

TENDER NOTICE

Ref.No. C7/DST-PURSE/7688/2018

Date. 05.04.2018

Sealed Tenders are invited by the Registrar, Bharathiar University, Coimbatore 641 046 up to 3.00 P.M on 27.04.2018 (**Separate Technical bid and Commercial bid**) from the **ISO Certified firms for the supply and installation of Components for Campus Networking under DST-PURSE (Phase-II) Program.**

<p>TENDER COST: Rs. 15,750/- EMD: Rs.75,000/- LAST DATE FOR SUBMISSION OF TENDERS:27.04.2018 up to 3.00P.M. TECHNICAL BIDS OPENING DATE : 27.04.2018 at 4.00 P.M.</p>
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For Tender document and details of Terms& Conditions can be downloaded from our website www.b-u.ac.in and www.tenders.tn.gov.in between 09.04.2018 to 27.04.2018.

NOTE : For any clarifications please contact Dr.K.Senthilkumar, Dept.of Physics - 0422- 2428448 during office hours

**REGISTRAR i/c
BHARATHIAR UNIVERSITY**

BHARATHIAR UNIVERSITY –COIMBATORE 641 046

**TENDER CONDITIONS AND INSTRUCTIONS FOR THE SUPPLY AND
INSTALLATION OF COMPONENTS FOR CAMPUS NETWORKING**

1. Sealed Tenders will be received by the **Registrar, Bharathiar University from the ISO Certified firms up to 3.00 p.m. on 27.04.2018** for the **supply and installation of Components for Campus Networking under PURSE Program, as specified in the schedule (Appendix I&II) .**
2. Tender should be addressed to the Registrar, Bharathiar University and should be only in sealed covers by Registered post/ or in person. Tenders received in ordinary covers without seal will not be considered.
3. The tender cover with **Ref.No.should be superscribed as “Tender for the supply and installation of Components for Campus Networking under PURSE Program.**The covers received without such superscription will be rejected summarily. All covers containing the tender should be sealed. Separate sealed covers should be used for technical and price bid and please be superscribed on the cover
4. **Technical Bids only will be opened on 27.04.2018 at 4.00 p.m. by the Registrar or his/her nominee in the presence of the tenderers** or their representatives who may be present at the time of opening. The representatives of the tendering firms who are attending during opening of the tenders should bring a letter of authorization from the tendering firms, which they represent to identify their bonafied.
5. Each tender shall be accompanied with the requisite Tender Cost of **Rs.15,750/- and EMD of Rs.75,000/-** in the form of DD drawn in one of the Nationalised Banks in the name of “Registrar, Bharathiar University” payable at Coimbatore. Cheques and Bank Guarantees will not be accepted. EMD will not carry any interest.

The tender submitted without the earnest money deposit be summarily rejected provided that any category of tenderers specifically exempted by the Government from the payment of earnest money deposit /tender cost necessary certificate should be enclosed for exemption otherwise it will be liable for rejection.
6. Tenders received late will be returned to the tenderer unopened.
7. Any quote where the financial bid is included in the technical bid will be summarily rejected.
8. a)The tender should contain particulars like the name and address of the Tenderers, Net rate including GST , transportation, delivery, installation and commissioning of the above equipments .
b) The rates will be kept firm for 180 days from the date of the opening of the Tenders in acceptance.

- c) The rate should be quoted both in words and figures with detailed technical specification, make and model Any scoring or overwriting should be attested by the tenders with full signature. The rate quoted should be firm and should not be subject to any variation clauses.
- d) University shall not pay increase in duties, taxes and surcharges on account of any revision by the Government at the time of supply and installation.
- e) Supply shall be as per the specifications mentioned in the Appendix and according at the time of supply
- f) Supply shall be as per the specifications mentioned in the Appendix and according at the time of supply .
- g) The tender should quote as per the tender specifications of the equipment only. Option shall be given separately.
- h) The tender form (Annexure I & II) should be completed in all respects. Wherever the information is not relevant to your bid, the space should be appropriately filled with 'NA or NIL'. No space shall be left blank. All the crucial documents should be signed and enclosed otherwise the tenders are likely to be rejected.
- i) If the given space is in sufficient to give required information, additional sheets may be added. Each such additional page shall be numbered consecutively and shall bear our tender reference number and signature of bidder or his/her authorized agent.

