
1001					0.066	0.066	0/0
1002					0.066	0.066	0/0
1003					0.066	0.066	0/0
1004					0.066	0.066	0/0
1005					0.066	0.066	0/0
1006					0.066	0.066	0/0
1007					0.066	0.066	0/0
1008					0.066	0.066	0/0

2. Checkpoints (CPs)

Label	Position error			Reprojection error [px]	Accuracy		Verified/Marked
	X [ftUS]	Y [ftUS]	Z [ftUS]		X/Y [ftUS]	Z [ftUS]	

GCP1	0.017	0.012	-0.062	0.3	0.066	0.066	6/6
GCP2	0.051	0.002	-0.061	0.7	0.066	0.066	6/6
GCP3	-0.003	-0.051	-0.041	0.8	0.066	0.066	6/6
GCP4	-0.017	-0.007	-0.064	0.4	0.066	0.066	9/9
Mean	0.012	-0.011	-0.057	0.5			
Min	-0.017	-0.051	-0.064	0.1			
Max	0.051	0.012	-0.041	1.6			
RMS	0.028	0.027	0.058	0.6			
Sigma	0.025	0.024	0.009	0.4			

Hardware & settings

System information

Hardware: CPU: 12th Gen Intel(R) Core(TM) i9-12950HX, cpus=1, threads=24
 RAM: 127.67 GB
 GPU: NVIDIA Corporation NVIDIA RTX A5500 Laptop GPU/PCIe/SSE2
 Operating system: Windows 11

Coordinate reference systems

Image coordinate reference system(s): WGS 84 - EPSG:4326
 Ground control point (GCP) coordinate reference system: NAD83(2011) / New York East (ftUS) + NAVD88 height (ftUS) - EPSG:6537+6360 [GEOID18]
 Project coordinate reference system: NAD83(2011) / New York East (ftUS) + NAVD88 height (ftUS) - EPSG:6537+6360 [GEOID18]

Processing settings

Calibration Completed	Densification Completed	DSM Completed	Orthomosaic Completed
Pipeline: Standard Template: Map Internals confidence: High Image scale: 1/1 Max extracted keypoints: Automatic Reoptimized: No	Noise filter: Enabled Image scale: 1/2 Min number of matches: 3 Multiscale: Enabled Density: Optimal Sky filter: Disabled	Input point cloud: Dense Interpolation: Enabled Surface smoothing: 12 Resolution: 0.085 ftUS/px	Algorithm: Hardware accelerated Oblique: Disabled Deghosting: Enabled Resolution: 0.085 ftUS/px
10m 28s	28m 57s	38m 24s	4m 5s