QP532
Reconnaissance UAV

Surveying/Inspection Assistant
Professional because of focus

Product Features

QP532 is a pure electric hybrid wing unmanned aerial vehicle independently developed by AheadX for the field of surveying/inspection. It adopts a composite material body, with a sturdy and reliable structure. The single operation duration can reach up to 180 minutes, the operating range can reach 150 kilometers, the practical lift is 5500 meters, and the maximum wind resistance level is 6. It can be mounted with a full range of Sail cameras to achieve fully autonomous and image free orthophoto/tilt photography operations; Can mount RIEGL LiDAR to achieve intelligent inspection operations; Provide services such as user load customization, post differential analysis, and image processing.
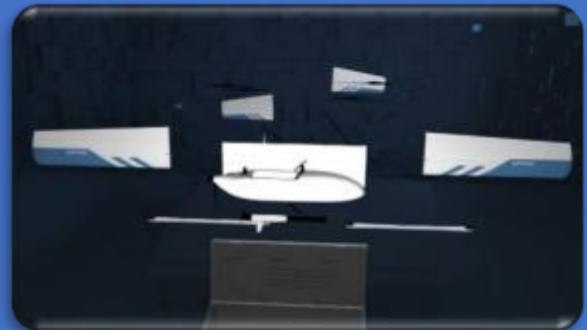
强劲机体性能
纯电动动力，复合材质机身
实用升限5500M，最大6级抗风

Complex working environment
Can be working shortly in light rain and snow.
Working temperature -20~50℃

Quick dismantling structure
Quick disassembly of structure, portable transport box, 5-minute quick deployment operation

Smart battery
Real-time health monitoring, -20℃ automatic heating Single cell 4.35V, very high energy density

Secure hardware backup
Dual redundant airspeed meter/satellite, three redundant heading measurement, four redundant IMUs

Servo safety condition monitoring
Real-time monitoring of motor/steering gear/structure status, abnormal alarm
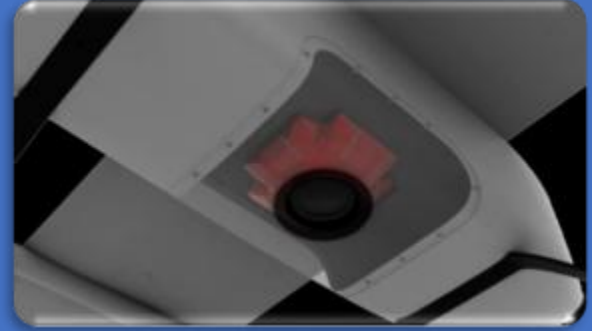
电台＋4G双数据链
20KM数传与4G数据链互为备份，
复杂场景稳定通讯

载荷深度硬件集成
支持挂载赛尔全系相机， RIEGL
雷达，支持用户载荷集成定制

Surveying/inspection advantages

QP532 delves deeply into the field of surveying and mapping/inspection, equipped with high-precision inertial navigation, time synchronization systems, and advanced camera calibration algorithms, which can achieve image control free surveying and mapping. At the same time, it supports post differential operations and provides data and image solution services to quickly obtain operational results; Deep integration of RIEGL LiDAR function, one click setting of LiDAR parameters, automatic opening/closing of scanning when entering/leaving the measurement area, reducing load power consumption and invalid data. The SPACE ground station software deeply integrates payload functions, enabling unmanned and fully autonomous operations. Multiple flight protection mechanisms improve flight safety.

Image-free surveying and mapping

1: 300 camera free orthophoto/tilt mapping, with an accuracy of up to 2CM without setting camera control points

Advanced turning algorithm for Motion planning

Automatically turn excessively according to the optimal efficiency when switching lanes, and the accuracy of mapping is not affected in strong wind environments

High-precision ground simulation flight

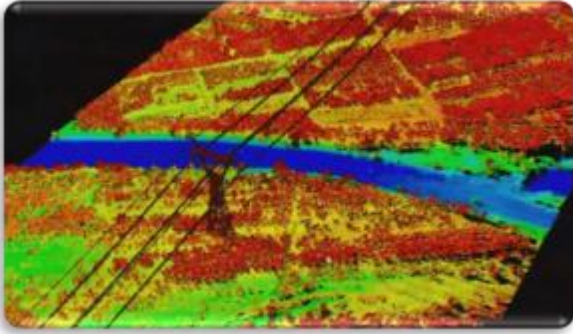Support high-precision terrain elevation simulation flight without fear of mountain operations

Real time differential RTK/post differential PPK simultaneous operation

Real time differential/post differential simultaneous operation providing data and image solving services

Intelligent inspection

Lidar one click settings, automatically start when entering the measurement area, and automatically close when leaving the measurement area
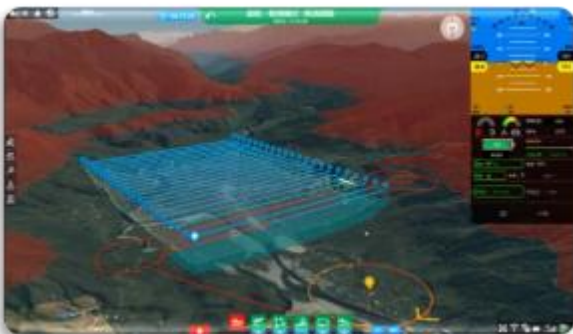

3D ground station software

3D map interface, WYSIWYG provides customized services

Load function integration

The ground station software integrates Sail camera/RIEGL load control and status monitoring functions

Imitation protection

When encountering terrain such as hills above the operating route, millimeter wave radar perceives abnormalities and automatically climbs

Fully autonomous operation, unmanned

You only need to issue the start task instruction to operate autonomously and customize unmanned services

Scan route with one click generation

Quick import of survey area files, blocks/strips

Galaxy Cloud System

Unmanned aerial vehicle online management, 3D real-time data monitoring and remote control, improving the efficiency of large-scale operations

Multiple emergency protection

low battery, data link loss, automatic return attitude overrun, emergency alternate landing, etc

QP 532 Parameter

Fuselage Length	1.74m
Wingspan	3.2m
Body Materials	Glass fiber+carbon fiber +PVC
Max. Take-off Weight	22kg
Cargo capacity	4kg
Dynamical system	Low noise, brushless, electric
Storage dimension	128*59*59cm
Max. Endurance	180min
Maximum range	150km
Cruising Speed	75km/h
Wind resistance	≤6
Practical ceiling	5500m
Working Temperature	-20℃~50℃
Take-off/Landing Mode	Auto VTOL
Hor. Positioning Accuracy	1cm+1ppm
Ver. Positioning Accuracy	2cm+1ppm
Data communication distance	20km（Stand）；60km（Max）