

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

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

Summary **i**

Project	frisco_2015_05_29
Processed	2015-Jun-12 21:20:12
Camera Model Name	DSC-WX220_4.4_4896x3672 (RGB)
Average Ground Sampling Distance (GSD)	12.37 cm / 4.87 in
Area Covered	10.136 km ² / 1013.6 ha / 3.9156 sq. mi. / 2505.96 acres
Image Coordinate System	WGS84
Output Coordinate System	WGS84 / UTM zone 7N
Processing Type	full Aerial nadir
Feature Extraction Image Scale	1
Camera Model Parameter Optimization	optimize externals and all internals
Time for Initial Processing (without report)	57m:41s

Quality Check **i**

? Images	median of 75375 keypoints per image	✓
? Dataset	565 out of 583 images calibrated (96%), all images enabled, 3 blocks	⚠
? Camera Optimization	0.03% relative difference between initial and final focal length	✓
? Matching	median of 4817.8 matches per calibrated image	✓
? Georeferencing	no 3D GCP	⚠

? Preview **i**

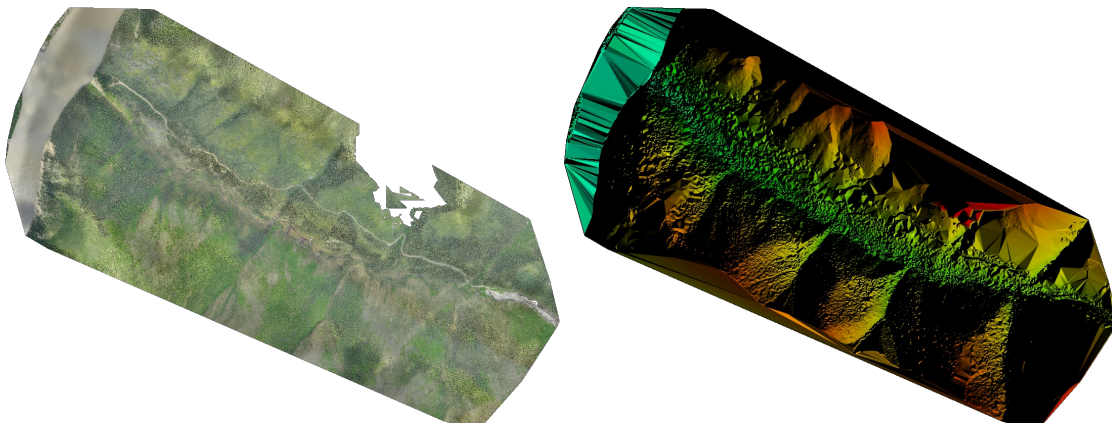


Figure 1: Orthomosaic and the corresponding sparse Digital Surface Model (DSM) before densification.

Calibration Details **i**

Number of Calibrated Images	565 out of 583
Number of Geolocated Images	583 out of 583

Initial Image Positions

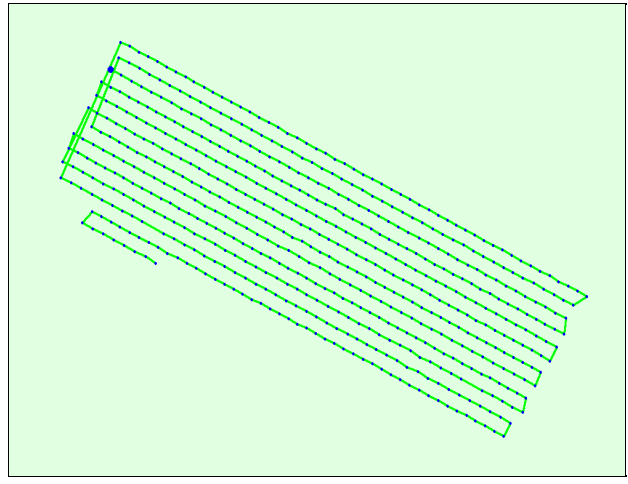


Figure 2: Top view of the initial image position. The green line follows the position of the images in time starting from the large blue dot.

