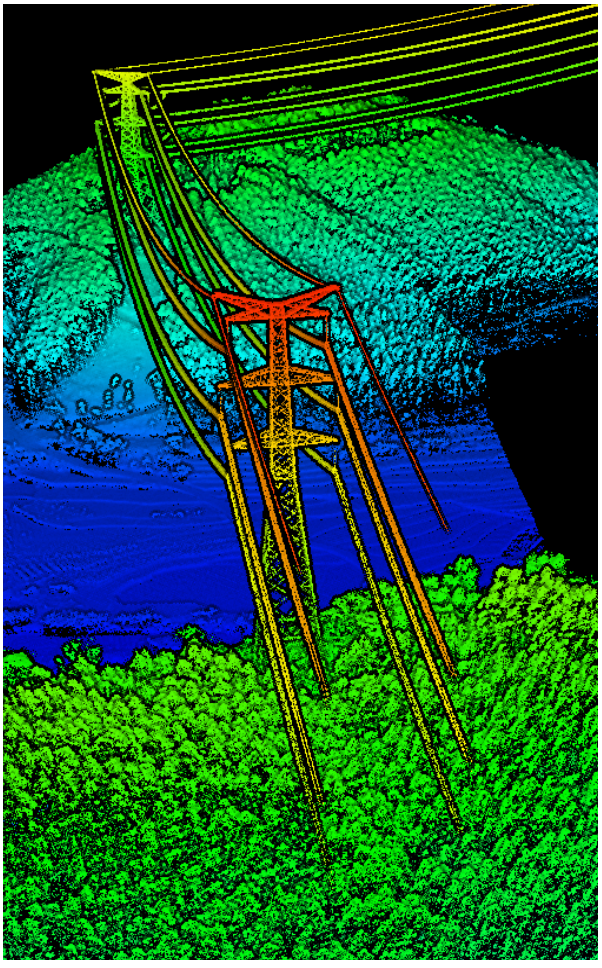
GreenValley International

LiAir X3C

Powerline Intelligent Autonomous Inspection System

LiAir X3C is the third-generation powerline intelligent autonomous inspection system independently developed by GreenValley, integrated with AirPilot intelligent autonomous flight algorithms. The LiAir X3C inherits the L3 "autopilot" capabilities of the X-series products and is integrated with 360-degree circular scanning LiDAR, further improving operational efficiency and data quality. The LiAir X3C, characterized by intelligence, high efficiency, high quality and cost-effectiveness.

Advantages



Two Survey Results with a single flight

The AirPilot intelligent automated powerline algorithm is upgraded again. In the automated powerline flight process, the LiAir X3C can recognize the tower, and then automatically hover, to take high-definition photos in front of the tower/on the tower/behind the tower through the equipped dual pan-tilt-zoom (PTZ) cameras. As a result, the surveying data of powerlines and towers are collected through only one flight.

Larger Viewing Angle

The LiAir X3C is equipped with 360-degree circular scanning LiDAR with a range of up to 300 meters. As a result, the scanning width is greater and the towers and powerline structure are scanned more completely.

Mapping Camera with Ultra-High Definition Image Quality

The LiAir X3C has a built-in 2600 W high-resolution mapping camera that provides clear and true images. It can produce high quality color point clouds and orthophotos. There are the reserved external camera interfaces, supporting the simultaneous mounting of infrared cameras and other types of cameras.

Support of LiPlan Flight Assistant

LiPlan supports status monitoring, parameter adjustment and 3D real-time point cloud display. The brand new design of the interface provides more convenient flight experience.

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Specifications

System Parameters			
Detection Range	80m (reflectivity ⩾ 10%) 200m (reflectivity ⩾ 54%) 300m (reflectivity ⩾ 90%)	Accuracy (Vertical)	5cm@70m
		Typical Flight Speed	2-6m/s
Weight	1.12kg	Memory	256G TF Card
Voltage	12~24V	Power Consumption	24W
Operating Temperature	-20~50°C	Storage Temperature	-30~60°C
Communication	WIFI		
LiDAR Unit			
Wavelength	905nm	Number of Channels	32
Dot Frequency	First Return: 640,000 points/s Dual Return: 1,280,000 points/s Triple Return: 1,920,000 points/s	FOV	360°(Horizontal)×40.3°(Vertical)
		Number of Returns	3
Inertial Navigation System			
GNSS	GPS, GLONASS, BeiDou	Azimuth Accuracy	0.038°
Attitude Accuracy	0.008°	Data Frequency	200HZ
Camera			
Pixels	26MP	Image Size	6252x4168
Focal Length	16mm/24mm (Equiv. Focal Length)		
Software			
Control Software	LiPlan	Pre-processing	LiGeoreference
Post-processing	LiDAR360/LiPowerline（Option）