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WK-AC100 Vehicle-mounted UAV automatic Airport

Vehicle-mounted intelligent accompany flight | Precise auto take-off and landing
Remote control | Intelligent charging and changing | Automatic flight

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Industry Application UAV

Traditional manual control, 2-3 people team to complete the patrol.

Bottleneck of the UAV industry

High costs for traditional inspection

High pilots costs
High expense
Environmental complex



Timeliness is poor

Drones don't respond instantly
Unable to cope with emergencies



Difficulty for personnel to operate

Difficulty to manual flight operation
No precise or synchronized control
High liability risk



Single data management

No value out of your data



Industry Application UAV

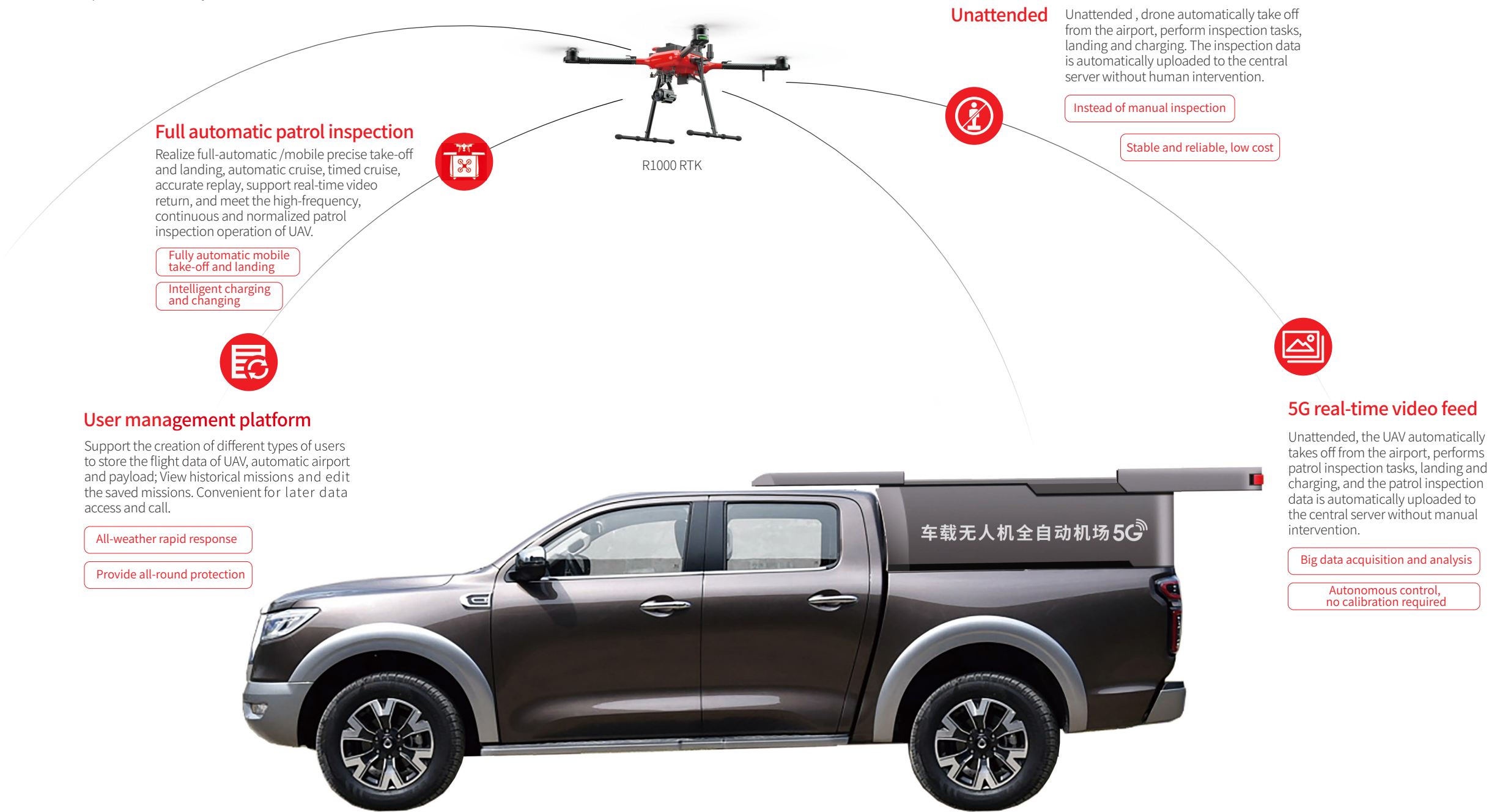
Traditional manual operation mode is limited by labor cost, pilot and control skills, environmental scope, work task quantity, safety factors, etc., which greatly restricts the rapid development of industrial UAV in the field of inspection and patrol.



