

Series	FW-300-SS Series		FW-300-SL Series	
PN	FW-300-SS-C1/2	FW-300-SS-C3/4	FW-300-SL-A1/2	FW-300-SL-A3/4
Visible light camera	Description			
Imaging device	1/1.8 inch line-by-line scan 4mega-pixel CMOS imaging sensor		1/2.8 inch line-by-line scan 2mega-pixel CMOS imaging sensor	
Zoom system	6.5~360mm, 57 X continuous photoelectric enhancement zoom		7.5~420mm, 56 X continuous photoelectric enhancement zoom	
Maximum aperture	F1.4-close		F1.6~close	
Min illumination	Colour pattern: 0.01Lux Black and white pattern: 0.001Lux			
Signal to noise ratio	>53dB			
Optical Fog Reduction	Yes			
Day&Night Switching Mode	Automatic infrared filter switch colour to black			
Encoding resolution/frame rate	Main stream: 4MP(2688×1520), 25 FPS Secondary stream: D1(704×576), 25 FPS		Main stream: 1080P(1920×1080), 25 FPS Secondary stream: D1(704×576), 25 FPS	
Back focus compensation	Automatic		Manual	
OSD	TimeOSD、 user-definedOSD			
Cover up	Yes			
Front-end Storage	Micro SD, Max128GB(Standard equipped32GB)			
Protocol	TCP/IP, UDP, RTSP, RTP, RTCP, HTTP, PPPoE, DHCP,NTP, FTP			
Compatible Interface	ONVIF、 GB/T28181、 API、 SDK			
Detection distance	Vehicle: 5600m( 4m×1.8m) Human: 1800m( 1.8m×0.6m) Mist: 6200m( 2m×2m)		Vehicle: 4000m( 4m×1.8m) Human: 1400m( 1.8m×0.6m) Mist: 7000m( 2m×2m)	
Identify distance	Vehicle: 2800m( 4m×1.8m) Human: 900m( 1.8m×0.6m) Mist: 6200m( 2m×2m)		Vehicle: 2000m( 4m×1.8m) Human: 700m( 1.8m×0.6m) Mist: 7000m( 2m×2m)	
Thermal imaging Camera	Description			
Sensor Type	Uncooled VOx			
Pixel pitch	17μm			
Resolution	384×288/640×512			
Encoding resolution/frame rate	768X576@ 50 fps / 1280×1024@ 25 fps			
NETD	<30mK@300K			
Wave range	8~14μm			
Fixed-focal/Zoom system	Fixed-focal75mm	25-100mm, 4 X continuous photoelectric enhancement zoom	Fixed-focal75mm	25-100mm, 4 X continuous photoelectric enhancement zoom

Aperture	F1.0	F1.2	F1.0	F1.2
Detection distance	Vehicle : 4000m( 4m×1.8m) Human : 1300m( 1.8m×0.6m) Fire: 4400( 2m×2m)	Vehicle : 5300m( 4m×1.8m) Human : 1700m( 1.8m×0.6m) Fire: 5700( 2m×2m)	Vehicle : 4000m( 4m×1.8m) Human : 1300m( 1.8m×0.6m) Fire: 5000m( 2m×2m)	Vehicle : 5300m( 4m×1.8m) Human : 1700m( 1.8m×0.6m) Fire: 5700m( 2m×2m)
Identify distance	Vehicle: 2000m( 4m×1.8m) Human:600m( 1.8m×0.6m) Fire: 4400m( 2m×2m)	Vehicle : 2650m( 4m×1.8m) Human : 850m( 1.8m×0.6m) Fire: 5700m( 2m×2m)	Vehicle : 2000m( 4m×1.8m) Human : 600m( 1.8m×0.6m) Fire: 5000m( 2m×2m)	Vehicle : 2650m( 4m×1.8m) Human : 850m( 1.8m×0.6m) Fire: 5700m( 2m×2m)
Intelligence features	Description			
Intelligent identification engine	5-core ARM+quad-core DSP@700MHz+dual-core NNIE@840MHz neural network acceleration engine Mali G71 MP2@900MHz GPU processing unit Support Neon acceleration, integrated FPU processing unit The front-end AI recognition engine has good timeliness, the back-end power failure does not affect the front-end recognition, the recognition efficiency is higher, the response speed is faster, and the long-distance transmission takes up less bandwidth		ARM+ DSP+GPU core algorithm engine The front-end AI recognition engine has good timeliness, the back-end power failure does not affect the front-end recognition, the recognition efficiency is higher, the response speed is faster, and the long-distance transmission takes up less bandwidth	
Mist/Fire Recognition Algorithm (Optional)	Using Visible light and infrared image dual recognition, real-time cross-recognition of Mist/Fire can be performed all day, improving the accuracy and reliability of Mist/Fire recognition Neural network deep learning algorithm, low false positives on Fire, accurate identification The cruise cycle is less than 15 mins to facilitate the timely detection of Fire conditions The false alarm rate is less than 1‰, and the false alarm rate is less than 3 times/day/10,000 hectares Mist min recognition pixel is better than 10×10 pixels, Fire min recognition pixel is better than 2×2 pixels			
Smart surveillance (Optional)	Regional invasion surveillance: support 3D regional settings, up to 64 Cross-border surveillance: supports 3D area settings, up to 64 Enter area surveillance: support 3D area settings, up to 64 Surveillance of leaving area: Support 3D area setting, up to 64 Privacy masking: support 3D area settings, up to 64			
Structural performance	Description			
Horz Range	360°Continuous rotation			
Horz Speed	0.01°~60°/s; Presetting bit speed: 60°/s			
Vertical Range	-90°~90°			
Vertical Speed	0.01°~40°/s; Presetting bit speed: 40°/s			
Presetting bit	2048			
Presetting bit accuracy	0.03°			
Cruise	Strip Cruise、Presetting bit Cruise、Track Cruise			
Rain wiper	Yes			

