TENDER

FOR

SUPPLY & INSTALLATION OF

WIRELESS NETWORK ACCESS DEVICE

NIT No.: IITJ/TEN/2010-11/3/NW/11

NIT Issue Date: 5th March, 2011

Last Date of submission: 26st March, 2011

Indian Institute Technology, Rajasthan
Old Residency Road, Ratanada, Jodhpur – 342011, Rajasthan
Tel.: 0291- 2449011 Fax: 0291-2449011 email: sps@iitj.ac.in

Indian Institute of Technology (IIT), Rajasthan, Jodhpur invites tenders for supply, erection, installation and commissioning of Wireless Access Points at Institute as per specifications given in the Schedule attached to the Tender form annexed hereto. All offers should be made in the English and should be written in both figures and words. The relevant brochure may also be enclosed. Tender forms can be downloaded from the website (http://www.iitj.ac.in/tenders.html) of the institute.

The bidders are requested to read the tender document carefully and ensure compliance with all instructions herein. Non-compliance with instructions in this document may disqualify the bidders from the tender exercise.

The Director, IIT Rajasthan, Jodhpur reserves the right to select certain items (in single or multiple units) and reject the others or all mentioned in the Schedule. The Director, IIT Rajasthan, also reserves the right to revise or alter the specifications before acceptance of any tender.

Incomplete tenders, amendments and additions to tender after opening or late tenders are liable to be ignored, and rejected.

The bidders are requested to submit Technical Bid and Price Bid in separate sealed covers as follows:

(i)   Technical Bid containing information regarding business turnover, experience and other details of the firm to judge the suitability of the bidder.

(ii)   Price bid containing prices of the various products clearly mentioning all charges and taxes as may be payable.

The tender shall be submitted in a sealed envelope bearing the following reference on the top left hand corner: "NIT No.: IITJ/TEN/2010-11/3/NW/11.", by latest 26th March, 2011 at 15:00 hrs. and addressed to:

"The Director
IIT Rajasthan,
Old Residency Road,
Ratanada, Jodhpur – 342011, Rajasthan"

All tender documents should be sent through courier, speed post or registered post. All tender documents received after this specified date and time shall not be considered.

The Technical bid will be opened on 28th March, 2011 at 11.00 P.M in the Conference Hall, Administrative Block of the Institute in the presence of the bidders or their authorized representative who are present at the time. Price bids of only those bidders will be opened whose technical bids are found suitable by the committee appointed for the purpose. Date and time of opening of price bids will be decided after technical bids have been evaluated by the committee. Information in this regard will be posted on Institute's web site / Notice board. No separate information shall be given to individual bidders.

1. Earnest Money Deposit (EMD):

A Demand draft of ₹ 50, 000/- (Rupees Fifty Thousand only) towards as EMD and another separate demand draft of ₹ 1000/- (Rupees One Thousand only) towards nonrefundable tender fee drawn in favour of "Director, IIT Rajasthan, Payable at Jodhpur" should accompany the Technical bid document.

2. Pre – Qualification Criteria:

a) Bidders should be the manufacture / authorized distributer / reseller.

b) Bidders should have minimum three years of experience of supply and installation of Wireless Access Point in short time frame (3 - 4 weeks) at educational Institutes, supporting document should be attached.

c) Bidders must be an ISO: 9001 / 14001 / 18001 certified.

d) Financial soundness to execute the order with an annual turnover of more than ₹ 30.00 lacs continuously during last 3 financial years supporting document should be attached.

3. Prices:

The Prices must be quoted in Indian Rupees and should be inclusive of all packing, forwarding, freight, insurance, delivery and commissioning at destination site (IIT Rajasthan, Jodhpur) and taxes.

In case bidders quote in foreign currency they should quote along with separate price in Ex-work, packing, forwarding charges and other charges if any. Bidders should convert the total cost in INR at date of submission of bid.

IIT Rajasthan is registered with DSIR, Govt. of India (custom duty notification no. 51/96-custom dt: 23 July, 1996 and central Excise duty Notification No. 10/97-central Excise dt: 1 March, 1997) and is therefore, exempted from Custom / Excise Duty. Exemption Certificate of the same shall be issued.

4. Validity:

The bid should be valid for acceptance up to a period of 90 Days. The Bidders should be ready to extend the validity, if required.

5. Delivery:

All the goods ordered shall be delivered with proper packing within the delivery in period from the date of issue of order at the above destination. Project should be completed within 8 weeks.

6. Warranty Declaration:

Bidder must give the warranty of three years from the date of installation of Wireless Access Point against any manufacturing defects and also give the warranty declaration that everything to be supplied by us hereunder shall be free from all defects and faults in material, workmanship and shall

be of the highest quality and material of the type ordered, shall be in full conformity with the specification.

