KOMATSU

Smart Construction Edge

Smart Construction Edge Release Notes Update

FW VERSION : ”10.5.4"

OS VERSION : "7.2.0"

Update Steps(Online Update)

1. Connect Edge to charger during update
2. Connect Edge to Ethernet
3. Update Edge
4. Confirm the version after the update

Caution

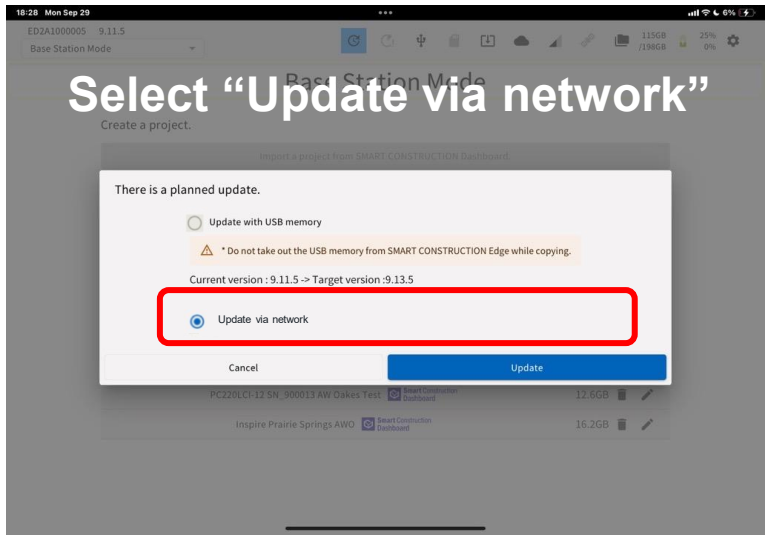
Firmware file size is very Large (~5GB)

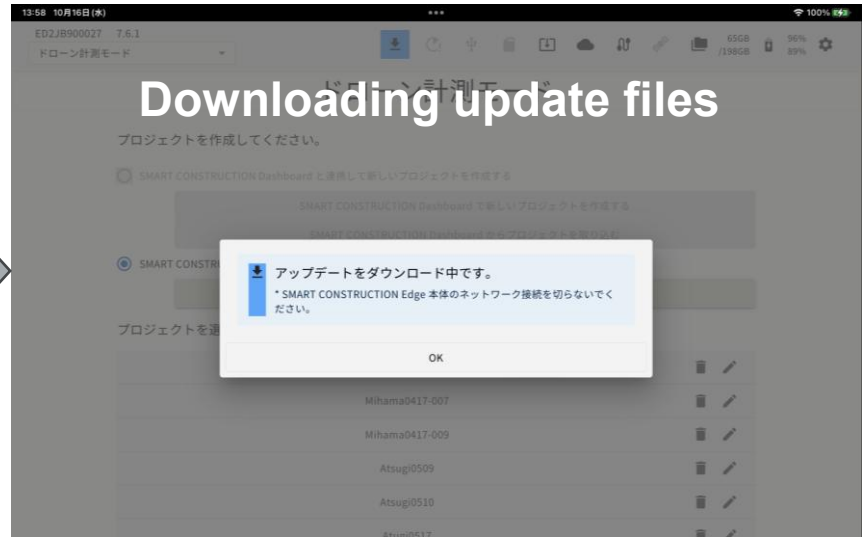
- **For online update: Please connect Edge to Ethernet** during update process to avoid SIM card data use.

※iPad is recommended to update to IOS 18.7.1 or higher

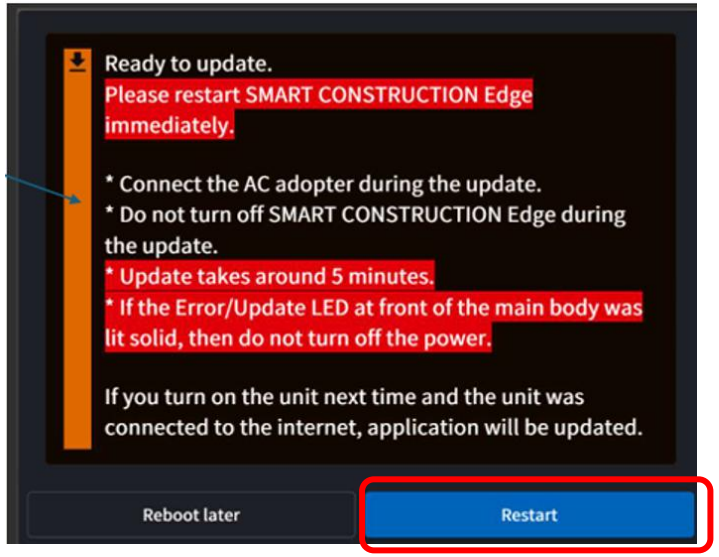
＜Updating from Edge FW v7 or later＞

- Connected to Internet, download the files to update, then press “Restart”
- If the operation LED turns flushing green to solid green, update has completed for the both FW and OS.





