FlySpark

Defense-grade counter-UAS, detection and tactical UAV systems for authorized programs.

FlySpark AI VisionCube

MODEL COMPARISON

SPECIFICATION	AI VisionCube S	AI VisionCube D
PRODUCT IMAGES	 Source product illustration	 Source product illustration
TARGET DETECTION & TRACKING		
Camera	Visible light (short focus)	Dual visible light (short focus + long focus)
Spatial recognition	Air-to-ground recognition	Air-to-ground recognition
Target recognition types	Default: Human, Vehicle	Default: Human, Vehicle
Target detection range	Vehicle: 450 m; Human: 170 m	Vehicle: 450 m; Human: 170 m
Minimum target tracking pixel	16 × 16 pixels	16 × 16 pixels
Average dynamic-target tracking speed	80 km/h	80 km/h
Intelligent 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
Maximum target recognition number	50	50
Picture-in-picture (PIP)	Supported	Supported
Supported VTX	Analog	Analog
Supported optical fiber type	Analog	Analog
Recommended FPV size	7 inches or larger	7 inches or larger
AI IMAGE PROCESSING BOARD		
Computing power	1 TOPS	6 TOPS
Communication protocol	CRSF	CRSF
Supported firmware	BetaFlight	BetaFlight
Input voltage	9–16 V	9–16 V
Mounting holes	25.5 × 25.5 mm	25.5 × 25.5 mm
Board size	138 × 81 × 29 mm	138 × 81 × 29 mm
Board weight	43.5 g	43.5 g
VISIBLE LIGHT — SHORT FOCUS		
CMOS	1/2.8 inch	1/2.8 inch
Focal length	4 mm	4 mm
Field of view (H × V)	69° × 42°	72° × 45°
Minimum illumination	1/5Min/1lux·s	1/65Min/1lux·s
Output resolution	1920 × 1080 @ 30 Hz	1920 × 1080 @ 30 Hz
Camera size	19 × 19 × 30 mm	40.8 × 25 × 26 mm
VISIBLE LIGHT — LONG FOCUS		
CMOS	—	1/2.6 inch
Focal length	—	12 mm
Field of view (H × V)	—	26° × 15°
Minimum illumination	—	1/65Min/1lux·s
Output resolution	—	1920 × 1080 @ 30 Hz
Camera size	—	40.8 × 25 × 26 mm
THERMAL CAMERA		
Video output resolution	—	—
Pixel pitch	—	—
Focal length	—	—
Field of view (H × V)	—	—
Spectral response range	—	—
Camera size	—	—
Weight	—	—
Interface	—	—

FlySpark AI VisionCube

MODEL COMPARISON

SPECIFICATION	AI VisionCube ST	AI VisionCube DT
PRODUCT IMAGES	 Source product illustration	 Source product illustration
TARGET DETECTION & TRACKING		
Camera	Visible light (short focus) + 384 thermal imaging	Dual visible light (short focus + long focus) + 384 thermal imaging
Spatial recognition	Air-to-ground recognition	Air-to-ground recognition
Target recognition types	Default: Human, Vehicle	Default: Human, Vehicle
Target detection range	Vehicle: 450 m; Human: 500 m	Vehicle: 450 m; Human: 500 m
Minimum target tracking pixel	16 × 16 pixels	16 × 16 pixels
Average dynamic-target tracking speed	80 km/h	80 km/h
Intelligent 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
Maximum target recognition number	50	50
Picture-in-picture (PIP)	Supported	Supported
Supported VTX	Analog	Analog
Supported optical fiber type	Analog	Analog
Recommended FPV size	7 inches or larger	7 inches or larger
AI IMAGE PROCESSING BOARD		
Computing power	1 TOPS	6 TOPS
Communication protocol	CRSF	CRSF
Supported firmware	BetaFlight	BetaFlight
Input voltage	9–16 V	9–16 V
Mounting holes	25.5 × 25.5 mm	25.5 × 25.5 mm
Board size	138 × 81 × 29 mm	138 × 81 × 29 mm
Board weight	43.5 g	43.5 g
VISIBLE LIGHT — SHORT FOCUS		
CMOS	1/2.8 inch	1/2.8 inch
Focal length	4 mm	4 mm
Field of view (H × V)	69° × 42°	72° × 45°
Minimum illumination	1/5Min/1lux·s	1/65Min/1lux·s
Output resolution	1920 × 1080 @ 30 Hz	1920 × 1080 @ 30 Hz
Camera size	19 × 19 × 30 mm	40.8 × 25 × 26 mm
VISIBLE LIGHT — LONG FOCUS		
CMOS	—	1/2.6 inch
Focal length	—	12 mm
Field of view (H × V)	—	26° × 15°
Minimum illumination	—	1/65Min/1lux·s
Output resolution	—	1920 × 1080 @ 30 Hz
Camera size	—	40.8 × 25 × 26 mm
THERMAL CAMERA		
Video output resolution	384 × 288 @ 25 Hz	384 × 288 @ 25 Hz
Pixel pitch	12 µm	12 µm
Focal length	9 mm	9 mm
Field of view (H × V)	20.3° × 11.5°	20.3° × 11.5°
Spectral response range	8–14 µm (LWIR)	8–14 µm (LWIR)
Camera size	26 × 26 × 32.6 mm	26 × 26 × 32.6 mm
Weight	32.4 g	32.4 g
Interface	USB	USB

