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GURU JAMBHESHWAR UNIVERSITY OF SCIENCE & TECHNOLOGY, HISAR-125001
Tender For Supply and Installation of IP Based Campus Surveillance System

To

Subject: Invitation for tender for supply and installation of IP based campus surveillance system .

Dear Sir (s),

You are invited to submit your most competitive tender for the following equipment (s) with the following terms and conditions:-

A. SCHEDULE OF EVENTS :-

1.	TENDER NO.*	::	N/W Cell / 2016 /SURV
2.	TENDER FLOATING DATE	::	25.10.2016
3.	TENDER SUBMISSION CLOSING DATE & TIME::		15.11.2016 (3:00 PM)
4.	TENDER OPENING DATE & TIME	::	15.11.2016 (3:30 PM)
5.	VENUE FOR TENDER SUBMISSION & OPENING::		Room No. 112 TB-6
6.	PRE-BID CONFERENCE(IF ANY)	::	No
	DATE, TIME AND VENUE		NA
7.	TENDER DOCUMENT COST	::	Rs. 300-00

* Tender number must be mentioned in all correspondence.

B. BRIEF DISCRIPTIONOF TENDER DOCUMENT :-

This tender document consist of four parts namely :

- i) Brief description of the equipment name ;
- ii) Technical data sheet(technical specifications of the equipment) ;
- iii) General standard Terms and conditions ; and
- iv) Special Terms and conditions (If any).

1. Brief description of the equipment(s) :-

It mentions the name of the equipment required and its quantity. The quantity is subject to increase and decrease, at the discretion of the indenter. **(ANNEXURE-A)**

2. Technical data sheet(technical specifications of the equipment) :-

It contains the technical details / specification of the equipment. It should be submitted in a separate sealed envelope marked as “Technical Bid”. Bids having deviation in technical specification will be declared as “technically non-responsive ” and it will not be considered for commercial evaluation . **(ANNEXURE-B)**

3. Commercial Data Sheet(Price / Commercial Bid) :-

This format deals with the commercial aspect of the tender. The bidder should quote the basic/ex-works rate of goods and other over head charges only in this format .

4. **General / standard Terms and conditions** (Part D):-

This portion contains the general/standard terms and conditions of the tender and its compliance is essential, failing which the contract may be cancelled and bidder may be liable for penal action against it.

5. **Special Terms and conditions :-** (ANNEXURE-C)

It contains special terms and condition which may be in addition to / in super-session of the referred “**General / Standard Terms and conditions**” and its compliance is also compulsory in the same manner, as in the case of the **General / Standard Terms and conditions**.

C. EQUIPMENT DETAILS :

i) Brief description of the equipment name :-

<u>Sr. No.</u>	<u>Name of Equipment(s)</u>	<u>Quantity Required</u>
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1.	IP based campus surveillance Items	See Annexure-A
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ii) **Technical data sheet (Technical specifications of the equipment) :-**

Sr. No.	Description of the Equipment (s)	Technical Specifications
1.	Supply and Installation of IP based Campus Surveillance System	ANNEXURE-B

D. GENERAL/ STANDARD TERMS AND CONDITIONS OF THE TENDER :-

1 **TWO ENVELOPE BID** :-

The tender is to be submitted on two envelope bid pattern i.e. “Technical bid” and “Price/commercial bid” in separately sealed envelopes. Both of these envelopes should be put in and sealed in another envelope addressed to In charge, Networking Cell, Guru Jambheshwar University of Science & Technology, Hisar-125001 (Haryana), India and super-scribed in bold as “**Tender for supply & installation of IP Based Campus Surveillance System**”.

The “Technical bid” should mention only the technical details of the item/equipment. Price per unit be mentioned only in the “**Price/commercial bid format**”. Bid will be rejected if it is not submitted in above format

2. **BID SIGNING** :-

The Tender must be signed by authorized signatory of the bidding firm/company on each page, along with seal of the firm/company, as the case may be

3. **Conditional Bid** :-

Conditional Bid is not acceptable. Hence, the supplier is advised neither to alter the specifications nor to mention anything on the Tender form, except cost, signature with seal, otherwise his Tender will not be considered. Supplier should also not submit multiple option bid in terms of rates and model.

4. **Delivery Destination**:-

The Tender should be quoted as FOR GJUS&T, Hisar.

5. **Delivery Acceptance** :-

The delivery of the material will be handed over to the authorized official of the concerned indenting department/office, However, the goods will be deemed to accepted subject to the approval of the inspection committee of GJUS&T. In case of rejection of the consignment, the supplier should immediately remove the consignment from the university premises failing which it will remain there at the risk and responsibility of the supplier and university will not be responsible for any kind of liability in this regard.

