

Quality Report



Generated with Pix4Ddiscovery version 4.5.6



Important: Click on the different icons for:



Help to analyze the results in the Quality Report



Additional information about the sections



Click [here](#) for additional tips to analyze the Quality Report

Summary



Project	try1
Processed	2025-11-13 20:44:35
Camera Model Name(s)	PMA2616_16.0_6252x4168 (RGB)
Average Ground Sampling Distance (GSD)	4.55 cm / 1.79 in
Area Covered	0.656 km ² / 65.6409 ha / 0.25 sq. mi. / 162.2861 acres
Time for Initial Processing (without report)	05m:00s

Quality Check



Images	median of 74006 keypoints per image	
Dataset	152 out of 155 images calibrated (98%), all images enabled	
Camera Optimization	7.93% relative difference between initial and optimized internal camera parameters	
Matching	median of 15798 matches per calibrated image	
Georeferencing	yes, no 3D GCP	

Preview

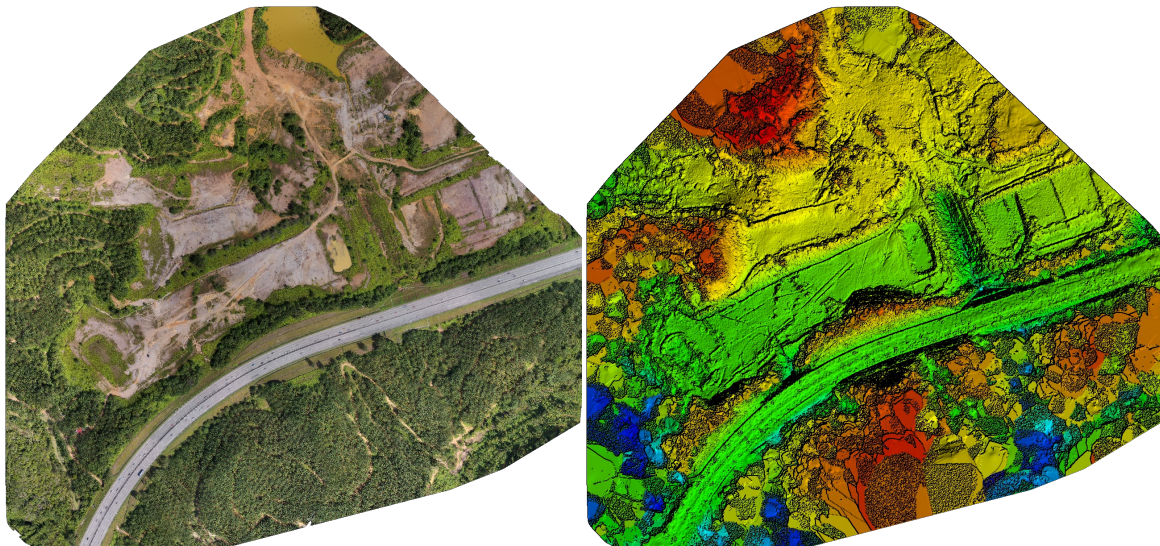


Figure 1: Orthomosaic and the corresponding sparse Digital Surface Model (DSM) before densification.

Calibration Details



Number of Calibrated Images	152 out of 155
Number of Geolocated Images	155 out of 155

