

# University of Kalyani



## Centre for Information Resource Management

### NOTICE INVITING QUOTATIONS

Ref. No. KU/INVC/CCTV-Sys./2024

Date: June 25 2024

Sealed quotations are invited from reputed vendors for supply & Installation of CCTV System in the S.N. Bose Innovation Centre, the specification (Annexure-I) of which is furnished below:

Sl. No.	Description of Items	Quantity	Remarks(if any)
01.	Camera ( Dome + Bullet)	(10+1) Nos.	Sealed Quotation be submitted to the CIRM, University of Kalyani,, Kalyani, Nadia 741235, West Bengal
02.	NVR with 2TB HDD	01 Nos.	
03.	16 Port PoE Switch	01 No.	
04.	Cat-6 UTP Cables	01 Box.	
05.	2U Rack	01 No.	
06.	LED Monitor 22 inch with Clamp	01 No.	
07.	Cable Laying ISI Mark PVC Casing and Installation with Supporting accessories	LUMSUM	

The above notice may be downloaded from University website [www.klyuniv.ac.in](http://www.klyuniv.ac.in).

Last Date of receiving quotations: 05<sup>th</sup> July, 2023 up to 4 p.m.

Quotation must be made by the bidders in their official pad/letter head and be submitted to the following address:

Centre for Information Resource Management, Kalyani-741235, Nadia, West Bengal

#### Terms & Conditions:

- Bidders are requested to quote item- wise as far as possible putting rates of the items separately. Other Costs (if any) like taxes, duties, installation cost must be mentioned separately in the quotation. **Bidder must mention the make and model number of the item distinctly while quoting for any item. If possible, bidder must enclose relevant documents including brochure of the quoted item along with its technical specification with model and make. The manufacturer of the items must have National and International repute, having experience of selling similar items to Govt. or Govt. aided Educational Institutions and organizations. Further, the manufacturer must have satisfactory service centre base in Kolkata and its surrounding areas.**

- **Bidder must provide OEM Authorization Certificate.**
- **Tender Specific Technical Compliance with warranty Certified by OEM Letter Head as per Tender Specification.**
- Bidders must submit valid documents as to Trade License, IT, GST, Manufacturing documents (if any) and credential documents for supplying similar type of items.
- In case of any dispute, University decision be taken as granted and all disputes are subject to Kolkata Jurisdiction only.
- Purchaser enjoys the right to select the vendor without assigning any reasons thereof to any bidder and lowest quotation does not ensure any guarantee for awarding purchase order.
- Purchaser may take decision for not buying any or all the items as stated hereinabove due to the fund constraint or for other issues.
- Purchaser also possesses the right to take decision on relaxation of any clause as stated above in case of need for selecting suitable and responsive vender without compromising the quality of the items as mentioned above.

**Sd/-**  
**System-in-Charge**  
**Centre for Information Resource Management**  
**University of Kalyani**

## Annexure-I

### Technical Specification of CCTV System

#### A. Camera Specification:

<b>Image Sensor</b>	1/2.8" 2MP Progressive scan CMOS (0.9071 centimeters)
<b>Minimum Illumination</b>	0.01Lux@F2.0
<b>Effective Pixels</b>	1920(H)x1080(V)
<b>Body Type</b>	Dome
<b>Shutter Speed</b>	Auto/Manual, 1/3~1/100000s
<b>White Balance</b>	Auto/natural/street lamp/outdoor/manual/regional custom
<b>Lens</b>	3.6mm fixed lens (2.8mm optional)
<b>Max Aperture</b>	F2.0
<b>Gain Control (AGC)</b>	Auto/Manual
<b>Lens Type</b>	Fixed
<b>S/N Ratio</b>	>56dB
<b>DORI Distance</b>	3.6mm– 49.7m (Detect) 19.9m (Observe) 9.9m (Recognize) 5m (Identify) 2.8mm– 38.6m (Detect) 15.4m (Observe) 7.7m (Recognize) 3.9m (Identify)
<b>Video Compression</b>	Instastream/ H.265/Smart H.264+/H.264/ H.264B/ MJPEG (only supported by the sub stream)
<b>Angle of View</b>	3.6 mm: Horizontal: 84°; Vertical: 45°; Diagonal: 100° 2.8 mm: Horizontal: 102°; Vertical: 54°; Diagonal: 120°
<b>Back Light Comp.</b>	BLC/ HLC/ DWDR
<b>Frame Rate</b>	Main Stream: 1920 × 1080 (1 fps–25/30 fps) Sub stream: 704 × 576 (1 fps–25 fps) 704 × 480 (1 fps–30 fps)
<b>Resolution</b>	2MP (1920 × 1080); 1.3MP (1280 × 960);720p (1280 × 720); D1 (704 × 576/704 × 480); VGA (640× 480); CIF (352 × 288/352 × 240)
<b>Motion Detection</b>	Off / On (4 area, Rectangle)
<b>Privacy Mask</b>	4 areas
<b>ICR</b>	Auto(ICR)/Color/B/W
<b>ROI</b>	Yes (4 areas)
<b>Bit Rate</b>	H.265: 12 Kbps–6144 Kbps H.264: 32 Kbps–6144 Kbps
<b>Protocol</b>	IPv4; IPv6; HTTP; TCP; UDP; ARP; RTP; RTSP; SMTP; FTP; DHCP; DNS; NTP; Multicast; ONVIF (Profile S/Profile T); CGI; P2P; Genetec
<b>Ethernet</b>	RJ-45 (10/100Base-T)
<b>User Account</b>	6 Users
<b>Smart Phone</b>	iPhone, iPad, Android Phone
<b>IR Range</b>	IR Range of 30 Mtr., Smart IR
<b>Operating Temperature</b>	-40°C to +60°C (-40°F to +140°F)/less than ≤ 95%
<b>Power Source</b>	DC12V, PoE (802.3af)
<b>Power Consumption</b>	1.4W (12V DC); 2.2W (PoE)

