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*In order to continuously improve user satisfaction, the product will continue to be upgraded,
The actual product and promotional materials may be different, please refer to the final actual product.*

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R500 RTK 测绘无人机
Surveying and Mapping UAV

御风而行 更进一步

Drive the wind Attain a higher goal




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R500 RTK 测绘无人机

R500 RTK厘米级无人机，机身采用轻量化碳纤维机身设计，轻装上阵，到手随时起飞。飞行续航时长可达60分钟，7级超强抗风等级。搭配三轴增稳小云台快拆设计，支持6K超高清相机、星光夜视相机、红外热成像相机挂载。



一体化碳纤维机身
Integrated Carbon Fiber fuselage



网络RTK
Network RTK



12公里图传
12KM Max Transmission

R500 RTK Surveying and Mapping UAV

R500 RTK UAV, the fuselage of lightweight carbon fiber fuselage design, light weight for frame, ready to fly. 60 minutes flight time with Grade 7 wind resistance. Equipped with three-axis small gimbal which can support 6K ultra HD camera, starlight night vision camera and infrared thermal imaging camera.



6K 25帧视频
6K 25fps Video



60分钟续航
60-min Max Flight Time



IP54防护等级
IP54 Rating



12KM远距离图传

12KM transmission

R500 RTK无人机采用2.4G远距离传输系统最大图传距离可达12KM。抗干扰能力强传输稳定可靠。

R500 RTK UAV adopts 2.4G long-distance transmission system, which can transmit the maximum map distance up to 12KM. Strong anti-interference ability, stable and reliable transmission.



网络RTK(选配)

Network RTK (optional)

集成全新RTK模块, 拥有强大的抗磁干扰能力与精准定位能力, 提供实时厘米级定位数据。

Integrated new RTK module, with strong anti-magnetic interference capability and accurate positioning capability, providing real-time centimeter-level positioning data.



稳定可靠的飞控系统

Stable and reliable flight control system

采用最新的控制导航算法,可实现数据实时互为备份;无需安装减震设计,赋予飞行器更高可靠性,为航拍提供稳定可靠的飞行体验!

The latest control navigation algorithm can realize real-time mutual backup of data. No need to install shock absorption design, giving the aircraft more reliability, for aerial photography to provide stable and reliable flight experience!



60分钟续航

60 minutes flight time

轻量化一体碳纤机身设计,机身抗震性强;搭配7000mAh大容量智能电池,最大连续飞行时间长达60分钟(空载状态,海平面无风状态下悬停飞行)。

Lightweight integrated carbon fiber fuselage design, the fuselage is strong earthquake resistance; Equipped with 7000mAh large-capacity intelligent battery, the maximum continuous flight time is up to 60 minutes (no-load state, hovering flight in the state of no wind at sea level).

智能环境感知

Intelligent environment awareness

前视红外避障模块, 下视红外定高系统,能让飞行器定位更精确, 感知周围飞行障碍物, 减少因操作失误带来的意外。

The forward-looking infrared obstacle avoidance module and the down-looking infrared height setting system can make the aircraft positioning more accurate, perceive the surrounding flying obstacles, and reduce the accidents caused by operation errors.



APP应用软件

Application software

针对航拍应用不同需求, 我们开发专用R500 专用APP, 操作界面简单, 实现轻松作业。

In view of different requirements of aerial photography applications, we developed a special R500 APP with a simple operation interface and easy operation.



搭配WKRC-H12带屏遥控器

With the WKRC-H12 screen remote control

搭载安卓嵌入式系统, 采用先进的SDR技术和超级协议栈, 让图像更加清晰, 延迟更低, 距离更远, 抗干扰更强。

With Android embedded system, advanced SDR technology and super protocol stack, the image is clearer, the delay is lower, the distance is longer and the anti-interference is stronger.



6K超高清航拍摄相机

6K ultra high definition aerial camera

支持拍摄6K 25fps、4K 30fps/60fps视频与2100万像素照片, 支持 H.265 编码格式输出, 保留最真实的细节, 85°超低畸变率广角镜头, 让您的创作更具灵感。

Support shooting 6K 25fps, 4K 30fps/60fps video and 21 million pixel photos, support H.265 encoding format output, retain the most true details, 85° ultra-low distortion rate wide Angle lens, let your creation more inspiration.



