

**Tender Document : supply, installation, commissioning and maintenance of
CCTV IP Cameras at different locations in NITK.**

Tender Notification : 593/CCTV/2018-19/DM

NITK Surathkal , Srinivasnagar PO,

Dakshina Kannada District

Karnataka PIN 575025

Notice Inviting Tender

Supply, Installation, commissioning and maintenance of CCTV IP Camera equipment and accessories for the Surveillance of LECTURE HALL COMPLEX A,B,C

Office of The Resident Engineer

Updated on : 08/03/2019

Tender Notification	593/CCTV/2018-19/DM
Estimated amount put to Tender	Rs 20 lakhs
E M D Amount	Rs 40,000.00
Time for Delivery	Within 15 days of issue of Purchase Order
Last Date for submission of tender	08/04/2019 before 3:00 PM
Address for Submission of Tender	Office of the Resident Engineer, National Institute of Technology Karnataka Post Srinivasnagar, Surathkal, Mangaluru – 575025
Date of opening of technical bid	09/04/2019 at 10:00 AM (if possible)
Date of opening of financial bid	Intimated later to the technical qualified bidders.



NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA, SURATHKAL
OFFICE OF THE RESIDENT ENGINEER
NOTICE INVITING TENDER (N.I.T)

Tender Notification: 593/CCTV/2018-19/DM

Date: 08/03/2019

National Institute of Technology Karnataka, Surathkal (in short - NITK, Surathkal; hereinafter referred as the “Institute”) is an autonomous Educational Institute of the Ministry of Human Recourses Development, Government of India, imparting technical and science education engaged in Research Activities. National Institute of Technology Karnataka, Surathkal is one of the “Institutes of National Importance” notified by the Govt. of India under the NIT Act – 2007 (Act No. 29 of 2007).

It is proposed to install 63 nos of CCTV cameras with all associated works at different locations of LECTURE HALL COMPLEX A, B, C of the institute. In this connection Sealed Tenders are invited for the following services in two cover system (i.e., Technical bid and financial bid) subject to the following terms and conditions, from the intending bidders to reach this office on or before scheduled date and time. The tender (Technical bid) will be opened on the specified day in the presence of bidders or their authorized agents who may choose to be present. The financial bid of only such bidders whose technical bid is accepted shall be opened later similarly on a pre-informed date

Note: Bids will NOT be received after the deadline that mentioned in the NIT. Bidders are hereby advised to ensure that their bids reach the address as mentioned above well before the deadline.

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Resident Engineer

NITK, Surathkal

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1. Introduction

➤ **Objective:** Sealed Tenders are invited from intending bidders for the **supply, Installation, commissioning and maintenance of CCTV IP Camera** equipment and accessories for the Surveillance of different locations of **LECTURE HALL COMPLEX A,B,C** of the institute. The CCTV shall run 24x7 and Cameras are to be placed such a way that it should cover the approach areas at the entry and exit points' up to a distance of forty six meters. CCTV footage are to be preserved for a minimum period of 30days.

The set-up must be compliant to the Karnataka Public Safety (Measures) Enforcement Act 2017 (Karnataka Act No 44 of 2017) and its subsequent amendments if any.

➤ **Procedure:** A **two-stage** procedure will be adopted for evaluation of tenders submitted in response to this Notice Inviting Tender. Minimum qualification or background in terms of revenue, work experience and technical expertise expected from the bidder to participate in the bidding process shall be as given elsewhere in this document.

➤ The **commercial bid** shall contain the financials pertaining to CCTV for **supply, Installation, commissioning and maintenance of CCTV IP Camera** equipment and accessories for the Surveillance of different locations of **LECTURE HALL COMPLEX A, B, C** of the institute. Commercial bid of only those bidders who pass the technical bid evaluation shall be considered for financial evaluation.

➤ **Successful bidder** shall be that bidder who has submitted the lowest qualified bid.

2 How to Submit

Both the Envelope No. 1 and 2 should be kept in another separate envelope duly superscripted with the following details.

➤ Tender Notification Number: 593/CCTV/2018-19/DM

➤ ITEM: **Supply, Installation, Commissioning and maintenance of CCTV IP Camera** equipments and accessories for the Surveillance of different locations of **LECTURE HALL COMPLEX A, B, C** of the institute.

➤ Mention KIND ATTENTION: Resident Engineer PH: 0824 2473033 and submit at the address given in the Notice Inviting Tender.

Last Date for submission of tender: 08/04/2019 before 3:00 PM

Note: NITK Surathkal will not be responsible for non-receipt /non-delivery of the bids due to wrong addresses / postal delays / courier delays or any other similar reasons.

3 Submitting the bids

The bid should be submitted in two cover system — Technical Bid and Financial Bid as given below.

