

Multispectral Target Recognition and Tracking Servo Turntable

P03 Technical Specifications Document

Product Name

Multispectral Target Recognition and
Tracking Servo Turntable

Specification Model

P03

Product Application

Airport security, border perimeter, low-altitude short-range defense, tracking of low, small, and slow targets, etc.

Product Features

- Visible light, uncooled thermal imaging ultra-long focal length, multispectral imaging encoded and transmitted under the same SOC
- Dual-spectrum images are automatically zoomed and focused as an integrated unit, and the visible light images support optical defogging
- Intelligent applications: Edge computing, deep learning algorithms, supporting object detection, object recognition, object tracking
- Target classification recognition: more than 80 types of classification targets including humans, vehicles, ships, animals, etc., similarity ratio judgment
- Optional multi-sensor signal input, sensor alarm, voice intercom, environmental parameters, power management, etc.
- Open architecture, capable of accepting guidance from various systems such as radar, AIS, ADS-B, spectrum, and TDOA
- Precise azimuth and field of view feedback can achieve accurate positioning of mobile targets such as drones, vehicles, and ships.

Product Illustration



- Independent IP or virtual dual IP, supports national standard protocols, freely connects to various NVRs, IPSANs, and management platforms
- Three-proof structure, wind resistance level 15, suitable for application in harsh environments
- Detection, tracking, and identification of large aircraft targets at altitudes of 1-25KM; Identification of aircraft landing gear targets at altitudes of 1-10KM.
- Detection, tracking, and identification of low, slow, small targets in the 1-6KM airspace.
- Detection, tracking, and identification of typical targets such as humans, vehicles, and boats within a range of 1-20KM from land and sea

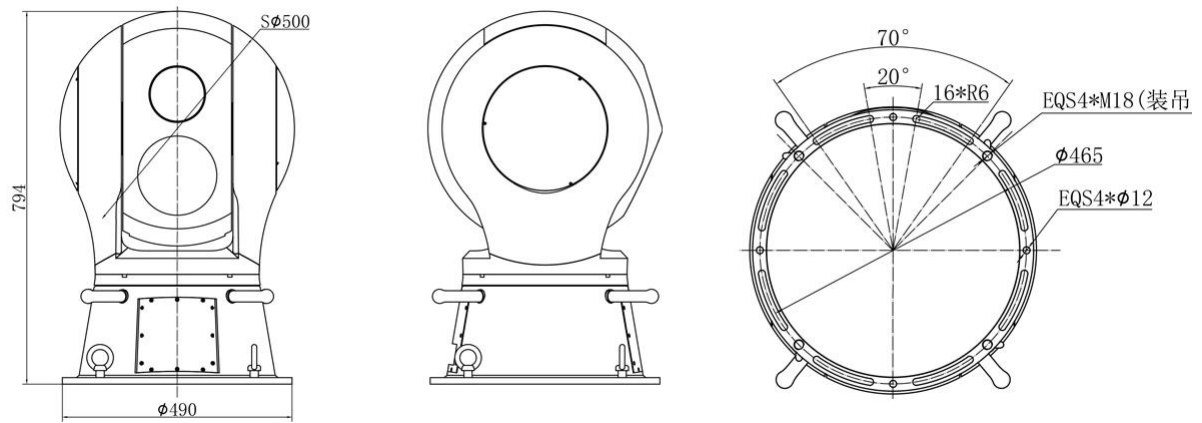
Technical specifications

Product	Name	Multispectral Target Recognition and Tracking Servo Turntable
	Detection model	UMAS-P03
	Specification model	UMAS-P03-1
	Image resolution	1920*1080 @25fps/30fps
	Lens focal length	F12.3-800mm, 65X optical continuous zoom
	Optical properties	Color, black and white, optical defogging
Visible Light image	Image adjustment	White balance, exposure compensation, wide dynamic range, gain control, 3D noise reduction
	Video parameters	Brightness, contrast, sharpness, saturation.
	Focus mode	Automatic / Manual
	Daytime performance indicators	1.Reference target: Civil aircraft Detection range: $\geq 25\text{KM}$; Tracking range: $\geq 20\text{KM}$; Identification range: $\geq 15\text{KM}$
		2.Reference Target: Drone (Axle distance of 35cm) Detection range: $\geq 6\text{KM}$; Tracking range: $\geq 5\text{KM}$; Recognition range: $\geq 4.5\text{KM}$
		3.Reference Target: People Detection range: $\geq 10\text{KM}$; Tracking range: $\geq 4\text{KM}$; Recognition range: $\geq 3\text{KM}$
		4.Reference Target: Car