9. Faxed bids are liable to be rejected.

- 10. The tender shall be valid for a maximum period of 180 days from the date of opening. If the tender validity is less than 180 days the tender will be rejected as non-responsive tender. Tenderer should not withdraw his tender after the tenders are opened. In case the tender is withdrawn after it opened, the EMD will be forfeited and black listed.
- 11. The EMD of the unsuccessful tenders will be refunded immediately after the tenders are disposed of by the competent authority.
- 12. Successful tenderer shall execute an agreement for the fulfillment of contract in the stamp paper in the model form. The conditions stipulated in the form should be strictly adhered to and violation of any of the conditions will entail termination of the contract without prejudice to be right of the University and to recover any consequential loss from the successful tenderer.
- 13. Successful tenderer shall remit a **Security deposit 6.5% to the order value** Security Deposit will be refunded at the end of warranty period subject to the satisfaction of the University. The EMD may be adjusted towards Security deposit payable.
- 14. If the successful tenderer failed to act upto the tender or backs out when his tender accepted, security deposit will also be forfeited to department.
- 15.a) The material should be supplied strictly in accordance with the specifications given in the Appendix and should fulfill the successful tests carried out by the Competent Authority of the University. The supply and installation should be made as per the delivery schedule to be sent by the Registrar along with the exact location of the work. The guarantee period shall take effect from the date of installation . Successful tenderer shall be liable to change any defective part

during the warranty period. In either case the damaged or defective items will have to be taken back at supplier's cost and risk.

16. The commissioning and installation should be completed within the stipulated period mentioned in the supply order. If the supply is not made within the period, the supply order will be cancelled and the EMD & Security deposit will be forfeited.
17. The materials are to be guaranteed for at least one year of installation and commissioning against manufacturing defect and bad workmanship. The warranty period specified will commence from the date of installation .
18. The materials quoted shall conform to ISI standard. The make of the materials shall be mentioned in the tender.
19. Any dispute arising out of this contract shall be settled only at the court having jurisdiction of Coimbatore.
20. The authority competent to accept the tender reserves the right to reject or accept any tender without assigning any reasons thereof.
21. Regarding the acceptance of supply with reference to the specification and quality of materials supplied, the decision of Registrar shall be final.

22. Price:

a) **For Imported:** The Price shall be quoted in Currency for CIF Chennai /CIP Chennai / FOR Coimbatore. If the equipment is imported but quoted in INR please quote the basic price inclusive of duties/GST as per the existing Govt.rules. If necessary, the required documents will be provided along with the supply order .

b) **For Indigenous** : Quote the price in INR inclusive of GST and warranty. separate charges for warranty will not be considered at any cost , should mention the valid GST Registration/ Numbers along with the copy of the registration Certificate.

22 The University is registered with DSIR and eligible for exemption towards customs duty as per the Government Notification No: 51/ 96 Customs Dt.23.7.1996.and Central excise duty as per Government Notification No.10/97 Central Excise Dt: 1.3.1997.

23 This University do not have IEC number and exempted from application of rules as per Foreign Trade for importers in certain cases since 1993. this is a Research Institution Permanent IEC numbers shall be used at the time of Customs clearance .

24 **The customs duty after providing duty exemption certificates if applicable as per customs tariff for the said equipments shall be paid by the local supplier /Clearing agent at the time of Customs clearance which will be reimbursed subject to the condition on submission of original customs bills to the University after delivering the equipment to the department concerned. Necessary documents will be provided after receipt of original invoice/Cargo Arrival/Shipment notice from the Principal Supplier.**

The Customs clearance , transportation and delivery charges up to the University has to be borne by the firm.

25. PAYMENT :

a) If the quoted price in currency . The payment will be made by irrevocable Letter of Credit (LC) / advance FDD(only copy) in favor of the Principal Supplier /Currency Wire Transfer to the Principal Supplier only after supply and installation of the equipment . Advance Currency Wire transfer is not applicable

b)If the quoted price in INR, the payment will be made after supply and installation. No advance payment will be made .

26.Loss or Damage: External damages or shortages that are prima facie the results of rough handling in transit or due to defective packing will be intimated within a fortnight from the date of receipt of the material, Internal defects, damages of any internal parts that cannot ordinary be exhibited on superficial inspection though due to bad handling in transit or defective packing will be intimated within two months from the date of receipt of the stores. In either case the damaged or defective stores will have to be taken back at supplier's cost and risk.

