# Postterra VTOL

## Features:-

- Modularization
- Internationalization
- Long Endurance: 120min
- Security
- One-click take off and landing
- Multi redundant
- PPK Built-in Simplification (No ground control needed
- One click data import
- High efficiency
- HIgh precision - Real time differential based on 100Hz RTK
- Triple-redundant flight controller + Integrated digital Transmission + RTK reference station

Suveyor VTOL LIDAR

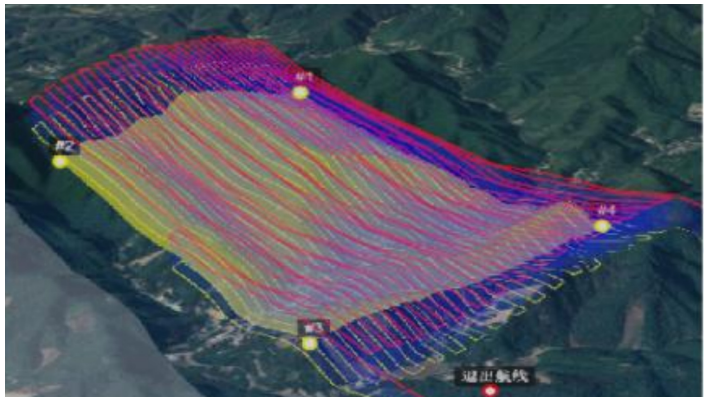

42MP Camera (RGB)

Website: www.postterra.com.myscad.us

# PT VTOL 260X

| The fuselage of UAV | |
|---|---|
| Texture of material | EPP fuselage, Carbon fiber frame |
| Wingspan | 220cm |
| Length | 130cm |
| Standard take-off weight & load | 6.5kg (No load)<br>Overload; 2KG |
| Mode of take-off and landing | Verticle take-off and landing |
| Precision of recovery landing point | <1m |
| Promotion mode | Electric compound wing forward pull propulsion |
| Flight speed | 70km/h |
| Maximum control radius | 10km |
| Wind resistance | Level 7 |
| Altitude of departure point | Above 6500 meters |
| Operation temperature | -20℃ until 45℃ |
| GNSS | |
| Channel | 226 channels |
| Signal tracking | GPS L1 C/A, L2C, L2P (y), GLONASS L1/L2, Galileo E1 |
| The acuracy of RTK | Horizontal: 10mm + 1.0ppm  Verticle: 15mm+1.0ppm |
| The update frequency of RTK | 100Hz |

**Route Planning**



Follow Terrain (SRTM)

Mission Planning: Linear, Route, Area, Multi Grid, etc

# Surveyor 260X

## Professional Level UAV LiDAR Scanning System PT-260X

Highly Integrated | High Precision | 300m Ranging | High Efficiency | Multi Platforms | Easy Operation

PT-260X liDAR scanning system is a UAV measurement system independently developed by Geosun company. It highly integrates laser scanner, GNSS satellite positioning system, INS inertial navigation system and camera ), and can quickly obtain high-precision laser point cloud number. It can be widely used in Digital city construction, Industry, Land survey, Forestry and Agriculture

## System Parameter

| | |
|---|---|
| Accuracy | ≤10cm@150m |
| Weight | 1.15 kg |
| Working Temperature | -20°~＋55° |
| Dimension | 11.5*11*12cm |
| Storage | 64 GB Max support 128GB TF card |
| Carrying Platform | Multi Rotor/VTOL |

## Laser Unit

| | |
|---|---|
| Measuring Range | 300m@10% |
| Laser Class | 905nm Class1 (IEC 60825-1:2014) |
| Laser Line Number | 32-beam |
| FOV | 360°, adjustable |
| Range Accuracy | ±1cm |
| Data | Trible echo 1920,000 Points/Sec |

## POS Unit

| | |
|---|---|
| Update Frequency | 200HZ |
| Pitch /Roll Accuracy | 0.005° |
| Heading Accuracy | 0.017° |
| Position Accuracy | ≤0.05m |
| GNSS Signal Type | GPS L1/L2/L5,GLONASS L1/L2<br>BDS B1/B2/B3,GAL E1/E5a/E5b |

## Pre-Processing Software

| | |
|---|---|
| POS （Trajectory） Software | Shuttle |
| Point Cloud Software | gAirHawk |

## Camera

| | |
|---|---|
| FOV | 83° |
| Effective Pixel | 26 MP |
| Focal Length (mm) | 16 |

