

# Assam University: Silchar

## Notice Inviting Tender

No: AUL/CCTV/35/15

Dated: 29/09/2016

Sealed tenders in **Two Bid System (Technical and Commercial)** are invited from manufacturers/distributors/authorised dealer of reputed brands having wide experience in dealing with following items. **Demand Draft of Rs. 1000/- in favour of Assam University, Silchar in separate envelope payable to Finance Officer, Assam University, Silchar to be submitted along with the bid as Tender Fees.**

Name of the Work	Time of Delivery and installation.	EMD/ Call Deposit	Last date & time for submission of the Tender	Date & timing of opening of the Tender
<b>Tender for supply &amp; Installation of CCTV in Central Library.</b>	<b>Four Weeks</b>	<b>Rs. 10000/-</b>	<b>9/11/2016 (2:00 pm)</b>	<b>9/11/2016 (3:00 pm)</b>

Note: The date of Submission and Opening of the Tender shall be on the following working day in case submission and opening date become a non-working day due to the strike, road-blockade etc.

Librarian, Central Library

Tender must be submitted in different sealed envelope (containing Tender Fees, technical & financial bid in separate envelope), superscripting therein "Tender No., Bid Closing Date, Vendor's name etc." and submitted to Librarian, Central Library, **Assam University, Silchar – 788011** on or before 2 p.m. on 5/11/2016. Under no circumstances tender will be accepted after the due date and time of closing. For details please visit University website [www.aus.ac.in](http://www.aus.ac.in).

**Librarian, Central Library  
Assam University, Silchar- 788011**

## Technical Specification

### Annexure - I

SL	Item	Make	Description	Qty	Unit of Measurement
1	IP IR Dome Camera	Sony/HiVision/CP Plus or equivalent	2 Megapixel CMOS Vandal-proof Network Dome Camera, 0.01Lux @ (F1.2, AGC ON) ,0 Lux with IR, IR Range approx 30 meters, PoE	17	Nos
2	IP IR Bullet Camera	Sony/HiVision/CP Plus or equivalent	2 Megapixel CMOS ICR Infrared Network Bullet Camera, 0.07Lux @ (F1.2, AGC ON) ,0 Lux with IR,PoE, IR Range upto 30 meters	15	Nos
3	H/W NVR	HP/Dlink or equivalent	32 Channel Network Video Recoreder, HDMI,VGA, Recording Resolution 12MP, Playback Resolution 12MP, HDD 4 SATA.	1	Nos
4	PoE Switch	HP/Juniper or equivalent	24 Port PoE Gigabit Ethernet Smart Managed Switch + 4 SFP	3	Nos
5	PoE Switch	HP/Juniper or equivalent	8 Port PoE Gigabit Ethernet Web Smart Managed Switch + 2 SFP	1	Nos
6	OFC Cable	Standard Make	6 Core Armoured Single Mode Fiber Optic Cable	300	Mtr.
7	LIU	Standard Make	6 port Rack Mount Fibre Patch Panel loaded with SC Adapter & splice tray	4	Nos
8	Pigtails	Standard Make	Single Mode SC-Type Pigtails	24	Nos
9	OFC Patch Cord	Standard Make	SC-LC Single Mode Duplex Fiber Optic Patch cord - 2 Mtr	4	Nos
10	SFP Module	Standard Make	Fiber Optic Transceiver - Single Mode	4	Nos
11	CAT6 Cable	Standard Make	CAT6 UTP Cable Box (305Mtr)	6	Box
12	Network Rack	Standard Make	9U Wall mountable Rack with all accessories	2	Nos
13	Network Rack	Standard Make	17U Floor Standing Rack with all accessories	1	No
14	HDD for NVR	HP/Sony or equivalent	4 TB SATA HDD for 24X7 surveillance purpose	2	Nos
15	RJ45 Connector	Standard Make	RJ45 Connector Plugs for UTP Termination (Box-100Pcs)	1	Box
16	Monitor	Sony/LG or equivalent	42" LCD for Live View (Table Top/Wall mount)	2	Nos
17	UPS	APC/SuKam/Luminos or equivalent	5 KVA Online UPS system with 60Min. Battery Backup & Necessary power connectivity upto the Rack end in each floors	1	Set
18	PVC Conduits	Standard Make	PVC Casing /Conduits as per site requirement	800	Mtr
19	Electrical Cable & Connectors	Standard Make	Twisted Pair 3 Core Insulated Cables for Local Power Connection to Rack endas ,3 pin 5 Amp Power Socket etc.	1	Job
20	Installation & Commissioning Charges including Fixing & Configuring of Cameras, NVR & Switches, Laying of Fiber & UTP Cable, Splicing of Fiber Cores etc. with 1 year Service Warranty			1	Job

