

## SG-TCM06N2-M30180(30120)

- 640×512 Thermal Network Camera Module with Motorized Lens



### 1. Features

- > 640×512 resolution, high sensitivity sensor.
- > 12μm pixel pitch.
- > 30~180mm (30~120mm) motorized lens.
- > Support various IVS functions.
- > Support Fire Detection.
- > Support Analog and Ethernet dual output.

### 2. Specification

| Model  |                | SG-TCM06N2-M30180           | SG-TCM06N2-M30120         |
|--------|----------------|-----------------------------|---------------------------|
| Sensor | Image Sensor   | Uncooled VOx microbolometer |                           |
|        | Resolution     | 640×512                     |                           |
|        | Frame Rate     | 50Hz                        |                           |
|        | Pixel Pitch    | 12μm                        |                           |
|        | Spectral Range | 8~14μm                      |                           |
|        | NETD           | ≤40mK@25°C, F#1.0           |                           |
| Lens   | Coating        | DLC                         |                           |
|        | Focal Length   | 30~180mm                    | 30~120mm                  |
|        | Lens Type      | Motorized                   | Motorized                 |
|        | Optical Zoom   | 6x                          | 4x                        |
|        | Digital Zoom   | 8x                          | 8x                        |
|        | F Value        | F1.0~F1.4                   | F1.0~F1.4                 |
|        | FOV            | 14.59°×11.69°~2.44°×1.96°   | 14.59°×11.69°~3.67°×2.93° |

|                                           |                      |                                                                                                                                               |      |
|-------------------------------------------|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|------|
| Video                                     | Compression          | H.265/H.264/H.264H/H.264B/MJPEG                                                                                                               |      |
|                                           | Audio Compression    | AAC / MP2L2                                                                                                                                   |      |
|                                           | Snapshot             | JPEG                                                                                                                                          |      |
|                                           | Resolution           | Main Stream: 50fps@(1280×1024, 1280×720, 704×576, 704×480)<br>Sub-Stream1/2: 50fps@(704×576, 704×480, 352×288, 352×240)                       |      |
|                                           | Video Bit Rate       | 4kbps~65Mbps                                                                                                                                  |      |
| Network                                   | Network Protocol     | IPv4, IPv6, HTTP, HTTPS, TCP, UDP, RTSP, RTCP, RTP, ARP, NTP, FTP, DHCP, PPPoE, DNS, DDNS, UPnP, IGMP, ICMP, SNMP, SMTP, QoS, 802.1x, Bonjour |      |
|                                           | API                  | ONVIF, HTTP API, SDK, GB28181                                                                                                                 |      |
|                                           | Network Security     | User Authentication, IP/MAC Filtering, HTTPS Encryption, IEEE 802.1X Network Access Control                                                   |      |
|                                           | Web Browser          | IE, Edge, Firefox, Chrome                                                                                                                     |      |
|                                           | User                 | Up to 20 users, 2 level: Administrator, User                                                                                                  |      |
|                                           | Storage              | Micro SD/SDHC/SDXC card (Up to 1TB) edge storage, FTP, NAS                                                                                    |      |
|                                           | Multicast            | Support                                                                                                                                       |      |
| Intelligence                              | Perimeter Protection | Tripwire, Cross Fence Detection, Intrusion                                                                                                    |      |
|                                           | Behavior Analysis    | Abandoned Object, Object Removal, Fast-Moving, Crowd Detection, Loitering Detection, Parking Detection                                        |      |
|                                           | Events               | Motion Detection, Video Occlusion, Scene Change, Audio Detection, Network Disconnected, IP Conflict, Illegal Access, Storage Anomaly          |      |
|                                           | Fire Detection       | Support                                                                                                                                       |      |
| Interface                                 | Ethernet             | 4PIN Ethernet port, 10M/100M self-adaption                                                                                                    |      |
|                                           | Alarm In/Out         | 1/1                                                                                                                                           |      |
|                                           | Audio In/Out         | 1/1                                                                                                                                           |      |
|                                           | Control Interface    | 1x TTL 3.3V (VISCA protocol),<br>1x RS485 (Pelco protocol) (TTL 3.3V optional)                                                                |      |
|                                           | Video Output         | Network and CVBS                                                                                                                              |      |
| Pseudo Color                              |                      | White hot, black hot, fusion, iron red, etc. 20 options                                                                                       |      |
| Focus Mode                                |                      | Auto / Manual / One Push AF                                                                                                                   |      |
| FFC Mode                                  |                      | Auto / Manual                                                                                                                                 |      |
| Image Setting                             |                      | Brightness, Contrast, Sharpness, and Temporal Noise Reduction                                                                                 |      |
| OSD                                       |                      | Support                                                                                                                                       |      |
| Flip                                      |                      | Support                                                                                                                                       |      |
| Mirror                                    |                      | Support                                                                                                                                       |      |
| Power Supply                              |                      | DC 12V, 1A                                                                                                                                    |      |
| Typical Power Consumption                 |                      | 2.5W                                                                                                                                          |      |
| Peak Power Consumption                    |                      | 7.3W                                                                                                                                          | 7.1W |
| Operating Conditions                      |                      | -30°C~+60°C/20% to 80%RH                                                                                                                      |      |
| Storage Conditions                        |                      | -40°C~+70°C/20% to 95%RH                                                                                                                      |      |
| The 1 <sup>st</sup> Lens Protection Level |                      | IP67                                                                                                                                          |      |

