

Milesight

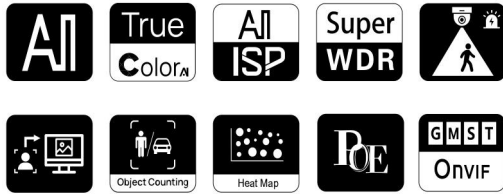
# AI Motorized TrueColor Turret Network Camera

NDA A

IP67

IK10

DATASHEET



- ▶ NDA A Compliance (The fully NDA A-compliant products are well suited for government, defense and a range of projects subject to the NDA A.)
- ▶ 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.)

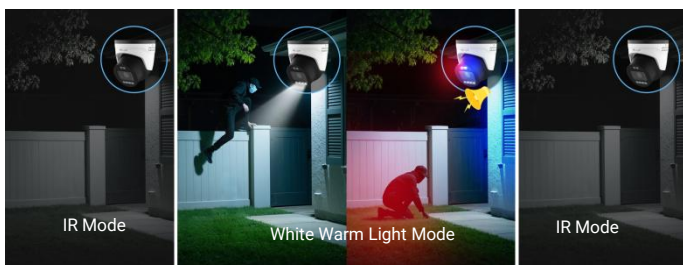
## Night Vision with TrueColor Technology

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.



## 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.



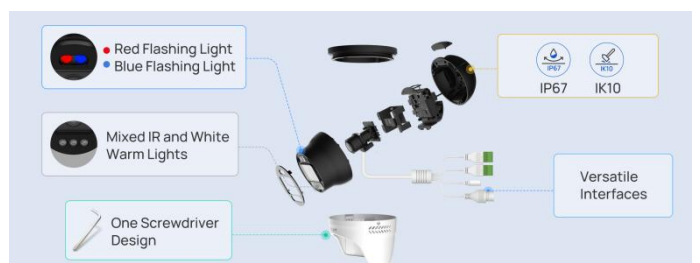
## Smarter Detection, Greater Accuracy

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.



## 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 Motorized TrueColor Turret Network Camera

|                    | Model                        | MS-CQ4431-FHYPG1<br>(4MP)  | MS-CQ5431-FHYPG1<br>(5MP)  |
|--------------------|------------------------------|--|--|
| <b>Camera</b>      | Image Sensor                 | 1/1.8" Progressive Scan CMOS   | 1/2.65" Progressive Scan CMOS  |
|                    | Min. Illumination            | 0.0008 Lux@F1.2 (Color, 30IRE)<br>0 lux (Illuminator on)   | 0.003 lux@F1.2 (Color, 30 IRE)<br>0 lux (Illuminator on)   |
|                    | WDR                          | 120dB Super WDR  |  |
|                    | Shutter Time                 | 1/100000s ~ 1s   |  |
|                    | Day/Night Mode               | Day / Night / Auto / Customize / Schedule  |  |
|                    | DORI Distance                | D: 69.3m~149m O: 27.3m~58.7m<br>R: 13.6m~29.3m I: 6.9m~14.7m   | D: 86.1m~242m O: 33.9m~95.1m<br>R: 16.9m~47.5m I: 8.5m~23.8m   |
|                    | S/N                          | >56dB  |  |
| <b>Illuminator</b> | Illuminator Type             | 4 x Smart Hybrid Lights (Mixed IR and White Warm Lights)   |  |
|                    | IR Wave Length               | 850nm  |  |
|                    | Illumination Distance        | Up to 60m (IR Light), Up to 50m (White Warm Light) (TBD)   |  |
|                    | Illuminator On/Off Control   | Auto, Manual   |  |
|                    | Smart Hybrid Lights          | Support  |  |
|                    | Red and Blue Flashing Lights | 1 x Red Light and 1 x Blue Light   |  |
| <b>Lens</b>        | Lens                         | 2.8~12mm@F1.2  | 2.7~13.5mm@F1.2  |
|                    | Aperture                     | F1.2   |  |
|                    | Field of View                | H111.6°~H47.5°, V58.8°~V26.7°, D129.4°~D54.5°  | H114°~H36.2°, V58.5°~V20.4°, D140.6°~D41.6°  |
|                    | Close Focus Distance         | 0.5m   |  |
|                    | Camera Angle Adjustment      | Pan: 0° ~ 360°, Tilt: 0° ~ 80°, Rotation: 0° ~ 360°  |  |
|                    | Mount                        | Φ16  |  |
| <b>Video</b>       | Max. Image Resolution        | 2688 x 1520  | 2960 x 1664  |
|                    | Primary Stream               | 60Hz: 30fps@(2688x1520, 2304x1296, 1920x1080, 1280x720)<br>50Hz: 25fps@(2688x1520, 2304x1296, 1920x1080, 1280x720)           | 60Hz: 30fps@(2960x1664, 2688x1520, 1920x1080, 1280x720)<br>50Hz: 25fps@(2960x1664, 2688x1520, 1920x1080, 1280x720) |
|                    | Secondary Stream             | 60Hz: 30fps@(704x576, 640x480, 640x360)<br>50Hz: 25fps@(704x576, 640x480, 640x360)   |  |
|                    | Tertiary Stream              | 60Hz: 30fps@(1920x1080, 1280x720, 704x576, 640x480, 640x360)<br>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 Motorized TrueColor Turret Network Camera

