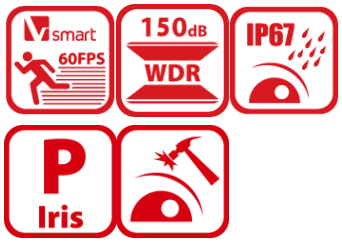
# 4MP Motorized Varifocal Bullet Camera
# CMIP3B43LPR-AISP






LTS has been dedicated to develop products with security since established.
LTS always follows security by design principle and has adopted many methods of security technologies into our product development lifecycle, including terminal security, data security, application security, network security, and privacy protection. In the meantime, the security technologies used by LTS are all in compliance with local applicable laws and safety regulations. These security measures could enhance product's cyber security protection capability and protect your devices as well as your data from malicious cyber attacks.

- High quality imaging with 4 MP resolution
- Excellent low-light performance
- Clear imaging against strong back light due to 150 dB AWDR technology
- Efficient H.265+ compression technology to save bandwidth and storage
- 5 streams to meet a wide variety of applications
- Water and dust resistant (IP67), vandal proof (IK10)
- Capture vehicles and humans of different speed clearly via ShotN technology
- High frame rate, up to 2MP@120fps and 4MP@60fps
- Built-in heater to ensure clear image under rainy or snowy weather
- Built-in G-sensor for vibration detection
- Built-in power meter for historical power statistics
- License Plate Recognition and Vehicle Attribute Recognition

## ▪ Function

Perimeter Protection

With embedded deep learning based target detection and classification algorithms, the camera carries out the duty of perimeter protection, monitoring the actions of line crossing, intrusion, region entrance, and region exiting. The algorithms greatly filter out the mistaken alarm caused by the interference of leafs, lights, animal, flag, etc.

Road Traffic and Vehicle Detection

With embedded deep learning based license plate capture and recognition algorithms, the camera alone can achieve plate capture and recognition. The algorithm enjoys the high recognition accuracy of common plates and complex-structured plates, which is a great step forward comparing to traditional algorithms. Blocklist and allowlist are available for plate categorization and separate alarm triggering.

## ▪ Specification

| | |
|---|---|
| **Camera** | |
| Image Sensor | 1/2.7" Progressive Scan CMOS |
| Max. Resolution | 2688 × 1520 |
| Min. Illumination | Color: 0.005 Lux @ (F1.6, AGC ON), B/W: 0.0018 Lux @ (F1.6, AGC ON), 0 Lux with Supplement light |
| Shutter Time | 1 s to 1/100,000 s |
| Day & Night | IR cut filter,<br>Blue glass module (less ghost phenomenon) |
| **Lens** | |
| Focal Length & FOV | 4.7 to 118 mm, horizontal FOV 55.8° to 2.8°, vertical FOV 32.3° to 1.6°, diagonal FOV 63.3° to 3.2° |
| Lens Type | Varifocal lens, motorized lens, 4.7 to 118 mm |
| Focus | Auto, Semi-auto, Manual |
| Iris Type | P-iris |
| Aperture | 4.7 to 118 mm: F1.6 to F3.8 |
| **DORI** | |
| OODPCVS | Wide:<br>Overview: 133.3 m, Outline: 66.6 m, Discern: 33.3 m, Perceive: 21.3 m, Characterize: 10.7 m, Validate: 5.3 m, Scrutinize: 1.8 m<br><br>Tele:<br>Overview: 2750.0 m, Outline: 1375.0 m, Discern: 687.5 m, Perceive: 440.0 m, Characterize: 220.0 m, Validate: 110.0 m, Scrutinize: 36.7 m<br><br>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. |
| **Illuminator** | |
| Supplement Light Type | IR |
| Supplement Light Range | 4.7 to 118 mm: up to 200 m |
| Smart Supplement Light | Yes |
| IR Wavelength | 850 nm |
| **Video** | |
| Main Stream | Monitoring mode:<br>50 Hz: up to 50 fps (2688 × 1520, 1280 × 720), up to 100 fps (1920 × 1080)<br>60 Hz: up to 60 fps (2688 × 1520, 1280 × 720), up to 120 fps (1920 × 1080)<br>*High frame rate is supported under monitoring mode only.<br>smart mode:<br>50 Hz: 25 fps (2688 × 1520, 1920 × 1080, 1280 × 720)<br>60 Hz: 30 fps (2688 × 1520, 1920 × 1080, 1280 × 720) |