Once update completed restart



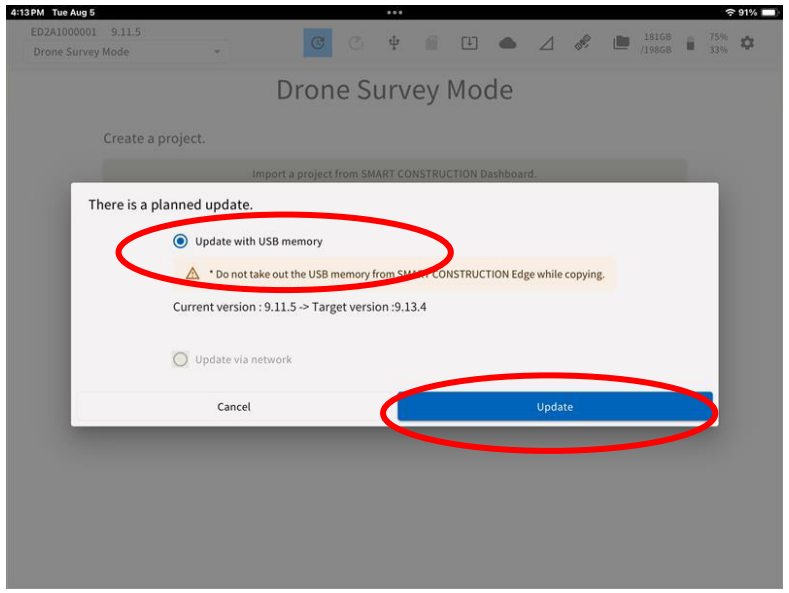
Update steps with USB drive(Local Update)

- **Save Update files in your USB drive**

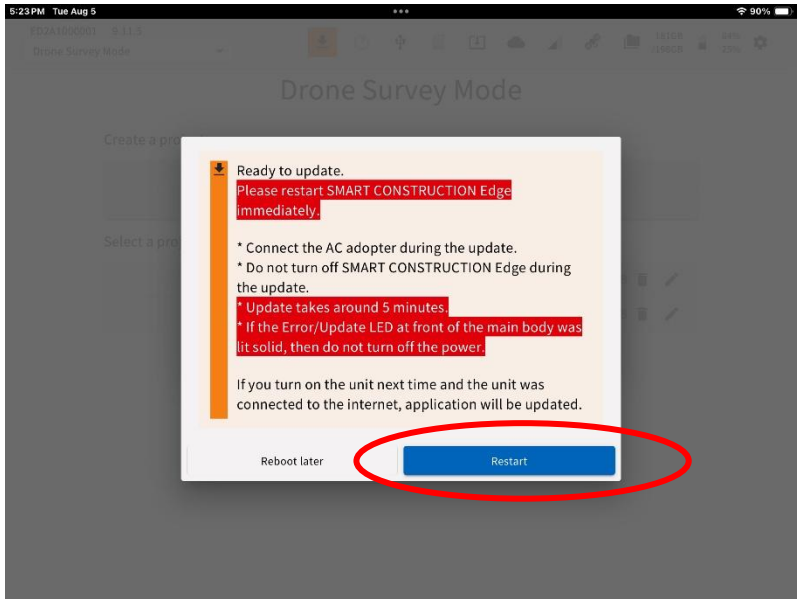
  Download 3 files (firmware.md5, firmware1.bin, firmware2.bin) and copy **directly** to root folder of USB drive. If the files are in folder, Edge won't recognize.

- **Insert USB drive with files to Edge USB port**

  Proceed Update from notification message



Update process could take up to 5 minutes. When you see the right message, tap "Restart" to reboot Edge to complete update.



After restarting, wait for the green LED to change from flashing to solid (about 5 minutes)

Update items SC Edge v10.5.4

Classification	Item	Summary	Detail Page
Improvement	Download Mount Point List	In the Edge2 settings screen, specifying the mount point for the network RTK service has changed from manual entry to a download-based method	P4
	GCP annotation improvement	We have introduced a feature that automatically detects Ground Control Point (GCP) markers when processing Drone with GCP	P5-P7
	Drone Process Quality Improvement	Improve the quality of Point Cloud and DTM with lower noise	P8
	Distance unit added	We have added coordinate Unit in Edge installation point screen	P9
	DJI MATRICE400 Support (Only **Zenmuse P1 Camera**)	Support DJI Matrice400 (with Zenmuze P1 Camera) for drone processing https://enterprise.dji.com/matrice-400	N/A
	ACSL RTK-SOTEN (Japanese Drone) Support	Support RTK So-TEN for drone processing with +/- 10cm level accuracy https://product.acsl.co.jp/en/product/post-369/	N/A

