

Specifications for IP based CCTV Surveillance System

- All compliances for Camera, Software, Storage device, networking switches, UPS should be given on OEM's letter head.
- OEM should provide Manufacture Authorisation Form [MAF] and certify to provide support for repair, spares and technical support for full warranty and post warranty period as per tender.

1- IP 3MP Box Camera with varifocal lens

- 1/3" 3.0 mega pixel or higher progressive scan CMOS sensor with minimum 30 fps @ 3 MP resolution and Day/Night Capabilities
- Minimum illumination 0.1Lux/F1.2(Color) or better, 0.01Lux/F1.2(B/W) or better
- S/N ratio 50 db or more than it
- Shutter speed Auto/manual, 1/3s (or less)~ 1/10000s (or better)
- White balance Auto
- Gain Control (GC) Auto
- Back light compensation preferable
- Wide-Dynamic-Range The camera should give a WDR range of minimum 120db or better
- Electronic Image Stabilization (EIS) Should support; Defog & ROI preferable
- Snapshot General and event based preferable
- Privacy Masking Up to 4 areas
- Video compression H .264/MJPEG (more formats)
- Noise reduction 3D preferable
- Video streaming Dual Streaming or more
- Resolution and frame rate
- Maximum resolution 2048x1536 with maximum
- frame rate 30fps
- Interface RJ-45 (10/100Base-T) or more
- Power Source DC 12V/AC 24V, PoE (IEEE 802.3af Class3)
- Memory card
- Special feature DDNS support for smart phone(iphone, android, windows phone). DDNS access should be provided in the supply of the project.
- Audio Input 1 channel RCA or more
- Audio output 1 channel RCA or more
- Alarm In 1 or more
- Alarm out 1 or more
- Audio compression G.711a/G.711u or higher desirable

Supported web browser for remote viewing etc.

Windows Microsoft internet explorer 10.x or later, Firefox, Safari, Google Chrome. The camera on its web GUI should provide facility to initiate video recording and audio recording (if activated) even without Video Management Software.

- Protocol

It should support following protocols-

Ipv4/Ipv6, HTTP, HTTPS, SSL, TCP/IP, UpnP, ICMP, IGMP, SNMP, RTSP, RTP, UDP, SMTP, NTP, DHCP, DNS, PPPOE, DDNS, FTP, IP Filter, ONVIF Ver 2.0

- Back Focus mechanism

The network camera shall offer Hardware based back focus mechanism for adjustment through web browser or Video Management System (VMS) software (Desirable)

Security IP Address filtering

- Image Setting

Brightness, contrast, saturation, sharpness, Anti Flicker, White Balance, Shutter Speed, BLC, HLC, mirror, Flip

Operating temperature -10°C to +50°C or better

- Whether proof and vandal proof standard

IP 66 rated weather proofing standards and IK10 vandal proof standard external housing.

- Certification UL, CE, FCC, RoHS and ONVIF

C/CS Mount Lens Specification

- 1 Image size 1/3"
 - 2 Focal length (mm) 5 ~ 50mm
 - 3 Max. Aperture F1.4
 - 4 Mount C/CS
 - 5 Lens Control
- Focus: manual
Iris: Auto (DC drive)
Zoom: Manual

Outdoor Housing Specification

- 1 General Aluminum (case)
- 2 Operating Temperature Set: -10°C~+50°C
- 3 Ingress Protection IP66
- 4 Vandal Resistance IK10
- 5 Humidity ≤90%RH

- 6 IR Distance Inbuilt IR for 30 meters or more
- 7 Power Supply AC24V/2.5A or as per requirement

2. IP Speed Dome PTZ Camera with 2 MP CMOS sensor

Feature Description

- 1 Imaging device / sensor 1/3" CMOS with minimum effective pixels 1920(H) x1080(V) progressive scan or Higher
- 2 Minimum illumination Color: 0.3 Lux@F1.6; B/W: 0.01Lux@F1.6 or better
- 3 Electronic Shutter 1/1 to 1/10000s or better
- 4 White balance Auto
- 5 Zoom 30X optical and 12X digital or better
- 6 Focal length 4.3 mm~129mm or with better range
- 7 Pan and Tilt Coverage Pan @ 0°~360° endless, / Tilt @ 0-180°(approx.) Auto Flip 180°
- 8 Pan and Tilt speed Pan 160°/s and Tilt 120°/s or better
- 9 Presets Mini. 200 Presets
- 10 Intelligent Zoom It should Zoom only clicked Part of the frame through computer mouse(preferable)
- 11 S/N ratio more than 50 db or better
- 12 Video compression H .264/MJPEG (or more Formats)
- 13 Video streaming Two Streaming or more
- 14 Resolution and frame rate Support Video resolution 1080P (max. 30fps)
- 15 Privacy mask Minimum 2 areas
- 16 Day & Night Auto
- 17 Audio Yes with preferably compression
- 18 Networking Interface 1 x RJ-45 (10/100Base-T)
- 19 Power Source AC 24V
- 20 Security User account and Password protection
- 22 Integrated IR up to 100 meter
- 23 Memory card
- 24 Operating temperature -10°C to +50°C
- 25 Noise reduction 2D and 3D
- 26 Remote Operation Monitor, PTZ Control, Voice Intercom, System setting, Playback, File Download, Log Information, Maintenance & Upgrade
- 27 EIS Should Support EIS, Defog(preferable)
- 28 Focus Auto Focus
- 29 Auto Tracking Yes
- 31 WDR It shall have Digital Wide Dynamic Range feature min. 97 db
- 32 Date and Time stamping Camera should support date and time stamping on the footage
- 33 Tour 5 Auto pattern, 8 Auto tour, 5 Auto scan
- 34 Protocol

