Enquiry No. IIITDMJ/P&S/Enq./13 **Date: 29-07-2015**

Sub: Invitation of Tender/Quotation for the Supply of followings items:

1. **Network Hardware**

a) Router (06 No.) Annexure 1
b) Managed Switch (L3) (03 No.) Annexure 2
c) Switch (L2) Annexure 3
d) Access Point (03 No.) Annexure 4
e) RJ45 Connector (5000 Nos.)
f) Crimping Tool (25 Nos.)

Sealed Tenders are invited by the Registrar, PDPM Indian Institute of Information Technology, Design & Manufacturing Jabalpur for Supply of following items:

1. **Network Hardware**

a) Router (06 No.) Annexure 1
b) Managed Switch (L3) (03 No.) Annexure 2
c) Switch (L2) Annexure 3
d) Access Point (03 No.) Annexure 4
e) RJ45 Connector (5000 Nos.)
f) Crimping Tool (25 Nos.)

The tender No., closing and opening date of received quotations are as follows:

Tender No. IIITDMJ/P&S/Enq/13	Dated : **29- 07-2015**
Closing Date & Time:	**28.08.2015 at 3.00 PM**
Date & Time of opening of Tender:	**28.08.2015 at 4.00 PM**

General Terms and Conditions:

1. Sealed pack quotations are invited from original manufacturers or their authorized dealers having distributorship and service center.
2. **The bid: should be in two parts:**
   (a) Techno Commercial Bid: Consisting of technical details & prices complying with the required technical specifications mentioned in Annexures.

(b) EMD: The bidder must submit the EMD (bid security). If the EMD is not found valid in terms of amount and period-wise or otherwise, quotation of the bidder will stand invalid.

The quotation and EMD should be sealed by the bidder in a cover duly super scribed.

3. **Rates:-** Rates quoted should be in Indian Rupees(INR) on FOR destination at PDPM-IIITDM, Jabalpur on **DOOR Delivery basis**, inclusive of all the charges, with break up as:-

(i) Basic cost
(ii) Installation charges (if any)
(iii) VAT/CST as applicable
(iv) Total FOR at IIIT, Jabalpur

Note:- If the breakup is not given, it will be assumed that the quoted rates include all admissible taxes, transportation charges and installation charges. VAT will be deducted at source as per Madhya Pradesh VAT Act.

4. PDPM-IIITDM, Jabalpur is registered with DSIR, Govt. of India(Custom Duty Notification No. 51/96-Custom dt:- 23rd July 1996 and Central Excise Duty Notification no. 10/97-Central Excise Dt: 1st March 1997) and it therefore, exempted from Excise Duty and partial exempted from Custom duty. Exemption certificate of the same shall be issued, to successful bidder if needed.

5. Payment will be released 90% on delivery and 10% against satisfactory installation/ inspection report.

6. **Only one specific model/make of the quoted item satisfying complete technical specifications should be mentioned. No option should be given. Quoting of options will lead to disqualification.**

7. The quantity given is tentative and Institute reserves the right to change the quantity as per its requirement at any stage. Further, the Institute reserves the right to place order either of all the items or only some of the above items. The supplier shall have no right to claim any compensation in such case. Bidder may quote any or all of the items.

8. The supplier is to submit earnest money deposit (EMD) of Rs. 30,000/- (Rupees Thirty thousand only) with their sealed quotation. Quotation without earnest money deposit shall be summarily rejected.

9. The earnest money deposit(EMD) should be in the form of Demand Draft/FDR in favour of PDPM-IIITDM payable at Jabalpur. The EMD should remain valid for a period of 45 days beyond the final tender validity period.

10. Validity of quotation should be minimum 90 days from the date of opening of quotation. The overall offer for the assignment and tenderer(s) quoted price shall remain unchanged during the period of validity. If the tenderer quotes the validity shorter than the required period, the same shall be treated as unresponsive and it may be rejected.