Industry Application UAV

Fully Automated Drone Nest for Vehicles

Walkera Automated Vehicle-mounted nest can realize automatic unattended, remote automatic inspection. Save labor cost, simple and easy to control, fast response, improve 3~4 times of the operation efficiency.



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Vehicle-mounted intelligent accompany flight | Precise auto take-off and landing
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Walkera Wk-AC100 Vehicle-mounted UAV automatic Airport can achieve automatic/mobile accurate take-off and landing, automatic cruise, timed cruise, accurate replication, AI intelligent identification, mobile tracking; Support real-time video return, automatic charging/charging, meet the UAV high frequency, continuity, normal inspection, realize automatic unattended operation.



Unattended



AI intelligent identification



Automatic inspection operation



Automatic charging /charging



5G real-time video feed



User management platform



Protection level



Multi-airport synergy

Vehicle-mounted UAV

R1000 RTK

R1000 adopt new modular quick disassembly structure, four-axis folding arm design; Support dual magnetic compass mutual backup, using power signal redundancy design, to ensure flight safety. GNSS+ grid RTK double redundant system, which brings centimeter-level positioning accuracy and supports omnidirectional obstacle avoidance, makes the operation more safe. R1000 RTK has a long flight duration of 54 minutes and a maximum payload of 8kg.



Vehicle-mounted UAV automatic Airport

Ground station control system

Users can log in and control the equipment at any time, and execute sudden complex flight commands through the ground station. The platform can formulate four tasks according to different application scenarios, realize different flight modes and collection modes, assign tasks through the control system, and obtain real-time video data.



• Remote real-time control • Multiple task setting • Automatic/Manual switchable

Through 5G, the remote real-time control of unmanned replacement /charging, take-off and landing of uav, flight trajectory, and Angle of cradle head can be achieved, which is not limited by distance and region.

Multi-task complex scene setting, can set the trajectory, navigation point, Angle, inspection target and other flight information.

The UAV control mode is equipped with one-key switching function, which can realize the temporary switching of manual control of UAV and camera PTT in case of emergency during task inspection, and can switch back to the automatic flight task at any time.

Vehicle-mounted UAV automatic Airport

Intelligent charging and changing

When the power is nearly exhausted, the UAV will return to the vehicle airport automatically and change the power automatically through the mechanical arm without any manual intervention. After 2 minutes, the uav can take off again and put into operation. The breakpoint will continue to fly to the original position and continue the inspection. The replaced battery will be recharged automatically in the car for the next use.



Vehicle-mounted UAV automatic Airport

The Sports UAV Airport APP starts the inspection task with one click

After the inspection is completed, the staff can drive to the next location. The UAV does not need to return to the take-off point, but directly follows the vehicle to the next location. The UAV lands directly during the process of the vehicle moving, automatically changes the battery and takes off, and starts the inspection of the next area.



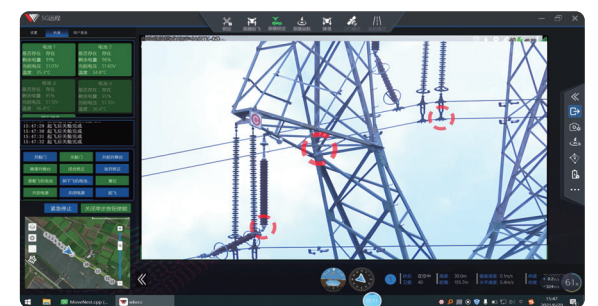
Automatically perform pylon inspection based on the planned tasks

Through 5G, the remote real-time control of unmanned replacement/charging, take-off and landing, flight trajectory, PTP Angle and other aspects can be realized without being affected distance and geographical limitations.