6. Delivery Period :-

Firm shall complete the job within 45 days of placement of purchase order. They shall be liable of penalty @ 0.5 % per week for delay in this regard. In case job is not completed within 45 days then university will cancel the order without paying any amount and the firm will be blacklisted for any future dealing with the university.

7. Delivery Period Extension:-

The supply order(s) shall be executed within the time specified in this regard. However, in case of Force Majeure / reasons beyond control of the supplier, he may make a written request to the Vice-Chancellor for grant of extension for delivery period. The written request in this regard should clearly spelling out such reasons .

The Vice-Chancellor, if he is satisfied of such reasons and further that the requested extension will not be detrimental to the interests of the university, may grant extension for a reasonable period for delivery of the goods. The supplier would be required to indemnify the university against any loss on account of downfall of the price during the extended period. However the extension in delivery period will not be treated as a matter of right.

8. Penalty for delayed supply :-

In the event of the delayed supply, if accepted, there will be a penalty @ 0.5% per week of total cost of the purchase order. The supply will be deemed to be complete on the day when 100 % supply is handed over to the indenter(in case of supply in installments) and its installation is done.

9. EMD forfeiture:-

EMD will be released on successful inspection of complete network. In case of the contractor backs out the supply, the earnest money deposited by him shall be forfeited. Apart from it, he will be liable for any other action against him, as may be considered necessary by the Vice-Chancellor.

10. Rejection of incomplete tenders;_

Incomplete Tender such as unsigned Tender, late submitted Tender, conditional Tender, not confirming to the eligibility criteria and Technical specification or with any vague term such as 'Extra as applicable', will be considered as rejected.

11. Quantity Variation :-

The quantity shall be subject to increase or decrease as the case may be.

12. Manual/literature:-

The detailed literature/catalogue of the quoted instrument and its accessories should also be attached with the tender. The specifications claimed by the firm should be clearly mentioned in the literature/catalogue also. Its manual should also be supplied with the equipment.

13. Taxation:-

Taxes/Excise duty/Custom duty etc. should be quoted independent of the ex-works price of the item and it will be paid as applicable under Government rules, if so quoted by the Supplier in the tender, subject to the certificate in the bill of costs as follows. However, wherever exemption from duty (excise/custom duty) is

applicable, the university will provide the exemption certificate, along with supply/purchase order itself.

“Certified that the taxes/duties charged in this bill is leviable under Government Rules”. In case of imported goods the custom clearance is to be arranged by the supplier at his own. Charges, if any, in this regard, however, need to be mentioned accordingly in the quote itself. University will provide necessary documents for this purpose. In case the quote is silent with regard to taxation and clearance charges etc, no such charges will be paid by the university.

14 . Right to Bid rejection :-

The University reserves the right to reject any or all offers without assigning any reason.

15. Packaging of Consignment :-

The material should be packed in a strong case so as to avoid any damage, theft or pilferage in the transit, in which case the responsibility shall be that of the supplier.

16. Warranty :-

The warranty should be 36 months from the date of installation of the IP based Campus Surveillance System including UPS and its batteries.

17. Performance Warranty :-

Firm will have to submit performance Bank Guarantee of 10 % amount of total cost for a period of 5 years (3 years of warranty and 2 years of AMC). University can claim this amount in case firm do not provide satisfactory services during warranty period.

In case of imported goods requiring opening of LC or advance copy of the draft, the bank guarantee on account of performance warranty, having validity for warranty period plus 4 months, should be submitted before issuance of the purchase order by the indenter. If required, its validity will be got suitably extended by the supplier before release of his EMD.

18. Payment :-

The payment will be made after inspection by university, which will be carried out within one month of completion of the work.

19. Currency:-

The rates be quoted in Indian Currency(IN R).

20. Earnest Money Deposit(EMD) :-

The earnest money of the amount , as per the slab given below, in the form of bank draft payable at Hisar and drawn in favor of the Registrar, Guru Jambheshwar University of Sc. & Tech. Hisar or a irrevocable bank guarantee, will be required to be remitted with the tenders. **EMD should be enclosed with Price bid and the same should be indicated in the Technical bid also.**

21.Arbitration :

In case of any dispute both the parties will be bounded by the decision of the Vice-Chancellor, GJUS&T, Hisar , as the arbitrator.

22.Jurisdiction :- All disputes shall be subject to Hisar jurisdiction.