行业应用可搭载平台

Payload-carrying platform for industrial applications

微光夜视相机 Low light night vision camera

星光级夜视相机配备极度灵敏的感光器件, 便于夜间追踪锁定目标, 能拍出色彩分明的视频图像; 画质清晰, 视频分辨率可达到 1080P/30fps, 支持全方位多角度地进行作业, 清晰捕捉夜间的真实瞬间。在低照度环境下, 拍摄清晰物体画面, 适合夜晚微光环境拍摄作业。

Starlight class night vision cameras are equipped with extremely sensitive sensors to track and lock targets at night, and can take vivid video images. The picture quality is clear, the video resolution can reach 1080P/30fps, support all-round multi-angle operation, clearly capture the real moment at night. In low-light environments, it is able to shoot clear images of objects, suitable for nighttime low-light missions.

应用警务侦察、夜晚救援
Suitable for police reconnaissance, nighttime rescue



红外热成像相机 Infrared thermal imaging camera

红外线热成像相机具有穿透能力强、探测距离远、可识别隐藏目标、温度检测及昼夜可视等优势。基于图像与温度算法, 能在不利气候环境下, 识别目标。高灵敏度热成像相机, 突破光线和空间的局限, 可随时随地捕捉清晰、精准的热图像。让你能快速搜索大面积区域, 或近距离检测难以攀爬的设备。工作变得更加高效、轻松和安全。

Infrared thermal imaging cameras have the advantages of strong penetrating ability, long detection distance, recognizable hidden objects, temperature detection, and day and night viewing. Based on image and temperature algorithms, the target can be identified under adverse climate conditions. Highly sensitive thermal imaging camera, designed for breaking the light and space limits, capable of capturing clear and precise thermal images wherever you are, anytime. It allows you to quickly search a large area or hard-to reach devices, making the work more efficient, easier and safer.

适用电力、搜救
Suitable for power, search and rescue sectors



为航测而生

Born for aerial survey

R500是一款小型多旋翼高精度航测无人机,面向低空摄影测量应用,具备厘米级导航定位系统和高性能成像系统,便携易用,全面提升航测效率。

R500 is a small, multi-rotor, high-precision aerial survey uav for low-altitude photogram-metry applications. Equipped with centimeter-level navigation and positioning system and high-performance imaging system, it is portable and easy to use to comprehensively improve the efficiency of aerial survey.



效率提升
Efficiency

无人机外业数据采集效率约为传统人工作业方式的5至10倍。

The efficiency of UAV field data acquisition is about 5 to 10 times that of traditional manual operation.



成本降低
Cost reduction

设备成本低,操作简单,高度自动化操作让测绘单位降低人力投入。

Low cost of equipment, simple operation, highly automated operation to reduce manpower investment units.

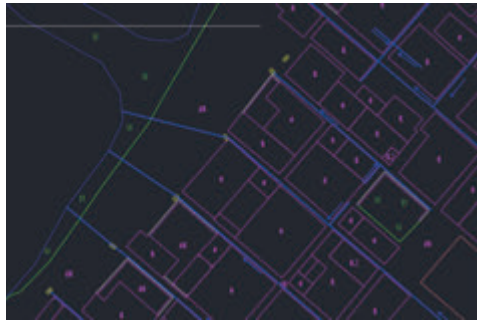


测绘成果多样化
Diversity of surveying and mapping results

提供DOM、DSM等测绘成果,满足多种需求。

Provide DOM, DSM and other mapping results to meet a variety of needs.

● 基础测绘 / Basic surveying and mapping



快速采集数据,大幅降低外业成本,灵活生成多种测绘成果。

Fast data collection, greatly reduce field costs, flexible generation of a variety of surveying and mapping results.

● 空间规划 / Spatial planning



无人机快速二维三维精准建模与多种地理数据结合,直观展示规划效果,设计更加科学高效。

UAV fast 2D and 3D precise modeling is combined with a variety of geographical data to intuitively display the planning effect, making the design more scientific and efficient.

● 工程测绘 / Engineering surveying and mapping



提升工程建设数字化水平,为设计、施工、运营提供全面的信息支撑。

Enhance the digital level of engineering construction, provide comprehensive information support for design, construction and operation.

● 自然资源调查 / Natural resource survey



高效数据采集,自动化信息处理,无人机解决方案让大范围精细化自然资源调查成为可能。

Efficient data collection, automated information processing, and unmanned aerial vehicle solutions make it possible to refine large-scale natural resource surveys.

巡检场景

Checking the scene

R500无人机采集高清数据,为巡检、巡逻提供更加安全、便捷、高效的巡检解决方案。

R500 UAV collects high-definition data, providing patrol industry with more secure, convenient and efficient patrol solutions.

