

- !** **Important:** Click on the different icons for:
- ?** Help to analyze the results in the Quality Report
 - i** Additional information about the sections

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

Summary i

Project	experiencia_2
Processed	2018-06-11 11:20:18
Camera Model Name(s)	New_FC6310_8.8_4864x3648 (37bee8dd06b900a30510286089a90535) (RGB)
Average Ground Sampling Distance (GSD)	0.11 cm / 0.04 in
Area Covered	0.000 km ² / 0.0049 ha / 0.00 sq. mi. / 0.0121 acres

Quality Check i

? Images	median of 72836 keypoints per image	✓
? Dataset	14 out of 14 images calibrated (100%), all images enabled	✓
? Camera Optimization	4.35% relative difference between initial and optimized internal camera parameters	✓
? Matching	median of 55683 matches per calibrated image	✓
? Georeferencing	yes, site calibration	✓

? Preview i

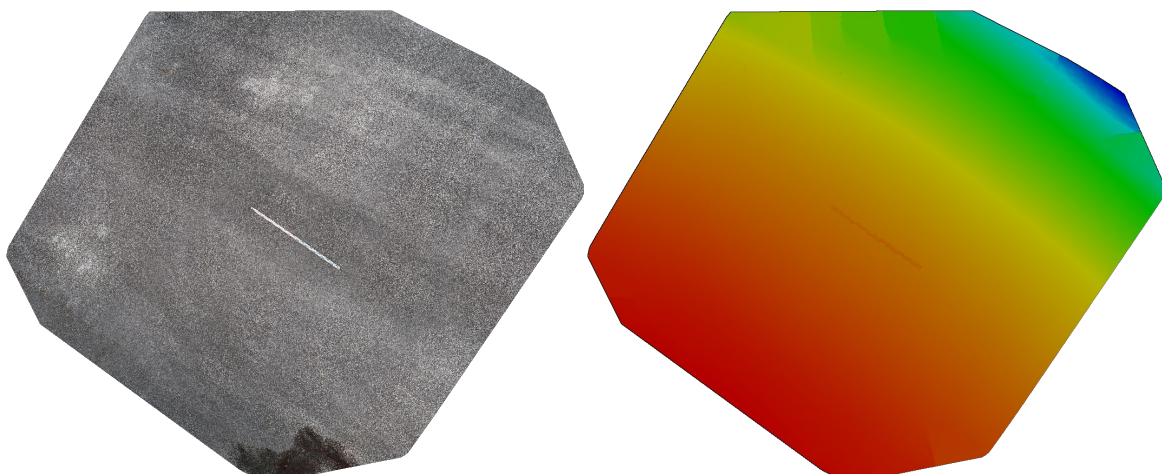


Figure 1: Orthomosaic and the corresponding sparse Digital Surface Model (DSM) before densification.

Calibration Details i

Number of Calibrated Images	14 out of 14
Number of Geolocated Images	14 out of 14

