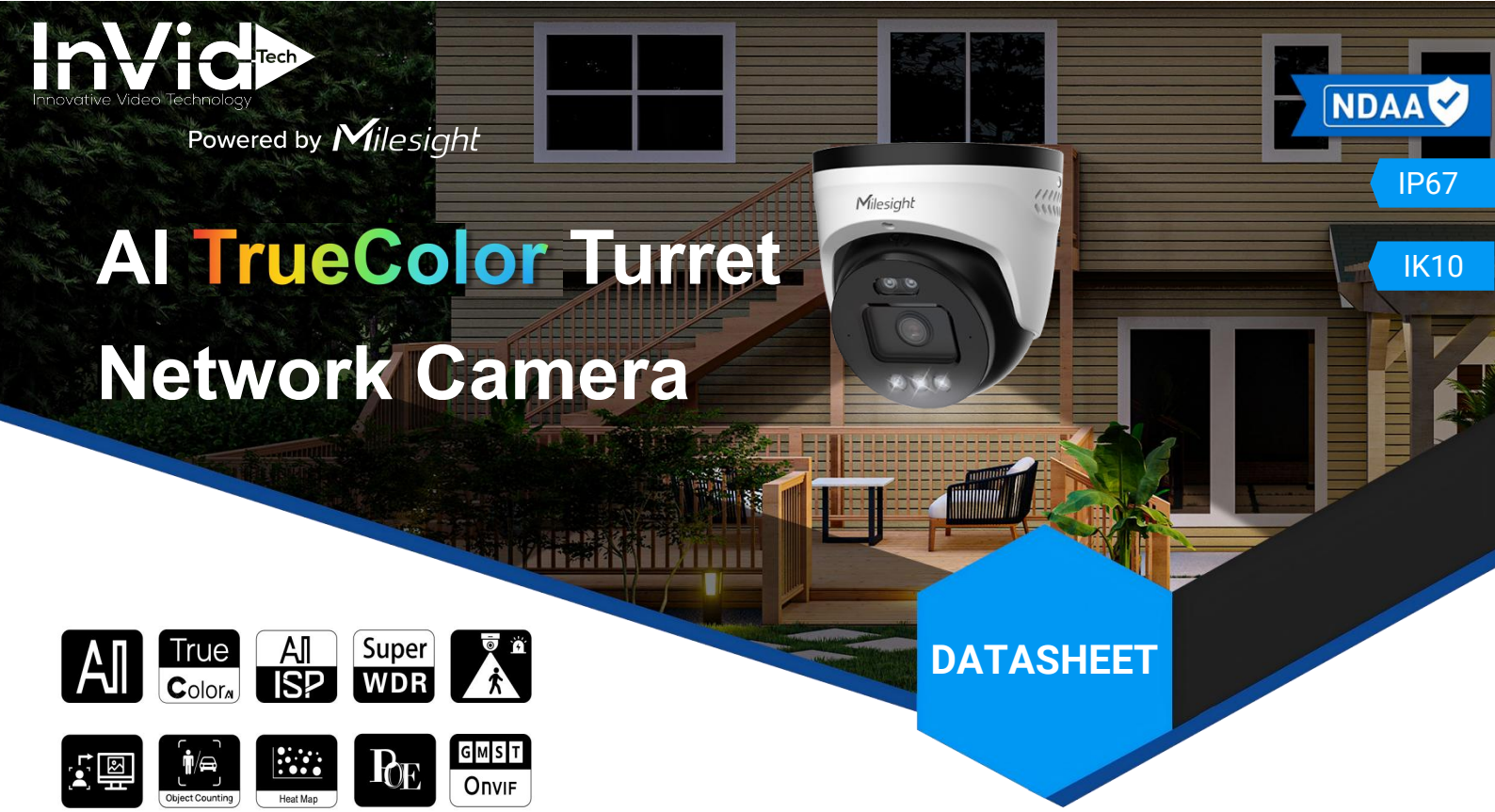
InVid Tech
Innovative Video Technology

Powered by Milesight

AI TrueColor Turret Network Camera



DATASHEET

AI · True Color · AI ISP · Super WDR · Object Counting · Heat Map · PoE · GMST Onvif

