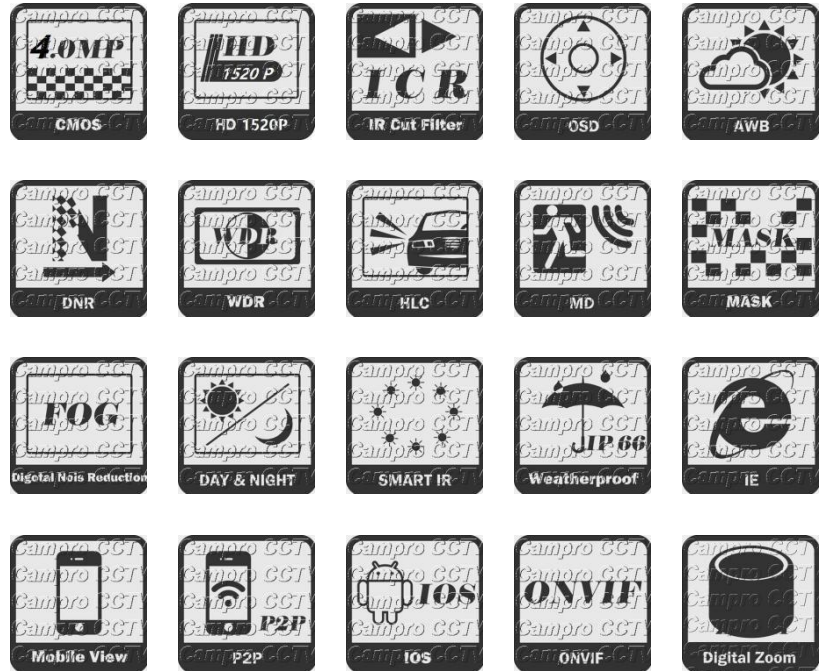
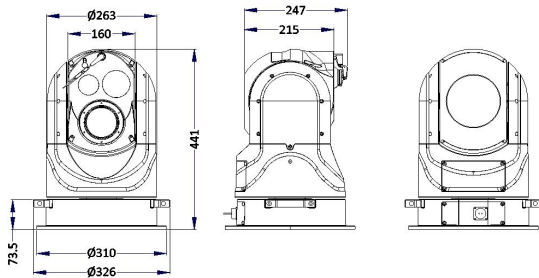


4MP 52X Starlight Thermal & Optical Dual-Spectrum PTZ



- Visible light and thermal imaging ship recognition and tracking algorithm, snap pictures and upload to platform/VMS.
- Intelligent all-round scanning, thermal imaging whole area high-temperature detection, fire & smoke recognition of visible camera, self-examination to minimum possibility of misjudgment
- Pan and tilt axis gyro stabilizer system + video image resist the electricity algorithm, to compensate the attitude shift caused by environment vibration
- 640*512, 12µm/75mm Uncooled Amorphous Silicon Focal Plane Arrays Detector
- 1/1.8" Progressive Scan 4MP CMOS
- 6.1~317mm, 52X Optical Zoom, 16X Digital Zoom
- Starlight Technology
- Auto-Induction Wiper
- Positioning Accuracy: Pan 0.1°, Tilt 0.05°
- IP 67, suitable for Forest Fire Prevention, Fishery Administration and High Altitude Observation, which contains Advanced Ship recognition / Tracking, High-Temperature Detection and Linkage Algorithm. Thermal imaging and visible camera+night vision, ensuring 7/24 all day monitoring.

Model No.	CB-52X-TH7540
Thermal Module	
Detector Type	VOx Uncooled Amorphous Silicon Focal Plane Arrays Detector
Effective Pixels	640(H) * 512(V)
Pixel Pitch	12µm
Spectral Range	8µm~14µm
Sensitivity (NETD)	≤ 50mK@F1.0
Focal Length	75mm
Field of View (H) / (V)	5.9° / 4.7°