Sd/-

Librarian

## Location

<b>Grnd Floor</b>			
<b>Sl. No.</b>	<b>Location</b>	<b>Type</b>	<b>Qty</b>
1	Main Gate	Bullet	2
2	Reception	Dome	2
3	E- Library	Bullet	2
4	Social Science Stack	Bullet	4
5	Research Cubical	Dome	2
6	Periodical	Dome	2
7	Circulation	Dome	1
8	Reception Corridor	Bullet	2
9	Science Stack	Dome	4
10	Acquisition	Dome	1
11	Science Corridor	Bullet	1
<b>Total</b>			<b>23</b>
<b>First Floor</b>			
12	Thesis	Dome	4
13	Library Corridor	Bullet	2
14	Rishi Arobindo Hall	Bullet	2
15	Office Room	Dome	1
<b>Total</b>			<b>9</b>
<b>Grand Total</b>			<b>32</b>
<b>Total Bullet Camera</b>			<b>15</b>
<b>Total Dome Camera</b>			<b>17</b>

Sd/-

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## Commercial Bid

### Annexure - V

SL No	Item	Make	Description	Qty	UoM	Unit Price Including Tax	Amount
1	IP IR Dome Camera		2 Megapixel CMOS Vandal-proof Network Dome Camera, 0.01Lux @ (F1.2, AGC ON), 0 Lux with IR, IR Range approx 30 meters, PoE	17	Nos		
2	IP IR Bullet Camera		2 Megapixel CMOS ICR Infrared Network Bullet Camera, 0.07Lux @ (F1.2, AGC ON), 0 Lux with IR, PoE, IR Range upto 30 meters	15	Nos		
3	H/W NVR		32 Channel Network Video Recorder, HDMI, VGA, Recording Resolution 12MP, Playback Resolution 12MP, HDD 4 SATA.	1	Nos		
4	PoE Switch		24 Port PoE Gigabit Ethernet Smart Managed Switch + 4 SFP	3	Nos		
5	PoE Switch		8 Port PoE Gigabit Ethernet Web Smart Managed Switch + 2 SFP	1	Nos		
6	OFC Cable		6 Core Armoured Single Mode Fiber Optic Cable	300	Mtr.		
7	LIU		6 port Rack Mount Fibre Patch Panel loaded with SC Adapter & splice tray	4	Nos		
8	Pigtails		Single Mode SC-Type Pigtails	24	Nos		
9	OFC Patch Cord		SC-LC Single Mode Duplex Fiber Optic Patch cord - 2 Mtr	4	Nos		
10	SFP Module		Fiber Optic Transceiver - Single Mode	4	Nos		
11	CAT6 Cable		CAT6 UTP Cable Box (305Mtr)	6	Box		
12	Network Rack		9U Wall mountable Rack with all accessories	2	Nos		
13	Network Rack		17U Floor Standing Rack with all accessories	1	No		
14	HDD for NVR		4 TB SATA HDD for 24X7 surveillance purpose	2	Nos		
15	RJ45 Connector		RJ45 Connector Plugs for UTP Termination (Box-100Pcs)	1	Box		
16	Monitor		42" LCD for Live View (Table Top/Wall mount)	2	Nos		
17	UPS		5 KVA Online UPS system with 60Min. Battery Backup & Necessary power connectivity upto the Rack end in each floors	1	Set		
18	PVC Conduits		PVC Cassing /Conduits as per site requirement	800	Mtr		
19	Electrical Cable & Connectors		Twisted Pair 3 Core Insulated Cables for Local Power Connection to Rack endas ,3 pin 5 Amp Power Socket etc.	1	Job		
20	Installation & Commissioning Charges including Fixing & Configuring of Cameras, NVR & Switches, Laying of Fiber & UTP Cable, Splicing of Fiber Cores etc. with 1 year Service Warranty			1	Job		
<b>Total Amount (Including Taxes)</b>							