- **Technical Bid:** The bidder should give details of their technical soundness and provide list of customers of previous services to Universities, Institutes or Government Departments/ Undertakings/ public sectors with contact details. The details of the bidder/ profile should be furnished along with the copy of all related documents. This envelope should be sealed and duly super-scribed as Envelope No. 1: Technical Bid. Full name and address of the agency should also be mentioned on envelope and should be addressed to Office of the Resident Engineer, National Institute of Technology Karnataka Post Srinivasnagar, Surathkal, Mangaluru – 575025 [DK].
- EMD in original form valid for minimum six months, through Bank Guarantee or Demand Draft only drawn on any scheduled bank in favour of **Director NITK**, Surathkal, payable at Surathkal should be submitted. EMD shall bear no interest. Any bid not accompanying with EMD is liable to be treated as non-responsive and rejected except for those firms who are eligible for exemptions as per existing rules.

In case the Bidder claims for waiver of EMD, he/she shall provide documentary proof of being registered with the Central Purchase Organization, National Small Industries Corporation (NSIC)/MSME or the concerned Ministry or Department as per Rule 156 of GFR 2017, of Government of India, as amended from time to time. The registration must remain valid till the Bid Validity period

- **Commercial bid:** The bidder should submit their financial bid in Envelope 2 as per the price schedule format given in Section 12 in the page 18 to 21 of this document. The rate should be quoted both in words and figures. All the pages of the financial bid should be signed affixing the seal. All corrections and overwriting should be initialled. This envelope should be duly superscribed as **Envelope No. 2: Financial bid**. Full name and address of the agency should also be mentioned on the envelope and should be addressed to The Resident Engineer, National Institute of Technology Karnataka Post Srinivasnagar, Surathkal, Mangaluru – 575025.

4. The calendar of events of e-Tender is as follows:

- Date for viewing the tender document in website : 08-03-2019 onwards
- Start date for submission of tender document : 09-03-2019 10:00hours
- End (close) date for the submission tender : 08/04/2019 before 3:00 PM
- Tender opening date (technical bid) : 09/04/2019 before 10:00 AM (if possible)

5. MINIMUM BIDDER ELIGIBILITY CRITERIA FOR QUALIFYING TECHNICAL BID.

- **The Bidder should be registered under Indian law as a business entity. (Copy of documents such as registration under shops and commercial establishments or similar).**
- The Bidder must possess GST registration – self attested copy should be attached.
- The Bidder must possess PAN registration with Income Tax department self-attested copy should be attached.
- The bidder must have the experience of having **successfully completed** similar work as follows during the past seven financial years ,in any Central Government department/ State Government department/Central or State Government undertakings/ Central or State government autonomous bodies/Public or Private Sector Units/ Private firms Central Government department/ State Government department/Central or State Government undertakings/ Central or State government autonomous bodies/Public or Private Sector Units/ Private firms:
 - **At least three single similar works, each work consisting of not less than 25 nos of IP based Cameras in CCTV system and allied works” OR**
 - **Two similar works, each work consisting not less than 38 nos of IP based Cameras in CCTV system and allied works; OR**
 - **One similar work of not less than 50 nos of IP based Cameras in CCTV system and allied works.**

Similar work means: **Supply, Installation, Commissioning and maintenance of CCTV IP Cameras.**

Self-attested copy of Work Experience certificate issued from Central Government department/ State Government department/Central or State Government undertakings/ Central or State government autonomous bodies/Public or Private Sector Units/ Private firms (*with copy of TDS certificate in case of Private firms*) **should be submitted (BIDDER’S PARTICULARS Annexure I).**

- Authorization letter from original equipment manufacturer (OEM) in respect of system integration, warranty conditions and technical support for the CCTV system. OEM of

IP CAMERAS should be present/occupational in India for more than 10 years directly without Joint ventures.

However, this is not applicable to STARTUPS notified by the GO.I.

- The Bidder should not be blacklisted by any of the Government agencies. Declaration should be given by authorized signatory and undertaking in this regard must be submitted as per the format in Annexure-II.

6. Evaluation of Bids:

The evaluation of the Bids submitted shall be done in following two stages

- **Technical Evaluation:** The bids shall be opened in front of the bidders and technical evaluation shall be carried out to conform to tender requirements. The **technical bid** shall be evaluated in terms of matching specifications and qualifying terms for the bidders.
- **Commercial Evaluation:**
 - i. Only the technically qualified bidders shall be invited during opening of commercial bids and subsequently commercial evaluation shall be carried out.
 - ii. If any arithmetic discrepancies found in the commercial bid, then actual price will be derived based on the unit price quoted & taxes thereon. If there is any difference between price quoted in figures and words, then lowest among these shall be considered for determination of L1.
 - iii. Initial evaluation / comparison for various categories of items given in the Tender Document will be done on the basis of Gross Bid Value. The bid with lowest commercial Bid (L1) shall be considered for the award of contract.
 - iv. The bidder whose evaluated price is found to be lowest (L-1), shall be considered for placement of Work Order for supply and installation and maintenance of CCTV.

