NATIONAL INSTITUTE OF TECHNOLOGY

राष्ट्रीय प्रौद्योगिकी संस्थान- तिरुचिरापल्ली

TIRUCHIRAPPALLI – 620 015.

तमिलनाडु - दक्षिण भारत

TAMILNADU – SOUTH INDIA

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NOTICE FOR INVITING TENDERS	
NAME OF THE PROJECT	**CCTV FOR NITT CAMPUS**
NAME OF THE WORK	**Procurement, Installation, Commissioning of the CCTV Cameras and Video Surveillance Systems (using Video Management Software) at various locations in our institute Campus.**

BID SYNOPSIS	
Pre-Bid Meeting	**18.06.2014, 11.30 AM**
Last Date of Submission	**25.06.2014, 2.30 PM**
Date of Opening	**25.06.2014, 3.30 PM**
E.M.D	**Rs.10,000/- (Rupees Ten thousand Only)**
Tender Processing Fee	**Rs. 150/- (Rupees One hundred and Fifty Only)**
Address for Communication	**Dr. Samson Mathew Chief of Works National Institute of Technology Tiruchirappalli-620015,Tamilnadu, India**

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SECTION A: Objective of the Project

The purpose of CCTV surveillance on campus is to:

➤ To protect student's valuable things, and watch Entry and Exit points.
➤ Promote a safe environment by deterring acts of **harassment or assault** /**ragging.**
➤ Deter vandalism and assist in the identification of individuals who commit damage to our institute property.
➤ Assist law enforcement agencies with regard to the investigation of any crime that may be depicted.
➤ To monitoring day to day operations of the all security points in various important places in our institute to preventing crimes, it helps you identify how a crime happened and to spot it in action.
➤ Protecting Faculty/staff/students: − it protects them against false allegations which are very common depending on the nature of the any office/institution.
➤ To investigate claims on arising issues at common areas and to have records for evidence or validation.
➤ All video surveillance can monitor and controlling from CCTV Server/control room, Director Chamber & Security Office also.
➤ To make our institute as a **"SAFE & SECURE CAMPUS".**

Section B: Specific Terms & Conditions

1. The bidder should be Original Equipment Manufacturer (OEM) or the channel partner of the OEM engaged in the business of providing CCTV surveillance system.

2. The bidder should have minimum three years of experience in procurement, installation and commissioning of CCTV cameras and security & surveillance system projects.

3. The vendor / supplier must have supplied and installed at least 3 numbers of CCTV systems of similar type in a large undertakings like reputed educational institutions/Defence establishments / Govt. of India institutions / public utilities viz., airport, railway stations etc., in India and working satisfactorily for a minimum period of 3 years. Reference list of supplies along with contact details and satisfactory performance certificates shall be submitted along with techno-commercial bids.

4. The bidder shall provide project plan for the procurement, implementation. The information in the technical bid should be complete in itself facilitating full technical scrutiny. The tenderer must volunteer all information required for this purpose. It must be kept in mind that no change to Financial Bid, arising out of clarifications on technical bid, is permitted.

5. The design must ensure robust network for connecting cameras and must have 99% uptime.

6. **All bids must include survey report done at site and actual Functional Design and Network Architecture.**

7. OEM Authorization Certificate would be mandatory for quoting the Camera models.

8. Third Party (preferably OEM) project inspection/approved by Central/State govt. body would be mandatory before the handover.

9. The bidder must be committed towards providing effective service.

10. ISO certification or equivalent would be mandatory.

11. The bidder shall be required to survey the work places and the office areas and identify strategic locations to place the CCTV cameras so as to have maximum coverage of the work places and other locations which are required to be monitored including the computer screens.

12. The tenderer will have to deploy suitable manpower to supervise the work having knowledge of CCTV system implementation.

13. Tenderer shall continue to provide maintenance and support during and after the warranty period and shall submit the annual maintenance contract for the CCTV system maintenance after the expiry of warranty period.

14. The contract shall deem to have been concluded by the "acceptance of tender" issued in the form of a purchase order. The acceptance may be communicated to the Tenderer by fax or registered/speed post. The Tenderer is required to acknowledge receipt of the acceptance within 3 working days. However, non-acknowledgement on the part of the Tenderer does not affect the "acceptance of tender" or the conclusion of contract.

15. All communications by the Purchaser to the Tenderer will be deemed to have been made by e-mail, fax, or registered/speed post to the number or address furnished by the Tenderer.

16. The purchaser shall not be liable for any obligation, monetary or otherwise, that has not been expressly stated in the contract.

17. The Tenderer shall deem to have indemnified the Purchaser against all claims by third parties relating to the contract, including but not limited to intellectual property rights.

18. The Tenderer shall not disclose any information provided to him by the Purchaser except to the extent required to execute the contract.

19. **Specifications:** The specifications governing the systems to be supplied may be provided with the tender enquiry as an enclosure.

20. A quote received against a tender enquiry shall be deemed to commit the Tenderer to those specifications.

21. Where an aspect is not covered in the specification, the Tenderer shall be required to conform to the good quality standards that he had provided in the past to any other buyer.

22. The specification contained in the tender enquiry may be modified if requisite specifications are not available, by mutual consent in written before the contract is accepted.

23. **Hardware**: For all cameras, DVRs and other related hardware: In case of defects occurring to any component during the tender period, the component is to be replaced by the Tenderer within 24 hours free of cost. Similarly, onsite support shall be provided by the Tenderer by way of stationing 1 technician at NIT Tiruchirappalli within the project cost, during the period of tender i.e. 4 weeks.

24. **Price:** When quoting against a tender enquiry, all components of the price of such as the basic price and different types of taxes and charges shall be listed separately. Where only 'rates 'are applicable, they shall be explained clearly. The proposed cost by the tenderer shall include procurement, implementation, and commissioning and post warranty annual maintenance contract. The tenderer should submit separate annual maintenance contract with details of the service to be provided including cost.

25. **For Financial Bid**: The cost shall include supply, installation and commissioning of CCTV cameras with appropriate cabling work with material.

