

Short Range Intelligent Photoelectric Turntable for Drone Detection and Tracking Camera

Our Product Introduction

Basic Information

- Place of Origin: China
- Brand Name: MYT
- Certification: CNAS、CMA、CAL、ILAC-MRA
- Model Number: DD-E2
- Minimum Order Quantity: 1
- Price: Pricing is negotiable based on order quantity
- Delivery Time: 10 work days
- Payment Terms: TT, LC
- Supply Ability: 500 units per month



Product Specification

- Visible Camera Detection Distance: $\geq 2500\text{m}$
- Tracking Distance: $\geq 2000\text{m}$
- Identification Distance: $\geq 1000\text{m}$
- Sensors: Backlit Starlight CMOS



More Images



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DD-E2 Short-range Intelligent Camera

1, Product Introduction

The DD-E2 series of miniature photoelectric turntables, independently developed by our company, is designed for integrated air-ground security in key locations such as military bases, nuclear, biological, and chemical defense facilities, border and maritime defense zones, conference centers, office buildings, prisons, and airports. This system integrates photoelectric detection and tracking capabilities, featuring high-definition visible light cameras, non-cooled thermal imaging devices, and other multi-spectrum detection modules. It can also be equipped with a laser rangefinder module. When paired with intelligent target detection and tracking modules, it effectively detects, tracks, identifies, and alerts against small to medium-sized civilian consumption-grade rotary-wing, fixed-wing drones, personnel, vehicles, and vessels.

The micro photoelectric turntable can be used independently, or it can be combined with radar equipment, passive spectrum detection equipment, radio interference equipment, etc., to form an automatic defense system for unmanned aerial vehicles, which can effectively guarantee the air-ground integrated security of key places day and night, all-weather.



2, Features

- 1) Detection spectrum width: it can integrate low-light HD visible light and high-performance non-cooling thermal imaging. The advantages of multi-spectrum detection complement each other, and the multi-source data convergence and fusion processing make the target invisible, which can effectively meet the monitoring needs of users under day and night and all-weather conditions;
- 2) Fast steering speed: the rotary speed can reach 100°/s, the acceleration can reach 120°/s², start and stop quickly, smooth operation, help to capture, track fast moving targets;
- 3) Wide coverage: azimuth rotation range 0°~360°, pitch rotation range -90°~+90°, realize no dead zone detection, full dimensional coverage;
- 4) High control accuracy: precision angle encoder is used with high precision closed-loop servo control system, positioning accuracy is better than 0.02°, high performance image processing unit is matched with high precision focusing control mechanism to achieve accurate automatic focusing;
- 5) Excellent tracking performance: the automatic tracking module is designed with a variety of advanced target capture algorithms and tracking algorithms, supplemented by high-precision servo control to ensure the stable tracking of the target in the process of rapid motion and change of direction;
- 6) High degree of intelligence: support target intrusion detection, mobile detection and other abnormal behavior detection, support target classification recognition, support radar linkage, 3D zoom positioning and other functions, greatly improving the level of unmanned, automation and information;
- 7) Strong environmental adaptability: high strength aluminum alloy material, double layer three-proof technology inside and outside, IP67 protection, rainproof, dustproof, corrosion resistant, electromagnetic interference, long-term suitable for the harsh environment in the field.