Any deviation in the material and the specifications from the accepted terms may liable to be rejected and the bidders need to supply all the goods in the specified form to the satisfaction / specifications specified in the order / contract and demonstrate at their own cost. The payments shall be made only after receiving the material in the required specifications and quality to the satisfaction of the Institute authorities.

7. Terms of Payment:

- No advance payment will be made for Indigenous purchase.

- 90% Payment of the total order value shall be released after receipt of materials in good condition and balance 10% will be released after complete installation & inspection.

- In case of Import supplies, payment will be made through 100% irrevocable letter of credit or by Telegraphic Transfer.

8. Tender expenses and documents:

- All costs incurred by the bidder in the preparation of the tender shall be at the entire expense of the bidder.

9. Tender Evaluation Criteria:

- Bids will be evaluated on the basis of the terms & conditions, specification already incorporated in the tender document, based on which tenders have been received and the terms, conditions etc. mentioned by the bidders in their tenders. No new condition will be brought in while scrutinizing and evaluating the tenders.

- The Committee will examine all the bids to determine whether they are complete, whether any computational errors have been made, whether required sureties have been furnished, whether the documents have been properly signed stamped and whether the Tenders are generally in order.

- Prior to the detailed evaluation of Price bid, the committee will determine the substantial responsiveness of each bidder to the tender document. The substantially responsive bidder is one, who accepts all the terms and conditions of the tender documents without material deviations. Deviations from, or objections or reservations to critical provisions such as those concerning EMD, Delivery, Warranty, Taxes & Duties, Force Majeure and other terms & condition of the tender. The committee determination of a Tender's responsiveness is to be based on the contents of the tender itself without recourse to extrinsic evidence.

- If a tender is not substantially responsive, it will be rejected by the Purchaser and cannot subsequently be made responsive by the bidders by correction of the nonconformity.

- The tenders will be scrutinized to determine whether they are complete and meet the essential and important requirements, conditions etc. as prescribed in the tender document. The

tenders, which do not meet the basic requirements, are liable to be treated as non – responsive and will be summarily ignored.

10. Award of Contract:

- Committee reserves the right to accept any tender and to reject any or all tenders.

- The Committee reserves the right to accept in part or in full any tender or reject any or more tender(s) without assigning any reason or to cancel the tendering process and reject all tenders at any time prior to award of contract, without incurring any liability, whatsoever to the affected bidder or bidders.

- The committee will scrutinize the bids and tender evaluation will determine to its satisfaction whether the bidder, whose bid has been determined as the lowest evaluated responsive tender is eligible, qualified and capable in all respects to perform the contract satisfactorily. If, there is more than one schedule in the List of Requirements, then, such determination will be made separately for each schedule.

- The contract will be awarded to the lowest evaluated responsive bidder decided by the committee.

11. Liquidated Damages (Late Delivery):

- The furniture should be delivered and installed in specified period as specified in the purchase order and be ready for use within 4 weeks of the issue of purchase order unless otherwise prescribed. If the bidder fails to deliver and place any or all the furniture or perform the service by the specified date, penalty at the rate of 1% per week of the total order value subject to maximum of 10% of total order value will be deducted.

12. Return of EMD:

- The earnest money of the successful bidder will be returned without any interest after depositing of security money after award of the contract and security money will be return to them without any interest after completing the successful contract.

- The earnest money to the remaining bidders will be returned bidders will be returned to them without any interest with in thirty day after awarding the contact.

ANNEXURE – 1

Bill of Material

S. No.	Description	Qty.
1.	Wireless Access points	50 Nos.
2.	IOS wireless LAN Controller-Based Recovery	50 Nos.
3.	Wireless Controller for supporting upto 100APs	01 Nos.
4.	Wireless controller redundant power supply	01 Nos.
5.	Unified wireless controller SW	01 Nos.
6.	100AP BASE LICENSE	01 Nos.
7.	1 GIG SFP Modules: GLC-LH-SM = GE SFP, LC Connector LX/LH transceiver	10 Nos.
8.	Single Mode Fiber patch chord, SC-LC 2 meter	10 Nos.
9.	Router	01 Nos.

1. Detailed specifications are provided in the Annexure – 2
2. This equipment's must be compatible with our existing network infrastructure, the details of which, is provide in Annexure – 3.
3. The price must include comprehensive 3 years warranty with services.

