



S4E



DISPLAY IMAGE OF FINAL PRODUCT MAY VARY DEPENDING ON HOUSING DESIGN

VIRAJ 28CCD-50

Long Range PTZ Surveillance System

COOLED DETECTOR

Description of the system

The VIRAJ 28CCD series is a multi-sensor PTZ surveillance systems is one of our unique creations under MAKE IN INDIA. It is specially designed for the key areas viz

- Airports,
- Military strategic locations
- Chemical industries
- Border and coastal defenses.

The offered system is complete with

- High-definition visible light camera,
- Cooled thermal imager
- Pan/ Tilt
- IP67 complaint

The system can be further upscaled by adapting

- Laser range finder,
- Digital Compass
- Automatic tracking
- Ai based intelligence system enabling positioning, tracking, identification and tracking of target

Salient Features

- Sturdy Housing IP67 compliant
- Azimuth rotation range 0° to 360° with a pitch rotation range -90° to $+90^{\circ}$ with no dead angle detection and full-dimensional coverage
- Swift turning speeds upto $60^{\circ}/s$ and acceleration of $120^{\circ}/s$, which plays a pivotal role in capturing and tracking fast moving targets;
- Guarantees Accuracies using precision angle encoder and highprecision closed-loop servo control system
- Positioning accuracies of 0.01° ,
- High Performance image processing unit with high-precision focus control mechanism to achieve precise automatic focusing
- Excellent tracking performance with tracking accuracies $\pm 0.5\text{mrad}$, to ensure stable tracking of the target during fast flight and directional change
- AI intelligence based in house developed software enhancing additional functions viz hot Intrusion alarm, Cross-border intrusion alarm, Target tracking, long-distance small target recognition, Radar integration etc

Technical specifications

Model	VIRAJ 28 CCD-50	
Detection (DAY) Recognition identification	Vehicle: 50 km, 25 10	Human: 40 km 20 10
Night detection Recognitioin Identification	40 20 05	40 20 10
Thermalsensor	MCT detector, Stirling dry cooler 3-5 micron,/1-3 micron SWIR 640x512 15 micron pixel pitch	
Thermal lens	F/5.5	50-715mm
	20X continuous zoom, 8X digital zoom	
FOV	0.77° Horizontal	
Image process	1.Image enhancement: SDE 3.Brightness and contrast 5.Digital zoom: 2X/4X	2.Color: White hot/Black hot 4.AGC, adjustable 5.Cross: Display 6.Correction: Shutter/Background
Visible camera sensor	1/1.8" CMOS	
	0.0002lux super high sensitive color to B/W CCD	
	4 megapixels, 2560 X 1440	
	Automatic ICR switch	
	H.264/MPEG4/MIPEG	
Visible camera lens	32Kbps~16Mbps, 60Hz30 FPS	
	12.5 – 750 mm	82X zoom, auto focus
LRF	Included to cover a range of 20km NATO	
Rotation	Pan: 0~360°, Tilt: +90°~-45° (Support overhead tracking)	
Speed	1.Pan speed: 0.01°~60°/s ; Tilt speed: 0.01°~60°/s 2. Acceleration: 100°/s ² Pan; 100°/s ² Tilt 4. Speed adaptive: with intelligent sensing shifting function, support lens focal length speed adaptive function 5. Speed mode: The highest speed mode can be set 6. Drive mode: direct drive with high torque rare earth permanent magnet synchronous motor, high speed start and stop, smooth and smooth tracking with rad	
PT position	1. Positioning accuracy: 0.01°- 0.02°, high-frequency fine-tuning pulse precision motor drive, digital angle measurement sensor servo 2. Positioning time: less than 4s	
Patrol and Scan	1. Preset: no less than 255 2. Path scanning: support preset point cruise, day and night cruise, line sweep, apple skin scan, scan speed can be set 3. Watch function: support watch preset point \ line sweep \ cruise \ apple skin	
Data Feedback	1. Lensservo:support lens field of view, magnification, ZOOM/FOCUS value query, return, positioning function 2. Pan Tilt angle: support horizontal, vertical angle real-time / query return, positioning function	
Focus	Motorized Auto	
Thermal Sensitivity	20-25 mk	

Image Display	White Hot
Cooler Life Time	10000 hours MTBF
Track Module	<ol style="list-style-type: none"> 1. Video interface: support visible light/ thermal image video switching tracking 2. Video format: composite video, PAL, NTSC 3. Multi-target detection:support multi-target detection 4. Tracking algorithm: Integrate multiple tracking algorithms, which can be switched manually/automatically according to different scenarios, and support recapture and lock when the target is temporarily lost 5. Target size: adaptive gate, the size of the tracking frame changes automatically according to the target size
Features	<ol style="list-style-type: none"> 1. Heating defrost: oriented industrial window defroster, automatic heating temperature control 2. Power failure memory:support, can restore power offstate 3. Motor protection: PT blocking protection, high reliability 4. Fault detection:support power-on self-test,status query and fault code feedback 5. Upgrade maintenance: remote restart, remote upgrade function, convenient system maintenance
Protocol	<ol style="list-style-type: none"> 1. TCP /IP, HTTP, DHCP, DNS, DDNS, RTP and other network protocols 2. Support ONVIF2.0 3. Pelco-P, Pelco-D and other industry-standard protocol, baud rate 2400,4800,9600,19200 alternative, proprietary protocols can be customized
Power supply	AC90V~305V to DC48V Turntable rotation power can be controlled in 120W Maximum power consumption 180W
Environmental Indicators	<ol style="list-style-type: none"> 1. Working temperature: -40 °C ~ + 60 °C 2. Storage temperature: -45 °C ~ + 70 °C 3. Humidity: <90% 4. Protection: Ip67

Integration of System For Reference