23. EMD Slab :-

<u>Sr. No.</u>	<u>Contract Value</u>	<u>Earnest Money</u>
1.	Rs. 200001/- to 300000/-	Rs. 10000/-
2.	Rs. 300001 to 500000/-	Rs. 20000/-

3.	Rs. 500001 to 1000000/-	Rs. 40000/-
4.	Rs. 1000001 to 2000000/-	Rs. 70000/-
5.	Above Rs. 20,00,000/-	Rs. 100000/-

The terms & conditions of tender have been read and I/We certify that I/We clearly understand the same and undertake for its compliance

Place :-----

Date:-----

Signature of authorized
representative of the bidding
firm/company with seal.
(Affix Rubber Stamp of the firm)

GURU JAMBHESHWAR UNIVERSITY OF SCIENCE & TECHNOLOGY HISAR

(Technical Bid) Set-I

TENDER NO & DATE : _____ Name of Firm _____

S. No.	Description of item	Qty	Make	Model
1.	Fixed Lens Bullet Camera 2 Megapixel 1/2.8" Full HD with onboard analytics	64		
2.	Connector Enclosure: For connector and cable at camera site	64		
3.	Monitor: 43" LED Commercial IPS Pannel, 1920 x 1080 resolution, viewing angle of 178 x 178 degree, Dynamic contrast ratio 500,000:1, minimum brightness 350 cd /m2, RJ45 Port, HDMI port, DVI-D Port, VGA/RGB Port for HDMI Ports With Video Wall Mounting with easy cable plug in should be supplied with HDMI Cable 5 meter and wall mounting kit	4		
4.	Workstation: Industrial Grade Workstation for 24X7 OPERATIONS as per technical specifications	1		
5.	UTP: CAT6 UTP Cable (305 Mtr. Roll)*	8		
6.	Server: Rack Mount Server with Two Intel Xeon E5-2609 v3 1.9GHz,15M Cache,6.40GT/s QPI,No Turbo,No. HT,6C/6T(85W), 3.5" Chassis with minimum 8 Hard Drives, 2 x 8GB RDIMM, 2133MT/s, Dual Rank, x8 Data Width, 8 x 8TB 7.2K RPM NLSAS 12Gbps 512e 3.5in Hot-plug Hard Drive, Integrated RAID Controller, DVD+/-RW, SATA, RAID 5 loaded with preloaded Microsoft Server 2012.	1		
7.	Point to Point Link: Radio Frequency Link with Master and Slave (Complete Link)	3		
8.	UPS: Online UPS 2 KVA with 2 hours battery backup.	2		
9.	Pipe: 3/4" PVC Pipe ISI Marked.*	1000		
10.	8 port KMM switch compatible with USB mouse and keyboard	1		

*On Measurable basis.

Set-II

S. No.	Description of item	Qty	Make	Model
1	Fixed lens Dome Camera 2 Megapixel 1/3" Full HD	28		
2	Connector Enclosure: For connector and cable at camera site	28		
3	Monitor: 43" LED Commercial IPS Pannel, 1920 x 1080 resolution, viewing angle of 178 x 178 degree, Dynamic contrast ratio 500,000:1, minimum brightness 350 cd /m2, RJ45 Port, HDMI port, DVI-D Port, VGA/RGB Port for HDMI Ports With Video Wall Mounting with easy cable plug in should be supplied with HDMI Cable 5 meter and wall mounting kit	1		
4	Workstation: Industrial Grade Workstation for 24X7 OPERATIONS g as per technical specifications	1		
5	16 channel NVR : Loaded with 4X2TB HDD	2		
6	PoE Switch: 24 Port L2 PoE Switch Gigabit with one SFP port	2		
7	9U Rack with accessories	2		
8	UTP: CAT6 UTP Cable (305 Mtr. Roll)*	4		
9	UPS: Online UPS 2 KVA with 2 hours battery backup.	1		
10	Pipe: 3/4" PVC Pipe ISI Marked.*	750		
The OEM for Camera and NVR should be same.				

**On Measurable basis.*

Note: Attach the documentation and catalogue of the make and model quoted.

BIDDER'S ACKNOWLEDGEMENT

I UNDERTAKE TO SUPPLY THE EQUIPMENT / ITEM AS PER ABOVE TECHNICAL SPECIFICATIONS

Date and Place:

(SIGN WITH SEAL OF THE BIDDER }

GURU JAMBHESHWAR UNIVERSITY OF SCIENCE & TECHNOLOGY HISAR
Price/commercial bid (For Networking items)
(In separate envelope)