Monitor position	Yes
3D orientation	Yes
Non-volatile memory	Yes
Automatic calibration	Available, Automatic calibration of geographic coordinates and due north positions
Interface	Description
Alarm input/output	2 in/4 out
Alarm linkage	Yes
Audio input/output	1 in/1 out
Network Interface	10M/100M Adaptive Ethernet port
Power Supply	Amphenol connector
General features	Description
Power Supply	DC 48V±20%, Overall max power consumption80W(max heating20W)(Default withoutDC48V Power Adapter, to be purchased separately)
	Φ300mm×500mm
Weight	20kg
Working environment	-40℃~60℃, ≤93%RH, Non-condensing
Heater	Intelligent temperature control
IP Rate	IP67

## Order information

	Remarks
FW-300-SS-C	Visible light 360mm, Thermal imaging 384*288(640*512)/75mm/25-100mm, detection distance 6km, ball shape PTZ camera
	Mist&Fire Recognition Algorithm module (Optional)/Smart surveillance algorithm module (Optional)
	Three dimensional flat platform(Optional)
	Fixing bracket(Optional)
	DC48V/150W Power Adapter(essential fittings)
Product	Remarks
FW-300-SL-A	Visible light 420mm, Thermal imaging 384*288(640*512)/75mm/25-100mm, detection distance 7km, ball shape PTZ camera
	Mist/Fire Recognition Algorithm module (Optional)/Smart surveillance algorithm module (Optional)
	Three dimensional flat platform(Optional)
	Fixing bracket(Optional)
	DC48V/150W Power Adapter(essential fittings)

# FW-380-GLSeries

## Technical parameters

PN	FW-380-GL-A1/2	FW-380-GL-A3/4	FW-380-GL-A5/6
<b>Visible light camera</b>	<b>Description</b>		
Imaging device	1/1.8 inch line-by-line scan 200 mega-pixel CMOS imaging sensor		
Zoom system	14.5~700mm, 56 X continuous photoelectric enhancement zoom		
Maximum aperture	F2.8~close		
Min illumination	Colour pattern: 0.01Lux Black and white pattern: 0.001Lux		
Signal to noise ratio	>53dB		
Optical Fog Reduction	Yes		
Day&Night Switching Mode	Automatic infrared filter switch colour to black		
Encoding resolution/frame rate	Main stream: 1080P(1920×1080), 25 FPS Secondary stream: D1(704×576), 25 FPS		
Back focus compensation	Manual/Automatic		
OSD	Time OSD、 user-defined OSD		
Cover up	Yes		
Front-end Storage	Micro SD, MAX 128GB(Standard equipped 32GB)		
Protocol	TCP/IP, UDP, RTSP, RTP, RTCP, HTTP, PPPoE, DHCP,NTP, FTP		
Compatible Interface	ONVIF、 GB/T28181、 API、 SDK		
Detection distance	Vehicle: 5600m( 4m×1.8m) Human: 1800m( 1.8m×0.6m) Mist: 10000m( 2m×2m)		
Identify distance	Vehicle: 2800m( 4m×1.8m) Human: 900m( 1.8m×0.6m) Mist: 10000m( 2m×2m)		
<b>Thermal imaging Camera</b>	<b>Description</b>		
Sensor Type	Uncooled VOx		
Pixel pitch	17μm		
Resolution	384×288 / 640×512		
Encoding resolution/frame rate	768X576@ 50 fps / 1280×1024@ 25 fps		
NETD)	< 30mK@300K		
Wave range	8~14μm		
Fixed-focal/Zoom system	Fixed-focal 75mm	25-100mm, 4 times Continuous photoelectric enhancement	20-150mm, 7.5 times Continuous photoelectric enhancement