● 交通巡检

Traffic inspection



通过空中抓拍和喊话快速处理小型事故,及时疏导拥堵,通过无人机收集事故现场照片,高效完成现场事故处置。

Small accidents were quickly dealt with by aerial capture and propaganda, congestion was relieved in time, and photos of accident site were collected by UAV to efficiently complete on-site accident disposal.

● 警用巡检

Police inspection



快速响应,实现空中视野可视化侦查,提高执法效率,保障社会安全有序。

Rapid response, the realization of aerial visual detection, improve the efficiency of law enforcement, ensure social security and order.

● 海关巡检

Customs inspection



大范围搜索目标区域,迅速定位走私人员,及时开展执法行动。

Search the target area in a wide range, quickly locate smugglers, and carry out law enforcement actions in a timely manner.

● 电力巡检

Electric power inspection



促进巡检自动化,提升巡检效率及精细化程度,助力电网数字化转型。

Promote inspection automation, improve inspection efficiency and refinement, and help power grid digital transformation.

● 油气巡检

Inspection of oil and gas



深入人工难以抵达的区域,提高巡检效率,减轻人员工作量,保障油气管道、石油钻井平台等设备安全运行。

Go deep into areas that are difficult to reach manually, improve inspection efficiency, reduce the workload of personnel, and ensure the safe operation of oil and gas pipelines, oil drilling platforms and other equipment.

● 地理信息测绘

Geographic information mapping



颠覆传统人工测绘作业模式,大幅提升测绘工作的自动化和信息化水平,全面提升测绘效率。

It subverts the traditional manual surveying and mapping operation mode, greatly improves the level of automation and information technology of surveying and mapping, and comprehensively improves the efficiency of surveying and mapping.

技术参数

Technical parameters

飞行器	Aircraft
对称电机轴距: 460mm 机身尺寸: 367mm*367mm*228mm 电机: KV值650rpm/V 电调:持续电流45A 螺旋桨规格: 直径*螺距: 11*4.5 inch 正常起飞重量: 1.38kg(含电池和云台) 最大起飞重量: 2.0kg 上升速度: 出厂默认5 m/s, (3~8m/s可调) 下降速度: 出厂默认3 m/s, (3~8m/s可调) 水平飞行速度: GPS模式: 5m/s; 运动模式: 出厂默认10m/s (5~20m/s可调); 姿态模式: 15m/s (无风环境) 最大可倾斜角度:GPS模式: 25° 运动模式: 30° 姿态模式: 30° 最大旋转角速度: 150°/s 最大飞行海拔高度: 4500m 最大可承受风速: 17 m/s 最大续航时间: 60分钟(空载, 不挂载相机云台); 50分钟(挂载相机云台); 工作环境温度: -10°C至+40°C 定位精度:GPS: 垂直±1.5 m, 水平±0.4 m (GPS定位正常工作) 配合网络RTK: 水平1cm+1ppm, 垂直2cm+1ppm (GPS定位正常工作、网络RTK连接正常)	Weigh motor wheelbase: 460mm Body size: 367mm*367mm*228mm Motor: KV 650rpm/V Electric adjustment: continuous current 45A Propeller size: Diameter * pitch: 11*4.5 inch Normal takeoff weight: 1.38kg(including battery and head) Maximum takeoff weight: 2.0kg Rise Speed:factory default 5.0m/s, (adjustable from 3 to 8m/s) Falling Speed: factory default 3.0m/s, (adjustable from 3 to 8m/s) Horizontal Flight Speed: GPS mode: 5m/s Motion mode: factory default 10m/s (adjustable from 5 to 20m/s); Attitude mode: 15m/s (no wind environment) Maximum tilt Angle :GPS mode: 25° Motion mode: 30° Posture mode: 30° Maximum rotational angular velocity: 150°/s Maximum flight altitude: 4,500 m Maximum wind speed: 17 m/s Maximum endurance: about 60 minutes (without 6K camera) About 50 minutes (with 6K camera) Operating temperature: -10°C to +40°C Positioning accuracy: GPS: vertical ± 1.5m, Level ±0.4 m (GPS positioning works normally) Coordinate with network RTK: horizontal 1cm+1ppm, vertical 2cm+1ppm (GPS positioning works normally, network RTK connection is normal)
前视避障	Forward-looking obstacle avoidance
障碍物感知范围: 12m FOV: 水平30°, 垂直±2.4° 测量频率: 100 Hz	Sensing range of obstacles: 12m FOV: 30° horizontal, ±2.4° vertical Measurement frequency: 100 Hz
下视定高	Under the fixed high
高度测量范围: ≤ 12 m 精确悬停范围: ±0.1m 测量频率: 100Hz	Height measurement range: ≤ 12 m Accurate hover range: ±0.1m Measurement frequency: 100Hz
遥控器WKRC-H12	Remote control WKRC - H12
型号: WKRC-H12 工作频率: 2400MHz至2483MHz 最大通信距离: 12Km(开阔无遮挡, 无电磁干扰) 显示设备: 5.5寸 1920*1080 1000NITS高亮显示屏 充电接口:TYPE-C 电池: 3.7V 10000mAh LiPo 1S 工作环境温度: -10°C至40°C 充电环境温度: 5°C至40°C 重量: 530g 尺寸: 190*152*94mm	Model: WKRC - H12 Operating frequency: 2400MHz to 2483MHz Maximum communication distance: 12KM(open without shelter, no electromagnetic interference) Display equipment: 5.5-inch 1920*1080 1000NITS highlight screen Charging interface: Type-c Battery: 3.7V 10000mAh LiPo 1S Operating temperature: -10°C to 40°C Charging ambient temperature: 5°C to 40°C Weight: 530 g Size: 190 * 152 * 94 mm

