

# CCTV TENDER SPECIFICATIONS 2024-2025

Sr. #	Item Name	Specifications
1.	2x4MP Full-Color Duo Splicing Network Camera	<ul style="list-style-type: none"> <li>➤ Outputs 180° wide-angle splicing image.</li> <li>➤ Outputs max. 8 MP (4096 × 1800)@25 fps.</li> <li>➤ H.265 codec, high compression rate, ultra-low bit rate.</li> <li>➤ Built-in warm light and the max. Illumination distance is 40 m.</li> <li>➤ ROI, SMART H.264 +/H.265+, AI H.264/H.265, flexible coding, applicable to various bandwidth and storage environments.</li> <li>➤ WDR, 3D NR, HLC, BLC, digital watermarking, applicable to various monitoring scenes.</li> <li>➤ Alarm: 1 in, 1 out; audio: 1 in, 1 out; supports max. 512 G Micro SD card, built-in Mic and speaker, support two-way talk.</li> <li>➤ 12 VDC/Poe power supply, easy for installation.</li> <li>➤ IP67 protection.</li> <li>➤ EPTZ: Enlarge and track the targets of intelligent alarms.</li> <li>➤ SMD.</li> <li>➤ Intelligence</li> <li>➤ IVS (Perimeter Protection)</li> <li>➤ Intrusion, tripwire, fast moving (the three functions support the classification and accurate detection of vehicle and human); loitering detection, people gathering, and parking detection</li> <li>➤ Heat Map</li> <li>➤ Smart Object Detection</li> <li>➤ Smart abandoned object; smart missing object</li> <li>➤ People Counting</li> <li>➤ Support the counting of enter number, leave number and pass number, and displaying and outputting yearly/monthly/daily reports.</li> </ul>

  
  
Systems

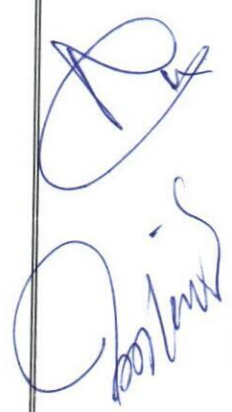
		<ul style="list-style-type: none"> <li>➤ Support the counting of number in area, and 4 rules configuration. Count number of people or stay time and link alarm.</li> <li>➤ Support queue management, and 4 rules configuration. Count number of people or stay time and link alarm</li> <li>➤ Certifications</li> <li>➤ CE-LVD: EN62368-1</li> <li>➤ CE-EMC: Electromagnetic Compatibility Directive 2014/30/EU</li> <li>➤ FCC: 47 CFR FCC Part 15, Subpart B</li> <li>➤ UL/CUL: UL60950-1 CAN/CSA C22.2 No.60950-1-07</li> <li>➤ Two Years Warranty</li> </ul>
2.	8 MP Full-color Active Deterrence Network Camera	<ul style="list-style-type: none"> <li>➤ 8 MP, CMOS image sensor, low illuminance, high image definition, Outputs max. 8MP (3840 × 2160) @25/30 fps, H.265 codec, high compression rate, low bit rate.</li> <li>➤ Built-in warm illuminator, and the min. Illumination distance: 30m, ROI, SMART H.264+/H.265+, flexible coding. Applicable to various band width and storage environments, Rotation mode, WDR, 3D NR, HLC, BLC, digital watermarking, applicable to various monitoring scenes.</li> <li>➤ Intelligent detection: Tripwire, intrusion, Abnormality detection.</li> <li>➤ Motion detection, video tampering, scene changing, audio detection, no SD card, SD card full, SD card error, network disconnection, IP conflict, illegal access, and voltage detection, Supports sound and light alarm linkage.</li> <li>➤ When an alarm is triggered, the camera links sound alarm and light flashing Supports one-tap disarming.</li> <li>➤ You can disarm the events of alarm output, sending email, audio, and light in the configured period.</li> <li>➤ Alarm: 1 in, 1 out; audio: 1 in, 1 out; supports max. 256 G Micro SD card.</li> <li>➤ Built-in Mic and speaker, 12V DC/Poe power supply, IP67 protection, SMD Plus, Colorful flashlight alarm.</li> </ul>

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		<ul style="list-style-type: none"> <li>➤ Two Years Warranty</li> </ul>
3.	8MP IR Vari-focal Network Camera	<ul style="list-style-type: none"> <li>➤ 8MP IR Vari-focal Bullet Network Camera</li> <li>➤ 8-MP 1/2.7" CMOS image sensor, low luminance, and high definition image.</li> <li>➤ Outputs max. 8 MP (3840 × 2160) @20 fps, and supports 2688 × 1520 (2688 × 1520) @25/30 fps.</li> <li>➤ H.265 codec, high compression rate, ultra-low bit rate.</li> <li>➤ Built-in IR LED, and the max. illumination distance is 60 m.</li> <li>➤ ROI, SMART H.264+/H.265+, flexible coding, applicable to various bandwidth and storage environments.</li> <li>➤ Rotation mode, WDR, 3D NR, HLC, BLC, digital watermarking, applicable to various monitoring scenes.</li> <li>➤ Intelligent monitoring: Intrusion, tripwire (the two functions support the classification and accurate detection of vehicle and human).</li> <li>➤ Abnormality detection: Motion detection, video tampering, audio detection, no SD card, SD card full, SD card error, network disconnection, IP conflict, illegal access, and voltage detection.</li> <li>➤ Alarm: 1 in, 1 out; audio: 1 in, 1 out; supports max. 256 G Micro SD card; built in MIC.</li> <li>➤ 12 VDC/PoE power supply, easy for installation.</li> <li>➤ IP67, IK10 protection.</li> </ul> <p>SMD Plus. Two Years Warranty</p>
4.	5MP IR Fixed-focal Network Camera	<p>5MP IR Fixed focal Bullet WizSense Network Camera</p> <p>5-MP 1/2.7" CMOS image sensor, excellent low luminance performance and high definition of images.</p> <p>Outputs max. 5MP (2592 × 1944) @20 fps, and supports 4MP (2688 × 1520) @25/30 fps.</p> <p>H.265 codec, high compression rate, low bit rate.</p> <p>Built-in IR LED, max. IR distance: 50 m.</p>

