Quality Report

PIX4Dmatic v2.0.2

Camera	DJI_M3M_12.3_5280x3956
Area covered	43.836 acUS
Average GSD	0.104 ftUS
Project CRS	NAD_1983_CORS96_StatePlane_Wyoming_East_FIPS_4901_Ft_US - ESRI:103581
Dense point count	10,027,311

Quality check

Matches	Median of 8057 matches per calibrated image	✓
Dataset	100% calibrated (117/117 images), 1 calibration block	✓
Camera optimization	13.09% relative difference between initial and optimized internal camera parameters The percentage of difference between the initial and optimized parameters is between 5% and 20%.	⚠
ATPs	237458 ATPs	

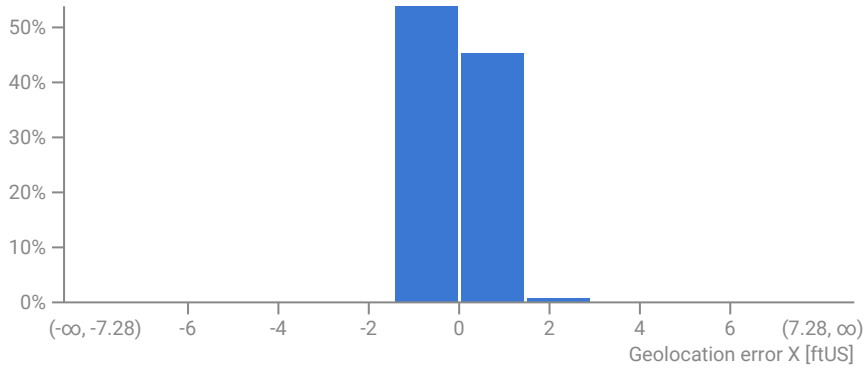
Cameras

Internal camera parameters

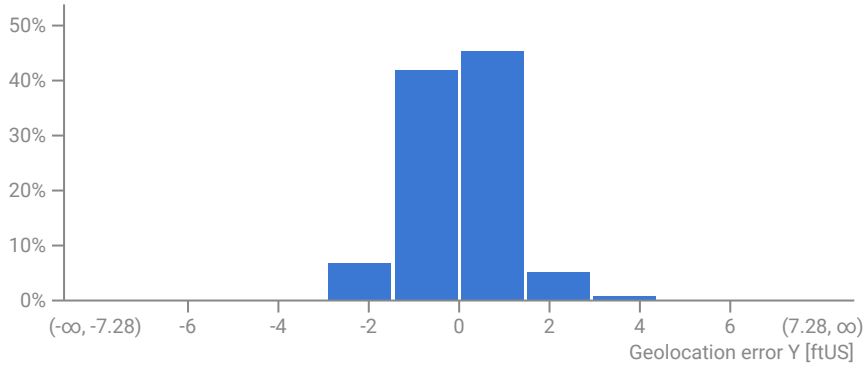
DJI_M3M_12.3_5280x3956. Sensor dimensions: 17.424 mm x 13.055 mm

	Focal length	Principal point x	Principal point y	R1	R2	R3	T1	T2
Initial	3675.6 px 12.13 mm	2644.2 px 8.726 mm	1970.2 px 6.502 mm	-0.0981864	-0.0214693	0.0014396	-0.0003436	-0.0000466
Optimized	4156.7 px 13.717 mm	2661.8 px 8.784 mm	1950.8 px 6.437 mm	-0.1415531	0.0185573	-0.0467986	-0.0001288	0.0001689

