

# Long Distance PTZ Multi Sensor Thermal Camera

The EMSDMA46BL series multi-sensor optical platform camera is specially designed for the key areas surveillance such as conference centers, office buildings, prisons, airports, military bases, nuclear, biological and chemical industries, border and coastal defenses. Optical platform camera system, it is can integrate multi-spectrum detection modules such as high-definition visible light camera, refrigerated/uncooled thermal imager, near-infrared laser illumination, etc., and can be equipped with laser range finder, electronic compass, automatic tracking, intelligent analysis, etc. The module realizes the functions of all-weather and all-time full-dimensional discovery, positioning, tracking, identification and tracking of targets, and the operating distance can reach more than 18km. The optical platform camera system can be fixedly erected or used in vehicles. It is adopts military quality design, and the overall shell is made of super cast aluminum material, and the protection level reaches IP67, which effectively ensures the long-term stable operation of the equipment in the harsh field.



The optical platform camera system can also cooperate with radar equipment, passive spectrum detection equipment, radio interference equipment, etc. to form an automatic UAV defense system to realize early detection, fast locking, stable tracking, quasi-recognition and strong countermeasures of UAVs. Effectively ensure low-altitude safety in key areas day and night, all-weather



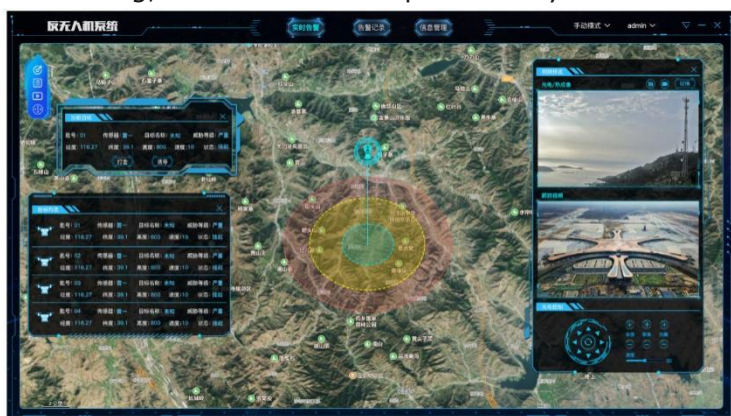
## Feature

1. Proper functioning in severe environment: reinforced aluminum alloy housing.

2. Wide coverage: azimuth rotation range  $N \times 360^\circ$  , pitch rotation range  $-30^\circ \sim +60^\circ$  , realizing no dead angle detection and full-dimensional coverage
3. Fast turning speed: The turning speed can reach  $120^\circ/s$ , the acceleration can reach  $120^\circ/s^2$ , it starts and stops quickly, and runs smoothly, which is helpful for capturing and tracking fast moving targets;
4. High control accuracy: using precision angle encoder and high-precision closed-loop servo control system, positioning accuracy can reach  $0.01^\circ$ , high-performance image processing unit with high-precision focus control mechanism to achieve precise automatic focusing;
5. Excellent tracking performance: The automatic tracking module designed with a variety of advanced target acquisition algorithms and tracking algorithms, supplemented by high-precision servo control, tracking accuracy can reach  $\pm 0.5\text{mrad}$ , to ensure stable tracking of the target during fast flight and change of direction
6. High degree of intelligence: With self-developed background management software, it can easily realize functions such as hot spot alarm, regional intrusion alarm, cross-border intrusion alarm, target tracking, long-distance small target recognition, radar linkage, panoramic stitching, 3D zoom positioning, etc. Greatly improve the unmanned, automated and informatized level of the system;
7. Multiple redundant protection: internal temperature monitoring, directional industrial defroster, improve the reliability of the system
8. Strong environmental adaptability: high-strength cast aluminum material, sprayed with three-proof paint, IP67 protection, rainproof, dustproof, anti-corrosion, anti-electromagnetic interference, suitable for various harsh environments

## Application

Mainly used in anti-UAV control, low-altitude air defense, military base security monitoring, airport monitoring, oil field and oil depot security.