Infrared Thermal imaging		Detection range: $\geq 15\text{KM}$; Tracking range: $\geq 6\text{KM}$; Recognition range: $\geq 4\text{KM}$ (Working conditions: Ambient temperature: $\leq 20^{\circ}\text{C}$, Visibility: $\geq 6\text{Km}$, Relative humidity: $<40\%$)
	Detector type	Uncooled (Vanadium Oxide Detector, Sensing Band: 8-14um)
	Image resolution	640*512; Image encoding resolution: 12801024
	Lens focal length	F30--150mm, optical 5X continuous zoom
	Image mode	Hot black, hot white, pseudo-color. 1.Reference target: Civil aircraft Detection range: $\geq 18\text{KM}$; Tracking range: $\geq 12\text{KM}$; Identification range: $\geq 8\text{KM}$ 2.Reference Target: Drone Detection range: $\geq 1.8\text{KM}$; Tracking range: $\geq 1.6\text{KM}$; Recognition range: $\geq 1.5\text{KM}$ 3.Reference Target: People Detection range: $\geq 2\text{KM}$; Tracking range: $\geq 1\text{KM}$; Recognition range: $\geq 0.8\text{KM}$ 4.Reference Target: Car Detection range: $\geq 5\text{KM}$; Tracking range: $\geq 2\text{KM}$; Recognition range: $\geq 1.5\text{KM}$ (Working conditions: Ambient temperature: $\leq 20^{\circ}\text{C}$, Visibility: $\geq 20\text{Km}$, Relative humidity: $<40\%$)
Servo turntable	Night performance indicators	
	Rotary table type	Servo direct drive, PID feedback
	Horizontal range, speed	$0^{\circ} \sim 360^{\circ}$ horizontal key control speed: $0.05^{\circ} \sim 80^{\circ}/\text{s}$
	Pitch range, speed	$-90^{\circ} \sim +90^{\circ}$ vertical key control speed: $0.05^{\circ} \sim 60^{\circ}/\text{s}$
	Horizontal angle correction	Full-angle electronic correction compensation
Intelligent Application	Pre-set stop accuracy	$\pm 0.01^{\circ}$
	Automatic search	Full-screen motion target search, thermal target tracking search
	Guidance mode	Capable of receiving radar, spectrum, TDOA, ADS-B; AIS guidance.
	Tracking mode	Specific target recognition and tracking, moving target

Figure Image and System		tracking, guided tracking, manual tracking
	Target recognition	Supports classification and identification of over 80 types of targets including drones, humans, vehicles, boats, etc.
	Early Warning and Joint Response	Alarm protocol upload, snapshot capture, preset position linkage
	Video Compression format	H.256 / H.264 / MJPEG (limited to image capture)
	Video protocol	ONVIF、GB T-28181、RTSP
	Network protocol	IPv4, TCP/IP, UDP, etc.
	Network Function	System remote upgrade, virtual dual IP addresses
	Diagnostic monitoring	IP Conflict Detection, Heartbeat Detection, Log Recording
	Interface	Standard aviation plug interface (including: DC48V power supply, 10M/100M adaptive network interface)
	Protection level	IP66, optional three-proof protection
General Standards	Operating temperature/ humidity	-40℃ to +60℃, humidity <90%
	Power Supply & Power Consumption	AC220V ± 15%; power consumption ≤240W
	Size and dimensions	Φ500*794mm (for reference only)
	Weight (net weight)	≤75Kg

Product Dimensions



Specialized products vary slightly according to various applications, specific requirements can be inquired with business specialists, please understand and support!

Dedicated Software

Industry-specific platform management software, Tracer, SDK, or customized industry application software

Last updated date:2025-05-09

Standard product appearance and specification design are subject to change without further notice. Please refer to the actual product.