

INVITATION FOR QUOTATION

TEQIP-II/2012/WB2G02/Shopping/11

21-Jun-2012

To

Sub: Invitation for Quotations for supply of Goods

Package Code: TEQIP-II/WB/WB2G02/11

Dear Sir,

1. You are invited to submit your most competitive quotation for the following goods with item wise detailed specifications given at Annexure I,

Sr. No	Brief Description	Quantity	Delivery Period (In days)	Place of Delivery	Installation Requirement (if any)
1	Wireless Access Points & Compatible Switch / Controller	10	20	School of Mobile Computing	Yes
	Compatible Switch (Accessoris)	02			
	Compatible Controller (Accessoris)	01			

2. Government of India has received a credit from the International Development Association (IDA) in various currencies equivalent to **US\$ 300 Million** towards the cost of the **Technical Education Quality Improvement Programme [TEQIP]-Phase II** Project and intends to apply part of the proceeds of this credit to eligible payments under the contract for which this invitation for quotations is issued.

3. Quotation,

3.1 The contract shall be for the full quantity as described above.

3.2 Corrections, if any, shall be made by crossing out, initialing, dating and re writing.

3.3 All duties and other levies payable by the supplier under the contract shall be included in the total price.

3.4 Applicable taxes shall be quoted separately for all items. Please note that the Excise exemption & Customs concession is applicable to Jadavpur University.

3.5 The prices quoted by the bidder shall be fixed for the duration of the contract and shall not be subject to adjustment on any account.

3.6 The Prices should be quoted in Indian Rupees only.

4. Each bidder shall submit only one quotation.

5. **Validity of quotation:** Quotation shall remain valid for a period not less than **45** days after the last date of quotation submission.

6. Evaluation of Quotations,

The Purchaser will evaluate and compare the quotations determined to be substantially responsive i.e. which

6.1 are properly signed ; and

6.2 Confirm to the terms and conditions, and specifications.

7. The Quotations would be evaluated for all items together.

- Quotations will be compared on the basis of quoted price for goods at its final destination.
- Past performance & experience may be furnished to consider the credential of the bidder

8. Award of contract:

The Purchaser will award the contract to the bidder whose quotation has been determined to be substantially responsive and who has offered the lowest evaluated quotation price.

8.1 Notwithstanding the above, the Purchaser reserves the right to accept or reject any quotations and to cancel the bidding process and reject all quotations at any time prior to the award of contract.

8.2 The bidder whose bid is accepted will be notified of the award of contract by the Purchaser prior to expiration of the quotation validity period. The terms of the accepted offer shall be incorporated in the purchase order.

9. Payment shall be made in Indian Rupees as follows:

100% of the total cost immediately after delivery, Satisfactory installation along with demonstration and testing of the goods and also acceptance by the department.

10. All supplied items are under normal commercial warranty/ guarantee of not less than **12** months from the date of successful acceptance of items.

11. Rate of AMC may be furnished separately, which will be applicable at the end of the normal commercial warrant period.

12. You are requested to provide your offer latest by **15:30** hours on **06-07-2012**. Bids will be opened on the same day at 16:00 hours.

13. Detailed specifications of the items are at Annexure I.

14. Training Clause (if any) **Demonstration at the time of Installation**

15. Testing/Installation Clause (if any) **Satisfactory Installation & Testing is required**

16. Information brochures/ Product catalogue, if any must be accompanied with the quotation clearly indicating the model quoted for.

17. Sealed quotation to be submitted/ delivered, **within 15:30 hours of 06-07-2012**, at the address mentioned below,

TEQIP CELL, 2nd Floor, Aurobindo Bhavan, Jadavpur University, 188, Raja S. C. Mallick Road, Kolkata- 700 032.

18. We look forward to receiving your quotation and thank you for your interest in this project.

Sd/-

Dr. Gupinath Bhandari
Nodal Officer, Procurement
TEQIP, Phase-II

Annexure I

Package Code: TEQIP-II/WB/WB2G02/11

Sr. No	Item Name	Specifications
1	Wireless Access Points & Compatible Switch / Controller	<p>a) Wireless Controller</p> <p>i) The Wireless compliance shall be appliance based, rack mountable that shall centrally manage & control Wireless AP's conforming to 802.11a,b,g,n standards.</p> <p>ii) The Wireless Controller shall be able to support at least 16 nos. of 802.11a/b/g/n AP's from day one, scalable to minimum 256 nos. of AP's in future with add-on license.</p> <p>iii) Port Density:</p> <p>a) It shall have at least 4 x 10/100/1000BaseT (RJ45) ports or 4 x 1000BaseX SFP ports and 02 nos. of 10G-BaseX unpopulated ports from day one, which may be populated with 10G single mode or multi-mode transceivers in future.</p> <p>b) In case of SFP ports, all the ports should be populated with 1000BaseT SFP (RJ45) transceivers from day one.</p> <p>iv) The controller shall have field replaceable fan tray and redundant power supply from day one.</p> <p>v) The wireless controller shall ideally support split-plane architecture with separate data and control planes for efficient performance.</p> <p>vi) The controller shall be able to manage all Access Points centrally and provision security, quality of service, RF management and roaming.</p> <p>vii) Each controller shall be able to support 20,000 or more wireless clients.</p> <p>viii) It shall be possible to configure and commission multiple Wireless controllers in a cluster.</p> <p>ix) The Wireless Controllers, when clustered, shall be able to load balance Wireless AP's configured in the same mobility domain.</p> <p>x) When configured in a cluster, the failure of one controller shall not affect the wireless network and all Access Point connected to the failed controller should get registered/joined to the remaining Controller automatically irrespective of the number of AP license installed on the active controller.</p> <p>xi) The controller shall be able to detect new AP's connected to the LAN and dynamically configure them to include in the WLAN</p>