ANNEXURE – 2

SPECIFICATIONS FOR ACTIVE AND PASSIVE COMPONENTS

(1) Wireless Controller Specifications

Wireless:-

- IEEE 802.11a, 802.11b, 802.11g, 802.11d, WMM/802.11e, 802.11h, 802.11n   Wired/Switching/ Routing

- IEEE 802.3 10BASE-T, IEEE 802.3u 100BASE-TX specification, 1000BASE-T. 1000BASE-SX,

- 1000-BASE-LH, IEEE 802.1 Q Vtagging, and IEEE 802.1AX Link Aggregation.

Data Request For Comments (RFC):-

- RFC 768 UDP

- RFC 791 IP

- RFC 2460 IPv6 (pass through Bridging mode only)

- RFC 792 ICMP

- RFC 793 TCP

- RFC 826 ARP

- RFC 1122 Requirements for Internet Hosts

- RFC 1519 CIDR

- RFC 1542 BOOTP

- RFC 2131 DHCP

- RFC 5415 CAPWAP Protocol Specification

- RFC 5416 CAPWAP Binding for 802.11

Security Standards:-

- WPA

- IEEE 802.11i (WPA2, RSN)

- RFC 1321 MD5 Message-Digest Algorithm

- RFC 1851 The ESP Triple DES Transform

- RFC 2104 HMAC: Keyed Hashing for Message Authentication

- RFC 2246 TLS Protocol Version 1.0

- RFC 2401 Security Architecture for the Internet Protocol

- RFC 2403 HMAC-MD5-96 within ESP and AH

- RFC 2404 HMAC-SHA-1-96 within ESP and AH

- RFC 2405 ESP DES-CBC Cipher Algorithm with Explicit IV

- RFC 2406 IPsec

- RFC 2407 Interpretation for ISAKMP

- RFC 2408 ISAKMP

- RFC 2409 IKE

- RFC 2451 ESP CBC-Mode Cipher Algorithms

- RFC 3280 Internet X.509 PKI Certificate and CRL Profile

- RFC 3602 The AES-CBC Cipher Algorithm and Its Use with IPsec

- RFC 3686 Using AES Counter Mode with IPsec ESP

- RFC 4347 Datagram Transport Layer Security

- RFC 4346 TLS Protocol Version 1.1

Encryption:-

- WEP and TKIP-MIC: RC4 40, 104 and 128 bits (both static and shared keys)

- AES: CBC, CCM, CCMP

- DES: DES-CBC, 3DES

- SSL and TLS: RC4 128-bit and RSA 1024- and 2048-bit
- DTLS: AES-CBC
- IPSec: DES-CBC, 3DES, AES-CBC

Authentication, Authorization, and Accounting (AAA):-

- IEEE 802.1X
- RFC 2548 Microsoft Vendor-Specific RADIUS Attributes
- RFC 2716 PPP EAP-TLS
- RFC 2865 RADIUS Authentication
- RFC 2866 RADIUS Accounting
- RFC 2867 RADIUS Tunnel Accounting
- RFC 2869 RADIUS Extensions
- RFC 3576 Dynamic Authorization Extensions to RADIUS
- RFC 3579 RADIUS Support for EAP
- RFC 3580 IEEE 802.1X RADIUS Guidelines
- RFC 3748 Extensible Authentication Protocol
- Web-based authentication
- TACACS support for management users

Management:-

- SNMP v1, v2c, v3
- RFC 854 Telnet
- RFC 1155 Management Information for TCP/IP-Based Internets
- RFC 1156 MIB
- RFC 1157 SNMP
- RFC 1213 SNMP MIB II
- RFC 1350 TFTP
- RFC 1643 Ethernet MIB
- RFC 2030 SNTP
- RFC 2616 HTTP
- RFC 2665 Ethernet-Like Interface types MIB
- RFC 2674 Definitions of Managed Objects for Bridges with Traffic Classes, Multicast Filtering, and

Virtual

Extensions:-

- RFC 2819 RMON MIB

- RFC 2863 Interfaces Group MIB

- RFC 3164 Syslog

- RFC 3414 User-Based Security Model (USM) for SNMPv3

- RFC 3418 MIB for SNMP

- RFC 3636 Definitions of Managed Objects for IEEE 802.3 MAUs

- Cisco private MIBs

Management Interfaces:-

- Web-based: HTTP/HTTPS

- Command-line interface: Telnet, Secure Shell (SSH) Protocol, serial port

- Cisco Wireless Control System (WCS) Interfaces and Indicators

- Uplink: 8 (5508) 1000BaseT, 1000Base-SX and 1000Base-LH transceiver slots

- Small Form-Factor Pluggable (SFP) options (only Cisco SFPs supported): GLC-T, GLC-SX-MM, GLC-LH-SM

- LED indicators: link

- Service Port: 10/100/1000 Mbps Ethernet (RJ45).