TENDER NO & DATE : _____ Name of Firm _____

Set-I

S. No.	Description of item	Qty	Rate	Amount
1	Fixed Lens Bullet Camera 2 Megapixel 1/2.8" Full HD with onboard analytics as per technical specifications	64		
2	Connector Enclosure: For connector and cable at camera site	64		
3	Monitor: 43" LED Commercial IPS Pannel, 1920 x 1080 resolution, viewing angle of 178 x 178 degree, Dynamic contrast ratio 500,000:1, minimum brightness 350 cd /m2, RJ45 Port, HDMI port, DVI-D Port, VGA/RGB Port for HDMI Ports With Video Wall Mounting with easy cable plug in should be supplied with HDMI Cable 5 meter and wall mounting kit	4		
4	Workstation: Industrial Grade Workstation for 24X7 OPERATIONS as per technical specifications	1		
5	UTP: CAT6 UTP Cable (305 Mtr. Roll)*	8		
6	Server: Rack Mount Server with Two Intel Xeon E5-2609 v3 1.9GHz,15M Cache,6.40GT/s QPI,No Turbo,No. HT,6C/6T(85W), 3.5" Chassis with minimum 8 Hard Drives, 2 x 8GB RDIMM, 2133MT/s, Dual Rank, x8 Data Width, 8 x 8TB 7.2K RPM NLSAS 12Gbps 512e 3.5in Hot-plug Hard Drive, Integrated RAID Controller, DVD+/-RW, SATA, RAID 5 loaded with preloaded Microsoft Server 2012.	1		
7	Point to Point Link: Radio Frequency Link with Master and Slave (Complete Link)	3		
8	UPS: Online UPS 2 KVA with 2 hours battery backup.	2		
9	Pipe: 3/4" PVC Pipe ISI Marked.*	1000		
10	8 port KMM switch compatible with USB mouse and keyboard	1		
11	Fixing of CCTV Camera's with configuration.	64		
12	Configuration of Server, Storage & monitoring Station as per solution(64 cameras).	1		
13	Digging: Minimum 3 feet soft / hard surface with refilling / restoring the original state, marking etc. *	Per Meter		
14	Laying: Laying of UTP / Power cable through PVC pipe, fixing of pipe. Measurement will be based upon length of UTP.	2400		
15	Labeling and Documentation for above Project.	1		
		Total Set-I (A)		

Set-II

S. No.	Description of item	Qty	Rate	Amount
1	Fixed lens Dome Camera 2 Megapixel 1/3" Full HD as per technical specifications	28		
2	Connector Enclosure: For connector and cable at camera site	28		
3	Monitor: 43" LED Commercial IPS Panel, 1920 x 1080 resolution, viewing angle of 178 x 178 degree, Dynamic contrast ratio 500,000:1, minimum brightness 350 cd /m2, RJ45 Port, HDMI port, DVI-D Port, VGA/RGB Port for HDMI Ports With Video Wall Mounting with easy cable plug in should be supplied with HDMI Cable 5 meter and wall mounting kit	1		
4	Workstation: Industrial Grade Workstation for 24X7 OPERATIONS as per technical specifications	1		
5	16 channel NVR : Loaded with 4X2TB HDD	2		
6	PoE Switch: 24 Port L2 PoE Switch Gigabit with one SFP port	2		
7	9U Rack with accessories	2		
8	UTP: CAT6 UTP Cable (305 Mtr. Roll)*	4		
9	UPS: Online UPS 2 KVA with 2 hours battery backup.	1		
10	Pipe: 3/4" PVC Pipe ISI Marked.*	750		
11	Fixing of CCTV Camera's with configuration.	28		
12	Configuration of NVR with Workstation	2		
13	Digging: Minimum 3 feet soft / hard surface with refilling / restoring the original state, marking etc. *	Per Meter		
14	Laying: Laying of UTP / Power cable through PVC pipe, fixing of pipe. Measurement will be based upon length of UTP.	1200 mtr		
15.	Labeling and Documentation for Library .	1		
			Total of Set-II (B)	

*On measurable basis.

S. No.	Description of item	Qty	Rate	Amount
1	Total cost of the project inclusive of 3 years maintenance services with RE	A+B		
2	Comprehensive annual rate of AMC with RE for 4th and 5th year.	2		
Grand Total (L-1 will be decided on basis of this total)				

We agree to supply the above Equipments/software in accordance with the above technical specifications for a total contract price referred as above , with in the period specified in the Invitation for Tender. We also confirm that the normal commercial warranty/guarantee of as per tender document shall apply to the offered Equipments/Software.

