

Major Visual Revolution in Automotive Industry: Exceptional
Nighttime Perception Capability

5/7-inch high-performance Thermal imaging night vision



How does thermal imaging enhance night driving safety?

Due to poor visibility at night, dazzling bright lights, fog and haze, etc.,

70% of major traffic accidents occur at night.

Thermal imaging can perfectly solve the above problems

Pierce through the night

Shield dazzling light

Break through fog

Before use

Before use

Before use

After use

After use

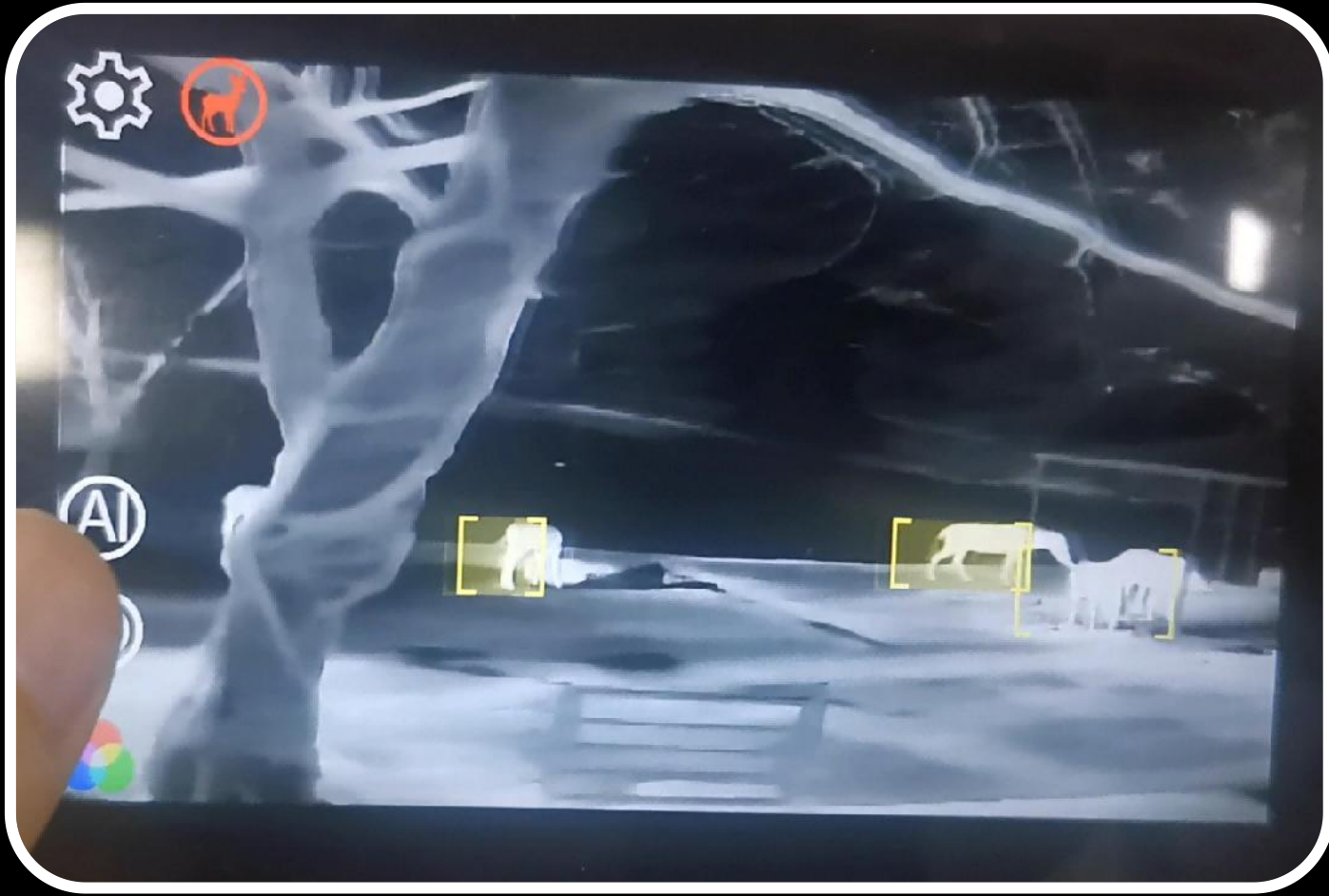
After use

Thermal imaging (far-infrared) has a unique advantage over visible light cameras in the automotive field when it comes to detecting heat sources (human bodies, animals, cars, etc.) under adverse conditions such as darkness, strong light, fog, and heavy haze. This is because thermal imaging operates by imaging the temperature differences on the surface of objects, independent of light.