Aperture	F1.0	F1.2	
Detection distance	Vehicle: 4000m( 4m× 1.8m) Human: 1300m( 1.8m× 0.6m) Fire: 4400( 2m×2m)	Vehicle: 5300m( 4m× 1.8m) Human: 1700m( 1.8m× 0.6m) Fire: 5700( 2m×2m)	Vehicle: 8000m( 4m× 1.8m) Human: 2600m( 1.8m× 0.6m) Fire: 8800( 2m×2m)
Identify distance	Vehicle: 2000m( 4m× 1.8m) Human: 600m( 1.8m×0.6m) Fire: 4400m( 2m×2m)	Vehicle: 2650m( 4m× 1.8m) Human: 850m( 1.8m×0.6m) Fire: 5700m( 2m×2m)	Vehicle: 4000m( 4m× 1.8m) Human: 1300m( 1.8m× 0.6m) Fire: 8800( 2m×2m)
Intelligence features	Description		
Intelligent identification engine	ARM+ DSP+GPU core algorithm engine The front-end AI recognition engine has good timeliness, the back-end power failure does not affect the front-end recognition, the recognition efficiency is higher, the response speed is faster, and the long-distance transmission takes up less bandwidth		
Mist/FireRecognition Algorithm (Optional)	Using Visible light and infrared image dual recognition, real-time cross-recognition of Mist/Fire can be performed throughout the day to improve the accuracy and reliability of Mist/Fire recognition. Neural network deep learning algorithm, low false alarm of Fire, accurate recognition The cruise cycle is less than 20 minutes to facilitate the timely detection of Fire The false alarm rate is less than 1‰, and the false alarm rate is less than 3 times/day/10,000 hectares		
Smart surveillance algorithm	Mist min recognition pixel is better than 10×10 pixels, Fire min recognition pixel is better than 2×2 pixels Regional invasion surveillance: support 3D regional settings, up to 64 Cross-border surveillance: supports 3D area settings, up to 64 Enter area surveillance: support 3D area settings, up to 64 Surveillance of leaving area: Support 3D area setting, up to 64 Privacy masking: support 3D area settings, up to 64		
Structural performance	Description		
Horz Range	360°Continuous rotation		
Horz speed	0.01°~90°/s; Presetting bit speed: 90°/s		
Vertical Range	-90°~90°		
Vertical Speed	0.01°~90°/s; Presetting bit speed: 90°/s		
Presetting bit	2048		
Location accuracy	0.01°		
Cruise Scan	strip Cruise、 Presetting bitCruise、 Track Cruise		
Rain wiper	Yes		
Monitor position	Yes		
3D Location	Yes		
Non-volatile memory	Yes		
Automatic calibration	Yes, Automatic calibration of geographic coordinates and due north positions		
Interface	Description		
Alarm input/output	2 in/8 out		
Alarm linkage	Yes		
Audio input/output	1 in/1 out		
Network Interface	10M/100M Adaptive Ethernet port		
Power Supply	Amphenol connector		
General features	Description		

Power Supply	DC 48V±20%， Overall max power consumption 120W(max heating 40W) (Default without DC48V Power Adapter， to be purchased separately)
	Φ380mm×650mm
Weight	50kg
Working environment	-40℃~60℃， ≤93%RH， Non-condensing
Heater	Intelligent temperature control
IP Rate	IP67