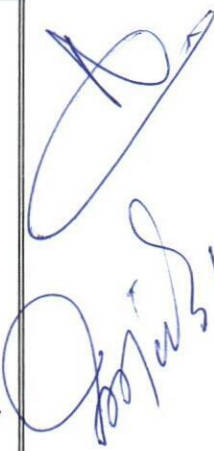
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		<p>ROI, SMART H.264 +/H.265+, AI H.264/H.265. flexible coding, applicable to various bandwidth and storage environments.</p> <p>Rotation mode, WDR, 3D NR, HLC, BLC, digital watermarking, applicable to various monitoring scenes.</p> <p>Intelligent detection: Intrusion, tripwire (support the classification and accurate detection of vehicle and human).</p> <p>Abnormality detection: Motion detection, privacy masking, scene changing, audio detection, no SD card, SD card full, SD card error, network disconnection, IP conflict, illegal access, and voltage detection.</p> <p>Alarm: 1 in, 1 out (Only - AS supports); audio: 1 in, 1 out (Only - AS supports); max. 256 G Micro SD card. built-in Mic. 12 VDC/PoE power supply, easy for installation.</p> <p>IP67 protection.</p> <p>SMD plus.</p>
5.	2MP Network AI IR Bullet Camera	<ul style="list-style-type: none"> <li>➤ Max. 2MP resolution, Up to 120fps, 0.007Lux@F1.3, 1/30sec. (Color), 0Lux (B/W, IR LED on).</li> <li>➤ Day &amp; Night (ICR), WDR (120dB), H.265, H.264, MJPEG.</li> <li>➤ Built in Mic</li> <li>➤ 2/1 Alarm in/out, 1/1 audio in/out</li> <li>➤ Video Analytics based on AI.</li> <li>➤ Object detection and classification (Person, Face, Vehicle, License Plate).</li> <li>➤ Face mask detection.</li> <li>➤ Social distancing detection, Attribute, Best Shot, Compatible Insight v2.0 for Business Intelligence.</li> <li>➤ Two Years Warranty</li> </ul>
6.	4MP IR Fixed-focal Network Camera	<ul style="list-style-type: none"> <li>➤ 4-MP 1/2.9" CMOS image sensor, low luminance, and high definition image.</li> <li>➤ Outputs max. 4 MP (2688 × 1520)@20 fps and supports 2560 × 1440 (2560 × 1440)@25/30 fps.</li> <li>➤ H.265 codec, high compression rate, ultra-low bit rate.</li> <li>➤ Built-in IR LED, and the max. Illumination distance is 80 m.</li> </ul>



		<ul style="list-style-type: none"> <li>➤ ROI, SMART H.264+/H.265+, flexible coding, applicable to various bandwidth and storage environments.</li> <li>➤ Rotation mode, WDR, 3D NR, HLC, BLC, digital watermarking, applicable to various monitoring scenes.</li> <li>➤ Intelligent monitoring: Intrusion, tripwire (the two</li> </ul>
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		<ul style="list-style-type: none"> <li>➤ ROI, SMART H.264+/H.265+, flexible coding, applicable to various bandwidth and storage environments.</li> <li>➤ Rotation mode, WDR, 3D NR, HLC, BLC, digital watermarking, applicable to various monitoring scenes.</li> <li>➤ Intelligent monitoring: Intrusion, tripwire (the two functions support the classification and accurate detection of vehicle and human).</li> <li>➤ Abnormality detection: Motion detection, video tampering, audio detection, no SD card, SD card full, SD card error, network disconnection, IP conflict, illegal access, and voltage detection.</li> <li>➤ Alarm: 1 in, 1 out ; audio: 1 in, 1 out ; supports max. 256 G Micro SD card; built in MIC.</li> <li>➤ 12 VDC/PoE power supply, easy for installation.</li> <li>➤ IP67, IK10 (optional) protection.</li> </ul> <p>SMD Plus. Two Years Warranty</p>
7.	Outdoor/ Indoor AI Intelligent Cameras,	<ul style="list-style-type: none"> <li>➤ 4Megapixel progressive scan CMOS H.265 &amp; H.264 triple-stream encoding.</li> <li>➤ 25/30 fps@2688 × 1520, 50/60 fps@1080P(1920 × 1080) WDR (140 dB), RAM 1 GB. . AI and Intelligent Smart Features, Support face image capture.</li> <li>➤ Support 6 kinds of face attributes extraction: Age, Gender, Expression (Jolly, Surprise, Normal, Rage, Sad, Disgusted, Confused, Frightened), Glasses, Mouth Mask, Moustache &amp; Beard, Tripwire. Intrusion (Recognition of vehicle and people), fast moving, loitering detection, parking detection and people gathering.</li> <li>➤ Support People Counting, Perimeter Protection, Support Line crossing/Region/Queuing people counting.</li> <li>➤ Support 4 accesses independent detection, 4 areas independent detection, Object Abandoned/Missing.</li> <li>➤ Heat Map, 2.7 mm–12.0 mm motorized lens. 2/1 Alarm in/out, 1/1 audio in/out Max. IR LEDs Length 50 m, Micro SD memory, IP67, IK10</li> </ul>



