



**Features**

- 1/2.8" CMOS Sensor
- Resolution: Up To 1920 X 1080 @ 25 / 30fps
- H.265 Video Compression
- 2.8-12 mm Lens, 4X Optical Zoom, 16X Digital Zoom
- Smart IR, IR Distance upto 50 mtr
- Starlight Ultra Low Light 0.002lux
- Triple Stream
- Speed Max 60°/s, -2~90° Tilt Angle
- Mechanical WDR 140dB, 3DDNR, HLC, BLC, Smart Defog, ROI, Privacy Mask
- Audio in: Built-in Mic/1 ch Line, Audio out: Built-in Speaker/1- ch , Alarm in/out 2/1
- MicroSD Card Slot supports up to 128GB, Reset Button, RS485
- **Early Warning(EW)**: When the target break into the area and trigger alarm, enable the speaker to warn, and flashing white light for frightening
- **Analytics**: Tripwire / Double Tripwire / Perimeter / Object Abandon / Object Lost / Running / Loitering / Parking / Early warning / Crowd / Audio Abnormal Detection / Video Abnormal Detection
- **Alarm**: Harsh Voice Alarm, Motion Detection, Mask Alarm, Port Alarm, Network Disable Alarm, IP Conflict, MAC Conflict Detection
- 6000V Lightning/Surge Protection
- IP65, Metal

