



IISWBM

NOTICE INVITING TENDER

Sealed tenders in Two-Bid System (to be submitted in separate sealed covers 1. Technical Bid and 2. Financial Bid) are invited by IISWBM, Management House, College Square (West), Kolkata – 700 073 from bonafide, reliable and resourceful networking contractor with sufficient experience for ICT Networking overhaul project of the Institute as per details given in the tender document.

Tender document with all details including terms & conditions are available from the office of the AAO during office hours on all working days from 15th October 2026 to 02nd November 2026 (Monday to Friday) between 11-00 am to 4-00 pm. You may also download tender documents from Institute's Web Site (www.iiswbm.edu). The last dated of submission of sealed tender completed in all respect including all required documents by 4.00 pm on or before 04th November 2026.

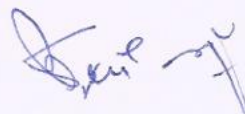
Bidder should submit the following documents:

1. The name, mail id and phone number of the authorised signatory of the bidder in the letter head .
2. Address Proof - The Bidder must have an office located in West Bengal for at least 1 year prior to submission of Bid
3. A copy of the valid Trade Licence (self-certified).
4. Self-certified photocopy of GST Registration Certificate
5. Self-certified copy of the PAN card of the bidder.
6. Self-certified photocopies of ITR of the Assessment Years 2025-26, 2024-25 and 2023-24.
7. The Bidder must submit at least 2 recent (not more than 3 years old) Work Orders of similar type. in support of the experience (except that of IISWBM).
9. Signed Tender documents including Annexure – I, II, III and IV
10. Bidder should inscribe the company name, address, contact no. and e-mail ID on left bottom corner of the envelopes.

Bidder should submit Price Bid with the following items:

Price bid shall be opened for the technically qualified bidder only. Bidder should submit only the following documents with the **Price bid in a separate sealed envelope:**

1. Rate should be quoted for each item as per Annexure – IV
2. Price Bid should be signed by the authorised signatory of the Bidder under rubber stamp of the Bidding company.


15/10/26
Superintendent

Annexure – I

NIT No. IISWBM/Networking/01/26-27

Date: 15th October 2026**Important Information:**

Available date for collection of Tender Documents	Submission of Tender Documents
From 15 th October 2026 to 02 nd November 2026 between 11-00 am to 4-00 pm on all working days; alternatively this may be downloaded from the official website of IISWBM.	By 4-00 pm on or before on 04 th November 2026

For enquiry date and time: 15th October 2026 to 03rd November 2026 from 11-00 am to 4-00 pm. (Please contact at Computer Dept. of the Institute)

Opening of Tender Documents: 05th November 2026 at 2.30 pm.

General Terms & Conditions:

1. Payment will be made by A/C Payee Cheque / NEFT against submission of Tax Invoice after successful completion of the work and delivery of the required articles. No advance payment will be made.
2. The rate should be valid for 02 months.
3. Rate should be in INR and all inclusive. However, GST should be specified extra.
4. Bidder must have the valid certificates in respect of ISO 9001:2015, ISO 27001: 2013 or latest (Bidder with 2013 Certification should upgrade themselves to 2022), ISO 20000-1: 2018 and CMMi Level
5. The Bidder must submit valid MAF Certificates for all proposed hardware / software OEMs named in their submitted technical bid.
6. The Bidder must have certified resources in their payroll in respect of Virtualization Service Expert, Backup Solutions Expert, Cloud Security Expert, Networking Expert with appropriate certificates from the OEMs named in their Technical Bids (Proof to be submitted)
7. The bidders must have Positive Net Worth in each of the last three Financial Years (2025-26, 2024-25 and 2023-24) - Certificate issued by a Chartered Accountant is to be provided.
[Net Worth = (Paid Up Capital + Free Reserve) - (Accumulated Loss + Intangible Asset)]
8. The Institute reserves the right to reject any / all tenders or cancel the accepted tender without assigning any reason.
9. Tender papers should be signed in all pages with seal.
10. The tender should be prepared and submitted after carefully perusing the complete tender documents including the terms and conditions.
11. Institute takes no responsibility for delay / loss or non-receipt of tender documents sent by post.
12. Date of completion : 02 months from the date of issuance of work order.
13. 10% of the total bill amount will be deducted from the bill as security deposit. Security Deposit will be released after 01 (one) year from the date of raise of final bill, if work found satisfactorily. Security Deposit shall not carry interest of any kind.
14. Any deviation in technical specification will be summarily rejected.
15. No sub-contract will be permitted.
16. LD clause : If you are unable to complete the above job within schedule time, a sum of Rs. 100/- per day will be deducted as a penalty for each additional day.
17. Any conditional bid will be summarily rejected.

Annexure – II

NIT No. IISWBM/Networking/01/26-27

Date : 15th October 2026

The Director
IISWBM
College Square (west)
Kolkata:700073

Sub: Application for ICT Networking overhaul project of the Institute per details given in the
tender document against your Advertisement in the Newspapers/Institute's Web-site /
Notice Board

Respected Sir,

In view of the above, we would like to apply for the same. Our detailed information are as stated here under:

Name of the organization	:
Address of the organization	:
Contact No.	:
e-mail ID	:
Trade licence No. (attach self-attested copy)	:
PAN No. (attach self-attested copy)	:
IT Return (attach self-attested copy)	:
GST Registration No.(attach self-attested copy)	:
Experience Proof (attach at least 2 recent Work Orders except IISWBM)	:
Other details , if any	:

Thanking you,

Yours faithfully,

(Signature with seal)

Date:

Annexure – III

NIT No. IISWBM/Networking/01/26-27

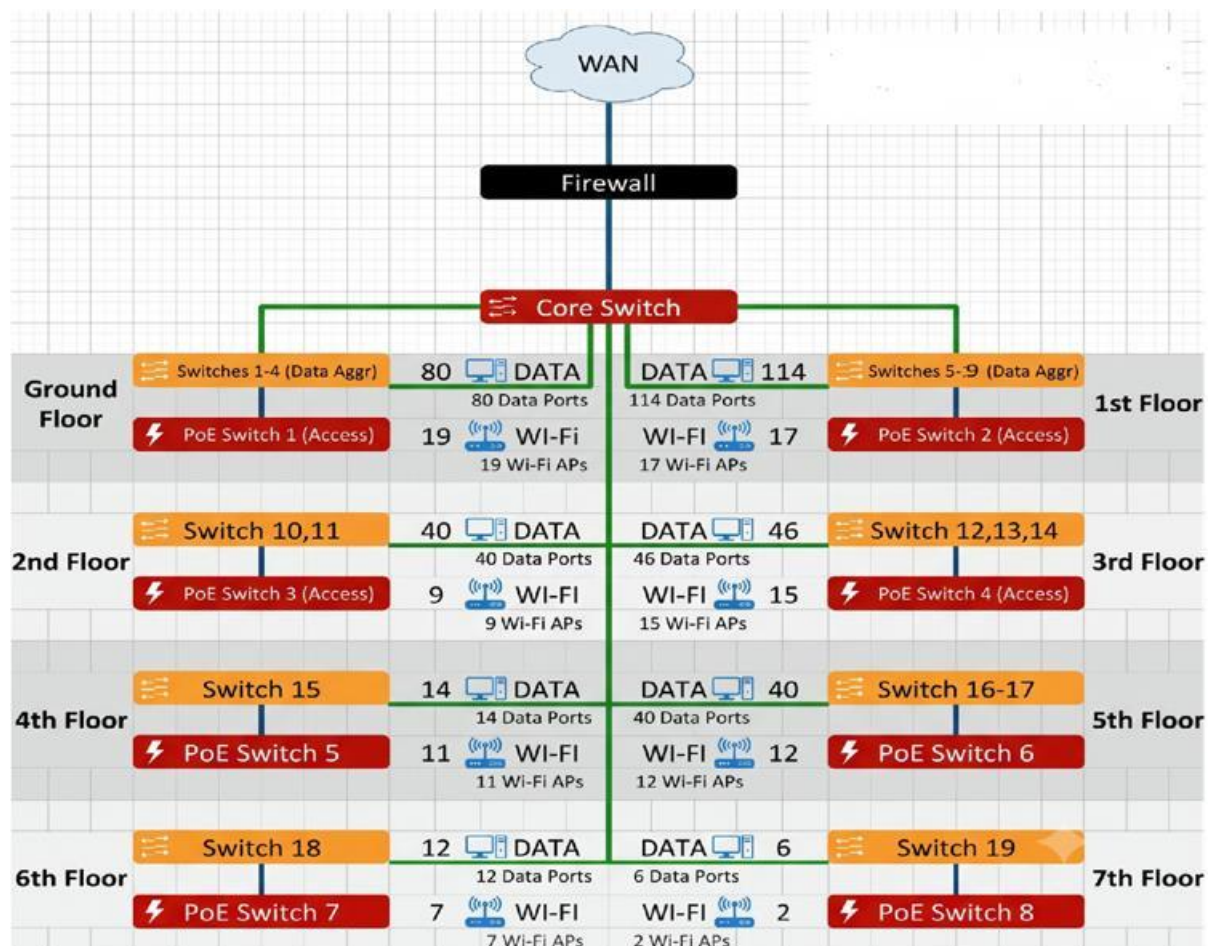
Date : ... October 2026

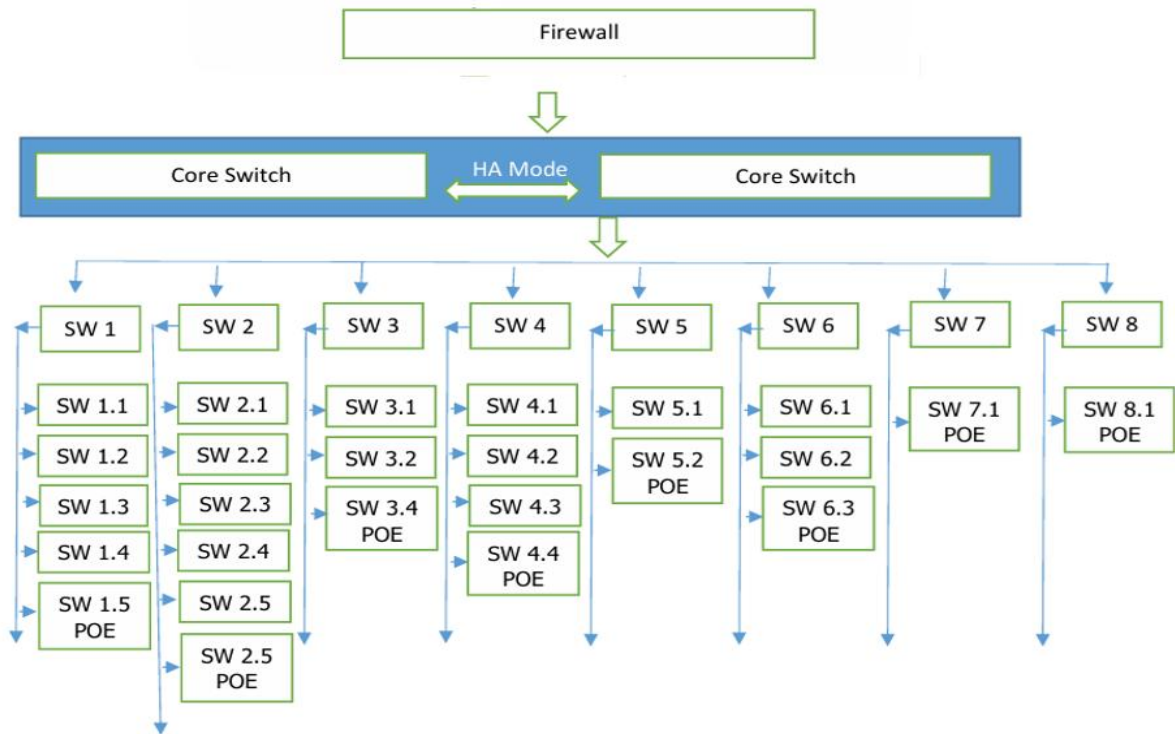
Technical Scope of Work

Sl.	Phase / Module	Scope Description & Key Deliverables	Target Location	Category
1	Project Objective & Scope	Supply, installation, testing, and successful commissioning of high-speed structured campus LAN & enterprise Wi-Fi across all 8 levels (Ground to 7th floor) of the IISWBM heritage campus building. The architecture is engineered to provide unified, secure connectivity for ~700 end nodes.	All 8 Floors (G to 7th)	Turnkey Commissioning
2	Physical Rack & Core Deployment	• Mount & stack 2x 24-Port L3 Managed 10G Multi-Gig switches in the GF Server Room for redundant core switching. • Mount Perimeter Next-Gen Firewall with dedicated power & policy implementation for cybersecurity and network-security requirements. • Deploy 8x Distribution & 18x Access switches in standard floor racks. • Deploy 92 ceiling/wall mounted Enterprise Wi-Fi 6 Access Points.	GF Server Room & Floor Racks	Active Hardware
3	Cabling, Patching & Fiber Uplinks	• Terminate and patch horizontal Cat6/6A drops connecting ~700 endpoints. • Connect vertical riser distribution backbone via 10G optical transceivers (16x SFP+ modules). • Patch all 92 Wi-Fi APs to dedicated 24-port PoE switches across respective floors. • Structured cable routing, dressing, and dual-ended identification tagging.	Campus Risers & Drop Locations	Passive & Interconnects
4	Routing, Security & VLAN Configuration	• Configure Next-Generation Firewall: WAN failover, static/dynamic NAT, intrusion prevention (IPS), web filtering, and granular role policies. • Configure Core Switches: L3 Inter-VLAN routing (Faculty, Students, Admin, Labs, Guest), DHCP Relay, and LACP link aggregation. • Access layer setup: 802.1Q trunking, STP/RSTP loop defense, and dynamic PoE power budgeting.	L3 Core & Perimeter Gateway	Configuration & Policy
5	Wireless Enterprise Deployment	• Configure 92 Enterprise Access Points across unified multi-SSID profiles (e.g., IISWBM-Faculty, IISWBM-Students, IISWBM-Guest). • Enterprise WPA2/WPA3 (802.1X / RADIUS integration) & visitor captive onboarding portal. • RF channel optimization and power level fine-tuning to prevent co-channel interference.	Campus-wide Wi-Fi Coverage	Wireless Setup

6	UPS & Power Backup Solution	• Supply, Installation, Testing & Commissioning (SITC) of Online UPS Systems & VRLA/SMF Battery Banks • 3 Years Comprehensive (UPS & Batteries)	Server room, Computer Laboratory and Accounts Department	Turnkey Commissioning
7	Testing, Quality Assurance & Handover	• 100% link certification of copper & fiber drops. • Core switch active failover testing and 10G uplink bandwidth validation. • Seamless Wi-Fi coverage (instructional and office areas). • Verification of internet and internal portal connectivity for all ~700 endpoints. • Submission of As-Built topology diagrams, cable schedules, IP matrices, and 2-day on-site admin training. • Demonstration of Power Backup Solution	Handover & Documentation	Sign-Off & Support

Indicative Network Diagram:





Floor-wise indicative Network Port& Equipment Allocation Matrix

Floor Level	Data Drops	Wi-Fi APs	Active Nodes Total	Data Switch Allocation	PoE Switch Allocation	Uplink Type
Ground Floor	80	19	99	Switches 1, 2, 3, 4 (Data Aggr)	PoE Switch 1	Direct 10G to Core
1st Floor	114	17	131	Switches 5, 6, 7, 8, 9, 10 (Data Aggr)	PoE Switch 2	10G Fiber Uplink
2nd Floor	40	9	49	Switches 10, 11	PoE Switch 3	10G Fiber Uplink
3rd Floor	46	15	61	Switches 12, 13, 14	PoE Switch 4	10G Fiber Uplink
4th Floor	14	11	25	Switch 15	PoE Switch 5	10G Fiber Uplink
5th Floor	40	12	52	Switches 16, 17	PoE Switch 6	10G Fiber Uplink
6th Floor	12	7	19	Switch 18	PoE Switch 7	10G Fiber Uplink
7th Floor	6	2	8	Switch 19	PoE Switch 8	10G Fiber Uplink
Total Active Ports Provisioned	352	92	444	19 Data Switches Cluster	8 PoE Switches	10G Redundant Backbone

Note on approximate 700-Node-Modernization Target:

- Current floor layout activates 444 high-priority primary ports (352 Data endpoints + 92 Access Points).