Initial Image Positions

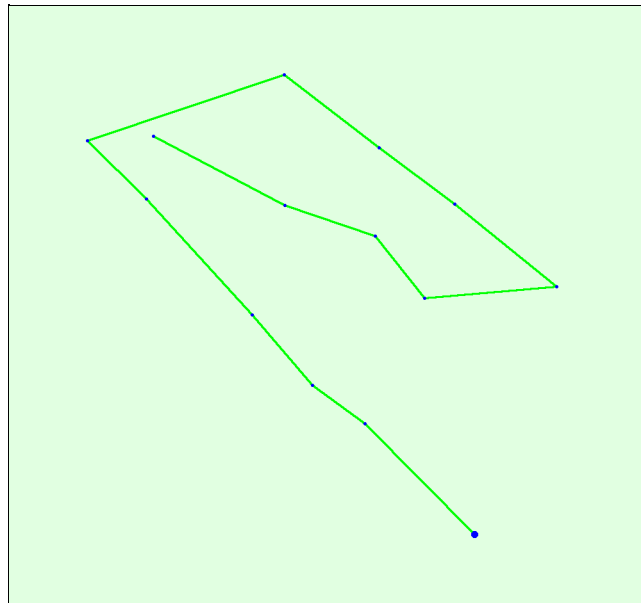
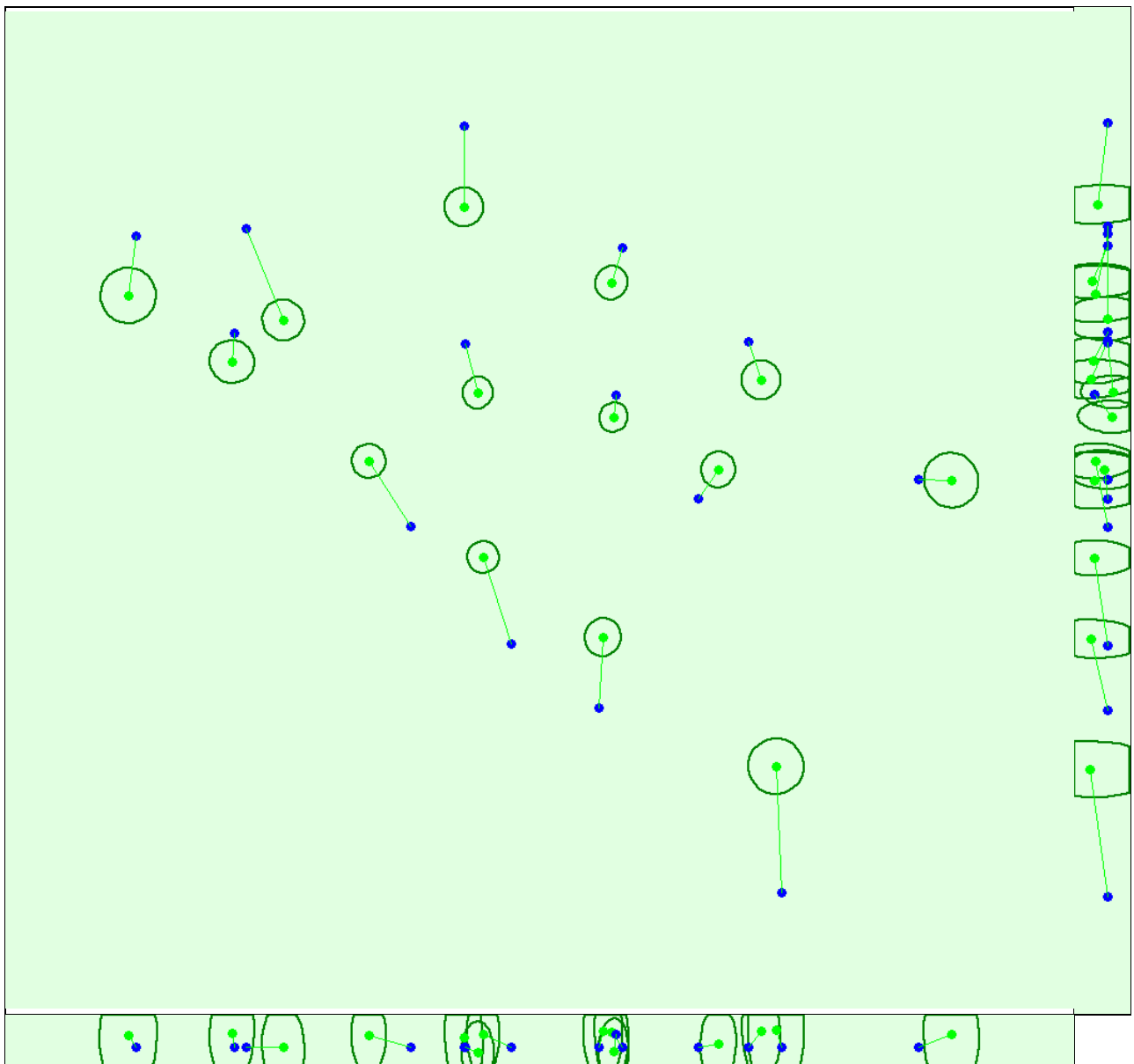


Figure 2: Top view of the initial image position. The green line follows the position of the images in time starting from the large blue dot.

