

PREDATOR THERMAL

HD Product Range



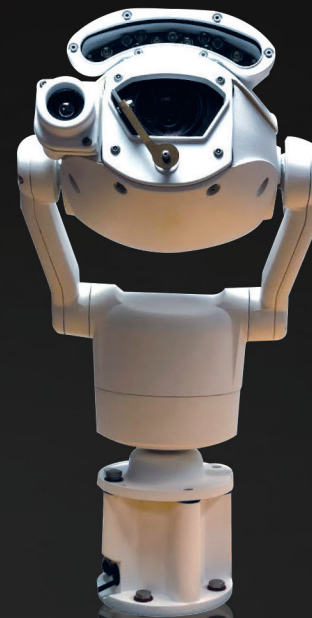
DESIGNED
& MANUFACTURED
IN EUROPE

Ruggedised Dual 1080P
HD & Thermal PTZ Camera


360VISION
TECHNOLOGY
technology that protects



Red



Side Mount



Top Mount TC55/TC73

Predator Thermal

Thermal imaging CCTV surveillance cameras from 360 Vision Technology deliver high-resolution images in all environments, and can see through smoke, dust, light fog, haze and darkness.

Predator Thermal is the ideal solution for 24-hour surveillance and intrusion detection, offering a range of 640-pixel thermal cores from 4.9mm (95° FOV) to 73mm (6° FOV), integrated alongside a 1080p HD optical camera with powerful 40x zoom. It's also available with integrated long-range IR and white light, enabling you to choose the model that meets your operational specification perfectly. All models deliver incredible colour or mono images during the hours of darkness thanks to Sony's industry-leading Exmor R 1/2.8" sensor, which delivers exceptional low-light performance and colour integrity.

Heat based thermal imaging can be used to detect recently driven vehicles and hidden persons, recently disturbed ground, footprints and hidden objects with heat traces. In addition, thermal imaging CCTV can be used in process control, where accurate fault detection via thermal imaging can be used to detect potential health & safety issues.

The comprehensive thermal camera range includes:

- Thermal camera only
- Optical plus thermal camera side mounted (to 36mm)
- Optical plus thermal camera top mounted (to 55mm and 73mm)

Support & Compatibility

Our commitment to the ONVIF organisation also extends to constant and proactive direct communication with leading VMS manufacturers to ensure full feature and operational compatibility.

Our standard 3-year warranty can be extended to 5 years with our optional low-cost support package - a valuable addition for customer framework and maintenance contracts.

We believe in our manufacturing quality, innovative design and market leading support all provided from our factory facility in Runcorn UK, delivering direct support to System Integrators and delivery partners throughout the world.

Low Power

'Low Power Mode' for inactive periods of operation, 'Intelligent Illumination' and 'Night Setting Presets' to control the illumination activity and low consumption components.

That all adds up to greatly reduced power consumption for applications such as solar, fuel, battery and other low voltage sensitive applications. POE option also available.

On Board Recording

Optional full HD JPEG frame recording inside the camera. Trigger options include: network loss, alarm, preset position, scheduled, manual or always on recording. File Transfer Protocol (FTP) option provides automated off camera image transfer.

Options for internal recording memory up to 512Gb, ensuring no information is lost. Can be used for Time-lapse event capture of construction site progress.

Latest Camera Modules

All Predator thermal cameras are equipped with Sony's industry-leading Exmor R 1/2.8" sensor, delivering exceptional low-light performance and colour integrity.

Larger sensor = brighter, crisper and more defined images.

IR & LED White Light

Predator Thermal offers options of integrated long-range IR to 600m and white light to 250m. Standard 850nm IR and covert "no glow" 940nm are available.

IR is ideal to produce clear evidential video quality images, whatever the lighting conditions. White light offers powerful illumination for overt applications, such as intruder tracking and anti-social behaviour deterrence.

360 Degree View

Continuous rotation pan, unobstructed 360° view, 180° tilt all contribute to unhindered views usually associated with dome alternatives.

Ruggedised

Our ruggedised IP68 Predator cameras are designed to withstand harsh environments, such as extreme temperatures, dust, moisture, and vibrations.

In addition, IK10 is the highest impact protection rating for electrical enclosures, meaning they can resist 20 joules of external mechanical shock or impact.

Paint Options

Standard high quality black, white, grey or mid-grey paint finish, with all RAL colours available as options.

Optional long life 'Extreme' paint finish for marine/coastal applications available too, ensuring that the operational and aesthetic features of the Predator are protected.

Attack Detect Feature

Attack Detect & Base Scan on Impact features ensure that if a physical attack is detected, the camera will automatically recalibrate to its original position - ensuring alarms and positional presets are not compromised.