Passenger Vehicle Thermal Imaging Night Vision-Product Selection Diagram



Advanced AI Recognition (People/Vehicles/Animals)



Multi-target
person/vehicle
recognition



Ultra-long distance
small target recognition

ultra-low latency
50FPS



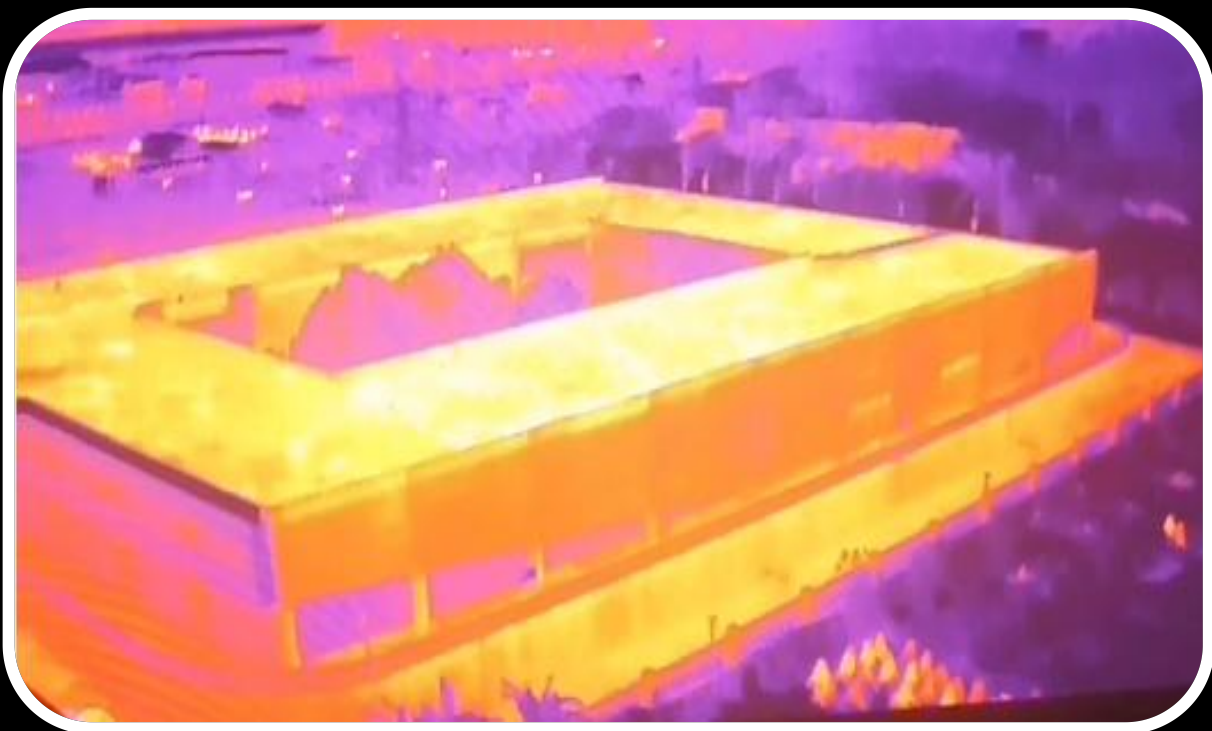
Quick switching among seven types of pseudo-colors