11 In case the tenderer withdraws, modifies or change his offer during the validity period, bid is liable to be rejected and the earnest money deposit shall be forfeited without assigning any reason thereof. The tenderer should also be ready to extend the validity, if required without changing any terms and conditions etc. of their original tender.

12. The bidder shall submit one copy of the tender document and addenda thereto, if any, with each page of this document should be signed and stamped to confirm the acceptance of the entire terms & conditions as mentioned in the of the tender enquiry document.

13. Conditional bid will be treated as unresponsive and it may be rejected.

14. In case the supplied item(s) has deviation(s), and is/are accepted by the Institute, amount proportionate to deviation as decided by the Institute would be deducted. In case it is found at a later stage that the items internal structure/specification do not conform with the specification in the tender document, bank guarantee will be forfeited and the firm/supplier will be liable to be blacklisted for participating in future tender process for at least one year.

15. **Delivery Period :** Delivery of all the items should be completed within 4 weeks from the date of receipt of firm order. **No other delivery period longer than that given by the Institute will be accepted and if quoted by the tenderer will lead to technical disqualification of the firm.**

16. **Penalty for delayed Delivery:**

In the event of delayed delivery, Installation & Commissioning i.e. after the expiry of the period as mentioned in P.O., the vendor shall be liable for a penalty deduction at a percentage of the value of the undelivered equipment subject to a maximum of 7.5% as detailed below:

@ 1% up to one week;
@ 2.5% up to two weeks;
@ 5% up to three weeks;
@ 7.5% for four weeks and above

For the purpose of this clause, part of the week is considered as a full week.

17. The quotations should be completed in all respects and cover the cost for the materials of the exact specification and descriptions of the stores as per the annexure, otherwise the same shall be ignored.

18. **Authorization Certificate:** The authorized dealer/agent/distributor has to submit valid authorized Agent/Dealership Certificate issued by their principal.

19. **Warranty/Guarantee:** Bid should be quoted with one (01) year comprehensive on-site warranty/guarantee as per specification of the respective items in the annexures and will start from the date of satisfactory installation/commissioning, against any defect of manufacturing, workmanship and poor quality of components supplied items. During warranty/guarantee period the purchaser will not bear the cost of the item (s), which may come as replacement of the original stores or spares as a result of faults noticed at the time of inspection during the warranty period. The Seller/Local Agent is required to eliminate the fault(s) occurring during the Warranty period without delay by improvement or replacement as may be necessary, at their own cost. During warrantee period, the supplier should ensure a maximum downtown of 72 hours from the date/time of the complaint lodge about the item. The supplier must provide after sales service facility on site during warrantee period.

20. **Performance Bank Guarantee:** During Warranty Period supplier has to submit PBG @ 5% of the total cost of the items supplied in the form of Bank Gurarantee/FDR payable at Jabalpur. PBG will be valid for a period of 60 days beyond the date of completion of warrantee.

21 **Inspection & Testing:** Goods will be inspected by the purchaser at his end. Goods rejected on inspection will be replaced by the supplier of cost and all charges for collection and delivery of the same to the Purchaser will be on suppliers account.

22. Any attempt of negotiations direct or indirect on the part of the tenderer with authority to whom he has submitted the tender unless called by the competent authority or any endeavor to secure any interest for an actual or prospective tenderer or to influence by any means, the acceptance of particular tender will render the tender liable to exclusion form consideration.

23. **Eligibility Criteria:** A bidder must have proven track record in supplying the specified items/similar items to the educational institutions/reputed organizations and should be financially sound and should have own showroom & service centre.

24. The Institute reserves the right to reject any or all bids without specifying any reasons thereof.

25. All disputes/arbitration should be within the jurisdiction of Jabalpur

26. Kindly enclose pamphlet/brochure of the company along with the quotation showing complete details, technical specifications and quality of the items.

27. Sealed quotation, mentioning "Tender No. IIITDMJ/P&S/Enq./13" at the top of the envelop, should reach on or before 3.00 PM on 28.08.2015 to the Registrar PDPM-IIITDM Jabalpur, Dumna Airport Road, Post: Khamaria, Jabalpur (M.P.) Pin-482005.