27Guarantee: The Supplier shall undertake to repair free of charge or replace any defective part of the equipment supplied due to defective or faulty design or bad workmanship during a period of three years from the date of commissioning of the equipment.

28 Leaflets and Descriptive Literature: Full descriptive particulars and manuals of the equipment offered should accompany the tender. Information regarding the country of manufacturer or origin of materials in the manufacture of articles should be furnished.

29. Tests: Manufacturer's certificate for the routine tests specified in the BSS of the test issue or as per manufacturer's standard practice should be forwarded in duplicate. The materials will be rejected, if the test results are not satisfactory.

30 .Penalty Clause: The delivery should be guaranteed by you under the penalty clause mentioned hereunder:

“Should delivery be delayed by strike, lockouts, fire accidents or any cause whatsoever, beyond the reasonable control of the contractor and whether such delay or impediment occurs before or after the time or extended time for dispatch or completion, a reasonable extension time shall be granted.

If the contractor fails in due performance of this contract, within the time fixed by the contractor the extension thereof , the contractor is liable at discretion of the purchaser to a penalty of 4% per month of the contract value of such portion only of materials as cannot, in consequence of the delay, be used during each month between the appointed or extended time as the case may be and the actual time of acceptance, and such penalty shall be in full satisfaction of the contractor's liability for the delay but shall no in any case exceed 25 % of the contract value of such portion of the materials.

31 Additional Documents required for qualification

- ISO Certificate
- Number of years standing in the business.
- Average turnover in the last three years.
- Backup facility for the warranty period.
- GST Number along with the copy of the registration Certificate
- PAN Number along with the copy of PAN
- Company Profile.
- Copy of the supply order and installation record at reputed institutions / organizations and sufficient service back-up in Tamil Nadu / South India
- Customer Satisfaction Certificate from any of the institutions/organization is to be attached with the Technical Bid And Price Bid.
- Any other relevant details in support of the items specified.

32. Only qualified bidders will be considered for technical evaluation. The bidders who are disqualified in the Technical evaluation, the Commercial bid will not be considered.

33. Price bid evaluation will be done for imported inclusive of the customs duty / Customs clearance and other charges. For indigenous inclusive of all GST, warranty and other charges etc.

34. The University will not offer any explanation to those tenderers whose technical bid has not been found acceptable by the technical evaluation committee .

35. Tenders will be considered only from the ISO certified Manufacturers / authorized distributors with sound technical and financial capabilities.

36. The University's general rules for the supply of the materials and works will apply on this purchase also.

37. Training at University Campus at free of charge .

38. Tender shall be submitted with brief description, make and model number, technical specifications etc. along with catalogue/manual.

39. No communications from any tenderer adding to/adhering or explaining any terms of the tender will be considered prior to the submission or after opening of the tenders by the competent authority

40. In case of any modifications in specifications/terms and conditions/ any clarifications to the bid document it will be hosted in our website only and bidders are requested to log on to our website from time to time regularly for any amendment and no separate corrigendum will be issued in this regard.

41. The tenderer must not be blacklisted by Central Government, State Government or Government of Corporations or any organization in India. A certificate or undertaking to this effect must be submitted.

42. The tender is submitted subject to and agreeing the above conditions duly attested and certified.

SIGNATURE OF THE TENDERER

Schedule

S.No.	Item	Quantity	Unit Prize	Tax	Total Prize
1	Firewall (As per enclosed specification)	1			
2	Wireless Controller (As per enclosed specification)	1			
3	Access Point Indoor (As per enclosed specification)	150 *			
4	Access Point Outdoor (As per enclosed specification)	7			
5	Cabling, Laying and Commissioning for Access Points				
	a. High Quality Cat 6 Cable Fully Copper (305 Mts)	22 Box			
	b. ¾" PVC pipe (for Cat 6 Cable Laying) and Accessories	4000 Meters			
	c. Cat 6 Cable Laying Charges				
Total Cost					

* The number of Access Points may vary by 10% depending on budget availability & final prize.