- Total physical structured horizontal cabling, patch panels, and edge switch capacity is designed to scale up to ~700 concurrent nodes across IISWBM labs, classrooms, administrative offices, and library facilities.

Detailed Specifications for Active and Passive components

Firewall

SI No	Items	Requirement
1	Should be in Gartner	Leader in NGFW from last 10 years
2	Security offerings from Day 1	IPS, Advanced Malware Protection, Application Control, URL, DNS & Video Filtering, Antispam Service,
3	Should support VDOM	10 from day 1
4	Interfaces	1. 1x RJ45 Console Port 2. 2x RJ45 HA and Management Ports 3. 16x GE RJ45 Ports 4. 4x 10GE SFP+ FortiLink Slots 5. 8x SFP Ports
5	Firewall Throughput	28 Gbps
6	Threat Protection	2.8 Gbps
7	IPS Throughput	5.3 Gbps
8	NGFW Throughput	3.1 Gbps
9	Concurrent Sessions (TCP)	3 M
10	New Sessions/Second (TCP)	140000
11	Firewall Policies supported from day 1	10000
12	IPsec VPN Throughput (512 byte)	35 Gbps
13	Gateway-to-Gateway IPsec VPN Tunnels	2000
14	Client-to-Gateway IPsec VPN Tunnels	16000
15	SSL-VPN Throughput	1.5 Gbps
16	SSL Inspection Throughput (IPS, avg. HTTPS)	3 Gbps
17	Minimum Number of FortiSwitches Supported, controll, manage and monitor	48
18	Minimum Number of AP Supported, controll, manage and monitor	128
19	Approved Makes	Palo Alto, Check point, Fortinet

Core Switch

24 Port L3 Managed Stackable M-GiG/10G Switch		
Sl.No.	Technical Specifications	
1	Interface	The switch must have dedicated 12 x 1G/2.5G/5G/10G Base-T ports and 12 x 10G (at least 8 ports must supports 1G SFP as well) Base-x SFP+ ports
2	CPU and	Should have or better:- CPU: Quad-Core Cortex-A57 ARMv8 1.8Ghz 64-bit, 2GB

	Memory	RAM DDR4, Flash: 512MB
3	Performance	The switch must have the followings :- Stack height: 8 switches (All stacking accessories must be included), Switching fabric: 480 Gbps Line-Rate, Throughput: 357 Mpps, 16K MAC addresses, Number of VLANs: 4,093 Number of multicast groups= 2K IPv4, Number of multicast groups= 2K IPv6, ARP/NDP= 2K, Number of LAGs (802.3ad): 128 LAGs with up to 8 ports per group, Number of hardware queues for QoS: 8 (Standalone), Number of routes: 512 IPv4 Unicast routes, Number of routes: 256 IPv6 Unicast routes, Jumbo frame support: up to 12K packet size, MTBF:7,802,00 hours or higher
4	L2 Service	The switch should have the followings:- Protocol based VLAN, IP Subnet, IPX, ARP, Subnet based VLAN,MAC based VLAN,Voice VLAN,Private Edge VLAN,Private VLAN,Guest VLAN,Double VLAN Tagging (QoQ), MVR, MRP, MVRP, LAG Hashing,LAG Member Port Flaps Tracking,UDLD support,Distributed Link Aggregation,Storm Control, Link Dependency, PVSTP, PVRSTP, STP Loop Guard, STP Root Guard,BPDU Guard,STP BPDU Filtering, STP BPDU Flooding, IGMP v2/v3 Snooping support, MLD v1/v2 Snooping support, Expedited Leave Function, Static L2 Multicast Filtering, MLDv1/2 Snooping Support, IGMP Proxy, MLD Proxy, ASM, SSM, Multicast streams routing between subnets
5	L3 Services	The switch should supports :- Multicast Static Routes (IPv4, IPv6), DVMRP, Neighbor discovery (IPv4, IPv6), PIM-DM (IPv4, IPv6), PIM-SM (IPv4, IPv6), PBR, PIM multi-hop RP support,IPMC replication, DHCP Client (IPv4, IPv6),DHCP Server (IPv4, IPv6),DHCP Snooping (IPv4, IPv6),DHCP/ BootP Relay (IPv4, IPv6) DHCP options 55, 66, 67, 125 and 150,Static Routing (IPv4, IPv6),Port based Routing,ECMP Static Routing,Port Based Routing,VLAN Routing RIP v1 and v2,OSPF v2 and v3,OSPF Flood Blocking,Route Redistribution,VRRP,VRRP Route/Interface Tracking,Loopback Interfaces,Tunnel interfaces,Router Discovery,IP Helper,IP Source Guard,IP Event Dampening,ECMP, Proxy ARP,Multinetting,ICMP v4 and v6,IPv4/IPv6,DNS v4 and v6 IPv6 Routing
6	QoS	The switch should have :- IEEE 802.1p CoS,DiffServ QoS, WRED, Single Rate Policing,Strict Priority queue technology,Auto-VoIP,iSCSI Flow Acceleration,IP DSCP,IP Precedence,IP TOS,L3 IPv6 Flow Label,Interface Traffic Shaping,PHB Support,Minimum Bandwidth per-interface
7	Security	The switch should support Broadcast, Multicast and Unicast Network Storm Protection,CPU Protection,DoS attack protection,ICMP throttling,Management ACL,Radius accounting,TACACS+, L2/L3/L4 Access Control List (ACL), MAC, IPv4, IPv6, TCP, UDP ACL,Protocol based ACL,ACL over VLAN,Dynamic ACL,IEEE 802.1x Radius Port Access Authentication, MAB, Port Security, Dynamic ARP Inspection, MAC Filtering, Port MAC Locking, IEEE 802.1X Radius Network Access Control, IEEE 802.3x flow control, GMRP, GVRP, GARP, Time-based ACLs, ACL over VLANs, IPv6 RA Guard Stateless Mode, Network Authentication Successive Tiering
8	Management	The switch must have the followings :- ISDP, 802.1ab LLDP and LLDP-MED, SNMP v1, v2 and v3, RMON 1, 2, 3, 9, sFlow, Command Line Interface (CLI), Web-based graphical user interface (GUI), Admin access control via Radius and TACACS+, Telnet, IPv6 Management, Dual Software (Firmware) images, Dual Configuration file (Text-based), Radius accounting, Malicious Code Detection, SNTF, XMODEM, Port Mirroring, Cable Test Utility, SSH v1/v2, SSL/HTTPS and TLS v1.0 for web-based access, File Transfer (uploads, downloads) through TFTP/HTTP, SCP/ SFTP/ HTTPS, Syslog, Non disruptive Config Management, RSPAN, Persistent log supported, STP, RSTP, MSTP
9	LED	Should have :- Per port: Speed, Link, Activity, Per device: Power, Fan, Stack Master, Stack ID
10	Environment	Should support or better:- Operating temperature : 0° to 50°C (32° to 122°F), Operating Humidity (relative) : 90% maximum relative humidity (RH), non-condensing
11	Certifications	The switch should have CE: EN 55032, CISPR 32, VCCI, FCC, RCM: AS/NZS, IEC 60950, UL listed, BSMI, EN 61000, MTCTE from TEC