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| Sub-Stream | 50 Hz: 25 fps (1280 × 720, 704 × 576, 640 × 480)<br>60 Hz: 30 fps (1280 × 720, 704 × 480, 640 × 480) |
| Third Stream | 50 Hz: 25 fps (1920 × 1080, 1280 × 720, 704 × 576, 640 × 480)<br>60 Hz: 30 fps (1920 × 1080, 1280 × 720, 704 × 480, 640 × 480) |
| Fourth Stream | 50 Hz: 25 fps (704 × 576, 640 × 480)<br>60 Hz: 30 fps (704 × 480, 640 × 480) |
| Fifth Stream | 50 Hz: 25 fps (704 × 576, 640 × 480)<br>60 Hz: 30 fps (704 × 480, 640 × 480) |
| Video Compression | Main stream: H.265+/H.265/H.264+/H.264,<br>Sub-stream: H.265/H.264/MJPEG,<br>Third stream: H.265/H.264,<br>Fourth stream: H.265/H.264/MJPEG,<br>Fifth stream: H.265/H.264/MJPEG |
| Video Bit Rate | 32 Kbps to 8 Mbps |
| H.264 Type | Baseline Profile,Main Profile,High Profile |
| H.265 Type | Main Profile |
| Bit Rate Control | CBR,VBR |
| Scalable Video Coding (SVC) | H.264 and H.265 encoding |
| Region of Interest (ROI) | 4 fixed regions for each stream |
| Target Cropping | Yes |
| e-PTZ | Support Patrol and Auto Tracking settings |
| **Audio** | |
| Audio Type | Mono sound |
| Audio Compression | G.711/G.722.1/G.726/MP2L2/PCM/MP3/AAC-LC |
| Audio Bit Rate | 64 Kbps (G.711ulaw/G.711alaw)/16 Kbps (G.722.1)/16 Kbps (G.726)/32 to 192 Kbps (MP2L2)/8 to 320 Kbps (MP3)/16 to 64 Kbps (AAC-LC) |
| Audio Sampling Rate | 8 kHz/16 kHz/32 kHz/48 kHz |
| Environment Noise Filtering | Yes |
| **Network** | |
| Protocols | TCP/IP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, SRTP, RTSP, RTCP, PPPoE, NTP, UPnP, SMTP, SNMP, IGMP, 802.1X, QoS, IPv4, IPv6, UDP, Bonjour, WebSocket, WebSockets, MQTT/MQTTS, RTMP , Support X.509 authentication, Support802.1xEAP-GTC and MSCHAP V2; 802.1xEAP 1.2 supports a maximum 32-bit key. |
| Simultaneous Live View | Up to 20 channels |
| API | ISAPI,SDK,ISUP,OTAP,ONVIF (Profile S, Profile G, Profile T, Profile M) |
| User/Host | Up to 32 users<br>3 user levels: administrator, operator, and user |
| Smooth Streaming | Yes |
| Security | Password protection, complicated password, HTTPS encryption, 802.1X authentication (EAP-TLS, EAP-LEAP, EAP-MD5), watermark, IP address filter, basic and digest authentication for HTTP/HTTPS, WSSE and digest authentication for Open Network Video Interface, RTP/RTSP OVER HTTPS, Control Timeout Settings, Security Audit Log, TLS 1.2, TLS 1.3, TPM 2.0 (FIPS 140-2 level 2), AES128/256 |