? Initial Image Positions

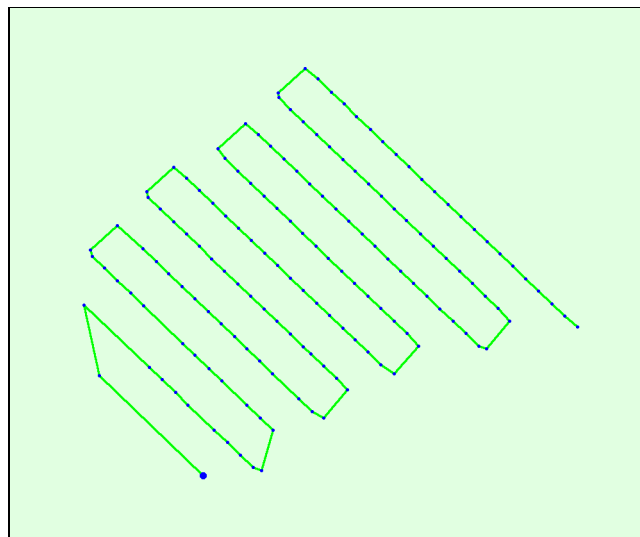
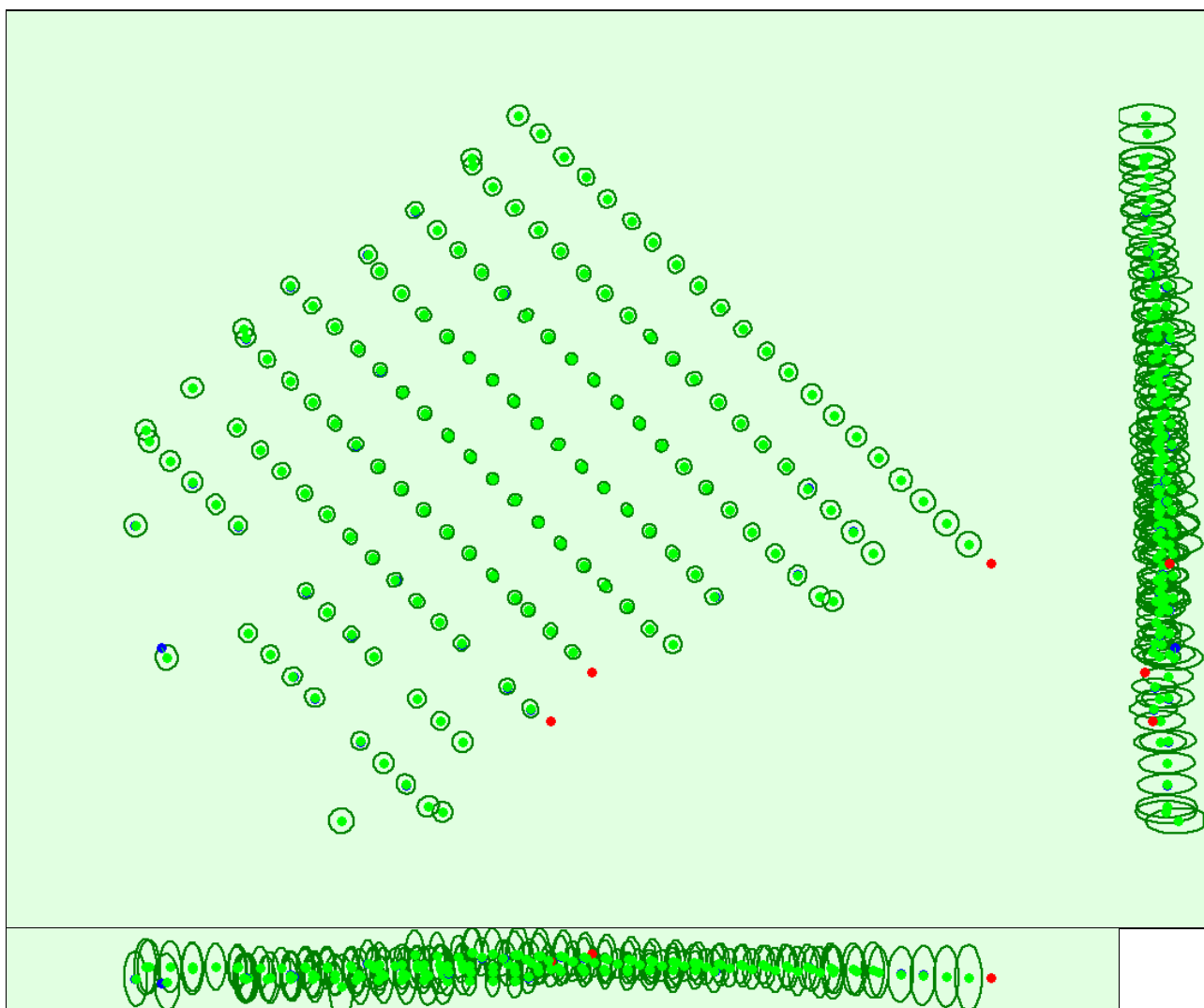


Figure 2: Top view of the initial image position. The green line follows the position of the images in time starting from the large blue dot.