7. General Instructions:

- Incomplete or conditional tender will be rejected. A bidder must bid for all items specified in the schedule. Partial bidding will be treated as incomplete and the bid will be rejected.
- Validity of bids: The rate quoted should be valid for 90 days. No claim for escalation of rate will be considered after opening the Tender.
- **Release of EMD:** The EMD shall be released after receipt of performance guarantee from successful bidder
- **Performance guarantee:** The successful bidder shall deposit a performance guarantee of 5% of the quoted amount in the form of Bank Guarantee (in approved format) / Demand Draft / FDR of any scheduled bank drawn in favour of the **Director, NITK, Surathkal** payable at Surathkal, on intimation before executing the Contract Agreement.

- **Release of Performance guarantee:** P.G will be released after successful completion of the work and after receiving of the security deposit.
- **Security deposit:** The successful bidder shall deposit a further security deposit of 5% of the quoted amount in the form of Bank Guarantee (in approved format) / Demand Draft / FDR of any scheduled bank drawn in favour of the **Director, NITK, Surathkal** ,the security deposit will be released after completion of total warrant period.

➤ Clarification of Tender Document:

A prospective bidder requiring any clarification of the Tender Document may communicate in writing /telephone to re.electrical@nitk.edu.in / 0824 247 3033 on or before 08/04/2019 before 1:00 PM. The compiled response if any will be uploaded in the NITk website as an annex to the notification before the last date. There will not be an in-person pre-bid conference. No communication will be entertained after this specified date from the bidders or their principals until the tendering process is completed. Violation of this can result in bid rejection.

- The Institute may ask for clarifications if any during the technical evaluation and the bidders are expected to respond. Lack of response from them will enable the Institute to arrive at its own decision about such bids.
- Amendment of Tender document: At any time prior to the last date for receipt of bids, Institute reserves the right for any reason whatsoever, whether at its own initiative or in response to a clarification requested by prospective bidder, modify the Tender document by an amendment. Such amendments if any, shall be duly uploaded to the Institute website. The bidders are hereby advised to watch the Institute website for any such updates.
- Institute reserves the right to extend the last date for the receipt of bids at its own discretion.
- The bids shall be written in English language and any information printed in other language shall be accompanied by an English translation, in which case for the purpose of interpretation of the bid, the English translation shall govern.
- The Institute reserves the right to cancel or reduce the quantity included in the schedule of requirements at any time after acceptance of the tender without a notice. The Contractor/Supplier shall have no claim to any payment of compensation or otherwise whatsoever, on account of any profit or advantage which he might have derived from the execution of the work/supply in full but he did not derive in consequence of the foreclosure of the whole or part of the works/supply.
- In case of dispute, the matter will be subject to Mangalore Jurisdiction only.

8. PAYMENT TERMS:

- For supply , Installation, Commissioning and maintenance of CCTV IP Camera equipment and accessories for the Surveillance of different locations of **LECTURE HALL COMPLEX A,B,C** of the institute **part of work 90% of the value of work will be paid on successful completion of work, balance 10% will be released after completion of warranty period** (i.e one year from the date of commissioning)
- Maintenance charges will be paid to the successful bidder **on HALFYEARLY basis after deduction of applicable taxes as arrears.**

9. Warranty and Annual Maintenance:

- The entire CCTV System supplied and installed should be under **onsite warranty of five** years against all types of defects and deficiencies from the date of handing over of the system to NITK. Any defects found in the product/sub-product within the warranty period of 5 years shall be rectified/ replaced by the vendor free of cost. During this period of warranty, servicing at quarterly interval or earlier without any additional cost besides attending to call back services in case of break down shall be carried out free-of-cost. This includes replacement of parts and spare parts and any number of break down call.
- **After lapse of warranty offered by Manufacturer, CCTV camera with all its accessories will be on four-year maintenance, and the bidders should quote the rate in price bid. Maintenance charges will be paid to the successful bidder on HALFYEARLY basis after deduction of applicable taxes.**
- AMC shall be on-site comprehensive maintenance, which includes preventive as well as corrective maintenance. The firm awarded with the maintenance contract shall carry out preventive maintenance of equipment on quarterly basis/ as per requirement and shall maintain the proper record thereof.
- The comprehensive maintenance shall be carried out primarily at the premises of NITK on all working days during office hours or even beyond office hours or on holidays depending upon exigency of work as and when so required. In case, the service provider feels that the equipment cannot be repaired at site, they will carry and deliver the equipment at their own cost and get it repaired within 24 hours, failing which replacement shall be provided, or an amount of Rs.300 per day per CCTV shall be payable as compensation. The firm shall maintain proper service call sheets which will be duly signed by the Engineer and the concerned official of the department.
- The agency shall ensure that the equipment is retained in its original or higher configuration and form. In the event of any downward alteration to the equipment by the agency or any attachment made thereto, the agency shall pay for any

repair/replacement and adjustments required to restore the equipment to its original state. The faulty equipment parts replaced must be new and equivalent in performance of existing parts.