Computed Image/GCPs/Manual Tie Points Positions

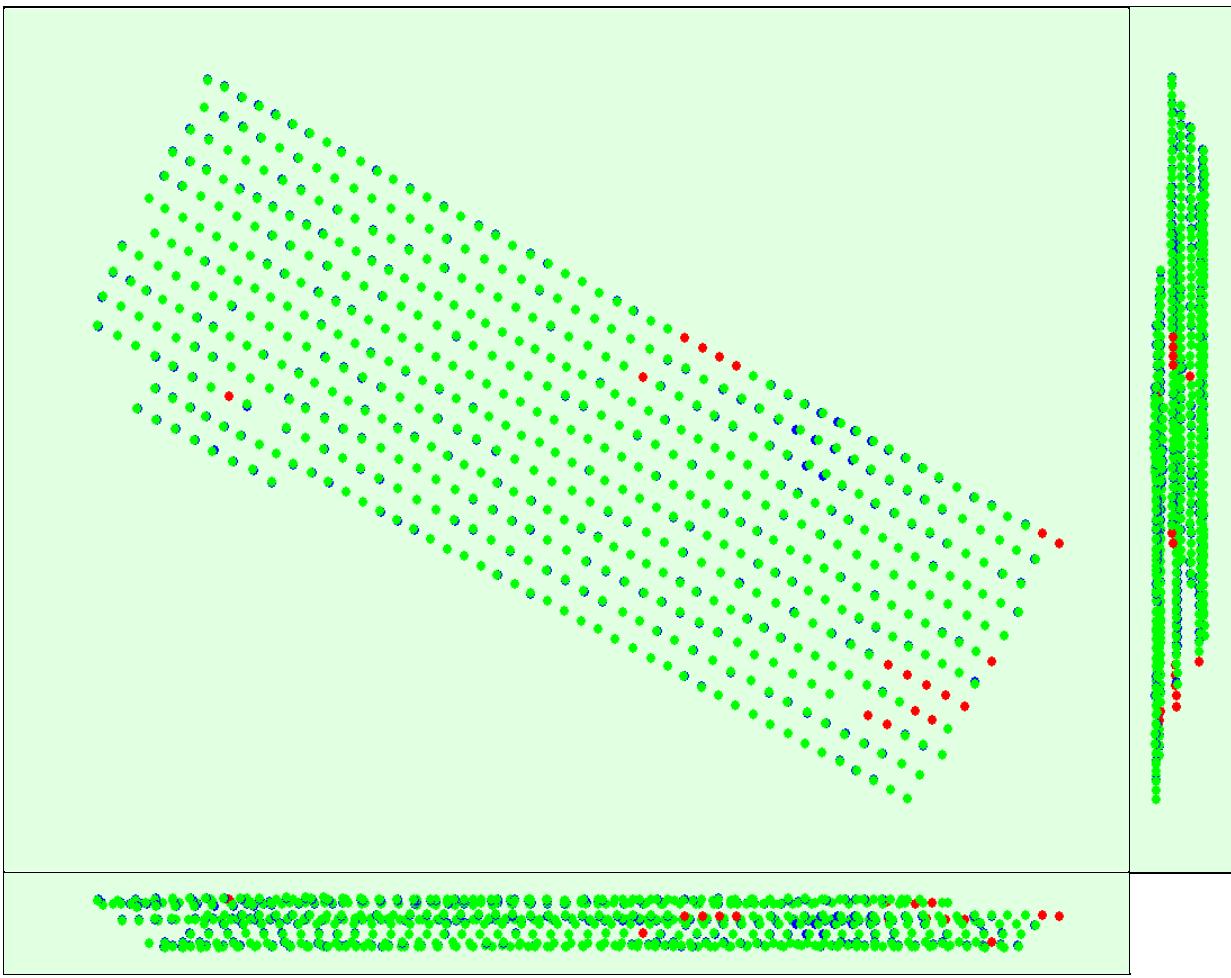


Figure 3: Offset between initial (blue dots) and computed (green dots) image positions as well as the offset between the GCPs initial positions (blue crosses) and their computed positions (green crosses) in the top-view (XY plane), front-view (XZ plane), and side-view (YZ plane). Red dots indicate disabled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

Overlap



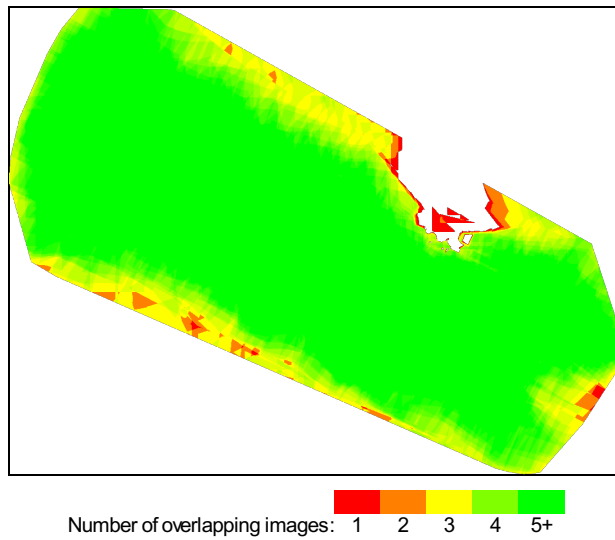


Figure 4: Number of overlapping images computed for each pixel of the orthomosaic. Red and yellow areas indicate low overlap for which poor results may be generated. Green areas indicate an overlap of over 5 images for every pixel. Good quality results will be generated as long as the number of keypoint 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	3189063
Number of 3D Points for Bundle Block Adjustment	1338157
Mean Reprojection Error [pixels]	0.181296