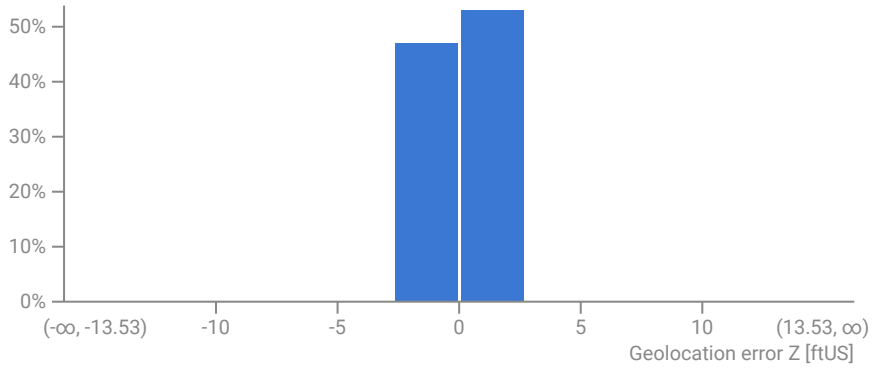
Absolute geolocation variance



	Geolocation error X [ftUS]
Mean	0.003
Median	-0.045
Sigma	0.500
RMS	0.500



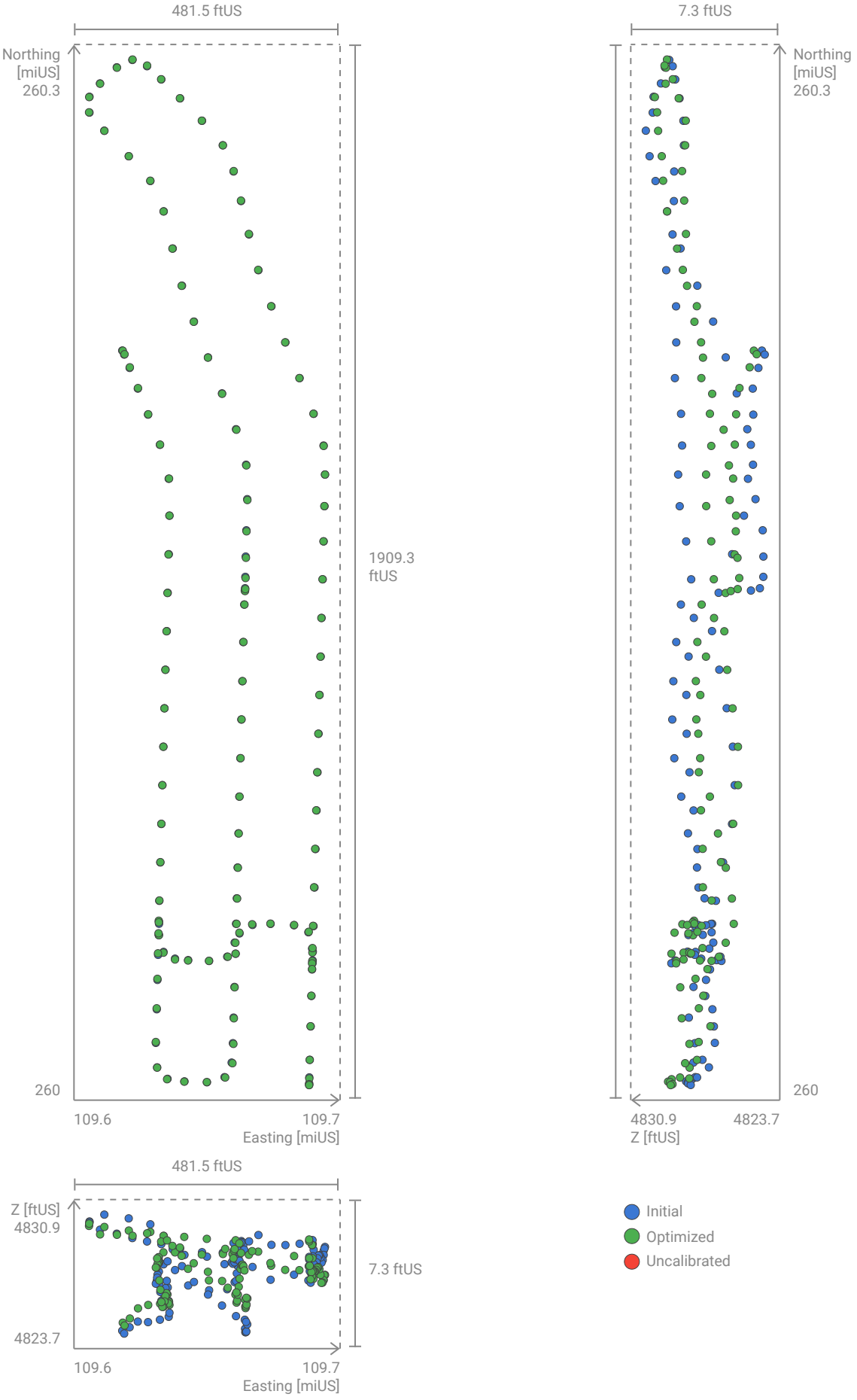
	Geolocation error Y [ftUS]
Mean	-0.003
Median	0.044
Sigma	0.932
RMS	0.932