Computed Image/GCPs/Manual Tie Points Positions



Uncertainty ellipses 1x 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). 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	0.163	0.163	0.394	11.492	10.948	3.269
Sigma	0.034	0.034	0.094	0.086	0.092	0.017

? Overlap

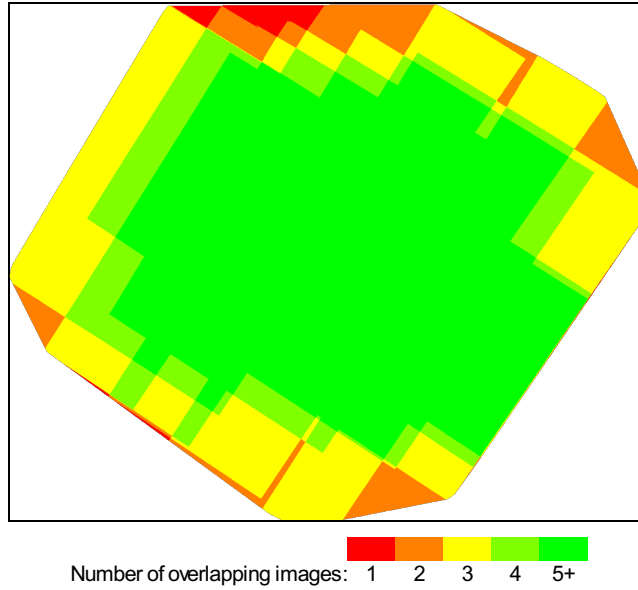


Figure 4: Number of overlapping images computed for each pixel of the orthomosaic. Red and yellow areas indicate low overlap for which poor results may be generated. Green areas indicate an overlap of over 5 images for every pixel. Good quality results will be generated as long as the number of keypoint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

Bundle Block Adjustment Details

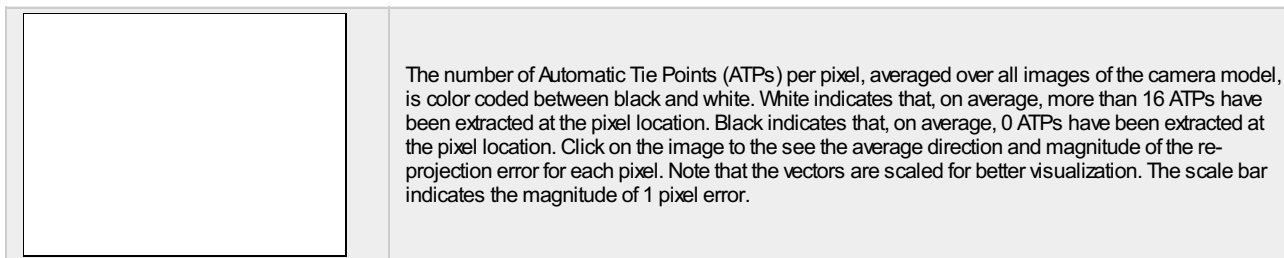
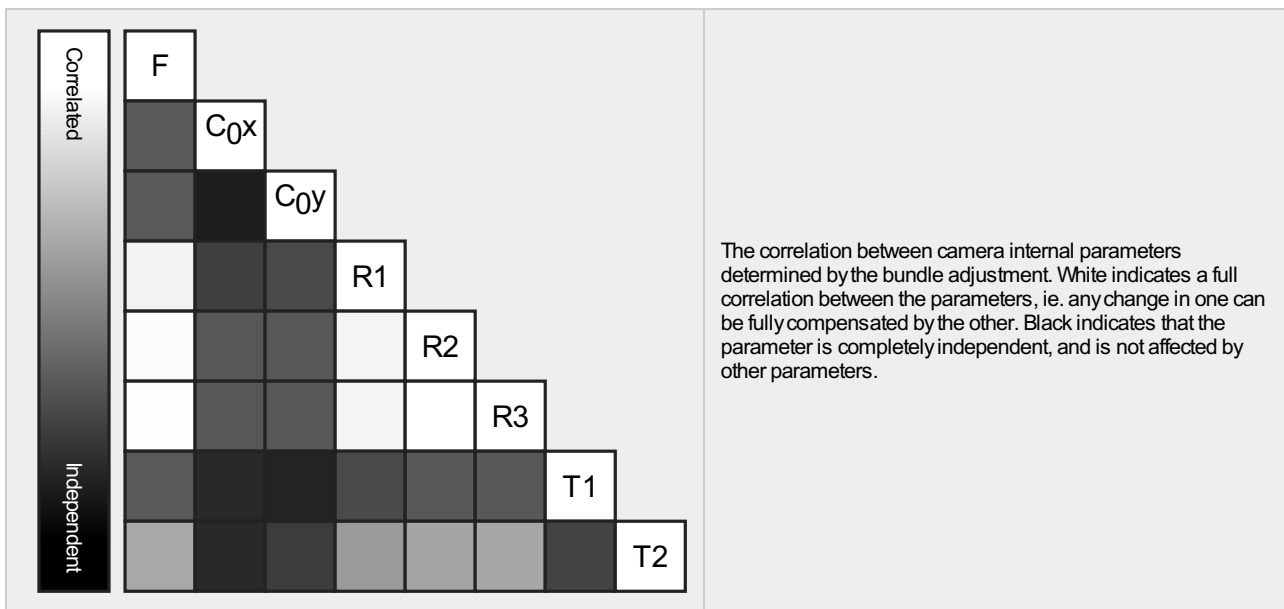
Number of 2D Keypoint Observations for Bundle Block Adjustment	717743
Number of 3D Points for Bundle Block Adjustment	223559
Mean Reprojection Error [pixels]	0.118