? Computed Image/GCPs/Manual Tie Points Positions



Uncertainty ellipses 100x magnified

Figure 3: Offset between initial (blue dots) and computed (green dots) image positions as well as the offset between the GCPs initial positions (blue crosses) and their computed positions (green crosses) in the top-view (XY plane), front-view (XZ plane), and side-view (YZ plane). Red dots indicate disabled or uncalibrated images. Dark green ellipses indicate the absolute position uncertainty of the bundle block adjustment result.

? Absolute camera position and orientation uncertainties

	X[m]	Y[m]	Z[m]	Omega [degree]	Phi [degree]	Kappa [degree]
Mean	0.108	0.108	0.260	0.038	0.045	0.015
Sigma	0.019	0.019	0.060	0.003	0.002	0.002

? Overlap

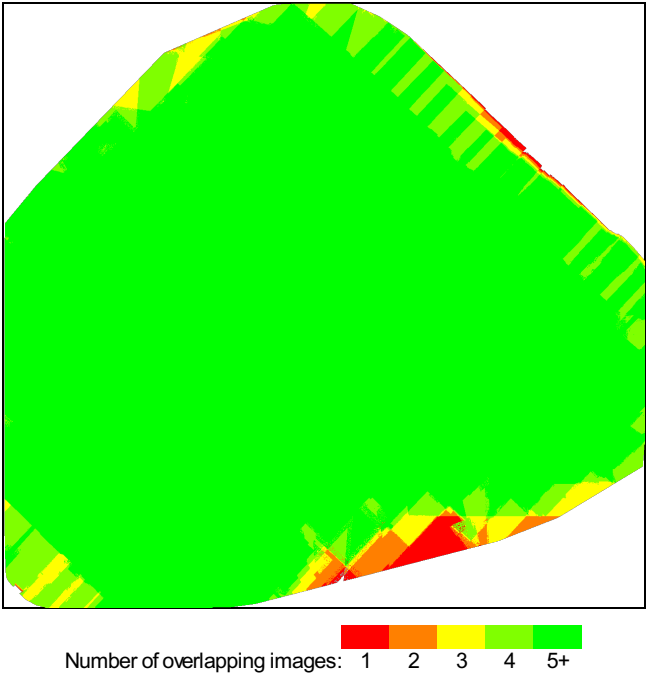


Figure 4: Number of overlapping images computed for each pixel of the orthomosaic. Red and yellow areas indicate low overlap for which poor results may be generated. Green areas indicate an overlap of over 5 images for every pixel. Good quality results will be generated as long as the number of keypoint matches is also sufficient for these areas (see Figure 5 for keypoint matches).