3, Device Technical Parameters

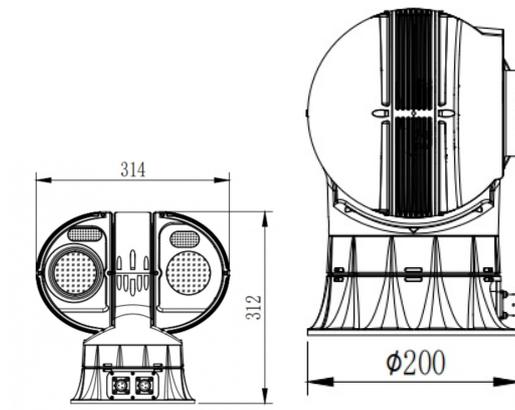
model	DD-E2 type photoelectric turntable
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Working Distance	Under the conditions of visibility not less than 15km, air humidity not more than 60%, and normal temperature and line of sight, 0.3m*0.3m UAV target:
	Visible camera detection distance is $\geq 2500\text{m}$, tracking distance is $\geq 2000\text{m}$, and identification distance is $\geq 1000\text{m}$ Thermal camera detection distance is $\geq 1000\text{m}$, the tracking distance is $\geq 800\text{m}$, and the identification distance is $\geq 500\text{m}$
Visible Camera	<ol style="list-style-type: none"> 1. Sensors: Backlit starlight CMOS 2. Resolution: 1920 x 1080 3. Illuminance: color 0.01 Lux, black and white 0.001Lux 4. Lens: 7-320 HD lens 5. Field Angle: 1.28°~41.67° 6. Camera control: electric zoom, manual/half-automatic/auto focus 7. Video format: H.264/H.265 8. Image enhancement: AI ISP Image enhancement, support wide dynamic, strong light suppression, electronic anti-shake, 3D digital noise reduction, automatic white balance and so on 9. Fog penetration: supports optical/electronic dual fog penetration
Thermal Camera	<ol style="list-style-type: none"> 1. Detector: oxidized alum (VOx) non-cooling focal plane 2. Resolution: 640 x 512 3. Induction band: 8μm~14μm long wave infrared 4. Lens: 100 prime lens (optional 25mm-75mm zoom lens, field of view 5.9°~17.7°) 5. View Angle: 4.4° x 3.5° 6. NETD:$\leq 40\text{mk}$(@25 F1.0) 7. Video format: H.264/H.265 8. Camera control: manual/automatic focus 9. Correction: Automatic/manual/background correction 10. Polarized pseudo-color: thermal black/white polarity, and a variety of pseudo-colors 11. Image adjustment: support brightness, contrast, gamma value correction and other parameters adjustment 12. Electronic amplification: 1x ~ 8x digital amplification, support global synchronous display 13. Strong heat source protection: support 14. Health management: support the health index of the engine to record and query; detector temperature, ambient temperature, limit temperature, cumulative working time, switch on/off/shutter times
Serviceable	<ol style="list-style-type: none"> 1. Shape: quasi-spherical 2. Window: double window 3. Wiper: Support intelligent automatic wiper 4. Rotation range: horizontal 360o continuous rotation, pitch-90° ~ +90° 5. Limitation: The horizontal pitch has a soft limitation function, which can be set by the program 6. Speed adaptive: it has intelligent sensing speed change function and supports lens focal length speed adaptive function 7. Zero setting: support the setting of horizontal and pitch zero 8. Rotation speed: horizontal 0.01°/s~100°/s, pitch: 0.01°/s~80°/s 9. Acceleration: greater than or equal to 120°/s² 10. Position accuracy: better than 0.02° 11. Location time: less than 2s 12. Pre-position: not less than 2048 13. Path scanning: support preset point cruise, line scan, apple skin, pattern scan, the scanning speed can be set 14. Active protection: dual power supply filter protection, AC and DC dual mode power supply redundancy design, internal automatic temperature control design, lightning surge protection, turntable blockage protection 15. Drive mode: direct drive with torque motor, high speed start and stop, smooth tracking with radar
Intelligent Analysis	<ol style="list-style-type: none"> 1. Implementation method: front-end embedded intelligent analysis module; AI performance 16TOPS, memory 8G, CPU8 cores 2. Abnormal behavior detection: support regional intrusion detection, boundary intrusion detection, mobile detection; support target recognition; 3. Classification recognition: Support the classification recognition of people, vehicles, ships, drones and other targets (customers need to assist in providing data sets)
Tracking Function	<ol style="list-style-type: none"> 1. Tracking method: front-end embedded hardware tracking 2. Tracking algorithm: Built-in multiple tracking algorithms, support multi-target detection, automatic capture, anti-obstructing tracking, recognition tracking and so on 3. Tracking mode: manual and automatic tracking, radar linkage is supported 4. Tracking function: automatic zoom and dual-channel target recognition are supported during tracking; adaptive tracking wave gate is supported, and the size of tracking box can be adapted according to the size of the target 5. Tracking display: It has the tracking target eagle eye display, which can be adjusted at any position and supports 2, 4 and 8 times magnification display of the target; it also supports tracking status display, tracking target pixel, off-target amount, confidence level and other tracking box osd custom display 6. Tracking accuracy: tracking accuracy: $\leq 0.5\text{mrad}$ 7. Video switching: digital HD visible light/digital infrared video switching tracking