28. Techno Commercial bid will be opened at **4.00 PM** same day (**28.08.2015**). In case of holiday, technical commercial bid will be opened at the same time on next working day.

Rizwan Ahmed
Assistant Registrar (P&S)

Annexure - I

Specification: Router

1.	Form Factor	External Modular 2U
2.	RAM	512 MB (installed) / 2GB Max
3.	Flash Memory	256 MB (installed) / 8 GB (max)
4.	Routing Protocol	OSPF,IS-IS,BGP,EIGRP, GRP, DVMRP, PIM-SM, IGMPv3, GRE, PIM-SSM, static IPv4 routing, static IPv6 routing
5.	Data Link Protocol	Ethernet, Fast Ethernet, Gigabit Ethernet
6.	Remote Management Protocol	SNMP, RMON
7.	Features	MPLS support, Syslog support, IPv6 support, Class-Based Weighted, Fair Queuing (CBWFQ), Weighted Rando802m, Early Detection (WRED)
8.	Compliant Standards	IEEE 802.1Q, IEEE 802.3af, IEEE 802.3ah, IEEE 802.1ag
9.	Power	AC 120/230 V (50/60) Hz

Annexure-2

Specifications: L3 Switch

1.	Switch should be 1 RU rack mountable with internal redundant power supply and support hot swappable 1000 Base-SX, 1000 Base-LX/LH, 1000 Base-ZX modules
2.	Should have minimum 56 Gbps forwarding bandwidth and minimum 41Mbps forwarding rate
3.	In case of power supply failure, redundant power supply should be able to handle the complete load
4.	Switch should support IEEE Standards of Ethernet: IEEE 802.1d, 802.1s, 802.1w, 802.3ad, 802.3x, 802.1D, 802.1p, 802.1Q, 802.3, 802.3u, 802.3ab, 802.3z etc.
5.	Should have IEEE 802.1QVLAN encapsulation and up to 1000 active VLANs per switch
6.	Should have Secure VTP with MD5 to reduce administrative burden of configuring VLANs on multiple switches in turn eliminating the configuration errors & troubleshooting in secure manner
7.	Should be able to discover the neighboring device of the same vendor giving the details about the platform, IP Address, Link connected through etc., thus helping in troubleshooting connectivity problems
8.	Should have UDLD to detect connectivity issues with both fiber and copper cabling. Ensures that a partially failed link is shut down on both sides, to avoid L2/L3 protocol convergence issues
9.	Should have extensive debugging including layer 2 debugging and layer 2 trace route for troubleshooting
10.	Should have Time Domain Reflectometry (TDR) feature for detecting cable breaks and shorts
11.	Should haveL2 convergence features like MSTP, RSTP, PVST etc.
12.	Switch ports should automatically detects the type of device connected and offers a best-practices configuration to the ports
13.	Should have capability to response for SLA monitoring for metrics like delay, latency, jitter, packet loss
14.	Should have minimum 8000 MAC Address support
15.	Should have DiffServ / TOS Marking & Policing
16.	Should have at least 4 Queues to differentiate and prioritize different applications (Voice / Video / Data)
17.	Should have IGMPv1, v2 and v3 and IGMP Snooping features
18.	Should have multicast VLAN registration (MVR) feature
19.	Should have unicast, multicast and broadcast storm control