SIGNATURE OF THE TENDERER

Specifications for Firewall	
Basic Criteria	Compliance
Must have a 64-bit hardware platform & based on Multi-Core Architecture with the FastPath Packet Optimization for excellent throughput for all your key processes.	
Firewall should support standard NAT/Route mode & also transparent mode/Bridge mode for Seamless deployment into existing network adding all security functionality without changing IP configurations in the network.	
Licensing should be based on Firewall appliance & not based on IP/Users.	
The proposed solution should be with High Availability giving both the choice of Active-Passive or Active - Active modes.	
OEM should have Support centre in India and should be available 24*7*365 via email, phone and remote assistance.	
Appliance should have ICSA certification for Firewall & NSS labs certified and recommended, and other certifications like: CB, CE, FCC Class A.	
Appliance should be rack mountable and all accessories to be provided along with appliance.	
OEM Should be listed in Leaders Quadrant in latest Gartners Magic quadrant on UTM or NGFW.	
Firewall Hardware Specifications	Compliance
Firewall Next-Gen UTM appliance should have minimum preinstalled 8 Gig ports, customizable to LAN, WAN, & DMZ ports.	
Firewall Next-Gen UTM appliance should come with expansion slots to include additional port modules supporting Giga, SFP and SFP+ ports and base firmware image supporting these modules.	
Supplied Firewall should come with minimum two USB ports to support WWAN interface.	
The firewall throughput should be minimum 50 Gbps to handle intensive network traffic load during peak time.	
Firewall VPN throughput should be minimum 8 Gbps	
Firewall IPS throughput should be minimum 6 Gbps	
Combined throughput of NGFW "IPS + App Ctrl + WebFilter" : minimum 5 Gbps to handle peak traffic load with these security features enabled.	
Firewall Antivirus throughput minimum 4 Gbps to scan network traffic for known, and for unknown threats zero-day scan through cloud based solution technology.	
Firewall appliance Concurrent connections should be minimum 11 million	
Firewall appliance should handle new connections/sec should be minimum 2,25,000	
2 x hot swappable redundant Power Supply	
RAM/Memory should be minimum 16 GB for high performance on peak traffic volume and SSD should be minimum 256 GB	
Gateway Firewall Feature Specifications	Compliance

Should support management Features like: Firewall management, Centralized management, Status & Alerting, Logging on box.	
Should support management through secure web, SSH & console. Should also have an option to be managed from centralized management server.	
The proposed solution must provide flexible, granular role-based GUI administration for local & remote firewall administrators.	
Dashboard should give us visibility on resource utilization like CPU, Memory, advanced threat reports and other UTM security profile log count, interface utilization for live and historical upto a year's period.	
Should support User & App Control: User Identity, IP, Web control, App Control, Content Control.	
On appliance Network Protection for: Firewall, IPS, AntiVirus engine, Anti-Malware.	
Networking: Routing & Bridging, Zone Segmentation, Traffic Shaping, WiFi controller, VPN, IPv6 support.	
Granular traffic shaping features should be available for Web, App, Firewall rule and User based.	
Firewall should also support SNMP and Netflow protocols for monitoring the health of appliance through third party integrated monitoring solutions.	
Firewall should automatically download necessary security patch updates like Gateway Anti virus signatures, Gateway IPS signatures on the scheduled intervals to stay up to date.	
Firewall network usage reports and alerts have to be sent over email along with configuration backup on scheduled intervals like daily, weekly, monthly.	
Firewall should support Stateful deep packet inspection.	
Should support configuration of DNS, DHCP, NTP and Dynamic DNS	
Should support IPv6 and should be certified, with tunnelling support including 6in4, 6to4, 4in6, and IPv6 rapid deployment (6rd) through IPSec for future requirements.	
Should support user-based traffic quotas on upload/download or total traffic and cyclical or non-cyclical.	
Bridging with STP support and ARP broadcast forwarding	
Should support multiple WAN link load balancing: multiple Internet connections, auto-link health check, automatic failover, automatic and weighted balancing and granular multipath rules.	
Should Support Upstream proxy support for future requirements.	
Per-rule and policy based routing by source, destination, user/group or layer-4 services.	
Supports routing: static, default, multicast (PIM-SM) and dynamic (RIP, BGP, OSPF)	
Firewall rule should support Country blocking by geo-IP with country and continent selections.	
Should support Flood protection like DoS attack, DDoS attack and portscan blocking.	

