



AI VisionCube Kit

2026 Brand New Upgrade Next-Level Sensing AI Module

Clearer | More Accurate | More Intelligent



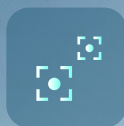
Upgrade to
640*512 Thermal
Imaging Resolution



1.2km
Ultra-Range



PiP
Architecture



Multi-Target
ID



Auto-Adhesive
Tracking + Dynamic
Memory Lock



The AI VisionCube Kit is a revolutionary AI visual tracking system designed specifically for drones, integrating high-performance target recognition, dynamic tracking, and anti-jamming control. Through the fusion of deep learning algorithms and high-performance intelligent chips, drones equipped with this kit can achieve automatic target acquisition, stable tracking, and precise trackings in complex electromagnetic environments. This significantly reduces the operational threshold for pilots and greatly improves mission execution efficiency.



AI Image Processing Board



The central control unit of the system, it acts like the "brain" of the system. It processes the image data captured by the high-definition camera in real-time, utilizing advanced AI algorithms for target detection and recognition. The system also features an automatic adhesive tracking function, where it can automatically attach and track a target, precisely locking onto the target's features. Additionally, it has memory tracking functionality, recording the target's movement characteristics and historical trajectory to provide more accurate data support for subsequent tracking.

640*512 Thermal Imaging Camera



With 640*512 high resolution for clear & stable imaging; high frame rate design ensures smooth detection of fast-moving targets; wide temperature range with high precision; possesses seamless night operation & camouflaged target recognition capabilities, suitable for multi-scenario operations.

HD Visible Light Camera



Ultra-low latency analog output for real-time clear image transmission. Built-in picture-in-picture mode supports electronic zoom, allowing pilots to simultaneously observe the overall environment & target details. With optimized algorithms, the image transmission maintains low latency throughout, aiding real-time control decisions.

1.2km Ultra-Long-Range Recognition



Equipped with single/dual-camera collaborative algorithms and precision optical modules, automatically identifies human/vehicle targets at 1.2km range. Achieves 85% higher recognition accuracy than conventional AI systems, enabling beyond-visual-range operations in complex environments.

PIP Architecture



Dual-stream PIP technology combines global situational awareness (main view) with 8x digital zoom tracking (sub-view), allowing real-time environmental analysis and precision strike decision-making.

Dynamic Memory Locking



Integrates temporal prediction models and Kalman filter algorithms to reacquire targets within 3s after occlusion/visual loss. Enhances tracking stability by 40% in dense foliage environments.

Target Re-locking Support



After locking a target, if you wish to change the target, you can toggle the corresponding channel's RC stick. An additional aiming crosshair will appear in the VTX image. Use the RC direction stick to move the aiming crosshair to the new target, and then lock it again.

Multi-Target Recognition



YOLOv7-optimized architecture simultaneously tracks 50+ dynamic targets within FOV. Supports self-training algorithm deployment for customized classification models in defense and surveillance scenarios.

Adaptive Lock-On Tracking



After identifying multiple targets, the drone can correct its heading. The intelligent crosshair adsorption algorithm will adsorb the tracked target to the central area of the screen, reducing the locking time to 0.5 seconds. This significantly reduces the micro-operation load on the pilot and increases the locking success rate to 92% in high-speed moving scenarios.