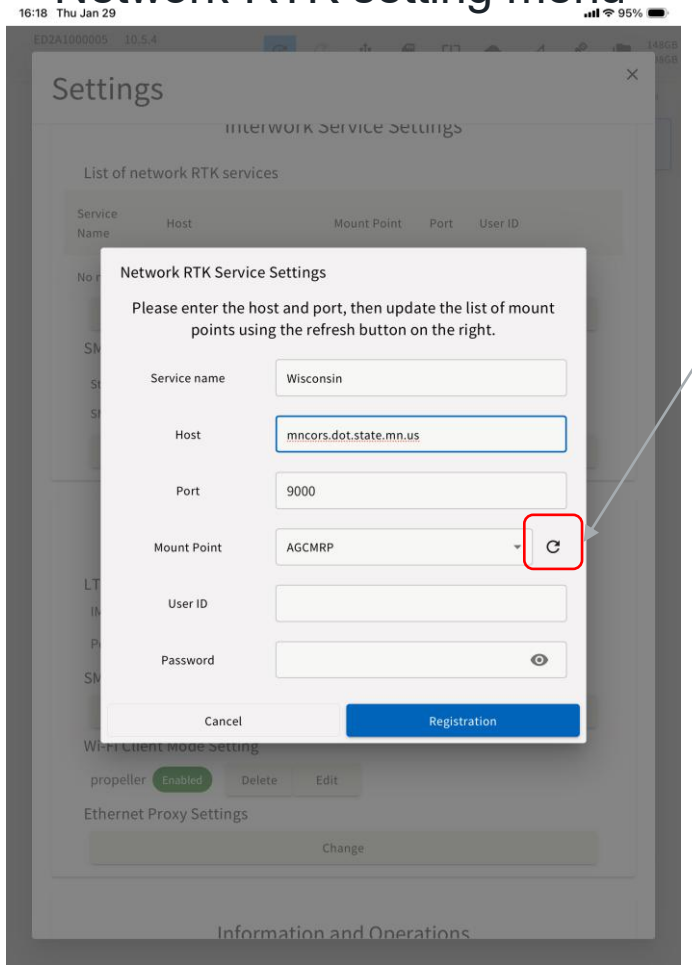
Update items SC Edge v10.5.4

Classification	Item	Function
Bug Fix	Fixed a bug where point cloud generation with GCP failed under certain specific conditions	Drone
	Fixed a bug of Drone processing, when merging multiple flights data from DJI Matrice4E	Drone
	Fixed a bug where Smart Construction account authentication error remains after recovered from offline	Drone
	Fixed a bug where correction data could not be stopped after broadcasting if an external radio was not connected.	Base Station
	Unsupported RTCM3.2 MSM3 format option is removed	Base Station

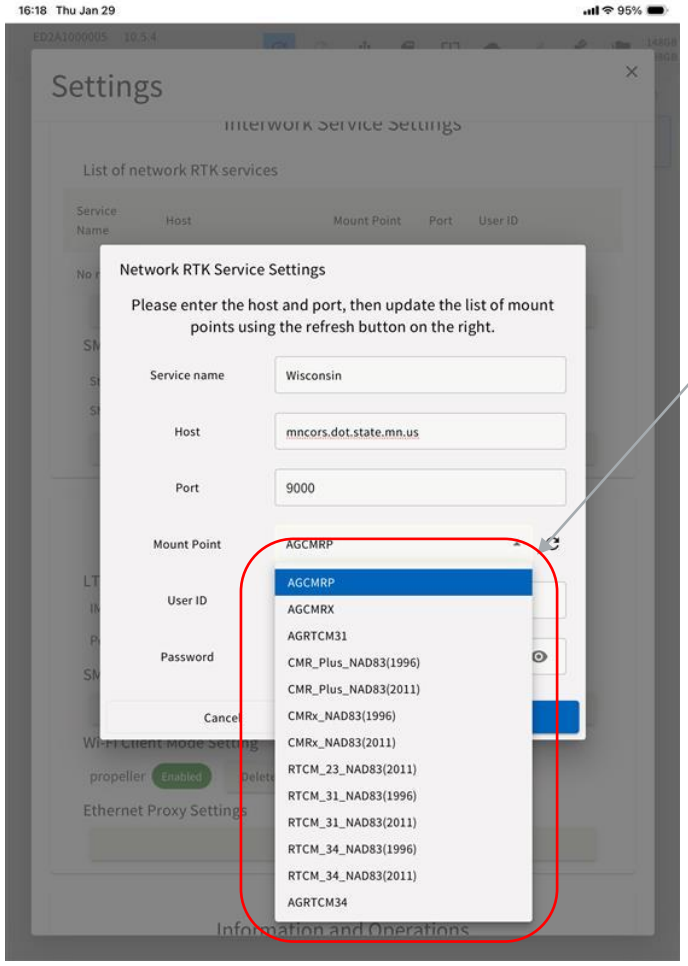
Download Mount Point List

Downloading the mount point list instead of entering the mount point manually.