	Geolocation error Z [ftUS]
Mean	0.020
Median	0.073
Sigma	0.766
RMS	0.766

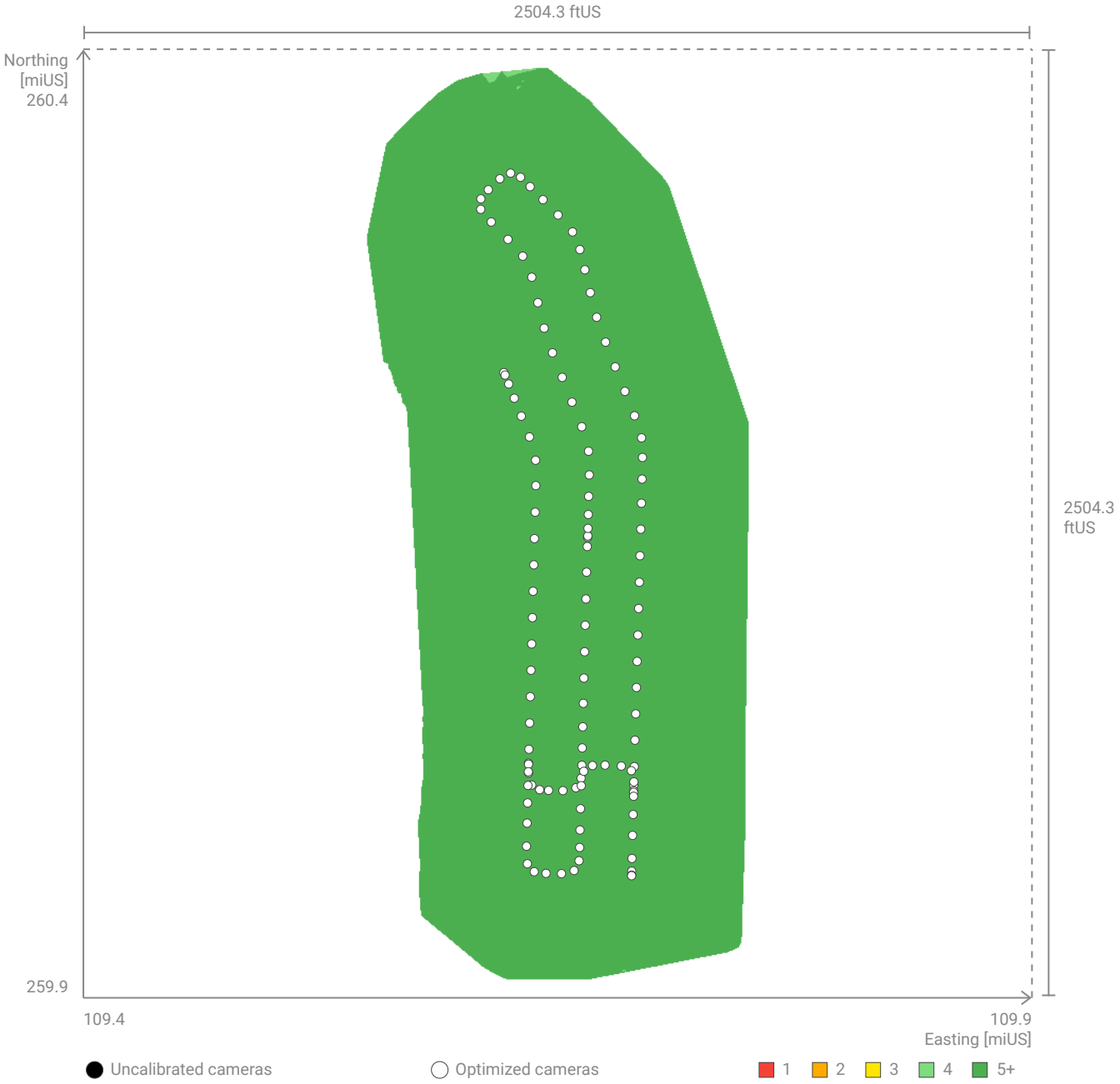
The geolocation error is the difference between the initial and computed camera positions. Plots show the per-axis distributions of geolocation errors across the cameras. Large positive and negative errors are denoted with the orange bins. Note that the image geolocation errors do not correspond to the accuracy of the observed 3D points.