Bundle Block Adjustment Details

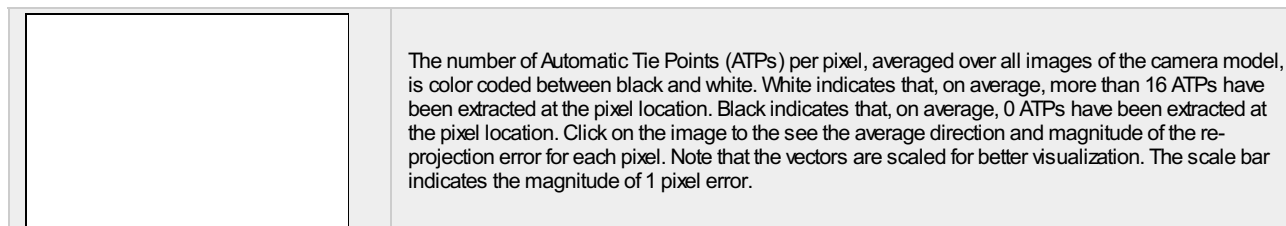
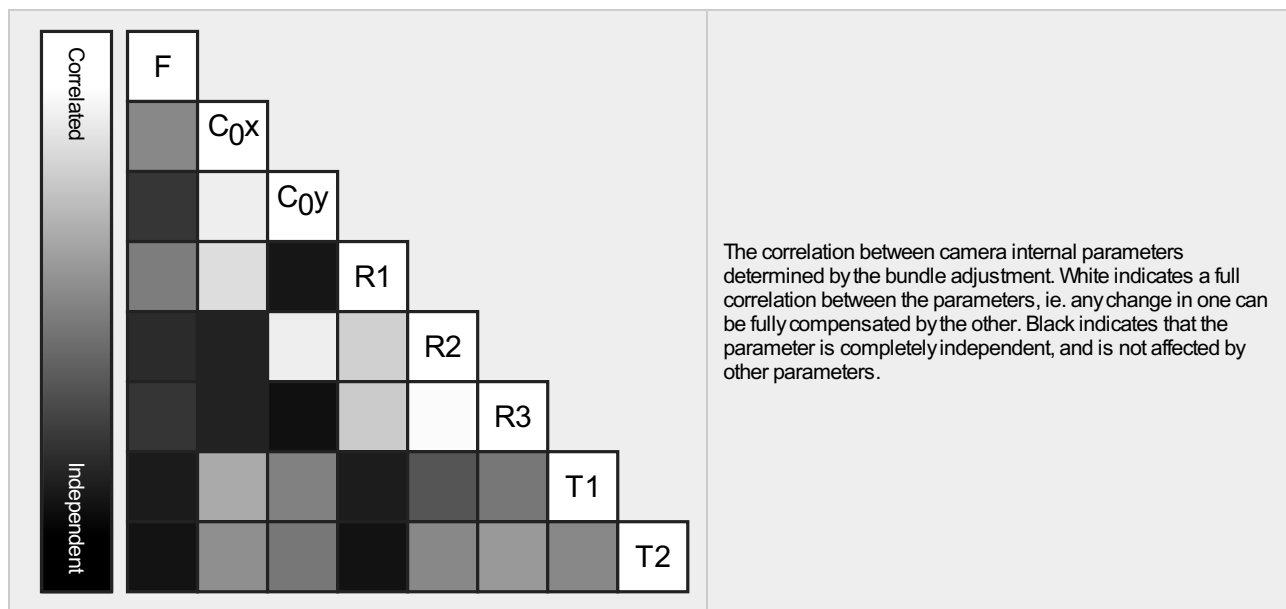
Number of 2D Keypoint Observations for Bundle Block Adjustment	2616063
Number of 3D Points for Bundle Block Adjustment	920244
Mean Reprojection Error [pixels]	0.153

? Internal Camera Parameters

📷 PMA2616_16.0_6252x4168 (RGB). Sensor Dimensions: 25.400 [mm] x 16.933 [mm]

EXIF ID: PMA2616_16.0_6252x4168

	Focal Length	Principal Point x	Principal Point y	R1	R2	R3	T1	T2
Initial Values	3938.268 [pixel] 16.000 [mm]	3126.000 [pixel] 12.700 [mm]	2084.000 [pixel] 8.467 [mm]	0.000	0.000	0.000	0.000	0.000
Optimized Values	4250.876 [pixel] 17.270 [mm]	3143.132 [pixel] 12.770 [mm]	2047.068 [pixel] 8.317 [mm]	0.041	-0.083	0.058	-0.001	0.000
Uncertainties (Sigma)	0.484 [pixel] 0.002 [mm]	0.095 [pixel] 0.000 [mm]	0.069 [pixel] 0.000 [mm]	0.000	0.000	0.000	0.000	0.000



? 2D Keypoints Table



	Number of 2D Keypoints per Image	Number of Matched 2D Keypoints per Image
Median	74006	15798
Min	59407	66
Max	82828	36824
Mean	74050	17211

? 3D Points from 2D Keypoint Matches



	Number of 3D Points Observed
In 2 Images	637118
In 3 Images	132107
In 4 Images	53615
In 5 Images	29341
In 6 Images	17497
In 7 Images	12889
In 8 Images	9955
In 9 Images	7834
In 10 Images	5671
In 11 Images	3931
In 12 Images	3352
In 13 Images	2622
In 14 Images	2114
In 15 Images	1175
In 16 Images	416
In 17 Images	264
In 18 Images	192
In 19 Images	115
In 20 Images	33
In 21 Images	3