12	Warranty	The device must have Lifetime Hardware replacement warranty, Lifetime free latest firmware support, 3 years On call/remote technical support, 3 years advance RMA replacement from OEM must be included from day 1, Replacement with New Product Only No refurbished Products.
13	Approved Makes	Cisco, HPE, Juniper, Netgear, Extreme Networks, Allied Telesis

Access Switch with 24 Port PoE for WiFi

S.No.	Technical Specifications	
1	INTERFACE	Should have minimum 16 x 1G base-T PoE+ ports, 8 x 1G base-T PoE++ ports (60Watt per port) with 4 x 1G/10G Base-X SFP+ ports, should be 1U rack mountable
2	CPU AND MEMORY	Must have or better: CPU: 800MHz ARM A55 Single Core, RAM: 512MB, Flash: 64MB, 420W PoE budget Should supports the followings: IEEE 802.3 Ethernet, IEEE 802.3u 100BASE-T, IEEE 802.3ab 1000BASE-T, IEEE 802.1Q VLAN Tagging, LLDP, LLDP-MED, IEEE 802.1p Class of Service, STP, RSTP, MSTP, IEEE 802.3az, Auto-voice VLAN, SNMP v1, v2c, v3, IEEE 802.1Q tag vlan, minimum 256 vlans, IEEE 802.1p (Class of Service), DSCP - L3 based QoS, Port -based ingress/egress rate limiting, IEEE 802.3ad static or dynamic link aggregation (LACP), DHCP client, Port mirroring (many-to-one), IGMP snooping v1/v2, ACL based on MAC and IP, SNTP, IEEE 802.1ab LLDP etc.
3	PERFORMANCE	Must have or better: Packet buffer memory: 1.5 MB, Bandwidth: 128 Gbps, Packet forwarding rate : 95 Mpps, Priority queues: 8, WRR, MAC address: 16K, Multicast groups: 512, Number of IPv4 static routes: 32, Number of IPv6 static routes: 32, Number of ARP cache entries: 512, Number of DHCP snooping bindings: 256, Access Control Lists (ACLs) 100 shared for MAC, IP and IPv6 ACLs, Jumbo frame support: Up to 10K packet size, Acoustic noise level @ 25°C- 30.5 dBA, MTBF: 2,86,000 hours or more
4	L3 SERVICES	Should support DHCP client, DHCP snooping, IPv4 and IPv6 static routing, VLAN routing, Host ARP table, Number of IP VLAN interfaces (routed VLANs): 15 etc.
5	NETWORK MONITORING and SECURITY	Must have 802.1ab LLDP, SNMP v1, v2c, v3, Guest Vlan, Access Control Lists (ACLs) L2, L3, L4, IP-based ACLs (IPv4 and IPv6), MAC-based ACLs, TCP/UDP-based ACLs, MAC lockdown, MAC lockdown by the number of MACs, Control MAC # Dynamic learned entries: 16380, IEEE 802.1x RADIUS port access authentication, Port-based security by locked MAC addresses, Cloud/remote management, Broadcast, multicast, unknown unicast storm control, DoS attacks prevention, Dynamic ARP inspection etc.
6	LED	Must have: Per port Speed, Link, Activity, Per device Power and Fan etc.
7	POWER CONSUMPTION	Should comply with the followings: worst case if all ports used, full PoE load, line-rate traffic 502W, IEEE 802.3az, Fan count: 2 etc.
8	ENVIRONMENTAL SPECIFICATIONS	Must have or better: Operating temperature : 0° to 50°C (32° to 122°F), Operating Humidity (relative) : 90% maximum relative humidity (RH), non-condensing
9	CERTIFICATIONS	Must have: CE, FCC Class A, RCM, ICES Class A, VCCI, KC, BSMI, UKCA, MTCTE, CB, CE, CSA, RCM, KC, BSMI etc.
10	WARRANTY	Lifetime Hardware replacement warranty, Lifetime free latest firmware support, 3 years Cloud license must be included, Replacement with New Product Only No refurbished Products
11	Approved Makes	Cisco, HPE, Juniper, Netgear, Extreme Networks, Allied Telesis

24 Port Non-PoE Switch

S.No.	Technical Specification	
1	Interface	Should have minimum 24 x 1G base-T ports with 4 x 1G/10G Base-X SFP+ ports

2	Features and Performance	Should supports the followings: CPU: 800MHz ARM A55 Single Core, RAM: 512MB, Flash: 64MB, IEEE 802.3 , IEEE 802.3u, IEEE 802.3ab, IEEE 802.1Q, IEEE 802.3ad, IEEE 802.1AB, IEEE 802.1p, IEEE 802.3az ,Auto-voice VLAN, SNMP v1, v2c, v3, IEEE 802.1Q tag vlan, minimum 256 vlans, DSCP - L3 based QoS, Port - based ingress/egress rate limiting, DHCP client, Broadcast storm control, Port mirroring (many-to-one), IGMP snooping v1/v2, IEEE 802.1x, ACL based on MAC and IP, SNTP, IEEE 802.1ab LLDP etc, Packet buffer- 1.5 MB, Bandwidth: 128 Gbps, Packet forwarding rate- 95 Mpps, Priority queues: 8, Priority queuing Weighted Round Robin (WRR) , MAC address database size- 16K, Multicast groups: 512, Number of IPv4 static routes: 32, Number of IPv6 static routes: 32, Number of ARP cache entries: 512, Number of DHCP snooping bindings: 256, Access Control Lists (ACLs) 100 shared for MAC, IP and IPv6 ACLs, Jumbo frame support: Up to 10K packet size, Acoustic noise level 29 dBA, Mean Time Between Failures (MTBF) 3,82,200 hours or more
3	L2 and L3 Services	Should support: Broadcast, multicast, unknown unicast storm control, 16 LAGs with max 8 members in each LAG, IEEE 802.1D, IEEE 802.1w, IEEE 802.1s, IGMP snooping (v1, v2 and v3), MLD snooping support (v1 and v2), IGMP snooping queries, Block unknown multicast, MVR etc. DHCP client, DHCP snooping, IPv4 and IPv6 static routing, VLAN routing, Number of IP VLAN interfaces (routed VLANs): 15 etc.
4	Security	Must have 802.1ab LLDP, SNMP v1, v2c, v3, RMON group 1,2,3,9, Guest Vlan, RADIUS-based VLAN assignment via .1x, MAC-based .1x, RADIUS accounting, Access Control Lists (ACLs) L2, L3, L4, IP-based ACLs (IPv4 and IPv6), MAC-based ACLs, TCP/UDP-based ACLs, MAC lockdown, MAC lockdown by the number of MACs, Control MAC # Dynamic learned entries: 16384, IEEE 802.1x RADIUS port access authentication, Port-based security by locked MAC addresses, Cloud/remote management, Broadcast, multicast, unknown unicast storm control, DoS attacks prevention, Dynamic ARP inspection etc., SNTP client over UDP port 123.
5	QoS	Should have: Port-based rate limiting - Egress only, Port-based QoS, Support for IPv6 fields, DiffServ, IEEE 802.1p COS, IPv4 and v6 DSCP, IPv4 and IPv6 ToS, Weighted Round Robin (WRR), Destination MAC and IP, TCP/UDP-based, Strict priority queue technology, Auto-VoIP VLAN / Auto-Voice VLAN - Yes, based on OUI bytes (default database and user-based OUIs) in the phone source MAC address, Auto-VoIP, Auto-Voice Vlan, Auto-Video Vlan etc.
6	Led and Power	Must have: Per port Speed, Link, Activity, Per device Power and Fan etc., worst case if all ports used, line-rate traffic 26W, Fan count: minimum 1 etc.
7	Environment	Must have or better: Operating temperature : 0° to 50°C (32° to 122°F), Operating Humidity (relative) : 90% maximum relative humidity (RH), non-condensing
8	Certificates	Must have: CE, FCC Class A, RCM, ICES Class A, VCCI, KC, BSMI, UKCA, MTCTE, CB, CE, CSA, BSMI etc.
9	Warranty	Lifetime Hardware replacement warranty, Lifetime free latest firmware support, 3 years Cloud license must be included, Replacement with New Product Only No refurbished Products
10	Approved Makes	Cisco, HPE, Juniper, Netgear, Extreme Networks, Allied Telesis

24 Port Stackable PoE and Distribution Switch

S.No	Technical Specifications	
1	Physical Interfaces	The switch should have 24 x 1G Base-T Copper PoE+ Ports, 04 x 1G/10G Base-X Fiber SFP+, Ethernet: Out-of-band 1G port , Console: USB-C, Storage: 2 x USB-A, Full-width 1U rack mount
2	CPU/ Memory	Must have or better :- CPU: Quad-Core Cortex-A57 ARMv8 1.8Ghz 64-bit, RAM: 2GB DDR4, Packet buffer memory: 16 MB, Flash: 512MB NAND 8-bit ECC

3	Performance	The switch must have the followings :- Stack height: 8 switches, Switching fabric: 128 Gbps, Throughput: 95.2 Mpps, 720 Watt PoE Power Budget, 2 PSUs in RPS mode, 16K MAC addresses, Number of VLANs: 4,093, Number of multicast groups= 2K IPv4, Number of multicast groups= 2K IPv6, ARP/NDP= 2K, Number of LAGs : 128 LAGs with up to 8 ports per group, Number of hardware queues for QoS: 8, Number of routes: 512 IPv4 Unicast routes, Number of routes: 256 IPv6 Unicast routes, Jumbo frame: 12K, MTBF:7,82,300 hours or higher
4	L2 Service	The switch should have the followings:- Protocol based VLAN, IP Subnet, IPX, ARP, Subnet based VLAN, MAC based VLAN, Voice VLAN, Private Edge VLAN, Private VLAN, Guest VLAN, Double VLAN Tagging (QoQ), GARP with GVRP/GMRP, MVR, MRP, MVRP, LAG Hashing, LAG Member Port Flaps Tracking, UDLD support, Distributed Link Aggregation, Storm Control, Link Dependency, PVSTP, PVRSTP, STP Loop Guard, STP Root Guard, BPDU Guard, STP BPDU Filtering, STP BPDU Flooding, IGMP v2/v3 Snooping support, MLD v1/v2 Snooping support, Expedited Leave Function,Static L2 Multicast Filtering, MLDv1/2 Snooping Support, IGMP Proxy, MLD Proxy, ASM, SSM, Multicast streams routing between subnets
5	L3 Services	The switch should supports :- Multicast Static Routes (IPv4, IPv6), DVMRP,Neighbor discovery (IPv4, IPv6), PIM-DM (IPv4, IPv6), PIM-SM (IPv4, IPv6), PBR, PIM multi-hop RP support,IPMC replication (hardware support), DHCP Client (IPv4, IPv6),DHCP Server (IPv4, IPv6),DHCP Snooping (IPv4, IPv6),DHCP/ BootP Relay (IPv4, IPv6) DHCP options 55, 66, 67, 125 and 150,Static Routing (IPv4, IPv6),Port based Routing,ECMP Static Routing,Port Based Routing,VLAN Routing RIP v1 and v2,OSPF v2 and v3, OSPF Flood Blocking, Route Redistribution, VRRP,VRRP Route/Interface Tracking, Loopback Interfaces,Tunnel interfaces,Router Discovery,IP Helper,IP Source Guard,IP Event Dampening,ECMP, Proxy ARP,Multinetting,ICMP v4 and v6,IPv4/IPv6,DNS v4 and v6 IPv6 Routing
6	QoS	The switch should have :- IEEE 802.1p CoS, DiffServ QoS, WRED, Single Rate Policing,Strict Priority queue technology,Auto-VoIP,iSCSI Flow Acceleration, IP DSCP, IP Precedence, IP TOS,L3 IPv6 Flow Label, Interface Traffic Shaping, PHB Support, Minimum Bandwidth per-interface
7	Security	The switch should support Broadcast, Multicast and Unicast Network Storm Protection, CPU Protection, DoS attack protection, ICMP throttling, Management ACL, TACACS+, L2/L3/L4 Access Control List (ACL), MAC, IPv4, IPv6, TCP, UDP ACL,Protocol based ACL, ACL over VLAN,Dynamic ACL, IEEE 802.1x Radius Port Access Authentication, 802.1x MAC Address Authentication Bypass (MAB), Port Security,Dynamic ARP Inspection,MAC Filtering, Port MAC Locking, IEEE 802.3x flow control,GMRP — Dynamic L2 multicast registration, Access Control Lists (ACLs) L2 / L3 / L4, Time-based ACLs, ACL over VLANs, IPv6 RA Guard Stateless Mode, Network Authentication Successive Tiering
8	Management	The switch must have the followings :- ISDP (Industry Standard Discovery Protocol), Out of band Management, SNMP v1, v2 and v3, RMON 1, 2, 3, 9, sFlow, Admin access control via Radius and TACACS+, Telnet, IPv6 Management, Dual Software (Firmware) images, Radius accounting, Malicious Code Detection, SNTp, XMODEM, Port Mirroring, Cable Test Utility, SSH v1/v2, SSL/HTTPS and TLS v1.0 for web-based access, File Transfer (uploads, downloads) through TFTP/HTTP, SCP/ SFTP/ HTTPS, Syslog, Non disruptive Config Management, Remote Port Mirroring (RSPAN), Persistent log supported, STP, RSTP, MSTP.
9	LEDs	The switch must have Per port: Speed, link, activity, Power, Fan, Stack Master, Stack ID leds.
10	Environmental	The switch should have Operating Temperature: 32° to 113°F (0° to 45°C), Operating Humidity: 90% maximum relative humidity, non-condensing
11	Certifications	The switch should have CE: EN 55032, CISPR 32, VCCI, FCC, RCM: AS/NZS, IEC 60950, UL listed, BSMI, EN 61000, MTCTE from TEC
12	Warranty	The device must have Lifetime Hardware replacement warranty, Lifetime free latest firmware support, 3 years On call/remote technical support, 3 years advance RMA replacement from OEM must be included from day 1, Replacement with New Product Only No refurbished Products.
13	Approved Makes	Cisco, HPE, Juniper, Netgear, Extreme Networks, Allied Telesis

