

**DS-2SF7C442MXG1-WD/26(F0)****TandemVu 7C Series Panoramic 4MP 42X Water-Level Detection Darkfighter Network**

- Built-in gauge reading algorithm to automatically get the readings of standard water level gauges
- Detects water level range from 0 to 40 m, within 80 m distance, with minimum scale of 1 cm and detection accuracy of  $\pm 2$  cm
- Performance mode, power saving mode, and sleep mode are available, the minimum power consumption is within 5 W
- With high accuracy PT system, the moving hysteresis error is less than  $0.08^\circ$
- The platform can wake up the device via remote command in sleep mode
- Support 4G network transmission
- High quality imaging with max. resolution of  $2560 \times 1440$  @30 fps

## ▪ Specification

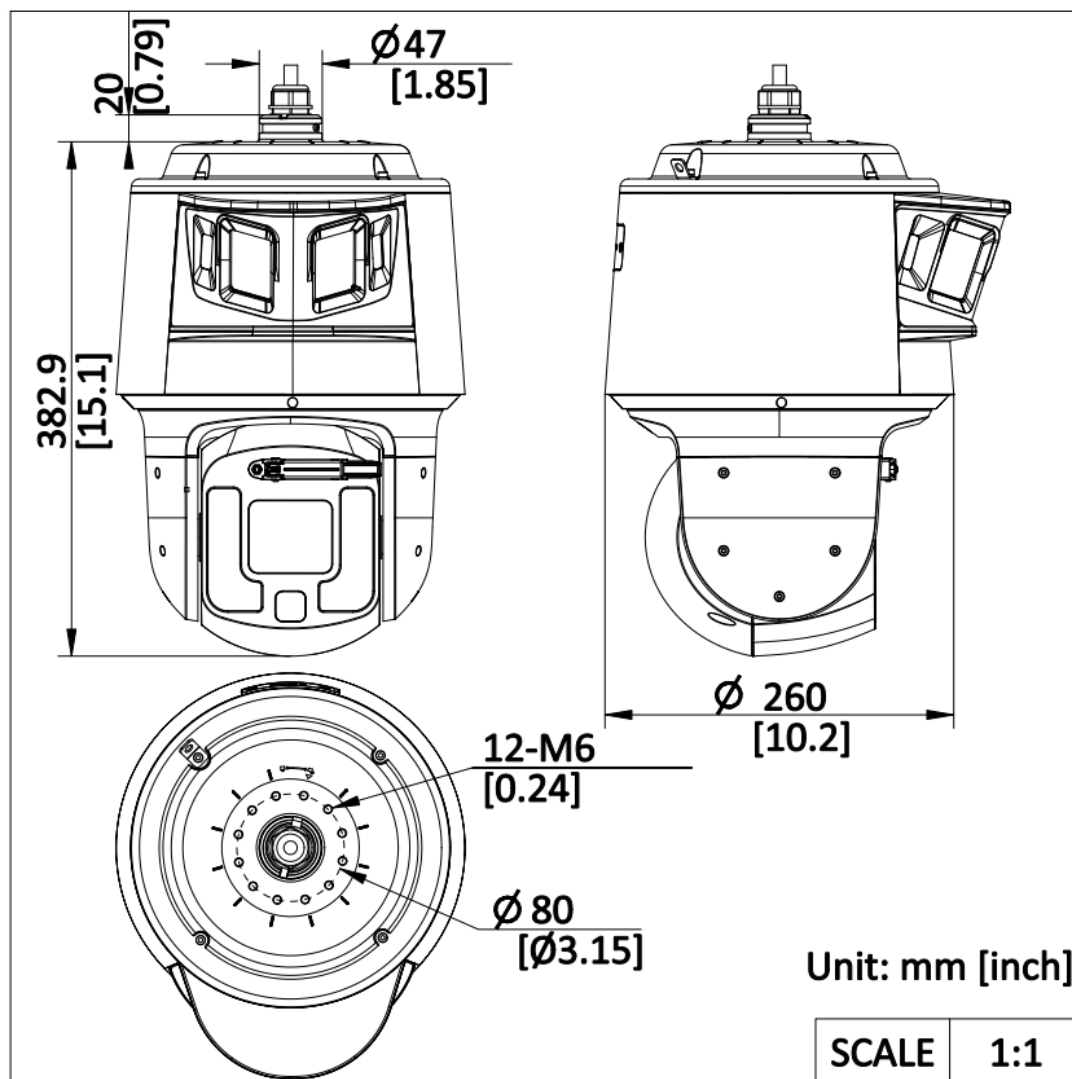
| Camera                 |                                                                                                                                                                                                                                                              |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Image Sensor           | [Panoramic channel] 1/2.5" Progressive Scan CMOS, [PTZ channel] 1/1.8" Progressive Scan CMOS                                                                                                                                                                 |
| Max. Resolution        | 2560 × 1440                                                                                                                                                                                                                                                  |
| Min. Illumination      | [Bullet channel] Color: 0.0005 Lux @ (F1.0, AGC ON), B/W: 0.0002 Lux @ (F1.0, AGC ON), 0 Lux with 0,<br>[PTZ channel] Color: 0.0003 Lux @ (F1.2, AGC ON), B/W: 0.0001 Lux @ (F1.2, AGC ON), 0 lux with IR                                                    |
| Shutter Speed          | 1/25 s to 1/30000 s                                                                                                                                                                                                                                          |
| Day & Night            | [Bullet channel] Color, [PTZ channel] IR cut filter                                                                                                                                                                                                          |
| Zoom                   | [PTZ channel] 42 × optical, 16 × digital                                                                                                                                                                                                                     |
| Slow Shutter           | yes                                                                                                                                                                                                                                                          |
| Lens                   |                                                                                                                                                                                                                                                              |
| Focal Length           | [Bullet channel] 2.8 mm, [PTZ channel] 6 to 252 mm                                                                                                                                                                                                           |
| FOV                    | [Bullet channel] horizontal field of view: 190° ±10°, vertical field of view: 80° ±10°, diagonal field of view: 198° ±10°, [PTZ channel] horizontal field of view: 59.1° to 1°, vertical field of view: 34.1° to 1.1°, diagonal field of view: 67.1° to 2.3° |
| Focus                  | semi-auto, manual, auto                                                                                                                                                                                                                                      |
| Aperture               | [Bullet channel] F1.0, [PTZ channel] F1.2                                                                                                                                                                                                                    |
| Zoom Speed             | [Bullet channel] No, [PTZ channel] approx. 5.6 s                                                                                                                                                                                                             |
| Illuminator            |                                                                                                                                                                                                                                                              |