It should support following protocols-

ICMP, IGMP, SNMP, RTSP, RTP, UDP, SMTP, NTP, DHCP, DNS, PPPOE, DDNS, FTP, IP Filter, ONVIF Ver 2.0

35 Alarm Minimum 4 input and 2 output

36 Audio compression G.711a/G.711u or higher

37 In camera Video Analytics Motion detection, tampering, virtual line, Disappear

38 Supported web browser for remote viewing etc.

Windows Microsoft internet explorer 10.x or later, Firefox, Safari, Google Chrome. The camera on its web GUI should provide facility to initiate video recording and audio recording (if activated) even without Video Management Software.

39 Whether proof standard IP 66 rated whether proofing standards

40 Certification UL, CE, FCC, RoHS and ONVIF

3. Fisheye Camera

Feature Description

- Ultra HD 12 MP (4K) 25 fps image with a 1/1.7" 12 megapixel sensor
- Digital WDR (DWDR) to ensures glare-free images
- True Day/Night capabilities with IR cut filter
- Image dewarping
- low-light performance with 3D noise reduction, saving storage and bandwidth together with H.265 Profile codec
- 1.98 mm, F2.8, fixed fisheye lens
- H.265, H.264 and MJPEG codec, triple stream support
- IR LEDs of 8 m (25 ft) of illumination
- Smart IR technology
- Waterproof (IP67) and IK10 impact-resistant camera housing
- working temperature of -30 °C to 60 °C
- ONVIF Profile
- Compatibility with most NVRs

4. LAN Cable

Feature Description

1 Type Cat-6 STP cable of reputed make

2 Distribution Infrastructure CAT-6 STP cable should be used for camera termination. Both ends should have STP I/O's and the Patch Cords should be pre-molded, factory connectorised & of reputed make.

3 Marking All cables, patch cords should be marked properly.

4. the quantity of required cable shall be priced as per 100m roll.

5. Power Cable

Feature Description

- 1 Type 3 Core Power Cable of reputed brand
- 2 Cable Type Minimum 1.5 Sq mm Copper wire

6. Earthing

- One Chemical Earthing is to be provided at control room for the safety of the equipments.
- Earthing should provide less than 2 Volts between Earth and Neutral point.

7. Specifications for Video Wall with Controller

Feature Description

- 1 Size Min 47" LED in 3x2 Matrix
- 2 Bezel to Bezel width Max 5 mm
- 3 Resolution Full HD 1920 X 1080 resolution@ 60 Hz
- 4 Contrast Ratio 1,200:1 (4500:1)
- 5 Response Time 12 ms
- 6 Brightness Minimum 450 cd/sq m
- 7 Colour Depth 1.06 Billion
- 8 Aspect Ration 16:9
- 9 Viewing Angle (VxH) 178 X178 Degree
- 10 Interface - Input HDMI, DP, DVI-D, RGB and Audio In
- 11 Interface - Output Out Put : DVI
- 12 USB Support Yes. Movie & Jpeg
- 13 Performance 24X7 operations guaranteed
- 14 Surface Anti glare
- 15 Life Time 50,000 Hours or more

8. Specifications for Poles

It is need based. Poles should be of appropriate heights and installed properly at each location ensuring optimum performance of these cameras and network connectivity. All items should be industry grade, GI coated, weather and lightening proof with appropriate earthing.

9. Surge and Data Protection -

AC Power supply at each camera end and at Control Room should have the Surge Protectors
At Each Camera RJ 45 data surge protector should be installed.

10. Specification of LED Screen (Industrial Grade)

Feature Description

- 1 Size 42" LED
- 2 Resolution Full HD 1920 X 1080 resolution
- 3 Contrast Ratio 1,100:1
- 4 Response Time 12 ms
- 5 Aspect Ratio 16:9
- 6 Viewing Angle (VxH) 178 X178 Degree
- 7 Motion Picture Updating Rate
Minimum 100 Hz
- 8 Interface - Input HDMI, DP, DVI-D, RGB and Audio In
- 9 Interface - Output Out Put : DP, External Speaker Audio Out
- 10 USB Support Yes. Movie & Jpeg
- 11 Performance 24X7 operations guaranteed
- 12 Audio Support Yes, Inbuilt Speaker
- 13 Surface Anti glare

11. Outdoor Box

All the junction box should be IP66 Type with protection from rain and water should have proper protection. It should have sufficient space for all required accessories.