26. Number of locations and number of CCTV cameras likely to be increased or decreased without assigning any reason.

27. Payment will be calculated on the basis of actual work done in terms of no. of cameras including required hardware and software.

28. **Penalty for downtime:** Institute may make a complaint about the equipment/service through letter, fax, e-mail, phone, SMS or any other convenient means. On receiving complaint about equipment/service, the tenderer will respond and repair/replace or provide required services within 24 hours, if failed, penalty shall be levied Rs. 500/- per day.

29. **Warranty / Guarantee: 5 years Warranty / Guarantee** to be provided by the bidder.

30. **Terms of Delivery and Payment:** As per current practices, no advance payment is permissible. However, to ensure cash flow, commensurate with progress of the project and the deliverables, mile stone payment may be agreed mutually.

31. **Financial Bid:** The Financial Bids are to correspond to the Technical Bids and contain all costing details. Financial Bids of only technically qualified tenderers will be considered. The information in Financial Bid must be in unitized form so that Financial Bid of all firms can be properly compared and L1 tenderer can be clearly established. Competent authority of NIT

Tiruchirappalli reserves the right to accept or reject any tender without assigning any reason. Rates quoted must be inclusive of all taxes.

32. **Time Frame:** The tenderer should ensure the completion of the work within three working weeks (excluding holidays) from the date of awarding of the contract

33. Arbitration Clause: If at any time, any question of difference or dispute whatsoever arises between two parties hereto or in relation to a part thereof, either of the party may give to each other notice in writing of the existence of such a question or dispute or difference. Efforts will be first made to resolve the differences/ disagreements amicable by mutual discussions. However, if it still persists, the same shall be referred for award to an arbitrator, to be nominated by the Director of the Institute. The decision of the Arbitrator shall be final and binding on both the parties.

34. **The vendor will be required to survey the work places and the office areas and identify strategic locations to place the CCTV cameras so as to have maximum coverage of the work places and other locations which required before installation.**

35. **The vendor to be inspects for calculating distance for cable laying works/civil work and find out distance.**

36. If the Prices are in foreign currency, it should be C.I.F. Chennai Airport basis, Currency quoted.

37. If the rates are quoted in Indian Rupees, the rates should be quoted on Door Delivery (F.O.R. N.I.T.T.) Basis.

38. The successful bidder shall have to furnish Performance Bank Guarantee equivalent to 10% of the Purchase order value.

39. The vendor / supplier should have adequate qualified manpower to undertake erection & commissioning of the system, the manpower details shall be furnished in the techno-commercial bid.

SECTION C: GENERAL INSTRUCTIONS TO BIDDERS

1. **The vendor will be required to survey the work places and the office areas and identify strategic locations to place the CCTV cameras so as to have maximum coverage of the work places and other locations which required to be monitored.**

2. Please send the tenders in a sealed envelope superscribed as "QUOTATIONS AGAINST TENDER NOTIFICATION NO: 01/CCTV/2014/Item No. 01:" Supply, Installation of CCTV cameras and VMS software in various places in our NITT campus" so as to reach **"Dr. Samson Mathew, Chief of Works, National Institute of Technology, Tiruchirappalli - 620 015, Tamilnadu, India"** on or before **25.06.2014 at 02.30 p.m.** along with a Softcopy of the Technical Compliance form & Quotation Forms in MS-Excel or MS-Word file format in a CD/DVD or USB drive.

3. For any further clarifications, contact by written request to "Dr. Samson Mathew, Chief of Works, National Institute of Technology, Tiruchirappalli - 620 015".

4. Tender applications can be downloaded from our institute website www.nitt.edu. The EMD amount of Rs.10,000/- and the tender processing fee of Rs 150/- can be had in the form of Demand Draft drawn in favour of **"The Director, NIT Tiruchirappalli"** and payable at SBI, NIT Tiruchirappalli Branch.

5. **Date of Pre bid meeting: 18.06.2014 at 11.30 AM in NITT Administrative Building. Last Date for Receipt of Tender at NIT-T : 25.06.2014 up to 02.30 PM. Opening Date for Tender : 25.06.2014 at 03.30 PM**

6. The tenders will be opened on **25.06.2014 at 03:30 PM** in the presence of the vendors present with authorization letter from the respective companies / firms. Suppliers intending to attend the tender opening should intimate us in advance.

7. All offers should indicate the taxes and duties applicable, if any. Additional charges for packing, forwarding, freight, insurance etc., if any, should be clearly mentioned. Clearance at Customs will be arranged by us.

8. NIT-T is paying concessional Customs & Excise duty under Government of India Notification No.51/96 for Central Customs and 10/97 for Central Excise Duty vide Certificate No.TU/V/RG-CDE(183)/2011 dt.10.10.11. Currently the purchaser is paying 5% Basic Customs Duty and 4% Import additional Duty. In addition to that NITT is paying 2% Educational Cess and 1% Higher Education Cess on Basic Customs Duty and Import Duty.

9. The Institute is not authorized to issue C and D forms of Sales tax certificate.

10. In case the offered items are to be imported, the rates should be quoted in foreign currency on C & F Chennai Airport.

11. If the price quoted is in foreign currency and if the order value is more than US$10,000 then 100% payment will be made through **Letter of Credit (LC) at sight on acceptance**. If the order value is less than US$ 10,000, then 100% payment will be through a Telegraphic Transfer (TT). **The bank charges outside India should be borne by the Supplier / Beneficiary. Part shipment not allowed**. If the price quoted is in Indian Rupees, then 50% payment will be made only delivered the materials, remaining 50% after installation and commissioning all other things as said above our project.

12. The warranty period should be clearly mentioned. The maintenance charges (AMC) under different schemes after the expiry of the warranty should also be mentioned.

13. The delivery period and duration of installation should be clearly mentioned.

14. Eligibility: Quotation from registered firms/company's / manufacturer under TNGST/CST / other statutory bodies alone be considered. Any Manufacturer / Supplier / Dealer who has been declared ineligible by World Bank/Government of India shall not be eligible to participate in this bid. Any fraudulent practices including concealing of facts at the time of submission of bid and there after shall lead to disqualification. List of beneficiaries especially from Educational Institutions / R & D Institutions should also be enclosed with the quotations.

