

Active Electro-optical Detection System

VAR300

Technical Data Sheet



PRODUCT OVERVIEW



Figure 1. VAR300

VAR300 is a stationary high-performance multi-integrated active electro-optical detection device that adopts a multi-technology fusion design. It also takes full use of deep neural network algorithms to automatically extract and classify features from image data to improve the accuracy and effectiveness of detection and identification of ‘low, slow and small’ drones. It is suitable for airports, prisons, critical activities and other scenarios.

KEY FEATURES

Active Detection: Automatic target search, 7/24 real-time detection of drones in the low-altitude range.

Intelligent Identification: Suitable for detecting and identifying the drones, based on an HD video module and an AI vision depth learning algorithm.

Tracking Record: Record the flight trajectory and image information of drones, providing reliable evidence for subsequent disposal.

All-Weather Detection: Integrated with optical imaging and infrared imaging technology to ensure reliable operation in day/night and in harsh weather conditions.

Target Location: Lock onto the target after the drone detection, identify and display information about the quality and location of the drones.

Real-time Monitoring: Supports real-time viewing of device detection results,

enabling users to respond and make decisions quickly.

System Integration: Supports networking and coordination with other systems, such as radio and radar, to form a comprehensive defense system.

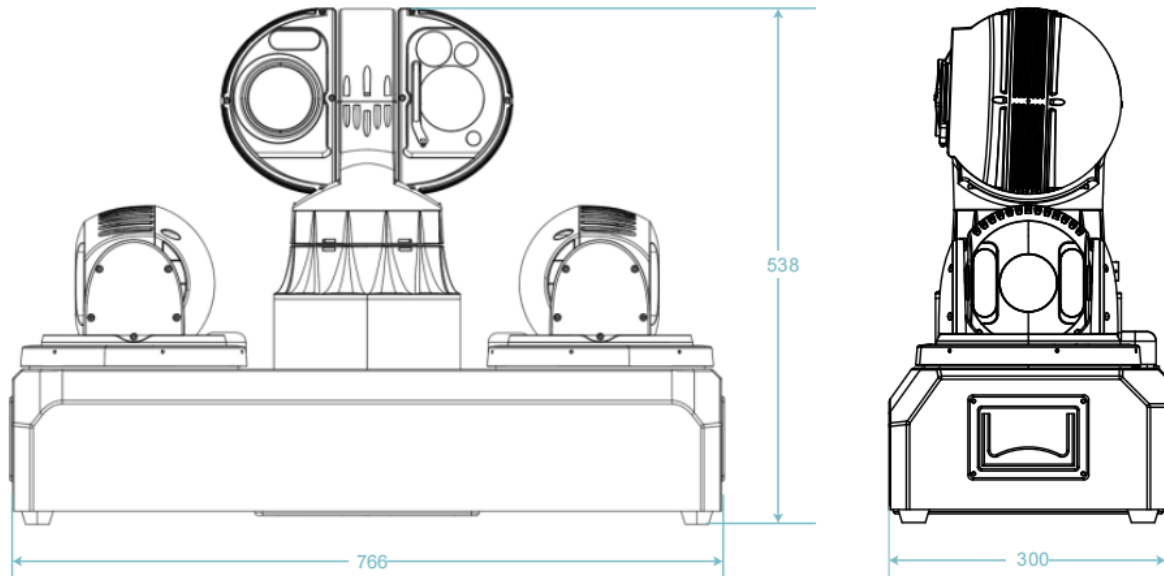


Figure 2. Dimensions: 766mm × 300mm × 538mm (±2mm)