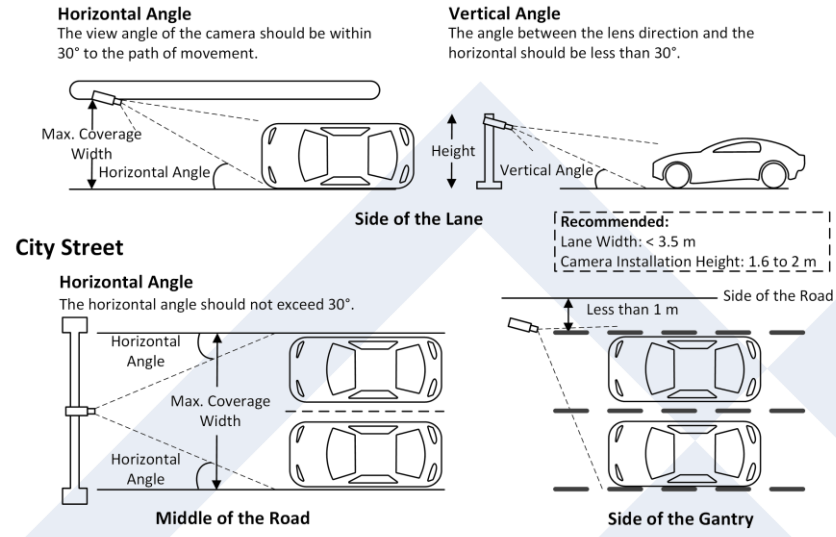
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| Network Storage | NAS (NFS, SMB/CIFS),Auto Network Replenishment (ANR),<br>Cloud Storage,<br>Together with high-end memory card, memory card encryption and health detection are supported. |
| Client | NVMS V3, LTS Connect, XVMS |
| Web Browser | Plug-in required live view: IE 10, IE 11,<br>Plug-in free live view: Chrome 57.0+, Firefox 52.0+, Edge 89+, Safari 11+,<br>Local service: Chrome 57.0+, Firefox 52.0+, Edge 89+ |
| **Image** | |
| Image Parameters Switch | Yes |
| Image Settings | Rotate mode,saturation,brightness,contrast,sharpness,white balance,AGC,adjustable by client software or web browser |
| Day/Night Switch | Day,Night,Auto,Schedule,Alarm Trigger |
| Wide Dynamic Range (WDR) | 150 dB |
| Image Enhancement | BLC,HLC,3D DNR,Distortion Correction,Defog |
| SNR | ≥ 52 dB |
| Privacy Mask | 8 programmable polygon privacy masks |
| Picture Overlay | LOGO picture can be overlaid on video with 128 × 128 24 bit bmp format. |
| Image Stabilization | EIS |
| **Interface** | |
| Video Output | 1 Vp-p Composite Output (75 Ω/CVBS) (Only for debugging) |
| Ethernet Interface | 1 RJ45 10 Mbps/100 Mbps/1000 Mbps self-adaptive Ethernet port |
| On-Board Storage | Built-in memory card slot, support microSD/microSDHC/microSDXC card, up to 1 TB |
| Alarm | 2 inputs, 2 outputs (max. 24 VDC/24 VAC, 1 A) |
| Audio | 1 input (line in), 3.5 mm connector, three-contact, max. input amplitude: 3.3 Vpp, input impedance: 4.7 KΩ, interface type: non-equilibrium,<br>1 output (line out), 3.5 mm connector, three-contact, max. output amplitude: 3.3 Vpp, output impedance: 100 Ω, interface type: non-equilibrium, mono sound |
| Reset Key | Yes |
| **Event** | |
| Basic Event | Motion detection (support alarm triggering by specified target types (human and vehicle)),exception (network disconnected, IP address conflict, illegal login, HDD full, HDD error),video tampering alarm,crying sound detection,gunshot and explosion sound detection,scream detection,glass break detection |
| Smart Event | Line crossing detection, intrusion detection, region entrance detection, region exiting detection |
| Linkage | Upload to FTP/NAS/memory card,notify surveillance center,send email,trigger alarm output,trigger recording,trigger capture,audible warning,HTTP custom alarm |
| **Deep Learning Function** | |
| Perimeter Protection | Line crossing, intrusion, region entrance, region exiting<br>Support alarm triggering by specified target types (human and vehicle)<br>Support combined event alarm triggering |
| Metadata | Intrusion detection,line crossing detection,region entrance detection,region exiting detection,road traffic |