## Order information

Product	Remarks
FW-380-GL-A	Visible light 700mm , Thermal imaging 384*288(640*512)/75mm/25-100mm/20-150mm , detection distance 10km , ball shape PTZ camera
	Mist/FireRecognition Algorithm module (Optional)/Smart surveillance algorithm module (Optional)
	Three dimensional flat platform(Optional)
	Fixing bracket(Optional)
	DC48V/600W Power Adapter(essential fittings)

Series	FW-500-EL-A Family			FW-500-EL-C Family		
PN	FW-500-EL-A1/ 2	FW-500-EL-A5 /6	FW-500-EL-A7/8	FW-500-EL-C1 /2	FW-500-EL-C5 /6	FW-500-EL-C7/ 8
Visible light camera	Description					
Imaging device	1/1.8 inch line-by-line scan 200 mega-pixel CMOS imaging sensor			1/1.8 inch line-by-line scan 400 mega-pixel CMOS imaging sensor		
Zoom system	21~1100mm, 52 times Continuous enhancement zoom					
Maximum aperture	F3.9~close					
Minillumination	Colour pattern: 0.01Lux Black and white pattern: 0.001Lux					
Signal to noise ratio	>53dB					
Optical Fog Reduction	Yes					
Day&Night Switching Mode	Automatic infrared filter switch colour to black					
Encoding resolution/frame rate	Main stream: 1080P(1920×1080), 25 FPS Secondary stream: D1(704×576), 25 FPS			Main stream: 4MP(2688×1520), 25 FPS Secondary stream: D1(704×576), 25 FPS		
Back focus compensation	Manual/Automatic					
OSD	time OSD、user-defined OSD					
Cover up	Yes					
Front-end Storage	Micro SD, max 128GB(Standard equipped 32GB)					
Protocol	TCP/IP, UDP, RTSP, RTP, RTCP, HTTP, PPPoE, DHCP,NTP, FTP					
Compatible Interface	ONVIF、GB/T28181、API、SDK					
Detection distance	Vehicle: 8200m( 4m×1.8m) Human: 2750m( 1.8m×0.6m) Mist: 15000m( 2m×2m)			Vehicle: 10800m( 4m×1.8m) Human: 3600m( 1.8m×0.6m) Mist: 15000m( 2m×2m)		
Identify distance	Vehicle: 4100m( 4m×1.8m) Human: 1370m( 1.8m×0.6m) Mist: 15000m( 2m×2m)			Vehicle: 5400m( 4m×1.8m) Human: 1800m( 1.8m×0.6m) Mist: 15000m( 2m×2m)		
Thermal imaging Camera	Description					
Sensor Type	Uncooled VOx					
Pixel pitch	17μm					
Resolution	384×288 / 640×512					
Encoding resolution/frame rate	768X576@ 50 fps / 1280×1024@ 25 fps					
NETD)	<30mK@300K					
Wave range	8~14μm					
Fixed-focal/Zoom system	Fixed-focal 75mm	20-150mm, 5 times Continuous enhancement	30-210mm, 7times Continuous enhancement	Fixed-focal 75mm	20-150mm, 5times Continuous enhancement	30-210mm, 7times Continuous enhancement