		<ul style="list-style-type: none"> <li>➤ Two Years Warranty</li> </ul>
8.	Artificial Intelligence base Facial Reorganization Camera.	<ul style="list-style-type: none"> <li>➤ 4MP, CMOS image sensor, low luminance, high image definition, 4MP (2688×1520) @50 fps/60 fps, ROM , 16 GB RAM 2 GB, H.264&amp;H.</li> <li>➤ 265 coding, high compression ratio, Alarm: 3 in, 2 out; audio: 1 in, 1 out; RS-485; BNC; supports max. 256 GB SD card.</li> <li>➤ Five streams for three-channel HD video, IP67, IK10 protection grade, 5 streams.</li> <li>➤ Face Recognition, with deep learning algorithm support People Counting.</li> <li>➤ Face Capture, Perimeter Protection and Video Structuration, Professional, intelligent, Face recognition, track, priority, snapshot.</li> <li>➤ Face enhancement, face exposure, face attribute extract, 6 attributes and 8 expressions: Gender, age, glasses, expressions (anger, sadness, disgust, fear, surprise, calm, happiness and confusion), mask, beard.</li> <li>➤ Max supports face contrast in face library with 200,000 faces, People Counting, People counting (count the entry number, exit number and pass number), display and output daily/monthly/annual statistics, No. in area, 2.7 to 12mm Motorized Lens, 12V DC/24V AC/.</li> <li>➤ IR Distance Minimum 50m , IP67, IK10 protection grade.</li> <li>➤ Two Years Warranty</li> </ul>
9.	Artifice Intelligence License Plate 4 MP Speed Detection Cameras with installation Accessories.	<ul style="list-style-type: none"> <li>➤ 4 MP Artificial Intelligence ANPR Camera, white light, Embedded with Deep learning LPR Engine.</li> <li>➤ Supports vehicle video detection with high detection rate; supports vehicle direction detection, License plate recognition, vehicle size, vehicle color detection and etc.</li> <li>➤ Supports 11 vehicle sizes detection: large bus, heavy truck, medium truck, sedan, minivan, light truck, SUV, MPV, medium bus, pick-up and minicar.</li> </ul>



		<ul style="list-style-type: none"> <li>➤ Supports 11 colors detection (daytime): white, black, blue, red, yellow, green, pinkish purple, gray, brown, orange and silver.</li> <li>➤ White List (10000 records database inside the camera), H.265&amp; H.264 dual-stream encoding.</li> <li>➤ Micro SD memory, Powerful motorized lens and white light, ideal for monitor ANPR distance, IP67, and superior performance for outdoor applications.</li> <li>➤ Embedded with LPR algorithm inside the camera, Vehicle data structuring.</li> <li>➤ License plate recognition, vehicle size, vehicle color detection and etc.</li> </ul> <p>Illumination Distance 30 m (98.43 ft), Capture Distance, 8 m–30 m, Min. Illumination, 0.002 lx (built-in illuminator on).</p> <ul style="list-style-type: none"> <li>➤ Min. Detection Speed 60 km/h, Alarm Event, Vehicle Detection, Vehicle capture rate ≥ 99%, Vehicle Recognition.</li> <li>➤ Two Years Warranty</li> </ul>
10	Mini PTZ Speed Dome Cameras for Outdoor Surveillance.	<ul style="list-style-type: none"> <li>➤ 2MP, 25/30fps@2M, Deep-learning.</li> <li>➤ Pro AI performance: Perimeter protection.</li> <li>➤ Video Structurization.</li> <li>➤ 25x optical zoom, SMD, Starlight.</li> <li>➤ H.265, PFA Technology.</li> <li>➤ IR Distance up to 100m, -40°C~70°C wide temperature range, IP66, POE+, -15°~90° tilt range.</li> <li>➤ Two Years Warranty</li> </ul>
11	PTZ Speed Dome Cameras for Outdoor Surveillance.	<ul style="list-style-type: none"> <li>➤ 4Megapixel 45x optical zoom, Max. 25/30fps@4MP.</li> <li>➤ Deep-learning-based auto tracking and perimeter protection.</li> <li>➤ IR distance up to 250m, IP67, IK10, Operating Temperature: -40°C~+70°C, Smart detection / Video Analytics.</li> <li>➤ Support human, motor vehicle and non-motor vehicle image capture.</li> <li>➤ Support alarm triggering by target types (human And vehicle).</li> </ul>