Min. Focus Distance	8M
Detection Distance	Vehicles: 1.4*4.0m / 16667M, Humans: 1.8*0.5m) / 7500M
Recognition Distance	Vehicles: 1.4*4.0m / 4167M, Humans: 1.8*0.5m) / 1875M
Identification Distance	Vehicles: 1.4*4.0m / 2083M, Humans: 1.8*0.5m) / 937.5M
Focus Control	Auto / Semiautomatic / Manual
Digital Zoom	1X~8X, Continuing Zooming 30~150mm (Step 0.1), Zoom in any area
Thermal Image Stabilization	Electronic Image Stabilization (EIS)
Thermal AGC	Auto / Manual
Thermal Brightness & Contrast	Manual / Auto0 / Auto1
Polarity	Black Hot / White Hot
Reticle	Reveal / Hidden / Shift
NUC	Support
Digital Detail Enhancement	Support
Digital Filter	Support
Thermal Noise Reduction	3D DNR
Image Flip	Right-Left / Up-Down / Diagonal
Color Palettes	18 (white hot/black hot/fusion/rainbow/golden autumn/midday/iron red/amber/jade/sunset/icefire/painting/pomegranate/emerald /spring/summer/autumn/winter)

Optical Camera Module

Digital Video Processor	1/1.8" 4MP CMOS Sensor
RAM & ROM	1GB RAM / 8GB ROM
Frame Rate	2560*1440
Minimum Illumination	Color: 0.0005Lux@F1.4(AGC ON), B/W: 0.0001 Lux@F1.4(AGC ON)
Shutter Speed	Auto / 1/25s-1~100'000s
Slow Shutter	Support
Aperture	DC drive
Day & Night Switch	Auto, Dual IR-Cut Filter (Day / Night / Auto / Schedule)

LENS

Lens Type	6.1~317mm Motorized 52X Optical Zoom Lens
Optical Zoom	52X
Digital Zoom	16X
Focus Control	Auto / Semi-Auto / Manual
Iris Control	Auto Iris
Aperture Value	Max. F1.4~F4.7

F.O.V.

Field of View (H)	65.4°~1.8° (Wide~Tele)
Field of View (V)	38.6°~1.1° (Wide~Tele)
Field of View (D)	73.2°~2.1° (Wide~Tele)
Minimum Working Distance	100mm~1500mm
Zoom Speed	Approximately 4.5s

DORI

DORI	Lens (mm)	Detect (m)	Observe (m)	Recognize (m)	Identify (m)
	6.1mm	54	54	27	221

	317mm	2800	2800	1400	1100
Compression Standard					
Video Compression	H.265 Main Profile / H.264 High Profile / H.264 Main Profile / H.264 Baseline Profile / MJPEG				
Video Bit Rate	32Kbps~16Mbps				
Audio Compression	G.711a / G.711u / G.722.1 / G.726 / MP2L2 / AAC / PCM				
Audio Bit Rate	64Kbps(G.711) / 16Kbps(G.722.1) / 16Kbps(G.726) / 32-192Kbps(MP2L2) / 16-64Kbps(AAC)				
Image					
Max. Resolution	2560*1440@25/30fps				
Main Stream	50/60Hz: 25/30fps(2560*1440/1920*1080/1280*960/1280*720)				
Sub Stream	50/60Hz: 25/30fps(704*576/640*480/352*288)				
Third Stream	50/60Hz: 25/30fps(704*576)				
Image Setting	Saturation, Brightness, Contrast, Sharpness adjustable by Client Soft. Or Browse				
Exposure Mode	Auto Exposure / Aperture Priority / Shutter Priority / Manual Exposure				
Focus Mode	Auto Focus / One Step / Manual Focus / Semi-Auto Focus				
Area Exposure / Focus	Support				
Gain Control	Auto / Manual				
BLC / White Balance	BLC: On/Off, White Balance: (Auto / Manual / Lock)				
Defog	Support				
Day/Night Switch	Auto, Manual, Timing, Alarm Trigger				
Flip	Normal / Flip Vertical / Flip Horizontal / 180° / 90°Clockwise / 90°Anti-clockwise				
HLC	Support				
Image Stabilization (EIS)	Support				
DNR	3D DNR				
WDR	≥ 140dB				
S/N Ratio	≥ 60dB				
Picture Overlay Switch	Support BMP 24-bit image overlay, customizable area				
Region of Interest	Support 3 streams and 4 fixed areas				
Privacy Mask	On/Off, (8 Areas, Rectangle)				
Network					
Protocols	IPv4/IPv6, HTTP, HTTPS, FTP, SMTP, UPnP, SNMP, DNS, DDNS, NTP, RTSP, RTP, TCP/IP, UDP, DHCP, PPPoE,				
API	Onvif (Profile S, Profile G), PSIA, CGI				
Baud Rate	1200 / 2400 / 4800 / 9600bps (Default:115200bps)				
Streaming Method	Unicast / Multicast				
Simultaneous	Live View Up to 20 Channels				
User/Host	5 Users				
Security	Password Protection, Complicated Password, HTTPS Encryption, IP Address Filter, Control Timeout Settings				
Video Management Software	IE / Web				
WEB	IE10/11, Safari V12.1 above, Firefox V.52 above, Google Chrome V.57 above, Edge V.79 above				
Mobile Client	iOS, Android				