- It shall be ensured that all the equipment are operational under controlled power supply and all defective equipment if any shall be rectified/replaced without any additional cost to the NITK. The vendor will not raise any condition with regard to the working environments including voltage, earthing etc. for equipment covered under AMC.
- AMC shall cover each part of CCTV camera and accessories including plastic body and parts, replacement of any part necessary for keeping the CCTV system active and free from any defects/disturbance, any unscheduled call for corrective and/or preventive maintenance services, taking appropriate measures/steps in time to set right the malfunctioning of the CCTV of the system. Maintenance of the CCTV surveillance system includes Camera Visibility Test, NVR Recording, NVR Recording Test, NVR Settings Verification, and Disk Error Check. Replacement of CCTV Parts.
- The faulty equipment parts replaced must be new and equivalent in performance of existing parts. Replacement of cable/other equipment will not be covered in the event of fire/Natural calamity, vandalizing of equipment and its accessories.
- The firm will ensure 99% uptime for the entire equipment failing which compensation of Rs.200/- per day shall be sought /collected or adjusted from payments to be made.

10.Scope of Work:

- **Supply, Installation, Commissioning and maintenance of CCTV IP Camera** equipment and accessories for the Surveillance of different locations of **LECTURE HALL COMPLEX A,B,C** of the institute, Installation of **63** cameras at desired locations covering the entrance to all the floors
- Supply of items mentioned in BoM,
- **The equipment/materials should be under 5 year's comprehensive warranty(1 Year product and 4 years AMC) from the date of successful delivery & installation.**
- All cameras should be IP based.
- After completion of work the agency should submit the copy(soft/hard in autocad format) of actual network lay out of the cctv system to the resident engineer office.
- The IP Based Video Surveillance system shall be a Hybrid System with distributed architecture having control station at the administrative department/Security Office & Viewing facility at the security cabin.
- A network, comprising a 16-port and 8 port switches connected with CAT6, shall be laid for transmission of signal from cameras to the Control Stations. The Main Control Station shall for Video Storage and further Control.

- The proposed Solution should allow NITK officials to locally and centrally monitor its facilities from a remote location on a Portable/Fixed personal computer monitor.
- The Solution should capture, store, and analyze digital video images to enable central monitoring, increase operational efficiency, reduce liability, minimize risk and secure people & property.
- After commissioning the Video surveillance system, the same shall be demonstrated for all its capabilities to the relevant user department to make them familiar with the system on mutually agreed dates.
- Once the supply order is placed, it will be the vendors' responsibility to make the project functional. Any additional cost incurred for completing the project and for which the vendor has not bid at the time of submission of the final offer will be borne by the vendor.
- The CCTVs Surveillance System need to be functional on 24x7 basic i.e. 24 hours all the days and need to have at least 30 days data storage capacity for all CCTVs.
- Completion Certificate: Work Completion certificate shall be issued only after completion of work in all respect and to the entire satisfaction of NITK.
- **Training:** Upon completion of the installation & commissioning the Successful Bidder shall provide the hands-on training on the installed equipment to the concerned officials along with the training materials on the equipment installed at NITK.
- Bidders should share all the relevant firmware/OS/Patches etc. as and when they are released by OEM during entire warranty period at no cost to NITK.
- The vendor will liaison on behalf of NITK, with other different OEMs for repairing of equipment(s) and all other accessories during warranty period.
- Annual Maintenance of the entire system after the will be undertaken as per the terms and conditions mentioned in the tender and any other condition agreed upon as per the terms.

11. Schedule of Requirements, Specifications and Allied Details

❖ Requirements

Item(s) Name to be Procured	supply, Installation, commissioning and maintenance of CCTV IP Camera equipment and accessories for the Surveillance of different locations of LECTURE HALL COMPLEX A, B,C of the institute
Type	Equipment

Specifications of the Item(s)	Please see the details listed below
Quantity	As in BOQ
Warranty	1 years from date of Installation
AMC	4 Years from the date of expiry of Warranty
Any other details/requirement	As specified in the details listed below
Delivery Schedule expected after release of Purchase/Work order	Within 15 days of issue of Purchase Order
EMD (in Rupees)	Rs 40, 000/-

