ArcGIS® Drone2Map™ Advanced

Project Summary

Project Name	CornTest10-10-23
Processed On	10/11/23, 09:00 AM
Camera Model	DJI M3M-MS
Images	272 out of 272 images calibrated
Project Area	2.393 km2 / 239.266 ha / 0.924 sq. mi. / 591.217 acres
Ground Resolution	0.109 (US ft)
Processing Time	01h:22m:12s

Adjust Images

Summary

Number of Tie Points	650,744
Number of Solution Points	214,637
RMSE of Reprojection Error / Sigma Naught (Pixel)	0.298 / 0.420
Initial Processing Time	01h:20m:09s

Processing Options

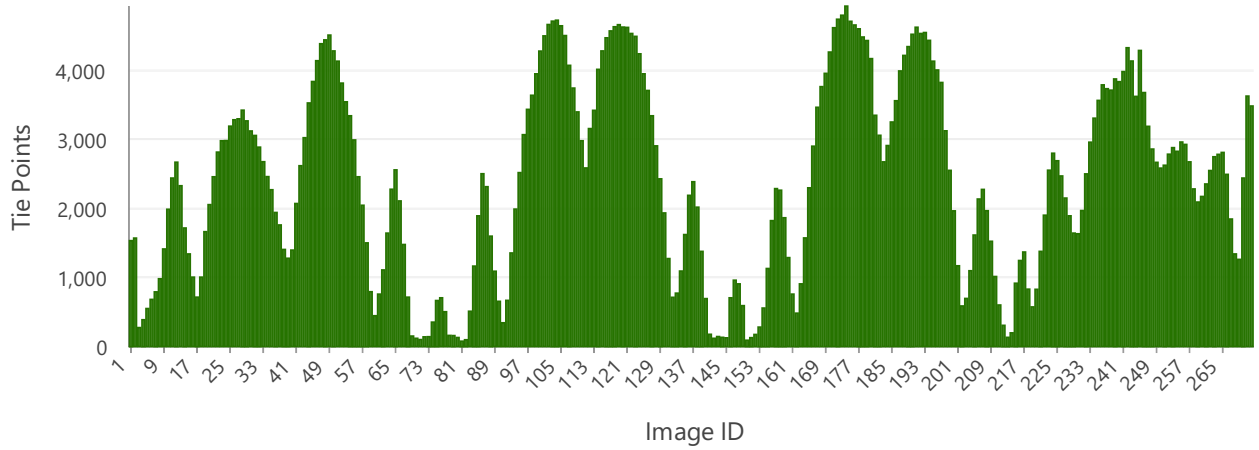
Initial Image Scale	1/8 (Eighth image size)
Refine Adjustment Scale	1 (Original image size)
Matching Neighborhood	Small (Optimized)

Internal Camera Parameters

DJI M3M-MS 4.5mm 2592x1944
1581F5FKD235A00D6DZ6

Focal Length	Principal Point X	Principal Point Y	K1	K2	K3	P1	P2
4.514	0.063	0.008	-1.053e-004	1.556e-005	-1.467e-006	2.557e-004	-2.851e-004

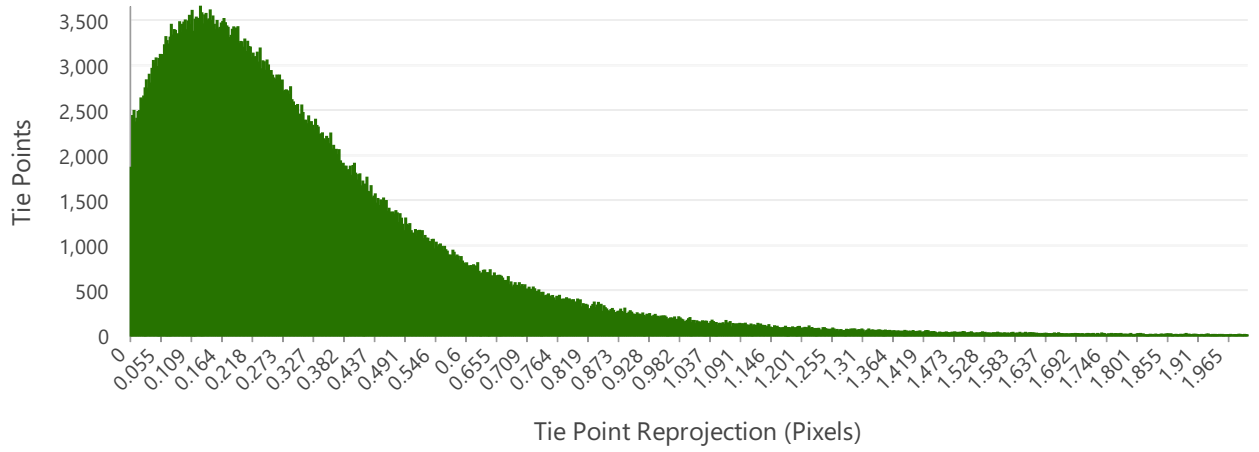
Tie Points Per Image



Min	79
Max	4,922
Median	2,450
Mean	2,392
Total	650,744

The total number of tie points that were detected in each image during the Adjust Images step. Images with low tie point counts may indicate problematic areas, such as areas with poor image quality, insufficient image overlap, or homogenous image textures.

Tie Point Reprojection Error



Min	0.000
Max	1.999
Median	0.252
Mean	0.322
RMSE	0.298

The distribution of the tie point reprojection errors across all adjusted images. The root mean square error (RMSE) of the reprojection error can be used to assess the overall quality of the Adjust Images processing step. Generally, an RMSE value closer to zero indicates a higher quality adjustment.