|                              |                          |   |    |
|------------------------------|--------------------------|---|----|
| <b>Image</b>                 | AI ISP                   | Support   | NA |
|                              | 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°  |    |
| <b>Audio</b>                 | Built-in Microphone      | Support, Dual Microphone  |    |
|                              | Built-in Speaker         | Support, 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  |    |
| <b>Interface</b>             | Alarm I/O                | 1/1   | NA |
|                              | Audio I/O                | 1/1   | NA |
|                              | Power Supply             | PoE (802.3at) / DC 12V±25%  |    |
| <b>Network</b>               | 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, VPN, SIP, PPPoE, VLAN, 802.1x, QoS, IGMP, ICMP, SSL,TLS 1.2 |    |
| <b>Intelligent Analytics</b> | Video Analysis           | <b>VCA 2.0:</b> 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   |    |
| <b>Event</b>                 | 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.  |    |
| <b>System</b>                | 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 Motorized TrueColor Turret Network Camera

|                       |                     |   |
|-----------------------|---------------------|---|
| <b>General</b>        | Working Temperature | -40°C ~ 60°C  |
|                       | Working Humidity    | 0~95% RH (Non-condensing)   |
|                       | Surge Protection    | 4KV   |
|                       | Power Consumption   | <b>TBD</b>   Min.: 3.1W (DC 12V), 3.7W (PoE)<br>Max.: 11.4W (DC 12V), 13.4W (PoE) |
|                       | Casing Material     | Metal   |
|                       | Net Weight          | <b>TBD</b>  |
|                       | Gross Weight        | <b>TBD</b>  |
|                       | Dimensions          | Φ122mm X 128mm  |
|                       | Warranty            | 3 Years/5 Years (Optional)  |
| <b>Certifications</b> | 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          | <b>IP67, IK10 (TBD)</b>   |