Wifi 6 2x2 mimo multigig PoE+ Access Point

S.No.	Technical Specifications	
1	Physical Interfaces	Must have or better:- 1 x 100/1000/2.5GBASE-T Gigabit Ethernet (RJ-45) ports with 802.3 af/at compliante, Two Internal antenna with 3.8/4.5dBi for (2.4GHz/5GHz) respectively, Four LED: Power and Cloud connection; LAN speed; 2.4GHz status; 5.0GHz status, Port for connecting 12V DC, 2.5A Power adapter
2	Standards	Should have WiFi 6 enabled, 802.3 a/b/g/n/ac/ax with WDS capabilities
3	Security	Should supports the following features from day 1:- Wi-Fi Protected Access (WPA, WPA2, WPA2 Enterprise, WPA3 standard), 802.11i, Wireless access control, MAC address filtering, Neighbor AP detection, Vlan creation, Bandwidth management, Guest network, Vlan per SSID, SSL support, LLDP, 802.1x RADIUS support with EAP TLS, TTLS, PEAP
4	Management	The access point must have Stand alone, Cloud based, App based management (Centralized management from anywhere anytime) which should provide the full management function for devices : Discovery, network setup, device configuration, ongoing monitoring, troubleshooting and firmware management, Multi-Tenancy, Secondary Admin Capabilities, Simple Network-Level Replication, Multi Network Locations , Bulk Device Onboarding , WiFi and PoE Scheduling, User Analytics, Multilingual Support. It must provides ongoing visibility of the network, and provide customized alerts based on specific needs, Secure device onboard with device MAC and S/N, Two-factor authentication , Client Isolation List, mDNS Gateway , Location level topology, Firmware scheduler, SNMP device status - read only & log export .
5	Other features	Should support the following features from day 1:- Bridge mode (PTP & PTMP), Repeater mode, Adjustable Transmit Power Control (TPC), Device detection, Identify type of wireless clients in the network, Business class WiFi based on next generation 802.11ax WiFi 6 technology on both 5.0GHz and 2.4GHz bands, Backward compatible to 802.11b/g/n/a/ac, Dual band 2x2 (2.4GHz and 5.0GHz) 4 streams of data for an aggregate throughput of up to 1.8 Gbps, Theoretical Throughput per Band:5.0GHz: 1200Mbps ,2.4GHz: 600Mbps, Orthogonal Frequency Division Multiple Access (OFDM/OFDMA), Target Wake Time (TWT), Basic Service Set Coloring (BSS Coloring), Bandsteering, Block SSID Broadcast, Ceiling mounting / Wall mounting (mounting kit must be given), Bidir and MU-MIMO support
6	Certifications	Should have FCC Part 15, CE EMC Report, EN 55032/24, EN 300 328, EN 301 893, EN 301 893, EN 62311(for Wi-Fi) , EN 62479 (for BT), IEC 60950-1 CB Certificate, CB IEC60950 / EN60950, EC 278/2009 certificates, MTCTE from TEC
7	Warranty And Support	Must have Lifetime Hardware Replacement warranty with lifetime free latest firmware support, 3 years Cloud license must be included, must be replaceable with New Product Only, No refurbished Products.
8	Approved Makes	Cisco, HPE, Juniper, Netgear, Extreme Networks, Allied Telesis

Wifi-6 4x4 mimo multigig PoE+ Access Point

S.No.	Wifi-6 4x4 mimo multigig PoE+ Access Point	
1	Physical Interfaces	Must have or better:- 1 x 1G/2.5GBASE-T Gigabit Ethernet (RJ-45) ports with 802.3 af/at compliante, Two Internal antenna with 3.1/4.3 dBi for 2.4GHz/5GHz respectively, Four LED: Power and Cloud connection; LAN speed; 2.4GHz status; 5.0GHz status, Port for connecting 12V DC, 2.5A Power adapter
2	Standards	Should have WiFi 6 enabled, 802.3 a/b/g/n/ac/ax with WDS capabilities
3	Security	Should supports the following features from day 1:- Wi-Fi Protected Access (WPA, WPA2, WPA2 Enterprise, WPA3 standard), 802.11i, Wireless access control, MAC address filtering, Neighbor AP detection, Vlan creation, Bandwidth management, Guest network, Vlan per SSID, SSL support, LLDP, 802.1x RADIUS support with EAP TLS, TTLS, PEAP, instant mesh.

4	Management	The access point must have Stand alone, Cloud based, App based management (Centralized management from anywhere anytime) which should provide the full management function for devices : Discovery, network setup, device configuration, ongoing monitoring, troubleshooting and firmware management, Multi-Tenancy, Secondary Admin Capabilities, Simple Network-Level Replication, Multi Network Locations , Bulk Device Onboarding , WiFi and PoE Scheduling, User Analytics, Multilingual Support. It must provides ongoing visibility of the network, and provide customized alerts based on specific needs, Secure device onboard with device MAC and S/N, Two-factor authentication , Client Isolation List, mDNS Gateway , Location level topology, Firmware scheduler, SNMP device status - read only & log export .
5	Other features	Should support the following features from day 1:- Bridge mode (PTP & PTMP), Repeater mode, Adjustable Transmit Power Control (TPC), Identify type of wireless clients in the network, Business class WiFi based on next generation 802.11ax WiFi 6 technology on both 5.0GHz and 2.4GHz bands, Backward compatible to 802.11b/g/n/a/ac, Operating frequency ranges:-2.412–2.472GHz, 5.180–5.240GHz, 5.260–5.230GHz, 5.500–5.700GHz, Beacon interval :- 2.4GHzradio:100millisec., 5GHzradio:100millisec., Dual band 4x4 (2.4GHz and 5.0GHz) 8 streams of data for an aggregate throughput of up to 3.6Gbps, Theoretical Throughput per Band: 5.0GHz: 2400Mbps; 2.4GHz: 1200Mbps, OFDMA, TWT, Maximum power consumption should not cross 26Watt, BSS Coloring, Bandsteering, Block SSID Broadcast, Bidir and MU-MIMO support, Operating temperature 0° to 40°C(32° to 104°F).
6	Certifications	Should have FCC Part 15 Report (EMI) SubPart B, CE, EMC Report, EN 55032/24 Report, EN 301 489-17 EMC Report, IEC 60950-1, MTCTE from TEC
7	Warranty	Must have Lifetime Hardware Replacement warranty with lifetime free latest firmware support, 3 years Cloud license must be included, must be replaceable with New Product Only, No refurbished Products.
8	Approved Makes	Cisco, HPE, Juniper, Netgear, Extreme Networks, Allied Telesis

SFP module & Transceiver

Sl. No.	10G MM SFP+ Module Specifications
1	Should compliant with SFP Transceiver MSA specification and RoHS
2	Should compliant with Specifications for IEEE 802.3ae 10GBase-SR
3	Should have Power Consumption <1.0w
4	Should have Duplex LC Connector interface and wave length 850nm
5	Operating temperature should be minimum 32 -158° F (0 - 70°C) and storage temperature should be minimum 32 -185 °F (0 - 85°C), Operative relative humidity minimum 85% @ (25°C)
6	Should have MTBF of minimum 4986500 hours or more
7	Should have UL 1950 CSA 22.2 No. 950 certified
8	Operating distance should be supported 2 - 300 m for 50/125 um MMF and 2 - 33 m for 62.5/125 um MMF
9	Must have 5 Years Hardware Replacement warranty and must be replaceable with New Product Only, No refurbished Products.
Approved Makes	Cisco, HPE, Juniper, Netgear, Extreme Networks, Allied Telesis

Passive OEM and Product specifications

Sl No	Passive OEM and Product Eligibility Criteria
1	All Copper & Fiber components shall be from same OEM.
2	The OEM should be partner with / member of Telecommunication Industry Association (ANSI/TIA) standards-committee

3	OEM and their Brand House (ODM) must be a registered/incorporated entity in India, with their own manufacturing facility, and operating in India for atleast 15 years. Presence through Distribution Partner only not acceptable. Documents needed to be attached along with the bid. OEM should produce these credentials for its own (including for subsidiary/ parent/ group company) INDIA factory and third party factory documents will not be accepted.
4	The OEM, as part of its declared warranty policy for the offered structured cabling components, must provide 25-years' industry-standard warranty on the installation for System Performance/ Application Assurance. [After structured cabling is commissioned, the OEM must provide the warranty certificate post performance testing.]
5	The offered products must be present in the latest product catalogue / brochure of the OEM, which must be publicly listed on OEM's website

Specification for U/UTP CAT 6 Cables

S.No.	Parameters Requirements	Specification
1	Category	Category 6 Unshielded Twisted Pair 4 pair cable shall be compliant with ANSI/TIA-568.2-D Additional Transmission Performance Specifications for 4-pair Category 6 Cabling. Supports ultrahigh speed data networks such as Gigabit Ethernet (1000 Base-T and 1000 Base-TX) and beyond.
2	Conductor	23 AWG
3	Jacket	The cable jacket shall be LSZH and LSZH sheath should Complying to: a. Fire rating IEC 60332-1, b. Acid gas IEC 60754-2 c. Smoke density IEC 61034-2
4		Incorporates central spine maintaining pair separation during installation to ensure premium performance after installation.
5	Mechanical Characteristics	Construction: 4 twisted pairs separated by internal X shaped, 4 channel, polymer spine / full separator. Half shall not be accepted. Conductor Solid Copper Conductor Diameter 0.56±0.005mm (23 AWG) Insulator Polyolefin Outer Diameter 6.0±0.4mm Max. Temperature 60°C
6	ROHS/ELV	Compliant
13	Approvals	Shall be 4-pair, meeting Category 6 compliance along with 4 connector test report from ETL(Intertek) to be submitted along with offer and report should be available on website of Intertek's ETL Verified program. Cable should be also UL listed and tested by ETL (intertek) @900MHz and report should be submitted along with bid.