Details of items and quantity required at LHC -A ,B & C

SL no	Item	LH A	LH B	LH C
1	16 PORT POE Switch	1 no	1 no	1 no
2	8-Port PoE Switch	2 no	2 no	2 no
3	2MP Full HD IP Day & Night Outdoor Fixed Dome Network Camera with install kit	2 nos	10 nos	18 nos
4	4MP Full HD IP Day & Night Outdoor Fixed Bullet Network Camera	17nos	10 nos	6 nos
5	Network Video Recorder of 32ch with adequate storage for 30days.	32CH NVR	32CH NVR	32CH NVR
6	Storage device compatible for NVR for storage capacity of ..	30TB STORAGE	30TB STORAGE	30TB STORAGE
7	CAT6 UTP 23AWG Solid:305M (Grey) Access :	900mtrs	800mtrs	1300mtrs
8	Patch Panel Cat 6 UTP Keystone Type- 16 Port Fully Loaded :	1 no	1 no	1 no
9	Patch Panel Cat 6 UTP Keystone Type- 8 Port Fully Loaded :	2 no	2 no	2 no
10	CAT6 UTP 24AWG PATCH CORD:1M,Plug 30U' Snagless(Grey):	19nos	20nos	24nos
11	Face Plate - Single (Keystone Jack, square)	19 nos	20nos	24nos
12	Jack Cat 6 Keystone UTP -Blue :	19 nos	20nos	24nos
13	Back Box For Single, Dual (Cat6/Cat6A,square)	19 nos	20nos	24nos
14	2 kva 1 ph 230 v ups suitable for min 30 min back up for the entire system with battery, chord and accessories.	1 no	1 no	-----

15	21 U Network Rack with all accessories:	1	1	1
16	2U Network Rack with all accessories:	2	2	2
17	1 inch PVC casing capping with accessories:	500 mtrs	350 mtrs	800 mtrs
18	1 ¹ / ₂ inch PVC casing capping with accessories:	300 mtrs	150 mtrs	400 mtrs
19	Wiring with 2run*2.5 sqmm +1 run *1.5 sqmm pvc insulated copper multistrand wires	100 mts	100 mts	25 mts

❖ The general specifications for the **supply, Installation, commissioning and maintenance of CCTV IP Camera** equipments and accessories are

- ✓ Resolution : Full HD 1920x1080 or higher
- ✓ Minimum illumination : 0.01 Lux or higher
- ✓ Lens : Focal length 3.6mm or higher
- ✓ Distance to be covered : IR LED (In built IR) 46Meters or higher
- ✓ Video Format Platform ONVIF compliant or equivalent (H.264 Compression)
- ✓ Storage Capacity of NVR : Minimum 30 days.

❖ Minimum Specifications - Active Devices

❖ PoE Switch Specifications

PRODUCT	8 PORT POE SWITCH	16 PORT POE SWITCH
Gigabit Ethernet RJ-45 Copper ports (10M/100M/1G) - 1000BASE-T	8	16
PoE/PoE+ Ports	8 PoE+ (60W PoE budget)	16 PoE+ (76W PoE budget)
Power Supply	External Input 54V 1.25A (67.5W)	External Input 54V 1.66A (90W)
Power Supply Supported	External Input 54V 2.4A (130W) Input 54V 1.66A (90W) Input 54V 1.25A (67.5W)	External Input 54V 3.7A (200W) Input 54V 2.4A (130W) Input 54V 1.66A (90W)
PRODUCT SPECIFICATIONS		
Gigabit Ports	8	16
Buffer Size	192KB	1MB
Energy Efficient Ethernet (IEEE 802.3az compliant)	Yes	
PERFORMANCE SPECIFICATION		
Bandwidth	16Gbps	32Gbps
Acoustic noise (ANSI-S10.12)	0	
QUALITY OF SERVICE (QOS)		
DSCP	Yes	
IEEE 802.1p COS	Yes	
LEDS		
Per port	Speed, Link, Activity, PoE	