		zoom	zoom		zoom	zoom
Aperture	F1.0	F1.2		F1.0	F1.2	
Detection distance	Vehicle: 4000m(4m×1.8m) Human: 1300m(1.8m×0.6m) Fire: 4400(2m×2m)	Vehicle: 8000m(4m×1.8m) Human: 2600m(1.8m×0.6m) Fire: 8800(2m×2m)	Vehicle: 11200m(4m×1.8m) Human: 3640m(1.8m×0.6m) Fire: 12320(2m×2m)	Vehicle: 4000m(4m×1.8m) Human: 1300m(1.8m×0.6m) Fire: 4400(2m×2m)	Vehicle: 8000m(4m×1.8m) Human: 2600m(1.8m×0.6m) Fire: 8800(2m×2m)	Vehicle: 11200m(4m×1.8m) Human: 3640m(1.8m×0.6m) Fire: 12320(2m×2m)
Identify distance	Vehicle: 2000m(4m×1.8m) Human: 600m(1.8m×0.6m) Fire: 4400m(2m×2m)	Vehicle: 4000m(4m×1.8m) Human: 1300m(1.8m×0.6m) Fire: 8800(2m×2m)	Vehicle: 5600m(4m×1.8m) Human: 1820m(1.8m×0.6m) Fire: 12320(2m×2m)	Vehicle: 2000m(4m×1.8m) Human: 600m(1.8m×0.6m) Fire: 4400m(2m×2m)	Vehicle: 4000m(4m×1.8m) Human: 1300m(1.8m×0.6m) Fire: 8800(2m×2m)	Vehicle: 5600m(4m×1.8m) Human: 1820m(1.8m×0.6m) Fire: 12320(2m×2m)
Intelligence features	Description					
Intelligent identification engine	ARM+ DSP+GPU core algorithm engine The front-end AI recognition engine has good timeliness, the back-end power failure does not affect the front-end recognition, the recognition efficiency is higher, the response speed is faster, and the long-distance transmission takes up less bandwidth			5-core ARM+quad-core DSP@700MHz+dual-core NNIE@840MHz neural network acceleration engine Mali G71 MP2@900MHz GPU processing unit Yes Neon acceleration, integrated FPU processing unit The front-end AI recognition engine has good timeliness, the back-end power failure does not affect the front-end recognition, the recognition efficiency is higher, the response speed is faster, and the long-distance transmission takes up less bandwidth		
Mist/Fire Recognition Algorithm (Optional)	Using Visible light and infrared image dual recognition, real-time cross-recognition of Mist/Fire can be performed all day, improving the accuracy and reliability of Mist/Fire recognition Neural network deep learning algorithm, low false positives of Fire, accurate identification The cruise cycle is less than 30 minutes, so that the false alarm rate of Fire is less than 1‰, and the false alarm rate is less than 3 times/day/10,000 hectares. Mist minimum recognition pixel is better than 10×10 pixels, Fire minimum recognition pixel is better than 2×2 pixels					
Smart surveillance algorithm (Optional)	Regional invasion surveillance: support 3D regional settings, up to 64 Cross-border surveillance: supports 3D area settings, up to 64 Enter area surveillance: support 3D area settings, up to 64 Surveillance of leaving area: Support 3D area setting, up to 64 Privacy masking: support 3D area settings, up to 64					
Structural performance	Description					
Horz Range	360°Continuous rotation					
Horz speed	0.005°~90°/s; Presetting bit speed: 90°/s					

Vertical Range	-90°~90°
Vertical Speed	0.005°~90°/s; Presetting bit speed: 90°/s
Presetting bit	2048
Location accuracy	0.0038°
Cruise Scan	Strip Cruise、Presetting bitCruise、Track Cruise
Monitor position	Yes
3D Location	Yes
Non-volatile memory	Yes
Automatic calibration	Yes, Automatic calibration of geographic coordinates and due north positions
<b>Interface</b>	<b>Description</b>
Alarm input/output	2 in/8 out
Alarm linkage	Yes
Audio input/output	1 in/1 out
Network Interface	10M/100M Adaptive Ethernet port
Power Supply	Amphenol connector
<b>General features</b>	<b>Description</b>
Power Supply	DC 48V±20%, Overall max power consumption 120W(max heating 40W) (Default without DC48V Power Adapter, to be purchased separately)
	Φ380mm×650mm      Φ490mm×800mm
Weight	75kg
Working environment	-40°C~60°C, ≤93%RH, Non-condensing
Heater	Intelligent temperature control
IP Rate	IP67

## Order information

Product	Remarks
FW-500-EL	Visible light 1100mm , Thermal imaging 384*288(640*512)/75mm/20-150mm/30-150mm , detection distance 15km , Ball shape PTZ camera
	Mist/Fire Recognition Algorithm module (Optional)/Smart surveillance algorithm module (Optional)
	Three dimensional flat platform(Optional)
	Fixing bracket(Optional)
	DC48V/600W Power Adapter(essential fittings)

# FW-500-ES Series

## Product Overview

The FW-500-ES series starlight military-grade high-precision ball-shape PTZ camera is a bi-spectral monitoring product that combines visible light and infrared ray. It is customized and developed for special needs like large-scale, long-distance, day & night intelligent monitoring.

Adopting the anti-wind resistance ball design concept, designing and producing according to the standards of military products, selecting high-precision transmission system to achieve high-precision positioning and target tracking; strong wind resistance, anti-sand sand performance, long-term stable operation in extremely harsh environments. At the same time, pyrotechnic recognition and motion detection/tracking algorithms can be selected to realize automatic early warning of abnormal events such as fire and target intrusion.