|                    |                                    |                                                     |
|--------------------|------------------------------------|-----------------------------------------------------|
| Dimensions (L*W*H) | Φ155*295mm                         | Φ110*221mm (Flange)<br>Φ120*221mm (Max. Projection) |
| Weight             | Approx. 3.2kg (Including lens cap) | Approx. 1.72kg(Including lens cap)                  |

### 3. DRI Distance

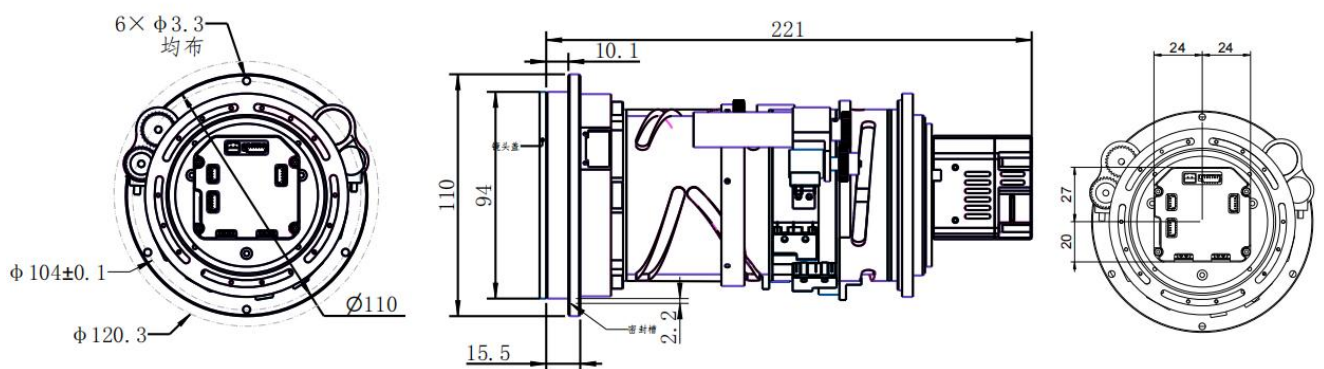
Target: Human size is 1.8m×0.5m (Critical size is 0.75m), Vehicle size is 1.4m×4.0m (Critical size is 2.3m); Fire size is 0.13m×0.13m (Critical size is 0.13m).

The target detection, recognition and identification distances are calculated according to Johnson's Criteria.

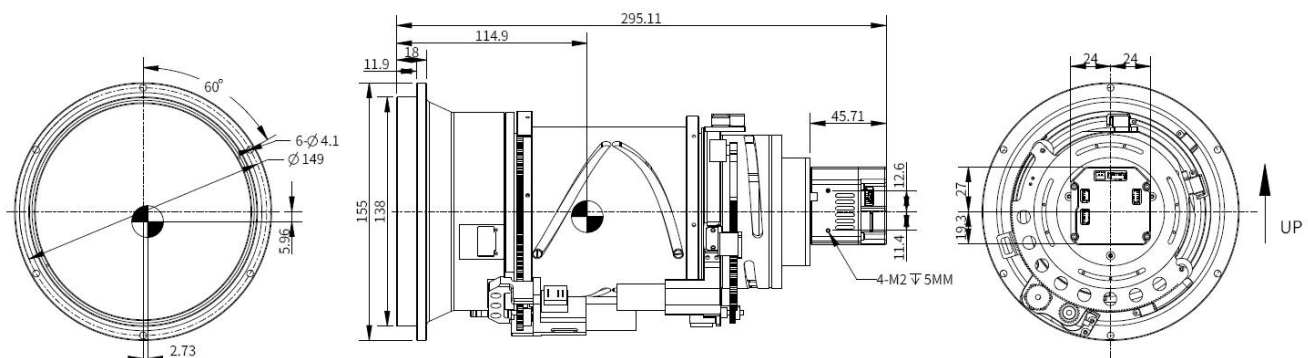
The recommended distances of Detection, Recognition and Identification are as follows:

| Lens  | Detect              |                    |                  | Recognize          |                   |                 | Identify          |                  |                 |
|-------|---------------------|--------------------|------------------|--------------------|-------------------|-----------------|-------------------|------------------|-----------------|
|       | Vehicle             | Human              | Fire             | Vehicle            | Human             | Fire            | Vehicle           | Human            | Fire            |
| 30mm  | 3833m<br>(12575ft)  | 1250m<br>(4101ft)  | 217m<br>(712ft)  | 958m<br>(3143ft)   | 313m<br>(1027ft)  | 54m<br>(177ft)  | 479m<br>(1572ft)  | 156m<br>(512ft)  | 27m<br>(89ft)   |
| 120mm | 15333m<br>(50305ft) | 5000m<br>(16404ft) | 607m<br>(1991ft) | 3833m<br>(12575ft) | 1250m<br>(4101ft) | 152m<br>(499ft) | 1917m<br>(6289ft) | 625m<br>(2021ft) | 76m<br>(249ft)  |
| 180mm | 23000m<br>(75459ft) | 7500m<br>(24606ft) | 910m<br>(2985ft) | 5750m<br>(18865ft) | 1875m<br>(6152ft) | 227m<br>(744ft) | 2875m<br>(9432ft) | 938m<br>(3077ft) | 113m<br>(371ft) |

### 4. Dimension

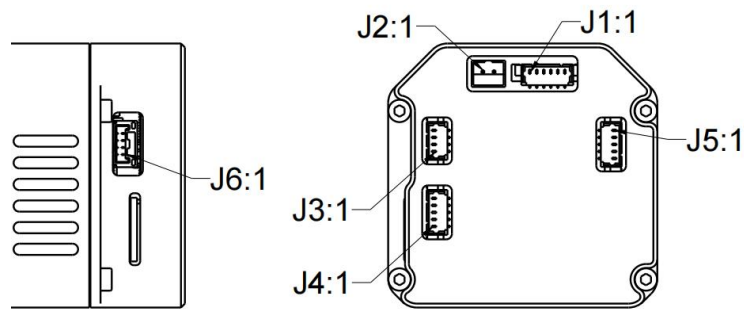


30~120mm Motorized Lens



30~180mm Motorized Lens

### 4. Interface Definition



Encoding board

| Type                                                  | PIN | PIN Name   | Description                                                                                      |
|-------------------------------------------------------|-----|------------|--------------------------------------------------------------------------------------------------|
| J1_6pin Power & UART Interface<br>(A1251-06A, 1.25mm) | 1   | DC_IN      | DC12V±10%                                                                                        |
|                                                       | 2   | GND        | GND                                                                                              |
|                                                       | 3   | 485A       | RS485A Pelco protocol (TTL 3.3V Optional)                                                        |
|                                                       | 4   | 485B       | RS485B Pelco protocol (TTL 3.3V Optional)                                                        |
|                                                       | 5   | RXD0       | TTL 3.3V, Visca protocol                                                                         |
|                                                       | 6   | TXD0       | TTL 3.3V, Visca protocol                                                                         |
| J2_2pin Power<br>(A2001AWR-02 2.0MM)                  | 1   | DC_IN      | DC12V±10%                                                                                        |
|                                                       | 2   | GND        | GND                                                                                              |
| J3_4pin Ethernet<br>(A1251-04A, 1.25mm)               | 1   | ETHRX-     | Adaptive Ethernet port, Internet RX-                                                             |
|                                                       | 2   | ETHRX+     | Adaptive Ethernet port, Internet RX+                                                             |
|                                                       | 3   | ETHTX-     | Adaptive Ethernet port, Internet TX-                                                             |
|                                                       | 4   | ETHTX+     | Adaptive Ethernet port, Internet TX+                                                             |
| J4_5pin Alarm<br>(A1251-05A, 1.25mm)                  | 1   | Alarm_IN   | Alarm In                                                                                         |
|                                                       | 2   | GND        | GND                                                                                              |
|                                                       | 3   | Alarm_OUT+ | Alarm output via circuit switching (closed on alarm, open otherwise, non-polarized) (48V/1A Max) |
|                                                       | 4   | Alarm_OUT- |                                                                                                  |
|                                                       | 5   | GND        | GND                                                                                              |
| J5_5pin Audio<br>(A1251-05A, 1.25mm)                  | 1   | AUDIO_Out  | Audio Out (Line Out)                                                                             |
|                                                       | 2   | GND        | GND                                                                                              |
|                                                       | 3   | AUDIO_IN   | Audio In (Line In)                                                                               |
|                                                       | 4   | GND        | GND                                                                                              |
|                                                       | 5   | CVBS       | CVBS                                                                                             |

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