

TECHNICAL SPECIFICATIONS FOR CCTV SYSTEMS

Material specification CAMERA

Indoor IR Dome Varifocal Camera , IP Indoor IR Dome Fixed Camera, IP Outdoor IR Bullet Varifocal Camera		
Sr.No.	Feature	Vendor Compliance (Yes/No)
1	The camera shall incorporate a 1/2.8" progressive CMOS/MOS sensor	Yes
2	The camera shall support 1280(H) x 960(V) pixels effective with 2.8 mm lens (2048 x 1536)	Yes
3	The camera shall have a minimum illumination of 1 lux in color mode.	Yes
4	Supported Resolution shall be 1280 x 960 at 25 fps and 720p at 30 fps or better (2048 x 1536)	Yes
5	The Camera shall use H.264/H.265 and MJPEG compression.	Yes
6	Camera should support minimum simultaneous MJPEG and two independent H.264/H.265 high profile streams which are different resolutions	Yes
7	Camera shall incorporate bandwidth management per stream by selecting the particular area in the given field of view of camera to enhance bandwidth optimization.	Yes
8	Angular field of View of camera shall be Horizontal : 185 deg or more	Yes
9	The camera shall feature to transform shadows and dark areas into natural and crisp images in real time.	Yes
10	The camera shall reproduce The camera shall also feature intelligent digital back light compensation, digital wide dynamic range circuit, digital noise reduction and electronic sensitivity-up for real surveillance purposes under severe conditions.	Yes
11	The power source for the camera shall be PoE IEEE 802.3af (2.8W) compliant power device.	Yes
12	The camera shall be able to support uni-cast and multi-cast transmissions.	Yes

13	The camera shall have a built-in web server so that access to the IP video stream can be obtained using Internet Explorer Version 6.0 or better.	Yes
14	The Bandwidth Limit shall be adjustable to from 64 kbps to 4096kbps or unlimited.	Yes
15	The camera shall be capable of being configured to automatically transmit alarm images transfer via FTP file transfer and/or e-mail. In addition the camera shall support the scheduled transfer of image data via FTP to an FTP server.	Yes
16	The camera shall support following protocols: TCP/IP, UDP/IP, HTTP, RTSP, RTP, RTP/RTCP, FTP, SMTP, DHCP, DNS, DDNS, NTP and SNMP.	Yes
17	The camera shall support IPV4 and IPV6 network addressing.	Yes
18	The camera shall be capable of operating at an Ambient Temperature of 0 degrees C ~ +40 deg Celsius and IP66 rated	Yes
19	Safety/Regulation: CE/FCC	Yes
20	Approve make : Hikvision, Panasonic, Honeywell	Yes
21	The bidders have to submit project specific manufacturer authorization letter (MAF) stating support and right to bid on OEM's behalf for this project. Generic MAF will not be acceptable. Bidders failing to submit the MAF are liable for disqualification.	Yes

Material

Rack mountable 1.5U NVR: Supports up to 32 cameras at 1080p resolution video recording & video playback at real time, with 4 SATA HDD capacity, HDMI & VGA output

Video Recording Hardware		
Sr.No.	Feature	Vendor Compliance (Yes/No)
1	Main Processor : Dual Core	Yes

2	O.S. : Linux/Windows	Yes
3	Should support min 32 IP cameras	Yes
4	Audio : 1channel Input (RCA), 1channel Output (RCA)	Yes
5	Display Interface : 1 HDMI,1 VGA	Yes
6	Display Resolution: 1920 × 1080, 1280 × 1024, 1280×720 1024×768	Yes
7	OSD : Camera title, Time, Video loss, Camera lock, Motion detection, Recording	Yes
8	Compression: H.264/H.265 MJPEG	Yes
9	Resolution: 3Mp (2048 × 1536) / 1080p (1920 × 1080) / 720p (1280 × 720) / D1 (704 × 480) / VGA (640 × 480) / CIF (Yes
10	Record Mode: Manual, Schedule {Regular (Continuous), VMD, Alarm}, Stop	Yes
11	Recording Interval : Recording duration: 1~120 min (default: 60 min), Pre-record: 1~30 sec, Post-record: 10~300 sec	Yes
12	Alarm Action:Recording, PTZ, Tour, Alarm, Video Push, Email, FTP, Buzzer & Alarm pop-up	Yes
13	Analytics: Video Motion Detection, Video Loss & Camera Blank	Yes
14	Alarm Inout : 4 channel Relay Outputs : 2 channel	Yes
15	Search Mode: Time/Date, Alarm, VMD & Exact search (accurate to second), Smart search	Yes
16	Playback : Play, Pause, Stop, Rewind, Fast play, Slow play, Next le, Previous le, Next camera, Previous camera, Full screen, Repeat, Backup selection, Digital zoom	Yes
17	Backup mode: USB device/Network	Yes
18	Ethernet: 1RJ45 port(10/100/1000Mbps)	Yes
19	Network function: HTTP, TCP/IP, IPv4/IPv6, UPnP, RTSP, UDP, SMTP, NTP, DHCP, DNS, IP Filter, PPPoE, DDNS, FTP, Alarm Server	Yes
20	Max Users : 120	Yes
21	Smart Phone Support should be available	Yes
22	Internal HDD : upto 8TB with min 2 slots	Yes
23	External Interface :	Yes

