

X820

A Quadcopter Drone for Industry Application



- Carbon fiber material
- 940mm Diagonal wheelbase
- Max Flight Time: 38mins
- Max Speed: 25m/s
- Max Transmission Distance: 10km
- Max Flight Height: 1500m
- PTZ Accuracy: $\pm 0.01^\circ$
- Satellite Positioning Systems: GPS / Beidou / GLONASS

System Overview

This product is a quadcopter drone which includes the aircraft, payload, remote control, and ground station. It's designed for public security, transportation, firefighting, border defense, agricultural and forestry, and energy industries. It provides a complete aerial video surveillance solution with long transmission distance, high hovering accuracy, and 30x optical zoom capabilities.

Functions

Intelligent Mode

The drone supports convenient operation with multiple intelligent modes, including flight route, waypoint flight, circle (points of interest), and direction lock mode. The drone can take off automatically and enable intelligent mode, moving according to the pre-set route / waypoints and points of interest. When the mission is finished, the drone will return to base and land automatically.

Security Mechanism

There are a series of security mechanisms which ensure safe and reliable drone operation. If the drone runs out of battery or moves out of the control range, it will signal an alarm and return to base automatically, triggering landing mode. E-Fence functionality makes setting flight boundaries easy, preventing the drone from flying into restricted areas.

Quick Assembly and Disassembly

All parts of the drone, including the battery, payload, propellers, antenna, and aircraft arms can be quickly assembled and disassembled, ensuring immediate mission readiness as well as quick extraction.

Visible Camera and Thermal Camera

The drone is equipped with a 6MP, high resolution visible light camera that supports 30x optical zoom for capturing more details from long range. EIS (Electronic Image Stabilization) reduces blurriness caused by movement or vibrations to ensure images are sharp. For special applications, an optional thermal camera can be added to detect hidden targets and provide accurate temperature measurement capabilities.

Accurate Positioning

Three satellite positioning systems used by the drone - GPS, Beidou, and GLONASS - ensure high accuracy positioning with $\pm 0.2\text{m}$ horizontal and $\pm 0.5\text{m}$ vertical accuracy. These three positioning systems also ensure near complete coverage of the global market.

Technical Specification**Aircraft**

Diagonal Wheelbase	940mm
Dimensions	940(mm) x 940(mm) x 521(mm)
Package Dimensions	600(mm) x 430(mm) x 720(mm)
Satellite Positioning Systems	GPS/Beidou/GLONASS
Net Weight	3.3kg(7.28lb)
Max. Takeoff Weight	10kg(22.05lb)

Flight Parameter

Hovering Power	768W
Hovering Time	35mins
Hovering Accuracy	Vertical: ±0.5m , Horizontal: ±0.2m(<Lev.3 wind)
Max. Speed	25m/s
Max. Flight Height	1500m(4921.3ft)
Max. Takeoff Altitude	5000m(16404.2ft)
Max. Ascent Speed	15m/s
Max. Descent Speed	2.5m/s
Max. Tilt Angle	25°
Max. Wind Speed Resistance	14m/s
Max. Angular Velocity	100°/s
Max. Flight Time	38mins
Operating Temperature	-20°C ~ 60°C (-4°F ~ 140°F)

Remote Controller

Operating Frequency	CE:800M FCC:900M
Max Transmission Distance	5Km
Battery	25 LiPo, 7800mAh
Operating Temperature	-30°C ~ 70°C(-22°F ~ 158°F)
Storage Temperature	-30°C ~ 70°C(-22°F ~ 158°F)

PC Ground Station

Storage	500G
Battery	8550mAh
Bandwith	8Mbps
Max Transmission Distance	10KM
Screen	13.1" touch screen

Power Battery

Capacity	22000mAh
Battery Type	LiPo

Net Weight	2.9kg(6.39lb)
Operating Temperature	-30°C ~ 70°C(-22°F ~ 158°F)
Storage Temperature	-30°C ~ 70°C(-22°F ~ 158°F)

Camera

Sensor	1/1.9" STARVIS™ CMOS
Effective Pixel	2560(H)x1920(V), 6 Megapixels
Electronic Shutter Speed	1/1s~1/30,000s
Focal Length	6mm~180mm
Angle of View	H: 61.2° ~ 2.1°
Optical zoom	30x
Pan/Tilt Range	Pan: ±168°; Tilt: -90° ~ 45°
Pan/Tilt Speed	Pan: 130°/s; Tilt: 130°/s
Accuracy	±0.01°
Encoding	H.265/H.264/MJPEG
Resolution	6M(2560×2560)/5M(2560×1920)/3M(2048×1536)/1080P(1920×1080)
EIS	Support
Storage	Micro SD Card 128G

Thermal Camera (Optional)

Thermal Pixel	640(H)x512(V)
Pixel Size	17μm
Thermal Sensitivity	≤40mK
Focal Length	19mm
Measurement	Low Gain: -40°C ~ +550°C(-40°F ~ 1022°F) High Gain: -40°C ~ +160°C(-40°F ~ 320°F)
Pan/Tilt Range	Pan: ±168°; Tilt: -90° ~ 45°
Pan/Tilt Speed	Pan: 130°/s; Tilt: 130°/s
Accuracy	±0.01°
Encoding	H.264/MJPEG
Storage	Micro SD Card 128G

Live Broadcasting(Optional)

Resolution	1920(H) x 1080(V), 2 Megapixels
Optical Zoom	12x
Speaker Effective Distance	≥100m(328ft)
Storage	Micro SD Card 128G
Easy Installation	Support

Accessories

Controller:



PC Ground Station



Remote Controller

Payload:



Live Broadcasting



6MP PTZ Camera



Thermal PTZ Camera

Dimensions (mm)