**Signature of the Tenderer**  
**Name:**  
**Address:**  
**Contact No:**

**TERMS AND CONDITIONS FOR SUBMISSION OF TENDER FOR CCTV AT  
CENTRAL LIBRARY.**

1. Only Manufacturers/Distributors/Authorized Dealer (Hereinafter called the Vendor) of **reputed brands** (including equipments of ISO/BIS/Standard Certifications) having wide experience in dealing with items at Annexure 'A' only may submit the tenders. Tender is to be submitted in a sealed envelope super scribing "**Tender for Supply & Installation of CCTV in Central Library**" with separate sealed envelope for Tender Fees, Technical and Commercial bid and also Tender No. with last date of submission is also to be mentioned.
2. The vendor must have experience in supply & installation of such items in Govt. organization /Public Sector Enterprises and Universities, etc. with at least three years of experience. Certificate in this regard from the responsible officer of that organizations with contact no., e-mail address etc is to be submitted.
3. The vendor must submit the latest Income tax, PAN card & Sales tax clearance certificates with the tender.
4. The tender should be accompanied with a BG/EMD/Call Deposit of Rs. 10,000/- (Ten Thousand) from any nationalized bank pledged in favour of the **Finance Officer, Assam University, Silchar** as earnest money.
5. The vendor must be the Authorized Partner of the manufacturer of a reputed brand and should produce a Letter of Authorization from the same. Any bids without the same would be rejected on the spot.
6. Being an educational institute, Assam University, Silchar is entitled for Custom and Central Excise duty exemption for procurement of scientific equipment etc. The interested Vendor while quoting rates should indicate the Excise duty component and tax component separately.
7. The vendor shall have to submit their tenders within 2:00 p.m. of 5/11/2016 at Central Library, Assam University, Silchar. No tender will be entertained after the scheduled time and date of submission of tenders. The same will be opened on 5/11/2016 at 3 p.m.
8. A committee of Experts constituted by the University authority will check the technical specifications and financial implications of each tender to prepare the panel of successful vendors.
9. The standard manufacturer's onsite warranty period for equipment should be at least 3 years from the date of installation. In case vendor wishes to quote for manufacturers extended warranty period it should be quoted separately.
10. The rate quoted for equipment should be for the items & specification as mentioned in the list. If vendor wishes to quote for a higher/superior specification, it must be separately stated along with proof that the specification is higher/ superior. In no case vendor should quote for lower/inferior specification otherwise tender will not be considered.

11. The interested vendor while quoting rates should include excise duty component and tax component if applicable and indicate the applicable percent or amount of excise duty component and tax component separately.
12. During Opening of tender only representative duly authorized by the vendor / tenderer will be allowed to be present.
13. The supply and installation of items will be one month from the issue of supply order.
14. The University does not bind itself to accept lowest tender and reserves the right to reject any or all the tenders received without assigning of any reason thereof. All tenders in which any of the prescribed condition is not fulfilled or any condition put forth by the vendor, shall be summarily rejected.
15. EMD of all vendor shall be released within 02 (Two) month after issue of supply order to the successful vendor. Successful vendor have to submit 10% of the bill amount in the form of BG/FDR/Call Deposit as performance guarantee which will be returned after expiry of warranty period.
16. No request for advance payment or change of terms and condition after award of job shall be entertained in any circumstances. After completion of the Supply and Testing, the vendor/firm will submit bills in triplicate for payment, with a certificate of successful delivery and/or installation of the materials from the Librarian, Central Library.
17. The receipt copy of Challan (original) shall have to be submitted along with triplicate bill for payment.
18. The consignment is required to be sent to Assam University under supplier's own arrangement free of additional charges. In case of damage or loss in transit, if any will be borne by the vendor.
19. The consignment is required to be delivered/dispatched within Four Weeks from the date of receipt of the supply order. Vendors are requested to take care that all the items mentioned in annexure are to be supplied in full set basis as per specification and the items are required to be tested and if needed to be installed. User's manuals are also to be provided along with the items supplied where applicable.
20. Special discount/rebate admissible to Educational Institution/Central University may be specifically indicated in the quotation.
21. Tenders not conforming to the terms and conditions and procedure so outlined are liable to be rejected summarily. University reserves the right to reject any or all tender at any time without assigning any reasons thereof.
22. The following updated documents should also accompany with the tenders:
  - (a) Trade Licence
  - (b) Income tax clearance certificate
  - (c) PAN Card
  - (d) Sale Tax clearance certificate
  - (e) CST/VAT clearance certificate.
23. The successful vendor have to provide on site warranty support for at least 3 years from the date of successful supply and testing. If any breakdown/non-functioning or