NVR with 30TB Storage

Technical Details/Specifications of NVR

SYSTEM	
MAIN PROCESSOR	Quad-core embedded processor
OPERATING SYSTEM	Embedded LINUX
VIDEO	
INPUTS	32 Channels IP
AUDIO	
AUDIO INPUT/OUTPUT	1 Channel Input/1 Channel Output, RCA
TWO-WAY COMMUNICATION	Supported
DISPLAY	
INTERFACE	2 HDMI (1 HDMI up to 3840 × 2160)
RESOLUTION	3840 × 2160; 1920 × 1080; 1280 × 1024; 1280 × 720; 1024 × 768
DISPLAY SPLIT	1/4/8/9/16/25/36
OSD	Camera title; Time; Video loss; Camera lock; Motion detection; Recording
FISHEYE VIDEO DE-WARPING	Supported in local and web user interface
RECORDING	
COMPRESSION	H.265/H.264/MJPEG/MPEG4
RESOLUTION	8 MP (3840 × 2160); 6 MP (3072 × 2048); 5 MP (2560 × 1920); 4 MP (2560 × 1440); Should support upto 8mp
FRAME RATE	1–15 fps (12 MP and 8 MP); 1–25/30 fps (rest of the resolutions)
RECORD BIT RATE	320 Mbps
BIT RATE:	16 kbps ~ 20 Mbps, per channel
RECORDING MODE	Schedule (Regular/Continuous, Motion Detection, Alarm); Manual; Stop
RECORDING INTERVAL	1 to 120 minutes (default 60 min)
PRE-EVENT RECORDING INTERVAL	1 to 30 seconds
POST-EVENT RECORDING INTERVAL	10 to 300 seconds
VIDEO DETECTION AND ALARMS	
TRIGGER EVENTS	Recording; PTZ; Tour; Alarm; Video Push; Email; FTP; Snapshot; Buzzer
VIDEO DETECTION	Motion Detection—MD Zones: 396 (22 × 18); Video Loss; Camera Blank
ALARM INPUT	16 Channels
RELAY OUTPUT	6 Channels
PLAYBACK AND BACKUP	
SYNC PLAYBACK	1/4/8/16 (maximum 4-ch @ 8 MP, 8-ch @ 4 MP, or 16-ch @ 1080p simultaneous playback)
SEARCH MODE	Time/Date; Alarm; Motion Detection (MD); Exact Search (accurate to a second); Smart Search
PLAYBACK FUNCTION	Play; Pause; Stop; Rewind; Fast play; Slow play; Next File; Previous File; Next Camera; Previous Camera; Full Screen; Repeat; Shuffle; Backup selection; Digital Zoom
BACKUP MODE COMPATIBILITY	USB Device; Network; Internal SATA burner
NETWORK	
ETHERNET	1 RJ-45 port (10/100/1000 Mbps)
SUPPORTED PROTOCOLS ₂	HTTP, TCP/IP, IPv4/IPv6, UPnP, RTSP, UDP, SMTP, NTP, DHCP, DNS, IP Filter, PPPoE, DDNS, FTP, Alarm Server, IP Search, P2P
NETWORK THROUGHPUT	Input 320 Mbps; Output 320 Mbps
STORAGE	
INTERNAL HDD	4 SATA ports, up to 32 TB
EXTERNAL HDD	1 eSATA port
AUXILIARY INTERFACE	
USB PORTS	3 (2 rear USB3.0; 1 front USB2.0)
RS232	1 port (for PC communications and keyboard)
ELECTRICAL	
POWER SUPPLY	Single, 100~240 VAC, 50/60 Hz
ENVIRONMENTAL	
OPERATING TEMPERATURE	-10°C to 55°C (14°F to 131°F)
RELATIVE HUMIDITY	10% to 90%, non-condensing
STORAGE TEMPERATURE	-20°C to 70°C (-4°F to 158°F), 0% to 90% relative humidity

Specification of IP bases cameras

FEATURES	BULLET	DOME
OPERATIONAL		
VIDEO STANDARD	NTSC/PAL	NTSC/PAL
SCANNING SYSTEM	Progressive scan	Progressive scan
IMAGE SENSOR	1/3" 4 MP CMOS	1/3" 2 MP CMOS
NUMBER OF PIXELS (H × V)	2688 × 1520	1920 × 1080
MINIMUM ILLUMINATION	0.03 lux color @ F1.4(Color, 1/3s, 30 IRE) 0 lux B/W with IR LEDs on @ F1.4	0.08 lux color @ F2.0 (Color, 1/3s, 30 IRE), 0 lux B/W with IR LEDs on @ F2.0
S/N RATIO	> 45 dB	> 45 dB
ELECTRONIC SHUTTER SPEED	1/3(4) – 1/100,000 s	1/3(4) – 1/100,000 s
IR DISTANCE	Up to 50 m	Up to 30 m
SMART IR	Auto/Manual	Auto/Manual
DAY/NIGHT	Auto (ICR)/Color/BW	Auto (ICR)/Color/BW
BACKLIGHT COMPENSATION	BLC/HLC/WDR (120 dB)	BLC/HLC/DWDR
WHITE BALANCE	Auto/Natural/Street Lamp/Outdoor/Manual	Auto/Natural/Street Lamp/Outdoor/Manual
GAIN CONTROL	Auto/Manual	Auto/Manual
WIDE DYNAMIC RANGE	True WDR (120 dB)	
NOISE REDUCTION	3D DNR	3D DNR
PRIVACY MASKING	Up to 4 configurable zones	Up to 4 configurable zones
MOTION DETECTION	Up to 4 configurable zones	Up to 4 configurable zones
DIGITAL ZOOM	16x	16x
LENS	3.6mm - 13.5 mm	2.8 mm, fixed, F2.0
ANGLE OF VIEW	104° – 28° (H), 55° – 16° (V)	110°/83° (H), 56°/44° (V)
VIDEO		
VIDEO COMPRESSION	H.265+/H.265/H.264+/H.264	H.265
RESOLUTION	4 MP (2688×1520), QHD (2560×1440)	1080p (1920×1080),
FRAME RATE	4 MP at 1 – 20fps,	2 MP at 1 – 25/30fps
BIT RATE CONTROL	CBR/VBR	CBR/VBR
BIT RATE	H.265: 12K – 8448 Kbps H.264: 32K – 10240 Kbps	H.265: 12K – 6400 Kbps
NETWORK		
ETHERNET	RJ-45 (10/100BASE-T)	RJ-45 (10/100BASE-T)
SUPPORTED WEB BROWSERS	Internet Explorer (11.0+)	Internet Explorer (11.0+)
SUPPORTED OS	Windows 7 32-bit	Windows 7 32-bit