		<p>network.</p> <ul style="list-style-type: none"> xii) It shall support captive portal with guest management. xiii) The Wireless controller shall provide secure roaming services across layer-2 & Layer-3 networks with support for FIPS 140-1 or better. xiv) The Wireless Controller shall be able to support Voice over WLAN applications from day one with support for dynamic call admission control and traffic prioritization to protect from delay and jitter. xv) It shall conform to 802.11e based QoS enforcement along with WMM, DSCP and 802.1p based prioritization. xvi) The controller shall support real time location based tracking services. xvii) The wireless controller shall be able to automatically tune the radio frequency or channel settings for the Wireless AP's. xviii) All control & configuration specific communication between the Access Points and Controller shall be encrypted and performed over TLS or equivalent. xix) Data communication between AP and Controller shall be sent over CAPWAP or equivalent encapsulated tunnel. xx) The controller shall support AAA offloading and integration with RADIUS / LDAP servers. xxi) The controller shall support rogue AP detection and mitigation. xxii) Each controller shall support 200 or higher number of VLAN's. xxiii) The controller shall have rate limiting features to limit needless broadcast and/or multicast traffic. xxiv) The controller shall support 802.1x based authentication for mobile clients. xxv) It shall support WPA & WPA2, Dynamic as well as static WEP based authentication. xxvi) It shall also support MAC based authentication. xxvii) The controller shall support Layer-2 & Layer-3 features like: <ul style="list-style-type: none"> a) 802.1D Spanning Tree Protocol b) 802.3ad Link aggregation c) Flow control d) SNTP or NTP e) IGMP snooping or equivalent. xxviii) The controller shall be able to perform software/firmware image upgrades on the Access point. xxix) The controller shall be manageable/configurable using Web based GUI, CLI and SNMP v3. xxx) The controller shall have a dedicate serial / RJ45 console port. xxxi) It should preferably have one or two USB ports for backup and image & software upgrades.
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		<p>xxxii) It shall have LED based status indicators for CPU/Switch fabric and power supply.</p> <p>xxxiii) Operating Temperature: 0°C to 45°C or better.</p> <p>xxxiv) Operating Humidity: 10% - 90% non-condensing.</p> <p>xxxv) Power: 100-240V AC input.</p> <p>b) Wireless Access Point</p> <p>i) The Access Point shall be indoor type with 802.11n compliant and support legacy 802.11 a/b/g clients.</p> <p>ii) The AP shall have dual radios with simultaneous operation in 2.4 GHz and 5 GHz bands.</p> <p>iii) It shall support two spatial streams with up to 300 Mbps per radio.</p> <p>iv) It shall support Voice over WLAN including Wireless IP handsets (Phones).</p> <p>v) It shall have integrated omni-directional antenna with two or more radiating elements.</p> <p>vi) The Access Point shall conform to IEEE 802.11 a, b, g, n, 802.11d, 802.11i, 802.11h standards.</p> <p>vii) The AP shall support at least 16 SSIDs per radio.</p> <p>viii) The AP shall have a Gigabit copper port that supports 802.3af PoE or 802.3at PoE+ standards.</p> <p>ix) The AP shall be able to perform automatic RF scans to detect rogue APs and RF threats.</p> <p>x) The AP shall support WPA/WPA2 & WEP based security. It shall also support AES based encryption.</p> <p>xi) The AP shall have following max transmit power:</p> <ul style="list-style-type: none"> a) 2.4 GHz: 21 dBm or higher for 802.11b/g; and 19 dBm or higher for 802.11n b) 5 GHz: 16 dBm or higher for 802.11a/n <p>xii) The AP shall support quality of service protocols/standards including – WMM, UPASD and 802.11e based TSPEC.</p> <p>xiii) It shall support call admission control.</p> <p>xiv) The AP be centrally managed and controlled by the Wireless controller.</p> <p>xv) Country specific operating channels shall be supported.</p> <p>xvi) The AP shall conform to UL 60950-1, FCC Part 15 specifications for safety & electromagnetic compliance.</p> <p>xvii) Operating Temperature: 0°C to 45°C or better</p> <p>xviii) Humidity: 10% - 90% non-condensing.</p> <p>xix) The AP shall have LED status indicators for Ethernet, Power and 2.4 GHz & 5 GHz radios.</p>