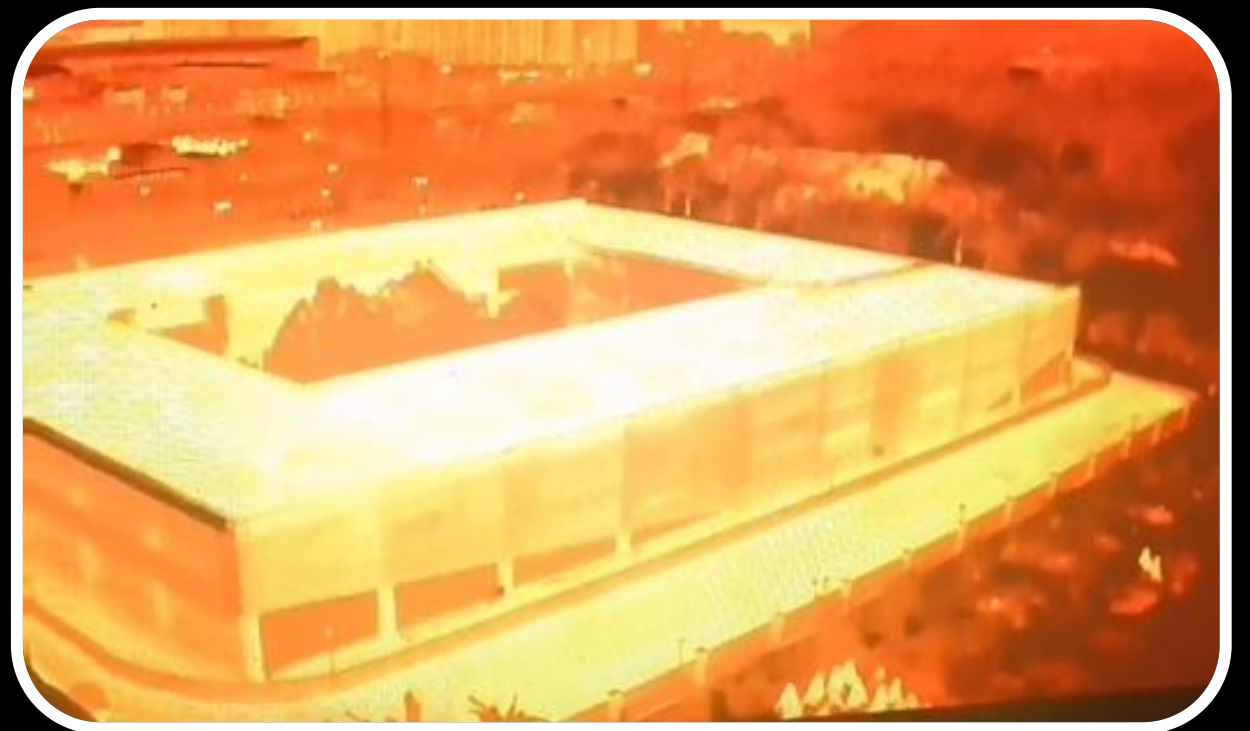
White hot



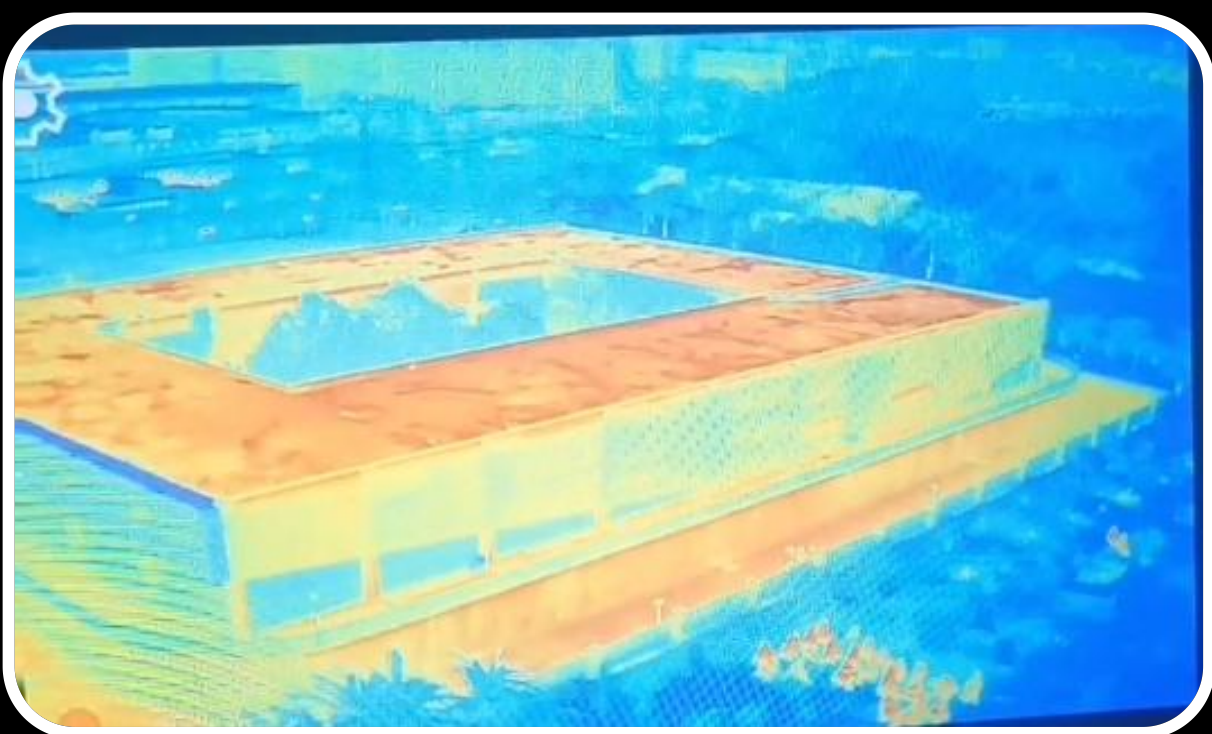