NETWORK (CONT'D)		
PROTOCOLS	IPv4/v6, TCP/IP, UDP, RTP, RTSP, RTCP, HTTP, HTTPS, SSL, FTP, SMTP, DHCP, PPPoE, UPnP, SNMP v2/v3, Bonjour, DNS, DDNS, IEEE 802.1X, QoS, NTP	IPv4/v6, TCP/IP, UDP, RTP, RTSP, RTCP, HTTP, HTTPS, SSL, FTP, SMTP, DHCP, PPPoE, UPnP, SNMP v2/v3, Bonjour, DNS, DDNS, IEEE 802.1X, QoS, NTP
INTEROPERABILITY	ONVIF Profile S, Profile G	ONVIF Profile S, Profile G
MAXIMUM USER ACCESS	20 users	20 users
SECURITY	User account and password protection, HTTPS, IP filter, IEEE 802.1X, digest authentication, user access log, TLS1.2, AES-256, SSH/Telnet closed, FTP disabled	User account and password protection, HTTPS, IP filter, IEEE 802.1X, digest authentication, user access log, TLS1.2, AES-256, SSH/Telnet closed, FTP disabled
EVENT	Network disconnection, IP address conflict, illegal access, video tampering, motion detection	Network disconnection, IP address conflict, illegal access, video tampering, motion detection
EVENT NOTIFICATION	Record (NAS, and FTP), relay output, email, snapshot	Record (NAS, and FTP), relay output, email, snapshot
ENVIRONMENTAL		
OPERATING TEMPERATURE	-22°F to 140°F (-30°C to 60°C)	-22°F to 140°F (-30°C to 60°C)
STORAGE TEMPERATURE	-22°F to 140°F (-30°C to 60°C)	-22°F to 140°F (-30°C to 60°C)
INGRESS PROTECTION	IP66	IP66
REGULATORY		
EMISSIONS	FCC Part 15B, EN 55032	FCC Part 15B, EN 55032
IMMUNITY	EN 50130-4	EN 50130-4
SAFETY	EU: EN 60950-1 North America UL listed to UL/CSA 60950-1	EU: EN 60950-1 North America UL listed to UL/CSA 60950-1
ROHS	EN 50581	EN 50581

❖ Minimum Specifications - Passive Devices

Equivalence or superiority claimed must be properly justified with the supporting documents and product brochures.

Passive Materials, Racks and Other materials such as PVC casing capping must be from reputed brands. All network passive materials must be from the same brand. Mix and match of passive materials from different brands will be a disqualification for the bid. The material make and model should be explicitly specified for these. If these are not specified, it will be a disqualification for the bid.

12.PRICE BID

To

The Resident Engineer,
National Institute of Technology Karnataka

Post Srinivasnagar, Surathkal, Mangaluru – 575025 [DK]

Subject: Price Bid for Supply, Installation, Testing and Commissioning of IP Based Video surveillance System (CCTV) at different locations of **LECTURE HALL COMPLEX A, B, C** of the institute

Name of the Bidder:

Address for Correspondence: _____

I hereby submit the commercial bid for **Supply ,Installation ,Commissioning and maintainece of IP Based Video surveillance System (CCTV) of LECTURE HALL COMPLEX A, B, C** of the institute, NITK as per the Scope of work given in this tender document within the time specified and in accordance with the terms and conditions and shall be bound by the stipulation made by me in the bid.

Note: Any equivalent or better product may be bided. However, **equivalence or superiority claimed must be properly justified with the supporting documents and product brochures.**

Sl. No	Item	Qty	Rate/Unit	GST	Total rate	Total Amount
1	Supply of 16 PORT GIGA SWITCH Approved Makes: Cisco/ Net gear/ Xtreme/ HP/ D link	3 nos				
2	Supply of 8-Port PoE Switch Approved Makes: Cisco/ Net gear/ Xtreme/ HP/ D link	6 nos				
3	Supply of 2MP Full HD IP Day & Night Outdoor Fixed Dome Network Camera with install kit Approved Makes: Bosch/ Pelco/ Sony/Honeywell	30 nos				