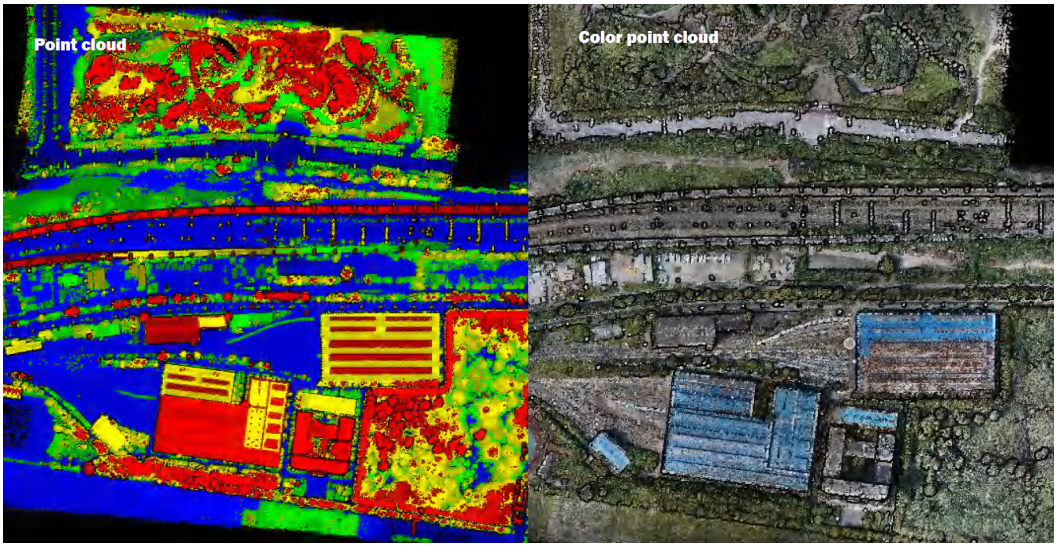
## Operation Efficiency Table

| Flight Height (m) | Density (pts/m²) @ speed 10m/s | Single Flight Operation(km²) |
|---|---|---|
| 50 | 228 | 1 |
| 100 | 160 | 1.68 |
| 150 | 80 | 2.52 |

## Mission Planning Software (optional)

| | |
|---|---|
| Mission Planning Software | Customized Route Planning Software – WayPoint Master |

## Application Case




Model:PT-260X

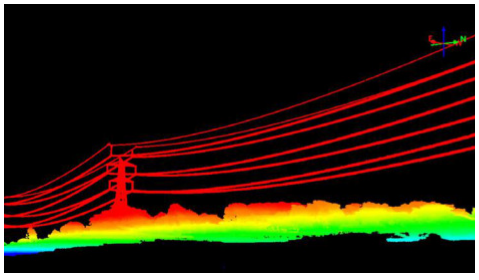
Flight speed:10m/s

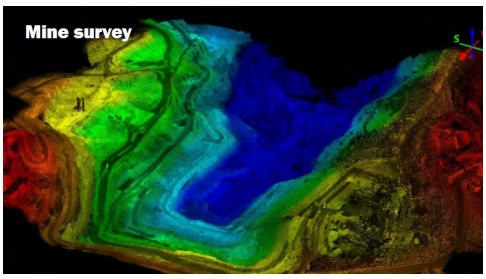
Flight altitude:120m

Accuracy:5cm

Application:Track Monitoring

Project location: US






POSTERRA

# PostTerra Cloud Mapper (Complete solution)

Ultimate System Lidar / UAV point cloud processing system

**1) Post Terra - Lidar Base Module** For Lidar Processing
Fly log trajectory processing
GPS PPK post processing

**2) Post Terra Lidar Cloud Mapper**
For Lidar/UAV cloud data advance Processing and editing
Engineering Process such DSM, DTM, Classification, contouring and etc
Various analysis and advance module
Export to various industry standard

**3)Post Terra Cloud – WEB MODULE** For data web sharing Web base digitizing
Data exporting to LAS or DXF via web browser
Slope and profile analysis

## Post Terra Solution

Work Flow Solution

Our system design and workflow is based on 30 years of in-depth survey experience and we understand how the system will be used in practice.