20.	Should have IEEE 802.1x to allow dynamic, port-based security, providing user authentication
21.	Should have MAC Address Based Security on per port basis.
22.	Should have IEEE 802.1xfeature with ACLs, Dynamic VLAN assignment, Web Authentication, multi domain authentication and MAC authentication bypass
23.	Should have IEEE 802.1xfeature with voice VLAN permits an IP phone to access the voice VLAN
24.	Should have IEEE 802.1xfeature with an ACL assignment for specific identity-based security policies
25.	Should have Port-based, VLAN-based and Time-based access-list to allow application of security policies on individual switch ports
26.	Should have the capability to display and clear MAC address information in MAC Address Table
27.	Should have routing protocols like static routing, inter VLAN routing, Equal cost routing, RIP v1&v2, Routed access for OSPFv2 and EIGRP stub routing etc.
28.	Should have unicast MAC filtering feature to prevent the forwarding of any type of packet with a matching MAC address.
29.	Should haveSSHv2 , SNMPv3 and NTP features to provide network security
30.	Should have TACACS+ and RADIUS support for AAA authentication
31.	Should be able to shut down Spanning Tree Protocol PortFast-enabled interfaces when BPDUs are received to avoid accidental topology loops
32.	Should be able to prevent edge devices not in the network administrator's control from becoming Spanning Tree Protocol root nodes
33.	Should have DHCP snooping feature to allow administrators to ensure consistent mapping of IP to MAC addresses.
34.	Should have multilevel security options on console access to prevent unauthorized users from altering the switch configuration
35.	Should have Port Mirroring feature based on port basis / vlan basis
36.	Should have support for IPv6 addressing, ICMPv6, TCP/UDP over IPv6, HTTP over IPv6, HTTPS over IPv6, SNMP over IPv6, Syslog over IPv6 etc.
37.	Management: Should have accessibility using Telnet, SSH, CLI for easier software upgrade through network using TFTP and configuration management
38.	Minimum Configuration deliverable
39.	Should have minimum 24 10/100/1000 Base-T ports with additional 4 Nos. of SPF Based ports

Annexure - 3

Specifications: L2 Switch

1.	Switch should be 1 RU rack mountable with external redundant power supply support and also support hot swappable 1000 Base-SX, 1000 Base-LX/LH, 1000 Base-ZX modules
2.	Should have minimum 56 Gbps forwarding bandwidth ,Minimum stacking bandwidth of 80Gbps & Minimum forwarding rate of 41Mpps
3.	In case of power supply failure, redundant power supply should be able to handle the complete load
4.	Switch should support IEEE Standards of Ethernet: IEEE 802.1d, 802.1s, 802.1w, 802.3ad, 802.3x, 802.1D, 802.1p, 802.1Q, 802.3, 802.3u, 802.3ab, 802.3z etc.
5.	Should have IEEE 802.1QVLAN encapsulation and up to 250 active VLANs per switch
6.	Should have Secure VTP with MD5 to reduce administrative burden of configuring VLANs on multiple switches in turn eliminating the configuration errors & troubleshooting in secure manner
7.	Should be able to discover the neighboring device of the same vendor giving the details about the platform, IP Address, Link connected through etc, thus helping in troubleshooting connectivity problems
8.	Should have UDLD to detect connectivity issues with both fiber and copper cabling. Ensures that a partially failed link is shut down on both sides, to avoid L2/L3 protocol convergence issues
9.	Should have extensive debugging including layer 2 debugging and layer 2 trace route for troubleshooting
10.	Should have Time Domain Reflectometry (TDR) feature for detecting cable breaks and shorts
11.	Should haveL2 convergence features like MSTP, RSTP, PVST etc.
12.	Should have capability to response for SLA monitoring for metrics like delay, latency, jitter, packet loss
13.	Should have minimum 8000 MAC Address support
14.	Should have DiffServ / TOS Marking & Policing
15.	Should have at least 4 Queues to differentiate and prioritize different applications (Voice / Video / Data)
16.	Should haveIGMPv1, v2 and v3 and IGMP Snooping features
17.	Should have multicast VLAN registration (MVR) feature
18.	Should have unicast, multicast and broadcast storm control
19.	Should have IEEE 802.1x to allow dynamic, port-based security, providing user authentication