Specification for CAT6 PATCH PANEL 24 PORT Loaded

S.No.	Parameters Requirements	Specification
1	Type	19" 24-port, loaded with Jack , A key product used in both Category 6 link and channel gigabit ethernet applications. The IDC section consists of V-shaped contacts that flex not fatigue when terminated. Each port should have shutter and can be colour coded to match jack outlets. Offering both front and rear labelling options, the patch panel is constructed of cold-rolled steel for additional strength and durability.
2	Ports	24
3	Plastic Housing Jack Connector	Polycarbonate, UL94V-0 rated or equivalent
4	Contact Plating	50µ" Gold/100µ" Nickel

5	Front Connector interface	RJ45
6	Circuit Identification Scheme	Icons on each of 24-ports
7	Port Identification	9mm or 12mm Labels on each of 24-ports (to be included in supply)
8	Height 1 U	(1.75 inches)
9	ROHS/ELV	Compliant

Specification for CAT6 I/O Complete Box

S.No.	Parameters Requirements	Specification
	Standard	
1	Type	Cat 6 jack is designed to maintain clean secure connections. PCB based Information outlet design type/technology which protects it from dust and containments. Should have integrated bend limiting and strain relief unit for cable entry.
2	Wire terminal	200 termination cycles
3	Modular Jack	750 mating cycles
4	Plastic Housing	Polycarbonate, UL94V-0 rated or equivalent
5	IDC Contact Plating	Tin/Lead Plate
6	Faceplate	Square Plate with 1/2/4 port. 86 x 86 mm
7	ROHS/ELV	Compliant

Specification for Cat 6 Patchcords

	Parameters Requirements	Specification
	Standard	
1	Type	Cat 6 U/UTP Patch Cords are key components of Cat 6 U/UTP End-to-End Solution and are designed to support data networks for 10/100BASE-T and 1000BASE-T applications. It should be available in 8 different colors.
2	Conductor	24 AWG stranded copper wire
3	Length	1 Mtr & 2 Meter
4	RJ45 plug and boot material	Clear polycarbonate
5	Outer Sheath	LS0H
6	RJ45 plug dimensions compliant with	ISO/IEC 60603-7-4 and FCC 47 Part 68
7	Contact material	0.35mm thick copper alloy
8	MIN operating life	750 insertion cycles
9	Sheath	LSZH

	Material	
	ROHS/ELV	Compliant
Specification for LC-LC Single Mode Fibre Patch Cord		
S.No.	Parameters Requirements	Specification
1	Type	LC-LC type 9/125 µm Singlemode OS2 Optical Fiber Patch Cords
2	Cable Type	Single Mode
3	Cable Length	3 Mtrs
4	Cordge Diameter	2.0mm+/-0.1mm x 4.1mm +/- 0.2mm
5	Connectors	LC-LC
6	Attenuation	0.30dB(max)
7	Buffer Diameter	900µm
8	Primary coating	245µm
9	Strength Member	Aramid Yarn
10	Jacket Material	LS0H IEC 61034-1 & 2, IEC-60332-1, IEC-60754-1 & 2
Specification for 6 / 12 / 24/ 48 / 96 PORT LIU LOADED WITH COUPLER & PIGTAILS		
S.No.	Parameters Requirements	Specification
1	LIU Type	The 1U Multi-Function Fibre Enclosure is a configurable rack mount unit for storing and terminating incoming fibre cable with loack & key.
2	Height of Patch	1 U
3	No. of Ports	24-Jun
4	Adapter	6 /12/ 24/ 48/96 LC Type
5	Material of Panel	16 Gauge CRS with graphite Powdercoat
6	Sliding cover	Panel cover is of slide out for easy maintenance. Incorporates heavy-duty ball bearing slides for smooth and limited extension of the drawer unit, allowing for patch cable access while protecting installed patch and trunk cables from damage during re-entry of the enclosure. Overall assembly must be suitable for 6 / 12/ 24/ 48 / 96 fibre termination and housed within 19" x 1U rack-dimension.
7	Cable Management rings	Management rings within the system to accommodate excess fibre cordage behind the through adapters and maintain fibre bend radius.
Specification for 6 Core Fiber cable		
S.N o.	Parameters Requirements	Specification
1	Cable Type	6 fiber Single Mode, Armoured, Unitube, Gel filled cable complying to ISO.IEC 11801 - 2nd Edition, type OS2; AS/ACIF S008; AS/NZS 3080,ITU-T REC G 652D, IEC 60793/60794, TIA 568, EIA 455; suitable for use in direct burial, outdoor ducts and backbone cabling.
2	Armour	Corrugated Steel Tape Armour -Thickness > 0.125mm
3	Water Blocking	Thixotropic Gel (Tube), Petroleum Jelly (Interstices)
4	Attenuation	. @ 1310nm <=0.35 db/Km MAX
5		. @1550nm <=0.22 db/Km MAX
6	Numerical Aperture	0.14

7	Attenuation Discontinuity	Both Windows <0.10dB
8	Core/Mode-Field (um)	9
9	Clad Diameter (um)	125 + - 1
10	Coat Diameter	245 + - 10
11	Loose tube material	Single PBTP Loose tube filled with water blocking Thixotropic gel
12	Jacket material	UV Stabilised Polyethylene (HDPE)
13	Peripheral Strength Member	Two Steel wires / E-yarns
14	Tensile Strength	1000N
15	Crush Resistance	2000N/10 cm
16	Cable Diameter	9mm
17	Max. Bending Radius (during installation)	20 X Overall diameter
18	Max. Bending Radius (during full load)	10 X Overall diameter
19	Cable weight Kg/Km	80 kg/km
20	Operating Temperature	-10 Degree C to +70 Degree C
		Make :- CommScope, Panduit, Molex

Other criteria

<u>Bidder Eligibility & Experience Credentials</u>
Bidder should have a registered business office, local service support (Active and Passive) Team with PAN India existence
Bidder should have PAN India existence with registered office with valid GST in all metro cities (Kolkata / Delhi / Chennai / Bangalore / Mumbai)
Bidder should be a profit seeking organization for last 3 – 5 years with at least turn over of Rs 100Cr in each Financial Year.
Proof of completing similar structured cabling or Active - Passive Network projects (e.g., valuing 50% of the estimated tender value over the last 3 to 5 years) with at least a single PO amounting Rs 1 Cr or higher.
Bidder should submit required prior purchase orders, completion certificates, or client contact details for similar LAN implementations PAN India basis
The bidder must be an authorized tier-1 partner, integrator, or reseller of the Original Equipment Manufacturer (OEM) for Passive components (cables, racks, patch panels, etc.) of quoted brand.
The bidder must be an authorized tier-1 partner, integrator, or reseller of the Original Equipment Manufacturer (OEM) for Active components (Switch, Router, Fire wall, etc.) of quoted brand.
A formal, project-specific Manufacturer Authorization Form issued directly by the OEM confirming product support and warranty backing
Required partner level/certification such as Gold/Silver/Platinum, depending on projectwise or general achievement from OEM.