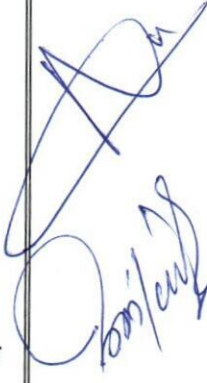
		<ul style="list-style-type: none"> <li>➤ Filtering out false alarms caused by animals, rustling leaves, bright lights, etc.</li> <li>➤ Support Auto Tracking, Tripwire, Intrusion, Object missing, Object Abandoned, Face Detection etc.</li> <li>➤ Two Years Warranty</li> </ul>
12	4MP 32X Smart Dual Light Network Panoramic PTZ Camera.	<ul style="list-style-type: none"> <li>➤ 1/2.8" 4Megapixel STARVIS™ CMOS</li> <li>➤ 32× optical zoom.</li> <li>➤ Starlight technology.</li> <li>➤ Max. 25/30 fps@2560 × 1440.</li> <li>➤ IR distance up to 200 m</li> <li>➤ Auto tracking.</li> <li>➤ Perimeter protection.</li> <li>➤ Face detection.</li> <li>➤ IP66.</li> <li>➤ Sound and light alarm.</li> <li>➤ 180° Panoramic Splicing.</li> <li>➤ Image Sensor</li> <li>➤ Panorama: 1/2.8" CMOS</li> <li>➤ Detail: 1/2.8" CMOS</li> <li>➤ Pixel</li> <li>➤ Panorama: 4 MP</li> <li>➤ Detail: 4 MP</li> <li>➤ Max. Resolution</li> <li>➤ Panorama: 3840 (H) × 1080 (V)</li> <li>➤ Detail: 2560 (H) × 1440 (V)</li> <li>➤ ROM</li> <li>➤ Panorama: 4 GB</li> <li>➤ Detail: 4 GB</li> <li>➤ RAM</li> <li>➤ Panorama: 1 GB</li> <li>➤ Detail: 1 GB</li> <li>➤ Electronic Shutter Speed</li> <li>➤ Panorama: 1/1 s–1/10,000s</li> <li>➤ Detail: 1/1s–1/30,000s</li> <li>➤ Scanning System</li> <li>➤ Progressive</li> <li>➤ Min. Illumination</li> </ul>



		<ul style="list-style-type: none"> <li>➤ Panorama:</li> <li>➤ Color: 0.001 lux@F1.0</li> <li>➤ B/W: 0.0001 lux@F1.0</li> <li>➤ Detail:</li> <li>➤ Color: 0.005 lux@F1.6 (1/25 s, 30 IRE, gain 100)</li> <li>➤ B/W: 0.0005 lux@F1.6 (1/25 s, 30 IRE, gain 100)</li> <li>➤ 0 Lux (IR on)</li> <li>➤ Illumination Distance</li> <li>➤ Panorama: 30 m (98.43 ft) (White light)</li> <li>➤ Detail: 200 m (656.17 ft) (IR)</li> <li>➤ Illuminator On/Off Control</li> <li>➤ Zoom Prio; Manual; Smart IR; Off</li> <li>➤ Illuminator Number</li> <li>➤ Panorama: 4 (White light)</li> <li>➤ Detail: 4 (IR), 2 (White light)</li> <li>➤ IVS (Perimeter Protection)</li> <li>➤ Tripwire; intrusion; crossing fence detection; loitering detection; abandoned/missing object; fast moving; parking detection; people gathering; vehicle/human alarm classification; linkage tracking</li> <li>➤ Face Detection</li> <li>➤ Supports face detection, optimization, tracking, capturing pictures, uploading high-quality face snapshots, and face enhancement; Supports attributes extraction. 6 attributes and 8 expressions; Supports face cutout: Face, one-inch photo. Capturing strategies include real-time capturing, optimization, and quality first</li> <li>➤ Auto Tracking Yes</li> <li>➤ Two Years Warranty</li> </ul>
13	5MP IR AI-Fire Smoke Sensing Network Camera with Temperature and Humidity Detection	<ul style="list-style-type: none"> <li>➤ Remote check based on smoke sensing and video alarm linkage</li> <li>➤ Intelligent monitoring: Flame detection</li> <li>➤ High precision temperature and humidity sensors are used to monitor the temperature and humidity data in the equipment environment</li> <li>➤ With split-spectrum smoke chamber and intelligent algorithm, eliminate the false alarm effectively.</li> </ul>