Environment	<ol style="list-style-type: none"> 1. Working temperature: -20 ~ +60 (-40 ~ +60 optional) 2. Working humidity: <95%RH 3. Flood protection: power 4000V, communication video signal 2000V
Adaptability	<ol style="list-style-type: none"> 4. Salt spray resistance: in PH value 6.5~7.2, continuous salt spray test for 96 hours, can still work normally 5. Protection class: IP67
Else	<ol style="list-style-type: none"> 1. Usage: fixed installation 2. Access: 1 RJ45 network interface, 1 DC24V power supply interface; 3. Network protocol: support TCP/IP, HTTP, RTP, RTSP, PPPoE, DNS, FTP; support ONVIF2.0, GB28181 and other network protocols 4. Fault detection: support power-on self-test, status query and fault code feedback data return 5. Supports real-time/ query return and positioning functions of lens field Angle, magnification, ZOOM/FOCUS values and turntable Angle; supports real-time query/ return and positioning functions of horizontal and pitch Angle 6. Power supply: AC220V±20%,50Hz 7. Power consumption: peak power consumption is less than 300W, stable power consumption is less than 120W; 8. Weight: less than 12kg 9. Size: 314mm x 312mm x 200mm 10. Stool: portable tripod, quick erection and leveling, no shaking (optional)
Software (optional)	<ol style="list-style-type: none"> 1. Client: optional rgs2000 Tracking dedicated client, which supports access to radar and photoelectric equipment and real-time monitoring of equipment status 2. Status display: support the dynamic display of target spots and track information reported by radar, and support the synchronous playback of radar target track and photoelectric video recording 3. Auxiliary tools: support distance, area and Angle measurement; support static calibration azimuth calculation; support radar photoelectric four-quadrant auxiliary calibration 4. Pan control: support eight-direction pan control, support keyboard WASD control up and down; support zoom and focus lens control; support horizontal Angle positioning, pitch Angle positioning, field Angle positioning 5. Electronic map: Supports electronic map, radar photoelectric real longitude and latitude map landing point, supports online and offline two-dimensional map 6. Remote configuration: support remote power on/off, restart, visible light thermal image power on/off, and remote camera parameter setting of photoelectric equipment 7. Multi-screen display: Supports video preview, electronic map, video surveillance, video playback and information management split screen display, supports multiple video preview interface split screen display

4, Dimension

Equipment external dimension diagram (reference)



5, Application Scenarios

It is mainly used for low-altitude security in military bases, airports, prisons, nuclear, biological and chemical industries, border and coastal defense, conference centers, office buildings, oil fields, oil depots and other key places.