Black hot



Ironbow



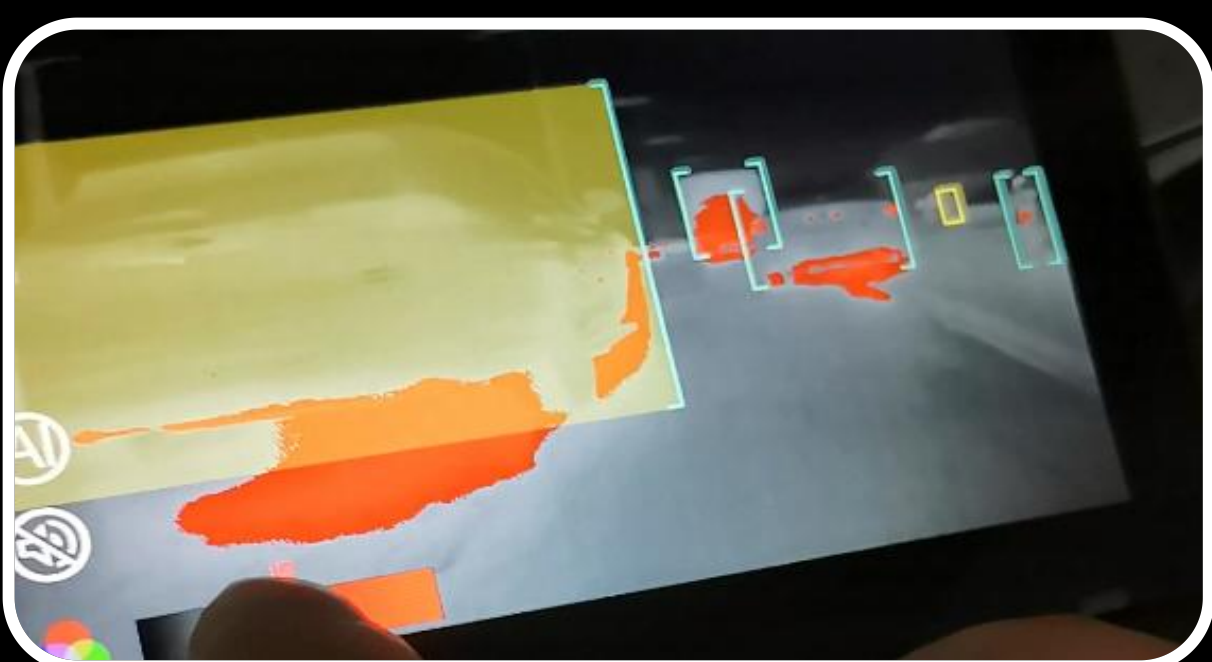