The camera will also look down and do an immediate 360° scan of the pole base to provide critical full video footage of the situation below.

Direct Drive Mechanism

Unlike many competitor products that utilise belt based drive systems, Predator incorporates ultra reliable and extremely quiet high torque direct drive mechanisms. This results in long life, high and consistent preset accuracy and long term reliability.

Dedicated Setup Apps

3 apps for discovery, configuration and update. With an innovative thumbnail index, select and program from one central network point.

No need for browser add-ins, security permissions or Internet necessary updates.

Thermal Imaging

360 Vision Thermal Imaging technology can deliver high resolution images through smoke, dust, light fog, haze and the darkest of nights. Thermal imaging uses an object's heat trace to detect recently driven vehicles, hidden persons, recently disturbed ground, footprints and objects that are hidden to conventional camera technology.

3 Year Warranty

Our standard 3-year warranty can be extended to 5 years with our optional low-cost support package - a valuable addition for customer frameworks and maintenance contracts.



Predator Thermal HD & 4K Specification

PRODUCT SPECIFICATION	4K 28x LOW LIGHT	HD 40K LOW LIGHT	
Colour/Mono	Yes	Yes	
Imager (CMOS)	1/1.8" Sony Starvis2	1/2.8" Sony Exmor R	
Zoom - Optical + Digital	28x, 12x	40x, 12x	
Zoom - Total	336x	480x	
Pixels (Effective)	Approx 8.29 Megapixels	Approx 2.38 Megapixels	
Horizontal view angle	58.8°(W) - 2.3°(T)	66.45°(W) - 1.88°(T)	
Lens Size	7 - 190mm	4.25 - 170mm	
Min Sensitivity - colour	0.002 Lux	0.002 Lux	
Min Sensitivity - mono Int	0.0002 Lux	0.0002 Lux	
Signal Noise Ratio	>50dB	>50dB	
Picture Flip	Yes	Yes	
Picture Freeze	Yes	Yes	
PRODUCT FEATURES - All Predator Cameras have the following functions			
Focus / Iris	Auto / Manual		
Presets	360		
Tours	4 (Max 90 Presets per tour)		
Learned Patrols	4 Mimic tours - up to 30 minutes duration each		
Privacy Zones	Up to 24		
Variable pan speed / coverage	0.1-120°/ Sec 360 ° continuous rotation, absolute positioning		
Variable tilt speed / coverage	0.1-120°/ Sec 180 ° absolute positioning		
Auto Homing	Goes to preset, tour or mimic tour after prescribed time		
Col / Mono Change over	4 Levels 3 fixed, 1 custom / user defined		
Operating Temperature	-50°C +65°C with optional heater		
Power	24Vdc to 36 Vdc		
Mounting options	Wall, Corner, Pole and Soffit		
Certification	CE & FCC approval; ingress IP68; Impact IK10; Vibration & Shock certified approvals.		
SIRIUS ILLUMINATION		IR & WHITE LIGHT (Nominal) - 850nm STANDARD IR or 940nm COVERT (NO-GLOW) AVAILABLE	
850nm	940nm		
SIR110	SIR110-940		110m 850nm IR / 70m 940nm IR
SIR160	SIR160-940		160m 850nm IR / 100m 940nm IR
SIR140WL	SIR140WL-940		200m 850nm IR + white light / 100m 940nm IR + white light
250SWL			250m white light only
SIR250WL	SIR250WL-940		250m 850nm IR + white light / 150m 940nm IR + white light
SIR275	SIR275-940		275m 850nm IR / 165m 940nm IR
SIR400	SIR400-940		400m 850nm IR / 250m 940nm IR
SIR550S	SIR550S-940		600m spot 850nm IR / 300m spot 940nm IR

SM (side mount) 640 Thermal	4.9mm	8.7mm	14mm	18mm	24mm	36mm		
HFOV (Horizontal Field of View)	95 °	50 °	32 °	24 °	18 °	12 °		
TC (top mount) 640 Thermal							55mm	73mm
HVOF (Horizontal Field of View)							8 °	6 °