| | |
|---|---|
| Road Traffic and Vehicle Detection | Smart Function:<br>Support license plate recognition of vehicles and motorcycles (only in checkpoint scenario)<br>Support vehicle attribute detection, including vehicle type, color, brand, driving direction, etc.<br>Support vehicle and non-vehicle counting<br>Blocklist and allowlist: up to 50,000 records<br>LPR Countries/Regions:<br>5 areas (USA, Europe, Middle East, Asia-Pacific, Africa) and more than 124 countries/regions<br>Accuracy (Under recommended installation and lighting conditions):<br>License plate recognition rate ≥98%<br>Capture rate ≥99%<br>Driving direction accuracy rate ≥98%<br>Vehicle Capture Speed:<br>Front installation in checkpoint scenario: up to 120 km/h<br>Side installation: up to 80 km/h<br>Capture Mode: License Plate and Vehicle Mode, Vehicle Priority Mode<br>Supports license plate recognition in detection area or lane line in the entrance and exit.<br>Supports Reverse License Plate Secondary Detection. If the vehicle is always in the camera view, when it triggers one capture, another capture will be triggered when it backs out of parking lot. |
| Parking Management | Support distant view mode and close view mode<br>Distant view mode: support status detection on up to 40 parking spaces, parking duration detection, and vacant parking space alarm<br>Close view mode: support status detection on up to 4 parking spaces, license plate recognition, parking timeout alarm, and vacant parking space alarm |
| DeepVision | Support searching for humans, vehicles, non-motorized vehicles, and animals and uploading the feature information. This function requires use with DeepVision NVR/Servers. |
| Vehicle Event Detection | Supports Parking Detection and Congestion Detection. |
| **General** | |
| Power | Three-core terminal block,<br>12 VDC ± 20%, 1.75A, max. 21W,<br>24 VAC ± 20%, 1.55A, max. 20.5 W,<br>PoE: IEEE 802.3at, Type 2, Class 4, 42.5 V to 57 V, 0.57 A to 0.43 A, max. 23 W |
| Material | Aluminum alloy body |
| Dimension | Ø5.7" × 14.8" (Ø144.1 mm × 374.7 mm) |
| Package Dimension | 16.7" × 7.5" × 7.1" (425 mm × 190 mm × 180 mm) |
| Weight | Approx. 5.18 lb (2350 g.) |
| With Package Weight | Approx. 7.65 lb (3467 g.) |
| Storage Conditions | -40 °C to 65 °C (-40 °F to 149 °F). Humidity 95% or less (non-condensing) |
| Startup and Operating Conditions | -40 °C to 65 °C (-40 °F to 149 °F). Humidity 95% or less (non-condensing) |

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| 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 |
| General Function | Heartbeat,anti-banding,one-key reset,mirror,password protection,flash log |
| Heater | Yes |
| De-icing | Yes |
| Device Management | Supports adding alarm box in the LAN to expand 6 additional input and 6 output alarm interfaces. Supports adding network microphone and speaker. |
| **Approval** | |
| EMC | CE-EMC: EN 55032:2015+A1:2020, EN 50130-4:2011+A1:2014, EN IEC 61000-3-2:2019+A1:2021, EN 61000-3-3:2013+A1:2019+A2:2021,<br>RCM: AS/NZS CISPR 32: 2015,<br>IC: ICES-003: Issue 7,<br>KC: KN32: 2015, KN35: 2015 |
| Safety | CB: IEC 62368-1: 2014+A11,<br>CE-LVD: EN 62368-1: 2014/A11: 2017,<br>BIS: IS 13252 (Part 1): 2010/IEC 60950-1: 2005,<br>LOA: IEC/EN 60950-1 |
| Environment | CE-RoHS: 2011/65/EU,<br>WEEE: 2012/19/EU,<br>Reach: Regulation (EC) No 1907/2006 |
| Protection | IP67: IEC 60529-2013,IK10: IEC 62262:2002 |
| Automotive and Railway | EN50121-4 |
| Other | PVC FREE |