	USB :2 ports (1 Rear USB3.0,1 Front USB2.0) RS232: 1 port, For PC communication & Keyboard RS485: 1 port, For PTZ control	
24	Safety / EMS Standard : Safety -CE, IEC60950-1 EMC-55022 Class B, EN55024	Yes
25	Operating Temp: -10°C ~ +55°C / Operating Humidity: 10% ~ 90%RH	Yes
26	Approve make : Hickvision, Panasonic, Honeywell, HP, IBM	Yes
27	The bidders have to submit project specific manufacturer authorization letter (MAF) stating support and right to bid on OEM's behalf for this project. Generic MAF will not be acceptable. Bidders failing to submit the MAF are liable for disqualification.	Yes

Client PC		
Sr.No.	Feature	Vendor Compliance (Yes/No)
1	Intel Core i7 or higher	Yes
2	8 GB of RAM DDR3,	Yes
3	4 SATA HDD hard drive (8TB SATA)	Yes
4	1 GB PCI-Express x16 dual-head video adapter, 100/1000 Ethernet Network Interface Card	Yes
5	16x DVD+/- RW Drive along with appropriate Operating System	Yes
6	Approve make : HP, Dell	Yes
42"LED		
Sr.No.	Feature	Vendor Compliance (Yes/No)
1	Type : LED	Yes
2	Size : 42" Flat Screen at high resolution	Yes
3	16:9 Aspect control	Yes
4	Viewing Angle : 178 deg	Yes
5	Resolution : 1920 x 1080 Full HD IPS LED	Yes

6	Input : Composite video / AV/ VGA/HDMI	Yes
7	Contrast Ration: 20000: 01	Yes
8	Approved Make: Samsung, Sony, Panasonic	Yes

Material

24p 10/100/1000 MBPS PoE Network Layer 2 manageable Switch

28 port 10/100 L2 managed POE switch with 4 nos 10/100/1000 gigabit ports (if required)			
S.N.	Features	Required Parameter	Vendor Compliance (Yes/No)
1	10/100 base port	28	Yes
2	10/100/1000 T port	2	Yes
3	Combo 10/100/1000T/SFP port	2	Yes
4	Switch capacity	17 Gbps	Yes
5	Flash	16MB	Yes
	CPU Memory	128MB	
6	POE Power	375W	Yes

7	Certifications	UL (UL 60950), CSA (CSA 22.2), CE mark, FCC Part 15 (CFR 47) Class A	Yes
15	Approved Make	Cisco, Avaya, HP	Yes

Material

12u Network / AV Rack

- It should be able to house all the network switches and recording hardware.
- Approved make : Valrack, APW, Rittal

Material

LAN cable of following size in existing pipe as per direction'[C]

CAT - 6

CAT 6 UTP Cables			
Sr. no.	Parameter	Tender requirement	Vendor Compliance (Yes / No)
1	ISO/IEC-11801 (2 edition) Class D, UL-94V0 rated plastics, RoHS compliance, ANSI/TIA/EIA-568-B.2-1 Category 6, Extrapolates up to 600 Mhz	Must Comply	Yes
2	Outer diameter: 6.0mm	Must comply	Yes
3	Cable shield	Unshielded	Yes
4	Number of conductors	8	Yes
5	Stranding	4 twisted Pair	Yes
6	Conductor type	23AWG bare annealed copper	Yes
7	Cable jacket material	PVC	Yes

8	Approved Make	Cisco, R & M, Nortel, 3Com,Digilink	Yes
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Material

PVC Conduit

- 25mm ISI mark
- Approved make : BPE or Equivalent