

ADVANCED AI VISION TRACKING MODULE

DD075CCT

THREE-LIGHT AI TRACKING MODULE

INTELLIGENT PERCEPTION · PRECISE TRACKING · ALL-WEATHER OPERATIONS

Powered by advanced AI algorithms and multi-sensor fusion, the DD075CCT delivers exceptional target detection, recognition, tracking, and guidance in complex, dynamic environments — day or night, in any weather.



THREE-LIGHT FUSION TECHNOLOGY

Visible light + Infrared + Thermal imaging, all-weather, all-day reliable operations



AI-PERCEPTION & SMART TRACKING

Autonomous recognition, intelligent locking, multi-target tracking and guidance



ULTRA-LOW LATENCY OUTPUT

Short-focus visible light camera supports analog video output with extremely low latency



THERMAL IMAGING MODULE

Long-wave infrared detection for day & night, even in smoke, haze and low-visibility conditions



AI-EMPOWERED PERFORMANCE



TARGET DETECTION RANGE

1200m

(FIXED-WING AIRCRAFT)



MAX TRACKING SPEED

120 km/h

(MOVING TARGETS)



MAX RECOGNIZABLE TARGETS

50

TARGETS

AI ALGORITHM ADVANTAGES



- Deep Learning Detection
- Real-time Tracking
- Multi-target Management
- Anti-occlusion & Re-identification
- High Adaptability in Complex Scenes

TARGET RECOGNITION RANGE (TYPICAL)



450 m



300 m



400 m



1200 m
(2.5m class)



WIDE APPLICATIONS



SECURITY & SURVEILLANCE



BORDER & COASTAL PATROL



INDUSTRIAL INSPECTION



EMERGENCY RESPONSE



SEARCH & RESCUE



AGRICULTURE MONITORING

AI MULTI-SENSOR FUSION



AI POWERED INTELLIGENCE



MULTI-SENSOR FUSION



ALL-WEATHER OPERATION



HIGH PRECISION TRACKING



LOW LATENCY OUTPUT



COMPACT & LIGHTWEIGHT



EASY INTEGRATION & CUSTOMIZATION

DD075CCT Technical specification of three-light tracking module

1 Product Introduction

DD075CCT Three-Light AI Tracking Module is equipped with one long-focus visible light CMOS sensor, one short-focus visible light CMOS sensor, and one long-wave uncooled infrared camera. The short-focus visible light camera can output analog visible light video with extremely low latency; the long-focus visible light camera features autonomous recognition, locking, tracking, and guidance capabilities for targets such as people, vehicles, and windows; and the infrared camera provides the capability to perform tasks in all weather and at all times.

2 Application Scenarios

FPV drone vision module, anti-drone visual guidance module, AI tracking module.

3 Technical Indicators Required

Model	DD075CCT
Infrared camera parameters	
Detector response band	8-14 um, long wave
Pixel size	12um
Number of detector pixels	384×288
Optical focal length	10mm
Angle of field	16.9° (H)×12.8° (V) (±5%)
Infrared camera resolution	384×288
Infrared video resolution	384×288@50fps
Telephoto visible light	

Visible Light Sensor	1/3.52" CMOS
Pixel size	2.2 μ m×2.2 μ m
Optical focal length	16.26mm
Angle of field	14.8° (H)×8.4° (V) (±5%)
Infrared camera resolution	1920×1080
Infrared video resolution	1920×1080@50fps
Short-focus visible light	
Visible Light Sensor	1/4" CMOS
Pixel size	2.7 μ m×2.7 μ m
Optical focal length	1.75mm
Angle of field	113.1° (H)×63.6° (V) (±5%)
Infrared camera resolution	1280×720
Infrared video resolution	1280×720@100fps
Tracker	
Function	1) Equipped with autonomous target recognition; 2) With target detection and tracking prediction capability; 3) Equipped with target positioning capability。
System indicators	
Weight	Camera component part:43±2g; Servo controller + tracker (must be equipped):56±2g.
Coverage	Under the condition that the daytime visibility is not less than 8 km, the target recognition distance of telephoto cameras for adults is more than 600 m,while that of Short-focus cameras for adults is more than 80 m; Under the condition of low light in urban areas at night, the target recognition distance for adults is more than 100 m.

Target location	CEP 10 Meters
Working temperature	-20°C~+55°C
Storage temperature	-45°C~+60°C
Rain test	It can work under light rain conditions.

4 Power Supply and Power Consumption

Power supply DC10.8V ~ 26.4V@3A;

Stable power consumption is less than 7W.

5 Output Interface

Video: Internet, Analog video;

Control: TTL serial port, Network.

6 Product Images



7 Product Structure