Drone identification and tracking, eagle eye display



Identification and tracking of high-speed UAV in complex background



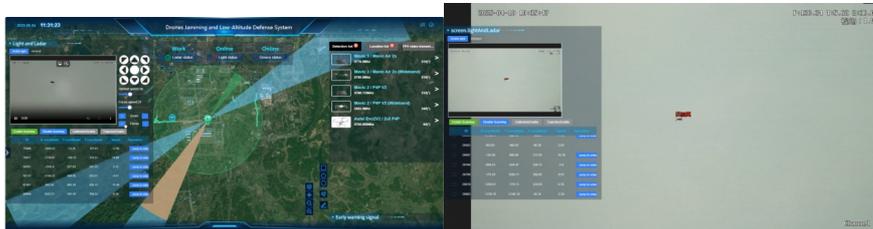
Bird recognition and tracking



The airport is out of control

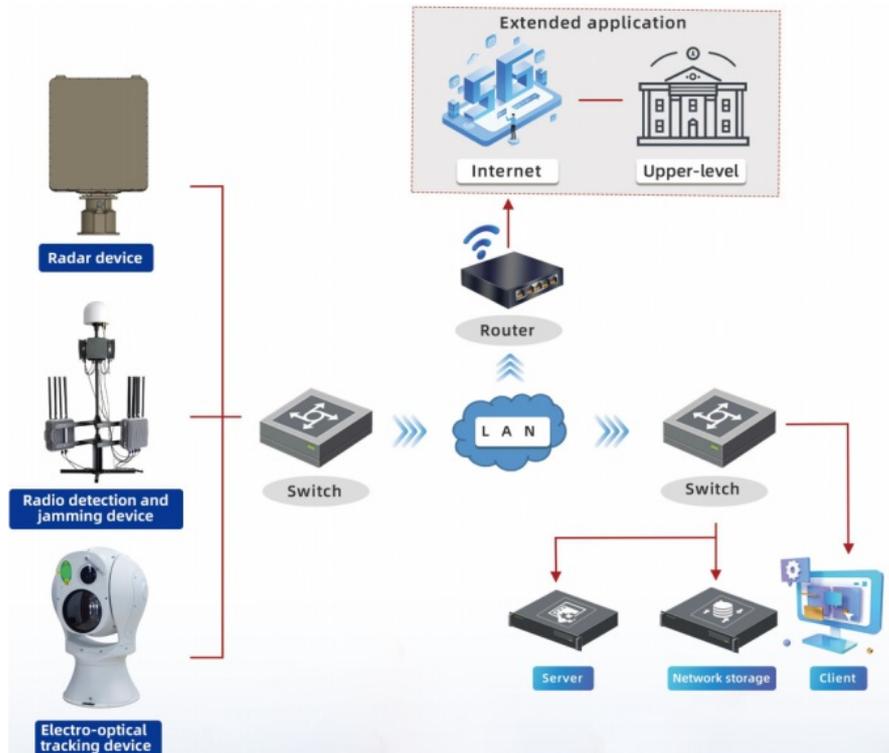


Key areas are uncontrolled



Anti-drone system applications

6, Typical application



Anti-drone system process

7, Certification Certificate



8, Company profile

Chongqing Miao Yitang Technology Co., Ltd. is a specialized company engaged in anti-drone and unmanned intelligent defense management.

With the technical support from the AI Internet of Things Research Institute of the Chinese Academy of Sciences and collaborations with multiple intelligent AI companies, the company has established research laboratories for AI unmanned field products, accumulating a variety of technical patents.

The company's products are widely applied to unmanned automatic management solutions for various defense and perimeter areas, including AI anti-drone systems and AI unmanned vehicle patrol systems. These systems integrate with multiple technologies such as optoelectronics, radar, vibration, thermal imaging, facial recognition, and radio frequency management, truly achieving a 24-hour uninterrupted anti-drone defense and ground perimeter defense warning system. This allows for cost savings for clients, reduction in human resource allocation, and ensures the safety of clients' lives and property. The outstanding security system has won the company an excellent reputation and created higher value for its partners.



9, Customer Service

- 1). We offer 24 hours service after sales
- 2). If there are any usage or quality issues with the product, we provide online technical support to diagnose the cause of the problem.
- 3). Should you find the products unsatisfactory, kindly return it to us within a period of 3 months from the date of dispatch. Upon receipt and inspection, should the products be found to be free from any damage attributable to human factors, a full refund will be granted. Alternatively, we can engage in discussions to amend the product and subsequently reship the product to you.



CUSTOMER SERVICE

- * Fast and patient communication: professional sales reply immediately
- * Fast delivery: usually 2-7 days
- * Flexible Safe shipping: fast by air or sea with cheap freight
- * Customer-friendly: complete user manual and exact video training provided
- * After sales service: one year warranty and life time technical support






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