Date _____

Place: _____

Signature with seal of the firm

Annexure-'A'

Set-I Entry Gates of University and various building of campus

S. No.	Description of item	Qty	Specifications
1.	Fixed Lens Bullet Camera 2 Megapixel 1/2.8" Full HD with onboard analytics	64	Specification as per Annexure 'B'
2.	Connector Enclosure: For connector and cable at camera site	64	
3.	Monitor: 43" LED Commercial IPS Panel, 1920 x 1080 resolution, viewing angle of 178 x 178 degree, Dynamic contrast ratio 500,000:1, minimum brightness 350 cd /m2, RJ45 Port, HDMI port, DVI-D Port, VGA/RGB Port for HDMI Ports With Video Wall Mounting with easy cable plug in should be supplied with HDMI Cable 5 meter and wall mounting kit	4	
4.	Workstation: Industrial Grade Workstation for 24X7 OPERATIONS g as per technical specifications	1	
5.	UTP: CAT6 UTP Cable (305 Mtr. Roll)*	8	
6.	Server: Rack Mount Server with Two Intel Xeon E5-2609 v3 1.9GHz,15M Cache,6.40GT/s QPI,No Turbo,No. HT,6C/6T(85W), 3.5" Chassis with minimum 8 Hard Drives, 2 x 8GB RDIMM, 2133MT/s, Dual Rank, x8 Data Width, 8 x 8TB 7.2K RPM NLSAS 12Gbps 512e 3.5in Hot-plug Hard Drive, Integrated RAID Controller, DVD+/-RW, SATA, RAID 5 loaded with preloaded Microsoft Server 2012.	1	
7.	Point to Point Link: Radio Frequency Link with Master and Slave (Complete Link)	3	
8.	UPS: Online UPS 2 KVA with 2 hours battery backup.	2	
9.	Pipe: 3/4" PVC Pipe ISI Marked.*	1000	
10.	8 Port KMM switch compatible with USB mouse and keyboard	1	
11.	Fixing of CCTV Camera's with configuration.	64	
12.	Configuration of Server, Storage & monitoring Station as per solution (64 cameras).	1	
13.	Digging: Minimum 3 feet soft / hard surface with refilling / restoring the original state, marking etc. *	Per Meter	
14.	Laying: Laying of UTP / Power cable through PVC pipe, fixing of pipe. Measurement will be based upon length of UTP.	2400 mtr	
15.	Labeling and Documentation for Entire Project.	1	

* On measurable basis as per actual.

Set II Library

S. No.	Description of item	Qty	Specifications
1	Fixed lens Dome Camera 2 Megapixel 1/3" Full HD	28	Specification as per Annexure 'B'
2	Connector Enclosure: For connector and cable at camera site	28	
3	Monitor: 43" LED Commercial IPS Panel, 1920 x 1080 resolution, viewing angle of 178 x 178 degree, Dynamic contrast ratio 500,000:1, minimum brightness 350 cd /m2, RJ45 Port, HDMI port, DVI-D Port, VGA/RGB Port for HDMI Ports With Video Wall Mounting with easy cable plug in should be supplied with HDMI Cable 5 meter and wall mounting kit	1	
4	Workstation: Industrial Grade Workstation for 24X7 OPERATIONS as per technical specifications	1	
5	16 channel NVR : Loaded with 4X2TB HDD	2	
6	PoE Switch: 24 Port L2 PoE Switch Gigabit with one SFP port	2	
7	9U Rack with accessories	2	
8	UTP: CAT6 UTP Cable (305 Mtr. Roll)*	4	
9	UPS: Online UPS 2 KVA with 2 hours battery backup.	1	
10	Pipe: 3/4" PVC Pipe ISI Marked.*	750	
11	Fixing of CCTV Camera's with configuration.	28	
12	Configuration of NVR with Workstation	2	
13	Digging: Minimum 3 feet soft / hard surface with refilling / restoring the original state, marking etc. *	Per Meter	
14	Laying: Laying of UTP through PVC pipe, fixing of pipe. Measurement will be based upon length of UTP.	1200 mtr	
15.	Labeling and Documentation for Library .	1	

* On measurable basis as per actual.

Annexure-‘B’

SPECIFICATIONS (Set-I)

Outdoor Bullet Camera

- 1/2.8” 2 Mega Pixel ExMor CMOS sensor;
- Full HD resolution of 1920 x 1080;
- H.264 (BP/MP/HP), MJPEG codec support for streaming and recording;
- 2D and 3D DNR to reduce noise in low-light;
- 20 mtr Smart IR;
- IP-66, IVA: Tripwire, Entry and Exit, Perimeter, Intrusion Detection, Motion Detection, Video Blind, Defog;
- F 1.2 @ 2.8mm, Angle of view: (H) 90°, 0.05 Lux Color mode, 0.01 Lux Black and White mode, 0 Lux Black and White mode with IR LED on, Image Enhancement with WDR, BLC, HLC, Defog, EIS;
- Configurable image size, quality, frame rate, VBR/CBR;
- 3D DNR;
- 4 Zones ROI;
- Supports 802.3af PoE Class 2
- Certificates: CE, FCC