- Service Port : 10/100/1000 Mbps Ethernet (RJ45) For High Availability for future use

- LED indicators: link,

- Utility Port: 10/100/1000 Mbps Ethernet (RJ45)

- LED indicators: link

- Expansion Slots: 1 (5508)

- Console Port: RS232 (DB-9 male/RJ-45 connector included), mini-USB

- Other Indicators: Sys, ACT, Power Supply 1, Power Supply2

Physical and Environmental:-

- Dimensions (WxDxH): 17.30 x 21.20 x 1.75 in. (440 x 539 x 44.5 mm)

- Weight: 20 lbs (9.1 kg) with 2 power supplies

- Temperature: Operating temperature: 32 to 104°F (0 to 40°C); Storage temperature: -13 to 158°F (-25 to 70°C)

- Humidity: Operating humidity: 10 95%, noncondensing; Storage humidity: up to 95%

- Input power: 100 to 240 VAC; 50/60 Hz; 1.05 A at 110 VAC, 115 W Maximum; 0.523 A at 220 VAC, 115 W Maximum; Test Conditions: Redundant Power Supplies, 40C, Full Traffic.

- Heat Dissipation: 392 BTU/hour at 110/220 VAC Maximum

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Regulatory Compliance:-

CE Mark

Safety:

- UL 60950-1:2003

- EN 60950:2000

- EMI and susceptibility (Class A):

- U.S.: FCC Part 15.107 and 15.109

- Canada: ICES-003

- Japan: VCCI

- Europe: EN 55022, EN 55024

(2) Access Point Specification

PRODUCT DESCRIPTION: -	802.11A/G/N CTRLR-BASD AP-CLEAN AIR INT ANT A REG
DEVICE TYPE: -	WIRELESS ACCESS POINT
ENCLOSURE TYPE: -	EXTERNAL
APPROXIMATE DIMENSIONS: -	8.7 IN X 8.7 IN X 1.9 IN
APPROXIMATE WEIGHT: -	2.3 LBS
RAM INSTALLED (MAX):-	128 MB
FLASH MEMORY INSTALLED: -	32 MB
DATA LINK PROTOCOL: - 802.11N FREQUENCY BAND: -	IEEE 802.11B, IEEE 802.11A, IEEE 802.11G, IEEE 2.4 GHZ, 5 GHZ
FEATURES: -	AUTO-SENSING PER DEVICE, POWER OVER ETHERNET (POE), MIMO TECHNOLOGY, WI-FI MULTIMEDIA (WMM) SUPPORT, CLEANAIR TECHNOLOGY
POWER OVER ETHERNET (POE):-	YES

POWER: -   AC 120/230 V (50/60 HZ)

(3) 1G SFP MODULE Single Mode

Product Model: GLC-LH-SM

Product Name: 1000BASE-LX/LH SFP Transceiver Module Product

Type: SFP (mini-GBIC)

Form Factor: Hot-swappable

Dimensions: 8.5 Height x 13.4 Width x 56.5 Depth

(4) OFC Patch Card Single Mode

2 meters LC-SC 8.3/125um/3mm (core/cladding/jacket) single mode duplex patch cord, UPC polish

(5) Router

Device Type: Router

Form Factor: External - modular - 2U

RAM: 512 MB (installed) / 2 GB (max)

Flash Memory: 256 MB (installed) / 8 GB (max)

Routing Protocol: OSPF, IS-IS, BGP, EIGRP, DVMRP, PIM-SM, IGMPv3, GRE, PIM-SSM, static IPv4 routing, static IPv6 routing

Data Link Protocol: Ethernet, Fast Ethernet, Gigabit Ethernet

Remote Management Protocol: SNMP, RMON

Features: Cisco IOS IP Base, MPLS support, Syslog support, IPv6 support, Class-Based Weighted, Fair Queuing (CBWFQ), Weighted Random, Early Detection (WRED)

Compliant Standards: IEEE 802.1Q, IEEE 802.3af, IEEE 802.3ah, IEEE 802.1ah, IEEE 802.1ag

Power: AC 120/230 V (50/60 Hz)

Annexure – 3

Available Active component of IIT Rajasthan

Sr. No	Specification	Model	Qty.
1	Cisco L3 Switch	WS-C3560X-24T-S CATALYST 3560X 24 PORT DATA IP BASE	2
2	Cisco L2 Switch	WS-2960S-24PS-L CATALYST GIG PORT WITH POE	33
3	Wireless Controller Up to 100 AP	AIR-CT5508-100-K9 CISCO 5508 SERIES	1
4	Wireless Access Points	AIR-CAP3502I-A-K9 802.11A/G/N	89
5	SFP Hot-Swap	GLC-LH-SM GE SFP	44
6	Unified Thetas Management (UTM)	XTM 830F Series	2