Standard Deviation of Exterior Orientation

	X (US ft)	Y (US ft)	Z (US ft)	Omega (degrees)	Phi (degrees)	Kappa (degrees)
Min	0.000	0.000	0.000	0.001	0.001	0.001
Max	0.000	0.000	0.000	0.007	0.004	0.010

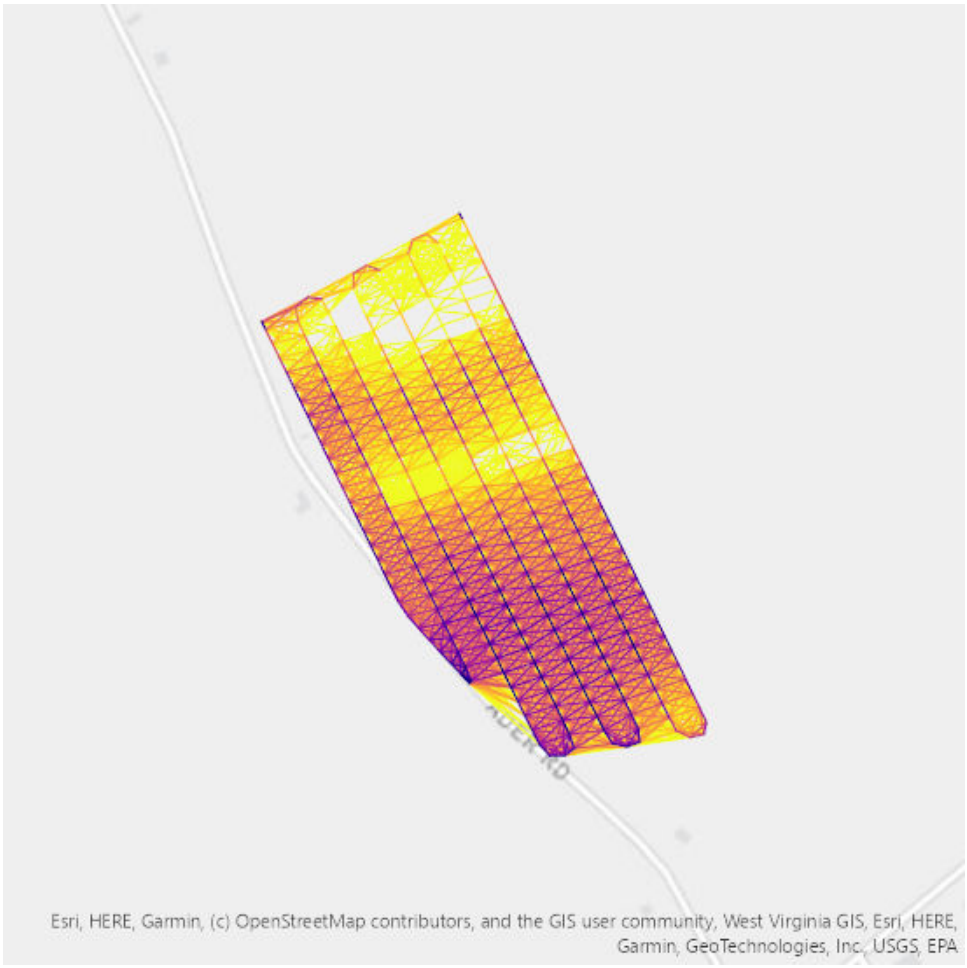
Adjusted Image Positions

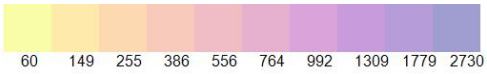
The initial image locations (blue points) and their adjusted positions (green points) after processing.

Image Overlap

The amount of overlap between image projections after processing. Areas with high overlap produce the most accurate results. Avoid placing control points in areas of low overlap, as this could affect their accuracy.

Cross Matches





The adjusted image positions with links showing the number of tie points between matched images after the Adjust Images processing step. Darker links indicate a higher number of tie points between the images. Images with a greater number of links generally produce more accurate results.

Solution Points

2 Images	129,307
3 Images	39,434
4 Images	17,894
5 Images	9,748
6 Images	5,515
7 Images	3,680
8 Images	2,545
9 Images	1,833
10 Images	1,348
11 Images	963
12 Images	672
13 Images	491
14 Images	361
15 Images	278
16 Images	178
17 Images	145
18 Images	96
19 Images	51
20 Images	46
21 Images	28
22 Images	13
23 Images	8
24 Images	2
25 Images	1

The frequency of solution points per image observations. Solution points with a higher number of image observations generally produce more accurate results.

Project Settings

System Information

Hardware	CPU: Intel(R) Xeon(R) Gold 5218R CPU @ 2.10GHz RAM: 96GB GPU: NVIDIA RTX A5000 (Driver: 31.0.15.3742)
Operating System	Microsoft Windows 11 Pro for Workstations, 64-bit
ArcGIS Drone2Map Version	2023.1.1

Coordinate Information

Image Coordinate System	GCS_WGS_1984/VCS:EGM96 Geoid
Project Coordinate System	NAD_1983_2011_StatePlane_Pennsylvania_South_FIPS_3702_Ft_US/VCS:Unknown height system (US survey feet)

Project Resolution

Project Resolution	Automatic 1 x GSD (0.109 US ft)

2D Product

Summary

Processing time for Orthomosaic	02m:27s

Processing Options

Create Orthomosaic	Yes
Create Digital Surface Model	No
Create Digital Terrain Model	No
Color Balance	Yes

3D Product

Processing Options

Create Point Cloud	No
Merge LAS Tiles	No
Create DSM Textured Mesh	No
Create 3D Textured Mesh	No
Enhance Textured Mesh	No