Hot



Rainbow



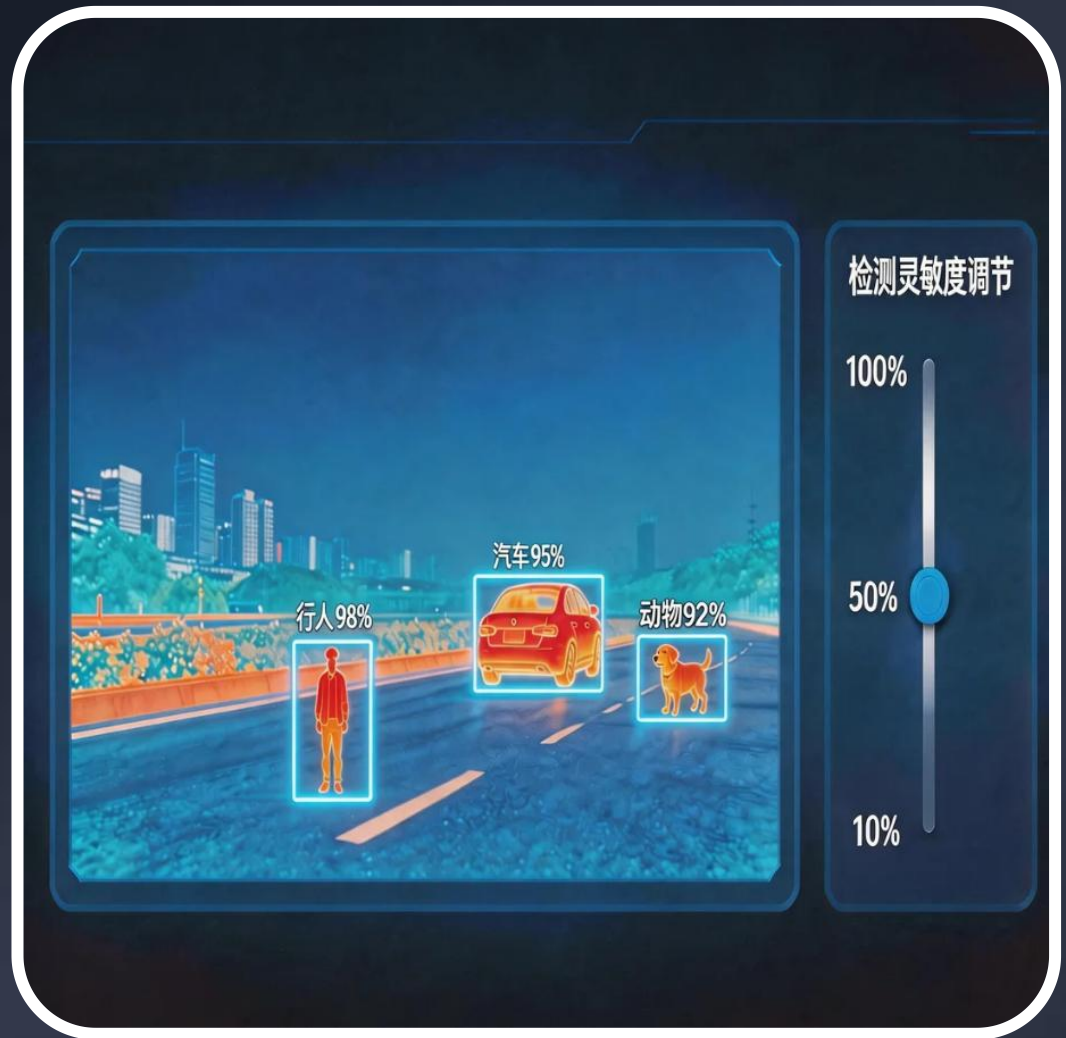
Lava