15. Complete user, technical and service documentation, and spare parts catalogue are to be provided along with the supply of the item.

16. Delay / loss in postal transit or due to other reasons will not be NIT-T's responsibility.

17. We are not responsible for accidental opening of the covers that are not properly superscribed and sealed before the time scheduled for opening.

18. Authorized signatory should sign on all the pages. Bids without authorized signatures will be rejected.

19. The vendors are informed that they should sign a stamp paper agreement with us, for Warranty, AMC, etc. as per our terms & conditions. 5% of purchase order value should be provided in the form of bank guarantee towards performance security if the order value exceeds rupees five lakhs within the rate contact period of one year. The bank guarantee will be returned to the supplier after the successful completion of supply, installation, and the warranty period.

20. Vendors are informed that once the companies are shortlisted based on the technical specification, only then the price bids of the firms that meet NIT-T's Technical specification / requirements would be compared.

21. NIT-T reserves the right to change the order quantity or split the orders among multiple vendors without assigning any reason(s) whatsoever.

22. NIT-T reserves the right to reject any or all the tenders without assigning any reasons whatsoever.

23. Apart from the above General Terms and Conditions, item-wise terms and conditions are enlisted in the Technical compliance form and Quotation form.
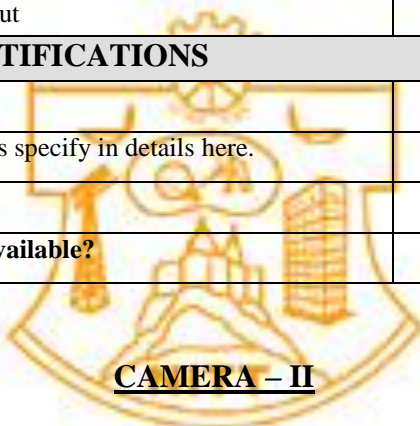
SECTION D: TECHNICAL SPECIFICATIONS

The specification provided below shall be considered as base specification and is indicative only. The parameters specified for each of the item shall be considered as base specification and bidders are requested to offer similar or better items for enhancing the overall performance of the CCTV system. The CCTV system shall be designed such that scope exists for future up gradation and compatibility with other security and access control measures.

CAMERA – I

TYPES OF CAMERA	Approximate required Quantity	Firm's Offer (All the details should be specified)
Indoor/Outdoor 20x HD 1080p PTZ ONVIF camera with Pendant arm mount (for outdoor use)	**05**	
GENERAL		
Make /Brand and Model Number		
The camera shall be 1080p HD PTZ or approximately 2 megapixels.		
Shall have High-resolution, full HD PTZ camera with 1080p25/30(2MP) resolution and 20x zoom for capturing fine details		
The camera shall support Preset positions, each with a label.		
Shall have inbuilt Intelligent Video Analytics.		
It shall fully support H.264 encoding, bandwidth throttling and multicasting		
Shall have Enhanced system flexibility with dual recording and dual power source (High Power over Ethernet (High PoE) / 24 VAC) options		
Camera shall be able to get recorded at different resolutions and frame rates (Eg: 720p at 30fps and 720p at 60fps/480p or 240p)		
Sensitivity (typical) **30 IRE**-Day mode-sens up on 0.04lx,Night mode sense up on 0.005lx.		
Aspect Ratio HD: 16:9		
Lens minimum 20x optical zoom		
Focus One-push (default), Automatic (normal, low), Manual		
Iris Automatic with manual override		
Field of View • 1080p Mode 2.9° (tele) to 55.4° (wide) • 720p Mode 2.0 (tele) to 37.6 (wide)		
Gain Control Automatic/Manual (–3 to +28 dB, +2 dB steps/16 steps)		
Camera Setup/Control Via Internet Explorer Web browser version 7.0 or later		
Digital Zoom minimum 12x		
Electronic Shutter Speed (AES) 1/1 to 1/10000 s, 22 steps		
Wide Dynamic Range (WDR) 86 dB (WDR on)		
Day/Night Monochrome, Color, Auto		

NETWORK		
RTP, Telnet, UDP, TCP, IP, HTTP, HTTPS, FTP, DHCP, IGMP V2/V3, ICMP, ARP, SMTP, SNTP, SNMP v1, RTSP, 802.1x, iSCSI, DynDNS, UPnP, IP v4/6, QoS, SSH, SSL Advanced Networking: IPv6, QoS		
10-Base T/100 Base-TX, auto-sensing, half/ full duplex, RJ45		

ELECTRICAL /MECHANICAL		
Pan Range 360° cont.		
Tilt Angle 18° above horizon		
Preset Accuracy ± 0.1° typ.		
ENVIRONMENTAL		
Operating Temperature –40°C to 55°C		
Storage Temperature –45°C to 60°C		
Operating Humidity 0% to 100% relative, condensing		
LOCAL STORAGE		
Memory Card Slot User-supplied SD/SDHC/SDXC memory card(maximum 2TB – SDXC)		
Recording Continuous recording of video and audio		
Memory Card Slot User-supplied SD/SDHC/SDXC memory card(maximum 2TB – SDXC)		
USER CONNECTION		
Power, Camera RJ-45 10/100 Base-TX Ethernet (High Power over Ethernet (High PoE)) or PoE		
Video and Control RJ-45 10/100 Base-TX Ethernet		
Alarm Inputs (7) & Alarm Outputs (4)		
Audio 1 x mono line in, 1 x mono line out		
CERTIFICATIONS		
UL, FCC, CSA, EN, IP66		
If any other special feature? yes means specify in details here.		
Warranty Period in years ?		
If Any Additional warranty period available?		