Workstation

S.No.	Features	Description
1	Processor	Processor: E3-1226v3 4 Cores/3.3 Ghz /8 Mb cache/1600 Mhz FSB
2	Chipset	Intel® C226 chipset or above
3	RAM	16 GB
4	Graphics Card	Nvidia NVS 510 Should have a facility to check usage of graphics card on real time bases on different applications Should have a facility to update graphics driver as per different applications
5	Hard Drive	2 TB
6	Optical Drive	16x super multi DVDRW SATA ODD
7	Bays	1 internal 3.5-inch bay, and 1 shared with external 3.5-inch bay; 1 external 5.25-inch bay
8	Ports	Front: 4 USB 2.0, 1 microphone in, 1 headphone out Rear: 4 USB 3.0, 2 USB 2.0, 1 audio in, 1 audio out, 1 standard/1 optional serial port, 1 parallel (optional); 2 PS/2, RJ-45 (NIC), 1 VGA and 1 DisplayPort (for use with Intel HD Graphics); optional 2 IEEE 1394b ports (PCIe card) Internal: 4 USB 2.0 ports

9	Slots	1 PCIe Gen3 x16, 1 PCIe Gen2 x4/x16, 2 PCIe Gen2 x1, 1 PCI slot
10	Operating System	Windows 8.1 Professional or higher
11	Keyboard	OEM USB standard keyboard
12	Mouse	OEM USB Optical 3-Button Mouse
13	Form Factor with Tool free design	Mini Tower
	Chassis	Cable-less and Tool-free chassis -
	Diagnostics	Diagnostic tool that can be used by the end user or technical support personnel to view information about the hardware configuration of the computer and perform hardware troubleshooting Workstation systems. This should be independent of OS and works on Linux as well. This should perform comprehensive test on the motherboard.
	Collaboration	Solution for collaboration on complex 3D applications and designs between users/groups sitting anywhere in the world.
	Other Features	Solution where users can themselves know the exact RAM, BIOS settings, Graphics memory, Cache size, Processor cores and other system configurations required by the applications on the Workstations. Also suggest on latest patches and updates on drivers
14	Power Supply	240W-watt or more 90% efficient power supply: - Full ranging input and APFC - min 90% efficient or better
15	Certification & Security	The system should be certified by leading ISV's for running their applications. System should have solenoid lock & Hood sensor Optional Protect Tools Software should be available. The bidder should have experience of workstation products & ISV products. Authorization from any ISV application software vendor to be enclosed with the offer preferably ArcGIS, Erdas, Autodesk, etc.
16	Warranty	3 years comprehensive onsite warranty
17	Vendor Status	The hardware vendor (OEM) should be a reputed concern, having global presence in multiple countries. Vendor should have ISO certifications.
18	Integration & testing	Full configuration as listed above should be tested and integrated at OEM manufacturing plant which includes all major components, power supply, cooling fan, cabinet etc. A certificate from the manufacturer should be enclosed with this effect.
19	Manuals/ Driver CDs	1. All documents manuals/driver CDs should be provided by the OEM. 2. Product brochure, clearly indicating make and model no. etc, should be provided with the offer.
20	After sales service	Local services should be available and OEM (manufacturer) should have at least two authorized service provider (ASP) and their address should be available on OEM's website. Also, provide name & address of the ASP.
21	Industry Standards	System should be fully compliant with industry standards. System and all internal components should be RoHS compliant.

Specifications for Point to Point

1. Radio Operation

- System should be operating in ISM band 5.825-5.875GHz
- System should also support future proof ,supporting frequency range from 4910 – 5970 MHz to support future free band frequency
- System should ensure that the frequency that they employ would not be affected by other surrounding radio interference and by their own radios.
- System should employ bandwidth per channel of 5,10,20 MHz and 40 Mhz for backhaul.
- System efficiency should be at least 4.5 bps/Hz in a 20MHz and 40 Mhz channel size
- System must support actual aggregate throughput of more than 90 mbps and 180 mbps with 20 Mhz and 40 Mhz respectively without any license limitation.
- All System should be able to operate in a LOS and nLOS environment to ensure complete flexibility in choosing deployment locations.
- System must provide the flexibility Point to Point and Point to Multipoint Topology without any hardware changes.
- System should have minimum gain of 16 dBi integrated antenna.
- Integrated antenna beam width should not be higher than Azimuth 15 and Elevation 30
- System must support Asymmetric bandwidth configuration.
- Transmit power standard of system should range from 0 to 30 dBm with 1 dBm interval.
- Transmit power should employ automatic power back off (Automatic Transmit Power Control).System should change TX power in accordance with required received signal.
- Rx sensitivity of the system must be -90 dBm or better for 40 mhz channel width
- System Processor Specification must be Atheros AR9350, MIPS 74K 533MHz or better.
- System memory must support 128 MB DDR1, 16 MB Flash or better
- Interference Mitigation and Radio Performance
- All units should have a spectrum analyzer feature for monitoring the spectrum noise floor in which the system is operating on.
- System should have the capability to adapt the modulation mode depending on the link environment ensure best throughput while maintaining the link despite drop in link budget due to NLOS situation. Modulation level shall be dynamically adaptive between QPSK ,16 QAM and 64QAM .
- System should support modulation from QPSK ½ to 64QAM 5/6.
- Mac layer should be designed to carry small size of packets i.e. 64 bytes to minimize the impact of interference without compromising on throughput.
- System must operate with scheduled mac access rather than CSMA to avoid collision in network.
- System must support the MTU size of 1700 Bytes
- System Should support Spanning tree protocol for Layer 2 redundancy.
- System Should support DHCP server and client functionality
- System should be able to operate in NAT and bridge mode
- System should also define the priority of Broadcast ,Multicast and voice traffic
- System should support the traffic classification and prioritization by DSCP, COS, VLAN ID, Ethertype, source and destination at L3/L2 level..