Camera positions



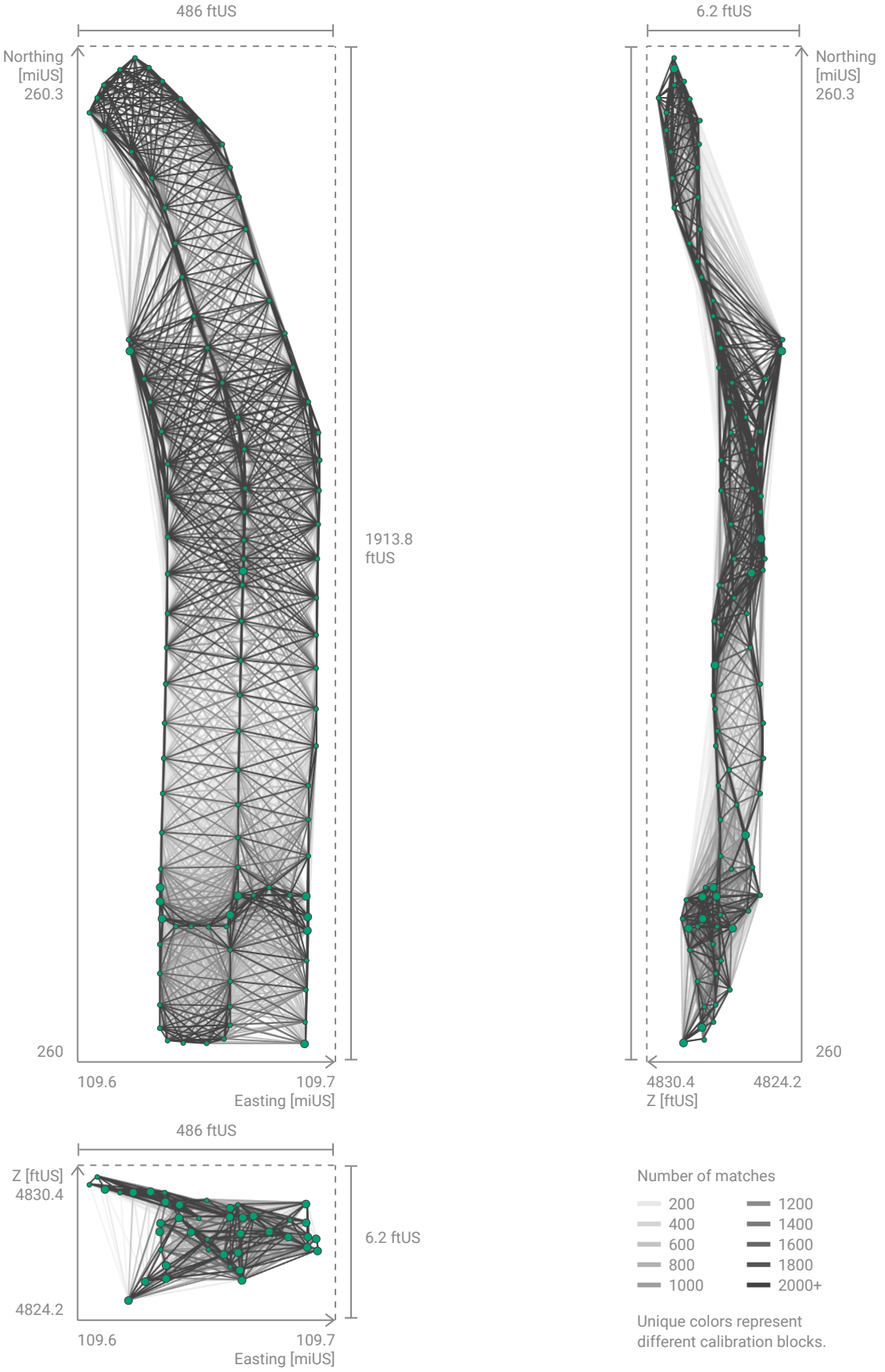
Initial and computed camera positions.