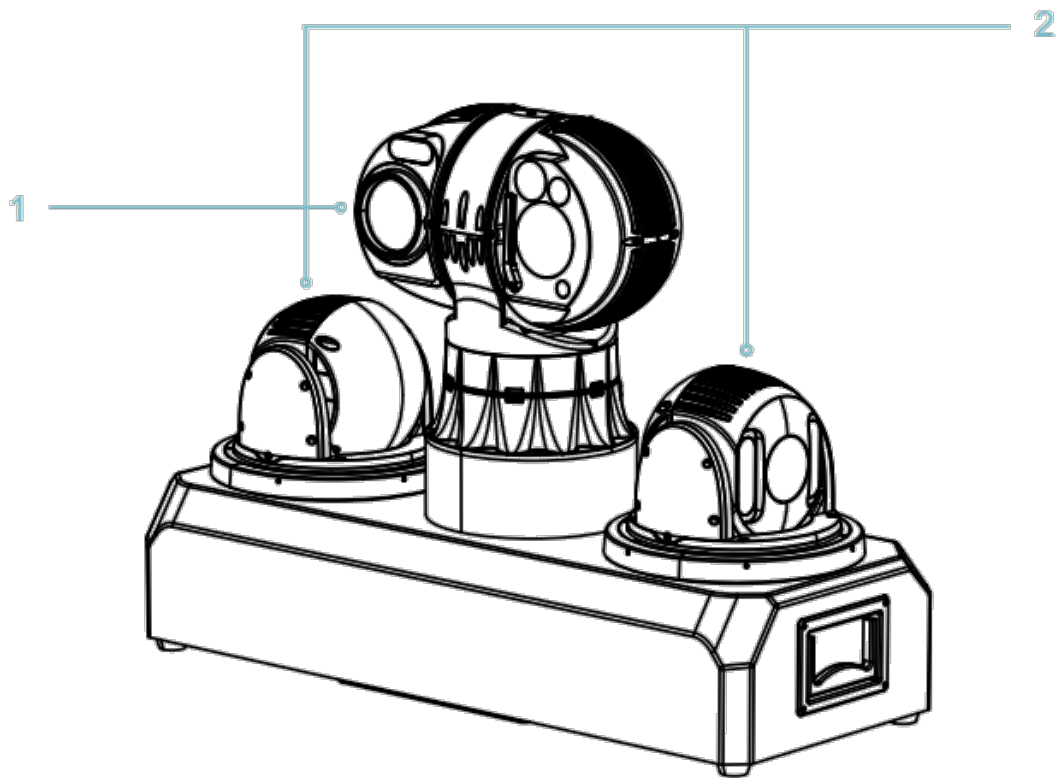


Figure 3. Indicator diagram of Function Module

No.	Module	Function	Qty. (/set)
1	Identifying and Tracking Camera	Integrated with an optical and infrared camera, enables the identification and tracking of low-altitude drone targets.	1
2	Scanning and Searching Camera	Enable searching and identification of drones in the coverage.	2