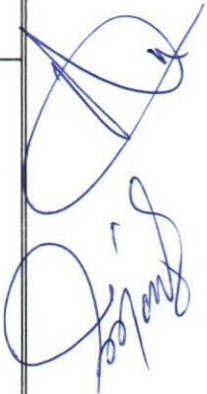
		<ul style="list-style-type: none"> <li>➤ Ultra-low power consumption design enables the smoke sensing module to operate for 3 years with only battery.</li> <li>➤ Built-in high decibel buzzer, smoke alarm is over 85 dB at 3 meters.</li> <li>➤ Self-test and low battery warning</li> <li>➤ Intelligent compensation algorithm relieves the impact of dust accumulation and environment changing on smoke sensing module</li> <li>➤ Insect-proof and dust-proof design for smoke sensing module</li> <li>➤ Built-in alarm voice, and user can import custom voice.</li> <li>➤ 5MP 1/2.7" CMOS image sensor, low luminance, and high definition image.</li> <li>➤ H.265 codec, high compression rate, ultra-low bit rate.</li> <li>➤ Flip mode, WDR, 3D NR, HLC, BLC, digital watermarking, applicable to various monitoring scenes.</li> <li>➤ 2/2 Alarm in/out, 1/1 audio in/out; supports max. 256 GB Micro SD card; built-in Mic and speaker.</li> <li>➤ 12V DC/PoE power supply</li> <li>➤ Built-in IR light; the max. IR LEDs Length is 20 m (65.62 ft)</li> <li>➤ Two Years Warranty</li> </ul>
14	Hi-fidelity Pickup	<ul style="list-style-type: none"> <li>➤ Use metal shell, surface is through plating processing;</li> <li>➤ Use high sensitivity waterproof and dustproof microphone head, pickup clear sound;</li> <li>➤ Ambient noise cancellation (ANC) technology;</li> <li>➤ Waterproof and dustproof level are IP66.</li> <li>➤ Scope: 5~100 m2</li> <li>➤ Sensitivity:-24±3dB</li> <li>➤ Frequency response: 20Hz~20kHz</li> <li>➤ Directional characteristic: Omni-directional</li> <li>➤ SNR(re 94dBSPL=1Pa@1KHz): 68dB</li> <li>➤ Dynamic range: 84dB</li> <li>➤ Max. sustainable sound pressure: 110dBSPL (1KHz, THD 1%)</li> <li>➤ Output impedance: 100Ω(non-equilibrium)</li> </ul>

		<ul style="list-style-type: none"> <li>➤ Network Protocol: TCP, UDP, ARP, ICMP, IGMP, DHCP, IGMP, HTTP, SIP, ONVIF</li> <li>➤ General</li> <li>➤ Audio Protocol: MP3, G.711a/u</li> <li>➤ Storage: 512 MB and TF card</li> <li>➤ Power Input: PoE+ (IEEE 802.3at), 24 VDC, 1 A (Standby)</li> <li>➤ Power Consumption: 20 W</li> <li>➤ Operating Temperature: -40 °C to +60 °C (-40 °F to +140°F)</li> <li>➤ Operating Humidity: 60%–95% (RH), non-condensing</li> <li>➤ Protection Level: IP6X</li> <li>➤ Certifications: CE EMC, CE LVD</li> <li>➤ Product Dimensions: 203 mm × 203 mm × 132 mm (7.99" × 7.99" × 5.20") (L× W × H)</li> <li>➤ Packaging Dimensions: 235 mm × 235 mm × 170 mm (9.25" × 9.25" × 6.69") (L× W × H)</li> <li>➤ Net Weight: 1.4 kg (3.09 lb)</li> <li>➤ Gross Weight: 1.9 kg (4.19 lb).</li> </ul>
16	64 Channels 2U 8HDDs Network Video Recorder.	<ul style="list-style-type: none"> <li>➤ 64-channel 1080p self-adaptive decoding capability. Max.1024/1024/800Mbps incoming/recording/outgoing bandwidth.</li> <li>➤ Supports N+M cluster.</li> <li>➤ Support Raid0/1/5/6/10.</li> <li>➤ Drawer-like chassis design allows for HDD hot swapping.</li> <li>➤ AI by recorder: 4-channel face detection and recognition; 8-channel metadata; 24-channel perimeter protection; 32-channel SMD Plus.</li> <li>➤ AI by camera: Face detection and recognition, perimeter protection, SMD Plus, metadata, ANPR, and people counting.</li> <li>➤ AI by Recorder</li> <li>➤ Face detection; face recognition; video metadata (human, motor vehicles, and non-motor vehicles); SMD Plus</li> <li>➤ AI by Camera</li> </ul>



- Face detection; face recognition; video metadata (human, motor vehicles, and non-motor vehicles); SMD Plus; stereo analysis; crowd distribution; people counting; ANPR; vehicle density; object monitoring
- Perimeter Protection
- Perimeter Performance AI by Recorder (Number of Channels)
- 24 channels, 10 IVS rules for each channel
- Perimeter Performance of AI by Camera (Number of Channels)
- 64 channels
- Face Detection
- Face Attributes
- Gender; age group; glasses; expressions; face mask; beard
- Face Detection Performance of AI by Recorder (Number of Channels)
- 4 channels (up to 12 face images/s each channel)
- Face Detection Performance of AI by Camera (Number of Channels)
- 64 channels
- Face Recognition
- Face Database Capacity
- Up to 40 face databases with 300,000 images, with a total capacity of 48 G. Name, gender, birthday, address, credential type, Credential No., countries & regions and state can be added to each face image.
- Face Recognition Performance of AI by Recorder (Number of Channels)
- 20 channels FD (by camera) + FR (by recorder), image stream: 20 face images/s
- 4 channels FD (by recorder) + FR (by recorder), video stream: 12 face images/s
- Face Recognition Performance of AI by Camera (Number of Channels) 64 channels

