

# KOLO HC9 DUAL SENSOR PTZ CAMERA



## HC9 Multisensor PTZ Series

HC9 series PTZ is a dual-sensor system including a powerful thermal and HD day/night zoom camera. High-performance imagers for true 24/7 work duty. Integrating two sensors provides unparalleled performance resulting in accurate detection, recognition, and identification of intruders and threats.

Integrated into an IP66 housing constructed of anti-corrosive aluminum alloy and a high-performance pan/tilt system. HC9 includes internal heater/blower, this allows HC9 series to withstand the harshest climates and making it ideal military and critical security applications, homeland defense, and coastal security.



### Extreme Long Range Detection

HC9 includes advanced Long-Wave Infrared (LWIR) HD thermal sensors in 640x512 or 1280x1024 capable of detecting vehicles at over 30km. distance and humans at over 15 km. distance.

### Extreme PT performance

HC9 includes a heavy duty high precision and high repeatability pan/tilt unit. All worm gears (no transmission belt) and encoders to ensure best performance and low maintenance.

### Key Features




- HD Thermal resolution in 640x512 or 1280x1024 pixels
- High performance NETD thermal Vox sensors with 12 $\mu$ m. pixel
- Long range zoom or fixed thermal lens up to 350mm.
- 2mp. - 8mp. day/night cameras, up to 2000mm zoom lens
- Starvis super low lux sensor
- 30/60fps. video
- EIS/OIS video stabilization for perfect image video stability
- High precision motor technology, accurate pan/tilt 0,001o
- Worm drive engine with long lasting / high repeatability
- High speed azimuth with -90/90o elevation
- 48v. DC power
- IP66 waterproof housing
- High / Low temperature ready
- Heater, fan, encoders
- Military connectors
- Onvif 2.5 and Profile S




## Specifications:




MODEL	HC9 SERIES				
THERMAL CAMERA	Typ	Dual sensor PTZ camera			
	Sensor	LWIR, uncooled Vox micro-bolometer			
	Wavelength	8-14µm.			
	NETD	<35mK@f/1,0 50Hz., 300K			
	Pixel pitch	12µm.			
	Resolutions	640x512 / 1280x1024			
	Display resolution	Up to 1280x1024 or 1920x1080			
	Color palette	10 colors			
	Image enhancement	Yes			
	Frames/second	30fps			
	Focal length	Up to 350mm.			
	F. number	From f.1 depending in the lens			
	HFOV	Up to 0.4 depending in the lens/resolution			
	Focus	Autofocus, motorized remote focus			
	Video compression	H.265, H.264, Mjpeg			
	Streams	Triple stream			
	Bitrate	256-6,144Kbps. / 1536-7,424Kbps. , VBR/CBR			
	Image settings	Contrast, Brightness, Mirror, Flip, sharpness, Image Enhancement, NR 2/3D			
Analogue video	Optional				
Motion detection/ROI	Yes				
Advanced video analysis	Tripwire, Cross Fence detection, Intrusion, Loitering detection				
Fire detection	Yes				
DAY/NIGHT CAMERA	Sensor	Low lux CMOS sensor, base in module selection			
		Resolution	Zoom	Focal length	
		2 megapixel	57X OIS	15-850mm.	HFOV 29,1-0,5°
		2 megapixel	80X	15-1200mm.	23-0,3°
		4 megapixel	88X	10,5-920mm.	40-0,49°
		2 megapixel	86X	10-860mm.	39,6-0,5°
		2 megapixel	35X	21-750mm.	22-0,48°
		2 megapixel	80X	12,5-1000mm.	18-0,37°
		2 megapixel	80X	25-2000mm.	15,1-0,18°
		Video compression			H.265, H.264, Mjpeg
		Streams			Triple stream
	Bitrate			1024-8,384Kbps., VBR/CBR	
Image settings	Contrast, Brightness, Mirror, Flip, sharpness, Enhancement, 2/3DNR, AWB, BLC, HLC, WDR, Near Infrared				
Day/Night	Day, night, auto				
Frames/second	30fps. / 60fps.				
Focus type	Autofocus, remote motorized				




DAY/NIGHT CAMERA	Defogging	Optical or digital, base in selection	
	Video output	Digital	
	Video analysis (D/N)	Tripwire, Cross fence, Intrusion, Abandoned-missing object, Fast moving, Parking detection, Crowd gathering estimation, Loitering Detection	
	EIS	In D/N camera	
	Local storage	Up to 256Gb. for each camera	
GENERAL	Web browser IE8 or above,	Chrome, Edge, Firefox	
	Pan/tilt movement	Pan 360° endless, tilt -90/90°	
	Pan/tilt speed	0,001°-600°/Sec. - 0,001°-40°/Sec.	
	Accuracy	+/- 0,006°	
	Tours	8	
	Presets	256	
	Auto scan / Auto pan	Yes	
	Patterns	5 (10min.)	
	Groups	4	
	Idle action / Start up	Yes	
	Protocols	Pelco D	
	Digital alarms	Motion detection, IVS alarms, memory full	
	Alarm I/O	D/N 1/1 - IR 1/1	
	RS485	Yes	
	Serial baudrate	2400-115200Kbps.	
	Encoders	High end absolute positioning encoders	
	Connector	Military type	
	Network	RJ45 1x Giga Ethernet	
	Network protocols	IPv4/v6, RTSP/RTP/RTCP, TCP/UDP, HTTP, HTTPS, DHCP, DNS, FTP, DDNS, PPPoE, SMTP, SNMP V1/V2, IEEE802.X, Bonjour, IP filter, QoS, ICMP, IGMP, NTP	
	Fan/Heater	Yes	
	Platform	Onvif 2.5, Profile S	
	Environmental	-40°/65°C. - 0/95% RH not condensing	
	Power	48v.DC (24-48v.)	
	Waterproof	IP66	
	Weight	50Kg. without cameras / Max. payload 30Kg. per side	
	Size	800x535x520mm.	
	Options	LRF, DMC, GPS, Marine coating	

### Thermal - DRI Distances

Human target 1,8x0,5m.	Johnson´s criteria - NATO standard - 225mm. focal length	
Detection		9.375m.
Recognition		2.344m.
Identification		1.172m.

Vehicle target 2,3x2,3m.	Johnson´s criteria - NATO standard - 225mm. focal length	
Detection		19.167m.
Recognition		4.792m.
Identification		2.396m.

Human target 1,8x0,5m.	Johnson´s criteria - NATO standard - 350mm. focal length	
Detection		14.583m.
Recognition		3.646m.
Identification		1.823m.

Vehicle target 2,3x2,3m.	Johnson´s criteria - NATO standard - 350mm. focal length	
Detection		44.722m.
Recognition		11.181m.
Identification		5.590m.

Human target 1,8x0,5m.	DORI distances for 1200mm.	
Detection		20.000m.
Observation		7.937m.
Recognition		4.000m.
Identification		2.000m.

\* Different weather conditions and temperature changes may affect to final distances, the stated distances are references.  
 \* GE window, fire detection/analytcs, GPS, DMC, LRF are optional.  
 \* Different laser illuminator configurations up to 5Km. distance  
 \* STANAG4347 / Thermal Imager- 20 temp difference &  $\sigma=0.2$  km-1 atmospheric attenuation factor / Day Imager- 1000 lux illumination and target contrast of 20%. Probability 50%.  
 \* Infrared CVBS video available only for 640x512, higher resolution HDSDI, analog video for day/night cameras not available.  
 \* Pan/tilt speed would be adjusted to different speeds depending the payload weight.  
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