Network RTK setting menu



Select this button to open mount point list.



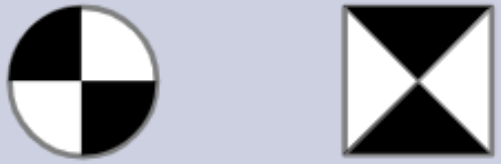
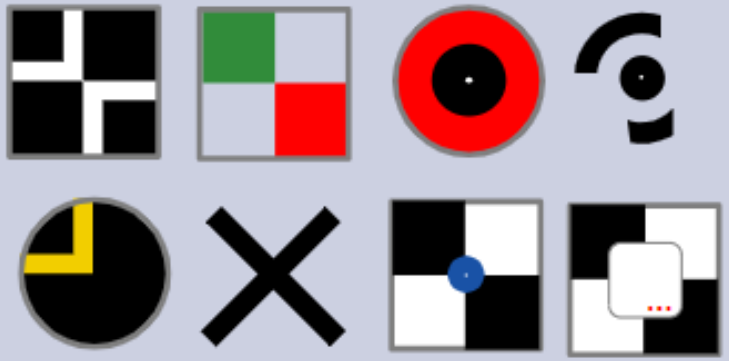
Show mount point list and select

Auto GCP Annotation

In v10, when performing drone processing using GCPs, the positions of the following markers can now be automatically detected.

Detectable markers

Possible, but not confirmed

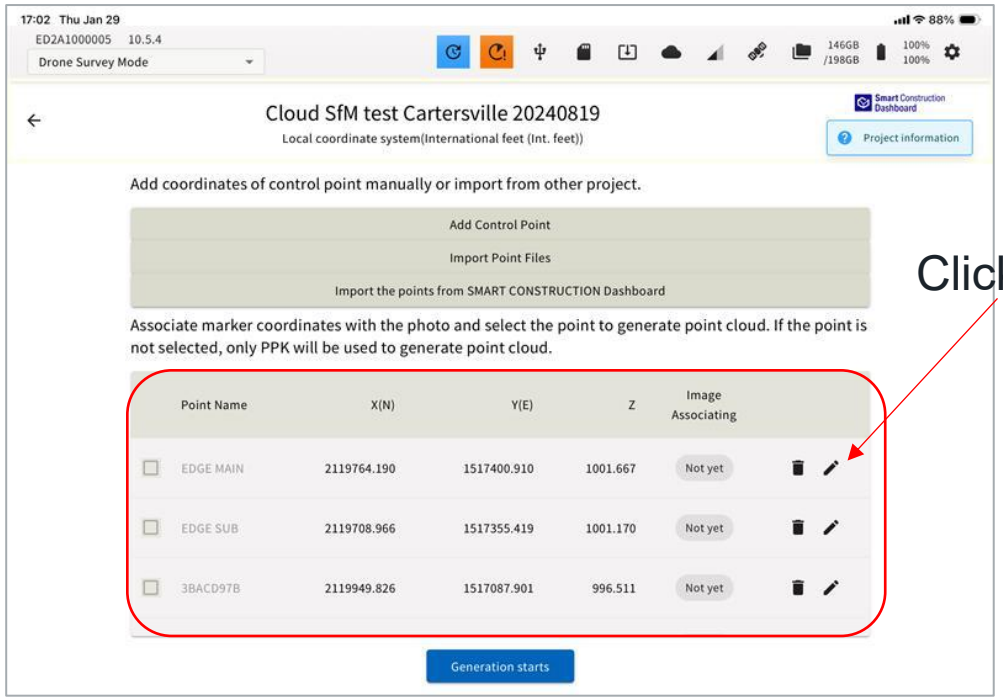
Detectable	Detectable but not stable	Not Detectable
 **Black & White with good contrast**		

※Size of GCP markers are 30 cm x 30 cm or bigger. (Black and White)
We have confirmed the auto detection with the condition of GSD 1cm ~ 2cm photo resolution.
GCP color was confirmed only in black and white.