? Internal Camera Parameters

New_FC6310_8.8_4864x3648 (37bee8dd06b900a30510286089a90535) (RGB). Sensor Dimensions: 11.407 [mm] x 8.556 [mm]

EXIF ID: FC6310_8.8_4864x3648

	Focal Length	Principal Point x	Principal Point y	R1	R2	R3	T1	T2
Initial Values	2988.640 [pixel] 7.009 [mm]	2424.160 [pixel] 5.685 [mm]	1831.930 [pixel] 4.296 [mm]	0.013	-0.012	0.008	0.002	0.003
Optimized Values	2858.412 [pixel] 6.704 [mm]	2420.483 [pixel] 5.677 [mm]	1828.502 [pixel] 4.288 [mm]	0.012	-0.010	0.006	0.002	0.003
Uncertainties (Sigma)	58.339 [pixel] 0.137 [mm]	2.564 [pixel] 0.006 [mm]	2.947 [pixel] 0.007 [mm]	0.001	0.001	0.001	0.000	0.000



2D Keypoints Table

	Number of 2D Keypoints per Image	Number of Matched 2D Keypoints per Image
Median	72836	55683
Min	68432	33365
Max	75930	59051
Mean	72729	51267

3D Points from 2D Keypoint Matches

	Number of 3D Points Observed
In 2 Images	106322
In 3 Images	49875
In 4 Images	27138
In 5 Images	17467
In 6 Images	10023
In 7 Images	5980
In 8 Images	4136
In 9 Images	1972
In 10 Images	353
In 11 Images	293