- NDAA Compliance (The fully NDAA-compliant products are well suited for government, defense and a range of projects subject to the NDAA.)
- Precision Imaging Technology (Utilizing AA process and a high-performance day/night focus lens, it achieves stunning image quality with true-to-life clarity.)
- Smart Hybrid Light (Auto-switching between IR and warm white light reduces light pollution and ensures full-color clarity, day or night.)
- Red and Blue Lights Deterrence (Upon detecting suspicious activity, automatically triggers a bright strobe light as a powerful visual deterrent.)
- Two-Way Audio (Dual microphones and a powerful speaker enable instant, clear communication for smarter, safer responses.)
- One-Click Arming & Disarming (Easily activate or deactivate alarm responses with a single click, ensuring smarter resource usage and greater operational flexibility.)
- Easy Remote Operation & Maintenance (The Milesight Device Portal makes remote management and maintenance simple and efficient.)

Night Vision with TrueColor Technology

Featuring a large sensor, wide aperture, 40m IR and 30m white warm lights, combined with advanced AI ISP and UTL correction technology, the camera delivers bright, low-noise images with enhanced shadow detail—ensuring true full-color performance even in challenging lighting conditions.

Smarter Detection, Greater Accuracy

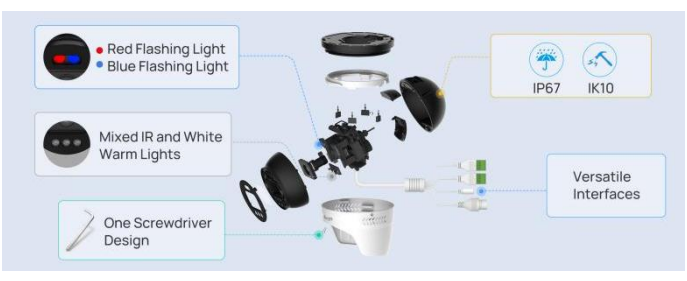
Focused on person and vehicle classification using deep learning, the full suite of AI VCA 2.0 delivers ultra-low false alarm rates, supports long-range detection up to 75 meters, multi-target recognition, and small-object detection—ensuring robust physical security. Meanwhile, MSense provides intelligent trend analysis tailored for vertical business applications.

Active Deterrence with Smart Response

Combined with VCA 2.0 and MSense analytics, automatically switches from IR to TrueColor mode upon detecting human or vehicle motion. While red and blue flashing lights, paired with two-way audio, deliver real-time visual and audio deterrence, ensuring proactive intrusion prevention.

Compact Yet Robust Design

Milesight' s One-Screwdriver design makes installation quick and easy. The camera integrates microphone, speaker, hybrid light, multiple interfaces, and supports up to 1TB SD card—all in a compact form. With IP67 water-proofing and IK10 vandal resistance, it performs reliably in any environment.



Milesight AI TrueColor Turret Network Camera

	Model	INVID-MS-CQ4431-HYPG1 (4MP)	INVID-MS-CQ5431-HYPG1 (5MP)
Camera	Image Sensor	1/1.8” Progressive Scan CMOS	1/2.65” Progressive Scan CMOS
	Min. Illumination	0.0008 Lux@F1.0 (Color, 30IRE) 0 lux (Illuminator on)	0.003 lux@F1.0 (Color, 30 IRE) 0 lux (Illuminator on)
	WDR	120dB Super WDR	
	Shutter Time	1/100000s ~ 1s	
	Day/Night Mode	Day / Night / Auto / Customize / Schedule	
	DORI Distance	2.8mm: D: 44m O: 17m R: 8.5m I: 4m 4mm: D: 62.5m O: 24.5m R: 12m I: 6m	2.8mm: D: 68.5m O: 27m R: 13.5m I: 6.5m 4mm: D: 86m O: 34m R: 17m I: 8.5m
	S/N	>56dB	
Illuminator	Illuminator Type	3 x Smart Hybrid Lights (Mixed IR and White Warm Lights)	
	IR Wave Length	850nm	
	Illumination Distance	Up to 40m (IR Light), Up to 30m (White Warm Light)	
	Illuminator On/Off Control	Auto, Manual	
	Smart Hybrid Lights	Support	
	Red and Blue Flashing Lights	1 x Red Light and 1 x Blue Light	
Lens	Lens	2.8mm, 4mm	
	Aperture	F1.0	
	Field of View	2.8mm: H:112° V:61.5° D:137° 4mm: H:93° V:49.5° D:111.5°	2.8mm: H:111° V:58.5° D:136° 4mm: H:92° V:50° D:108.5°
	Close Focus Distance	2.8mm: 2m 4mm: 3m	2.8mm: 1m 4mm: 1.5m
	Camera Angle Adjustment	Pan: 0° ~ 360°, Tilt: 0° ~ 90°, Rotation: 0° ~ 360°	
	Mount	M16	M12
Video	Max. Image Resolution	2688 x 1520	2960 x 1664
	Primary Stream	60Hz: 30fps@(2688×1520, 2304×1296, 1920×1080, 1280×720) 50Hz: 25fps@(2688×1520, 2304×1296, 1920×1080, 1280×720)	60Hz: 30fps@(2960x1664, 2688x1520, 1920x1080, 1280x720) 50Hz: 25fps@(2960x1664, 2688x1520, 1920x1080, 1280x720)
	Secondary Stream	60Hz: 30fps@(704x576, 640x480, 640x360) 50Hz: 25fps@(704x576, 640x480, 640x360)	
	Tertiary Stream	60Hz: 30fps@(1920x1080, 1280x720, 704x576, 640x480, 640x360) 50Hz: 25fps@(1920x1080, 1280x720, 704x576, 640x480, 640x360)	
	Video Compression	H.265+/H.265(HEVC)/H.264+/H.264/MJPEG	
	Video Bit Rate	16Kbps~16Mbps (CBR/VBR Adjustable)	