Auto GCP Annotation

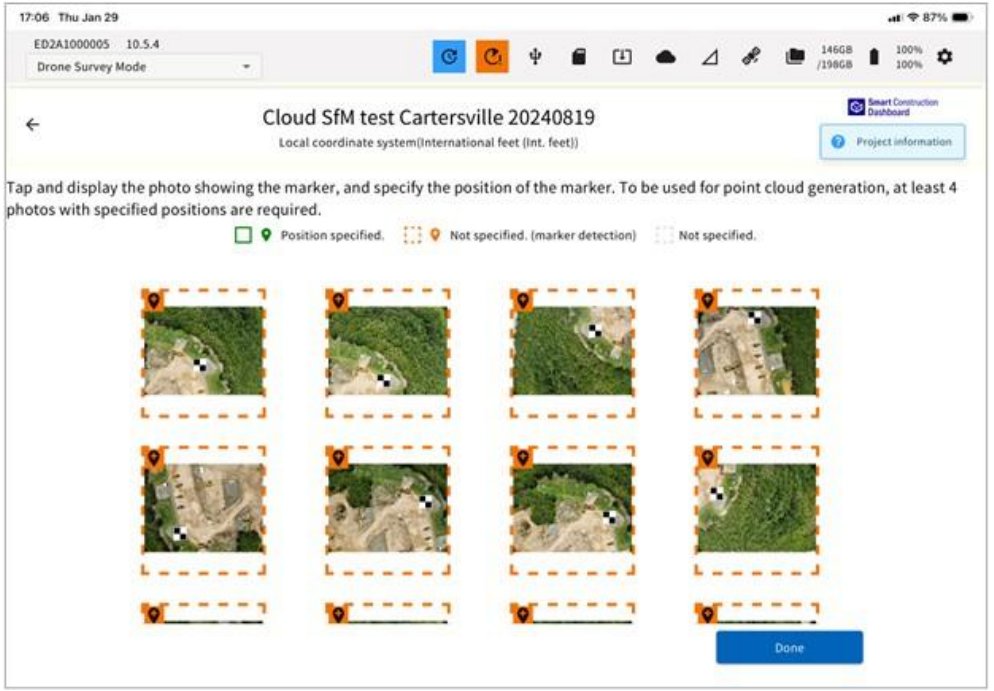
During the GCP annotation, GCPs which is close to the coordinates entered will be automatically detected as shown below, and photo of the detected markers will be highlighted in orange.

Add GCP to use



Click to annotate

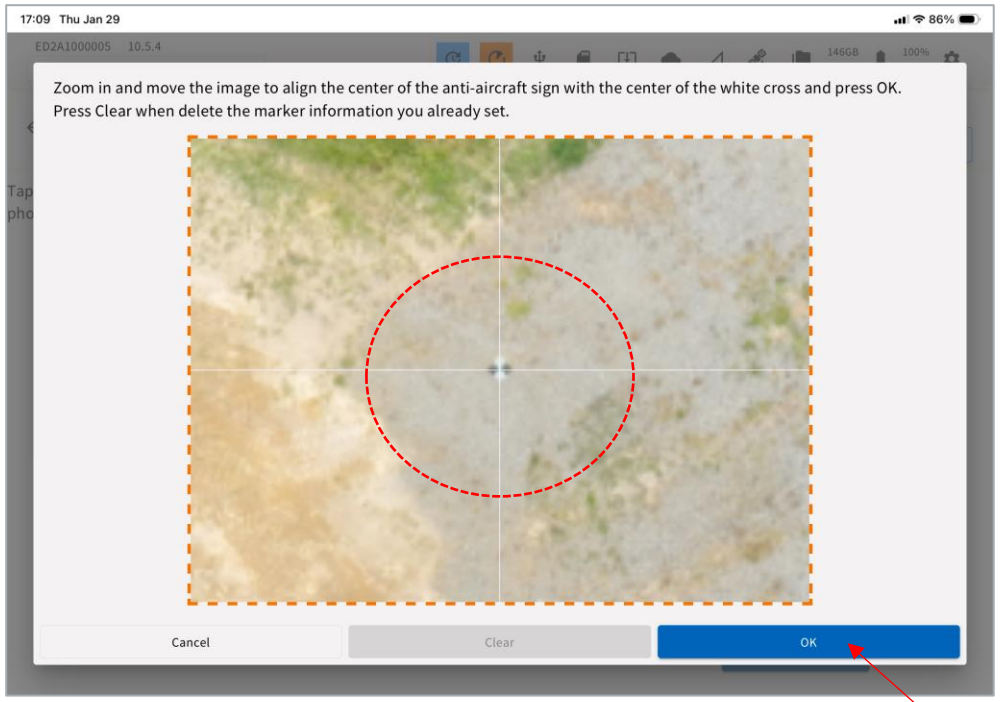
Automatically detected GCPs are highlighted in orange