Certified network engineers available for implementation and support of the mentioned project.
Declaration that bidder is not blacklisted/debarred by government/PSU/major organizations
Ability to comply with organization's cybersecurity and network-security requirements
Capability to provide post-warranty AMC/ATS and spare support
Bidder shall comply with all applicable statutory and regulatory requirements

<u>Product & Compliance Standards</u>
Requirement for end-to-end structured cabling products from a single OEM brand to ensure compatibility and avoid mixed-tier or second brands
Compliance with international and national standards such as ISO certification for the OEM, and BIS, CE, or UL compliance for applicable hardware
Mandating a long-term performance and application assurance warranty (typically 25 years) backed directly by site certification from the OEM for Passive materials.
Mandatory submission of Fluke test reports (Channel/Permanent Link) for 100% of the installed nodes before final sign-off.
All horizontal cabling (Cat6/Cat6A), patch panels, jack modules (I/Os), and patch cords must be 100% Molex / Panduit / CommScope genuine products
The OEM should be partner with / member of Telecommunication Industry Association (ANSI/TIA) standards-committee
OEM and their Brand House (ODM) must be a registered/incorporated entity in India, with their own manufacturing facility, and operating in India for atleast 15 years. Presence through Distribution Partner only not acceptable. Documents needed to be attached along with the bid. OEM should produce these credentials for its own (including for subsidiary/ parent/ group company) INDIA factory and third party factory documents will not be accepted.
The OEM, as part of its declared warranty policy for the the offered structured cabling components, must provide 25-years' industry-standard warranty on the installation for System Performance/ Application Assurance. [After structured cabling is commissioned, the OEM must provide the warranty certificate post performance testing.]
For all active components (switches), the standard OEM warranty should be for a minimum period of seven(7) years.
Project completion time will be 60 working days
One year free warranty service post successful implementation

Active ATC

Sl. No.	OEM CRITERIA
1	Bid specific OEM MAF in OEM letterhead and Complete Compliance in OEM letterhead
2	Bid specific Non - Malicious certificate and Valid ISO certificate for OEM
3	Product's features must be mentioned in the OEM Datasheet, Datasheet must be available in OEM global website and OEM must have research and development office in India
4	All switches, AP and Modules must be from same OEM for the best compatibility
5	OEM must be present in India for at least 20 years or more
6	MACaddress of the device should be in the name of OEM/parent Company of OEM. Documentary evidence must be given
7	Warranty and Test certificates must be given mentioning Model No. and their Serial No. in OEM Letterhead with signature from an authorized signatory
8	Products must be "Non Made in China" as per Land Border clause of Indian Govt.

Annexure – IV

NIT No. IISWBM/Networking/01/26-27

Date : ...October 2026

Financial Bid

(to be submitted in the letter head of the bidder)

Indicative Bill of Materials (BoM) and Specifications

UPS BoM and Specification:

Item No.	Scope / Area & Description of Items	Technical Specifications / Rating	Qty.	Rate	Amount
SECTION 1: SERVER ROOM POWER BACKUP SOLUTION — Supports: 3 Servers, 2 Core Switches, 2 Enterprise Firewalls (1 Hr Backup)					
1.1	Online UPS System (Server Room)	6 KVA / 6 KW True Online Double Conversion 1-Phase In / 1-Phase Out (or 3:1),	1 Set		
1.2	VRLA SMF Battery Bank	12V 42AH Sealed Maintenance Free (SMF) VRLA Batteries (16 Qty configured for 1 Hour Backup at full/rated critical load)	16 Nos		
1.3	Battery Rack & Interconnects	Heavy Duty MS Steel Battery Rack (Tiered) with PVC insulated copper link cables	1 Set		
SECTION 2: COMPUTER LAB ROOM POWER BACKUP SOLUTION — Supports: 50 Student Desktop PCs + Network Rack (1 Hr Backup)					
2.1	Online UPS System (Computer Lab)	10 KVA / 10 KW True Online Double Conversion UPS System, 3-Phase In / 1-Phase Out (or 3:3/1:1), IGBT Rectifier & Inverter, LCD Display, SNMP Card slot	1 Set		
2.2	VRLA SMF Battery Bank	12V 65AH Sealed Maintenance Free (SMF) VRLA Batteries (20 Qty configured for 240V DC Bus, 1 Hour Backup for 50 Workstations)	20 Nos		
2.3	Battery Rack & Interconnects	Heavy Duty Powder-Coated Metal Battery Rack (2-Tier/3-Tier) with copper interconnecting leads, lugs, and 100A DC MCCB switch	1 Set		
SECTION 3: DEPARTMENTAL IT / OFFICE POWER BACKUP SOLUTION — Supports: Departmental Cluster of 7 PCs + Peripherals (1 Hr Backup)					
3.1	Online UPS System (Department)	3 KVA / 2.7 KW - 3 KW True Online Double Conversion UPS System, 1-Phase In / 1-Phase Out, High Frequency IGBT, Generator Compatible	1 Set		
3.2	VRLA SMF Battery Bank	12V 65AH Sealed Maintenance Free (SMF) VRLA Batteries (6 Qty configured for 72V DC Bus, 1 Hour Backup for 7 Desktop PCs)	6 Nos		
3.3	Battery Rack & Interconnects	Compact MS Battery Rack with copper terminal links and 32A DC MCB Enclosure	1 Set		

Active components:

Item No.	Equipment Description & Technical Specification	Planned Deployment Location	Qty.	Rate	Amount
1	24 Port L3 Managed Stackable M-GiG/10G Switch (Core Switch) with 12 port SFP (10G) + 12 port UTP - in HA Mode	Ground Floor Server Room	2 Nos.		
2	24 Port Distribution Switch with 2 SFP Port	Floor Aggregation / Racks	8 Nos.		
3	24 Port Access Switch with UTP Port Only - Non PoE	Floor Racks (Data Drops)	11 Nos.		
4	24 Port Access Switch with UTP Port Only - PoE for Wifi	Floor Racks (Wi-Fi Power)	8 Nos.		
5	Access Point WAP 1 / 2 (Dual Band Enterprise 802.11ax/ac)	Floors G to 7th (Ceiling/Wall)	92 Nos.		
6	10G Transceiver (SFP+ Optical Modules)	Core & Distribution Uplinks	16 Nos.		
7	Firewall with UTP (Next-Generation Perimeter Security Gateway)	Server Room (WAN Gateway)	1 Nos.		

Passive and other components:

Sr. No	Description (CAT 6A PASSIVE COMPONENTS)	Total Qty	Rate	Amount
1	4-pair, Cat 6 UTP Cable, roll of 500m - DATA	117 Box		
2	Cat 6 UTP Jack with Strain relief and bend limiting boot, Consolidated-Data - User End	53 Nos 6		
3	24-port loaded, Cat 6 Jack Panel, SL-Series, 1U, Data/Voice	27 Nos		
4	Cat 6 SL Series Patch Cords - 1 Mtr , Active Data-Rack & User End	566 Nos		
5	Cat 6 SL Series Patch Cords - 2 Mtr , Active Data-Rack & User End	536 Nos		
6	2&4-port British Style Shuttered faceplate, WHITE	268 Nos		
7	Back Box	268 Nos		
8	PVC Pipe / Casing & Capping / Flexipipe - to be calculated on actual as per requirement	3500 Mtr		
9	15U Wall Mount Rack with all standard accessories	1 Nos		
10	9U Wall Mount Rack with all standard accessories for each floor to mount Access / Distribution switch for that floor	9 Nos		
11	Patchcord Striking for Patch cord & Cable Ties , Ferrul & Documentation	1 Lum		
12	6 Core Multi Mode Fibre Optic Cable (Armoured)	700 Mtrs		
13	12 Port LIU with coupler , blank and Pigtail - Fully loaded - 6 nos port splicing in each LIU	7 Nos		
14	48 Port LIU with coupler , blank and Pigtail - Fully loaded - 48 nos port splicing in LIU	1 Nos		
15	Fluke Testing Report Node wise - Mandatory - for Certification from OEM	536 Lum		
16	Rack Dressing & Velcro	15 Nos		
17	Project Management Charges & Transport	1 Lum		
18	Freight	1 Lum		

Total (Excluding GST)**Add: GST @ ____%****Total (including GST)**

Signature of the Bidder with Date