Milesight AI TrueColor Turret Network Camera

Image	AI ISP	Support	NA
	Privacy Masking	Up to 8 Areas (Mask Area and Mosaic Area are optional)	
	Image Setting	Brightness / Contrast / Saturation / Sharpness	
	Image Enhancement	BLC, HLC, 2D DNR, 3D DNR, AWB, Defog, AGC, LDC, Anti-flicker, Deblur, etc.	
	Image Rotation	Off, Rotating 180°, Flip Horizontal, Flip Vertical, Clockwise 90°, Anticlockwise 90°	
Audio	Built-in Microphone	Yes, Dual Microphone	
	Built-in Speaker	Yes, max.sound pressure level: 10cm: 95dB	
	Audio Compression	G.711/AAC/G.722/G.726	
	Audio Sampling Rate	8/16/32/44.1/48KHz	
	Audio Bit Rate	16~256kbps	
Interface	Alarm I/O	1/1	NA
	Audio I/O	1/1	NA
	Power Supply	PoE (802.3af) / DC 12V±25%	
Network	Ethernet	1 x RJ45 10M/100M Ethernet Port	
	Network Storage	NAS(Support NFS, SMB/CIFS), ANR	
	Protocol	IPv4/IPv6, ARP, TCP, UDP, RTCP, RTP, RTSP, LLDP, RTMP, HTTP, HTTPS, DNS, DDNS, DHCP, FTP, NTP, SMTP, SNMP, UPnP, Bonjour, SIP, PPPoE, VLAN, 802.1x, QoS, IGMP, ICMP, SSL,TLS 1.2	
Intelligent Analytics	Video Analysis	**VCA 2.0:** Intrusion Detection, Region Entrance, Region Exiting, Advanced Motion Detection, Line Crossing, Loitering, Object Left, Object Removed	
	Object Counting & Report	Count the number of objects crossing the line, optionally human and vehicle, Support regional people counting for up to 4 detection areas	
	Heat Map	The built-in statistical behavior analysis enables you to identify the busiest areas within the environment	
	Face Capture	Capture faces, get real-time snapshots and integrate with third-party systems for advanced analysis	
Event	One-Click Disarm	Support	
	Basic Event	Motion Detection, Tamper Detection, Audio Alarm, External Input, External Output, etc.	
	Exception	Network Disconnection, IP Address Filtering, Record Failed, SD Card Full, SD Card Uninitialized, SD Card Error, No SD Card, etc.	
	Event Action	FTP Upload, SMTP Upload, Snapshot, Record, External Output, Play Audio, Alarm to SIP Phone, HTTP Notification, Warning Light, etc.	
System	Watermark	Support	
	Storage	Support Micro SD/SDHC/SDXC Card Local Storage, up to 1TB	
	SIP/VoIP Support	Yes, Voice & Video-over-IP	
	System Compatibility	ONVIF Profile G&M&S&T, One API	