2D Keypoint Matches

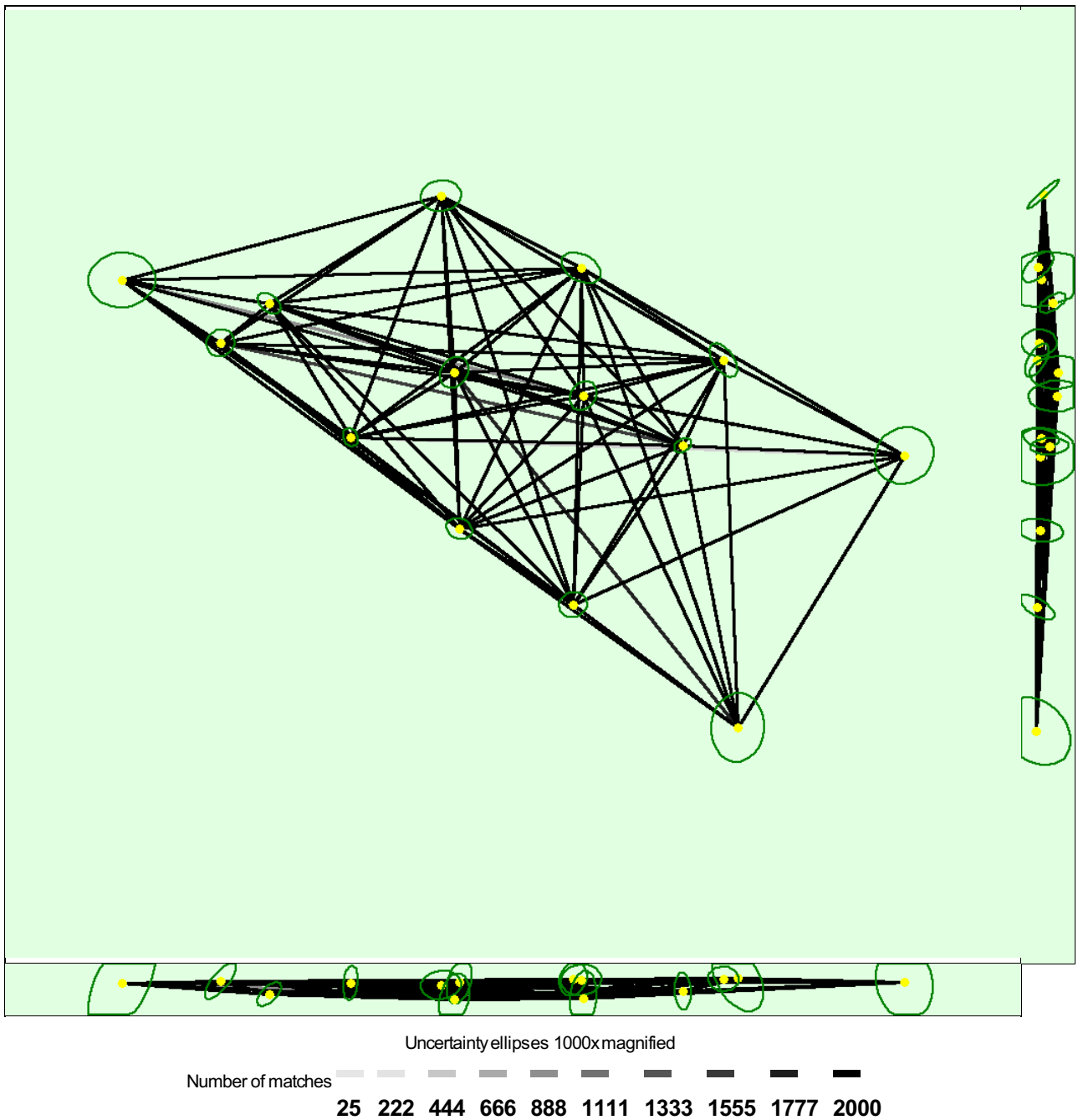


Figure 5: Computed image positions with links between matched images. The darkness of the links indicates the number of matched 2D keypoints between the images. Bright links indicate weak links and require manual tie points or more images. Dark green ellipses indicate the relative camera position uncertainty 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	0.000	0.000	0.000	0.009	0.010	0.005
Sigma	0.000	0.000	0.000	0.003	0.003	0.002

Geolocation Details

Absolute Geolocation Variance

Min 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	0.00	0.00	0.00
-6.00	-3.00	0.00	0.00	0.00
-3.00	0.00	50.00	35.71	78.57
0.00	3.00	50.00	64.29	21.43
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	0.00	0.00
12.00	15.00	0.00	0.00	0.00
15.00	-	0.00	0.00	0.00
Mean [m]		-0.012439	0.016968	-0.069790
Sigma [m]		0.163232	0.512626	0.074447
RMS Error [m]		0.163705	0.512906	0.102044

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.

Geolocation Coordinate System Transformation

Transformation of The Geolocation	X	Y	Z
Translation [m]	-515168.000000	-4398328.000000	0.000000
Rotation [degree]	0.000000	0.000000	0.000000
Scale	1.000000		

Transformation applied on the image geolocation with projection WGS 84 / UTM zone 29N (egm96).

Relative Geolocation Variance

Relative Geolocation Error	Images X[%]	Images Y[%]	Images Z[%]
[-1.00, 1.00]	100.00	100.00	100.00
[-2.00, 2.00]	100.00	100.00	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) i5-6500 CPU @ 3.20GHz RAM: 8GB GPU: NMDIA GeForce GTX 950 (Driver: 23.21.13.9135)
Operating System	Windows 10 Home, 64-bit

Coordinate Systems

Image Coordinate System	WGS84 (egm96)
Output Coordinate System	Arbitrary (m)

Processing Options

Detected Template	No Template Available
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

Results



Number of Generated Tiles	1
Number of 3D Densified Points	2407490
Average Density (per m ³)	2.82503e+06

DSM, Orthomosaic and Index Details



Processing Options



DSM and Orthomosaic Resolution	1 x GSD (0.108 [cm/pixel])
DSM Filters	Noise Filtering: yes Surface Smoothing: yes, Type: Sharp
Raster DSM	Generated: yes Method: Inverse Distance Weighting Merge Tiles: yes
Orthomosaic	Generated: yes Merge Tiles: yes GeoTIFF Without Transparency: no Google Maps Tiles and KML: no