		<ul style="list-style-type: none"> <li>➤ SMD Plus by Recorder, 32-channel: Secondary filtering for human and motor vehicle , reducing false alarms caused by leaves, rain and lighting condition change</li> <li>➤ SMD Plus by Camera, 64 channels</li> <li>➤ Video Metadata, Metadata Performance of AI by Recorder (Number of Channels)</li> <li>➤ 8 channels, Metadata Performance of AI by Camera (Number of Channels)</li> <li>➤ 32 channels, Human Attributes</li> <li>➤ Top color, top type, hat, bag, age, gender and umbrella</li> <li>➤ Motor Vehicle Attributes</li> <li>➤ License plate, plate color, vehicle model, vehicle logo, plate color, ornament, calling,</li> <li>➤ Non-motor Vehicle Attributes</li> <li>➤ Vehicle model, vehicle color, number of persons, helmet.</li> <li>➤ Vehicle License Plate Comparison</li> <li>➤ ANPR by Camera (Number of Channels)</li> <li>➤ 32 channels</li> <li>➤ License Plate Database Capacity: Blacklist and allow list: 20,000</li> <li>➤ Two Years Warranty</li> </ul>
17	128 Channels 2U 8HDDs Intelligent Video Surveillance Server.	<ul style="list-style-type: none"> <li>➤ Industry embedded micro-controller.</li> <li>➤ Max 512Mbps incoming bandwidth.</li> <li>➤ 128-channel IP video access.</li> <li>➤ Supports RAID 0/1/5/6/10</li> <li>➤ 3 HDMI/2 VGA video output</li> <li>➤ Main Processor Industry embedded micro-controller.</li> <li>➤ AI by Camera Face detection, face recognition, video metadata, IVS (tripwire, intrusion, missing object, and more), people counting, smoking detection, call detection.</li> <li>➤ Perimeter Function (AI by Camera) 64-channel.</li> <li>➤ Hot Swapping: YES.</li> <li>➤ Human Face Properties Supports 6 properties: Gender, age range (6-level), glasses, expression (8 types), mouth mask, and beard.</li> </ul>



		<ul style="list-style-type: none"> <li>➤ Face Detection Performance (AI by Camera) (Channel Number) 64-channel.</li> <li>➤ Plate Database Capacity Max. 50 plate databases with 3 hundred thousand plate numbers in total Supports allowlist and blocklist.</li> <li>➤ Human Body Properties Gender, age, sleeves length, top color, bottom type, bottom color, bag, rain coat, umbrella, hat, hairstyle, direction, hold a baby, mouth mask.</li> <li>➤ Vehicle Properties Vehicle type, vehicle color, plate color, logo, calling, seatbelt, ornament, region.</li> <li>➤ Remote Connection 128</li> <li>➤ Network Bandwidth Incoming bandwidth: 512Mbps Recording bandwidth: 400Mbps Outgoing bandwidth: 512Mbps.</li> <li>➤ Resolution 16MP/12MP/8MP/6MP/5MP/4MP/3MP/1080P/960P/720P/D1/CIF/QCIF.</li> <li>➤ Video Output 2-channel VGA output, 3-channel HDMI output, VGA 1/ HDMI 1 outputs the same video source. VGA2/HDMI2 outputs the same video source. Supports 4K output.</li> <li>➤ Video Compression Smart H.265+/Smart H.264+/H.265/H.264.</li> <li>➤ Audio Compression G.711A/G.711U/PCM/G726.</li> <li>➤ Network Protocol HTTP, HTTPS, TCP/IP, IPv4, RTSP, UDP, SMTP, NTP, DHCP, DNS, DDNS, P2P.</li> <li>➤ Backup Method HDD, peripheral USB storage device.</li> <li>➤ HDD Group 8</li> <li>➤ General Alarm Motion detect, tampering, local alarm</li> <li>➤ Anomaly Alarm IPC offline alarm, storage error, HDD full, IP conflict, MAC conflict, login lock, fan malfunction.</li> <li>➤ Internal HDD 8 slots, SATA3.0. Max.16T/HDD.</li> <li>➤ Two Years Warranty</li> </ul>
18	Embedded Video Storage	<ul style="list-style-type: none"> <li>➤ 64-bit High-performance multi-core processor, Max 512-ch IP camera inputs, Max 1024 Mbps</li> </ul>

		<p>incoming/recording/forwarding bandwidth, 48 HDDs, SAS/SATA, Hot-Swap.</p> <ul style="list-style-type: none"> <li>➤ Supports RAID 0/1/5/6/10/50/60, JBOD, Hot spare, Supports video stream/ Picture direct storage mode and IPSAN storage mode.</li> <li>➤ Supports N+M cluster, Supports Automatic Network Replenishment (ANR), SAS cascade for expanded storage space, Modular and drawer-like design, 1+1 redundant 80PLUS platinum power supply.</li> <li>➤ BBU battery for abnormal power failure, 10Gig Fiber Module.</li> <li>➤ RAM 8 GB by default (extendable to 64 GB), Power Redundancy1+1, 4×1-GbE LAN ports; 2×10-GbE optical fiber ports, up to 512-channel (1024 Mbps) access, storage, and forwarding; 32-channel (64 Mbps) online playback, Video Direct Storage (ONVIF).</li> <li>➤ Two Years Warranty.</li> </ul>
19	8TB Recording Storage Device	Recording Storage Surveillance Grade 8 TB
20	16TB Recording Storage Device	Recording Storage Surveillance Grade 16 TB
21	Industrial Grade 4K Screen for 24/7 Monitoring.	<ul style="list-style-type: none"> <li>➤ 55"(16: 9) UHD LED monitor, Built-in Android system, LED backlight, 3840×2160, 350cd/m2, 1200: 1 static contrast, 178/178 view angle, 8ms response time, 1.07B/10bit display color, 2×HDMI/USB 3.0/USB 2.0/Audio inputs, headphone Jack, RJ45 output, 2×8W speakers, 1231.6×707.7×62.5mm, 13.5kg.</li> </ul>
22	Industrial Grade 4K Screen for 24/7 Monitoring.	<ul style="list-style-type: none"> <li>➤ 21.45" FHD Monitor, 1920×1080 (FHD), VGA×1, HDMI×1, 3000:1 Contrast Ratio</li> </ul>
23	Video Input Interface Cards	<ul style="list-style-type: none"> <li>➤ Interface card A should have 2 CH HDMI 1.4 input slot support HDCP, Both HDMI input channel should support 4K resolution, Input Access Capability: All HDMI Channel Should support following resolution</li> <li>➤ 3840*2160@30fps,1920*1080@60fps/1600*1200@60fps/1400*1050@60fps/1366*768@60fps/1280*1024@60fps/1280*720@60fps/1024*768@60fps, Capable of</li> </ul>