网络RTK(选配)	Network RTK (optional)
使用频段: GPS: L1 /L2/L5 GLONASS:F1/F2 BeiDou: B1/B2/B3 Galileo:E1/E5 水平: 1cm+1ppm垂直: 2cm+1ppm 1ppm: 每增加1km,精度变差1mm。 定位更新率: 1000HZ 冷启动: <45s 热启动: <10s 重捕获: <1s 初始化可靠性: >99.9% 差分数据传输格式: RTCM 2.X/3.X 数据链路: 4G 通信距离: 不限距离(有4G网络信号) 工作环境温度: 10°C至45°C	Frequency band: GPS: L1 /L2/L5 GLONASS:F1/F2 BeiDou: B1/B2/B3 Galileo:E1/E5 Positioning accuracy: Level: 1cm+1ppm Vertical: 2 cm + 1 PPM 1ppm: Accuracy changes 1mm for every 1km increase. Location update rate: 1000HZ Cold start: < 45s 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: 10°C to 45°C

6K相机	6 K Camera
影像传感器: 1英寸SONY背照式CMOS 镜头: FOV85°; 等效9mm焦距; f/3.5光圈 拍照: 支持2100万像素 视频录制: 6K (5480*3648) @25fps 4K (3860*2160) @25fps/30fps/60fps 变焦: 25倍无损数码变焦 视频编码: H264、H265 支持文件系统格式: exfat 视频格式: MP4 图片格式: JPG 支持存储卡类型: Micro SD卡, 最大支持512G, 传输速度为Class10及以上或达到UHS-1评级的Micro SD卡	Image sensor: 1-inch SONY backshot CMOS Lens: FOV85°. Equivalent 9mm focal section; F / 3.5aperture Photo: support 21 million pixels, Video recording: 6K (5480 x 3648) @ 25fps 4 k (3860 * 2160) @ 25 FPS / 30 FPS / 60 FPS Zoom: 25 x lossless digital zoom Video coding: H264, H265 The supported file system format is exFAT Video format: MP4 Image format: JPG Supported memory card type: Micro SD card, up to 512 GB, transmission speedMicro SD cards with Class10 or above or UHS-1rating

智能飞行电池	Intelligent flight battery
电压: 22.2V 容量: 7000mAh 电池类型: LiPo 6S 能量: 155.4Wh 充电环境温度: 5°C至40°C	Voltage: 22.2 V Capacity: 7000 mAh Battery type: LiPo 6S Energy: 155.4 Wh Charging ambient temperature: 5°C to 40°C

云台	Gimbal
输入电压: 12V 稳定系统: 3轴(俯仰、偏航、横滚) 可控转动范围: 俯仰: -90°至+30°; 水平: ±40° 最大控制转速: 俯仰: 50°/s;; 横滚: 直接控角度 角度控制精度: 静态: ±0.01°; 动态: ±0.02°; 防抖: ±0.01°	Input voltage: 12V Stable system: 3 axis (pitch, yaw, roll) Controllable rotation range: pitch: -90° to+30°,level: ±40° Maximum control speed: pitch: 50°/s; Roll: Direct Angle control Angle control accuracy: static: ±0.01°; Dynamic: + / - 0.02 °; Stabilization: + / - 0.01 °