<u>CAMERA – II</u>

TYPES OF CAMERA		Approximate required Quantity	Firm's Offer (All the details should be specified)
HD 1080p Day/Night Fixed Dome Camera **(for outdoor use)**		**15**	
Make /Brand and Model Number			
The camera shall be fixed dome High definition camera with high image quality.			
The camera shall multiple streaming features enabling to deliver MJPEG and other streams.			
It shall fully support multicasting, internet streaming and iSCSI recording			
Shall support SD memory card slot			
ONVIF Compliance			
The camera shall switch from color to monochrome mode automatically by sensing the illumination level, manually via the alarm input, or remotely via a web browser.			
Power Supply	24 VAC ±10% 50/60 Hz 12 VDC ±10% Power-over-Ethernet 48 VDC nominal		
Video compression	H.264; M- JPEG,JPEG		
Data rate	99.6 Kbps to 10 Mbps		
HD Resolution (H x V)	720p: 1280 x 720, 1080p: 1920 x 1080		

Sensitivity	Minimum illumination (30 IRE)-color mode 0.50 lx, Monochrome tbd lx		
Shutter	Auto (1/50 [1/60] to 1/50000) automatic Fixed selectable		
Privacy Masking	Four independent areas, fully programmable		
Audio Streaming	Full duplex / half duplex		
Audio	1 x mono line in, 1 x mono line out		
Alarm	2 inputs, Relay 1 output		
Recording	Continuous recording, ring recording. alarm/ events/schedule recording		

Unit Configuration Via web browser or Configuration Manager		
Software update Flash ROM, remote programmable		
Protocols	RTP, Telnet, UDP, TCP, IP, HTTP, HTTPS, FTP, DHCP, IGMP V2/V3, ICMP, ARP, SMTP, SNTP, SNMP, 802.1x, UPnP	
Ethernet	STP, 10/100 Base-T, auto-sensing, half/full duplex, RJ45	
Data port RS‑232/422/485		
Operating Temperature	-50°C to +50°C (-58°F to 140°F)	
Storage Temperature	-30°C to +70°C (-22°F to +158°F)	
Operating Humidity	20% to 93% RH	
Storage Humidity	up to 98% RH	
Certifications	EN,UL,FCC,CSA	
If any other special feature? Yes means specify in details here.		
Warranty Period in years ?		
If Any Additional warranty period available?		

CAMERA – III

TYPES OF CAMERA	Approximate required Quantity	Firm's Offer (All the details should be specified)
1080P High definition Day/Night fixed IP camera Bullet/Box type (for indoor use)	**100**	
Make /Brand and Model Number		
The camera shall be Day/Night 1080 High definition camera with outstanding image quality.		
The camera shall support multiple streaming which shall facilitate integration with third-party video Management systems.		
It shall fully support multicasting, internet streaming and network attached storage recording.		
ONVIF Compliance		
It shall have SD card slot for edge recording during network failures		
The camera shall confirm specification which guarantees interoperability between network video products regardless of manufacturer and shall be able to exchange live video, audio, metadata and control information.		
Power Supply	24 VAC 50/60 Hz, 12 VDC ,Power-over-Ethernet	
Image format	1/2.7‑inch CMOS	

Video compression	**H.264 Main Profile (ISO/IEC 14496-10); JPEG**
Resolution (H x V)	**1080p: 1920 x 1080 (30 ips)** **VGA: 640 x 480 (30 ips)**
Privacy Masking	**Four independent areas, fully programmable**
Synchronization	**Internal**
Audio	**1 x mono line in, 1 x mono line out**
Alarm	**2 inputs, Relay 1 output**
Recording	**Continuous recording, ring recording. alarm/ events/schedule recording**

Unit Configuration Via web browser or Configuration Manager	
Software update Flash ROM, remote programmable	
Protocols	RTP, Telnet, UDP, TCP, IP, HTTP, HTTPS, FTP, DHCP, IGMP V2/V3, ICMP, ARP, SMTP, SNTP, SNMP, 802.1x, UPnP
Ethernet	STP, 10/100 Base-T, auto-sensing, half/full duplex, RJ45
PoE supply IEEE 802.3at compliant	
IP66rated Indoor housing and mounting brackets as per the site requirement	
Operating Temperature	-20°C to +60°C
Operating Humidity	20% to 93% RH
Certifications	CE,UL,FCC,CSA
If any other special feature? Yes means specify in details here.	
Warranty Period in years ?	
If Any Additional warranty period available?	

VIDEO MANAGEMENT SOFTWARE

Sl.No	Software	Required Specification	Qty	
01.	Video Management Software - License	➢ The VMS shall be a highly scalable and professional level software solution. ➢ The VMS shall offer a complete video surveillance solution that will be scalable from one to hundreds of cameras that can be added on a unit-by-unit basis. ➢ The VMS Software License cost shall be one-time and future versions should be available without any additional charges. ➢ There shall be no maintenance or annual subscription / renewal fees for VMS licenses. <u>The VMS Server shall be a system service providing the following functionality:</u> ✓ Configuration of all VMS components ✓ Video surveillance in four modes: Live Viewer, Alarm Viewer, Archive Viewer, Archive Search ✓ Archive Search/Exploring ✓ Map layout ✓ Alarm Monitoring ✓ Web Server ✓ Video Analytics	**01**	

| | | ✓ A set of utilities (activation, support, log management, watermark check)

➢ The Client VMS provides access to the functionality provided by the Server.
➢ All video streams supplied from analog cameras or IP cameras shall be digitally encoded in MPEG-4, M-JPEG, H.264 or MxPEG compression formats and recorded simultaneously in real time. The VMS shall interface with analog-to digital video encoders and IP cameras, hereafter referred to as digital video servers (DVS). The VMS shall support DVS's from various manufacturers.
➢ The VMS shall use two independent streams from camera or IP encoder: one for visualization and one for recording. All settings for each stream including resolution, codec type, frame rate and compression level may be selected independently without affecting overall system performance and IP device functionality.
➢ Each camera's bit rate, frame rate and resolution can be set independently from other cameras in the system, and altering these settings will not affect the recording and display settings of other cameras.
➢ The VMS shall require no proprietary recording hardware, no hardware multiplexer or time division technology for video or audio recording and monitoring.
➢ The VMS shall be based on a true open architecture that allows for use of non proprietary PC storage hardware that does not limit the storage capacity and allows for gradual upgrades of recording capacity.
➢ The VMS shall be able to use multiple CCTV keyboards and joysticks (with USB connection type) to operate the entire set of cameras throughout the system, including cameras of various manufacturer's brands, including their PTZ functionalities.
➢ The VMS shall support the latest revisions of the ONVIF and PSIA standards.
➢ The VMS shall consist of the Server and Client.
➢ The Server and Client may be started on the following operating systems: *Windows XP, Windows Server 2003, Windows Server 2008, Windows Vista, Windows 7. 32-bit and 64-bit versions should be supported.*
➢ Audio and Video storage configuration for the Server shall either be:

		✓ RAID configuration and Internal or external IDE organized ✓ RAID configuration or Internal or external SCSI/Fibre Channel organized. ➤ The Server shall not limit the actual storage capacity configured per server ➤ The VMS should support for widescreen display and touch screen displays.		
02.	Server	<u>The VMS Server is a system service providing the following functionalities:</u> ➤ Configuration of all VMS components, video surveillance in four modes: Live Viewer, Alarm Viewer, Archive Viewer, Archive Search (Advanced Archive Search/Exploring), 3D Map, Event Control and the System Log, Video Analytics, a set of utilities (activation, support, log management, watermark check). ➤ The Server shall offer the capability to be installed on several PCs to enable distributed archiving in a LAN or WAN environment. The Server shall not limit the number of PCs which can be networked together to form a distributed archive server system. ➤ The Server shall give the capacity to view all DVS in a network even if the DVS are assigned to different archive servers. ➤ The Server, in the case that a camera signal is lost, shall detect the video loss and alert the systems administrator. ➤ If an error occurs on a particular VMS function, it shall be able to re-launched without affecting the functioning of the system overall. ➤ The Server shall receive all incoming events (motion detection and triggered digital input and relay output) in the system and invoke appropriate actions based on user defined Event/action relationships. ➤ The Server shall maintain an event log for audit purposes. ➤ The Server shall authenticate users and grant access to the VMS based on predefined User access rights, events and user activities.		

		The Server shall receive and log all of the following events:		
		Alarm Events ❖ Active / Hot ❖ Acknowledged and classified by operator ❖ Missed **Application Events** ❖ Application Lost **Archive Events** ❖ Archiving stopped **Camera Events** ❖ Auto-Start Recording ❖ Auto-Stop Recording ❖ Motion on ❖ Motion off ❖ Signal Lost ❖ Signal Recovered ❖ Digital Input Events ❖ Digital input opening ❖ Digital input closing **DVS Events** ❖ Signal lost ❖ Signal recovered ❖ Unit discovered ❖ Unit lost **User Events** ❖ User Logon ❖ User Logoff **User-defined Events** ❖ User-defined events **Video Analytics Events** ❖ Abandoned object ❖ Line crossing ❖ Movement in area of interest (AOI) ❖ Stopping in area of interest (AOI) ❖ Loitering in AOI ❖ AOI entry and AOI exit ❖ Embedded video analytics from IP cameras		
03.	Archive	**Archives configuration and management.** ➢ The Server shall support Windows - independent file system to avoid fragmentation of hard drive part intended for archive use and access of Windows applications to archive files. Communication between System Core and archive file system shall be processed on low level without involvement of any Windows application. ➢ VMS video archive can be created at designated part of the hard drive in existent partition, at specially assigned partition or at dedicated hard drive completely reserved for video archiving.		

		➢ File system used for video archive recording shall not be affected by hard disk luster/sector damage and this sector shall be ignored by System Core for further usage to avoid possible compromise of archive integrity. ➢ User shall have possibility to create unlimited number of virtual archives in the system with ability to add certain cameras to specific archives with different recording parameters without affecting overall system performance, archiving effectiveness and camera general functionality.		
04.	System Log	Search for events based on specified conditions: time interval of event occurrence, type of event, key phrase. Four types of events: System heath event, Error event, Alarm event, Debug information. Events are shown in the form: date and time, type, description. Export of a list of events to a .txt file. Ability to quickly jump to video of an event. Utility for log Management: settings for archives of external logs and logging levels of the VMS Server and Client. Utility for watermark verification verification of the watermark added during export of snapshots and video.		
05.	Client	**Client connection to the Server.** The Client shall support the following forms of connections over IP: LAN, VPN. Secure connection between The Server and Client Software Application shall be provided via virtual private network (VPN) technology to avoid possibility of unauthorized access to data or video streams. The Client can connect to any available Server. Authentication must be performed when attempting to connect to the Server. Server function continues if the Client is unloaded: writing to the archive, detection, event logging, etc. continue.		

		Boundaries of the Client interface: users have access only to the indicated system features. The computer on which the Client is started must use a CCTV controller or standard PC keyboard to control cameras. An unlimited number of Clients can connect to a single Server.		
06.	Web Server	The VMS Web Server provides remote access to the Server over the Internet. ✓ Authentication of users connecting to the Web Server. ✓ Video surveillance in two modes: Live Viewer and Archive Viewer ✓ Real-time control of PTZ cameras: presets, optical zoom, control of pan / tilt angle and positioning speed. ✓ Digital zoom in both Live and Archive Viewer.		
07.	Android and iOs client VMS	VMS Client for Android and iOS operation systems allows connection to the Server via Internet. ✓ Android and iOS Clients are free for download on Google Play and on App Store respectively. ✓ Authentication of users connecting to the Web Server. ✓ Video surveillance in two modes: Live Viewer and Archive Viewer ✓ Shall be able to control PTZ camera on the mobile client		
08.	Software Up gradation/ AMC	Software license cost should be one time only without any additional annual recurring charges ✓ There shall not be any AMC for the Software and all the upgrades should be done free of cost.		

VIDEO AND AUDIO ANALYTICS			
01	Video &Audio Analytics	Video management software video & audio detection/ list of tools available.	
02.	Responses when Alarm Triggers.	✓ Start recording of the video from the camera (with sound); ✓ Send an SMS-message to one or several phone numbers; ✓ Send an email to one or several addresses; ✓ Play an audio announcement; ✓ Send a open/close signal to an actuating device (relay) connected to the camera; ✓ Switch to alarm processing mode; ✓ Rotate the PTZ camera in a given direction.	