The FW-300 series mainly completes visible light and infrared monitoring within a radius of 0-15km, and is suitable for remote monitoring scenarios such as border and coastal defense, airports, transportation hubs, water conservancy, tourist attractions, protected areas, and forest fire prevention.



## Product Features

### Optical performance

Visible light camera uses a high-sensitivity sensor, 4 million high-resolution image output and meets the needs of starlight monitoring

Optical wide dynamic, automatic switching according to ambient brightness, meeting the monitoring needs of high-contrast scenes

44 X(21-930mm) ultra-large zoom imaging, to detect finer, wider and farther

Support optical image stabilization function, the monitoring picture remains stable even when the device shakes.

Self-adaptive color fog penetration, adaptive adjustment of fog penetration level according to the severity of haze

Automatic back focus temperature compensation to solve the problem of back focus offset caused by temperature changes

Support optical fog, auto focus, one-key focus, auto tracking and other functions

Thermal imaging supports 7 X(30-210mm) continuous enhancement zoom, high-resolution dynamic image detail enhancement processing output

Raw data video output, provide effective basis for image processing

## Network Specificity

Single IP dual channel

Support ONVIF, GB/T28181 and other standard protocols

## Structural performance

The window adopts imported special coating technology, which has the characteristics of high light transmittance, hydrophobicity, dustproof and anti-fog.

Built-in GPS/Beidou positioning and electronic compass, real-time detection of the position, direction, angle, etc. of the turntable

Support automatic celestial body correction, and cooperate with the back end to realize dynamic field of vision monitoring and target positioning

Modular design, can be disassembled and maintained separately for quick replacement

Flexible control, fast capture of positioning targets, stable lock tracking

Horizontal continuous rotation, pitch angle and rotation range not less than 180°

Adopting precision mechanism transmission, servo system closed loop control, positioning accuracy better than 0.0038°

## Environmental adaptation

Ball-shapestructure design results small wind resistance coefficient,

high-strength precision shafting design greatly improves the long-term application in harsh weather environments

IP67 protection level and high-quality sealing effectively prevent sand, dust, and rain from entering

Built-in intelligent temperature control and defogging function to meet all-weather applications

The surface is sprayed with anti-oxidation and anti-salt spray, which has strong corrosion resistance

6KV anti-surge design, high lightning protection level

Wide temperature design, temperature range -40°C ~ 60°C

Wide voltage protection, allowable voltage fluctuation ±20%

PN	FW-500-ES-E1/2	FW-500-ES-E5/6	FW-500-ES-E7/8
Visible light camera	Description		
Imaging device	1/1.8 inch line-by-line scan 800 mega-pixel CMOS imaging sensor		
Zoom system	21~930mm, 44 times Continuous enhancement zoom		
Maximum aperture	F3.9~close		
Minillumination	Colour pattern: 0.01Lux Black and white pattern: 0.001Lux		
Signal to noise ratio	>53dB		
Optical Fog Reduction	Yes		
Day&Night Switching Mode	Automatic infrared filter switch colour to black		
Encoding resolution/frame rate	Main stream: 1080P(1920×1080), 25 FPS Secondary stream: D1(704×576), 25 FPS		
Back focus compensation	Manual/Automatic		
OSD	time OSD、 user-defined OSD		
Cover up	Yes		
Front-end Storage	Micro SD, Max 128GB(Standard equipped 32GB)		
Protocol	TCP/IP, UDP, RTSP, RTP, RTCP, HTTP, PPPoE, DHCP,NTP, FTP		
Compatible Interface	ONVIF、 GB/T28181、 API、 SDK		
Detection distance	Vehicle: 9400m( 4m×1.8m) Human: 3120m( 1.8m×0.6m)Mist: 15000m( 2m×2m)		
Identify distance	Vehicle: 4700m( 4m×1.8m) Human: 1560m( 1.8m×0.6m)Mist: 15000m( 2m×2m)		
Thermal imaging Camera	Description		
Sensor Type	Uncooled VOx		
Pixel pitch	17μm		
Resolution	384×288 / 640×512		
Encoding resolution/frame rate	768X576@ 50 fps / 1280×1024@ 25 fps		
(NETD)	<30mK@300K		
Wave range	8~14μm		
Fixed-focal/Zoom system	Fixed-focal 75mm	20-150mm, 5 times Continuous enhancement zoom	30-210mm, 7 times Continuous enhancement zoom
Aperture	F1.0	F1.2	
Detection distance	Vehicle: 4000m( 4m× 1.8m) Human: 1300m( 1.8m× 0.6m) Fire: 4400( 2m×2m)	Vehicle: 8000m( 4m× 1.8m) Human: 2600m( 1.8m× 0.6m) Fire: 8800( 2m×2m)	Vehicle: 11200m( 4m× 1.8m) Human: 3640m( 1.8m× 0.6m) Fire: 12320( 2m×2m)

