

**Maulana Abul Kalam Azad University of Technology,
West Bengal**

Formerly known as

West Bengal University of Technology

Tender Form

wireless controller and wireless access points

Notice No : IS/FO/15-16/34

Date of Issue : 27-Jun-2015

D.D. No. for the Tender Price :

Address:

**BF-142, Sector-I,
Salt Lake City,
Kolkata-700064**

Tele-Fax No:

(033) 2334-1034

Phone No.:

(033) 2321-1345

Tender Paper for wireless controller and wireless access points

a) Name & Address of the Firm:

b) Telephone No:

c) Mobile No.:

d) Fax No:

2. Name of the items for which the Firm is interested:

3. Name of the Proprietors/Partners/Directors etc:

4. Trade License No (With Photocopy):

5. VAT License No:

6. Service Tax Registration No (With Photocopy):

7. Additional Information if the party wants to include:

8. Copies of Testimonials/credentials/certificates regarding services/experience etc:

Signature with Stamp

Please give sealed quotation for the following items clearly superscribing the tender notice number on the envelope.

1. WIRELESS LAN CONTROLLER (QTY-1)

SN	SPECIFICATION
A	Architecture
1	Shall have at least 4 RJ-45 dual personality 10/100/1000 ports and a console port
2	Shall support minimum 20 IEEE 802.11a/b/g/n/ac class Wireless Access Points for centralized management and control from day 1 (with licenses)
3	Shall support unlimited simultaneous users (shall include licenses to achieve this if required)
4	Shall support up to minimum 250 simultaneous guest access users (shall include licenses to achieve this if required)
5	Shall be 1U 19" Rack-Mountable. Required mounting accessories to be included.
6	Shall be IEEE 802.11n and 802.11ac ready from day 1
B	Radio/Mobility Features
1	Shall support band-steering to increase wireless performance
2	Shall have enhanced radio management features for: a) Dynamic radio power adjustments based on environment dynamics and signal coverage management b) Dynamic switching of radio channels with radio interference detection c) Dynamic client load balancing across neighboring access points d) Airtime fairness/equivalent
3	Shall support per-user QoS and security services which follow users as they roam
4	Shall support spectral analysis from day 1
5	Shall have full service capabilities for wireless networks controlled across the WAN
6	Shall support central configuration of virtual service communities (or service sets) for QoS, authentication, encryption, and VLANs
7	Shall support distributed traffic forwarding on the WLAN network allowing traffic to flow directly from source to destination, eliminating needless traffic to pass through the controller, delivering better performance and faster, more-responsive applications
C	Security Features
1	Shall support per-user or per-device security policies
2	Shall support authentication based on user credentials (802.1X/EAP), hardware identifiers (MAC address, WEP key), and HTML login

3	Shall support authentication and authorization through Microsoft Active Directory or internal or external RADIUS AAA services
4	Shall support built-in stateful firewall for secure connection to Internet
5	Shall support NAT/PAT
6	Shall support secure management interfaces, including SSH/SSL access to CLI/Web UI, IPsec encapsulated SNMP, and XML with digital certificates
7	Shall support session tracking which compiles a log of user activity for security forensics
8	Shall support Access Control Lists based on IP address, protocol types and port filtering and DSCP values
9	Shall have transparent support for VPN tunnels via Adaptive NAT
10	Shall support VLAN mapping of guest access traffic for secure passage through corporate network
D	Management Features
1	Shall be able to control a network of minimum up to 40 Access Points per controller, ensuring consistent security, QoS, and roaming services from AP to AP
2	Shall have scalability consistent in 802.11 a/b/g/n and 802.11ac networks
3	Shall support per-user wireless rate limiting
4	Shall support central management of wireless access point operating modes, including infrastructure (bridging) and Local Mesh
5	Shall support packet captures across the wired and the wireless port in order to achieve diagnostic
6	Shall have easy-to-use web-based administrator interface
7	Shall have one console port for local management access
8	Shall support seamless integration with wired network, leveraging existing L2/L3 infrastructure resources, e.g., QoS, VLANs, NAC, MS Active Directory and RADIUS AAA
9	Shall support RADIUS activity statistics collection per-user for billing by data volume and elapsed session time
E	Warranty and Support
1	Shall have NBD replacement support for hardware and software free of cost for 5 years. The Support for 5 years with OEM needs to be quoted.
2	OEM make: Shall be from top 5 WLAN OEMs as per latest IDC report or leaders quadrant as per Gartner's recent report.