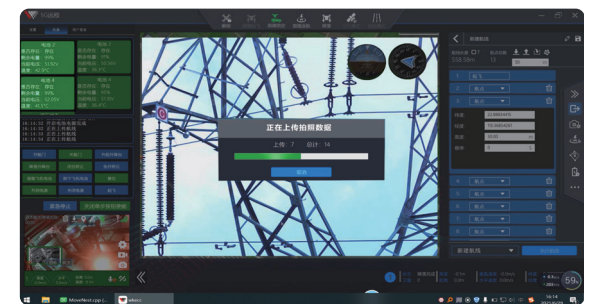
Precise identification of inspection targets, automatic dynamic shooting

The UAV uses AI image recognition algorithm to accurately identify targets and collect image information of inspected targets.



Upload and collect data through 5G network

The UAV uses AI image recognition algorithm to accurately identify the target, collect the image information of the inspected target, and return it through 5G network Upload to the cloud for automatic analysis, automatic detection of defects, and issue inspection reports.



River inspection Industry Applications



High-speed traffic patro Industry Applications



Electric power inspection Industry Applications



City's security cruise Industry Applications



Oil pipeline inspection Industry Applications



Forest inspection Industry Applications





Power supply: DC12V/24V ≤3KW
Control mode: remote background system, PLC, stepping system
Operation mode: Manual, Automatic (Touch screen, Remote background system)
Volume: 2045 x1690x1245mm (LxWxH)
Weight: about 650kg
Protection level: IP54, storm protection, lightning protection
Operating temperature: -20~50 degrees Celsius
Suitable for unmanned aircraft: R1000

Aircraft parameters



Aircraft

Symmetry motor wheelbase: 1047mm
Body size: unfold: 1140mm x1140mm x531mm
Folding: 514 mm x439 mm x469mm
(Folding arm, blade, obstacle avoidance gimbal)
Motor :KV value: 180rpm/V
Electrical regulation: Continuous current: 80A
(good heat dissipation condition)
Blade specification: Diameter * pitch: 24x7.9inch
Normal take-off weight: 7.8kg (battery included)
Maximum take-off weight: 15.8kg (near sea level)
Maximum speed of rise: 5 m/s
Maximum speed of descent: 3 m/s
Maximum horizontal speed: GPS mode: 5m/s(no wind)
Cruise mode: adjustable 3-20m/s (no wind)
Attitude mode: 25m/s(no wind)
Maximum tilt Angle: Positioning mode: 40°
Cruise mode: 40° Attitude mode: 40°
Maximum rotational angular velocity: 100°/s
Maximum wind speed: 17m/s
Maximum flight time: 54 minutes (no load)
Maximum altitude: 5000m
Recommended operating temperature: 0 ° C to +40 ° C
Hover accuracy: Enable RTK: Vertical: ±10cm horizontal: ±5cm
RTK disabled: Vertical: ± 0.5m Horizontal: ± 0.1m

The network RTK

Frequency band :GPS: L1 /L2/L5 GLONASS:F1/F2
BeiDou: B1/B2/B3 Galileo:E1/E5
Orientation accuracy: 0.2 ° /1m baseline
Level: 1 cm + 1 PPM
Positioning accuracy: vertical: 2cm+1ppm
1ppm: Accuracy will be reduced by 1mm
for every 1km increase.
Location update rate: 1Hz, 2Hz, 5Hz, 10Hz and 20Hz
Cold start: < 45 seconds
Hot start: < 10s
Recapture: < 1s
Initialization reliability: > 99.9%
Differential data transmission format: RTCM 2.x / 3.x
Data link: 4G
Communication distance: unlimited distance
(with 4G network signal)
Working environment temperature: 0°C to 45°C

Course following biaxial PTZ liDAR obstacle avoidance system

Obstacle perception range: 0.5m-40m@90% reflectivity (100Klux)
0.5m-13.5m@10% reflectivity (100Klux)
FOV: level 3 °
Measurement frequency: 50Hz
Horizontal rotation range: 360°
Pitch rotation range: ±90°
Measuring distance: ≤ 40 m

Payloads



4K 30 Times Zoom Camera



30X Dual-lens Camera



30X Fill-up Camera



Speaker



Stroke Unit



Spot search Light