UTM Security Feature Specification	Compliance
Gateway level Intrusion Prevention (IPS) should have high-performance with IPS deep packet inspection engine with selective IPS patterns for maximum performance and protection	
Gateway level Intrusion Prevention (IPS) should have 7000+ signatures and also provision to create custom IPS signatures.	
Web protection feature should have enterprise-grade web security with top-down execution and inheritance with flexible user/group policy definitions, customizable actions block/allow/warn actions.	
Web protection feature should have URL Filter database with millions of sites across 90+ categories and file type filtering by mime-type, extension and active content types (e.g. Activex, applets, cookies, etc.)	
Should have Malware scanning techniques to block all forms of viruses, web malware, trojans and spyware on HTTP/S, FTP and web-based email. Should enforce SafeSearch on the search engine portals.	
Should Protect users against pharming and other domain name poisoning attacks by repeating DNS lookups.	
Proposed firewall should include Application control based on category, characteristics, technology and risk level along with traffic shaping based on individual applications.	
Should support E-mail scanning with SMTP/S, POP3/S, and IMAP/S, encrypting outbound mails for secure delivery of mails, quarantine suspicious mails and authorization to release mails with proper reason to release.	
VPN Options	Compliance
Should support Site-to-site VPN, Remote access VPN using pre-shared key & Certificate based, L2TP VPN, PPTP VPN, SSL VPN, IPsec on multiple operating system platforms with base license on firewall ie., without the need additional licenses for VPN client or firewall firmware image.	
Should support encryption algorithms like AES (128/192/256), DES, 3DES, RSA (up to 2048 Bit), DH groups 1/2/5/14, Authentication algorithms like MD5 and SHA-1/256.	
Should support split-tunneling to optimize network bandwidth for remote access VPN users.	
Should support clientless VPN using HTML5 & self-service portal supporting RDP, HTTP, HTTPS, SSH, Telnet and VNC for Clientless VPN users.	
Authentication	Compliance
Firewall should support Authentication via remote authentication servers like Active Directory, eDirectory, RADIUS, LDAP and TACACS+. Should also include options for Client authentication agents for Windows, Mac OS X.	
Captive portal with Customized Logo	

Logging and Reporting	Compliance
The proposed solution should support On-appliance reporting solution with minimum 240 GB drive or should provide an external hardware and Software reporting solution support for the same.	
Dashboards on Traffic, Security, and User Threat Quotient,	
Applications Report on App Risk, Blocked Apps, Web Uses, Search Engines, Web Servers, FTP	
Network & Threats Report on IPS	
VPN Reports	
Email usage and protection Reports	
Compliance reports i.e., PCI-DSS, HIPAA, GLBA, SOX, FISMA, NERC CIPv3, and CIPA	
Current Activity Monitoring: system health, live users, IPsec connections, remote users, live connections, wireless clients, quarantine, and DoS attacks	
Report anonymization	
Report scheduling to multiple recipients by report group with flexible frequency options	
Provision to Backup /Restore log Files	
Export reports as HTML, PDF, Excel (XLS)	
Warranty and Support	Compliance
5 Years Hardware Advance Replacement on-site Warranty	
24x7 Enhanced Plus Support via Telephone & Email	
Free Security Updates & Patches	
Free Software Features Updates & Upgrades	
60 months Subscription License Includes :	
Next Generation Firewall with VPN, Routing, WAN Link Load Balancing, Link Aggregation, Traffic Shaping & Quota, Built-in Wireless Controller, Authentication	
Network Protection including IPS, HTML5, ATP/APT, Anti-malware, Anti-virus	
Web Protection including URL Filtering, App Control, Web & Application Traffic Shaping	
Email Protection including Antispam	
Web Server Protection including Web Application Firewall, Anti-virus, Reverse Proxy	
Installation , Commission and Configuration at Our University Data Center	
Free Technical Certification Training on supplied products & Features for minimum 1 person	
Eligibility	Compliance
OEM has to give minimum 5 reference customers (In India) who are using the quoted (or similar) model with minimum 1Gbps Internet BW & 3000 + users environment.	