# Milesight AI Motorized TrueColor Turret Network Camera

|                    | Model                        | MS-CQ8131-FHYPG1<br>(8MP)  | MS-CQ8231-FHYPG1<br>(8MP)                                    |
|--------------------|------------------------------|--|--|
| <b>Camera</b>      | Image Sensor                 | 1/2.7" Progressive Scan CMOS   | 1/1.8" Progressive Scan CMOS                                 |
|                    | Min. Illumination            | 0.004 lux@F1.2 (Color, 30 IRE)<br>0 lux (Illuminator on)   | 0.0008 Lux@F1.2 (Color, 30 IRE)<br>0 lux (Illuminator on)    |
|                    | WDR                          | 120dB Super WDR  |  |
|                    | Shutter Time                 | 1/100000s ~ 1s   |  |
|                    | Day/Night Mode               | Day / Night / Auto / Customize / Schedule  |  |
|                    | DORI Distance                | D: 93.9m~304m O: 37m~120m<br>R: 18.5m~59.8m I: 9.3m~29.9m  | D: 98.5m~212m O: 38.8m~83.4m<br>R: 19.4m~41.8m I: 9.7m~20.8m |
|                    | S/N                          | >56dB  |  |
| <b>Illuminator</b> | Illuminator Type             | 4 x Smart Hybrid Lights (Mixed IR and White Warm Lights)   |  |
|                    | IR Wave Length               | 850nm  |  |
|                    | Illumination Distance        | Up to 60m (IR Light), Up to 50m (White Warm Light) (TBD)   |  |
|                    | Illuminator On/Off Control   | Auto, Manual   |  |
|                    | Smart Hybrid Lights          | Support  |  |
|                    | Red and Blue Flashing Lights | 1 x Red Light and 1 x Blue Light   |  |
| <b>Lens</b>        | Lens                         | 2.7~13.5mm@F1.2  | 2.8~12mm@F1.2  |
|                    | Aperture                     | F1.2   |  |
|                    | Field of View                | H100.2°~H27°, V117.9°~V31.1°, D51.9°~D15.1°  | H105.3°~H46.8°, V55.6°~V26.2°, D122.6°~D53.9°                |
|                    | Close Focus Distance         | 0.5m   |  |
|                    | Camera Angle Adjustment      | Pan: 0° ~ 360°, Tilt: 0° ~ 80°, Rotation: 0° ~ 360°  |  |
|                    | Mount                        | Φ16  |  |
| <b>Video</b>       | Max. Image Resolution        | 3840x2160  |  |
|                    | Primary Stream               | 60Hz: 30fps@ (3840x2160, 3200x1800, 2688x1520, 1920x1080, 1280x720)<br>50Hz: 25fps@ (3840x2160, 3200x1800, 2688x1520, 1920x1080, 1280x720) |  |
|                    | Secondary Stream             | 60Hz: 30fps@ (704x576, 640x480, 640x360)<br>50Hz: 25fps@ (704x576, 640x480, 640x360)   |  |
|                    | Tertiary Stream              | 60Hz: 30fps@ (1920x1080, 1280x720, 704x576, 640x480, 640x360)<br>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 Motorized TrueColor Turret Network Camera