? 2D Keypoint Matches

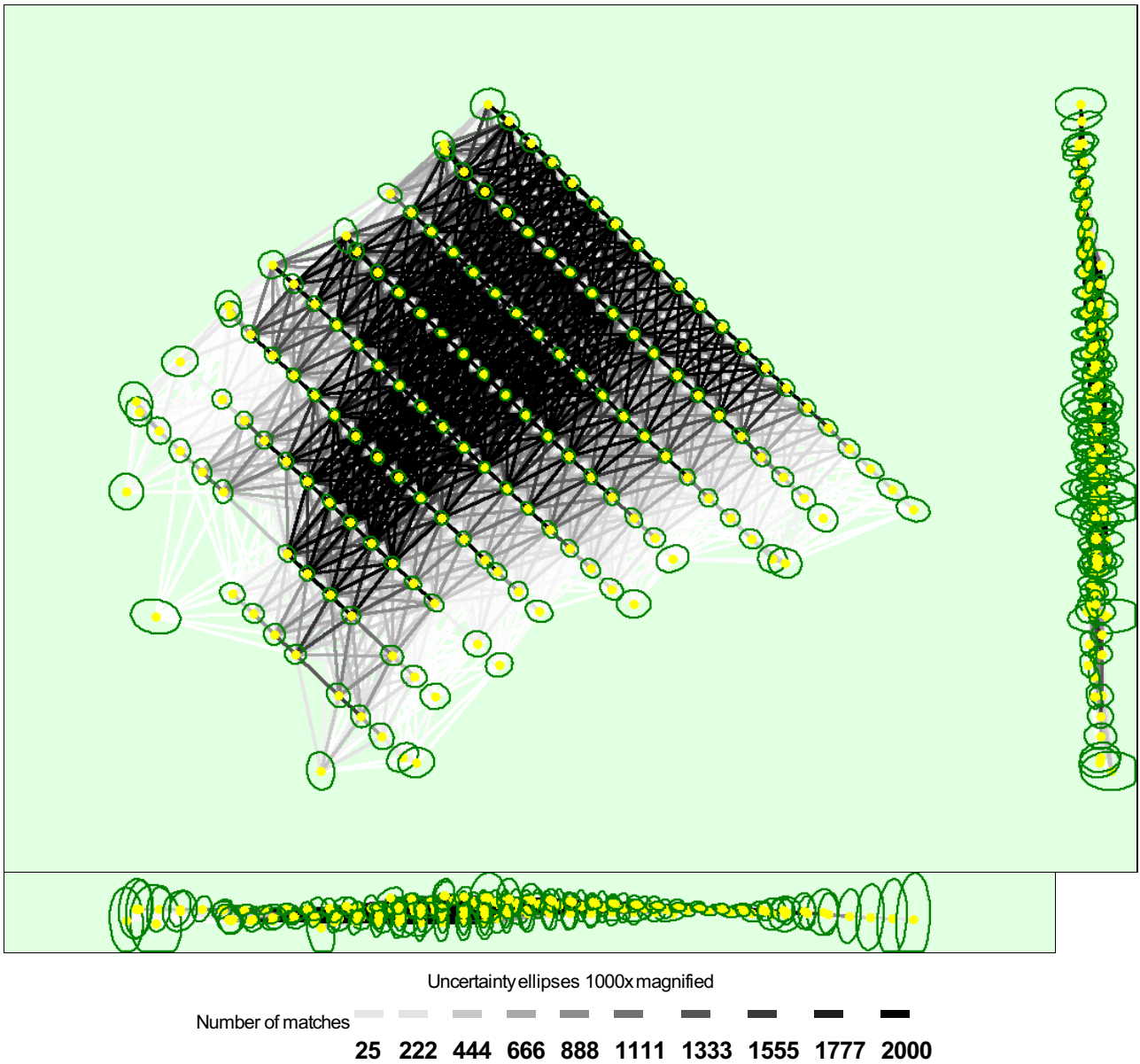


Figure 5: Computed image positions with links between matched images. The darkness of the links indicates the number of matched 2D keypoints between the images. Bright links indicate weak links and require manual tie points or more images. Dark green ellipses indicate the relative camera position uncertainty of the bundle block adjustment result.