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		<p>xx) The AP shall be wall & ceiling mountable. Appropriate mounting kits shall be supplied with the AP.</p> <p>c) Layer-3 Managed PoE Gigabit Switch</p> <p>i) The switch shall be 1U Rack mountable and support stacking of up to 8 switches units per stack and manageable using a single IP address.</p> <p>ii) The L3 Managed Switch should have 24-Port 10/100/000 BaseT plus 4 x shared/combo 1000BaseX SFP ports. The SFP ports should support LX up to 10km, ZX up to 70km and SX up to 550m</p> <p>iii) Stacking shall be configurable using dedicated ports and not by using any of the 4 nos. of shared/combo SFP uplink ports. Stacking bandwidth shall be 32 Gbps or more per switch. All components required for stacking (including stacking models, if any and stacking cables) shall be provided from day one.</p> <p>iv) Each of the 10/100/1000BaseT copper (RJ45) ports on the L2 switch shall be able to provide up to 15 Watts of power to the end devices as per IEEE 802.3af PoE standard.</p> <p>v) The switch shall provide minimum 48 Gbps of switching capacity.</p> <p>vi) The switch shall have packet forwarding rate of 35 Mpps for 64-byte packets at wire-speed performance.</p> <p>vii) The switch shall have MAC address table of 8,000 or more.</p> <p>viii) The switch shall have Jumbo frame support for 9216 bytes.</p> <p>ix) It should have the capability to automatically reconfigure a switch when it is replaces a failed unit in a pre-configured stack.</p> <p>x) The switch shall support 802.1Q VLAN and it shall be able to configure 1000 active VLANs and 4000 VLAN IDs.</p> <p>xi) The switch shall support Voice VLANs.</p> <p>xii) It shall be possible to configure static routing on the switch from day one. It shall support dynamic and advanced routing protocols like – RIP v1/v2, OSPF, ECMP, VRRP, etc., in future by applying/installing advance license when required.</p> <p>xiii) The switch shall support transmission of IPv6 packets over Ethernet networks as per RFC 2464 or equivalent. It shall also support DNS extensions for IPv6, Neighbour discovery for IPv6 and Path MTU discovery for IPv6.</p> <p>xiv) The switch shall have IGMP v3, IEEE 802.1D STP, 802.1w RSTP, 802.1s MSTP, 802.3ad LACP, 802.1AB LLDP-MED, Diffserv (RFC 2474 & 2475), IPv6 addressing architecture as per RFC 429 or equivalent.</p> <p>xv) The switch shall support External/Internal power supply which may be used in future for power supply redundancy.</p> <p>xvi) Quality of Service: The switch shall support t least 4 priority</p>
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		<p>queues with 802.1p compliance. It shall support Classification based on MAC address, IP ToS/DSCP marking, IP source /destination address or subnets, TCP/UDP source/destination port.</p> <p>xvii) Security: The L2 switch shall support 802.1x based secure network access control, MAC based security to control network access, DHCP snooping, Dynamic ARP inspection, IP Source Guard, BPDU filtering, SSHv2, RADIUS/TACACS+.</p> <p>xviii) Management: The L2 switch shall be manageable through a single IP for the entire stack. It should also support management using CLI, HTTP/Web GUI, Telnet, SSHv2, SNMPv1,v2,v3. The switch shall support DHCP option 82, IPv6 Neighbour Discovery, Path MTU discovery for IPv6, RMON, SNTP, TFTP/FTP, BootP.</p> <p>xix) Environmental Features: Operating Temperature: 0°C - 50°C; Operating Humidity: 95% RH non-condensing.</p>
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FORMAT FOR QUOTATION SUBMISSION

(In letterhead of the supplier with seal)

Package Code: TEQIP-II/WB/WB2G02/11

Date: _____

To: _____

Sl. No.	Description of goods (with full Specifications)	Qty.	Unit	Quoted Unit rate in Rs. (Including Ex Factory price, excise duty, packing and forwarding, transportation, insurance, other local costs incidental to delivery and warranty/ guaranty commitments)	Total Price (A)	Sales tax and other taxes payable	
						In %	In figures (B)
Total Cost							

Gross Total Cost (A+B): Rs. _____

We agree to supply the above goods in accordance with the technical specifications for a total contract price of Rs. _____ (Amount in figures) (Rupees _____ amount in words) within the period specified in the Invitation for Quotations.

We confirm that the normal commercial warranty/ guarantee of _____ months shall apply to the offered items and we also confirm to agree with terms and conditions as mentioned in the Invitation Letter.

We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf will engage in bribery.

Signature of Supplier

Name: _____

Address: _____

Contact No: _____