03.	Single camera simultaneous archive parts view (Time Compression/ Video Synopsis)	Allowing the user to set a time range for video footage and get a short video clip of all moving objects in the scene. Objects and events captured at different times are displayed simultaneously in a condensed "video synopsis". The total number of objects displayed by video synopsis function shall be user-definable. Built-in display options minimize object overlap. Enabling especially convenient viewing of large archives that feature a relatively small number of active objects.	
4.	Advanced archive search/Exploring with Forensic search	**Forensic search to perform video analytics on recorded video archive**.	
05.	Interactive 3D Map	To be capable to connect one or 2 or multiple important places to be quickly viewed upon.	
06.	Touch screen displays	Video management software allows operation with the widescreen displays and cameras and touch screen displays.	
07.	Web and mobile client live view	Video management software has the web-client and clients for mobile devices on the basis of Android and iOS operation systems. These clients allow viewing live-video and archive when they are Connected to the Server.	

SERVER SPECIFICATION

Sl.No	SPECIFICATION	QTY.	
01.	**VIDEO SERVER (with video Analytics, without viewing Monitor)** ➢ Dual INTEL XEON E5-2660 (X64 Bit) ➢ RAM - 16 GB (Minimum), 1600MHz ➢ Graphic Card – minimum 2GB ➢ Hard disks – 2x 1TB for Windows and NEXT ➢ OS – Windows Server 2008 ➢ Network Card – 2x1 Gbit/s Network cards ➢ warranty period – 5 years on site complete warranty	02	
02.	**Remote Workplace Client - Workstation** ➢ To view at least 14 cameras with 1080P resolution @ 25FPS ➢ Processor – Intel Core i7-3770K ➢ RAM – Minimum 16 GB,1600MHz ➢ Hard disks – 1 TB for Windows and NEXT ➢ OS-Windows7, 64bit ➢ Network Card – 1Gbit/s network card ➢ Warranty period – 5 years on site complete warranty	02	

SECTION E: PROPOSED LOCATIONS

Number of locations and number of CCTV cameras likely to be increased or decreased without assigning any reason.

Sl. No	Camera Location	type	Camera type
01	Institute Main Gate (to monitor entry & exit vehicle)	OUTDOOR	PTZ DOOM
02.	Quarters Gate	OUTDOOR	PTZ DOOM
03.	Institute Main Gate OUT (to monitor out)	OUTDOOR	PTZ DOOM
04.	Near Aavin 3 road junction (Aavin, CSG, hostel office road junction)	OUTDOOR	PTZ DOOM
05.	Admin Portico (Director car parking area)	OUTDOOR	DOOM - MEDIUM CONFIGURATION
06.	Entrance IN/OUT	OUTDOOR	DOOM
07.	Opal Hostel corner road (3 road junction- near library)	OUTDOOR	DOOM
08.	Opal Hostel Gate (security point –ROAD SIDE)	OUTDOOR	DOOM
09.	Civil department Junction corner road (Civil , Hostel road, Sports centre- 3road junction)	OUTDOOR	DOOM
10.	Transport office entrance (to cover ATM, classic foods entrance, gallery hall way, and Deans office stair case)	OUTDOOR	DOOM
11.	ESTATE OFFICE ENTRANCE (to cover estate office, power house and roads)	OUTDOOR	DOOM
12.	POWER HOUSE OUTER SIDE (to cover generators, and yard sides)	OUTDOOR	DOOM
13.	Chemical department corner road (3 road junction)	OUTDOOR	DOOM
14.	Opposite to CEESAT road	OUTDOOR	DOOM
15.	Hospital 3 road junction (Hospital, PG Qtrs, Hostel)	OUTDOOR	DOOM
16.	Shopping complex (RIGHT) BANK SIDE	OUTDOOR	DOOM
17.	Shopping complex (LEFT) Buhari side	OUTDOOR	DOOM
18.	OPPOSITE TO HOSPITAL/ NEAR HELIPAD	OUTDOOR	DOOM
19.	TREC – STEP Road Junction point	OUTDOOR	DOOM
20.	Director office lobby	INDOOR	Bullet/Box type
21.	Dean office lobby	INDOOR	Bullet/Box type
21.	DIRECTOR RECEPTION CHAMBER	INDOOR	Bullet/Box type
22.	Main office portico (Registrar office entrance)	INDOOR	Bullet/Box type
23.	Main office **left** side	INDOOR	Bullet/Box type
24.	Main office **right** side	INDOOR	Bullet/Box type
25.	UG Lecturer Hall Complex Entrance Security point	INDOOR	Bullet/Box type
26.	UG Lecturer Hall Lobby Ground floor (side 1)	INDOOR	Bullet/Box type