Milesight AI TrueColor Turret Network Camera

General	Working Temperature	-40℃ ~ 60℃	
	Working Humidity	0~95% RH (Non-condensing)	
	Surge Protection	4KV	
	Power Consumption	Min.: 4W (DC 12V), 5W (PoE) Max.: 10W (DC 12V), 11.5W (PoE)	Min.: 3W (DC 12V), 4W (PoE) Max.: 9W (DC 12V), 10W (PoE)
	Casing Material	Metal	
	Net Weight	Approx. 0.9kg	
	Gross Weight	Approx. 1.1kg	
	Dimensions	Φ122mm X 108mm	
	Warranty	3 Years/5 Years (Optional)	
Certifications	EMC	CE-EMC (EN 55032, EN 55035, EN61000), FCC (PART 15B)	
	Safety	CE-LVD (EN IEC 62368-1)	
	Environment	CE-ROHS (Directive (EU) 2015/863 amending 2011/65/EU)	
	Protection	IP67, IK10	

Milesight AI TrueColor Turret Network Camera

	Model	INVID-MS-CQ8131-HYPG1 (8MP)	INVID-MS-CQ8231-HYPG1 (8MP)
Camera	Image Sensor	1/2.7” Progressive Scan CMOS	1/1.8” Progressive Scan CMOS
	Min. Illumination	0.004 lux@F1.0 (Color, 30 IRE) 0 lux (Illuminator on)	0.0008 Lux@F1.0 (Color, 30 IRE) 0 lux (Illuminator on)
	WDR	120dB Super WDR	
	Shutter Time	1/100000s ~ 1s	
	Day/Night Mode	Day / Night / Auto / Customize / Schedule	
	DORI Distance	2.8mm: D: 89.5m O: 35m R: 17.5m I: 8.5m 4mm: D: 112m O: 44m R: 22m I: 11m	2.8mm: D: 91.5m O: 36m R: 18m I: 9m 4mm: D: 111m O: 43.5m R: 22m I: 11m
	S/N	>56dB	
Illuminator	Illuminator Type	3 x Smart Hybrid Lights (Mixed IR and White Warm Lights)	
	IR Wave Length	850nm	
	Illumination Distance	Up to 40m (IR Light), Up to 30m (White Warm Light)	
	Illuminator On/Off Control	Auto, Manual	
	Smart Hybrid Lights	Support	
	Red and Blue Flashing Lights	1 x Red Light and 1 x Blue Light	
Lens	Lens	2.8mm, 4mm	
	Aperture	F1.0	
	Field of View	2.8mm: H:111° V:58.5° D:136° 4mm:H:92° V:50° D:108.5°	2.8mm: H:112° V:61.5° D:137° 4mm: H:93° V:49.5° D:111.5°
	Close Focus Distance	2.8mm: 1m, 4mm:1.5m	2.8mm: 2m, 4mm:3m
	Camera Angle Adjustment	Pan: 0° ~ 360°, Tilt: 0° ~ 90°, Rotation: 0° ~ 360°	
	Mount	M12	M16
Video	Max. Image Resolution	3840x2160	
	Primary Stream	60Hz: 30fps@ (3840x2160, 3200x1800, 2688x1520, 1920x1080, 1280x720) 50Hz: 25fps@ (3840x2160, 3200x1800, 2688x1520, 1920x1080, 1280x720)	
	Secondary Stream	60Hz: 30fps@ (704x576, 640x480, 640x360) 50Hz: 25fps@ (704x576, 640x480, 640x360)	
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	Video Compression	H.265+/H.265(HEVC)/H.264+/H.264/MJPEG	
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Image	AI ISP	NA	Support
	Privacy Masking	Up to 8 Areas (Mask Area and Mosaic Area are optional)	
	ROI	Up to 8 areas	
	Image Setting	Brightness / Contrast / Saturation / Sharpness	
	Image Enhancement	BLC, HLC, 2D DNR, 3D DNR, AWB, Defog, AGC, LDC, Anti-flicker, Deblur, etc.	
	Image Rotation	Off, Rotating 180°, Flip Horizontal, Flip Vertical, Clockwise 90°, Anticlockwise 90°	
Audio	Built-in Microphone	Yes, Dual Microphone	
	Built-in Speaker	Yes, max.sound pressure level: 10cm: 95dB	
	Audio Compression	G.711/AAC/G.722/G.726	
	Audio Sampling Rate	8/16/32/44.1/48KHz	
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Interface	Alarm I/O	NA	1/1
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	Power Supply	PoE (802.3af) / DC 12V±25%	
Network	Ethernet	1 x RJ45 10M /100M Ethernet Port	
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Intelligent Analytics	Video Analysis	**VCA 2.0:** Intrusion Detection, Region Entrance, Region Exiting, Advanced Motion Detection, Line Crossing, Loitering, Object Left, Object Removed	
	Object Counting & Report	Count the number of objects crossing the line, optionally human and vehicle, Support regional people counting for up to 4 detection areas	
	Heat Map	The built-in statistical behavior analysis enables you to identify the busiest areas within the environment	
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Event	One-Click Disarm	Support	
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	Exception	Network Disconnection, IP Address Filtering, Record Failed, SD Card Full, SD Card Uninitialized, SD Card Error, No SD Card, etc.	
	Event Action	FTP Upload, SMTP Upload, Snapshot, Record, External Output, Play Audio, Alarm to SIP Phone, HTTP Notification, Warning Light, etc.	
System	Watermark	Support	
	Storage	Support Micro SD/SDHC/SDXC Card Local Storage, up to 1TB	
	SIP/VoIP Support	Yes, Voice & Video-over-IP	
	System Compatibility	ONVIF Profile G&M&S&T, One API	