The workflow enables you to:

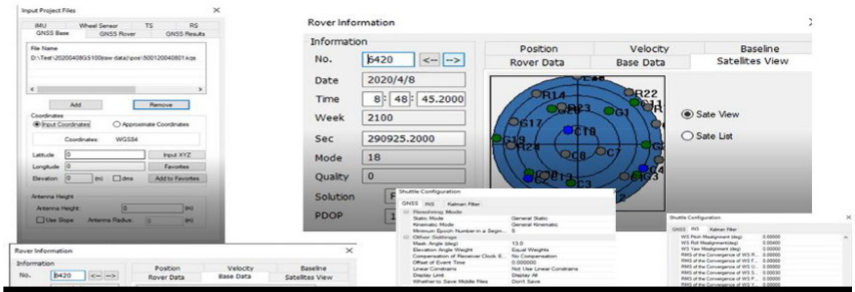
1. Undertake rigorous survey planning
2. Easy deployment in the field
3. Quality Assurance of data
4. Quick download of data
5. Filtering of data in LidarViewer Pro to extract the specific data needed
6. Export to third party packages

**Workflow to increase your rate of return**

The Post Terra workflow brings efficiency, effective management, improves productivity and results in a high rate of return or cost saving.

| 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|
| PLANNING Rigorous survey planning | DATA ACQUISITION Field survey Easy deployment | QUALITY ASSURANCE Real time QA of data in the field | DATA DOWNLOAD Quick and simple | DATA PROCESSING Filter and apply specific tools to analyze data | FIN Achi in expc |

## Post Terra Hawk - Lidar Base Module -for UAV FLY GPS PPK and PPS



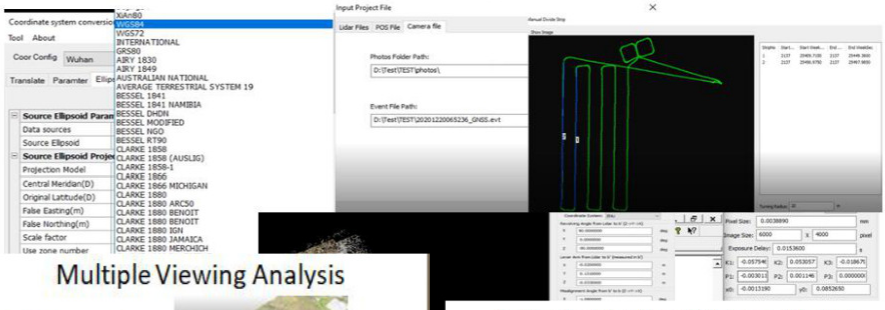
## Justification

-Platform independent.
- -All online platform support.
- -Windows base, rinux, apple or android.
- -Any platform that can online.

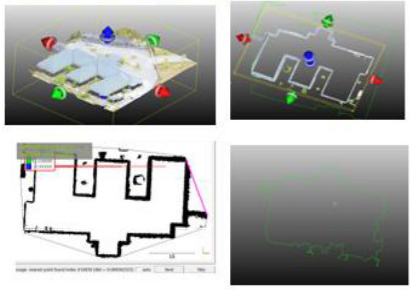
-Hardware independent.
- -Normal PC
- -Tablet
- -Smart phone
- -As long as can online

-Software independent.
- -No need special software or skill needed.
- -Can be run common web browser such as internet explorer, Microsoft Edge, Google chrome, Mozilla, opera and etc

## Post Terra Hawk - Lidar Base Module -for Synchronize LIDAR, POS and Camera

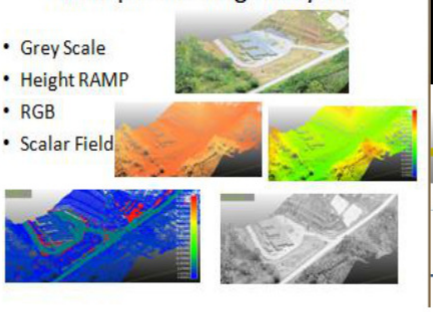


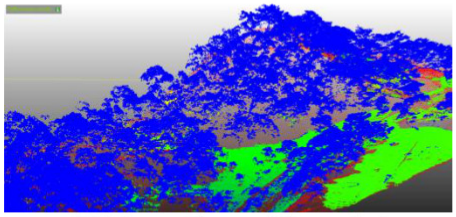
### Automation on Lidar data digitization



### Multiple Viewing Analysis

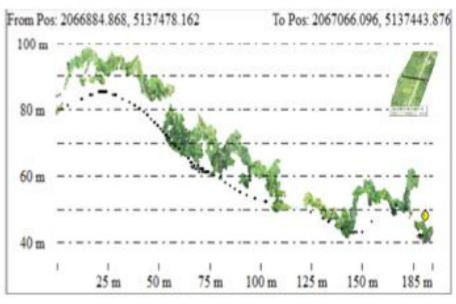
- Grey Scale
- Height RAMP
- RGB
- Scalar Field

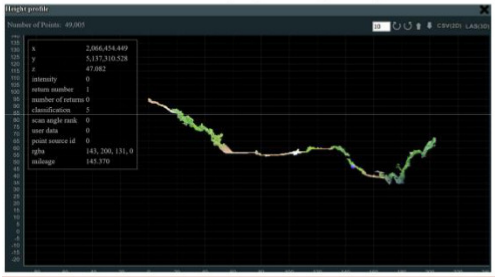




Web base – Slope profiling analysis

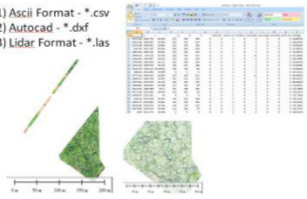
### Profiling Analysis with multiple layer point cloud



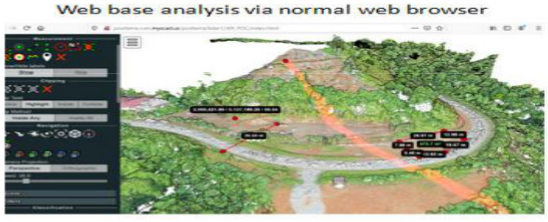



Web base – download the selected cloud data

1) Ascii Format - *.csv
2) Autocad - *.dxf
3) Lidar Format - *.las



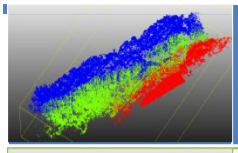
### Web base analysis via normal web browser



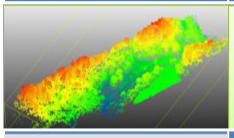
For more informations: http://postterra.com.myscad.us

# PostTerra Cloud Mapper (Complete solution)

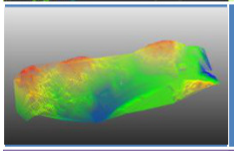
Ultimate System Lidar / UAV point cloud processing system



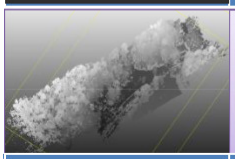
**Ready Tool to classify ground vegetation layers, buildings etc. Check ground classification with the help of Post terra Web Cloud.**



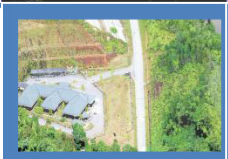
You can produce different deliverables from the classified point cloud. For example DTM.



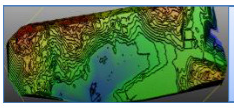
Match & Merged
multiple flight/drive passes and automatically find tie lines. Cut the overlap. Tie the point clouds to ground reference points



SUPPORT DATA From various Lidar sensor & UAV LAS data Import processed laser points and trajectories .Filter low points, stops and other error points. Deduce line numbers to points.



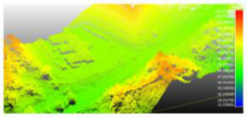
Colourised Lidar Module
You can create a RGB lidar cloud with true ortho mosaic from the raw images. You can also automatically texturize building walls using oblique images and colorize both airborne and mobile point clouds using images.

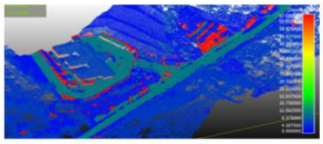


Contouring & Volume
Automatically produce contours with full user definable parameters.

## Multiple Viewing Analysis

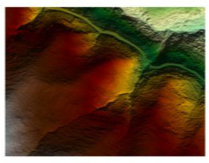
- Grey Scale
- Height RAMP
- RGB
- Scalar Field



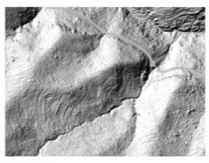


## Post Terra Cloud -Lidar Terrian Data

- FEATURES :
- The terrain model provides a series of automatic and manual-editing tools for classifying ground points from LiDAR
- point clouds. It also provides a set of GIS tools for interpolating surface models (e.g., digital elevation model/DEM, digital
- surface model/DSM), and visualizing and editing them in 3D. Additionally, it contains tools for repairing surface models
- from spikes and holes. Furthermore, It allows users to analyze the terrain model to generate derivatives from the surface
- models, e.g. slope, aspect, and roughness.