malfunctioning of the equipment/system occurs during the warranty period, the vendor shall have to attend to the complaint immediately after receiving verbal /written /e-mail complain and will make the machines functional free of cost. In case the system has to be taken out of the University campus, the vendor should provide a stand by support system /peripheral with same or higher /new configuration / specification. If the vendor/supplier /bidder fail to attend to the breakdown calls made within the warranty period, a portion or whole of the security Deposits as decided by the University shall be forfeited.

24. If there be any dispute, it will be referred to an arbitrator to be appointed by the University for his Decision and award. The award or decision of the arbitrator shall be final and binding on both the parties.
25. Civil Court shall have no jurisdiction to entertain any dispute regarding this tender.
26. No Telex/ Tele fax/ Telegram/ E-mail of the Technical & Commercial bid will be accepted. The University is not responsible for Postal/ Courier delays. The parties have to ensure the receipt of bids well in time.
27. Vendors should specifically submit a sheet clearly mentioning the brand of the equipment quoted.
28. Vendor should submit a sheet duly stamped and signed (Annexure III) whether their Tender document is meeting the Technical Specification given by the University or NOT.

Sd/-  
Librarian

## TECHNICAL SPECIFICATION

### Annexure – III

#### Sl. No. 1 – Specification of IP Dome Camera

Parameters	Description	Comply Yes / No	Remarks
<b>Image Sensor</b>	1/2.8" Sony Exmor CMOS or Equivalent Standard Quality		
<b>Core Processor</b>	ARM9 Architecture		
<b>Operating</b>	Embedded Linux		
<b>Lens</b>	4mm, Angle of View:74°		
<b>Day&amp; Night</b>	IR Cut Filter with Auto Switch		
<b>Focus</b>	Manual		
<b>Video Compres</b>	H.264/MJPEG		
<b>Frame Rate</b>	60Hz: 30fps (1920 × 1080), 30fps (1280 × 720)		
<b>Image Settings</b>	Brightness, Saturation, Contrast, Flip Mode Adjustable by Client Software or Web Browser		
<b>Picture Overlay</b>	200 × 200, BMP 24bit, Zone Configurable		
<b>Protocols</b>	TCP / IP / ICMP / HTTP / HTTPS / FTP / DHCP / DNS / DDNS / RTP / RTSP / RTCP / PPPoE / NTP / UPnP / SMTP / SNMP / IGMP / 802.1X /		
<b>Network</b>	1 RJ45 10M / 100M Ethernet Interface		
<b>Power Supply</b>	12 VDC ± 10%, PoE (802.3af)		
<b>Power Consump</b>	Max. 5 W		
<b>IR Range</b>	Up to 20m		

#### Sl. No. 2 – Specification of IP Bullet Camera

Parameters	Description	Comply Yes / No	Remarks
<b>Image Sensor</b>	1/2.8" Sony Exmor CMOS or Equivalent Standard Quality		
<b>Core Processor</b>	ARM9 Architecture		
<b>Operating</b>	Embedded Linux		
<b>Lens</b>	6mm Angle of View: 54°		
<b>Day&amp; Night</b>	IR Cut Filter with Auto Switch		
<b>Focus</b>	Manual		
<b>Video Compres</b>	H.264/MJPEG		
<b>Frame Rate</b>	60Hz: 30fps (1920 × 1080), 30fps (1280 × 720)		
<b>Image Settings</b>	Brightness, Saturation, Contrast, Flip Mode Adjustable by Client Software or Web Browser		
<b>Picture Overlay</b>	200 × 200, BMP 24bit, Zone Configurable		
<b>Protocols</b>	TCP / IP / ICMP / HTTP / HTTPS / FTP / DHCP / DNS / DDNS / RTP / RTSP / RTCP / PPPoE / NTP / UPnP / SMTP / SNMP / IGMP / 802.1X /		
<b>Network</b>	1 RJ45 10M / 100M Ethernet Interface		
<b>Power Supply</b>	12 VDC ± 10%, PoE (802.3af)		
<b>Power Consump</b>	Max. 5 W		
<b>IR Range</b>	Up to 20m		

