

ZS-HM3X Series

Dual Spectrum Bullet Camera

On-going updating AI-behavior analysis algorithm, temperature measurement and fire detection in the bullet camera, its widely used in perimeter security in residential and industrial areas, furthermore, with the high sensitivity infrared sensor NETD up to 25mk, sound-light interface and 4MP visible light so as to obtain more defined image.



Fire detection algorithm

Based on advanced fire detection algorithm to avoid fire incident, support temperature measurement with the RAW data simultaneously.



Powerful behavior analysis algorithm

New generation video content analysis(VCA) function for high accuracy vehicle/human recognition.



Perfect software access capacity

Support kinds of network protocols for easily access third party platform: ONVIF, API, http, SDK etc. Perfect communication with Network Optix system.



Advanced auto-motorized on thermal image

Thermal image lens is to be auto-adjusting the focus to always keep defined thermal image output in any weather.



Superior environmental adaptability

Excellent applicable for extreme weather, including darkness, rain, fog, smog and, etc, protection level IP67.



Intelligent alarm linkage

Support alarm linkage functions both VCA and fire detection events, as well as integrated interface of the sound-light.

Applications



Perimeter security



Solar power plant



Fire protection



Industrial park

Specifications

Thermal Module	HM3-X				
Detector	VOx Uncooled FPA				
Resolution/ Pixel pitch	384x288/12μm				
NETD	< 25mK@ 25°C				
Spectral range	8-14μm				
Focus Method	Motorized				
Focal Length	7mm	10mm	17mm	25mm	35mm
FOV	36.4x27.7	25.9x19.6	15.4x11.6	10.5x7.9	7.5x5.6
Image adjustment Uniformity correction	Auto/Manual adjustment for contrast ratio & brightness & acutance				
	Auto/Manual shutter, background correction				

Optical Module

Image Sensor	1/2.8" Progressive Scan CMOS		
Resolution	2592(H)×1536(V)		
Focal Length	4mm	6mm	12mm
FOV	80°×56.7	54°×29	28°×23.9

Image Effect

Thermal image process	AGC, IDE, 3D DNR, HDR
Image Enhancement	Real-time Super-Resolution
Image fusion	Support
Color Palette	Optional 9 color palettes (rust, rainbow, white/black, etc.)
EIS	Mutually exclusive with all smart functions except VCA function on the thermal

Smart Function

VCA	4 VCA types for motion detection, cross line, intrusion, area entry and exit
Fire Detection	Support
Temperature Measurement	3 temperature measurement rule types (points, areas, lines).
Temperature Range	-20°C~+ 135°C
Temperature Accuracy	± 8 °C (± 14.4 °F)

Interface

Alarm	2x ch input, 2x ch output
Audio I/O	1x ch input: impedance 35KΩ, amplitude 2V[p-p]; 1x ch output: impedance 600Ω, amplitude 2V[p-p]
Communication Interface	RJ45 10 M/100 M self-adaptive Ethernet
Storage	Micro SD up to 512GB

General

Power Supply	DC 12V/POE
Power Consumption	< 5W(w/o IR & heater)
Work Temperature/ Humidity	-20°C~+60°C (customized -40°C), <90% RH
Protection	IP67
Reliability	TVS 6000V lightning protection, surge protection, voltage transient protection
Dimension	366mmx116mmx100mm
Weight	< 2Kg

DORI Range Table

Thermal lens	Detection Range (Vehicles: 1.4x4 m)	Detection Range (Humans: 1.8x0.5 m)	Recognition Range (Vehicles: 1.4x4 m)	Recognition Range (Humans: 1.8x0.5 m)	Identification Range (Vehicles: 1.4x4 m)	Identification Range (Humans: 1.8x0.5 m)
7 m m	544m	194m	136m	49m	68m	24m
10 m m	778m	278m	194m	69m	97m	35m
17 m m	1322m	472m	331m	118m	165m	59m
25 m m	1944m	694m	486m	174m	243m	87m
35 m m	2722m	972m	681m	243m	340m	122m

*The table is only for reference and the performance may vary according to different environment.

*The optimal human detection, recognition, and identification distances are calculated according to Johnson's Criteria.