Multi-sensor Compatibility

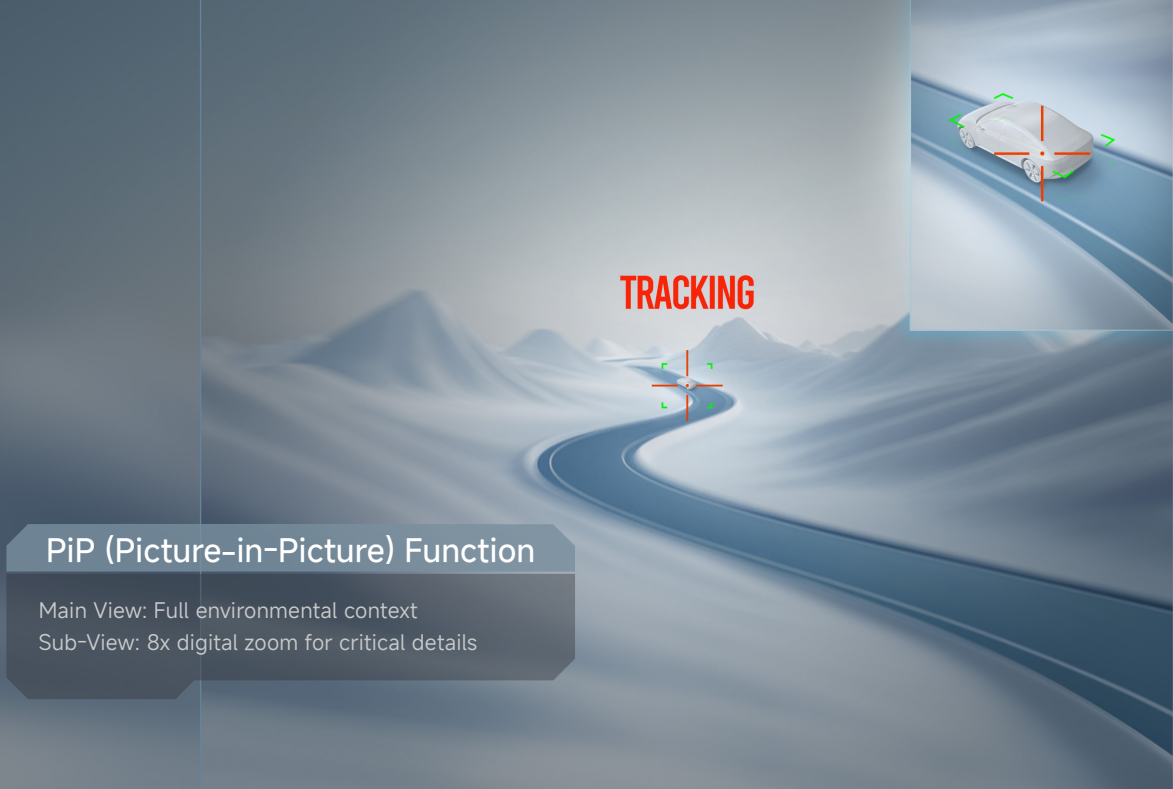


Switchable visible/thermal sensors with 9650 mV/lux·s ultra-high sensitivity and uncooled thermal imaging. Ensures 24/7 target ID capability from -20°C to 60°C, defeating camouflage/thermal masking.

Expand Search Range



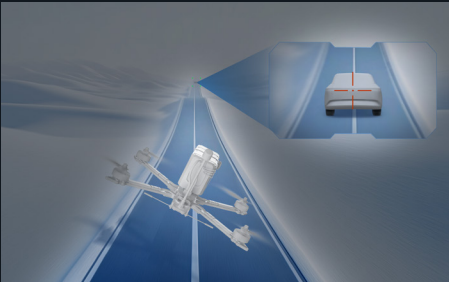
When the crosshair is not yet aligned with typical targets (e.g., people or vehicles) but you want to lock onto them quickly, simply toggle the corresponding channel on RC. Once activated, the drone's flight path will auto-adjust, and the crosshair will swiftly & precisely snap to the detected targets in pics.



PiP (Picture-in-Picture) Function

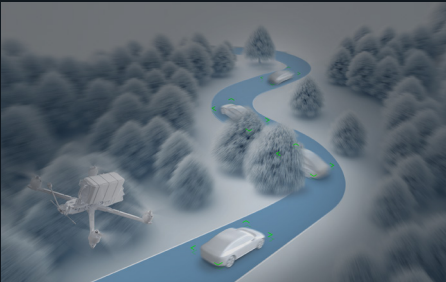
Main View: Full environmental context
Sub-View: 8x digital zoom for critical details

Max Recognition Range:
1.2km & Max Targets: 50



AI VisionCube Kit could identifies up to 50 targets within FOV;
AI VisionCube D/DT/DT Pro: Extends recognition range to 1.2km

Dynamic Memory Lock



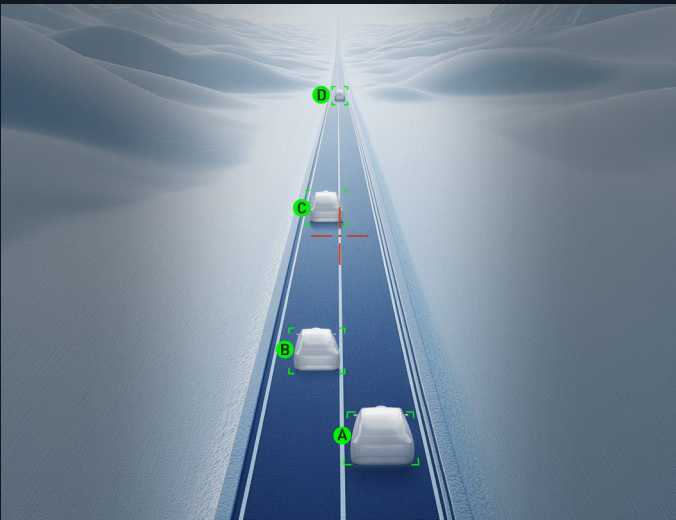
Reacquires obscured targets within 3s via motion trajectory prediction