|                          |   |
|--------------------------|---|
| <b>Camera</b>            |   |
| Image Sensor             | 1/2.8" CMOS   |
| Effective Pixels         | 1920(H)x1080(V)   |
| Signal System            | PAL/NTSC  |
| Minimum Illumination     | Color: 0.002Lux @ (F2.0, AGC ON)<br>Black&White:0.001Lux @ (F2.0, AGC ON); 0 lux with IR  |
| White Balance            | Auto/ ATW/ Manual   |
| AGC                      | Auto/Manual   |
| S/N Ratio                | ≥ 55dB  |
| BLC                      | YES   |
| HLC                      | YES   |
| Smart Defog              | YES   |
| WDR                      | 140dB   |
| Digital Noise Reduction  | 3D DNR  |
| Exposure Mode            | Auto/ Manual/Iris First/ Shutter First  |
| Shutter Time             | 1/1s~1/100000s  |
| Day& Night               | IR Cut Filter with Auto Switch  |
| Optical Zoom             | 4X  |
| Digital Zoom             | 16X   |
| Privacy Masking          | 24 Privacy Mask Programmable; Optional Multiple Colors  |
| Auto Focus               | Auto/ Semi-automatic/ Manual  |
| OSD                      | Size:16x16, 32x32, 24x24, 48x48, 64x64,96x96<br>Letters, Week, Date, Time, Total 5 Regions<br>PTZ Angle Superposition   |
| <b>Lens</b>              |   |
| Focal Length             | 2.8-12mm, 4x  |
| Zoom Speed               | Approx.5s(Optical Wide-Tele)  |
| Angle of View            | 104°(w)~30°(t)  |
| Minimum Working Distance | 0.5-1m(Wide-Tele)   |
| Aperture Range           | F1.4-F2.8   |
| <b>Pan &amp; Tilt</b>    |   |
| Pan Range                | 355° Endless  |
| Pan Speed                | Pan Manual Speed: 0.1° -60°/s,<br>Pan Preset Speed: 60°/s   |
| Preset Accuracy          | ±0.2°   |
| Tilt Range               | -2°-90° (Auto Flip)   |
| Tilt Speed               | Tilt Manual Speed: 0.1°-60°/s,<br>Tilt Preset Speed: 60°/s  |
| Proportional Zoom        | Rotation Speed Can Be Adjusted Automatically According to Zoom Multiples  |
| 3D Position              | YES   |
| Number of Preset         | 500   |
| Scan                     | 8   |
| Cruise                   | 8, up to 32 Presets per Cruise  |
| Pattern                  | 8, Each One With 600s Memory or 300 Orders  |
| Power loss recovery      | YES   |
| Guard Action             | Preset/ Cruise/ Pattern/ Scan   |
| PTZ Position Display     | YES   |
| Freeze Frame             | YES   |
| RS-485 Protocols         | DOME_PELCO_D, DOME_PELCO_P, DOME_PLUS   |
| <b>Infrared</b>          |   |
| IR Irradiation Distance  | Up to 50 mtr  |
| IR Irradiation Angle     | Adjustable by Zoom  |
| <b>Interface</b>         |   |
| Audio Input              | 1-ch Mic in(Line in Interface) Line Input 2-2.4V(p-p); Output Impedance 1KΩ, ±10%   |
| Audio Output             | Built-in Speaker Line level, Impedance: 600Ω  |
| Ethernet                 | 1-ch RJ45 10M/ 100M   |
| Alarm Input / Output     | 2Ch / 1 Ch  |
| On-board Storage         | MicroSD Card Slot supports up to 128GB  |
| BNC&RS-485               | YES   |
| <b>Network</b>           |   |
| Ethernet                 | 10Base -T/100Base-TX RJ45 Connector   |
| Max.Image Resolution     | 1920x1080   |
| Main Stream              | 1920x1080@25/30fps; 1280x960@25/30fps; 1280x720@25/30fps;<br>640x480@25/30fps; 704x576@25fps; 704x480@30fps   |
| Sub Stream               | 704x576@25/30fps; 704x480@25/30fps; 704x288@25/30fps;<br>704x240@25/30fps; 352x240@25/30fps; 352x288@25/30fps   |
| Third Stream             | 352x240@25/30fps; 352x288@25/30fps  |
| Image Compression        | H.265 / H.264 High Profile / MJPEG  |
| ROI Encoding             | 4 Dynamic Areas with Adjustable Levels  |
| Audio Compression        | G711A / G711U / ADPCM / AAC   |
| Protocols                | IPv4 / IPv6 / HTTP / 802.1x / FTP / SMTP / UPnP / SNMP / DNS / DDNS / NTP / RTSP / TCP / UDP / DHCP / PPPoE / HTTPS / ARP / RTP / QoS / MULTICAST / ICMP / IGMP     |
| Remote Connection        | 5 Users Access at the Same Time   |
| User Permission          | Up to 32 Users, 4 Levels  |
| Security Measures        | User Authentication (ID and PW), Host Authentication (MAC Address), IP Address Filtering  |
| Web Browser              | CHROME V45 or lower, IE, FIREFOX  |
| System Compatibility     | ONVIF (Profile S), SDK  |
| <b>Advance</b>           |   |
| Early Warning(EW)        | When the target break into the area and trigger alarm, enable the speaker to warn, and flashing white light for frightening   |
| Video Analytics          | Tripwire / Double Tripwire / Perimeter / Object Abandon / Object Lost / Running / Loitering / Parking / Crowd / Audio Abnormal Detection / Video Abnormal Detection |
| Intelligent Alarm        | Harsh Voice Alarm, Motion Ddetection, Mask Alarm, Port Alarm, Network Disable Alarm, IP Conflict, MAC Conflict Detection  |
| <b>General</b>           |   |
| Language                 | English, Spanish, Korean, Italian, Turkish, Thai, Russian, Traditional Chinese, Simplified Chinese, Polish, French  |
| Operating Conditions     | -10°C-50°C, 0~95% RHG   |
| Power Supply             | DC12V/POE   |
| Power Consumption        | 14.5W   |
| Circuit Protection       | 6000V Lightning/ Surge 4000V Protection   |
| Impact Protection        | Indoor IP65   |
| IR LEDs                  | 3pcs  |
| White light              | 1pcs  |
| Dimensions               | 152.2mm x 141mm x 141mm   |
| Weight                   | 0.8KG (IP PTZ Only), 1.2KG (with Packing Box)   |

**Dimensions**