CODEC	25/50fps	ASPECT	30/60fps
4K	3840x2160	16:8	3840x2160
1080P	1920x1080	16:9	1920x1080
720P	1280x720	16:9	1280x720
576P	1024x576	16:9	1024x576
SXGA *	1280x1024	5:4	1280x1024
XGA *	1024x768	4:3	1024x768
D1	720x576	5:4	720x480
VGA	640x480	4:3	640x480
QVGA	320x240	4:3	320x240
Distribution *	Multi Streaming Codec, 2 independently configurable profiles		
Image Compression	H.264, MJPEG, H.265		
Protocols	TCP/IP, IPv4, ONVIF (S), 802.1x, MD5, TLS, PEAP, HTTP, HTTPS, RTP, RTSP, RTSP over HTTPS, 360SDK, QoS, IGMP v3, SNMP v3, NTP, FTP, Digest Authentication		
Compression levels	CBR, VBR		
THERMAL RANGE	SM 640 with Boson		
Thermal Imager	Uncooled Vox Microbolometer		
FPA / Digital Video Display	64 x 512		
Pixel Pitch	12 μM		
Spectral Band	7.5 - 135 μM		
Full Frame Rate	60 Hz Baseline		
Exporting Frame Rates	N/A		
Sensitivity (NETD)	Industrial Performance Commercial	<30mK <50mK <60mK	
Scene Range (High Gain)	+0°C + 140 °C		
Scene Range (Low Gain)	+0°C + 500 °C		
PAL / NTSC	YES		
Image Optimizer	YES		
Digital Detail Enhancement	YES		
Polarity Control (Black Hot /White Hot)	YES		
Colour Monochrome Palettes (LUTS)	YES		
Digital Zoom (Continuous)	3 x		
Operating Temperatures	-40° C to +180 ° C		
Power (Thermal ONLY)	1 w Max		
Certification (Thermal ONLY)	Safety Mark : CE approval: Ingress: IP67 Certified		
Video Output	1Vp to p 75 Ω Ohm		
Standard Paint Options	RAL		
Black	9005		
White	9003		
Cool Grey	7035		
Mid Grey	7001		

Detection, Recognition, Identification of Human Target - 640px Core*

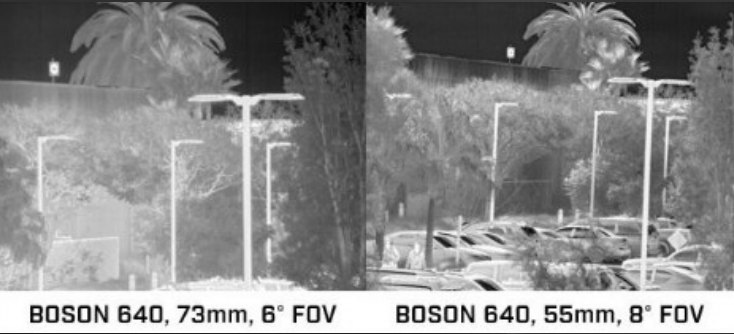
Boson Lens (mm)	HFOV °	
4.9mm	95°	Detection approx. 140m
		Recognition approx. 35m
		Identification approx. 17m
8.7mm	50°	Detection approx. 260m
		Recognition approx. 65m
		Identification approx. 32m
14mm	32°	Detection approx. 390m
		Recognition approx. 95m
		Identification approx. 47m
18mm	24°	Detection approx. 620m
		Recognition approx. 160m
		Identification approx. 80m
24mm	18°	Detection approx. 820m
		Recognition approx. 210m
		Identification approx. 104m
36mm	12°	Detection approx. 960m
		Recognition approx. 245m
		Identification approx. 122m
55mm	8°	Detection approx. 1500m
		Recognition approx.380m
		Identification approx. 190m
73mm	6°	Detection approx. 2450m
		Recognition approx. 650m
		Identification approx. 330m

* Figures based on performance characteristics of comparable legacy thermal systems

Detection, Recognition, Identification of Vehicle
(2.3m Critical Dimension) - 640px Core*

Boson Lens (mm)	HFOV °	
4.9mm	95°	Detection approx. 390m
		Recognition approx. 100m
		Identification approx. 50m
8.7mm	50°	Detection approx. 800m
		Recognition approx. 200m
		Identification approx. 100m
14mm	32°	Detection approx. 1080m
		Recognition approx. 275m
		Identification approx. 140m
18mm	24°	Detection approx. 1650m
		Recognition approx. 430m
		Identification approx. 220m
24mm	18°	Detection approx.2200m
		Recognition approx. 580m
		Identification approx. 290m
36mm	12°	Detection approx. 2550m
		Recognition approx. 680m
		Identification approx. 340m
55mm	8°	Detection approx. 3900m
		Recognition approx. 1060m
		Identification approx. 540m
73mm	6°	Detection approx. 6000m
		Recognition approx. 1750m
		Identification approx. 800m

* Figures based on performance characteristics of comparable legacy thermal systems



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The manufacturer reserves the right to change specifications without notice.

360 Vision Technology Ltd

Unit 7 Seymour Court, Manor Park,
Runcorn, Cheshire WA7 1SY UK

T: +44 (0)1928 570000

info@360visiontechnology.com

www.360visiontechnology.com