Identify distance	Vehicle: 2000m( 4m× 1.8m) Human: 600m( 1.8m×0.6m) Fire: 4400m( 2m×2m)	Vehicle: 4000m( 4m× 1.8m) Human: 1300m( 1.8m× 0.6m) Fire: 8800( 2m×2m)	Vehicle: 5600m( 4m× 1.8m) Human: 1820m( 1.8m× 0.6m) Fire: 12320( 2m×2m)
<b>Intelligence features</b>	<b>Description</b>		
Intelligent identification engine	<p>5-core ARM+quad-core DSP@700MHz+dual-core NNIE@840MHz neural network acceleration engine Mali G71 MP2@900MHz GPU processing unit Yes Neon acceleration, integrated FPU processing unit The front-end AI recognition engine has good timeliness, the back-end power failure does not affect the front-end recognition, the recognition efficiency is higher, the response speed is faster, and the long-distance transmission takes up less bandwidth</p>		
Mist/Fire Recognition Algorithm (Optional)	<p>Using Visible light and infrared image dual recognition, real-time cross-recognition of Mist/Fire can be performed all day, improving the accuracy and reliability of Mist/Fire recognition Neural network deep learning algorithm, low false positives of Fire, accurate identification The cruise cycle is less than 30 minutes, so that the false alarm rate of Fire is less than 1‰, and the false alarm rate is less than 3 times/day/10,000 hectares. Mist minimum recognition pixel is better than 10×10 pixels, Fire minimum recognition pixel is better than 2×2 pixels</p>		
Smart surveillance algorithm (Optional)	<p>Regional invasion surveillance: support 3D regional settings, up to 64 Cross-border surveillance: supports 3D area settings, up to 64 Enter area surveillance: support 3D area settings, up to 64 Surveillance of leaving area: Support 3D area setting, up to 64 Privacy masking: support 3D area settings, up to 64</p>		
<b>Structural performance</b>	<b>Description</b>		
Horz Range	360°Continuous rotation		
Horz speed	0.005°~90°/s; Presetting bit speed: 90°/s		
Vertical Range	-90°~90°		
Vertical Speed	0.005°~90°/s; Presetting bit speed: 90°/s		
Presetting bit	2048		
Location accuracy	0.0038°		
Cruise Scan	Strip Cruise、Presetting bit Cruise、Track Cruise		
Monitor position	Yes		
3D Location	Yes		
Non-volatile memory	Yes		
Automatic calibration	Yes、Automatic calibration of geographic coordinates and due north positions		
<b>Interface</b>	<b>Description</b>		
Alarm input/output	2 in/8 out		
Alarm linkage	Yes		
Audio input/output	1 in/1 out		
Network	10M/100M Adaptive Ethernet port		

Interface	
Power Supply	Amphenol connector
General features	Description
Power Supply	DC 48V±20%, Overall max power consumption 120W(max heating 40W)(Default without DC48V Power Adapter, to be purchased separately)
	Φ490mm×800mm
Weight	75kg
Working environment	-40℃~60℃, ≤93%RH, Non-condensing
Heater	Intelligent temperature control
IP Rate	IP67

## Order information

Product	Remarks
FW-500-ES	Visible light 930mm , Thermal imaging 384*288 ( 640*512 ) /75mm/20-150mm/30-150mm , detection distance 15km , ball shape PTZ camera
	Mist/Fire Recognition Algorithm module ( Optional ) /Smart surveillance algorithm module ( Optional )
	Three dimensional flat platform ( Optional )
	Fixing bracket ( Optional )
	DC48V/600W Power Adapter ( essential fittings )

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