2. WIRELESS ACCESS POINT (Qty-11)

SN	DESCRIPTION
A	Wireless Access Point Architecture
1	Shall have one RJ-45 auto-sensing 10/100/1000 Mbps port
2	Shall have dual-radios (IEEE 802.11 b/g/n and 802.11a/n)
3	Shall have integrated/external antennas for both IEEE radios, supporting two spatial streams and 2x2 MIMO reaching 300 Mb/s per radio
4	Shall have minimum four integrated/external antennas with omnidirectional coverage (minimum 4dBi for 2.4 GHz and 5dBi for 5 GHz)
5	Shall have four RP-SMA connectors for use with optional external antennas to extend coverage
6	Radio operation modes - Client access, Local mesh, Packet capture
7	The access point shall be IEEE 802.3af PoE compliant and shall be proposed with IEEE 802.3af PoE Injector of the same make
8	Maximum Power rating of 12.9 W
9	Both radios shall operate at full power and full performance on IEEE 802.3af PoE/Gigabit Ethernet
10	Shall have Indoor, plenum rated enclosure
11	Wi-Fi Alliance Certification- a/b/g/n Wi-Fi Certified
12	Must provide External Power Supply adapter
B	Access Point Mobility Features
1	Shall support self-healing, self-optimizing local mesh extending network availability to areas without an Ethernet infrastructure
2	Per-radio software-selectable configuration of frequency bands
3	Individual security and QoS profiles per Service Set
4	Each Service Set can be mapped to separate IEEE 802.1Q VLANs
5	Shall support direct source-to-destination traffic forwarding (distributed traffic forwarding) to maximize application delivery
6	Wireless Multimedia (WMM) support
7	Shall support enhanced survivability in case of controller failure, by serving wireless clients, authenticate new wireless clients with RADIUS Server and preserve last known configuration upon reboot
C	Access Point Management & Other Features
1	Shall support controlled mode (configured and updated via wireless controller) operation
2	Shall support L2 and L3 controller discovery
3	Shall provide intelligent channel switching and real-time Interference detection
4	Shall support per-client event log records association, authentication and DHCP activities for easy diagnosis
5	Shall support PCAP packet capture on WLAN or LAN interface
6	Shall support SNMPv3 and web-based secured management interfaces (SSL)
7	Operating temperature - 0°C to 45°C
D	Warranty and Support
1	Shall have NBD replacement support for hardware and software free of cost for 5 years. The Support for 5 years with OEM needs to be quoted.
2	OEM make: Shall be from top 5 WLAN OEMs as per latest IDC report or leaders quadrant as per Gartner's recent report.

General conditions:

1. The tenderers are required to deposit the tender forms along with relevant papers (mentioned in the form) in sealed covers superscribing tender number.
2. The university reserves the right to accept or reject any tender without showing any reason.
3. Tender fee of Rs. 200/- (non refundable) has to be deposited along with the tender papers.
4. All payments should be made through demand drafts in favour of the 'West Bengal University of Technology' payable at Kolkata.
5. The last date of receiving of tender paper in the office of the Finance Officer is June 11, 2015.
6. Incomplete tender shall be summarily rejected.
7. Subcontracting in any form will not be entitled by the University.
8. All legal disputes shall be subject to jurisdiction of Calcutta High Court.