



# Hybrid thermal imaging.

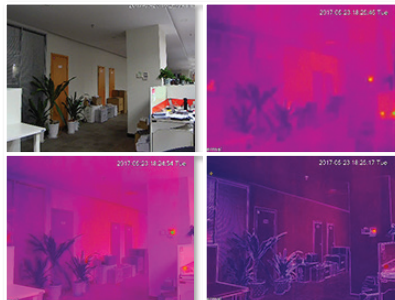
## Professional Thermal Series: Fixed lens hybrid bullet available in 2.0MP

By combining traditional image & thermal sensors, VIP Vision hybrid thermal cameras redefine your expectations of surveillance. Enhance images with Image Fusion thermal overlay, achieve excellent motion detection accuracy, setup thermal perimeters using IVS, and detect fires before they start, all in a compact weather rated body.

- Stream up to Full HD/1080p (1920 x 1080) at 25fps
- 2.0MP standard sensor & 4mm lens (80° view angle)
- One IP address/channel for thermal & visible images
- 35m infrared range, digital WDR & ultra DNR
- Superb low light capability in colour, up to 0.005lx
- Uncooled VOx thermal sensor (256 x 192 pixels)
- 3.5mm fixed lens for thermal camera (50.6° view angle)
- Detects 8~14µm wavelength infrared spectral range
- Adjustable modes & alarm output for fire detection
- IVS functions, audio I/O, IP67 rated body & PoE



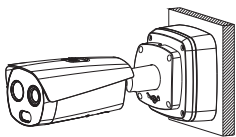
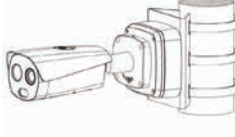
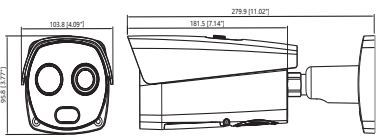



**Fire Detection & Alarm Output**



**Adjustable Hybrid Image Modes**



**Weather-Resistant Metal Body**

Specifications		2.0MP Thermal Hybrid Bullet		
Ordering Information		CAM448: Standard		
Visible Light Camera		Thermal Camera		
Camera	Image Sensor	1/2.8" 2.0MP Progressive Scan CMOS	Thermal Sensor	Uncooled VOx Microbolometer
	Effective Pixels	1920 (H) x 1080(V)	Effective Pixels	256 (H) x 192 (V)
	RAM / ROM	N/A	Sensitivity (NETD)	<50mK@f/1.1
	Min Illumination	0.005 Lux/F1.8 (Color), 0.0005 Lux/F1.8(B/W) 0Lux/F1.8 (IR on)	Spectral Range	8~14um
	S/N Ratio	N/A	Image Settings	Brightness, Sharpness, Region of Interest, Auto Gain Control, Flat Field Correction, 3D Digital Noise Reduction
	Infrared System	1 x Infrared LED, 35m range, Auto/manual on/off control	Colour Palettes	18 thermal colour palettes (eg: WhiteHot, BlackHot, Rainbow etc.)
	Lens / Iris	4mm F2.0 Fixed Lens	Lens / Iris	3.5mm Fixed/F1.0 Lens
Lens	Field of View	Horizontal: 80°, Vertical: 45°	Field of View	Horizontal: 50.6°, Vertical: 37.8°
	Focus	Fixed	Focus	Athermalized, Focus-free
	Resolution	1080p (1920 x 1080) to CIF (256 x 192)		
Frame Rate	Main	<b>Visible: 50Hz</b> 1920 x 1080 to 704 x 576 (1~25fps) <b>Thermal: 50Hz</b> 1280 x 960 to 256 x 192 (1~25fps)		
	Sub	<b>Visible: 50Hz</b> 704 x 576 to 352 x 288 (1~25fps) <b>Thermal: 50Hz</b> 640 x 480 to 256 x 192 (1~25fps)		
Video Compression	H.265 / H.264M / H.264H / H.264B / MJEG			
Bit Rate	H.264: 640 ~ 8192Kbps			
Bit Rate Control	Constant bit rate (CBR) / Variable bit rate (VBR)			
Day/Night	Auto (ICR) / Color / B&W			
Lighting Compensation	BLC / HLC / DWDR			
White Balance	Auto / Indoor/ Outdoor / Manual etc.			
Gain Control	Auto / Manual			
Noise Reduction	2D/3D DNR			
Picture Control	Mirror / Flip (180°)			
DORI Distance	<b>Person:</b> Detect: 146m / Observe: 57m / Recognise: 38m / Identify: 19m <b>Vehicle:</b> Detect: 389m / Observe: 153m / Recognise: 97m / Identify: 49m			
Intelligent Functions	Tripwire, Intrusion			
Thermal Functions	Fire Detection & Alarm, Cold/Hot Spot Trace, Human/Vehicle Classification, Smoke Detection			
Ethernet	RJ-45 (10/100Base-T)			
Protocol	HTTP, TCP, ARP, RTSP, RTP, UDP, RTCP, SMTP, FTP, DHCP, DNS, DDNS, PPOE, IPv4/v6, SNMP, QoS, UPnP, NTP			
Streaming Method	Unicast / Multicast			
Max. User Access	20 Users			
Video Interface	1 port BNC			
Audio Interface	1 Input / 1 Output			
Alarm Interface	2 Input / 2 Output			
RS485	Support			
Edge Storage	MicroSD Card (up to 256GB) / Memory Status Display (Normal/Error/Active/Lock/Formatting) / NAS / Local PC			
Interoperability	ONVIF Profile S & G, API			
Power Supply	12VDC / PoE			
Power Consumption	<12W			
Operating Conditions	-30° ~ +60° C / Less than 95% RH			
Ingress Protection	IP67			
Vandal Resistance	N/A			
Housing	Metal			
Pan/Tilt/Rotation	N/A			
Dimensions	280mm x 104mm x 96mm (with bracket)			
Net Weight	1.4kg			
Application	Mounting Options & Diagram			
				
		Junction Box MB1036	Pole Mount MB1036 + MB1027	Corner Mount MB1036 + MB1026

Your local VIP Vision™ IP solutions professional: