

**OFFICE OF THE REGISTRAR :: DIBRUGARH UNIVERSITY
DIBRUGARH :: ASSAM
PIN: 786 004**



BID DOCUMENT

FOR

NAME OF THE WORK: Supply, installation and commissioning of Storage Server and Networking at Dibrugarh University.

E-TENDER No: DU/NIT-2023/File-VII/185 dated 29.05.2023

CUT-OUT SLIP

NAME OF THE WORK: Supply, installation and commissioning of Storage Server and Networking at Dibrugarh University.

E-TENDER No: DU/NIT-2023/File-VII/185 dated 29.05.2023

SUBMISSION DUE DATE & TIME : 20.06.2023 up-to 11.30 A.M.

FROM:

NAME:
ADDRESS

TO:

THE REGISTRAR
DIBRUGARH UNIVERSITY
DIBRUGARH, ASSAM

(To be pasted on the outer envelope containing “Technical” & “Commercial” bids)



OFFICE OF THE REGISTRAR :: DIBRUGARH UNIVERSITY :: DIBRUGARH

No. DU/NIT-2023/File-VII/185

Date: 29.05.2023

E-Tender Notice

Open tenders are invited through e-tendering process from Manufacturers of nationally / internationally reputed brand or its authorized dealer / distributor for **Supply, installation and commissioning of Storage Server and Networking at Dibrugarh University**. For details, please visit the website [https:// assamtenders.gov.in](https://assamtenders.gov.in)

Detailed specification of the items, terms & conditions *etc.* are given as Annexure at Part-B. Last date of submission of Tender as per annexure at Part-B with all relevant papers is **20.06.2023 up-to 11:30 AM** to be submitted at the office of the Registrar, Dibrugarh University, Dibrugarh, Assam.

Availability of Bid papers	From 30.05.2023	
Last date for receipt of Bid	20.06.2023 upto 11.30 A.M.	
Time & Date of opening of Bid	20.06.2023 at 02:30 P.M.	
Place of opening of Bid	Office of the Registrar, DU	
Cost of Tender Document	1000/- (Non refundable) + 18% GST	To be paid online at assamtenders.gov.in
EMD	Rs. 62,000.00	

The tender should be separately submitted in 02 (two) parts, *i.e.*, **Part - I TECHNICAL BID** and **Part – II FINANCIAL BID**. The technical bid shall be opened on the above-mentioned date and time and the financial bid of only those bidders who qualify in technical bid shall be opened on the same date or at a later date which shall be intimated to the tenderer whose technical bids are found to be valid. Dibrugarh University reserves all the rights to reject any or all the tenders without assigning any reason thereof.

The Bidder shall submit both technical and financial bids on-line at assamtenders.gov.in portal. One hard copy of technical bid along with supporting documents and clearly marked as **“HARD COPY of Technical bid”** shall have to be submitted at the office of the Registrar, D.U. **Hard copy of Financial Bid or Cost of Tender Document/EMD as Draft/Cheque etc, will not be sent to Dibrugarh University under any circumstance.** In the event of discrepancy between online & manual technical bid, sending of hard copy of financial bid or sending of Cost of Tender Document/EMD as Draft/Cheque etc the bid will be disqualified.

Sd/-
Registrar i/c
Dibrugarh University

Copy to:

1. The Chairperson, Tender Opening Committee, D.U. for information.
2. The Deputy Registrar (F&A) i/c, D.U. for information.
3. The Programmer, D.U., with a request to upload the NIT at D.U. website.
4. Office File

Sd/-
Registrar i/c
Dibrugarh University

PART A - TERMS AND CONDITIONS

GENERAL INFORMATION

The tender bids duly complete in all respects, along with the necessary documents should be submitted to the Registrar, Dibrugarh University, Assam. The Technical Bids so received, shall be opened on **20.06.2023 at 02:30 P.M.** in the Office of the Registrar, Dibrugarh University in the presence of the representatives of the bidders. The Financial Bids of the Tenderers shall be opened on the same date or at a later date to be intimated to the Tenderers whose Technical Bids are found to be valid. Right to reject any or all Tenders, without assigning any reason thereof is reserved by Dibrugarh University.

Terms and Conditions of Supply:

Qualifying Criteria:

- i. The bidder should be a manufacturer of nationally / internationally reputed brand or its authorized dealer / distributor. Either the bidder or the manufacturer shall have experience in dealing with the similar kind of supply and installation at central govt./ state govt. / institute of national importance / educational & research institutes for last three years. A copy of the purchase orders received from any of the institutes during the last three years along with satisfactory completion certificate from the user (s) should be submitted.
 - ii. All the quotations must be supported by technical leaflet/ literature and the specifications mentioned in the quotation must be reflected / supported by such technical leaflet / literature.
 - iii. Dealers or agents quoting on behalf of manufacturer must submit valid authorization certificate.
2. The last date and time for the submission of the bids **20.06.2023 up-to 11:30 A.M.**
3. Suppliers shall submit the following documents along with their quotations:
- i) VAT/TIN/GST Registration No.
 - ii) Technical specifications offered by the Supplier.
 - iii) The bidder must submit a detailed compliance statement clearly mentioning compliance with the specifications mentioned in the NIT document and deviation if any.
 - iv) Technical literature regarding the offered products including pictures/sketch/diagrams etc.
4. The rates should be mentioned in the **BOQ** attached with the E-Tender on assamtenders.gov.in only.
5. The supplier shall submit the tender in 02 (two) envelopes. The first envelope (Technical Bid) shall contain all the following documents and be sealed.
- Filled in Format Technical Specifications/Literature
 - Valid copy of Trade License or Certificate of Incorporation or Partnership Deed.
 - PAN Card,
 - Registration certificate of GST,
 - Dealership/Manufacturing/Small Scale Industry (SSI) Certificate (if any)
 - The cost of tender of Rs. 1000.00 (Non refundable) + 18% GST, along with the Earnest Money of Rs. 62,000.00 (Rupees Sixty Two thousand) only To be paid online at assamtenders.gov.in.
 - The Firm(s) who are registered with MSME, National Small Industries Corporation (NSIC) /OR Small Scale Industries (SSI) are exempted to submit the Tender Cost/EMD. However, a copy of registration must be provided along with Technical Bid.
6. Supplier should read carefully all the instructions and terms and conditions, etc before registering rates in prescribed schedule of the tender. Taxes and duties etc. should be shown separately.

7. The Technical Documents shall be opened, at **02:30 P.M. on 20.06.2023** or on the next working day if the offices of the University remain closed due to any reason.
8. Technical specifications of the instruments/equipments are given in **Annexure I** to these papers (Part B).
9. The delivery and installation should be completed within 1 month or as specified from placing of the order. No extension shall be granted to the contractors/suppliers for the period of delivery, under any circumstances.
10. If the supplier fails to deliver the article as per the delivery schedule, the University shall be free to procure the balance/undelivered supply, at the risk and cost of the supplier, from other such suppliers.
11. The goods, articles, materials supplied by the supplier shall be accepted after inspection by an officer authorized by the competent authority. No articles/materials which do not conform to the specifications laid down in the terms and conditions or damaged in transit shall be accepted.
12. The bills of the suppliers shall be paid by the University after all the materials/articles/equipments have been received and installed, inspected as above.
13. Vendor must submit Compliance statement in tabular form comparing each specification of the quoted item with that given in the Tender Document **Annexure III**
14. The tendering firm must provide proof of documents for executing similar works earlier.
15. In the event of any breach of the terms and conditions of the supply, the University may terminate the contract placed with the supplier and forfeit the security deposit of the supplier.
16. Whether OEM or Authorized Distributor/ Dealer a letter or a valid certificate of authorization of manufacturer shall be enclosed.
17. Copy of product literature and catalogue, testing report, BEE rating, ISO etc.
18. The quantity as mentioned at Part-B (Specifications) may be increased or decreased at the time of placing Order as per requirement.
19. Tenderers are advised to study all technical and commercial aspects, instructions, forms, terms and specifications carefully in the tender document. Failure to furnish all information required in the Tender Document or submission of a bid not substantially responsive to the Tender document in every respect will be at the tenderer's risk and may result in the rejection of the bid.
20. The Bidder should not have been blacklisted in anywhere in India or abroad. A self –declaration letter by the Bidder on the company's letter head should be submitted along with technical bid.
21. This tender document is not transferable.
22. The tendering firm must have permanent establishment at Assam.

Note:

(a) Tenderers are advised to read carefully the Terms and Conditions of supply before recording the rates in this Schedule.

(b) No erasures or overwriting shall be allowed, unless they are authenticated under the full signature and the seal of the tenderer.

(c) The University reserves the right to:

- (i) Accept/reject any/all tenders without assigning any reason thereof.
- (ii) Revise the quantities at the time of placing the order without change in the rate quoted by the bidder.
- (iii) Add/modify/relax or waive any of the conditions stipulated in the tender document whenever deemed necessary
- (iv) Award the contract to one or more tenderers for the items covered by the tender.

ITEM No	DESCRIPTION OF GOODS WITH DETAILS OF SPECIFICATIONS	Unit Price	Taxes	Qty.	Total Amount
1					
2					
3					

Signature of the Tenderer
Seal of the Firm

**Part - B (Specifications):
Supply, installation and commissioning of Storage Server and Networking at Dibrugarh University**

1) SERVER : Quantity: 2 Nos

Parameter	Detailed Specification
Form Factor	Max. 2U rack mounted, front locking bezel, sliding rail
Processor	2 x Intel Xeon Silver 3rd Generation 4309Y 8 Cores 2.80 GHz Base Frequency 12 MB Cache
Memory	Minimum 32GB (2 x 16GB) DDR4 3200MT/s, Upgradable up to 1TB
Storage	2 x 960GB SSD SATA Read Intensive 6Gbps Hot-plug 5 x 16TB Hard Drive SAS 12Gbps Hot-Plug
RAID	RAID Controller - 8GB cache, providing RAID 0, 1, 5, 6, 10 options
Network Port	2x1 Gig Ethernet Port & 2 2x10GbE Fibre Ports (Minimum 1 No fibre Transceiver / SFP Should be populated from day 1)
OS	To be installed with Latest Centos.
OS Certification	Certified for latest Windows Server, RHEL, SUSE, Ubuntu
Virtualization	Certified for Citrix, Hyper-V, VMware ESXi
Power supply	80Plus Platinum certified redundant power supply
Management	Should provide virtual media, virtual folders, remote file share, virtual console support
Monitoring & alerting	Monitoring fan, power supply, memory, CPU, RAID, NIC for impending failure
Authentication	Directory services (AD, LDAP), two-factor authentication & single sign-on support TPM 1.2/2.0 Automatic BIOS recovery Firmware drift detection & alerting System lockdown feature to lock down configuration and firmware, protecting the server from inadvertent or malicious changes Drive security, including secure system erase for HDD, SSD & NVMe Dynamically enabled / disable USB ports to protect from USB-based attacks UEFI secure boot with custom certificates
Intrusion alert	Intrusion alert in case chassis being opened
Accessories	24inch LED Monitor, Keyboard, Mouse
Warranty	3 years on site comprehensive warranty Supplied product warranty must be visible in the manufacturer's official website in respect to each product serial number)
Installation	Complete H/W installation, OS Installation & configuration as per the deployment requirement

2) SERVER RACK : Quantity: 2 Nos

Parameter & Detailed Specifications
27U Fully Loaded Rack along with Complete Accessories
27U 600mm(W) x 1000mm Depth Rack with
Front Glass Door 27U 600W
Rear Door - 27U 600W
Cam Lock - Square Slot
Fan : Four Fan
Monitor Tray
Ventilation : 495W-700Dm, Metal
Cable Manager - 01U
Plastic Cable Loop's
Power Distribution Unit : 06/16 Amp Indian-Standard -06 Socket-Single Pole / Screw Mountable . 16 Amp MCB
ALTERNATIONG CURRENT - 16AMP 3 pin plug with power cable 2.5 sq.mm 3 meter Length
Earthing Strip - 150 mm Nickel Plating
Warranty : 3years

3) 3 KVA Online UPS : Quantity: 2 Nos

Parameter	Detailed Specifications
Configuration	3 KVA IGBT based On-Line UPS with inbuilt Isolation Transformer for Galvanic Isolation.
Capacity	3 KVA / 2700 Watts
AC Input Voltage Range	160-280 V AC, 1 Phase @100% load
Input Frequency	50Hz \pm 10% (Suitable for Generators)
AC Output Voltage	230 V AC, 1-phase \pm 1% (Sine Wave Output)
Output Frequency	50 Hz \pm 0.05 Hz
Overload Capacity	110% for 05 minutes, 125% for 01 minute
Harmonic Distortion	<2% for Linear Loads and <5% for non-linear loads
Crest Factor	3:1 or better
Isolation Transformer	UPS output should be fully isolated by double conversion and inbuilt isolation transformer within the UPS cabinet itself. External transformer shall not be considered.
Indications & Audible Alarms	Mains On, Inverter On, Overload, Load On Mains, Load On Battery, Battery Low
Digital Metering	LCD display for measurement of AC Voltage, Battery voltage, Battery Current, Load Current, Output frequency.
Battery Back-up & Other Details	The system must be capable of providing requisite battery back-up time of 60 Minutes using 12V, VRLA Sealed Maintenance Free Batteries with each UPS. Required VAH: 6200 VAH
Certification	BIS Certification
	CE Certification (IEC 62040-1 & IEC 62040-2 Standards)
	ISO 9001, ISO 14001, ISO 45001, ISO 50001 certified.
	RoHS Compliance
	E-Waste certification from Central Pollution Control Board, Govt of India)
After Sales Support & Manufacturer's Credibility	UPS OEM Should have own registered office in Assam for at least 10 years with service engineers on company's own payroll for ensuring prompt service support. (Documentary evidence to be provided)
	UPS OEM and Bidder should not have any past history of blacklisting from any government/PSU organization.
	UPS OEM must have valid Govt Electrical License
	UPS OEM Should have their own service centres in Dibrugarh/Tinsukia with adequate technical manpower and spares for ensuring 24 x 7 x 365 support
	UPS OEM should have ongoing service & maintenance contracts for at least 500 nos. On-Line UPS Systems to Govt./PSU organizations in Assam as proof of having 24 x 7 service support capabilities and competency along with their Client references. Details to be provided
Warranty	Warranty should be for 3 Years on UPS and 2 years on Battery

4) 24 Port Network Switch Quantity: 2 Nos

Technical Specification
The LAN switch shall be rack mountable with 24 Nos. 10/100/1000 Base-T ports with 4 Nos. 10 Gig SFP+ Ports from day 1. (Each Switch Should be populated with 2 No. Single Mode LX Transceiver LC Type)
The LAN switch shall be available with minimum 128 Gbps Switching Fabric.
The LAN switch shall have minimum packet forwarding rate of 95 Mpps at 64-byte packet length.
The LAN switch shall support minimum 16K MAC addresses.
There shall be 1000 IGMP groups.
The switch shall be able to work on both Ipv4 and Ipv6 (dual stack) from day one.

The LAN Switch must have 24× 802.3at/af-compliant PoE+ ports with a total PoE power supply of 382 Watt.
All ports in the switch shall operate at wire-speed / line-rate.
The LAN switch shall support IEEE 802.1Q VLAN encapsulation. Maximum 4K VLAN Groups.
It shall support for Automatic Negotiation of Trunking Protocol, to help minimize the configuration & errors.
It shall support centralized VLAN Management. VLANs created on the Core Switches shall be propagated to all the other switches automatically, thus reducing the overhead of creating / modifying / deleting VLANs in all the switches in turn eliminating the configuration errors & troubleshooting.
It shall support 802.1d, 802.1p, 802.1Q, 802.1s, 802.1w, 802.1x, 802.1ab, 802.3ad.
It shall support spanning-tree root guard or any other industry standard protocol to prevent other edge switches becoming the root bridge.
It shall support IGMP snooping v1, v2, v3 and Link Aggregation Protocol (LACP).
It shall Support 802.3ah Ethernet Link OAM for Detection of Unidirectional links and to disable them to avoid problems such as spanning tree loops
It shall be able to discover the neighbouring device of the same vendor giving the details about the platform, IP Address, Link connected through etc., thus helping in troubleshooting connectivity problems.
It shall support for Switch port auto recovery (Err disable) to automatically re- enable a link that is disabled because of a network error.
It shall support Multicast VLAN registration.
It shall support LLDP / LLDP-MED including client location information. It shall exchange link and device information in multi-vendor networks.
It shall support configuration rollback to replace current configuration with any saved configuration file.
It shall support configurable maximum transmission unit (MTU) of up to 9000bytes, with a maximum Ethernet frame size of 9018 bytes (Jumbo frames) for bridging on Gigabit Ethernet ports.
It shall support auto sensing speed on 10/100/1000 ports, auto negotiating half/full-duplex on all ports and Auto-MDIX.
The LAN switch shall have per-port broadcast, multicast, and unicast storm control.
It shall have standard 802.1p CoS and DSCP classification using marking and reclassification on a per-packet basis by source and destination IP address, source and destination MAC address, or Layer 4 TCP or UDP port number.
There shall be eight egress queues per port to enable differentiated management of up to eight traffic types.
There shall be Weighted Round Robin (WRR) or any other industry standard protocol to provide congestion avoidance.
There shall be strict priority queuing mechanisms.
Granular Rate Limiting functions to guarantee bandwidth in increments shall be as low as 64 Kbps.
Rate limiting support based on source and destination IP address, source and destination MAC address, Layer 4 TCP and UDP information, or any combination of these fields, using QoS ACLs (IP ACLs (Ipv4 and Ipv6) or MAC ACLs), class maps, and policy maps shall be available. ACL should be based on user defined packet content (Max. 6bytes length user defined).
There shall be support for Asynchronous data flows upstream and downstream from the end station or on the uplink using ingress policing and egress shaping.
There shall be support for Automatic Quality of Service for easy configuration of QoS features for critical applications.
The LAN switch shall support IEEE 802.1x to allow dynamic, port-based security, providing user authentication.
The LAN switch shall support for Admission Control features to improve the networks' ability to automatically identify, prevent, and respond to security threats and also to enable the switches to collaborate with third-party solutions for security-policy compliance and enforcement before a host is permitted to access the network.
It shall support port-based ACLs (PACLs) for Layer 2 interfaces to allow application of security policies on individual switch ports. It shall also support VLAN based filters.
It shall support unicast MAC filtering to prevent the forwarding of any type of packet with a matching MAC address. It shall support Unicast and Multicast MAC addresses and associated VLANs.
It shall support unknown unicast and multicast port blocking to allow tight control by filtering packets that the switch has not already learned how to forward.
It shall support IGMP filtering which shall provide multicast authentication by filtering out no subscribers and limits the number of concurrent multicast streams available per port.
It shall support for SSHv2, SNMPv3 to provide network security by encrypting administrator traffic during Telnet and SNMP sessions.

The switch shall support 2 sessions of Port Mirroring based on port basis / VLAN basis to support intrusion prevention system deployment in different VLANs. It shall support bidirectional data on mirror port which allows IDS to take action when an intruder is detected.
It shall support RADIUS authentication to enable centralized control of the switch and restrict unauthorized users from altering the configuration.
It shall support MAC address notification to allow administrators to be notified of users added to or removed from the network / It shall support SNMP Trap for new MAC notification.
It shall support DHCP snooping to allow administrators to ensure consistent mapping of IP to MAC addresses. This can be used to prevent attacks that attempt to poison the DHCP binding database, and to rate limit the amount of DHCP traffic that enters a switch port.
It shall support DHCP Interface Tracker (Option 82) to augment a host IP address request with the switch port ID.
It shall support port security to secure the access to an access or trunk port based on MAC address. After a specific timeframe, the aging feature should remove the MAC address from the switch to allow another device to connect to the same port.
It shall support multilevel security on console access to prevent unauthorized users from altering the switch configuration.
It shall support BPDU Guard feature, to shut down Spanning Tree Protocol Port Fast-enabled interfaces when BPDUs are received to avoid accidental topology loops.
It shall support Spanning-Tree Root Guard (STRG) to prevent edge devices not in the network administrator's control from becoming Spanning Tree Protocol root nodes.
It shall support for up to 512 access control entries (ACEs).
The LAN switch shall have CLI support to provide a common user interface and command set with all routers and switches of the same vendor.
It shall have Remote Monitoring (RMON v1 and v2) software agent to support for enhanced traffic management, monitoring, and analysis.
It shall have support for RMON groups through the use of a mirrored port, which permits traffic monitoring of a single port, a group of ports, or the entire switch from a single network analyser or RMON probe.
It shall have layer 2 trace route to ease troubleshooting by identifying the physical path that a packet takes from source to destination or it shall support OAM 802.3ah.
It shall support Trivial File Transfer Protocol (TFTP) and File Transfer Protocol (FTP) to reduce the cost of administering software upgrades by downloading from a centralized location.
It shall support Simple Network Time Protocol/Network Timing Protocol (SNTP/NTP) to provide an accurate and consistent timestamp to all intranet switches.
It shall support RMON v1 and v2 standards.
It shall support SNMPv1, SNMPv2, and SNMPv3 and Telnet interface to deliver comprehensive in-band management, and a CLI-based management console to provide detailed out-of-band management.
It shall support IPV6 management. ACL and QoS and Ipv6 Neighbour Discovery.
It Shall Support SDN Platform and have Provision to be Work Standalone or Controller Based and support Zero-Touch Provisioning (ZTP)
Must have 3 years warranty and support

5) Armoured 6 core Single Mode Fiber Optic Cable Quantity: 100 mtr

Minimum Required Specification
GENERAL:
06F Unitube Armoured with water blocking tape.
Rodent Proof, UV Protection. Direct Burial.
Embedded Strength members as 2 steel wires od 1.0 mm.
Polyester based yarns below Armor tape for easy ripping
Thermoplastic Material Tube
Excellent Waterproof Layer and Moisture Resistance
Excellent Crush Resistance Performance
Light Weight and Compact Structure
The fibre type is a Matched Cladding Single Mode
Low water peak fibre G.652D
Extremely high bandwidth. Optimized to support transmission at 1310 nm,1550 nm. Virtually unlimited Modal Bandwidth at 1310 nm

Should fulfil the requirements of:	
IEC 60793-1/60794-1.2	
ITU-T REC G.652D	
Telecordia GR-20 Core	
Testing methods are in accordance with the following standards:	
ITU-T G.652.D	
IEC 793-1	
GEOMETRICAL PROPERTIES	
Nominal mode field diameter	9.2 μm
Mode field diameter tolerance	$\pm 4 \mu\text{m}$
Cladding diameter	125
Cladding diameter tolerance	$\pm 1 \mu\text{m}$
Mode field concentricity error	$< 1 \mu\text{m}$
Cladding non-circularity	(= $<$) 1.0
ENVIRONMENTAL CHARACTERISTICS	
Change of Temperature Attenuation increase, -60°C to+85°C	$</= 0.05 \text{ db/km}$
Dry Heat Attenuation increase, 30 days at 85°C	$</= 0.05 \text{ db/km}$
Damp Heat Attenuation increase, 30 days at 85°C/ 85%R.H.	$</= 0.05 \text{ db/km}$
Damp Heat Attenuation increase, 30 days at 85°C/ 85%R.H.	$</= 0.05 \text{ db/km}$
MATERIALS	
CORE	Germanium doped core with no phosphorus i.e. reduced tendency for hydrogen degradation.
COATING	UV-curable dual layer acryl ate coating, which ensures excellent micro bending and abrasion resistance.
Coating Strip Force (typical)	
Min.	1.3 N
Max.	8.9 N
Stripping force after ageing in water at $70 \pm 5 \text{ }^\circ\text{C}$ for 168 h.	
Min.	1.0 N
Max.	3.5 N
OPTICAL PROPERTIES	
Attenuation (of cable with fibers):	
At 1310 nm	$<= 0.35 \text{ dB/km}$
Atten. At 1383nm (OH-Peak)	$<= 0.35\text{dB/km}$
At 1550 nm	$<= 0.25 \text{ dB/km}$
Cut-off wavelength c:	
High limit	1330 nm
Low limit	1180 nm
Cut-off wavelength cc	
High limit	1260 nm
Loss increase at 1550 nm for 100 turns of fibre loosely wound with a 37.5 mm radius:	
Max.	0.1 dB
Dispersion:	
Zero dispersion wavelength	1310 nm
Tolerance of zero dispersion	

Wavelength	-10/+12 nm
Zero-dispersion slope: $1295 \leq \lambda_0 \leq 1300$	
Max.	≤ 0.092 at λ_0
Chromatic dispersion coefficient:	
In 1285 nm - 1330 nm interval:	
Max.	3.5ps/km • nm
In 1270 nm - 1340 nm interval	
Max.	6 ps/km • nm
At 1550 nm	
Max.	18 ps/km • nm
Polarisation Mode Dispersion (PMD):	
Max.	≤ 0.2 ps/km
In homogeneity of OTDR trace for any two 1000 meters fiber lengths	
Max.	0.1 dB/km
Proof test level	1%

6) LIU 6 Port Fully Loaded

Quantity: 2 nos

SPECIFICATION / QUALITATIVE REQUIREMENT
The Fiber Rackmount LIU loaded having Adapter panel fixed on drawer base frame, with Adapters and with Pigtails and assembled with splice tray as per the Loaded fiber port requirement and their applicable accessories.
Suitable to mount at different positions (depth wise) on standard 1U 19 inch racks. Drawer type to pull out for easy maintenance when assembled in racks.
Cold Rolled Steel material with black powder coating
Three types of cable entry holes for different size cables through cable glands, covered with rubber cable grommets/covers.
Splicing of 24 fibers in each plastic fiber splicing trays with integrated cable spool design.
Non removable top cover and no rear cover. Drawer type to pull out for better access of interior.
As per the Loaded fiber port requirement , Loaded 6 (SC Simplex) adapters with SC SIMPLEX Pigtails on rackmount ports.
As per the Loaded fiber port requirement Accessories kit consists of Cable management rings/Cable saddles, Cable glands (PG13.5, 2 nos), Splice rods, Blanking clips, Velcro ties, Cable ties, Cable inlet/outlet hole covers(2 types, 2 nos each)
Cable management rings/Cable saddles can be mounted inside the rackmount, no provision to mount outside in front of the adapter panel.
Suitable for storing up to 1 meter of 900 μ m tight buffered fiber pigtail per adapter.
Panel Dimensions : 482 x 220 x 44.3 mm (Length x Width x Height)
Splice Tray Dimensions : 220 x 90 x 15 mm (Length x Width x Height)
Port identification numbers printed on the Adapter panel
Standards: Comply as per ANSI/TIA-568-C.3, ISO/IEC 11801, RoHS Compliant.
Operating Temperature: -20 °C to +70° C
Installation Temperature : -20 °C to +70° C
Warranty : 3 years

7) Fibre Patch Cord (3mtrs)

Quantity: 4 Nos

SPECIFICATION / QUALITATIVE REQUIREMENT
Fiber optic patch cord with two core (Duplex) fiber cable terminated with LC connector at one end and SC connector at other end
The terminated connectors in assemblies are designed and are compatible with industry standards (ANSI/TIA-568-C.3, ISO/IEC 11801).
Have good geometrical characteristics of apex offset & radius of curvature & fiber height
100% factory terminated and tested for optical characteristics & fiber end face finish.
Fiber type G. 652D standard. OS2 (9/125 μ m Corning Clear Curve),
Buffer Diameter : 0.9 ± 0.05 mm, Jacket Thickness : 0.35 ± 0.05 mm, Strength Member as Aramid yarn
Cable Diameter : $2.0 \times 3.8 \pm 0.2$ (Duplex)

Jacket color : Yellow, Jacket Material : LSZH, Length : 3 Mtr
Connector Ferrule : Ceramic, Apex Offset should be <50um, Fiber height should be ±100nm
Connector Repeatability ≤ 0.2dB with 1,000 times mating cycles.
Connector cable retention : 50 N (11.24 lbs), Crush resistance : 100N/100mm, Bend Radius: 20xDiameter of cable
Attenuation : ≤ 0.36 dB/km (@1310 nm), ≤ 0.25 dB/km (@1550 nm)
Chromatic Dispersion : ≤ 3.5 ps/nm.km (@1285 - 1330 nm), ≤ 18 ps/nm.km (@1550 nm)
Zero Dispersion Wavelength : 1300 - 1324 nm
Cut-off Wavelength : ≤ 1260 nm
Mode Field Diameter : 9.2 ± 0.4 μm (@1310 nm) , 10.4 ± 0.5 μm (@1550 nm)
Insertion Loss (@1310 &1550nm) : SM (UPC/PC) Type : SC/LC/ST/FC : ≤ 0.3 dB Return Loss (@1310 &1550nm) : SM (UPC/PC) Type : SC/LC/ST/FC : ≥ 50 dB
Insertion Loss (@1310 &1550nm) : SM (APC) Type :SC/LC/ST/FC : ≤ 0.3 dB Return Loss (@1310 &1550nm) : SM (APC) Type : SC/LC/ST/FC : ≥ 60 dB
Standards: IEC 60332-1, ANSI/TIA-568-C.3, ISO/IEC 11801,RoHS Compliant
Installation Temperature : -20 °C to +70° C, Operating Temperature : -20 °C to +70° C
Warranty: 3 years

8) HDPE Pipe Quantity: 100 mtrs

Good quality ISI Mark: HDPE Conduit for Fibre Laying Industry Standard
--

9) Installation & Commissioning: -

1	Laying of Fibre optic cable (100 mtr approx.): - Laying of OFC cable per industry standards. Min 1.5 feet deep trenching	1 Job
2	OFC splicing & termination (12 cores approx.)	
3	Fixing of RACK & LIU at required site (2 nos)	
4	Installation, Testing, Documentation of: - a) 2 No of UPS b) Basic OS installation & Configuration of the servers including configuration of network as per the requirement of the University c) any other work required to run the servers and establish a basic 10Gig ethernet IP network between the servers.	

Signature:

Date.....

Name :.....

Address :.....

.....

.....

Mobile No.....

Offered Technical Specifications

Sl. No.	Particulars	Detailed Technical Specifications
1	Server	
2	Server Rack	
3	3 KVA Online UPS	
4	24 Port Network Switch	
5	Armoured 6 Core Single Mode Fiber Optic Cable	
6	LIU 6 Port Fully Loaded	
7	Fibre Patch Cord (3 mtr.)	
8	HDPE Pipe	

COMPLIANCE SHEET

Supply, installation and commissioning of Storage Server and Networking at Dibrugarh University.

Sl. No.	Specification	Compliance (Complied / Not Complied)
1.	Server	
2.	Server Rack	
3.	3 KVA Online UPS	
4.	24 Port Network Switch	
5.	Armoured 6 Core Single Mode Fiber Optic Cable	
6.	LIU 6 Port Fully Loaded	
7.	Fibre Patch Cord (3 mtr.)	
8.	HDPE Pipe	
9.	Conditions of Supply, Installation, Testing, Commissioning, Training and Documentation.	

ANNEXURE-V**TECHNICAL BID - CHECK LIST**

Sl. No	Particulars	Mention 'Yes' / 'No'
1.	Whether "Technical Bid" & "Financial Bids" submitted separately and the respective envelopes superscribed properly	
2.	Whether Tender Fee submitted? (if applicable).	
3.	Whether EMD submitted? (if applicable)	
4.	Whether MSME/NSIC/SSI certificate submitted? (in case of seeking Exemption)	
5.	Whether copy of PAN submitted?	
6.	Whether valid Trade License or Certificate of Incorporation or Partnership Deed submitted?	
7.	Whether GST regn. Certificate provided?	
8.	Whether dealership/OEM certificate provided?	
9.	Whether detailed compliance sheet submitted?	
10.	Whether technical specification/ Literature provided?	
11.	Whether declaration regarding Non-Blacklist of Bidder/OEM anywhere in India or abroad on Bidders Letterhead submitted?	

All above enclosures must be valid (wherever applicable)

Date:

Name & Signature of the tenderer with seal

Place:

Note: Tenders not accompanied with above information & documents in support of the same may be summarily rejected.