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FlySpark AI VisionCube

MODEL COMPARISON

SPECIFICATION	AI VisionCube ST Pro	AI VisionCube DT Pro
PRODUCT IMAGES	 Source product illustration	 Source product illustration
TARGET DETECTION & TRACKING		
Camera	Visible light (short focus) + 640 thermal imaging	Dual visible light (short focus + long focus) + 640 thermal imaging
Spatial recognition	Air-to-ground recognition	Air-to-ground recognition
Target recognition types	Default: Human, Vehicle	Default: Human, Vehicle
Target detection range	Vehicle: 450 m; Human: 500 m	Vehicle: 450 m; Human: 500 m
Minimum target tracking pixel	16 × 16 pixels	16 × 16 pixels
Average dynamic-target tracking speed	80 km/h	80 km/h
Intelligent 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
Maximum target recognition number	50	50
Picture-in-picture (PIP)	Supported	Supported
Supported VTX	Analog	Analog
Supported optical fiber type	Analog	Analog
Recommended FPV size	7 inches or larger	7 inches or larger
AI IMAGE PROCESSING BOARD		
Computing power	1 TOPS	6 TOPS
Communication protocol	CRSF	CRSF
Supported firmware	BetaFlight	BetaFlight
Input voltage	9–16 V	9–16 V
Mounting holes	25.5 × 25.5 mm	25.5 × 25.5 mm
Board size	138 × 81 × 29 mm	138 × 81 × 29 mm
Board weight	43.5 g	43.5 g
VISIBLE LIGHT — SHORT FOCUS		
CMOS	1/2.8 inch	1/2.8 inch
Focal length	4 mm	4 mm
Field of view (H × V)	69° × 42°	72° × 45°
Minimum illumination	1/5Min/1lux·s	1/65Min/1lux·s
Output resolution	1920 × 1080 @ 30 Hz	1920 × 1080 @ 30 Hz
Camera size	19 × 19 × 36 mm	40.8 × 25 × 26 mm
VISIBLE LIGHT — LONG FOCUS		
CMOS	—	1/2.6 inch
Focal length	—	12 mm
Field of view (H × V)	—	26° × 15°
Minimum illumination	—	1/65Min/1lux·s
Output resolution	—	1920 × 1080 @ 30 Hz
Camera size	—	40.8 × 25 × 26 mm
THERMAL CAMERA		
Video output resolution	640 × 512 @ 50 Hz	640 × 512 @ 50 Hz
Pixel pitch	12 µm	12 µm
Focal length	9 mm	9 mm
Field of view (H × V)	45.9° × 34.4°	45.9° × 34.4°
Spectral response range	8–14 µm (LWIR)	8–14 µm (LWIR)
Camera size	26 × 26 × 27.1 mm (Lens: 8.6 connector)	26 × 26 × 27.1 mm (Lens: 8.6 connector)
Weight	<23 g (excluding lens & connector)	<23 g (excluding lens & connector)
Interface	USB	USB