Specification for Wireless Controller

S.No.	Description	Compliance
Make & Model		
1	Controller hardware should be 1U Rack mountable dedicated hardware controller. It should not be a virtual or software based controller	
2	Controller should support minimum of 150 Access points in a single controller and should scalable upto 200 without adding any additional hardware or module. Controller should include AP , firewall and WIPS licenses for all 200AP's from day one. This License is permanent, one time purchase for entire lifetime of the hardware, and there should not be any renewal/feature cost for the use of controller/access point	
3	Controller should support minimum 6000 concurrent users from day one.	
4	System must be highly available and must have no single point of failure. Controller must be deployed in 1+1 redundancy.	
5	Controller should compliant with IEEE CAPWAP protocol or equivalent for controller-based solution and it should support min of 4 x 1Gig ports	
6	The proposed architecture should be based on Centralized Controller WLAN Solution deployment model. AP's should download OS and configuration from controller for improved security and tunneled all Controlplane and Dataplane traffic from AP to Centralized controller.	
7	Controller should support MAC, 802.1x, web based(Captive portal) authentication with WEP, WPA-PSK, WPA-TKIP, WPA2-AES, 802.11i, 802.1X (EAP-TLS, EAP-TTLS, PEAP, LEAP, EAP-FAST, EAP-SIM, EAP-AKA, and EAP-MD5)	
8	The controller should support Hotspot 2.0	
9	The controller solution should facilitate monitoring, management, control, and up-gradation from the centralized Wi-Fi Management Centre.	
10	The WLAN controller must have inbuilt firewall with required license to configure Qos rules to evaluate and prioritize network traffic types. Traffic rate limiting should be possible subnet wide and also per client enforcement belonging to that subnet if required.	
11	Controller should have rogue AP detection, classification and automatic containment feature	
12	Controller should be able to detect and control the attacks, like Null Probe Response, Long SSID, EAP Handshake Failure, Adhoc Network, Large Duration ID, MAC Spoof, Fake AP, Authentication Flood, De-authentication Flood, Association Flood, Disassociation Flood, Overutilized AP and etc. in all APs	
13	Controller should support deep packet inspection for all user traffic across Layer 4-7 network to analyse information about applications usage. It should prioritize and bandwidth throttling for wireless traffic on per-application basis and include license for all AP's if required.	
14	WLAN Controller must support L2 and L3 roaming and ability to dynamically adjust channel and power settings based on the RF environment	
15	Controller should support vlan pooling and ability to map SSID to VLAN, VLAN pool and dynamic VLAN support for same SSID.	

16	Controller should support frequency loadbalancing where 5 Ghz clients are encouraged to connect over 5Ghz Radio to provide better load balancing among 2.4Ghz and 5Ghz Radios.	
17	Controller should provide air-time fairness between these different speed clients – slower clients should not be starved by the faster clients and faster clients should not adversely affected by slower clients.	
18	Controller Should support L2 Client Isolation so User's cannot access each other's devices.	
19	Controller should support AP grouping to enable administrator to easily deploy and manage configuration for large number of Aps. It should have an option to apply configuration for WLAN profile, DPI policies, Radio resource provisioning and radio interfaces to one or more APs or AP groups.	
20	Controller should support wireless mesh with five hop mesh.	
21	Should have Voice and Video Call Admission and Stream prioritization for preferential QOS	
22	The controller should support Web-based GUI, SNMP, Command-line interface(CLI) via Serial port, SSH for management.	
23	Controller should certified RoHS, WEEE	
	Eligibility	
	OEM should be in the AP controller market at least in last 5 years and have atleast 10 installations in India (attach the document)	
	Warranty	
	5 years Advance Replacement warranty	

Specification for Indoor Access Point		
S.No	Description	Compliance
Make & Model		
1	Access Point should have Auto-sensing Ethernet 10/100/1000 port and should support link aggregation to allow data traffic on both ethernet ports to increase throughput and redundancy.	
2	Access point should support dual-radio, dual-band IEEE Std 802.11a/b/g/n/ac wave2 access point with six internal antennas.	
3	Access Point should support both 802.3af and at Power-over-Ethernet (PoE & PoE+) with full capacity operation at full power of the radios	
4	Access Point radio should be minimum 3X3 MU-MIMO with minimum 3 spatial streams. Dual Radio capable must support data rates upto 1.3 Gbps on 5Ghz radio and 450Mbps on 2.4Ghz)	
5	Access point should be supplied with OEM mounting kit for Wall, T-Rail and Ceiling Mounting.	
6	The proposed access point should support for multiple operating modes: centralized, distributed, Mesh.	