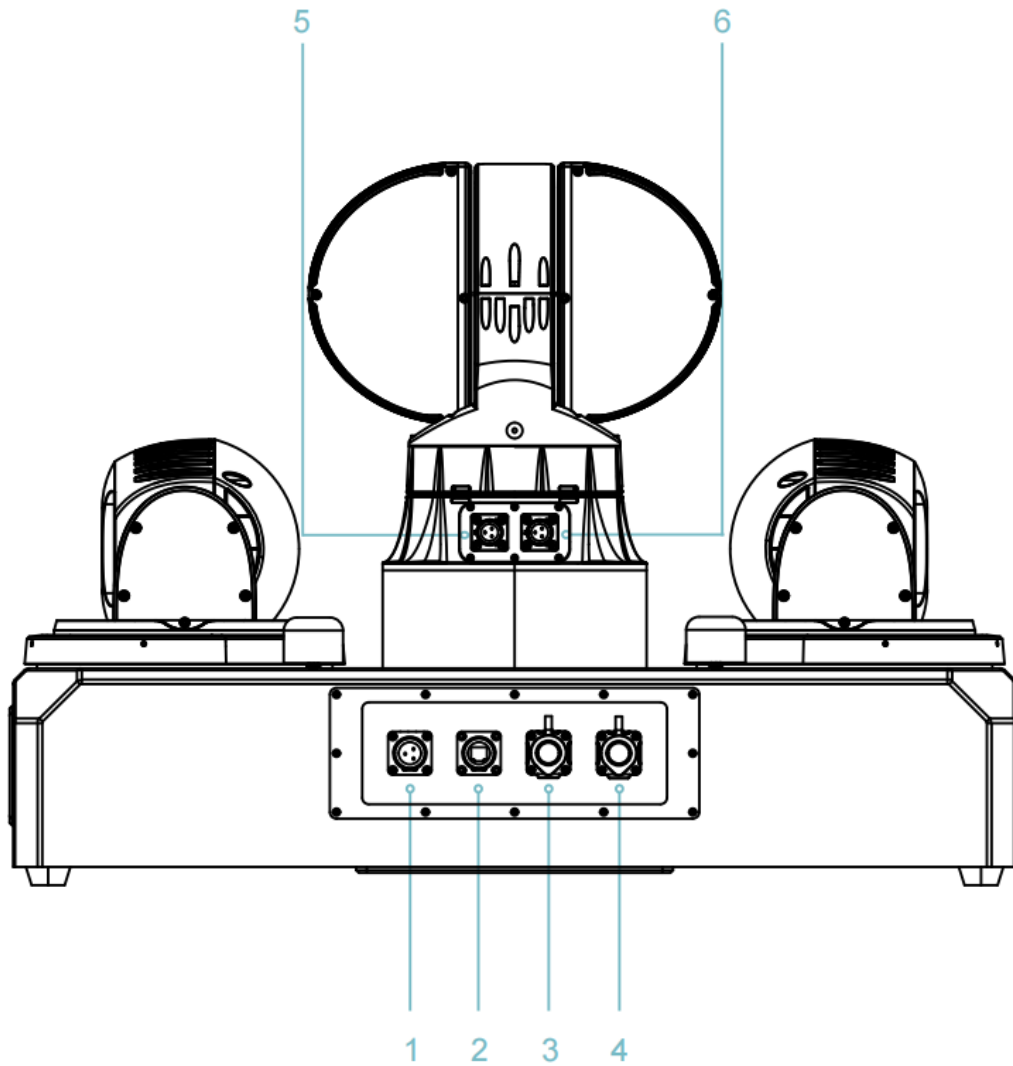


Figure 4. Indicator diagram of the external interface

No.	Description	Label	Interface Type
1	Identifying and Tracking Camera Power Port 1		2-pin circular aviation connector
2	Identifying and Tracking Camera Ethernet Port 1		12-pin circular aviation connector
3	Device Ethernet Port		RJ45
4	Device Power Port		AC110V~240V
5	Identifying and Tracking Camera Power Port 2	/	2-pin circular aviation connector
6	Identifying and Tracking Camera Ethernet Port 2	/	12-pin circular aviation connector

TECHNICAL SPECIFICATIONS

Detection Mode	Active scanning, searching, identifying, and tracking	
Detection Distance	Daylight: $\geq 1\text{km}$, Night: $\geq 0.5\text{km}$ (Target: DJI Mavic3)	
Tracking Distance	Daylight: $\geq 1.5\text{km}$, Night: $\geq 0.8\text{km}$ (Target: DJI Mavic3)	
Camera Focal Length	Scanning and searching camera	46x optical zoom Focal length: 7mm ~ 320mm
	Identifying and tracking camera	23x optical zoom Focal length: 5.9mm ~ 135.7mm
Resolution	1920 × 1080 (Optical)	
Infrared Thermal Imaging Module	Detector Type: VOx uncooled focal plane arrays	
	Resolution: 640 × 512	
	Camera Focal Length: 25mm ~ 75mm, variable focal length	
Direction Finding Accuracy	$\leq 2^\circ$ (RMS)	
Identifying Target	Multi-rotor drones, birds	
Servo Pan-tilt	Horizontal: $0^\circ \sim 360^\circ$	
	Vertical: $0^\circ \sim 15^\circ$	
Rotating Speed	Scanning and searching camera	18°/s (Optical, 4x zoom) 8°/s (Infrared, 3x zoom)
	Identifying and tracking camera	Maximum 120°/s (Adaptive zoom)
Power Supply	AC110V~240V	
Power Consumption	$\leq 200\text{W}$ (Running status)	
Dimensions	766mm × 300mm × 538mm ($\pm 2\text{mm}$)	
Weight	$\leq 37\text{kg}$	
Operation Temperature	-20°C to $+60^\circ\text{C}$	
IP Rating	IP66	