| Supplement Light Range | [Bullet channel] white light: up to 30 m, [PTZ channel] IR: up to 200 m                                                                                                                                                                                      |
| Smart Supplement Light | yes                                                                                                                                                                                                                                                          |
| PTZ                    |                                                                                                                                                                                                                                                              |
| Movement Range (Pan)   | [PTZ channel] 0° to 360°                                                                                                                                                                                                                                     |
| Movement Range (Tilt)  | [PTZ channel] -20° to 90°                                                                                                                                                                                                                                    |
| Pan Speed              | [PTZ channel] pan speed: configurable from 0.1° to 160°/s, preset speed: 240°/s                                                                                                                                                                              |
| Tilt Speed             | [PTZ channel] tilt speed: configurable from 0.1° to 120°/s, preset speed 200°/s                                                                                                                                                                              |
| Proportional Pan       | [Bullet channel] No, [PTZ channel] Yes                                                                                                                                                                                                                       |
| Presets                | 300                                                                                                                                                                                                                                                          |
| Preset Freezing        | yes                                                                                                                                                                                                                                                          |
| Patrol Scan            | 8 patrols                                                                                                                                                                                                                                                    |
| Pattern Scan           | 4 pattern scans                                                                                                                                                                                                                                              |
| Park Action            | preset, pattern scan, patrol scan, auto scan, tilt scan, random scan, frame scan, panorama scan                                                                                                                                                              |
| 3D Positioning         | yes                                                                                                                                                                                                                                                          |
| PTZ Status Display     | yes                                                                                                                                                                                                                                                          |
| Scheduled Task         | preset, pattern scan, patrol scan, auto scan, tilt scan, random scan, frame scan, panorama scan, dome reboot, dome adjust, aux output                                                                                                                        |
| Power-off Memory       | yes                                                                                                                                                                                                                                                          |