7	Access points should discover the controllers on the same L2 network and Layer 3 network through DHCP option, Static and DNS.	
8	WAP 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.	
9	Access Point should be 802.11ac wave 2 ready from day one and backward compatible with 802.11n/g/b/a /ac wave1 standards	
10	Must support 16 WLANs per AP for SSID deployment flexibility.	
11	Must support Proactive Key Caching and/or other methods for Fast Secure Roaming.	
12	Access point should support packet capture over the air and it should forward the captured information directly to external devices without storing packets locally on the AP or on the controller	
13	Capable of multi-function services including: data access, intrusion detection, intrusion prevention, with no physical “touch” and no additional cost.	
14	Access point should support below Wireless Monitoring Capabilities	
	a. Frequencies Scanned for 2.4 and 5 GHz	
	b. Background Scan with Client Access on 2.4 and 5 GHz	
	c. Full-time Scan as Dedicated Monitor	
	d. Packet Sniffer Mode	
	e. Spectrum Analyzer with required license.	
15	Access point should have capable to configure one radio for client access and other radio as sensor for WIPS	
16	The access point should support 4.5 dBi for 2.4 GHz, 6.5 dBi for 5 GHz with 24dBm on both bands.	
17	Access point should support IEEE Standards : 802.11a, 802.11b, 802.11d, 802.11e, 802.11g, 802.11h, 802.11i, 802.11j, 802.11n, 802.1x, 802.3af, 802.11ac, 802.3at, 802.3az, 802.3ad	
18	Access point should support dual redundant PoE power ports	
19	AP should have One Kensington security slot	
20	WiFi Alliance Certification for WMM and WMM power save	
21	Must support Reliable Multicast Video to maintain video quality	
22	Must support QoS and Call Admission Control capabilities.	
24	Access point should support Transmit Beam Forming (TxBF)	
25	It should support UL2043 Plenum rated Material	
26	It should be Operating temperature of: 0–50°C	
	Eligibility	
	OEM should be in the AP market at least in last 5 years and have atleast 10 installations in India (attach the document)	
	Warranty	
	5 years Advance Replacement warranty	

Specification for Outdoor Access Point

S.No.	Description	Compliance
Make & Model		
1	Access Point should have Auto-sensing Ethernet 10/100/1000 port and should support link aggregation to allow data traffic on both ethernet ports to increase throughput and redundancy.	
2	Access point should support dual-radio, dual-band IEEE Std 802.11a/b/g/n/ac wave2 access point with six internal/external antennas.	
3	Access Point should support 802.3at Power-over-Ethernet with full capacity operation at full power of the radios	
4	Access Point radio should be minimum 3x3 MU-MIMO with minimum 3 spatial streams. Dual Radio capable must support data rates upto 1.3 Gbps on 5Ghz radio and 450Mbps on 2.4Ghz)	
5	Access point should be supplied with OEM mounting kit for Wall and Pole mounting brackets	
6	The proposed access point should support for multiple operating modes: centralized, distributed, Mesh.	
7	Access points should discover the controllers on the same L2 network and Layer 3 network through DHCP option, Static and DNS.	
8	WAP 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.	
9	Access Point should be 802.11ac wave 2 ready from day one and backward compatible with 802.11n/g/b/a /ac wave1 standards	
10	Must support 16 WLANs per AP for SSID deployment flexibility.	
11	Must support Proactive Key Caching and/or other methods for Fast Secure Roaming.	
12	Access point should support packet capture over the air and it should forward the captured information directly to external devices without storing packets locally on the AP or on the controller	
13	Capable of multi-function services including: data access, intrusion detection, intrusion prevention, with no physical “touch” and no additional cost.	
14	Access point should support below Wireless Monitoring Capabilities	
	a. Frequencies Scanned for 2.4 and 5 GHz	
	b. Background Scan with Client Access on 2.4 and 5 GHz	
	c. Full-time Scan as Dedicated Monitor	
	d. Packet Sniffer Mode	
	e. Spectrum Analyzer with required license.	