## ▪ Installation Recommendation

**Entrance/Exit**

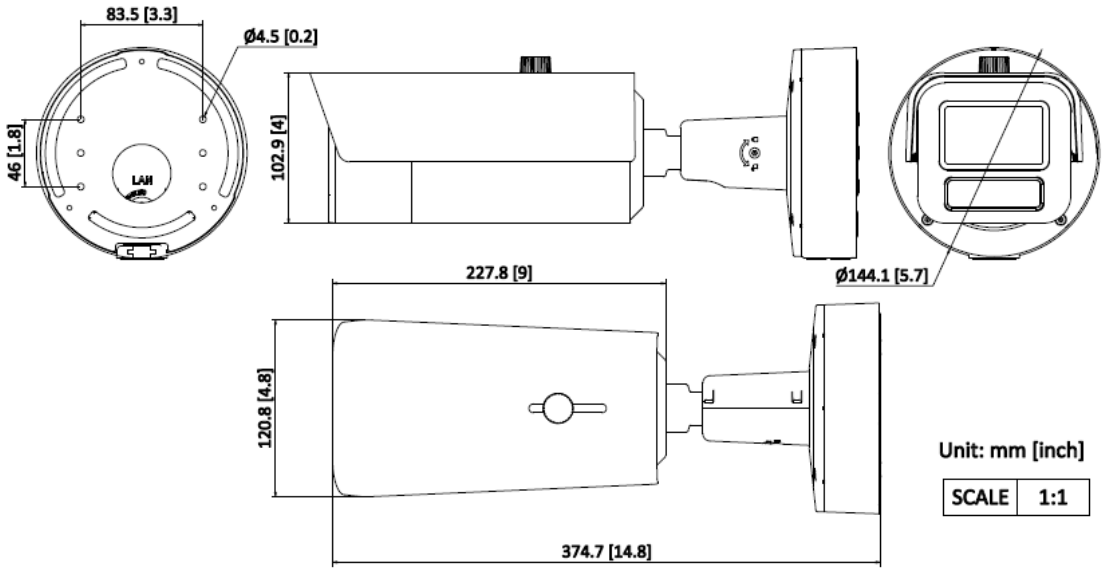



**City Street**

| Camera Position | Lens | Height (m) | Suggested Vertical Angle | Suggested Trigger Distance (m) | Max. Coverage Width | Max. Horizontal Angle | Vertical Angle Range | Capture Range (m) |
|---|---|---|---|---|---|---|---|---|
| Side of the Lane | 2.8 to 12 mm | 1.5 | 20° | 4 | 4.5 | 30° | 15° to 30° | 2.5 to 5.5 |
| Side of the Lane | 2.8 to 12 mm | 2 | 20° | 5.5 | 4.5 | 30° | 15° to 30° | 3.5 to 7.5 |
| Side of the Lane | 2.8 to 12 mm | 2.5 | 20° | 6.5 | 4.5 | 30° | 15° to 30° | 4.5 to 9 |
| Side of the Lane | 8 to 32 mm | 3 | 20° | 8 | 6 | 30° | 15° to 30° | 5 to 11 |
| Side of the Lane | 8 to 32 mm | 4 | 20° | 11 | 6 | 30° | 15° to 30° | 6 to 14 |
| Side of the Lane | 8 to 32 mm | 5 | 20° | 13.5 | 6 | 30° | 15° to 30° | 8.5 to 18 |
| Side of the Lane | 8 to 32 mm | 6 | 20° | 16.5 | 6 | 30° | 15° to 30° | 10 to 22 |
| Middle of the Road | 8 to 32 mm | 3 | 20° | 8 | 12 | 30° | 15° to 30° | 5 to 11 |
| Middle of the Road | 8 to 32 mm | 4 | 20° | 11 | 12 | 30° | 15° to 30° | 6 to 14 |
| Middle of the Road | 8 to 32 mm | 5 | 20° | 13.5 | 12 | 30° | 15° to 30° | 8.5 to 18 |
| Middle of the Road | 8 to 32 mm | 6 | 20° | 16.5 | 12 | 30° | 15° to 30° | 10 to 22 |

**Note: The installation diagram is for reference only. The actual scenario and appearance may vary.*

## ▪Dimension

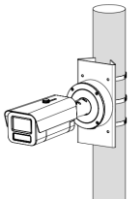
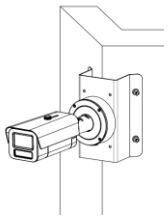


## ▪ Accessory

### ▪ Optional

| LTB389 | LTB388 |
| --- | --- |
|  |  |

### ▪ Installation Methods

| Vertical Pole Mounting LTB388 | Corner Mounting LTB389 |
| --- | --- |
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