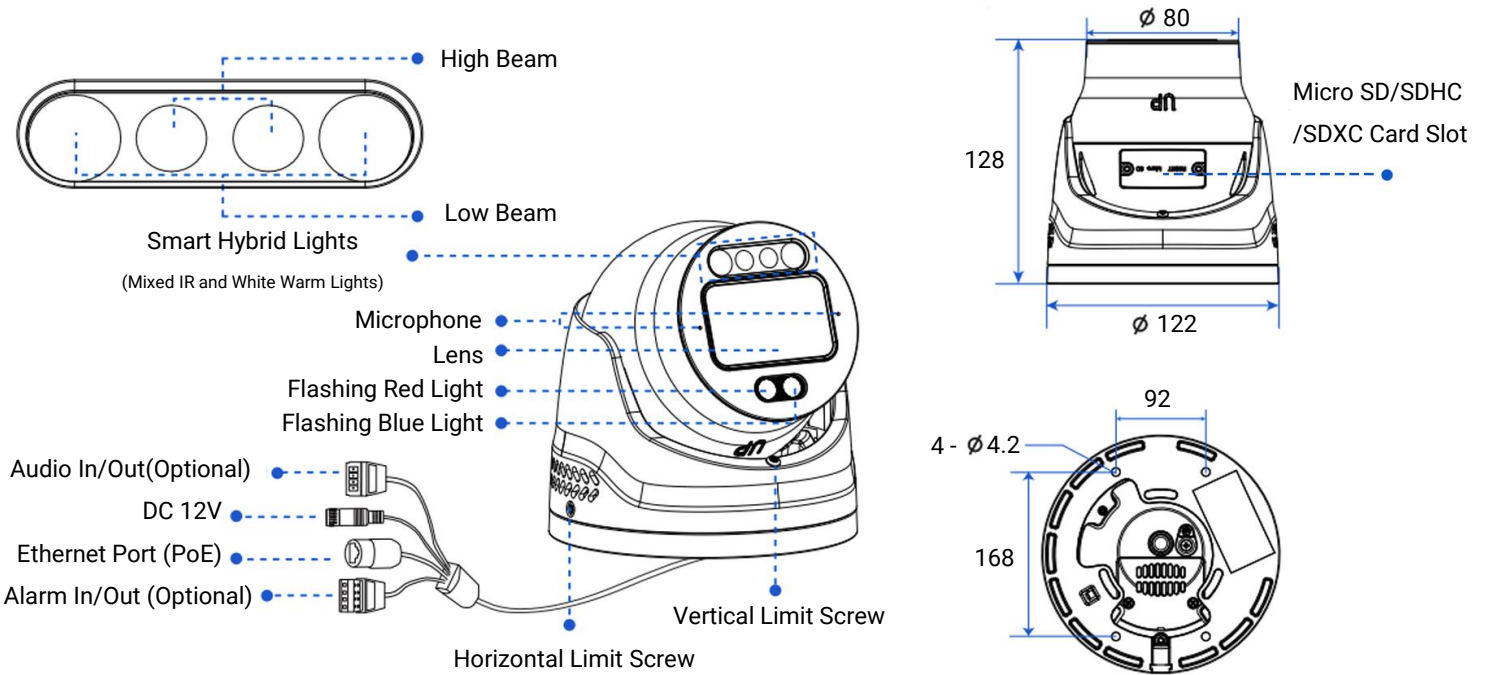
|                              |                          |   |         |
|------------------------------|--------------------------|---|---------|
| <b>Image</b>                 | AI ISP                   | NA  | Support |
|                              | Privacy Masking          | Up to 8 Areas (Mask 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°  |         |
| <b>Audio</b>                 | Built-in Microphone      | Support, Dual Microphone  |         |
|                              | Built-in Speaker         | Support, 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  |         |
| <b>Interface</b>             | Alarm I/O                | NA  | 1/1     |
|                              | Audio I/O                | NA  | 1/1     |
|                              | Power Supply             | PoE (802.3at) / DC 12V±25%  |         |
| <b>Network</b>               | 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, RTMP, HTTP, HTTPS, DNS, DDNS, DHCP, FTP, NTP, SMTP, SNMP, UPnP, Bonjour, LLDP, SIP, VPN, PPPoE, VLAN, 802.1x, QoS, IGMP, ICMP, SSL,TLS 1.2 |         |
| <b>Intelligent Analytics</b> | Video Analysis           | <b>VCA 2.0:</b> 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   |         |
| <b>Event</b>                 | 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.  |         |
| <b>System</b>                | 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 Motorized TrueColor Turret Network Camera

|                       |                     |  |  |
|-----------------------|---------------------|--|--|
| <b>General</b>        | Working Temperature | -40°C ~ 60°C   |  |
|                       | Working Humidity    | 0~95% RH (Non-condensing)  |  |
|                       | Surge Protection    | 4KV  |  |
|                       | Power Consumption   | Min.: 3.7W (DC 12V), 4.4W (PoE)<br>Max.: 12.2W (DC 12V), 13.8W (PoE) | Min.: 4.5W (DC 12V), 5.2W (PoE)<br>Max.: 12.8W (DC 12V), 14.5W (PoE) |
|                       | Casing Material     | Metal  |  |
|                       | Net Weight          | <b>TBD</b>   |  |
|                       | Gross Weight        | <b>TBD</b>   |  |
|                       | Dimensions          | Φ122mm X 128mm   |  |
|                       | Warranty            | 3 Years/5 Years (Optional)   |  |
| <b>Certifications</b> | 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          | <b>IP67, IK10 (TBD)</b>  |  |

# Milesight AI Motorized TrueColor Turret Network Camera

## Structure Diagrams



Units: mm

## Accessories Map