4	Supply of 4MP Full HD IP Day & Night Outdoor Fixed Bullet Network Camera Approved Makes: Bosch/ Pelco/ Sony/Honeywell	33 nos				
5	Supply of Network Video Recorder of 32ch Approved Makes: Seagate /Bosch/Pelco/Honeywell	3 no				
6	Supply of (storage device) compatible for above NVR for storage capacity of minimum 30days subject to a minimum capacity of 30 TB. Approved Makes: Seagate /Toshiba/ WD	3 nos				
7	Camera Licenses needed (if any) :	As appropriate				
8	Supply of CAT6 UTP 23AWG Solid:305M (Grey) Access: Approved Makes: /D-Link/Legrand /	3000 mtr				
9	Supply of Patch Panel Cat 6 UTP Keystone Type- 16 Port Fully Loaded:	3 nos				
10	Supply of Patch Panel Cat 6 UTP Keystone Type- 8 Port Fully Loaded:	6 nos				
11	Supply of CAT6 UTP 24AWG PATCH CORD:1M,Plug 30U‘ Snagless(Grey):	63 nos				

12	Supply of Face Plate - Single (Keystone Jack, square):	63 nos				
13	Supply of Jack Cat 6 Keystone UTP -Blue:	63 nos				
14	Supply of Back Box for Single, Dual (Cat6/Cat6A, square)	63 nos				
15	Supply of 2 kva 1 ph 230 v ups suitable for min 30 min back up for the entire system with battery, chord and accessories. Approved Makes: Techser, Aplab,luminous Battery: Exide,southern,Amron	2 nos				
16	Supply of 21 U Network Rack with all accessories: Approved Makes: Netrack/ Wallrack/ Legrand/ Tripp Lite	3 nos				
17	Supply of 2U Network Rack with all accessories: Approved Makes: Netrack/ Wallrack/ Legrand/ Tripp Lite	9 nos				
18	Supply, wiring of 2run*2.5 sqmm +1 run *1.5 sqmm pvc insulated copper multistrand wires Approved Makes: Finolex, havel, polycab.	225 mts				
19	Supply of 1 inch PVC casing capping with accessories: (Only ISI Marked conduits and accessories should be used)	1650 mtr				
20	Supply of 1 ¹ / ₂ -inch PVC casing capping with accessories: (Only ISI Marked conduits and	850 mtr				

	accessories should be used)					
21	Installation, Commissioning, Termination, Mounting, laying, Rack Fixing, core cutting and cable dressing Charges including hardware items (like screws, bolts, nuts etc.) (Only ISI Marked accessories should be used)	One job work				
	AMC of CCTV Surveillance Equipment, accessories & Cable for Four Year post - warranty	One job work				
	Grand Total					

1. The rate should not be provided as a percentage figure but in absolute Indian Rupees.

2. The rate quoted must be reasonable and valid for the period of contract from the date of opening of financial bid.

SIGNATURE WITH SEAL OF TENDERER

NAME IN BLOCK LETTERS: _____

Company Name with Full Address: _____

Annexure I

BIDDER'S PARTICULARS

S.No	Particulars	Details
1	Name of the Bidder	
2	Full Address of the Bidder	
3	Full address of the operating Branch/Office/Service Centre at Mangalore:	
4	Name of the Authorized Signatory	
5	Date of Incorporation of Company (Attach ROC Registration certificate, Partnership Deed or any other relevant legal document);	
6	Details of Earnest Money Deposit, if not exempted	DD No. _____ date _____ of Rs. 40,000/- drawn on Bank
7	Has the bidder completed similar work as per tender eligibility section 5, point no 4 for supply and installation of CCTV along with other accessories.	YES / NO

	<p>If YES, submit the proof of self- attested copies of the work orders and completion certificates for the same</p>	
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Bidder:

Signature _____
Name _____
Designation _____
Company _____
Date _____

Annexure II

**DECLARATION REGARDING
BLACKLISTING / DEBARRING FOR
TAKING PART IN TENDER**

(To be executed & attested by Public Notary/executive Magistrate on Rs 10/- non-judicial stamp paper by the Tendered]

1. I/We _____ of M/s _____
hereby declare that our company _____ having registered
address at _____ has
never been 'Blacklisted/debarred by any State/Central Govt, Department/Organization
till date nor we are facing/filed any Litigation proceeding regarding debarring
(blacklisting) with either of the above said agencies. OR I/We
_____ of M/s _____
hereby declare that our company _____ having
registered address
at _____

2. was blacklisted or debarred by State/ Central Govt, Department/Organization from
taking part in tenders for a period of _____ years w e f
_____ to _____.the period is over on
_____ and now the firm /company is entitled to take part in tenders.

1. In case of above information found false, I/we are fully aware that the tender/contract will be rejected/cancelled by National Institute of Technology Karnataka, Mangaluru – 575025 and EMD/Security deposit shall be forfeited.
2. In addition to the above National Institute of Technology Karnataka, Mangaluru – 575025 will not be responsible to pay the bills for any completed /partially completed work/supply.

ATTESTED:

(Public Notary/executive Magistrate)

DEPONENT

NAME:- _____

Address: _____