2 Security

- System should support WPA-2,AES128 proprietary security encoding.
- System should also support a management VLAN and data VLAN for further security measure

- System must have the ability to tag VLAN as per requirement
- System must support Radius authentication for all radio. Customer end should be able to communicate with master radio only after the successful authentication from Radius Server. After authentication ,CPE should be able to accept the QOS configuration pushed from Radius Server.
- System should support the Layer 2 and layer 3 firewall based on source and destination to protect from any security breach.
- System should also provide the filtering on basis of specific TCP port
- System must provide device event log

3. INTERFACES

- Management of the system shall be GUI HTTP,HTTPS ,and SSH SNMPv2c interfaces.
- System should have a Spectrum Management channel that is able to show individual channel interference
- System must support the prioritization of voice, video and data.
- System must support the feature to define priority of CPE.
- Software upgrade to system is done over the air as well as through the network
- System must support MIR configuration to ensure SLA.
- System should provide the complete statistic of Ethernet and wireless with detail of send/receive packet of unicast ,multicast and broadcast .
- System must support the syslog feature.
- System must support the basic troubleshooting feature such as Ping, Trace route.
- It is mandatory that System must support gigabit Ethernet .

4. Environmental Requirements

- Bidder's proposed indoor mounted equipment MUST operate as specified under the following room ambient environmental conditions:
 - a. Operating Temperature - 25 degrees C to +60 degrees C
 - b. System must have inbuilt surge suppressor of 2 Joule.
 - c. System weight should not exceed 0.5 Kg
 - d. Maximum power consumption should not exceed 10 W.

5. Certifications:

- WPC GSR-38
- IC - 109W-0015
- CE - EN 302 502 v1.2.1,EN 301 893
- EME- EN50385:2002
- Safety:60950-1:2006,60950-22:2006
- EMC Standard:EN310 489-1 v1.9.2 & EN301 489-17v2.2.1

Specifications of 8 Port KMM Switch:

Device Type: KVM console - 18.5"

KVM Switch: USB

Built-in Devices: Keyboard, touchpad , USB 3.0 hub

Aspect Ratio: Widescreen - 16:9

Native Resolution: Scales from 640x480- 1440x900

Color Support: 16.7 million colors

Dimensions (WxDxH): 17.4 in x 20.6 in x 1.75 in

Height (Rack Units): 1U
 Compliant Standards: Plug and Play, VESA DPMS, RoHS
 Manufacturer Warranty: 3 years warranty
 Display Type: KVM console / TFT active matrix with Diagonal Size 18.5"
 Built-in Devices: USB 3.0 hub
 Backlight Technology: LED backlight
 A-Si technology
 Input Type: Keyboard, touchpad,
 KVM: Keyboard / Mouse Interface USB
 English keyboard layout
 Connectivity Interfaces : 2 x USB 3.0 , VGA (DB-15)
 Mechanical Flat Panel Mount Interface with Rack Mounting Kit
 Compliant Standards: Plug and Play, VESA DPMS, RoHS, TAA Compliant
 Power Voltage Required: AC 230 V with
 Environmental Parameters: Min Operating Temperature 32 °F and Max Operating Temperature 122 °F.