Overlap



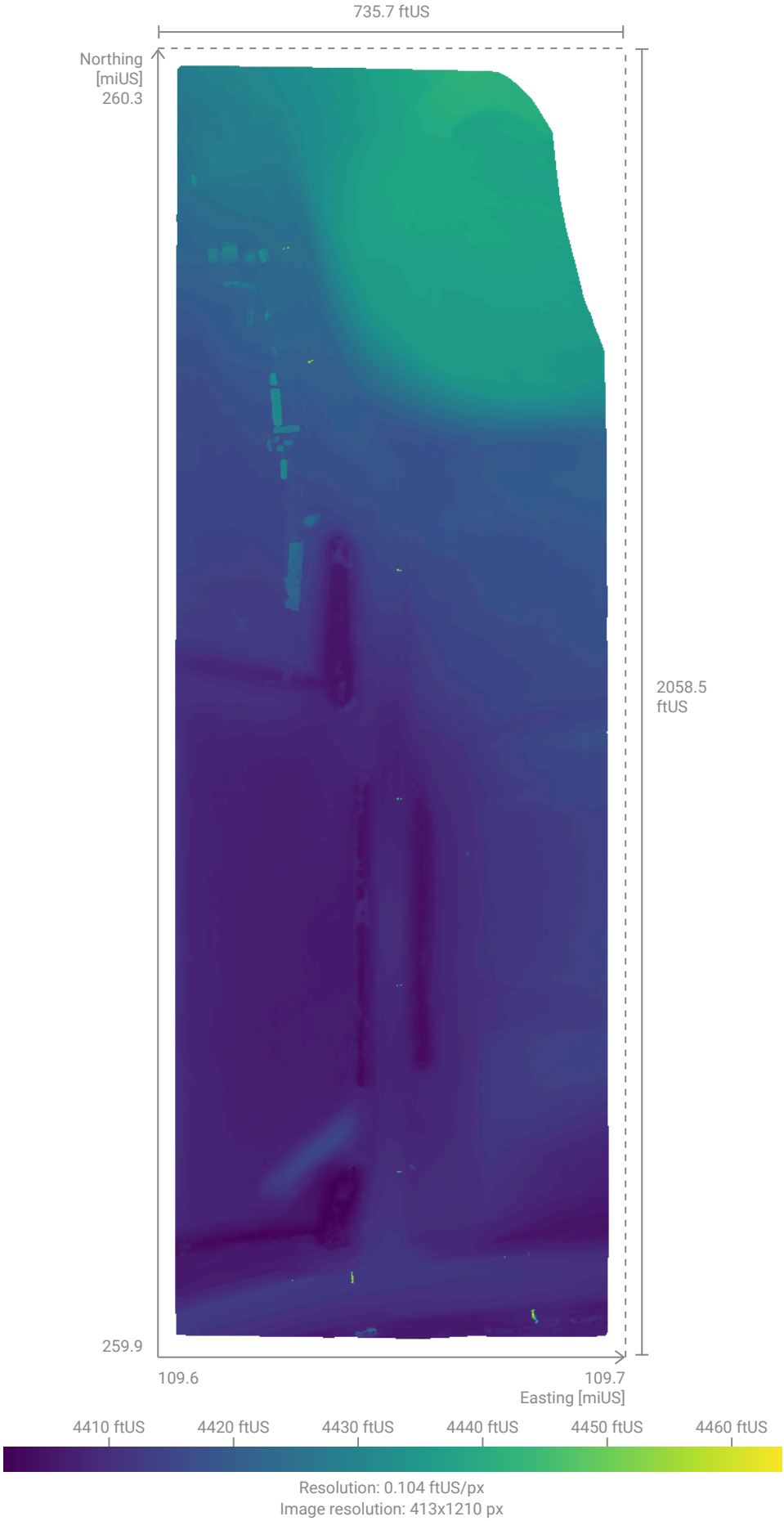
This graph shows the number of overlapping images for each pixel of the DSM preview. For precise 3D modeling and mapping applications, the overlap should be in green, i.e. each pixel should be visible in more than 5 images.