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	Net Weight	Approx. 0.9Kg
	Gross Weight	Approx. 1.1Kg
	Dimensions	Φ122mm X 108mm
	Warranty	3 Years/5 Years (Optional)
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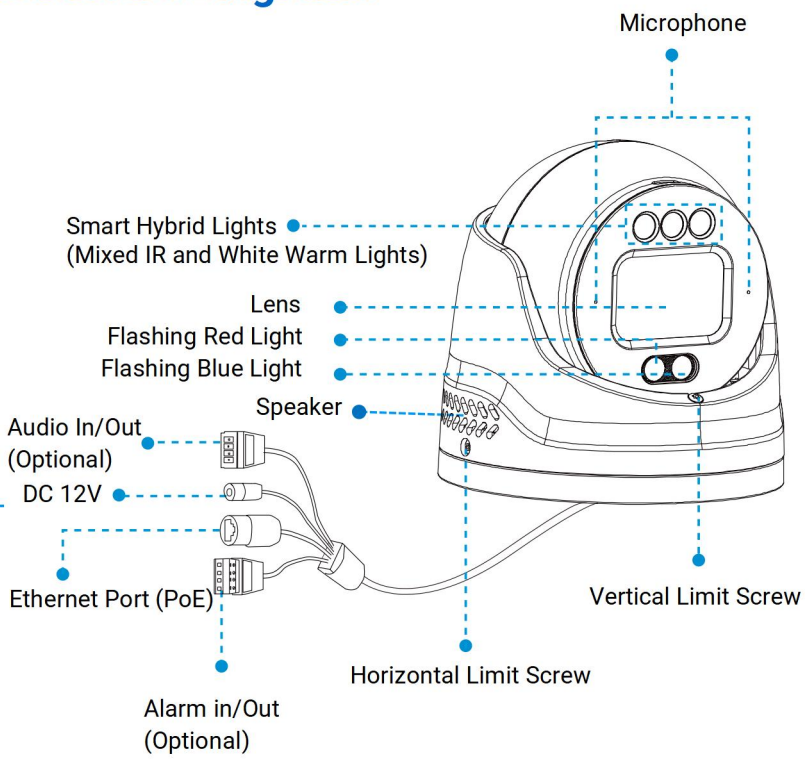
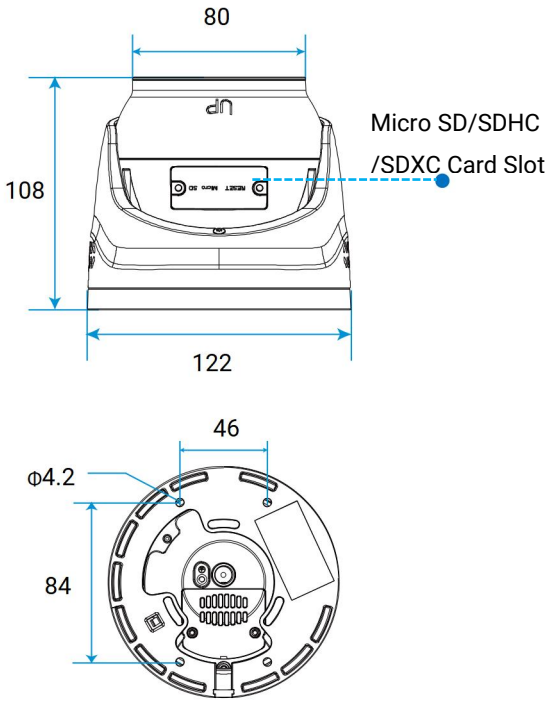
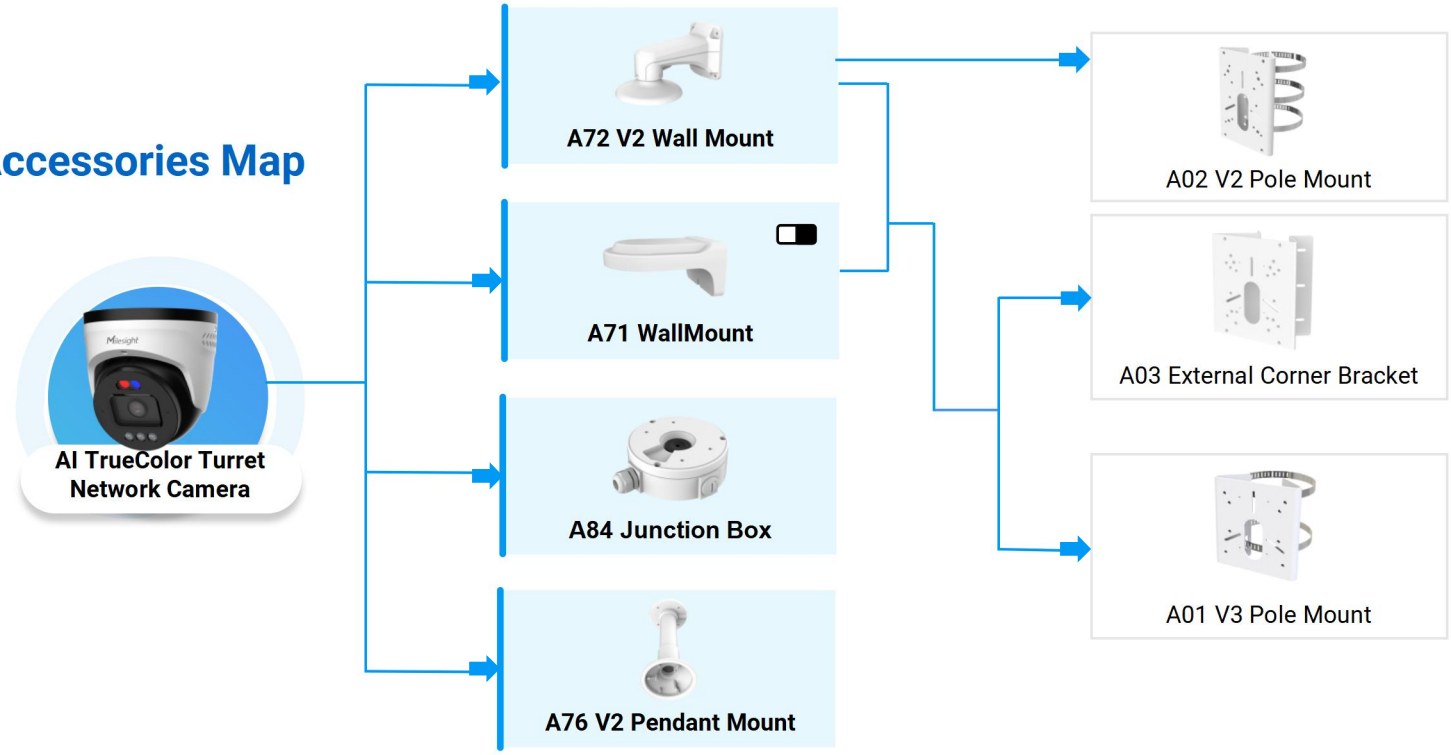
Structure Diagrams





Units: mm

Accessories Map



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