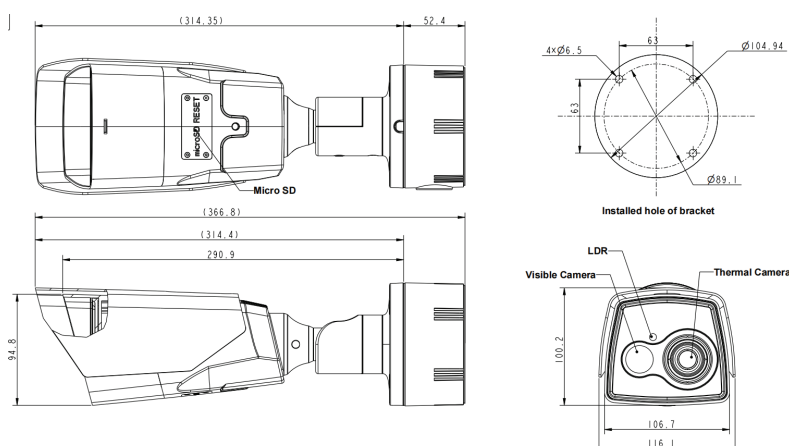
Notice:

Detection Range: In order to distinguish an object from the background.

Recognition Range: In order to classify the object(animal, human, vehicle, etc.).

Identification Range: In order to identify the object and describe it in details.

Dimension



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ZS-HM6X Series

Dual Spectrum Bullet Camera

On-going updating AI-behavior analysis algorithm, temperature measurement and fire detection in the bullet camera, its widely used in perimeter security in residential and industrial areas, furthermore, with the high sensitivity infrared sensor NETD up to 35mk, thermal resolution with 640*512, 4MP visible light so as to obtain more defined image.



Fire detection algorithm

Based on advanced fire detection algorithm to avoid fire incident, support temperature measurement with the RAW data simultaneously.



Powerful behavior analysis algorithm

New generation video content analysis(VCA) function for high accuracy vehicle/human recognition.



Perfect software access capacity

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Intelligent alarm linkage

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Applications



Perimeter security



Solar power plant



Fire protection



Industrial park

Specifications

Thermal Module	HM6-X			
Detector	VOx Uncooled FPA			
Resolution/ Pixel pitch	640x512/12μm			
NETD	< 35mK@ 25°C			
Spectral range	8-14μm			
Focus Method	Motorized			
Focal Length	10mm	17mm	25mm	35mm
FOV	42x34	25.4x20.4	17.5x14	12.5x10
Image adjustment	Auto/Manual adjustment for contrast ratio & brightness & acutance			
Uniformity correction	Auto/Manual shutter, background correction			

Optical Module

Image Sensor	1/2.8" Progressive Scan CMOS			
Resolution	2592(H)×1536(V)			
Focal Length	4mm	6mm	8mm	12mm
FOV	80°56.7	54°29	41.4°23.9	28°23.9

Image Effect

Thermal image process	AGC, IDE, 3D DNR, HDR			
Image Enhancement	Real-time Super-Resolution			
Image fusion	Support			
Color Palette	Optional 9 color palettes (rust, rainbow, white/black, etc.)			
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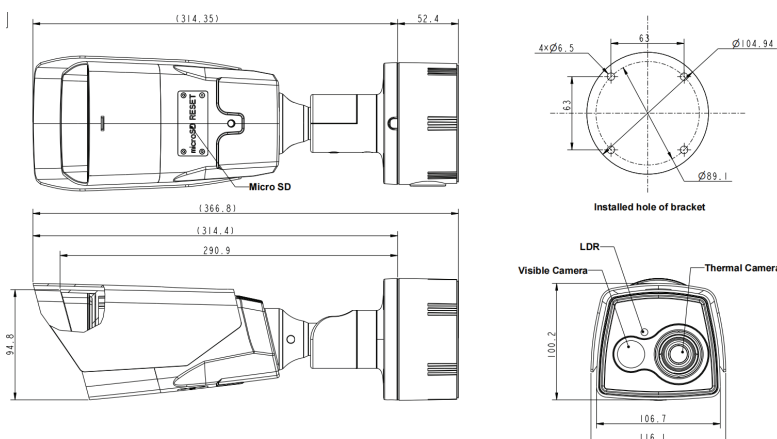
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