		frequent switching of channels. Cards should work with different type of video convertors and splitters
24	Base for Screens.	Aluminum Good Quality Base, for Each Screen.
25	Bracket for Screens.	Aluminum Good Quality Back Bracket, for Each Screen.
26	PC for Cameras Monitoring and Management.	<ul style="list-style-type: none"> <li>➤ Branded PC for Cameras Monitoring and Management.</li> <li>➤ Processor: Intel Core i7 13700</li> <li>➤ CPU Cooler: Aiseye S120D Black</li> <li>➤ Motherboard: Gigabyte B760M Gaming X</li> <li>➤ Ram: Corsair Vengeance 32GB 3600Mhz</li> <li>➤ GPU: Zotac Trinity OC 4080</li> <li>➤ SSD: Samsung 980 PRO 1TB</li> <li>➤ PSU: XPG Core reactor 850W 80+ GOLD</li> <li>➤ Casing: Lianli lancool 216</li> <li>➤ Windows 10 Genuine</li> <li>➤ 21.45" FHD Monitor, 1920×1080 (FHD), VGA×1, HDMI×1, 3000:1 Contrast Ratio</li> </ul>
27	24 Port Gigabit High-performance Ethernet Switches Layer 3 for Main Control Room.	<ul style="list-style-type: none"> <li>➤ L3 + Managed Core / aggregation Switch</li> <li>➤ Optical Ports switch</li> <li>➤ Switching Capacity: 598 Gbps</li> <li>➤ Packet Forwarding Capacity: 168 Mbps</li> <li>➤ 10 Gbps uplink and all-gigabit ports</li> <li>➤ Power Consumption: 33W</li> <li>➤ Dual Power Supply</li> <li>➤ Various routing characteristics</li> <li>➤ IRF2 intelligent resilient architecture</li> <li>➤ Manage through the web client and CLI</li> <li>➤ Supports functions such as port aggregation, Lay-2 VLAN, ACL, and QoS</li> <li>➤ High performance and reliability; easy to manage and maintain.</li> <li>➤ 2 Years Warranty.</li> </ul>
28	08 Port Industrial Grade POE Network Managed Gigabit Switch.	<ul style="list-style-type: none"> <li>➤ 8 Ports Industrial Full Gigabit Poe Managed Switch</li> <li>➤ Provide 8* 10/100/1000Base-T Ethernet ports (Poe) + 2* 1000BASE-X SFP Ports.</li> </ul>




		<ul style="list-style-type: none"> <li>➤ Support 4K high-definition video transmission; PoE Function: support IEEE802.3af/at standard, each port supports up to 60W PoE Output.</li> <li>➤ Support Web-based network management, support VLAN, QoS, RSTP, SNMP, Support IGMP Snooping etc.</li> <li>➤ Network function.</li> <li>➤ Support 4K VLAN, Support 802.1Q Protocol-Based VLAN, Support Port-Based VLAN.</li> <li>➤ Support Fast Ring as redundant link Support relay alarm for power off, network broken, PoE off, 6KV surge immunity, 8KV ESD Protection and anti-interference ability; -40°C~75°C working temperature.</li> <li>➤ Support redundant Power Supply Rail/Rack kit Fitting, CE, FCC, ROHS Certified.</li> <li>➤ Two Years Warranty</li> </ul>
29	16 Port Gigabit POE Switch.	<ul style="list-style-type: none"> <li>➤ Fast/Gigabit Ethernet, 16GE Poe, Poe SFP Slots, 2GE SFP, Switching Capacity, 52Gbps.</li> <li>➤ Packet Forwarding Rate, 23.81MppPacket Buffer Memory.</li> <li>➤ 4Mb MAC Table Size, 8K PoE Standard, PoE (802.3af), PoE+ (802.3at).</li> <li>➤ Hi-PoE, PoE Budget, 240W Long PoE Transmission.</li> <li>➤ Support of VLAN, Link Aggregation, Flow Control, Spanning Tree, Management Web, Lightning Protection, Mode 2KV, Working Temperature -10°C~55°C.</li> <li>➤ Two Year Warranty</li> </ul>
30	24 Port Gigabit POE Switch with 4 SFP.	<ul style="list-style-type: none"> <li>➤ L3 + Managed Core / aggregation Switch</li> <li>➤ Outputs 180° wide-angle splicing image.</li> <li>➤ Interfaces : 10/100/1000BASE-T port x 24 / 10GE SFP+/GE SFP port x 4</li> <li>➤ Switching Capacity : 392Gbps</li> <li>➤ Packet Forwarding Rate : 96Mpps</li> <li>➤ Protocol Standard : IEEE 802.3ad, IEEE 802.3, IEEE 802.3u, IEEE 802.3ab, IEEE 802.3z, IEEE 802.3ae, IEEE 802.3x, IEEE 802.3az</li> <li>➤ VLAN :4K / Port-based VLAN / 802.1Q Standard VLAN / MAC-based VLAN / Protocol-based VLAN</li> </ul>