Auto GCP Annotation

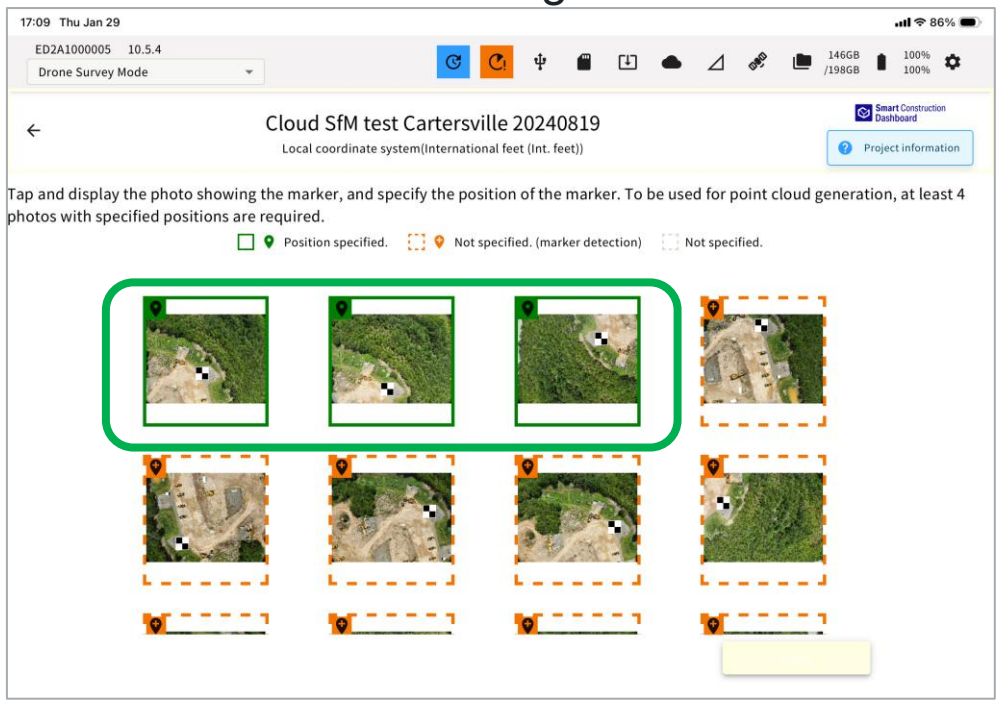
Choose one of these orange highlighted GCP photos, then you will see the GCP marker center automatically detected. If it is off-center, adjust it manually and tap OK. Once the GCP center is confirmed, it will be marked as located and turn green.

GCPs center is auto detected



Click to confirm

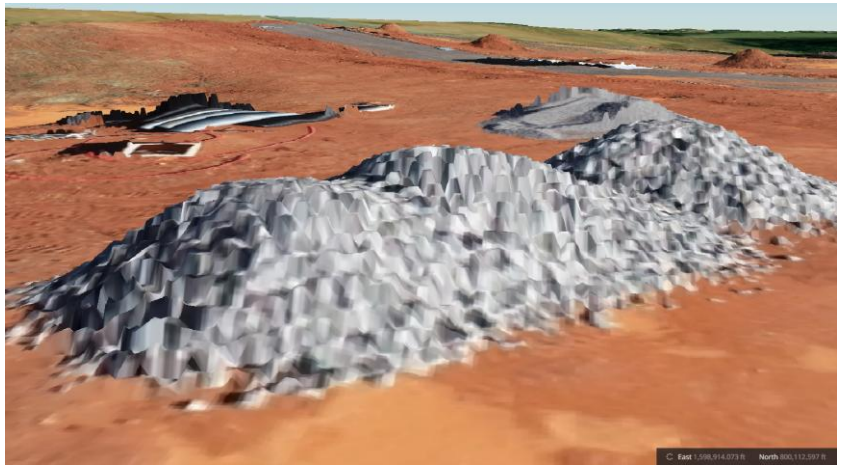
Once the GCP center is confirmed, the photo will be highlighted in Green.
Annotate at least 4 images