<b>Weatherproof Standard</b>	IP67
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## B. 16 Channel NVR Specification:

<b>Processor</b>	Industrial-grade embedded processor
<b>Operating System</b>	Embedded LINUX
<b>IP Camera Input</b>	16 channel
<b>Two-way Talk</b>	1 Ch. audio in/1 Ch. out, RCA
<b>User Interface</b>	Web, Local, GUI
<b>Video Output</b>	1 × VGA, 1 × HDMI (simultaneous)
<b>Resolution</b>	12MP; 8MP; 5MP; 4MP; 3MP; 2MP; 720p; D1
<b>AI by Camera</b>	Perimeter protection; SMD Plus
<b>Video Compression</b>	H.265/Smart H.264+/H264
<b>Encode Strategy</b>	Instastream
<b>AI by Device</b>	n/a
<b>Video Display Split</b>	1/4/8/9/16
<b>Audio Compression</b>	PCM; G.711A; G.711U; G.726
<b>Decoding Capability</b>	1-channel 12MP@30 fps; 1-channel 8MP@30 fps; 2-channel 5MP@30 fps; 3-channel 4MP@30 fps; 6-channel 1080p@30 fps
<b>Audio Output</b>	1 channel
<b>Audio Input</b>	1 channel
<b>Camera Blank</b>	Supports
<b>Motion Detection</b>	MD Zones: 396 (22 × 18)
<b>Video Loss</b>	Supports
<b>Alarm Linkage</b>	Recording; snapshot; buzzer; log; preset; email; tour
<b>AI Search</b>	n/a
<b>General Alarm</b>	Motion detection; privacy masking; video loss; PIR alarm
<b>Smart Phone</b>	iPhone, iPad, Android Phone
<b>Abnormal Alarm</b>	Camera offline; storage error; disk full; IP conflict; MAC conflict; login lock; cyber security exception
<b>Hard Disk</b>	1 SATA III ports, up to 16 TB for a single HDD. The maximum HDD capacity varies with environment temperature
<b>Recording Mode</b>	Manual record; alarm record; motion detection record; schedule record
<b>Backup Mode</b>	USB device
<b>Playback</b>	1. Play; pause; stop; fast forward; fast backward; rewind; play by frame 2. Full screen; backup (video clip/file); partially zoom in; audio on/of
<b>Record Interval</b>	n/a
<b>Ethernet</b>	1 × RJ-45, 10/100Mbps self-adaptive Ethernet port
<b>Interface Ports</b>	2 USB Ports (1 × front USB2.0; 1 × back USB2.0)
<b>Protocols</b>	HTTP; HTTPS; TCP/IP; IPv4; RTSP; UDP; NTP; DHCP; DNS; SMTP; UPnP; IP Filter; DDNS; Alarm Server; InstaOn Cloud; ONVIF (profileT/S/G); CGI; SDK
<b>Power Supply</b>	12V DC, 1.5A

<b>Power Consumption</b>	Total output of NVR is $\leq 10$ W (without HDD)
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### C. 16 Port PoE Switch Specification:

<b>PoE Ports</b>	16 PoE Ports
<b>Network Port</b>	16 x 10/100 Mbps Base-TX RJ45 ports (Data/Power) 2 x 10/100/1000 Mbps Base-T RJ45 ports (Data) 1 x 10/100/1000 Mbps Base-X SFP port (Combo)
<b>LED light</b>	16 x Link/Act LEDs 1 x G1 LED 1 x G2/SFP2 LED 1 x PoE-MAX LED 1 x Power LED
<b>PoE Standard</b>	IEEE802.3, IEEE802.3u, IEEE802.3ab, IEEE802.3z, IEEE802.3x, IEEE802.3af/at
<b>Switch Capacity</b>	7.2 Gbps
<b>Input Voltage</b>	100-240V/50-60Hz
<b>PoE Power Supply</b>	Ports 1-16 support standard IEEE802.3af/at 30W output per PoE port 130W output of the total PoE Power
<b>Forwarding Rates</b>	5.36 Mpps
<b>Power Consumption</b>	150W output the whole device
<b>MAC Address List</b>	4K
<b>Four Modes</b>	Standard: Default mode of the switch. In this mode, it works as an unmanaged switch; all ports can communicate with each other separately. Priority: In this mode, port G1 and G2/SFP2 serve as uplink ports, ports 1 – 8 serve as high priority port. All ports can communicate with each other separately. Extend: In this mode, data rate of ports 9 - 16 reduces to 10 Mbps, the maximum transmission distance can be 250 meters, and all ports can communicate with each other. VLAN: In this mode, ports 1 - 16 of the switch can communicate with port G1, G2/SFP2 separately, but cannot communicate with each other. You can enable this mode to reduce broadcast storm and isolate DHCP broadcast.
<b>Lightning Protection</b>	$\geq 6$ KV
<b>Operating Temperature</b>	0°C ~ 45°C (32°F ~ 113°F)

### D. 8 Port PoE Switch Specification:

<b>Network Port</b>	8, 10/100Mbps; RJ45 ports; Max. 30W Output of Single PoE Port
<b>Uplink Ports</b>	2, 10/100Mbps; Transmission Distance: Default: 0-100m
<b>Switch Capacity</b>	2Gbps (non-blocking)
<b>Forwarding Rates</b>	0.1488 Mbps/port
<b>PoE Standard</b>	IEEE802.3/802.3u/802.3x
<b>PoE Power Supply</b>	1/2(+),3/6(-)
<b>Transmission Distance</b>	0-100m/100Mbps or Max. 250m/10Mbps via Cat.5e or more under Extend mode
<b>MAC Address List</b>	2k
<b>Lightning Protection</b>	Support
<b>PoE Power Budget</b>	96W
<b>ESD Protection</b>	Air discharge: 8KV Contact discharge: 6KV

<b>Power Consumption</b>	<5W
<b>LED light</b>	Light on: Powering Light off: No Power
<b>Power Source</b>	Built-in Power Supply, Input: 100-240V AC, 50/60Hz
<b>Power Light</b>	Green light off: Normal/Default mode Green light on: VLAN mode Green light flash: Extend mode
<b>Working Temp</b>	-20°C ~50°C

### E. Cat-6 UTP Cables Specification:

<b>Cat-6 UTP Cables</b>	<p>Category 6 Unshielded Twisted Pair 4 pair 100 Ohm cable shall be compliant with ANSI/TIA/EIA-568-B.2-1 up to 600 Mhz. Category 6 UTP cables shall extend between the work area location and its associated telecommunications closet and consist of 4 pair, 23 AWG, UTP Non Plenum cable jacket. The 4 pair Unshielded Twisted Pair cable should be UL Listed and ETL Certify. Zero-Bit error throughput test as per IEEE standards verified by ETL The 4 pair Unshielded Twisted Pair cable should be RoHS Compliant. Construction: 4 twisted pairs separated by internal X shaped, 4 channel, full separator. Half shall not be accepted. Conductor Solid Copper Insulator Polyethylene Delay Skew : 35 ns MAX Jacket PVC Attenuation : 22.8dB/100m at 250MHz, 29.4dB/100m at 400MHz, 39dB/100m at 600MHz</p>
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### E. Wall Mount Rack Specification:

<b>2U Wall Mount Network Rack</b>	<p>Type: 2U Wall Mount Network Rack  Cooling: Roof mounted fan housing units with exhaust axial type fans of 2U rack mounted fan trays with 2/4 fan capacity to take care of heat pockets at specific locations. These units can be mounted anywhere all along the height of the cabinet.  Power Module : These are required to mount rack mount equipment's onto the cabinet</p>
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