| DORI                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| O2DCPVS                     | <p>[Panoramic channel] Wide: Overview: 48.3 m, Outline: 24.1 m, Discern: 12.1 m, Perceive: 7.7 m, Characterize: 3.9 m, Validate: 1.9 m, Scrutinize: 0.6 m ;</p> <p>[PTZ channel] Wide: Overview: 103.4 m, Outline: 51.7 m, Discern: 25.9 m, Perceive: 16.6 m, Characterize: 8.3 m, Validate: 4.1 m, Scrutinize: 1.4 m Tele: Overview: 4344.8 m, Outline: 2172.4 m, Discern: 1086.2 m, Perceive: 695.2 m, Characterize: 347.6 m, Validate: 173.8 m, Scrutinize: 57.9 m The OODPCVS values are calculated using pixel densities for different use cases as recommended by the IEC/EN 62676-4: 2025 standard. IEC 62676-4:2025 describes the planning, design, installation, testing, commissioning, and maintaining of video surveillance systems (VSS) comprising image capture device(s), interconnection(s) and image handling device(s), for use in security applications within private or public spaces.</p> |
| Video                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Main Stream                 | [Bullet channel] 50 Hz: 25 fps (3680 × 1656 , 3632 × 1632), 60 Hz: 30 fps (3680 × 1656 , 3632 × 1632), [PTZ channel] 50 Hz: 25 fps (2688 × 1520 , 2560 × 1440 , 1920 × 1080 , 1280 × 960 , 1280 × 720), 60 Hz: 30 fps (2688 × 1520 , 2560 × 1440 , 1920 × 1080 , 1280 × 960 , 1280 × 720)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Sub-Stream                  | [Bullet channel] 50 Hz: 25 fps (1200 × 536 , 960 × 432), 60 Hz: 30 fps (1200 × 536 , 960 × 432), [PTZ channel] 50 Hz: 25 fps (704 × 576 , 640 × 480 , 352 × 288 ), 60 Hz: 30 fps (704 × 480 , 640 × 480 , 352 × 240)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Third Stream                | [Bullet channel] No, [PTZ channel] 50 Hz: 25 fps (704 × 576 , 640 × 480 , 352 × 288), 60 Hz: 30 fps (704 × 480 , 640 × 480 , 352 × 240)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Video Compression           | H.265, H.264, MJPEG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Video Bit Rate              | 32 to 16384 Kbps                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| H.264 Type                  | Baseline Profile, Main Profile, High Profile                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| H.265 Type                  | Main Profile                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Scalable Video Coding (SVC) | H.264 and H.265 encoding                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Region of Interest (ROI)    | fixed region                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Audio                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Audio Compression           | G.711a law, G.711u law, G.722.1, G.726, MP2L2, AAC-LC, PCM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Audio Bit Rate              | MP2L2: 32 kbps, 40 kbps, 48 kbps, 56 kbps, 64 kbps, 80 kbps, 96 kbps, 112 kbps, 128 kbps, 144 kbps, 160 kbps, 192 kbps, AAC-LC: 16 kbps, 32 kbps, 64 kbps                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Audio Sampling Rate         | MP2L2: 16 kHz, 32 kHz, 48 kHz, AAC-LC: 16 kHz, 32 kHz, 48 kHz, PCM: 8 kHz, 16 kHz, 32 kHz, 48 kHz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Environment Noise Filtering | yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Network                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Protocols                   | IPv4/IPv6, HTTP, HTTPS, 802.1x, Qos, FTP, SMTP, UPnP, SNMP, DNS, DDNS, NTP, RTSP, RTCP, RTP, TCP/IP, UDP, IGMP, ICMP, DHCP, PPPoE, Bonjour, websocket, websockets                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Simultaneous Live View      | 20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| API                         | ISUP, Open-ended API, ISAPI, Hikvision SDK, Ehome, Open Network Video Interface                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| User/Host                   | 32                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