Internal Camera Parameters

DSC-WX220_4.4_4896x3672 (RGB). Sensor Dimensions: 6.170 [mm] x 4.627 [mm]

EXIF ID: DSC-WX220_4.4_4896x3672

	Focal Length	Principal Point x	Principal Point y	R1	R2	R3	T1	T2
Initial Values	3628.284 [pixel] 4.572 [mm]	2447.997 [pixel] 3.085 [mm]	1836.004 [pixel] 2.314 [mm]	0.012	-0.045	0.050	0.005	0.003
Optimized Values	3629.435 [pixel] 4.574 [mm]	2453.929 [pixel] 3.092 [mm]	1850.932 [pixel] 2.333 [mm]	0.003	-0.027	0.022	0.001	0.001

2D Keypoints Table

	Number of 2D Keypoints per Image	Number of Matched 2D Keypoints per Image
Median	75375	4818
Mn	12149	87
Max	101591	21374
Mean	73426	5644

3D Points from 2D Keypoint Matches

	Number of 3D Points Observed
In 2 Images	1039809
In 3 Images	192207
In 4 Images	59617
In 5 Images	23383
In 6 Images	10222
In 7 Images	4830
In 8 Images	2837
In 9 Images	1817
In 10 Images	1058

In 11 Images	712
In 12 Images	450
In 13 Images	322
In 14 Images	245
In 15 Images	161
In 16 Images	117
In 17 Images	86
In 18 Images	48
In 19 Images	47
In 20 Images	48
In 21 Images	28
In 22 Images	28
In 23 Images	22
In 24 Images	21
In 25 Images	10
In 26 Images	9
In 27 Images	8
In 28 Images	3
In 29 Images	5
In 30 Images	5
In 31 Images	1
In 32 Images	1

? 3D Points from 2D Keypoint Matches

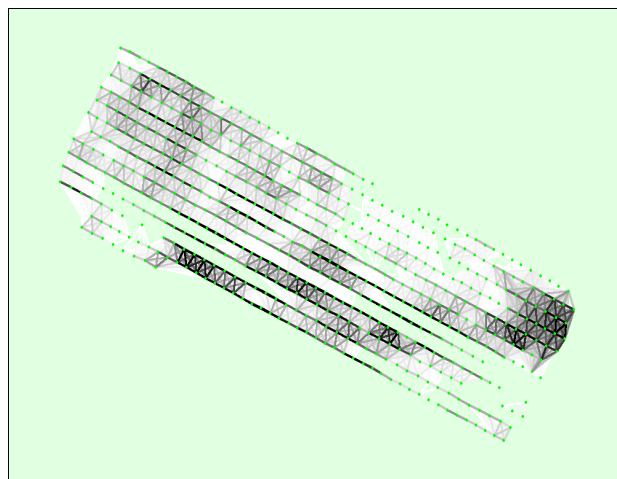


Figure 5: Top view of the image computed positions with a link between matching images. The darkness of the links indicates the number of matched 2D keypoints between the images. Bright links indicate weak links and require manual tie points or more images.

Geolocation Details



? Absolute Geolocation Variance



Mn Error [m]	Max Error [m]	Geolocation Error X[%]	Geolocation Error Y[%]	Geolocation Error Z[%]
-	-10.26	0.88	0.18	0.00
-10.26	-8.21	0.53	0.00	0.00
-8.21	-6.16	0.18	0.00	0.18
-6.16	-4.10	0.88	0.88	6.90
-4.10	-2.05	5.31	12.04	13.45
-2.05	0.00	35.40	35.93	24.42
0.00	2.05	47.61	40.00	36.46
2.05	4.10	7.96	10.80	16.99

4.10	6.16	1.06	0.00	0.88
6.16	8.21	0.18	0.18	0.71
8.21	10.26	0.00	0.00	0.00
10.26	-	0.00	0.00	0.00
Mean		0.019938	-0.040369	-0.018437
Sigma		2.107219	1.765671	2.357614
RMS Error		2.107314	1.766132	2.357687

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]	97.35	99.12	98.05
[-2.00, 2.00]	98.76	99.82	100.00
[-3.00, 3.00]	99.65	100.00	100.00
Mean of Geolocation Accuracy	4.691818	4.691818	5.277991
Sigma of Geolocation Accuracy	0.287510	0.287510	0.532923

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

Geolocation Orientational Variance	RMS [degree]
Omega	13.334232
Phi	3.528061
Kappa	9.411753

Geolocation RMS error of the orientation angles given by the difference between the initial and computed image orientation angles.

Point Cloud Densification details

Summary

Processing Type	aerial nadir
Image Scale	1/2 (half image size, default)
Point Density	optimal
Minimum Number of Matches	3
Use Densification Area	yes
Use Annotations	yes
Time for Densification (without report and 3D textured mesh)	01h:14m:07s

Results

Number of 3D Densified Points	34006444
Average Density (per m ³)	1.24