27.	UG Lecturer Hall Lobby Ground floor (side 2)	INDOOR	Bullet/Box type
28.	UG Lecturer Hall Lobby Ground floor (side 3)	INDOOR	Bullet/Box type
29.	UG Lecturer Hall Lobby	INDOOR	Bullet/Box type
30.	UG Lecturer Hall Lobby First floor (side 1)	INDOOR	Bullet/Box type
31.	UG Lecturer Hall Lobby First floor (side 2)	INDOOR	Bullet/Box type
32.	UG Lecturer Hall Lobby First floor (side 3)	INDOOR	Bullet/Box type
33.	UG Lecturer Hall Lobby	INDOOR	Bullet/Box type
34.	PG Lecturer hall complex Entrance (Security point)	INDOOR	Bullet/Box type
35.	PG Lecturer Hall complex Ground floor I	INDOOR	Bullet/Box type
36.	A2 HALL ENTRANCE (lobby)	INDOOR	Bullet/Box type
37.	A11/A10 / A13 hall P ATH WAY	INDOOR	Bullet/Box type
38.	PG Lecturer Hall complex Ground floor II	INDOOR	Bullet/Box type
39.	PG Lecturer Hall complex Ground floor III	INDOOR	Bullet/Box type
40.	PG Lecturer hall lobby	INDOOR	Bullet/Box type
41	PG Lecturer Hall Lobby First floor (side 1)	INDOOR	Bullet/Box type
42.	PG Lecturer Hall Lobby First floor (side 2)	INDOOR	Bullet/Box type
43.	PG Lecturer Hall Lobby First floor (side 3)	INDOOR	Bullet/Box type
44.	PG Lecturer Hall Lobby	INDOOR	Bullet/Box type
45.	Science block entrance I	INDOOR	Bullet/Box type
46.	Science block entrance II	INDOOR	Bullet/Box type
47.	Science block First floor - I	INDOOR	Bullet/Box type
48.	Science block First floor - II	INDOOR	Bullet/Box type
49.	Science block Second floor – I	INDOOR	Bullet/Box type
50.	Science block Second floor - II	INDOOR	Bullet/Box type
51.	Admin Block stair case (reception side)	INDOOR	Bullet/Box type
52.	Admin Block Car Portico	INDOOR	Bullet/Box type
53.	Director Room	INDOOR	Bullet/Box type
53.	Director Visitor's room	INDOOR	Bullet/Box type
54	Director office lobby (veranda)	INDOOR	Bullet/Box type
55.	Senate Room	INDOOR	Bullet/Box type
56.	Main office left side wing	INDOOR	Bullet/Box type
57.	Main office right side wing	INDOOR	Bullet/Box type
58.	Dean Academic Left side wing	INDOOR	Bullet/Box type
59.	Dean Academic Right side wing	INDOOR	Bullet/Box type
60.	Dean room s block Left side wing	INDOOR	Bullet/Box type
61.	Dean rooms block Right side wing	INDOOR	Bullet/Box type
62	Registrar office	INDOOR	Bullet/Box type
63.	Cash counter	INDOOR	Bullet/Box type
64.	Architecture department entrance	INDOOR	Bullet/Box type
65.	Chemical entrance	INDOOR	Bullet/Box type
66.	Physics entrance	INDOOR	Bullet/Box type
67.	CEESAT entrance I	INDOOR	Bullet/Box type
68.	CEESAT entrance II	INDOOR	Bullet/Box type
69.	Chemistry Dept. entrance	INDOOR	Bullet/Box type
70.	Electrical Dept. entrance	INDOOR	Bullet/Box type
71.	Mechanical Entrance I	INDOOR	Bullet/Box type

74.	Mechanical Entrance II (Metallurgy Dept)	INDOOR	Bullet/Box type
75.	Mechanical Entrance III (Work shop side)	INDOOR	Bullet/Box type
76.	Civil Department (Entrance I)	INDOOR	Bullet/Box type
77.	Civil Department (Entrance II)	INDOOR	Bullet/Box type
72.	Production Dept.	INDOOR	Bullet/Box type
73.	MCA Dept Entrance	INDOOR	Bullet/Box type
78.	Lyceum Entrance	INDOOR	Bullet/Box type
79.	CSE Dept. Entrance	INDOOR	Bullet/Box type
80.	ECE Dept. Entrance I	INDOOR	Bullet/Box type
81.	Silver Jubilee Building Entrance	INDOOR	Bullet/Box type
82.	ICE Entrance	INDOOR	Bullet/Box type
83.	Estate office entrance	INDOOR	Bullet/Box type
84.	Electrical Maintenance office entrance	INDOOR	Bullet/Box type
HOSTELS			
85.	Agate	INDOOR	Bullet/Box type
86.	Amber -A	INDOOR	Bullet/Box type
87.	Amber -B	INDOOR	Bullet/Box type
88.	Aquamarine-A	INDOOR	Bullet/Box type
89.	Aquamarine-B	INDOOR	Bullet/Box type
83.	Beryl	INDOOR	Bullet/Box type
90.	Coral	INDOOR	Bullet/Box type
91.	Diamond	INDOOR	Bullet/Box type
92.	Emerald	INDOOR	Bullet/Box type
93.	Garnet - A	INDOOR	Bullet/Box type
94.	Garnet - B	INDOOR	Bullet/Box type
95.	Garnet – C	INDOOR	Bullet/Box type
96.	Jasper	INDOOR	Bullet/Box type
98.	Lapis	INDOOR	Bullet/Box type
99.	Opal A	INDOOR	Bullet/Box type
100.	Opal B	INDOOR	Bullet/Box type
101.	Opal C East	INDOOR	Bullet/Box type
102.	Opal C West	INDOOR	Bullet/Box type
103.	Opal D	INDOOR	Bullet/Box type
104.	Opal E	INDOOR	Bullet/Box type
105.	Opal Hostel Security Point	INDOOR	Bullet/Box type
106.	Pearl	INDOOR	Bullet/Box type
107.	Ruby	INDOOR	Bullet/Box type
108.	Sapphire	INDOOR	Bullet/Box type
109.	Topaz	INDOOR	Bullet/Box type
110.	Zircon A	INDOOR	Bullet/Box type
111.	Zircon B	INDOOR	Bullet/Box type
112.	Zircon C	INDOOR	Bullet/Box type
113.	Mega Mess I (Ground Floor)	INDOOR	Bullet/Box type
114.	Mega Mess I (First Floor)	INDOOR	Bullet/Box type
115.	Mega Mess II (Ground Floor)	INDOOR	Bullet/Box type
116.	Mega Mess II (First Floor)	INDOOR	Bullet/Box type

TYPES OF CAMERA	QTY. REQUIRED	NATURE OF LOCATION
DOOM PTZ CAMERA	**05**	**(FOR OUTDOOR PURPOSE)**
DOOM CAMERA	**15**	**(FOR OUTDOOR PURPOSE)**
BOX TYPE (OR) OTHER TYPE CAMERA	**100**	**(FOR INDOOR PURPOSE)**
TOTAL NO. OF CAMERA	**120**	