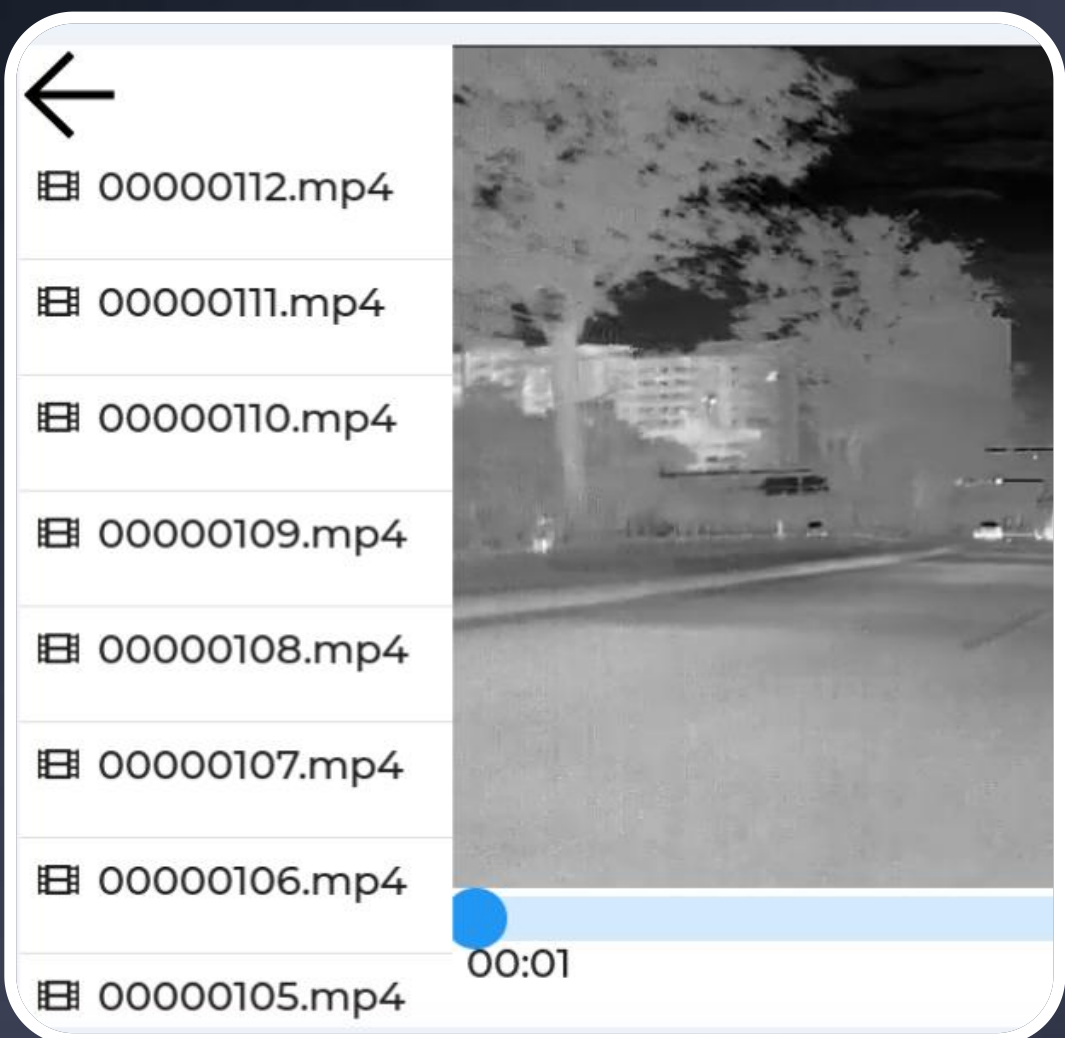
Red Hot
(adjustable threshold)