Multi-sensor Display

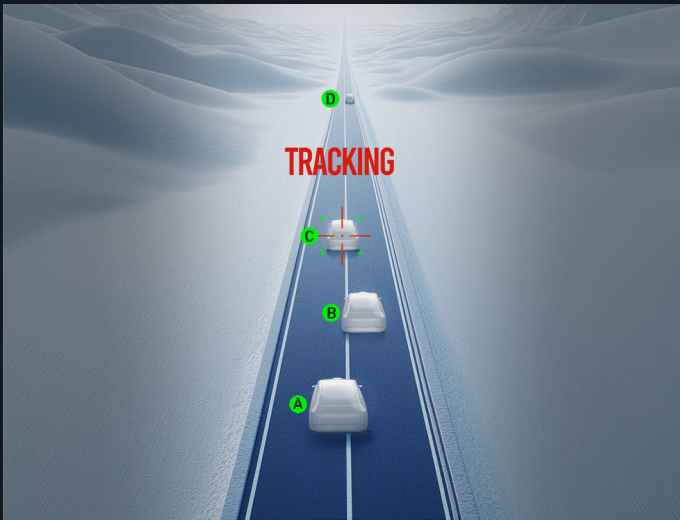


Compatible with thermal imaging cameras
24/7 operation with camouflage detection

Smart Crosshair Auto-Lock



Recognizes multiple targets → Adjusts yaw/pitch to align crosshair



Auto-centers target within frame for sustained tracking



	AI VisionCube S	AI VisionCube D	AI VisionCube ST	AI VisionCube ST Pro	AI VisionCube DT	AI VisionCube DT Pro
Camera	HD Single Cam Module	HD Dual Cam Module	Single Camera+Thermal Camera		Dual Camera+Thermal Camera	
Target Recognition Types	Default: Human, Vehicle	Default: Human, Vehicle	Default: Human, Vehicle		Default: Human, Vehicle	
Target Detection Range	Vehicle: 450m, Human: 170m	Vehicle: 1200m, Human: 500m	Vehicle: 450m, Human: 170m		Vehicle: 1200m, Human: 500m	
Min Target Tracking Pixel	16x16 pixels	16x16 pixels	16x16 pixels		16x16 pixels	
Max Tracking Speed of Dynamic Target	> 80km/h	> 80km/h	> 80km/h		> 80km/h	
Intelligent Adhesive Tracking	Supports crosshair fuzzy locking for close-range adhesive tracking	Supports crosshair fuzzy locking for close-range adhesive tracking	Supports crosshair fuzzy locking for close-range adhesive tracking		Supports crosshair fuzzy locking for close-range adhesive tracking	
Trajectory Prediction & Memory Tracking	Supports trajectory prediction and feature memory tracking	Supports trajectory prediction and feature memory tracking	Supports trajectory prediction and feature memory tracking		Supports trajectory prediction and feature memory tracking	
Max Target Recognition No.	50	50	50		50	
Picture-in-Picture (PiP)	Supported	Supported	Supported		Supported	

AI Image Processing Board

Computing Power	1 TOPS	6 TOPS	1 TOPS	6 TOPS
Communication Protocol	CRSF	CRSF	CRSF	CRSF
Supported Firmware	BetaFlight	BetaFlight	BetaFlight	BetaFlight
Input Voltage	9~16V	9~16V	9~16V	9~16V
Mounting Holes	25.5*25.5mm	25.5*25.5mm	25.5*25.5mm	25.5*25.5mm
Size	38*38*29mm	38*38*29mm	38*38*29mm	38*38*29mm
Weight	43.8g	43.8g	43.8g	43.8g

HD Single Cam Module

CMOS	1/2.8inch	1/2.8inch	1/2.8inch	1/2.8inch
Focal Length	4mm	3.9mm	4mm	3.9mm
FOV	69° (H)*42° (V)	72° (H)*45° (V)	69° (H)*42° (V)	72° (H)*45° (V)
Min. Illumination	7341mV/lux · s	9650mV/lux · s	7341mV/lux · s	9650mV/lux · S
Output Resolution	1920*1080@30Hz	1920*1080@30Hz	1920*1080@30Hz	1920*1080@30Hz
Camera Size	19*19*30mm	40.8*25*26mm	19*19*30mm	40.8*25*26mm

HD Dual Cam Module

CMOS	/	1/2.6inch	/	1/2.6inch
Focal Length	/	12mm (Telephoto); 3.9mm (Wide-angle)	/	12mm (Telephoto); 3.9mm (Wide-angle)
FOV	/	26° (H)*15° (V)	/	26° (H)*15° (V)
Min. Illumination	/	9650mV/lux · s	/	9650mV/lux · s
Output Resolution	/	1920*1080@30Hz	/	1920*1080@30Hz
Camera Size	/	40.8*25*26mm	/	40.8*25*26mm

Thermal Camera

Pixel Pitch	/	/	384*288@25Hz	640*512@50Hz	384*288@25Hz	640*512@50Hz
Focal length	/	/	12μm	12μm	12μm	12μm
FOV	/	/	9.1mm	9.1mm	9.1mm	9.1mm
Spectral Response Range	/	/	20.3°(H)*15.2°(V)	45.9°(H)x36.9(V)	20.3°(H)*15.2°(V)	45.9°(H)x36.9(V)
Video Input Format	/	/	8~14μm(LWIR)	8~14μm(LWIR)	8~14μm(LWIR)	8~14μm(LWIR)
Camera Size	/	/	26*26*32.85mm	26*26*21.1mm (excl. lens & connector)	26*26*32.85mm	26*26*21.1mm (excl. lens & connector)
Weight	/	/	32.4g	≤23g(excl. lens & connector)	32.4g	≤23g(excl. lens & connector)
Interface	/	/	USB	USB	USB	USB