|                                        |                                                                                                                                                                                          |
|----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Security                               | Authenticated username and password, MAC address binding, HTTPS encryption, 802.1X authenticated access, IP address filter                                                               |
| Network Storage                        | ANR, NAS (NFS, SMB/CIFS)                                                                                                                                                                 |
| Client                                 | iVMS-4200                                                                                                                                                                                |
| Web Browser                            | IE 10+, Chrome 57+, Firefox 52+, Safari 12+                                                                                                                                              |
| <b>Wireless (Mobile Communication)</b> |                                                                                                                                                                                          |
| Mobile Communication Type              | NO                                                                                                                                                                                       |
| Frequency                              | NO                                                                                                                                                                                       |
| Standard                               | NO                                                                                                                                                                                       |
| SIM                                    | nano sim                                                                                                                                                                                 |
| <b>Image</b>                           |                                                                                                                                                                                          |
| Image Parameters Switch                | yes                                                                                                                                                                                      |
| Image Settings                         | saturation, brightness, contrast, sharpness                                                                                                                                              |
| Day/Night Switch                       | day, night, auto, scheduled-switch                                                                                                                                                       |
| Wide Dynamic Range (WDR)               | 120 dB WDR                                                                                                                                                                               |
| SNR                                    | ≥52dB                                                                                                                                                                                    |
| Defog                                  | Optical defog                                                                                                                                                                            |
| Image Stabilization                    | yes                                                                                                                                                                                      |
| Image Enhancement                      | BLC, HLC, 3D DNR                                                                                                                                                                         |
| Privacy Mask                           | [Bullet channel] No, [PTZ channel] 24 programmable polygon privacy masks; mask color or mosaic configurable                                                                              |
| Regional Focus                         | [Bullet channel] No, [PTZ channel] Yes                                                                                                                                                   |
| Regional Exposure                      | yes                                                                                                                                                                                      |
| <b>Supplement Detection</b>            |                                                                                                                                                                                          |
| Satellite Positioning                  | No                                                                                                                                                                                       |
| Gyroscope                              | yes                                                                                                                                                                                      |
| <b>Interface</b>                       |                                                                                                                                                                                          |
| Ethernet Interface                     | 1 RJ45 100M self-adaptive Ethernet port                                                                                                                                                  |
| On-board Storage                       | Built-in memory card slot, support microSD/SDHC/SDXC card, up to 256 GB                                                                                                                  |
| Built-in Speaker                       | 1 built-in speaker                                                                                                                                                                       |
| Audio                                  | 1 audio input, 2.0 to 2.4 Vp-p, 1k Ohm±10%, 1 audio output, line level, impedance: 600 Ω                                                                                                 |
| Alarm                                  | 7 alarm inputs, 2 alarm output                                                                                                                                                           |
| RS-485                                 | Half duplex, HIKVISION, Pelco-P, Pelco-D, self-adaptive                                                                                                                                  |
| Reset                                  | yes                                                                                                                                                                                      |
| <b>Event</b>                           |                                                                                                                                                                                          |
| Basic Event                            | audio exception, video tampering alarm, alarm in, alarm out, exceptions                                                                                                                  |
| Linkage                                | Upload to FTP/NAS/memory card, audible warning, preset, patrol scan, pattern scan, send email, notify surveillance center, white light flashing, trigger alarm output, trigger recording |
| <b>Deep Learning Function</b>          |                                                                                                                                                                                          |
| Multi-Target-Type Detection            | [Bullet channel] no, [PTZ channel] Supports simultaneous detection and capture of human body, face and vehicle                                                                           |
| <b>Water Level</b>                     |                                                                                                                                                                                          |
| Detection Distance                     | ≤100 m                                                                                                                                                                                   |
| Water Level Range                      | 0 to 40 m                                                                                                                                                                                |

