PANJAB UNIVERSITY REGIONAL CENTRE, LUDHIANA

Panjab University Extension Library,
Civil Lines, Ludhiana-141001 (Pb.)
Phone: 2443830, 2448917
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Ref. No. RC/Ldh/12/1564-1583   Date:-05/09/2017

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Sir/Madam,

Kindly quote your rates for the Items as per specifications enclosed in *Annexure-I*, to be purchased on Turnkey basis at the Panjab University Regional Centre, Ludhiana.

Sr. No.	Name of Work	Estimated Cost	EMD
1.	Wi-Fi infrastructure	INR 15,00,000/-	INR 30,000/- (2% of estimated cost)

Three cover quotation in sealed envelope as mentioned below (mentioning clearly the terms and conditions of payment, rate of tax as applicable etc. and other terms) may please be addressed to *The Director, Panjab University Regional Centre, Ludhiana which must reach the office by 04:00 PM, 22nd September, 2017*.

It is proposed to have a three cover system for this quotation.

1. *Technical Proposal* is directed to be kept in a single sealed cover super-scribed with the words *"Technical Proposal for Wi-Fi infrastructure"* as per the Performa *(Annexure – II).*

2. *Commercial Proposal* is directed to be kept in a single sealed cover super-scribed with the words *"Commercial Proposal for Wi-Fi infrastructure"*.

3. *Both the above sealed covers* are directed to be kept in a single cover super-scribed with the words *"Proposal for Wi-Fi infrastructure"* due at 04:00 PM, 22nd September, 2017.

   *Note: Price should not be indicated in the Technical Proposal. Else, the Quotation will be rejected.

The *Technical Proposals* will be opened on *25th September, 2017 (1300 hrs.)* at Panjab University Regional Centre, Ludhiana.

The *Commercial Proposals* will be opened on *27th September, 2017 (1300 hrs.)* at Panjab University Regional Centre, Ludhiana.

Terms and conditions:

1. The Quotation should be submitted along with refundable *Earnest Money of INR 30,000/- (2% of estimated cost)* in the form of Demand draft, payable at Ludhiana in favor of '***The Director, Panjab University Regional Centre, Ludhiana'***. Quotations not accompanied by Earnest Money or incomplete in any respect will be rejected outright.
2. Pre-Bid Conference - The prospective bidders may visit Panjab University Regional Centre, Ludhiana for clarifying issues and clearing doubts, if any, about the specification and other allied technical details of the equipment on 14th September, 2017.
3. Please quote our letter no. and date in your letter of quotation.
4. The delivery will be FOR Panjab University Regional Centre, Ludhiana.
5. The quantity can be increased or decreased according to need.
6. Please attach the authorization certificate from OEM.
7. If there is any special concession/discount to the Educational Institutions it must be mentioned clearly in the quotation
8. Warranty/guarantee period and service after sale should be mentioned clearly.
9. No advance payment will be made.
10. Full and final payment will be made on the receipt of the material and satisfactory installation.
11. In case the order is not executed within the stipulated period, Panjab University Regional Centre, Ludhiana will be at liberty to make purchases through other sources, and to forfeit the earnest money of the supplier.
12. The material found defective of damaged in transit will have to be replaced by the firm at its own cost.
13. Minimum period for delivery/Job completion should be mentioned clearly.
14. The Security Deposit (5% of estimated cost) applies only to the contractor whose quotation has been accepted and is entrusted with the execution of the work.
15. No correspondence regarding acceptance /rejection of a quotation will be entertained.

Thanking you,

Yours faithfully

Director

COMMERCIAL PROPOSAL

Annexure -I

Sr. No.	Item	Quantity	Specification
1.	UTM with Integrated Wi-Fi Controller	01	8 or more GE RJ45 Ports 2 SFP ports with transceivers 1 USB Management Ports 2 or more USB ports 1 RJ45 Console port Support for 2 or more WAN links from day one 1GE RJ45 Management port Support for DMZ network Support for High Availability Firewall throughput: 2.5 Gbps or better IPS throughput: 310 Mbps or better SSL Inspection Throughput: 260 Mbps NGFW Throughput: 220 Mbps or better Threat Protection Throughput:200 Mbps or better Firewall Latency: 50 us or less Throughput: 300 mpps or more Users: 1000(300 Concurrent) Dimensions: 1 U Rack mountable Wi-Fi: Support for 64 Access Points or more ***Prices should be quoted inclusive of 1 Year UTM Subscription bundle with 24 X 7 support.***
2.	Indoor Access Points:15	15	Dual Radios 2.4 Ghz and 5 Ghz 4 Antennas (Internal/External) Peak Gain:3 dBi or better Throughput: Up to 867 Mbps or better at 5 Ghz, Upto 300 Mbps or better at 2.4Ghz 1 or more GE RJ45 with IEEE 802.3af or better IEEE 802.11 a/b/g/n/ac with 80 Mhz Channel Ceiling, T-Rail and wall Mount kit

Sr. No.	Item	Quantity	Specification
3.	Outdoor Access Points	03	Dual Radios 2.4 Ghz and 5 Ghz 4 Antennas (Internal/External) Peak Gain:5 dBi or better Throughput: Up to 867 Mbps or better at 5 Ghz, Upto 300 Mbps or better at 2.4Ghz 1 or more GE RJ45 with IEEE 802.3af or better IEEE 802.11 a/b/g/n/ac with 80 Mhz Channel PoE injector with AC power adapter Pole and Wall mount kit
4.	24 Port Layer-2 PoE Switch	02	24 port Layer 2 Ethernet switch with basic Layer 3 functionality. 24 RJ-45 ports out of which minimum 12 ports will support PoE (IEEE 802.3af) 2 or more SFP ports along with compatible SFP Single mode 1G transceivers.