20.	Should have MAC Address Based Security on per port basis.
21.	Should have IEEE 802.1xfeature with ACLs, Dynamic VLAN assignment, Web Authentication, multi domain authentication and MAC authentication bypass
22.	Should have IEEE 802.1xfeature with voice VLAN permits an IP phone to access the voice VLAN
23.	Should have IEEE 802.1xfeature with an ACL assignment for specific identity-based security policies
24.	Should have Port-based, VLAN-based and Time-based access-list to allow application of security policies on individual switch ports
25.	Should have unicast MAC filtering feature to prevent the forwarding of any type of packet with a matching MAC address.
26.	Should haveSSHv2 , SNMPv3 and NTP features to provide network security
27.	Should have TACACS+ and RADIUS support for AAA authentication
28.	Should be able to shut down Spanning Tree Protocol PortFast-enabled interfaces when BPDUs are received to avoid accidental topology loops
29.	Should be able to prevent edge devices not in the network administrator's control from becoming Spanning Tree Protocol root nodes
30.	Should have DHCP snooping feature to allow administrators to ensure consistent mapping of IP to MAC addresses.
31.	Should have multilevel security options on console access to prevent unauthorized users from altering the switch configuration
32.	Should have 4 Groups of RMON I support
33.	Should have Port Mirroring feature based on port basis / vlan basis
34.	Should have support for IPv6 addressing, ICMPv6, TCP/UDP over IPv6, HTTP over IPv6, HTTPS over IPv6, SNMP over IPv6, Syslog over IPv6 etc.
35.	Management: Should have accessibility using Telnet, SSH, CLI for easier software upgrade through network using TFTP and configuration management
36.	Minimum Configuration deliverable
37.	Should have minimum 24 10/100/1000 Base-T ports with additional 4 Nos. of SPF Based ports

RUCHKA

Annexure-4

Specifications: Wireless Access Point

1.	Access Points proposed must include radios for both 2.4 GHz and 5 GHz
2.	Must have a robust design for durability, without visible vents
3.	Must include dual band antennas to support both the 2.4GHz and 5GHz operations simultaneously from single antenna.
4.	Authentication and security: TKIP for WPA, AES for WPA2, 802.1x, Radius, AAA,802.11i
5.	Must support simultaneous 802.11n on both the 2.4 GHz and 5 GHz radios
6.	Must support data rates up-to 300Mbps on 5Ghz radio and 144mbps on 2.4Ghz radio
7.	Access points proposed with 4x10/100/1000 T LAN, 1x1G PoE, 1x1G uplink ports
8.	Must support up-to 20dbm of transmit power in both 2.4Ghz and 5Ghz radios
9.	The Wireless AP should have the technology to improve downlink performance to all mobile devices including one-, two-, and three spatial stream devices on 802.11n. The technology should use advanced signal processing techniques and multiple transmit paths to optimize the signal received by 802.11 clients in the downlink direction without requiring feedback and should work with all existing 802.11 clients. Should support configuring the access point as network connected sensor to access any network location covered by the access point to get real-time Spectrum analysis data.
10.	System should support up to 128MB DRAM,128MB Flash, 560MHz CPU
11.	Must incorporate radio resource management for power, channel, coverage hole detection and performance optimization
12.	Must support Proactive Key Caching and/or other methods for Fast Secure Roaming.
13.	Must support Management Frame Protection.
14.	Should support locally-significant certificates on the APs using a Public Key Infrastructure (PKI).
15.	Must operate as a sensor for wireless IPS
16.	Access Points must support a distributed encryption/ decryption model.
17.	Access Points must support Hardware-based DTLS encryption on CAPWAP Standard
18.	Must support the ability to serve clients and monitor the RF environment concurrently.
19.	Same model AP that serves clients must be able to be dedicated to monitoring the RF environment.
20.	AP model proposed must be able to be both a client-serving AP and a monitor-only AP for Intrusion Prevention services.

21.	Should support mesh capabilities for temporary connectivity in areas with no Ethernet cabling
22.	Must support telnet and/or SSH login to APs directly for troubleshooting flexibility.
23.	Must be lightweight and manageable through existing Wireless LAN Controller.
24.	Must support Power over Ethernet, local power, and power injectors.
25.	802.11e and WMM
26.	802.11e and WMM
27.	WiFi Alliance Certification for WMM and WMM power save
28.	Must support Reliable Multicast Video to maintain video quality