DEM



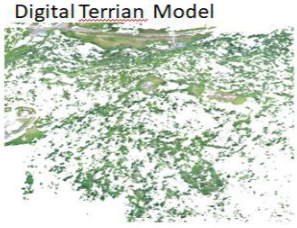
Hillshade

Contour Lines

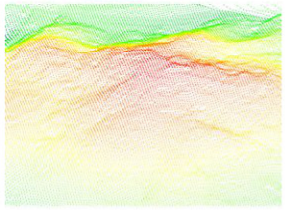
## DSM To DTM generation

Digital Surface Model

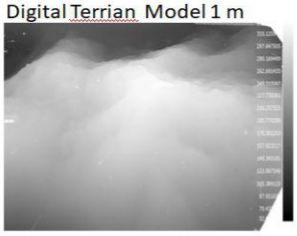
Digital Terrian Model



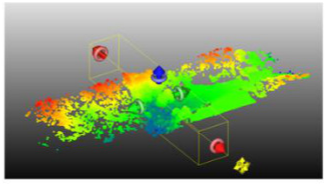
Digital Terrian Model 5 m

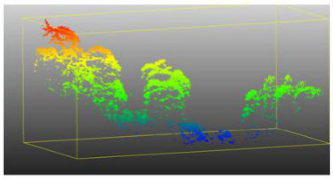


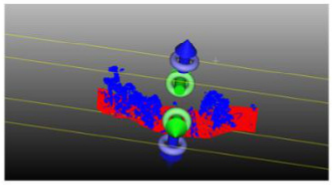
Digital Terrian Model 1 m

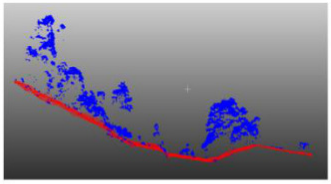


## Lidar Cross Section / Segmentation

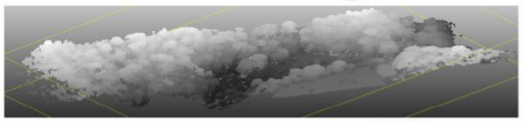


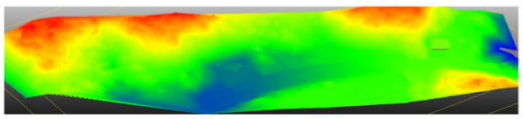


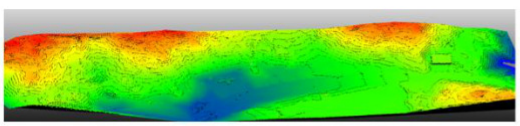


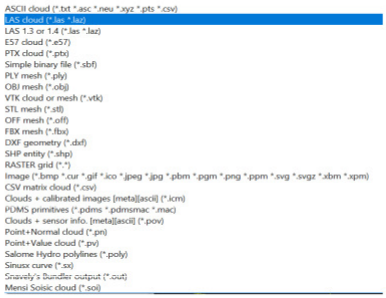


## Contouring









ASCII cloud (*.txt *.asc *.neu *.xyz *.pts *.csv)
LAS cloud (*.las *.laz)
LAS 1.3 or 1.4 (*.las *.laz)
E57 cloud (*.e57)
PTX cloud (*.ptx)
Simple binary file (*.sbf)
PLY mesh (*.ply)
OBJ mesh (*.obj)
VTK cloud or mesh (*.vtk)
STL mesh (*.stl)
OFF mesh (*.off)
FBX mesh (*.fbx)
DXF geometry (*.dxf)
SHP entity (*.shp)
RASTER grid (*.*)
Image (*.bmp *.cur *.gif *.ico *.jpeg *.jpg *.pbm *.pgm *.png *.ppm *.svg *.svgz *.xbm *.xpm)
CSV matrix cloud (*.csv)
Clouds + calibrated images [meta][ascii] (*.icm)
PDMS primitives (*.pdms *.pdmsmac *.mac)
Clouds + sensor info. [meta][ascii] (*.pov)
Point+Normal cloud (*.pn)
Point+Value cloud (*.pv)
Salome Hydro polylines (*.poly)
Sinusx curve (*.sx)
Snavely's Bundler output (*.out)
Mensi Soisic cloud (*.soi)

ASCII cloud (*.txt *.asc *.neu *.xyz *.pts *.csv)
LAS cloud (*.las *.laz)
LAS 1.3 or 1.4 (*.las *.laz)
E57 cloud (*.e57)
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VTK cloud or mesh (*.vtk)
DXF geometry (*.dxf)
SHP entity (*.shp)
Clouds + sensor info. [meta][ascii] (*.pov)
Point+Normal cloud (*.pn)
Point+Value cloud (*.pv)

Computer Specification

I7 Gen 7 processor or better, good processor frequency 16 GB RAM minimum, Recommended 32 GB DDR4 RAM, 6GB display memory, 1024*768 resolution display or better Minimum SSD hard disc or M2 storage device with fast access speed is recommended, Windows x64 version 10 or later

For more informations: http://postterra.com.myscad.us