Sr. No	Item	Quantity
1	24 ports Patch Panel fully loaded	3
2	22 U Floor Standing Network Rack	1
3	6 U Wall Mounted Rack (Fully Loaded)	2
4	Cat 61/O with SMB and face plates	20
5	Patch Cord 1 m	40
6	UTP Cat 6A Cable	1 roll
7	UTP Cat 6 Cable	4 roll
Sr. No	Item	Quantity

8	PVC Pipe 1"	500 mtr
9	HDPE Pipe 1"	200 mtr
10	5 KVA online UPS (with 30 minutes indicative backup)	1
11	1 KVA UPS	2

Sr. No	Item	Quantity
1	Laying of UTP with marking, numbering and tagging	1500 mtr
2	Fixing and Punching of I/O with SMB	15
3	Laying of conduit with flexible, band junction box and clamping	500 mtr
4	Fixing of rack with jack Panel and switches	3

TECHNICAL PROPOSAL PERFORMA   **ANNEXURE-II**

ACCESS SWITCH (Make/ Model): _____

S.No.	DESCRIPTION	Complied (Yes/No)	Remarks
1	Switch proposed should have minimum 24x GE RJ45 ports and 2x GE SFP ports		
2	Proposed switch should have minimum 12 PoE Ports (802.3 af/at) with a PoE Power budget of 100W		
3	The form factor of the proposed switch should be 1 RU		
4	Proposed switch should have a RJ-45/ USB Serial console port		
5	Proposed switch should be managed via both, GUI and CLI		
6	Switching capacity of the proposed switch should be minimum 52 Gbps		
7	Packet per second capacity of the switch should be 65 Mpps		
8	Proposed Switch should support minimum 16000 MAC address storage		
9	Proposed switch should support 4000 VLANs		
11	Operating temperature of the proposed switch should be 0-50 degrees Celsius		
12	Proposed switch should support: 802.1x Port Authentication MAC Address-Based Authentication MAC Black/White Listing TACACS+/RADIUS Admin Access Virtual Domain		
Supported Switching features			
13	Jumbo Frames		
14	Auto-negotiation for port speed and duplex		
15	IEEE 802.1D MAC Bridging/STP		
16	IEEE 802.1w Rapid Spanning Tree Protocol		

S.No.	DESCRIPTION	Complied (Yes/No)	Remarks
17	IEEE 802.1s Multiple Spanning Tree Protocol		
18	IEEE 802.1Q VLAN Tagging		
19	IEEE 802.3ad Link Aggregation with LACP		
20	IEEE 802.1AX Link Aggregation		
Management			
21	Telnet/SSH		
22	SNMP v1/v2c/v3		
23	LLDP (Receive and transmit)		
24	Standard CLI and web GUI interface		
25	Software download/upload: TFTP/FTP/GUI		

UTM CUM CONTROLLER (Make/ Model): _____

S.No.	DESCRIPTION	Complied (Yes/No)	Remarks
1	Should be hardware based		
2	Firewall throughput- minimum 2.5Gbps		
3	Concurrent session- 1.5M		
4	SSL inspection Throughput- 260 Mbps		
5	NGFW Throughput- 220 Mbps		
6	Should support up to 64 or more Access Points from day one.		
7	Firewall and VPN should be ICSA certified		
8	Should have wireless controller with all licenses from day one		

WI-FI ACCESS POINT (INDOOR) (Make/ Model): _____

Architecture			
S. No.	**DESCRIPTION**	**Complied (Yes/No)**	**Remarks**
1	The Access Point should support IEEE 802.11a/b/g/n/ac standards		
2	Should have the dual radio option and should be able to support devices on 2.4GHz and 5 GHz simultaneously.		
3	Should have at least 4 Internal Antennas		
4	Should have minimum 1 x 10/100/1000 Interface.		
5	Should support Power over Ethernet (PoE) 802.3af from day one		
6	Access point should support 2x2 MIMO with 2 spatial streams or better.		
7	The access Point should support throughput in 2.4 GHz: Up to 300 Mbps, and 5 GHz: Up to 867 Mbps		
8	Should be centrally managed through the wireless controller		
9	Should support mounting options of Ceiling, T-Rail and wall all these accessories should be included with box. If not quote all mounting kit.		

Wi-Fi Access Point (Outdoor) (Make/ Model): _____

Architecture			
S.No.	**DESCRIPTION**	**Complied (Yes/No)**	**Remarks**
1	The Access Point should support IEEE 802.11a/b/g/n/ac standards		
2	Should have the dual radio option. Frequency of one radio must 5 GHz a/n/ac and other one should be at 2.4 GHz b/g/n		

S.No.	DESCRIPTION	Complied (Yes/No)	Remarks
3	Should have 4 nos. external/ internal omnidirectional antennas for better coverage with a gain of approx. 3.5dBi (2.4 GHz) to 6dBi (5GHz) or better		
4	AP hardware type should be Outdoor IP67 rated, status LEDs		
5	Should have 1 x 10/100/1000 Interface or more		
6	Should support Power over Ethernet (PoE) 802.3at/ af		
7	Support 2x2 MIMO with 2 spatial streams or better.		
8	The access Point should support throughput in 2.4 GHz: Up to 300 Mbps, and 5 GHz: Up to 867 Mbps		
9	Should be centrally managed through the wireless controller		
10	Should support mounting options of pole and wall all these accessories should be included with box. If not quote all mounting kit.		