15	Access point should have capable to configure one radio for client access and other radio as sensor for WIPS	
16	The access point should support 5dBi for 2.4 GHz, 7dBi for 5 GHz with 26dBm on both bands.	
17	Access point should support IEEE Standards : 802.11a, 802.11b, 802.11d, 802.11e, 802.11g, 802.11h, 802.11i, 802.11j, 802.11n, 802.11x, 802.3af, 802.11ac, 802.3at, 802.3az, 802.3ad	
18	AP should have One Kensington security slot	
19	WiFi Alliance Certification for WMM and WMM power save	
20	Must support Reliable Multicast Video to maintain video quality	
21	Must support QoS and Call Admission Control capabilities.	
22	Access point should support Transmit Beam Forming (TxBF)	
23	It should support UL2043 Plenum rated Material	
24	Access Point should support certified IP67 industrial grade protection. No third party casing will be accepted	
25	It should be Operating temperature of: 0 – 60°C	
	Eligibility	
	OEM should be in the AP market at least in last 5 years and have atleast 10 installations in India (attach the document)	
	Warranty	
	5 years Advance Replacement warranty	

Eligibility Criteria

S.No	Description
1	OEM (& Bidder should have good track record over for the past five years in the field of networking (Copy of PO should be enclosed)
2	Quote the price with make/Model of the items. Without make/model, the tender will not be considered
3	Authorization letter (OEM Certificate) from Principals/Appropriate authority of manufacturer should be enclosed
4	Should have a facility/office at Tamil Nadu to provide support. Necessary proof is to be enclosed
5	The supplied items should be installed and integrated with the existing LAN infrastructure of this University

SIGNATURE OF THE TENDERER

ANNEXURE – I

TECHNICAL BID

Tender reference No: _____

1. Name and address of Bidder
2. The details of EMD
Amount of EMD Rs. _____, DD No. _____ dt
Bank: _____
3. Due Date of bid :
4. The bid shall remain valid for acceptance for 180 days, from the date of tender opening.
5. Schedule of Requirements:

Sl. No	Brief description of stores				Qty Required	Qty Offered	Delivery	Unit price (Rs)	Total Cost (Rs)
							At Bharathiar University Coimbatore	To be filled in Annex:II	
(i)	GST		%		-	-			
(ii)	Wararanty 5years-								
(ii)	Other charges, if any				-	-			
Grand total cost in Rs.									
Total cost (in words) _____ Rupees.									

Note: (1) All columns must be filled up.

(2) Adhering to the format given above is a pre- requisite for considering your bid.

(3) Please indicate applicability.

I/certify that I/We have completely read and understood and agree to all the terms & conditions given in Part II.

Date : _____ Signature of Bidder :

Office Stamp _____ Signing as :

:Mobile No. _____ Fax No. _____ Name in block letters :
e mail _____

ANNEXURE: II

PRICE BID

Tender reference No: _____

1. Name and address of Bidder
2. The details of EMD
Amount of EMD Rs. _____, DD No. _____ dt
Bank: _____
3. Due Date of bid :
4. The bid shall remain valid for acceptance for 180 days, from the date of tender opening.
5. Rates for items given in Techno-commercial offer at Schedule of requirements are as follows:

SINo	Brief description of stores			QtyOffered	Delivery	Unit price	Total Cost
					At Bharathiar University Coimbatore		
(i)	GST		%	-	-		
(ii)	Other charges, if any			-	-		
Grand total							
Total cost (in words)		Rupees.					

- NOTE :**(1) All columns must be filled up.
(2) Adhering to the format given above is a pre- requisite for considering your bid.
(3) Please indicate applicability.

Date : _____ Signature of Bidder : _____
Office Stamp Signing as : _____
Name in block letters : _____
Tele No. Fax No. e mail

LETTER OF ACCEPTANCE

To

**THE REGISTRAR
BHARATHIARUNIVERSITY
COIMBATORE – 641 046**

I/We agree to furnish required supplies /services as detailed in the Tender schedule or such portions thereof as you may specify in the Acceptance of Tender in accordance with the General Terms and Conditions governing the contract / supply order enclosed hereto duly accepted on receipt of the order for the same.

I /We agree to hold this offer open until and shall be bound to supply / omission /erect the equipment and dispatch the same within the specified period.

I/ We agree to supply and commission /erect the equipment and complete the whole of the work and hand over to the purchaser within the period of weeks. From the date of receipt of intimation from you regarding acceptance of this tender / receipt of supply order.

**Signature of the bidder
With office stamp
Name & Address**

**Station
Date:**