## Technical specification

Model

EMSDMA46BL

Thermal Camera System	
Thermal sensor	Uncooled Vox sensor
Resolution	640*1512
Wave length	8~14 μ m
NETD	25mK ( @25℃ F1.0 )
Lens	31mm~155mm, 5X optical zoom, 8X continuous digital zoom
Lens control	Manual /Auto focus
Image enhancement	SDE digital image enhancement technology
Pseudo color	18 kinds of pseudo color, hot-black /hot-white
Image	AGC/Brightness/Contrast
Range ruler	Support range ruler to measurement distance
Correction	Shutter/Background
Anti-Sunburn	Support
Daylight Camera System	
CMOS	High sensitive star light CMOS
Illumination	Color: 0.002Lux; Black/White: 0.0002 Lux
Focal length	8~500mm full HD lens,62X zoom, auto focus
Image	Support white balance, electronic shutter, backlight compensation, strong light suppression, 2D/3D digital noise reduction, electronic image stabilization,WDR
Defog	Support
Laser range finder	
Distance measurement	10km
Accuracy	± 2 m
Audio/Video	
Thermal Resolution	support 1920×1080; 1280×1024; 1280×960; 1024×768; 1280×720; 704×576; 640×512; 640×480; 400×300; 384×288; 352×288; 352×240
Visible Resolution	Support 3840*2160; 2592×1520; 2560×1440; 1920×1080; 1280×1024; 1280×960; 1024×768; 1280×720; 704×576; 640×512; 640×480; 400×300; 384×288; 352×288; 352×240
Video	H.265/H.264/MJPEG, multi-stream support
Video bit rate	32Kbps~16Mbps
OSD Setting	Support OSD display settings for channel name, time, gimbal orientation, field of view, focal length, and preset bit name settings
Intelligent Function	
Intelligent Analytic	1.hardware embedded intelligent analysis module; 2. AI performance of 16TOPS, 8GB of memory, and an 8-core CPU Intelligent Analysis 3. Abnormal Behavior Detection: Supports regional intrusion detection, cross-border intrusion detection, motion detection, and target recognition; 4. Classification and Recognition: Supports classification and recognition of targets such as people, vehicles, ships, and drones.
Auto Track	1. Tracking Method: embedded hardware tracking in camera 2. Tracking Algorithm: Multiple built-in tracking algorithms support multi-target detection, automatic acquisition, anti-occlusion tracking, and identification tracking. 3. Tracking Modes: Manual and automatic tracking, with support for radar linkage. 4. Tracking Functions: Automatic zoom and dual-path target recognition are supported during tracking. Tracking gate adaptation is supported, and the tracking frame size adapts to the target size.

	5. Tracking Display: Target tracking eagle-eye display with adjustable eagle-eye position and support for 2x, 4x, and 8x magnification.Supports tracking status display, including customizable tracking frame display for target pixels, miss distance, and confidence level. 6. Tracking Accuracy: $\leq 0.5$ mrad. 7. Video Switching: Digital HD visible light/digital infrared video switching tracking.
Distance measurement	By LRF
Anti-Sunburn	Support
Remote maintenance	Support
Web access	Support
Life-time management	Support
Pan tilt	
Rotation	N*360, $-30^{\circ} \sim +60^{\circ}$
Speed	Horizontal: $0.01 \sim 120^{\circ} / s$ ; Vertical: $0.01 \sim 120^{\circ} / S$
Acceleration	Horizontal: $120^{\circ} / s$ ; Vertical: $120^{\circ} / S$
Positioning Accuracy	$< 0.02^{\circ}$
Positioning Accuracy	$< 2s$
Zero Point Settings	Support zero point settings for horizontal and vertical
Preset	3000
Interface	
Interface	RJ45 network interface
Protocol	Support HTTP, HTTPS, FTP, SMTP, DNS, NTP, RTSP, RTCP, RTP, TCP, UDP, ICMP, DHCP, ONVIF, GB28181
SDK	Support
Others	
Power Supply	$AC220 \pm 20\%$ , 50Hz
Power consumption	Normal: 150W; Peak: 350W
Working temperature	$-40^{\circ} C \sim +60^{\circ} C$
Storage temperature	$-45^{\circ} C \sim +70^{\circ} C$
Humidity	$< 90\%RH$
Lightning protection	Support, interface circuit has built-in surge protection, 6000V
Anti-salt spray	Support
Dimensions	420mm $\times$ 358mm $\times$ 540mm
Weight	$\leq 40kg$