P2P	Support iOS / Android / PC
PTZ	
3D Intellectual	Support
Horizontal Rotation Range	0~360° endless
Horizontal Rotation Speed	Pan Speed: Configurable from 0.05° to 250°/s
Tilt Rotation Range	-50~90°
Tilt Rotation Speed	Tilt Speed: Configurable from 0.05° to 150°/s
Proportional Zoom	Yes
Positioning Accuracy	Pan: 0.1°, Tilt: 0.05°
Closed Loop Feedback Control	Support
Remote Upgrade	Support
Remote Reboot	Support
Preset Points	255
Patrol Scan	16 Patrols, up to 18 Presets per patrol
Pattern	16 Patterns, with total recording time not less than 10mins
A-B Scan	User Programmable
A-B Scan Speed	8 Levels Setting Available (1-8)
3D Positioning	Support
PWR On Action	Memory / Pattern 1 / Tour 1 / 360° Scan / A-B Scan / Preset 1-18 / None
Park Time	5~720s available
Dwell Preset	10~120s available
Power-Off Memory	Support
Anti-Flash	50Hz / 60Hz
Wiper	Automatic Induction Wiper (Auto / Manual)
Infrared	
Laser Distance	Up to 800m
Laser Intensity	Automatically adjusted, depending on the zoom ratio
Interface	
Ethernet Interface	RJ45*1, 10M/100M self-adaptive
Storage	Support 256G Micro SD / SDHC / SDXC offline local storage, NAS (NFS, SMB / CIFS support)
Alarm	1CH Input, 1CH Output
Audio	N/A
RS-422	RS-422*1
Video Output	1CH Thermal Imaging Video, Network Video, 1CH HD Video, Network Video (via RJ-45)
Alarm	
Snapshot	Remote Timing Snapshot, Mobile View Images Snapshot
Motion Detection	Intelligent Multiple Detection Zones (Max. 4 Zones)
Alarm Linkage	E-mail Alert and Upload Snapshot to FTP, Relay Out, Mobile Phone App
Event	
Basic Event	Motion Detection, Alarm Input and Output
Smart Tracking	N/A
Alarm Linkage	Upload to FTP, E-mail, Trigger Alarm Output, Trigger Recording

Smart AI	
Boat Identification Tracking of Daytime Camera & Thermal Imaging	Min. Recognition Pixel: 40*20 Numbers of Synchronously Tracking: 50 Tracking algorithm of daytime camera & thermal imaging (option for timing switching) Snap and upload through the linkage PTZ : Support
Intelligent All-Round and Cruise Scanning Linkage	Support
High-temperature Detection	Support
Gyro Stabilization	
Gyro Stabilization	2 Axis
Stabilized Frequency	≤ 1HZ
Gyro Steady-State Accuracy	0.5°
Max Speed Following of Carrier	100°/s
General Parameter	
Operating Temp.	Indoor: 0~40°, Outdoor: -40°~+65°
Humidity	≤ 95% Non Condensing
Temp. Control	Built in Fan & Heater
Power	DC 24V / 5A
Power Consumption	≤ 92W
Dimension	326(W)*441(H)*346(L)mm
Weight	18KG
Protection Level	IP66, TVS 4000V Lightning Protection, Surge Protection
Mounting	Mast Mounting
Approvals	
Certification	CE / FCC / RoHS
ISO	ISO9001

Note:

Detection Range: In order to distinguish an object from the background, the object must be covered by 1.5 or more pixels.

Recognition Range: In order to classify the object (animal, human, vehicle, etc.), the object must be covered by 6 or more pixels.

Identification Range: In order to identify the object and describe it in details, the object must be covered by 12 or more pixels.