Custom alert zone



Adjustable sensitivity



Supports recording



10 languages supported



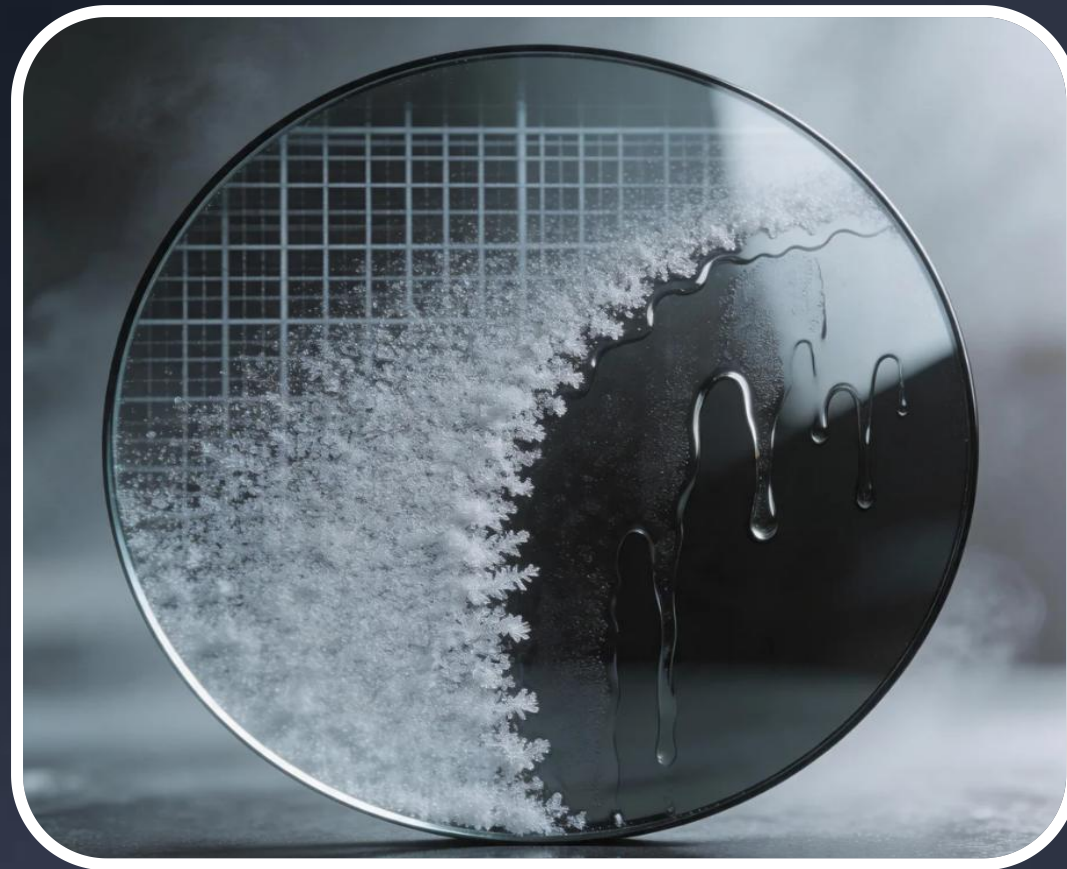
Custom alert voice



Customizable boot video & logo



High-strength Ge window



Auto defog
ON ($<2^{\circ}\text{C}$) / OFF ($>7^{\circ}\text{C}$)