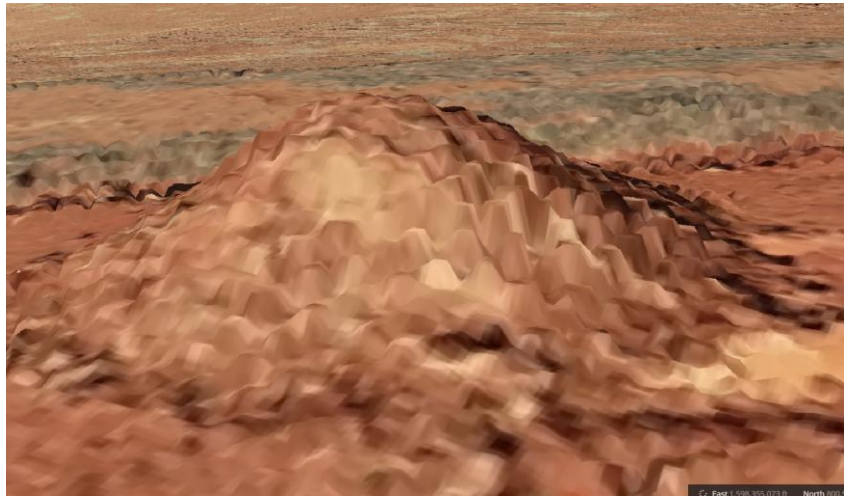


DTM Quality Improvement

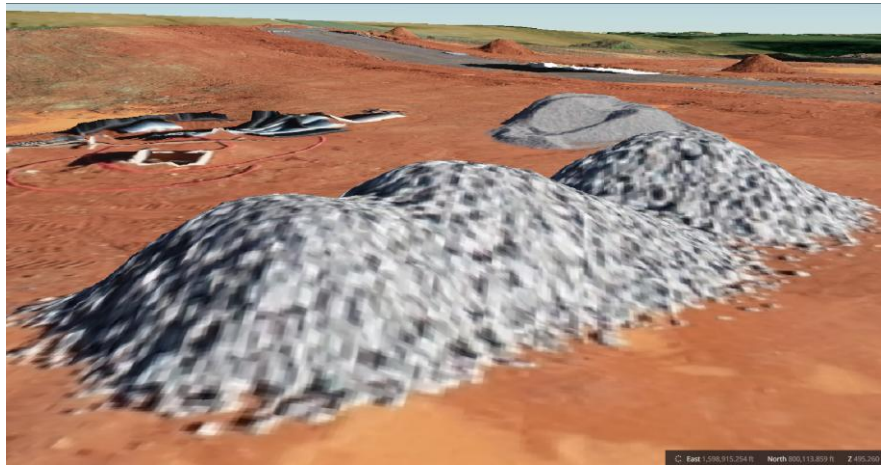
As shown below, the DTM noise was reduced even at the standard density