|                     |                                                                                                                                                                                                                                                                                                                                                       |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Minimum Scale       | 1 cm                                                                                                                                                                                                                                                                                                                                                  |
| Detection Accuracy  | ±2 cm                                                                                                                                                                                                                                                                                                                                                 |
| <b>General</b>      |                                                                                                                                                                                                                                                                                                                                                       |
| Power               | 12VDC±25%. Max 60 W (Max. 45 W including 6 W for heater and 6 w for supplement light in panoramic channel, and 6 W for heater and 12 w for supplement light in PTZ channel)                                                                                                                                                                           |
| Dimension           | Ø243 mm × 424 mm (Ø9.57" × 16.69")                                                                                                                                                                                                                                                                                                                    |
| Weight              | Approx. 7.9 kg (17.42 lb.)                                                                                                                                                                                                                                                                                                                            |
| Material            | ADC12                                                                                                                                                                                                                                                                                                                                                 |
| Operating Condition | -40 °C to 70 °C (-40 °F to 158 °F). Humidity 90% or less (non-condensing)<br>Operationg temperature for the speaker: -30 °C to 55 °C (-22 °F to 131 °F).                                                                                                                                                                                              |
| General Function    | mirror,password protection,watermark,IP address filter                                                                                                                                                                                                                                                                                                |
| Wiper               | yes                                                                                                                                                                                                                                                                                                                                                   |
| Demist              | yes                                                                                                                                                                                                                                                                                                                                                   |
| Language            | 33 languages: English, Russian, Estonian, Bulgarian, Hungarian, Greek, German, Italian, Czech, Slovak, French, Polish, Dutch, Portuguese, Spanish, Romanian, Danish, Swedish, Norwegian, Finnish, Croatian, Slovenian, Serbian, Turkish, Korean, Traditional Chinese, Thai, Vietnamese, Japanese, Latvian, Lithuanian, Portuguese (Brazil), Ukrainian |
| <b>Approval</b>     |                                                                                                                                                                                                                                                                                                                                                       |
| Protection          | IP67 (IEC 60529-2013),TVS 6000 V lightning protection, surge protection and voltage transient protection                                                                                                                                                                                                                                              |

## ▪ Dimension



▪ Accessory

▪ Optional

| DS-1276ZJ-P  | DS-1684ZJ-P | DS-4612ZJ-PA | DS-4603ZJ-PA | DS-1673ZJ-P |
|--------------|-------------|--------------|--------------|-------------|
|              |             |              |              |             |
| DS-4650ZJ-PC | DS-1674ZJ-P | DS-4660ZJ-PC |              |             |



## ■ Installation Methods

| Corner Mounting<br>DS-1276ZJ-P+DS-4603<br>ZJ-PA | Corner Mounting<br>DS-4660ZJ-PC+DS-460<br>3ZJ-PA+DS-1674ZJ-P | Vertical Pole<br>Mounting<br>DS-1684ZJ-P+DS-4603<br>ZJ-PA | Vertical Pole<br>Mounting<br>DS-4650ZJ-PC+DS-460<br>3ZJ-PA+DS-1674ZJ-P | Pendant Mounting<br>DS-4612ZJ-PA |
|-------------------------------------------------|--------------------------------------------------------------|-----------------------------------------------------------|------------------------------------------------------------------------|----------------------------------|
|                                                 |                                                              |                                                           |                                                                        |                                  |
| Wall Mounting<br>DS-4603ZJ-PA                   | Horizontal Pole<br>Mounting<br>DS-1673ZJ-P+DS-4612<br>ZJ-PA  | Junction Box<br>DS-1674ZJ-P+DS-4603<br>ZJ-PA              |                                                                        |                                  |
|                                                 |                                                              |                                                           |                                                                        |                                  |

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