? Relative camera position and orientation uncertainties



	X[m]	Y[m]	Z[m]	Omega [degree]	Phi [degree]	Kappa [degree]
Mean	0.013	0.012	0.017	0.008	0.007	0.002
Sigma	0.005	0.004	0.010	0.004	0.003	0.001

Geolocation Details



? Absolute Geolocation Variance



Mn Error [m]	Max Error [m]	Geolocation Error X[%]	Geolocation Error Y[%]	Geolocation Error Z[%]
-	-15.00	0.00	0.00	0.00
-15.00	-12.00	0.00	0.00	0.00
-12.00	-9.00	0.00	0.00	0.00

-9.00	-6.00	0.66	0.00	0.00
-6.00	-3.00	0.00	0.00	0.00
-3.00	0.00	28.29	65.79	59.87
0.00	3.00	71.05	33.55	40.13
3.00	6.00	0.00	0.00	0.00
6.00	9.00	0.00	0.00	0.00
9.00	12.00	0.00	0.66	0.00
12.00	15.00	0.00	0.00	0.00
15.00	-	0.00	0.00	0.00
Mean [m]		-0.000623	0.000078	-0.002670
Sigma [m]		0.538750	0.965841	0.162167
RMS Error [m]		0.538750	0.965841	0.162189

Min Error and Max Error represent geolocation error intervals between -1.5 and 1.5 times the maximum accuracy of all the images. Columns X, Y, Z show the percentage of images with geolocation errors within the predefined error intervals. The geolocation error is the difference between the initial and computed image positions. Note that the image geolocation errors do not correspond to the accuracy of the observed 3D points.

 Relative Geolocation Variance



Relative Geolocation Error	Images X [%]	Images Y [%]	Images Z [%]
[-1.00, 1.00]	99.34	99.34	100.00
[-2.00, 2.00]	100.00	99.34	100.00
[-3.00, 3.00]	100.00	100.00	100.00
Mean of Geolocation Accuracy [m]	5.000000	5.000000	10.000000
Sigma of Geolocation Accuracy [m]	0.000000	0.000000	0.000000

Images X, Y, Z represent the percentage of images with a relative geolocation error in X, Y, Z.

Initial Processing Details



System Information



Hardware	CPU: Intel(R) Core(TM) i7-14700F RAM: 128GB GPU: NVIDIA GeForce RTX 4060 Ti (Driver: 32.0.15.8180)
Operating System	Windows 10 Pro, 64-bit

Coordinate Systems



Image Coordinate System	WGS 84 (EGM96 Geoid)
Output Coordinate System	WGS 84 / UTM zone 47N (EGM96 Geoid)

Processing Options



Detected Template	 3D Maps
Keypoints Image Scale	Full, Image Scale: 1
Advanced: Matching Image Pairs	Aerial Grid or Corridor
Advanced: Matching Strategy	Use Geometrically Verified Matching: no
Advanced: Keypoint Extraction	Targeted Number of Keypoints: Automatic
Advanced: Calibration	Calibration Method: Standard Internal Parameters Optimization: All External Parameters Optimization: All Rematch: Auto, yes

Point Cloud Densification details



Processing Options



Image Scale	multiscale, 1/2 (Half image size, Default)
Point Density	Optimal
Minimum Number of Matches	3
3D Textured Mesh Generation	yes
3D Textured Mesh Settings:	Resolution: Medium Resolution (default) Color Balancing: no
LOD	Generated: no
Advanced: 3D Textured Mesh Settings	Sample Density Divider: 1
Advanced: Image Groups	group1
Advanced: Use Processing Area	yes
Advanced: Use Annotations	yes
Time for Point Cloud Densification	07m:57s
Time for Point Cloud Classification	NA
Time for 3D Textured Mesh Generation	06m:46s

Results



Number of Generated Tiles	1
Number of 3D Densified Points	25734769
Average Density (per m ³)	24.95