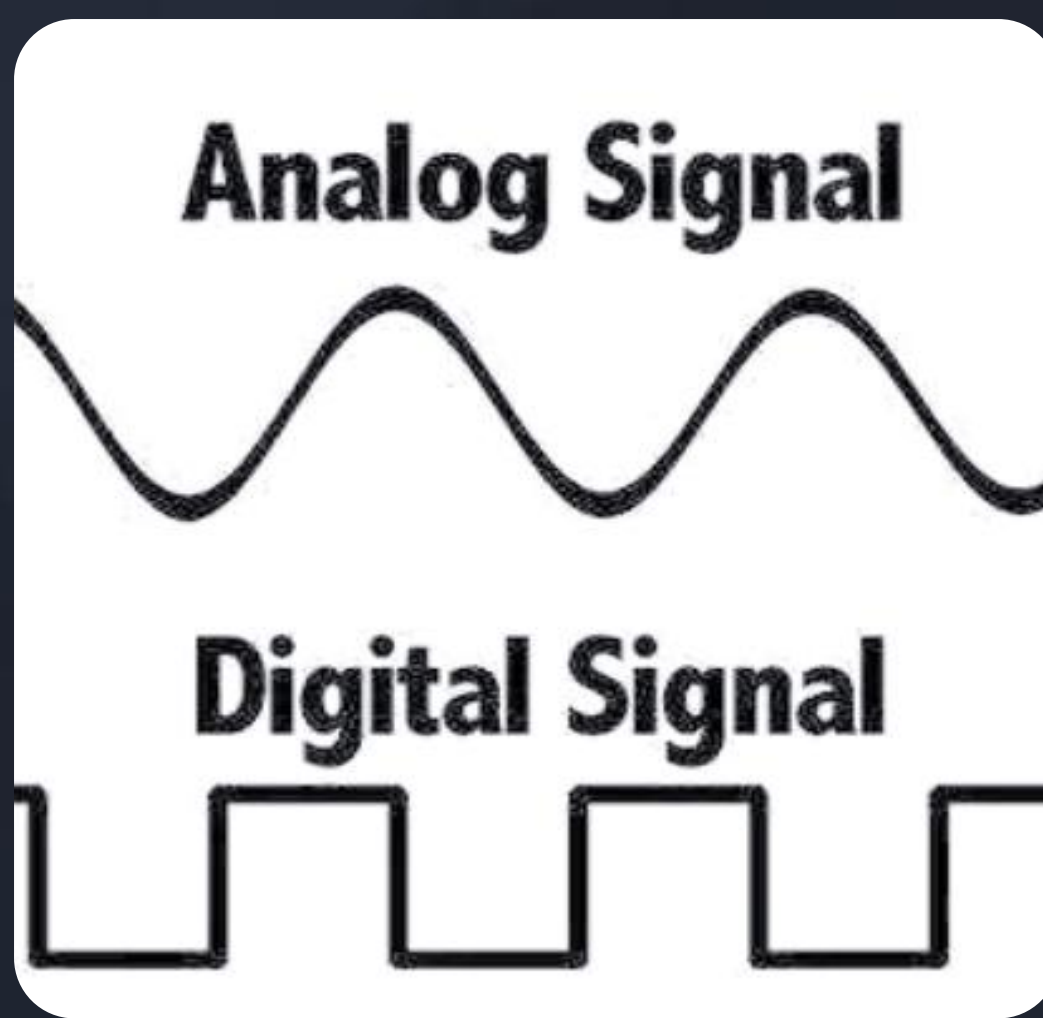
IP67 waterproof camera



IP66-rated main unit



2.5D Touchscreen



3.3V alarm signal output



Product Parameter

product name	5-inch thermal imaging night vision system (second generation)						
Selection of Thermal Imaging Camera							
Resolution	256*192			384*288	640*512		
model	HW-5710						
Lens	1.5mm	4mm	9.1mm	9.1mm	4.6mm	9.1mm	13mm
FOV	120°*86°	45°*33°	18°*13°	29°*22°	95°*76°	48°*39°	34°*27°
Recognition distance (Human)	35m	94m	236m	214m	108m	214m	306m
Recognition distance (Vehicle)	52m	138m	347m	315m	159m	315m	451m
AI Recognition Distance(Human)	15m	60m	100m	100m	60m	80m	100m
AI Recognition Distance(Vehicle)	30m	100m	200m	200m	100m	200m	200m
AI Recognition Distance(Animals)	10m	40m	60m	60m	40m	50m	60m
Size (mm)	35*40*35	40*30*26		42*60*42	64*75*58	42*60*42	
Window/Defrost	X	Support	Support	Support	X	Support	Support
Working band	8~14μm(VOX)						
NETD	≤40mK @25℃， F#1.0						
Pixel size	12μm						
Image algorithm	Detail enhancement, automatic shutter correction						
5/7-inch Host Specifications							
Screen parameters	5/7-inch IPS HD display with 1024×600 resolution						
computing power system	LINUX operating system, 3T computing power NPU, ≥98% recognition rate,50Hz high frame rate						
Color palettes	White hot/Black hot/Ironbow/Hot/Rainbow/Lava/Red Hot						
Algorithm Function	Built-in warning speaker / 3.3V alarm signal output						
Working TEMP	-30℃ - 70℃						
voltage/power	DC9-32V/≤7W						
Size(L*W*H)	142mm*38mm*97mm(5-inch) / 180mm*25mm*120mm(7-inch)						
weight	280g(5-inch) / 420g(7-inch)						

Note: Pedestrian >1.7m, Vehicle width >2.3m, Animal height >1.5m