Specification for Camera, NVR and Switch of Set-II

S.No	Item	Specifications
1	NVR	16ch 2 bay Professional Network Video Recorder with RJ-45 port;DC-in jack;One HDMI supporting resolution - 1920x1080,1280x720,1280x800,1366x768,800x600,1024x768,1440x900;RS485 Over UTP Cable, IP Protocol;One USB 3.0 and One USB2.0;Audio input x 1, output x 1;One VGA supporting resolution:1920x1080,1280x720,1280x800,1366x768,800x600,1024x768, 1440x900 ; Gigabit Ethernet LAN port (10/100/1000 Mbps); 1024 MB DDR III RAM,128MB ROM, HDD features(Reformat Disk,HDD hibernation, Partition and Grouping, Quota Management;Up to 4TB HDD each bay)
2	Dome Camera	1/3" 2 Megapixel progressive CMOS sensor, 20 meter IR illumination distance, IK10 vandal-proof housing, Configurable image size, quality, frame rate, and bit rate, Configurable shutter speed, brightness, saturation, contrast, sharpness, WDR, and 3D filter, Simultaneous H.264/MJPEG format compression, H.264/MJPEG multicast streaming, 1920 x 1080 @30 FPS, Supports 802.3af PoE Class 2, certification: CE,FCC & IP66 compliance
4	POE Switch	24-ports 10/100/1000Base-T PoE Switch plus 2 1000Base-T/SFP ports + Cable Diagnostics+16,000 mac entries+8 ports 802.3at compliant + CoS based on 802.1p Priority Queues, DSCP, Bandwidth Control; HOL Blocking Prevention; Spanning tree+1 IP interface+8 queues per port +Broadcast/Multicast/ Uni cast Storm Control+IPv4/v6 Dual Stack+802.3x Flow Control +IGMP Snooping+Loopback Detection+LLDP/LLDP-MED+Auto Surveillance VLAN+CLI and GUI+IPv6 Neighbor Discovery+IPv4/v6 Dual Stack+ACL+DHCP Server Screening+DHCP Snooping+Duplicate address detection+EAP, OTP, TLS, TTLS, PEAP,Radius+Time Based POE+Cable Diagnostics+Port Security supports 64 MACs per port. CE Class A,VCCI Class A,FCC Class A,BSMI,CCC,C-Tick,cUL,CE (LVD)

Annexure-'C'

Special Terms and Conditions (These will supersede the general terms and condition of the tender document in case of conflict)

- Tender **will be evaluated on turn key basis as per quantity mentioned.** Each bidder will have to quote for all items.
- Following should be included in Technical bid envelope
 - Signed Tender Document (including General Terms and Conditions)
 - Signed Technical Bid, Annexure A, B and C
 - EMD
 - All Supporting Documents for technical evaluation
- Following should be included in Commercial bid envelope
 - Signed Commercial Bid
- Supplier should mention make and model in technical bid.
- Supplier should not quote multiple options for make, model and rate for any item.
- Price should be quoted in commercial bid (separate envelope) in Indian rupee only, including all taxes
- VLAN structuring, all type of IP configuration, MAC binding etc to be done by firm if required by university.
- Supplier will install the relevant software on a single server to serve 64 cameras (Set-I) with recording and play back features.
- No extra payment will be made for any other head of charge. Such cost should be included in item / service.
- Payment will be made on actual measurable basis for all the items.
- Payment of AMC will be made on half yearly basis i.e. at start of 6th month and at the start of 12th month every year.
- The training of 3 days will have to be provided to university officials.
- A sufficient local stock will have to be maintained in order to ensure 99.5 % uptime.
- Passive items should have ISO 9001 and ISO 14001 certification.
- Incomplete tender such as unsigned tender, absence of supporting document, late submitted tender, conditional tender, multiple option tender will not be accepted.
- Number of items and locations may increase or decrease as per requirement during installation.
- OEM for Camera's Components should be a Company registered in India under the Indian Companies Act 1956 and should be in existence in India for past 5 years with an Annual Cumulative Turnover of Rs. 1000 Crores and above in India in last two consecutive Audited Financial years (2014 and 2015).
- OEM of camera should have direct service center/presence in Hisar or nearby Area i.e. within 250 kilometers. OEM should have toll free Number and warehouse in India.
- OEM of camera should be ISO 9001 certified.
- The Bidder should be an Indian company incorporated under Companies Act 1956 and should be in existence from past at least 5 years.
- The Bidder should be ISO 9001 Certified.
- The Bidder should have successfully executed at least 2 project of IP based surveillance of 25.0 Lakhs or higher estimated value of server / NVR based solution in past 3 years. Completion Certificate in this regard is to be submitted with technical bid.
- The Bidder should be Authorized System Integrator / Authorized dealer/ Authorized Reseller / Distributor of Active Components (Proof to be attached), Manufacturer Authorization certificate to be provided from Camera's, Display and Server OEM.
- The Bidder should have to provide OEM warranty certificate of three years and support letter during AMC period (i.e. 4th and 5th year) to ensure the direct warranty support even from OEM.
- The OEM of camera will certify the project after deployment of entire project.
- The dispute if any will be subject to jurisdiction at Hisar. For arbitration, the decision of the Vice Chancellor will be final.

I accept all above terms and conditions

Signature of supplier