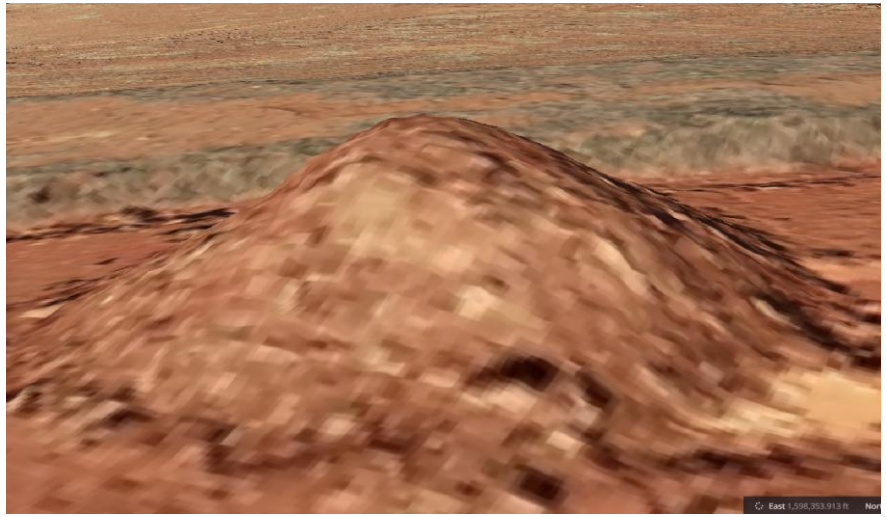
Old Version





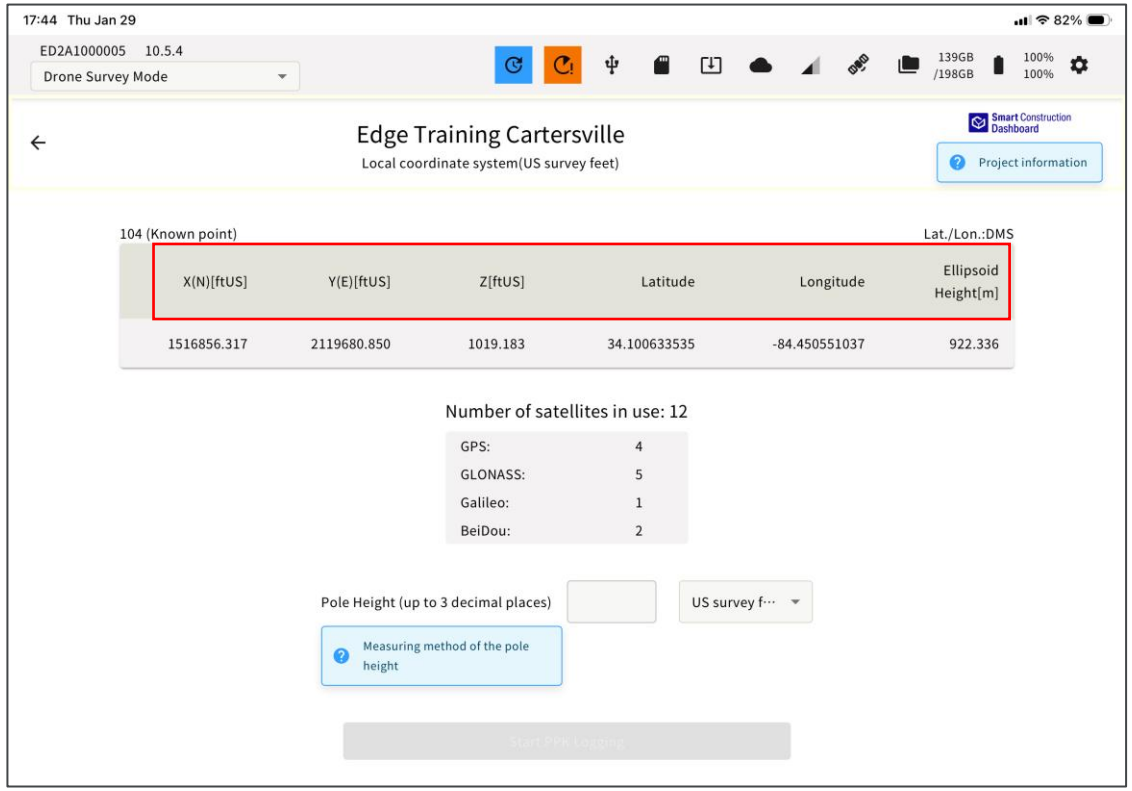
V10.5.4

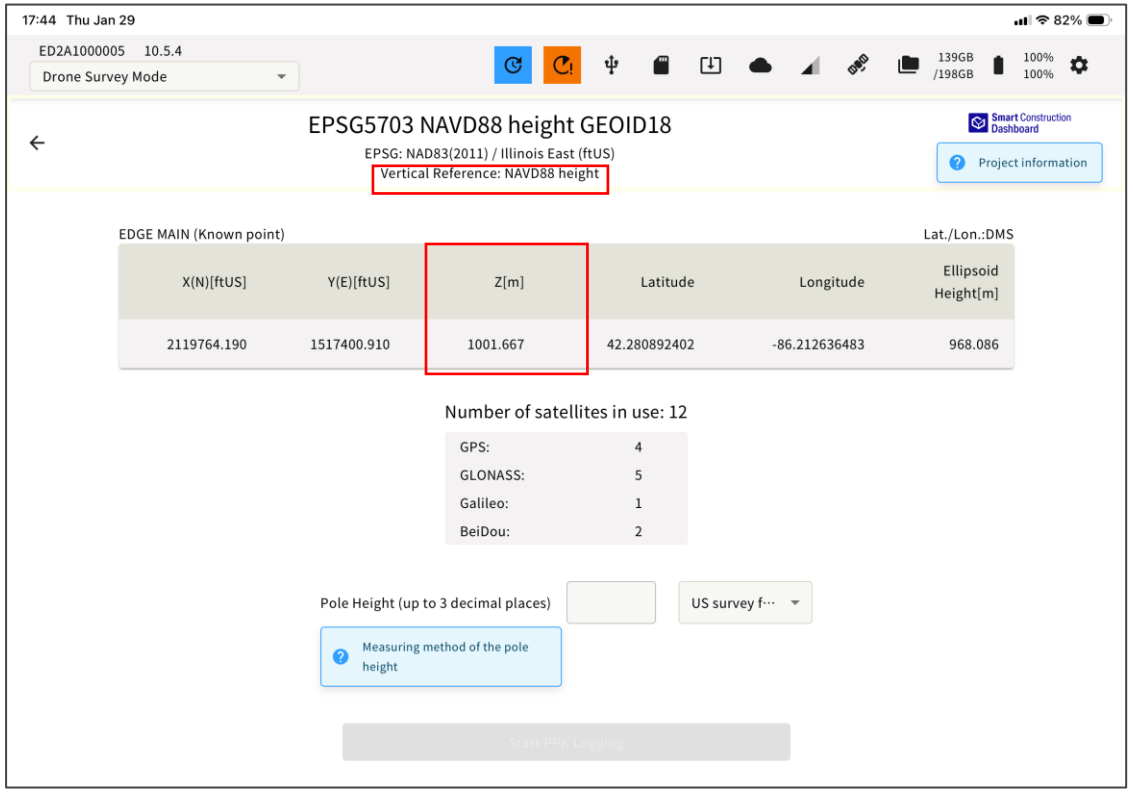




Distance unit is added

We have added distance unit in Edge installation point screen





If State Plane Coordinate system with Meter(m) datum is used, Please enter the control point height in Meter(m) value. (i.e EPSG5703 NAVD88)

Will be fixed in future