### Sl. No. 3 – Specification of Network Video Recorder

Parameters	Description	Comply Yes / No	Remarks
IP Video Input	40-ch		
Audio Input	1-ch,3.5mm		
Incoming Bandwidth	280Mbps		
Outgoing Bandwidth	280Mbps		
Internet Protocol	TCP / UDP / HTTP / MULTICAST / UPnP / DHCP / PPPoE / DDNS / NFS / FTP		
ANR	Download Stored Video Automatically from Camera SD Card, When NVR was Offline		
HDMI Output	1-ch, Resolution: 1920×1080, 1280×720, 800×600, 1024×768, 1366×768,		
VGA Output	1-ch, Resolution: 1920×1080, 1280×720, 800×600,1024×768, 1366×768,1440×900,1280×800		
	Adjustable Output mode, Self-adaptive Resolution		
Frame Rate	Mainstream 25fps(P)/30fps(N); Substream 25fps(P)/30fps(N)		
Recording Resolution	4K (3840*2160, 3264*2448, 3296*2472) / 6MP (2752*2208, 2408*2008) / 5MP (2560*1920, 2592*1944, 2592*1920,		
Audio Output	2-ch, BNC(Linear Electrical Level, 6000),1-ch 3.5mm		
Synchronous Playback	4-ch 4K/6MP/5-ch 5MP/8-ch		
Live View/Playback	4K(3840*2160,3264*2448,3296*2472)/6MP(2752*2208,3008*2*2008)/5MP(2560*1920,2592*1944,2592*1920,2528*2128		
SATA	4 SATA for 4 HDDs		
HDD Capacity	Up to 6TB Capacity for Each HDD		
Network Interface	1 RJ-45 10/100/1000Mbps Self-adaptive Ethernet Interfaces		
Serial Interface	2x RS-485/232		
USB Interface	1x USB3.0, 2x USB2.0		
IPC Management	IPC Centralized Management		
IVA (Intelligent Video Analytics)	Support 40-ch Camera IVA Function		
	Tripwire / Perimeter / Facial Detection / People Counting / Missing & Foreign Object / Crowd / Loitering / Fast Moving / Parking / Off-position / Blurred Image / Audio Offline / Screaming Detection		
Records Format	H.265, also support MP4 in H.264 Format		
Certification	CE, FCC		

#### Sl. No. 4 – Specification of 24 Port Gigabit Ethernet PoE Switch

Description	Comply (Yes/No)	Remarks
L2 Managed Switch having 24x10/100/1000BaseT PoE ports and 4 1G SFP		
Switching Capacity should be atleast 56Gbps		
Packet Forwarding Rate should be atleast 41.7 Mpps for 64-byte packet size		
The switch should have non-blocking architecture & wire-speed performance under fully loaded condition from day-1		
The switch should have fan at 3 Nos. in design.		
The switch should support both IEEE 802.3af & IEEE 802.3at standards.		
The switch should have 802.1p support with 4 queues per port. Support strict & WRR queue handling technique.		
The switch should have Port-based ingress & egress bandwidth control with minimum granularity of atleast 64kbps		
The switch should have standard & extended Access control list		
The switch should have the following security features from Day-1: SSLv3, SSL IPv6, Broadcast/Multicast & Unicast storm control, port security feature with atleast 64 MAC per port, traffic segmentation, ARP spoofing prevention, IEEE 802.1x, DHCP server screening, RADIUS server, Binding of IP address with MAC address & interface.		
The switch should have feature to protect the CPU from protocol control packet		
The switch should have cable diagnostic feature to check the status of connected RJ45 cables.		
The Switch should have following Management features from day-1: Web-based GUI, Web based GUI for IPv6, CLI, Telnet Server, Telnet Server IPv6, TFTP Client, TFTP client IPv6, SNMPv1v2cv3, SNMP IPv6, SNMP trap, BootP/DHCP Client, DHCPv6 client, SNTP, SNTP IPv6, trusted host, trusted host IPv6, RMONv1, Syslog, Syslog IPv6, ICMPv6, IPv4 & v6 dual stack		
The switch should have Energy saving green technology based on cable length & link status.		
The switch should be 1U height		
The switch should be RoHS compliant & should have following certifications: FCC Class A, CE Class A, VCCI Class A, C-Tick, IPv6 Core Ready Logo Phase-II		

#### Sl. No. 5 – Specification of 8 Port Gigabit Ethernet PoE Switch

Description	Comply (Yes/No)	Remarks
L2 Managed Switch having 8x10/100/1000BaseT PoE ports and 2xcombo 10/100/1000BaseT ports/SFP slots		
Switching Capacity should be atleast 20Gbps		
Packet Forwarding Rate should be atleast 14.5Mpps for 64-byte packet size		
The switch should have non-blocking architecture & wire-speed performance under fully loaded condition from day-1		
The switch should have fanless design. It should have hardware reset button.		
The switch should support both IEEE 802.3af & IEEE 802.3at standards.		
The switch should have 802.1p support with 4 queues per port. Support strict & WRR queue handling technique.		
The switch should have Port-based ingress & egress bandwidth control with minimum granularity of atleast 64kbps		
The switch should have standard & extended Access control list		
The switch should have the following security features from Day-1: SSLv3, SSL IPv6, Broadcast/Multicast & Unicast storm control, port security feature with atleast 64 MAC per port, traffic segmentation, ARP spoofing prevention, IEEE 802.1x, DHCP server screening, RADIUS server, Binding		

The switch should have feature to protect the CPU from protocol control packet attack.		
The switch should have cable diagnostic feature to check the status of connected RJ45 cables.		
The Switch should have following Management features from day-1: Web-based GUI, Web based GUI for IPv6, CLI, Telnet Server, Telnet Server IPv6, TFTP Client, TFTP client IPv6, SNMPv1v2cv3, SNMP IPv6, SNMP trap, BootP/DHCP Client, DHCPv6 client, SNTP, SNTP IPv6, trusted host, trusted host IPv6, RMONv1, Syslog, Syslog IPv6, ICMPv6, IPv4 & v6 dual		
The switch should have Energy saving green technology based on cable length & link status. IEEE 802.3az		
The switch should be 1U height		
The switch should be RoHS compliant & should have following certifications: FCC Class A, CE Class A, VCCI Class A, C-Tick, IPv6 Core		

### Sl. No. 6 – Specification of 6 Core Optical Fiber Cable

Description	Comply (Yes/No)	Remarks
6 Core Single Mode Outdoor Armored Fiber Optic Cable		
Protected by Glass-yarn in between corrugated steel tape & loose tube		
Sequential meter marking		
Standards: ISO 11801, IEC60793-1, IEC60794-1.2, ITU-T REC G.652D,		
The fiber type is a Matched Cladding Single Mode		
Fiber dual coated with acrylate coating.		
The fiber is optimized for operation at 1310 nm and at 1550 nm.		
Nominal Mode Field Diameter: 9.2 μm		
Mode field diameter tolerance: ±4%		
Cladding Diameter: 125 μm		
Cladding diameter tolerance: ±1 μm		
Mode field Concentricity error: < 1 μm		
Cladding non-circularity: < 2 %		
Germanium doped core with no phosphorus i.e. reduced tendency for hydrogen degradation.		
UV-curable dual layer acrylate coating, which ensures excellent micro bending and abrasion resistance.		

### Sl. No. 7 – Specification of 6 Port LIU

Description	Comply (Yes/No)	Remarks
Have sufficient slots accommodate Simplex SC adapters individually.		
Aluminium base material for light mounting		
Should have Splice Tray & Cable Spool provision inside		
Accessory kit consists of cable ties, mounting ear screw earthing and spiral wrap		
Panel cover should be slide out for easy maintenance		
Removable Rear & Front cover for better access to interior of LIU		
Should be loaded with 6nos.of SC Single mode simplex adapters		
Adapters should be Telcordia, TIA/EIA, IEC compliance		
OEM should have valid ISO 9001 & ISO 14001 for design & development for wired & wireless networking products.		
All the passive components should be from same make		

**Sl. No. 8 – Specification of Fiber Pigtail**

Description	Comply (Yes/No)	Remarks
Corning Optical Fiber single mode complying G652D, G657A & G657B		
SC type Single Mode Connector		
Low insertion & return loss, clean & scratch free faces		
2Mtr length		
OEM should have valid ISO 9001 & ISO 14001 for design & development for wired & wireless networking products.		

**Sl. No. 9 – Specification of Fiber Patch Cord**

Description	Comply (Yes/No)	Remarks
All optical fiber patch leads shall comprise of Single mode 9/125µm fiber with SC & LC fiber connectors terminated at each end. The optical fiber patch leads shall comply with the following specifications:		
Optical Fiber – Corning Single Mode		
Connector: Zirconia ceramic ferrule		
Pre-radiuses and pre-polished ferrule		
Duplex		
Color-coded Yellow for SM		
Insertion Loss - <0.2 db		
Cable: 9/125, SM		
Repeatability - < 0.2 db		
Durability – 1000 mating cycle		
Working Temp : -40 deg C.to + 85 deg. C		
Standard : G652D, G 657A & G 657B		
Length : 1 Mtr / 2Mtr / 3Mtr (as per BOQ)		
OEM should have valid ISO 9001 & ISO 14001 for design & development for wired & wireless networking products.		
All the passive components should be from same make		

**Sl. No. 10 – Specification of 1G SFP Module**

Description	Comply (Yes/No)	Remarks
1000BaseLx Single Mode LC Style transceiver		
Distance support at fiber side: atleast 10Km		
Transceiver should be of same make as switch		
OEM should have valid ISO 9001 & ISO 14001 for design & development for wired & wireless networking products.		
All the switches with transceivers components should be from same make		

### Sl. No. 11 – Specification of CAT6 UTP Cable

Description	Comply (Yes/No)	Remarks
Category 6 Unshielded Twisted Pair 4 pair 100W cable shall be compliant with ANSI/TIA/EIA-568-C.2-1 Additional Transmission Performance Specifications for 4-pair 100W Category 6Cabling. Cat6 cable should be tested up to 600MHz.		
Category 6 UTP cables shall extend between the work area location and its associated telecommunications closet and consist of 4 pair, 23 AWG, UTP.		
The 4 pair Unshielded Twisted Pair cable shall be UL Listed, ETL Certified.		
All Category 6 cables shall meet or exceed the following characteristics:		
Construction: 4 twisted pairs separated by internal X shaped, 4 channel, polymer spine / full separator. Half shall not be accepted.		
Conductor Solid bare Copper		
Conductor Diameter 0.56±0.005mm (23 AWG)		
Insulation :High Density Polyethylene		
Jacket PVC		
Outer Diameter 6.1 mm nominal		
Temperature Range -20° to +70°C		
OEM should have valid ISO 9001 & ISO 14001 for design & development for		
All the passive components should be from same make		

### Sl. No. 12 – Specification of Wall Mount Network Rack

Description	Comply (Yes/No)	Remarks
9U Protek wall mount rack: 600mm width/500mm depth, 19” fully modular design, Flat Pack design, full vented top cover & bottom cover with the cable entry provision.		
Front tinted glass door.		
A/c main distribution box with 6 nos.5amp sockets. -1 No.		
19” cable manager – 1 Nos.		
Front panel mounting hardware. – 1 Pkts		
230V AC 90 CFM fan – 1 No.		

### Sl. No. 13 – Specification of Floor Standing Network Rack

Description	Comply (Yes/No)	Remarks
19” Moducab Rack: 17U/600mmwidth/600mm depth, Aluminium Extruded Frame Structure Design ( Vertical, Width & Depth Pillar) side panels are detachable with slam latches ventilation slot on side panels, full vented top cover & bottom cover with the cable entry provision. Joint Free Gasket throughout the frame.		
Front tinted glass door.		
Mesh back door.		
Castors with break.		
A/c main distribution box with 12 nos. of 5amp socket.- 1 No.		
19” cable manager – 2 Nos.		
Front panel mounting hardware – 2 Nos.		
230V A/C 90 CFM fan – 4 Nos.		

**Sl. No. 14 – Specification of Monitor**

Description	Comply (Yes/No)	Remarks
Size-43", Resolution:1920X1080,brightness:300nits, Contrast ratio- 1000:1, Dynamic Contrast ratio-500000:1,inputs: HDMI,DVID,RGB,RS232C,RJ45,IR,USB, outputs: Audio, External Control-RS232C, Surface Treatment-Hard Coating, Anti-glare Treatment of the Front Polarizer , Dust/Humidity Protection-Conformal coating, Certification- Energy Star 6.0, Typical power consumption- 60watt or less		

**Sl. No. 15 – Specification of UPS**

Description 9435144485	Comply (Yes/No)	Remarks
Single Phase 5 KVA Online UPS with 100 Amp trolley based Battery Bank and having minimum backup of 3 Hours.		

Sd/-  
Librarian