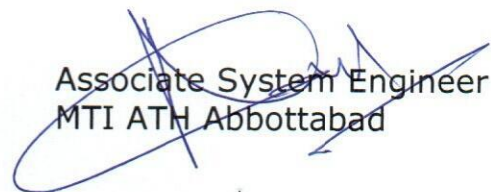
		<ul style="list-style-type: none"> <li>➤ Spanning Tree : STP / RSTP / MSTP</li> <li>➤ Port Aggregation : Up to 14 aggregation groups, and up to 8 GE ports for each group / LACP, Manual aggregation</li> <li>➤ Redundancy backup : VRRP</li> <li>➤ DHCP : DHCP Client / DHCP Server / DHCP Snooping</li> <li>➤ Security Features : Hardware supports IP ACL,MAC ACL, VLAN ACL / Hardware supports IP+MAC binding based on port / Support IP Source Guard / Support ARP Detection / Support IEEE802.1x port authentication / Support Radius authentication / Support the user classification management and password protection</li> <li>➤ System Maintenance : Support the configuration file upload/download / Support the updated packet upload / Restore default configuration via WEB / Support system logs / PING</li> <li>➤ Network Management : WEB(http and https protocol) / CLI / Telnet / SSH 2.0 / SNMP / RMON / LLDP / Support the NTP client.</li> <li>➤ 2 Years Warranty</li> </ul>
31	HD Network Control Keyboard for PTZ Cameras.	<ul style="list-style-type: none"> <li>➤ HD Network Control Keyboard, Screen 10" TFT LCD touch screen, Keyboard to Control, 2×RJ-45 port (10/100/1000M).</li> <li>➤ Four-Dimensional Joystick Control of PTZ Functions.</li> <li>➤ Support 4K decoding live view, Support Video-Wall display control, support bidirectional talk, Preset Position, Auto Scan, Auto Pan, Auto Tour &amp; Pattern Control.</li> </ul>
32	CAT-6 Network Cable in RFT	CAT-6 Network Cable in Good Quality Duct / U-PVC, / Conduit including the RJ-45 Connectors including Civil related work if required. Support Poe long-distance transmission; Excellent OFC with 99.99% OFC (oxygen free copper) purity; Environmentally-friendly outer sheath; Top-notch quality guarantee for 10 years
33	Optical fiber cable in RFT	12 core optical fiber cable in Good Quality Duct / U-PVC, / Conduit including Splicing, Patch Cord, Pigtail and Related installation accessories.

34	FIFER PATCH CARD	FIBER PATCH CARD SC TO SC
35	FIFER PATCH CARD	FIBER PATCH CARD SC TO LC
36	PDU	PDU
37	OFDF	OFDF 24 Port with accessories of OFC related.
38	OFDF	OFDF 12 Port with accessories of OFC related.
39	SFP	Gigabit SFP Fiber Module
40	IT Rack 42U	Floor Standing, Perforated Dual Compartment Door, 2 Fixed Tray and 1 sliding tray, 4 Fans, Fan kit and PDU, Compatible to cater all accessories as per the CCTV design.
41	Weather Proof 4U Rack	Weather Proof Rack/ Edge DB Box to inbuilt, Poe switch, UPS, Circuit Breaker, PDU, ODF etc.
42	Weather Proof 9U Rack	Weather Proof Rack/ Edge DB Box to inbuilt, Poe switch, UPS, Circuit Breaker, PDU, ODF etc.
43	Power Cable in RFT	2.5 mm 2 Core Power Cable in Feet including Civil work pure copper above than 99%
44	Power Backup	ONLINE Branded 10 kVA, 0.9 PF standard Backup UPS
45	Power Backup	1 kVA, 0.6 PF standard Backup
46	Breaker	10 Amp Breaker for DBs
47	Poles	Galvanized Poles for Cameras 5 Feet with, Base, Civil Work complete in all aspects.
48	Poles	Galvanized Poles for Cameras 10~15 Feet with, Base, Civil Work complete in all aspects.
49	Poles	Galvanized Poles for Cameras 15~20 Feet with, Base, Civil Work complete in all aspects.
50	Water-proof Junction Box for Camera Mount	Aesthetic design, Material: aluminum, junction box
51	HDMI Cable	HDMI Cable 15 Meter 4K Supportive.
52	Main Control Room Installation	<b>Main Control Room with installation of LED and other related Accessories.</b> Room Size Wood /PVC Paneling. Gypsum State of the art Ceiling 2X2.



		Electrification work with lighting and related work. Chairs and Counter Table Screen structuring
53	Digging in RF	Digging including Lying of OFC, UTP Cable, lying of warning tape, backfilling, Installation of route indicators.
54	Installation / Commissioning	Relevant Installation / Commissioning Configuration Services for quoted equipment / store,

  
Supervisor CCTV  
MTI ATH Abbottabad

  
Associate System Engineer  
MTI ATH Abbottabad

HOD IMD  
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21/11/24