SECTION F: FORMAT FOR TECHNICAL BID

	Name and address of the bidding firm/ agency/ company (as per certificate of incorporation)	
	Year of commencement/ incorporation	
	Specify your firm/ Company is a manufacturer/ authorized dealer / distributor / Agency	
	Name, Address and designation of the Authorized Person (Sole Proprietor/ Partner/ Director)	
	Details of EMD furnished DD Number Date of DD Issuing Bank	
	Details of Tender application money furnished DD number Date of DD Issuing Bank	
	Has the firm ever been blacklisted by the Government/ PSU/ University/ MNC/ Corporate	
	Whether registered with any Central/ State Government Agency (If yes, attach registration certificate)	
	Is the firm authorized dealer of OEM CCTV camera supplier? Letter from OEM CCTV camera supplier to be attached as the proof.	
	Annual Turnover during the last three years (enclose Annual Accounts duly certified by Chartered Accountant) 2013-14 2012-13 2011-12	
	Service Tax Registration Number (attach documentary proof)	
	CST/ VAT Registration Number (attach documentary proof)	
	Income Tax PAN Number (attach documentary proof)	
	Whether the firm has a full-fledged office and workshop in Trichy or anywhere in Tamil Nadu? If so furnish address of the same	
	Whether list of clients along with their contact persons name, telephone numbers and address attached? **(Bid will not be considered without this information)** The vendor / supplier must have supplied and installed 3 numbers of CCTV systems of similar type in large undertakings like Defence establishments / Govt. of India institutions / public utilities viz., airport, railway stations etc., in India and working satisfactorily for a minimum period of 3 years. Reference list of supplies along with contact details and satisfactory performance certificates shall be submitted along with techno-commercial bids.	

SECTION G: FORMAT FOR PRICE BID

	I - CAMERAS			
	Name of the Item	Price for each	Qty (approx)	PRICE (Taxes and duties to be indicated separately)
1.	Indoor/Outdoor 20x HD 1080p PTZ ONVIF camera with ARM Mount **(for outdoor use)**		05	
2.	HD 1080p Day/Night Fixed Dome Camera **(for outdoor use)**		15	
3.	1080P High definition Day/Night fixed IP camera per unit - bullet/box type **(for indoor use)**		100	Price for 1 to 50 = Price for above 50 =
4.	Portable CCTV camera trailer setup unit		1	
	II-SERVER			
5.	VIDEO SERVER (with video Analytics, without viewing Monitor) - Dual INTEL XEON E5-2660 (X64 Bit) - RAM - 16 GB (Minimum), 1600MHz - Graphic Card – minimum 2GB - Hard disks – 2x 1TB for Windows and NEXT - OS – Windows Server 2008 - Network Card – 2x1 Gbit/s Network cards - warranty period – 5 years on site complete warranty		2	
6.	Remote Workplace Client - Workstation - To view at least 25 cameras with 1080P resolution @ 25FPS - Processor – Intel Core i7-3770K - RAM – Minimum 16 GB,1600MHz - Hard disks – 1 TB for Windows and NEXT - OS-Windows7, 64bit - Network Card – 1Gbit/s network card - Warranty period – 5 years on site complete warranty		2	
7.	Network-attached storage (NAS) + iSCSI storage – The archive to store - Above 50 cameras/480P/25FPS/H.264 - For 30 days, 24 hours per day is 18 TB and above		2	
	III - VIDEO MANAGEMENT SOFTWARE			
8.	Video Management Software – License ** If free software means to mention it		01	
9.	Camera Licenses if any		As req.	

10.	Server License, if any		As req.	
11.	Enterprise or Base License, if applicable		As req.	
12.	Video Analytics or VCA License		As req.	
13.	Forensic Search or Video Archive Search License			

Important Note:

- **Software license cost should be one time only without any additional annual recurring charges.**

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IV - ACCESSORIES

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14.	Outdoor dome enclosure & wall mount bracket suitable for Mount Dome PTZ Camera.			
15.	Outdoor dome enclosure & wall mount bracket suitable for Mount Dome Camera.			
16.	Outdoor dome enclosure & wall mount bracket suitable for fixed IP camera.			
17.	Suitable powder coated/Normal (rust free) Pole for Mounting Cameras. If any requirement		As req.	
18.	Suitable fastener		As req.	
19.	Suitable armored network cable (cat 5/6) with connectors (RJ45)		As req.	
20.	Suitable armored network cable laying work with material to connect all cameras. Price per meter (Necessary GI pipes to be use for road crossing areas)	**	As req.	
21.	Suitable Power Cables for each camera		As req.	
22.	Suitable VGA and HDMI cables		As req.	
23.	**LCD SCREEN TELEVISION with wall mounting bracket** (46") inch HD Resolution 1920 X 1080 or equivalent HDMI /USB/ETHERNET PORT/ LAN/BUILT-IN WIFI/DVI AUDIO PORT Suitable audio and video support AC-100-240V, 50hz Touch screen - optional		03	
24.	Price for any other optional item (if necessary)	**	As req.	

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V – INSTALLATION/LABOUR

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25.	Installation of poles including labour and materials (digging, filling and fixing)		As req.	
26.	Civil work labour including of all materials (if necessary)		As req.	

	VI – SUPPLY AND INSTALLATION OF UPS FOR POWER BACKUP			
27.	Supply of Online Ups for servers 5 KVA with Battery backup ONE HOUR.		01	
28.	Providing suitable MCB/Main switch for both input/output for ups Installation including labour		As req.	
29.	Ground earthing (copper plate) for UPS installation as per normal Electrical standard.		03	
30.	Price for any other optional item (if necessary)			
	VII –WARRANTY / AMC/ON SITE ENGINEER /OPTIONAL (FOR ALL ITEMS)			
33.	Warranty period – All the equipments supplied should have minimum 3 years comprehensive onsite warranty. Any fault in the equipment should be replaced with free of cost for complete three years.			
34.	Cost for additional warranty period in years (if any)			
35.	Cost of Annual Maintenance Contract for complete CCTV system after warranty period is over. Mention the rates for three years after the warranty period per year basis.			
36.	Cost for minimum two on-site engineers to maintain the system during the warranty period and during AMC period. (if yes means you should mention the details year wise)			
37.	Is software training provided for our institute maintenance engineers?			
38.	Any other optional terms? (if yes means you should mention in details)			