2D Keypoint matches



Computed camera positions with links between matched cameras. The opacity of the links indicates the number of matched 2D keypoints between the cameras. Near-transparent links indicate weak links and require manual tie points or more cameras. To improve visibility, camera positions may be slightly shifted and multiple cameras may be grouped into a single point on the plot. Group of multiple cameras is indicated by a larger point on the plot.

DSM



Resolution: 0.104 ftUS/px
Image resolution: 413x1210 px

Orthomosaic

Resolution: 0.104 ftUS/px
Image resolution: 413x1210 px

Hardware & Settings

System information

CPU	Intel(R) Core(TM) i9-10900KF CPU @ 3.70GHz, cpus=1, threads=20
RAM	31.89 GB
GPU	NVIDIA Corporation NVIDIA GeForce RTX 3090/PCIe/SSE2 (Driver: 4.1.0 NVIDIA 591.86)
Operating system	Windows 11

Coordinate reference systems

Image coordinate reference system	WGS 84 - EPSG:4326
Project coordinate reference system	NAD_1983_CORS96_StatePlane_Wyoming_East_FIPS_4901_Ft_US - ESRI:103581

Processing settings

Calibration — Completed

Template: Large scale and corridor
Pipeline: Scalable standard
Image scale: 1/2
Internals confidence: Low
Externals confidence: Default
Simultaneous camera internals and MTP/GCP optimization: Disabled
Max. extracted keypoints: Automatic
Use automatic ITPs: Disabled

1m 27s

Dense point cloud — Completed

Algorithm: Hardware accelerated
Image scale: 1/2
Density: Optimal
Min. number of matches: 3
Multiscale: Enabled
Noise filter: Disabled
Sky filter: Disabled
Mask-aware: Disabled

3m 17s

DSM — Completed

Input point cloud: Dense point cloud
Interpolation: Interpolate holes
Resolution: 0.104 ftUS/px
Surface smoothing: 12 px
Polygon-aware: Disabled
Mask-aware: Disabled

48s

Orthomosaic — Completed

Resolution: 0.104 ftUS/px
Algorithm: Hardware accelerated
Oblique: Disabled
Blending algorithm: Minimal
Mask-aware: Disabled

17s