

**INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH**

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CET CAMPUS, KULATHUR, ENGINEERING COLLEGE.P.O  
THIRUVANANTHAPURAM 695016,  
KERALA, INDIA.

s,

Date: 30<sup>th</sup> June 2014

**INVITATION TO TENDER(IND)**

No: IISER/PUR/4496/14  
Due Date: 14<sup>th</sup> July 2014 (3 PM)

Dear Sirs,

Sub: **Wireless LAN Controller & Controller band Accesspoints**

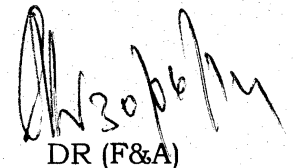
We invite Sealed Tenders for the following items:

Sl #:	Item/ Description	Qty
1.	Wireless LAN controller	1 No
2.	Controller band Accesspoints (Specifications as per Annexure I)	16 Nos.

Please quote your lowest rate and shortest delivery period. Your offer in sealed cover **SUPERSCRIBING TENDER NUMBER AND DUE DATE** shall reach us on or before the due date and time. Please follow strictly the "Instructions to Tenderers attached".

Thanking You,

Yours Faithfully



DR (F&A)  
Addl. Charge (P & S)

**P.S: CATALOGUE/LEAFLET FEATURING ALL TECHNICAL SPECS/INFORMATION OF THE PRODUCT QUOTED SHALL ACCOMPANY THE OFFER.**

**GENERAL SPECIFICATIONS FOR THE WIRELESS NETWORK:**

- Centralized management and control
- Real time display of APs and signal coverage
- Layer 2 and layer 3 mobility for clients
- Access points should be able to communicate with controllers across routed boundaries
- Wiring access points to managed and unmanaged switches should be possible
- Access points should be deployable at LAN extended over telephone wire using modems
- Client exclusion list
- Wireless mesh between access points.
- Detection and mitigation of common RF related attacks (like Netstumbler, wellenreiter, void 11, Fake AP, address spoofing, DoS, etc)
- Detection of rouge access points and containment with notification to the administrator
- Malicious user detection and alerts
- Support for mobile applications such as voice over WLAN
- Centralized implementation of the following
  - o Security policies
  - o QoS policies
  - o Dynamic channel assignment
  - o Transmit power control
  - o Detection and avoidance of RF interference
  - o Elimination of coverage holes
  - o Dynamic load sharing of clients
  - o Automatic shifting of clients of a failed access point to another
  - o Bandwidth throttling per user or per access point
  - o Traffic thresholds for users on a specific SSID
- Programmable timing restrictions on WLAN availability
- Support for Redundant controllers
- Automatic detection and configuration of access points

**Specification for Access Point**

**Radios**

Concurrent dual band, 2.4 GHZ and 5 GHz

**Data Rate**

450 Mbps per radio

**802.11n capabilities**

3\*3 MIMO with spatial streams  
802.11n and 802.11a/bb/g beam forming  
802.11 dynamic frequency selection (DFS)  
Cyclic shift diversity (CSD) support  
Integrated Antenna

*Handwritten signature and date: 30/06/14*

## Interfaces

10/100/1000 Base - T autosensing (RJ-45)

Management console port (RJ-45)

## Power options

802.3af, Power adapter

## Standards Compliance

IEEE 802.11 a/b/g/n, IEEE 802.11h, IEEE 802.11d 802.11i, WPA2, EPA, 802.1X, AES, TKIP, Wi-Fi Multimedia, IPv4, IPv6, dual-stack, RADIUS, Active Directory

## **Specifications for Wireless LAN Controller**

### Features

DHCP Server, VLAN, Syslog, IPv6, IPS, WMM, QoS

### Scalability

Single controller should support minimum 50 access points and 1000 clients

### Wireless Standards

IEEE 802.11a, 802.11b, 802.11g, 802.11n, 802.11d, 802.11e, 802.11h, 802.11k, 802.11r, 802.11u, 802.11w, 802.11ac

### Security standards

WPA, WPA2

### Encryption

WEP, TKIP, AES

### Authentication methods

IEEE 802.11X, RADIUS, LDAP, Active Directory, MAC Address

### Management protocols

SNMP v1, v2c, v3

RMON, Telnet, HTTP, HTTPS, SSH

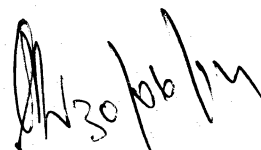
## Interfaces

10/100/1000 Base-T autosensing (RJ-45)

Management console port (RJ-45)

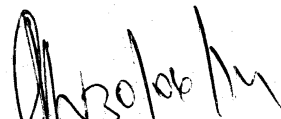
## IP

IPv4, IPv6, Dual Stack

  
DR (F&A)  
Addl. Charge [P & S]

**IISERTVM**  
**INSTRUCTIONS TO TENDERERS [INDIGENOUS].**

1. Tenders should be sent in sealed envelopes superscribing the relevant tender no. and the due date of opening. Only one tender should be sent in each envelope.
2. Late tender and Delayed Tenders will not be considered under any circumstances.
3. Sales Tax and /or other duties/levies where legally levies and intended to be claimed should be distinctly shown separately in the tender.
4. (a). Your quotation should be valid for a minimum period of 60 days from the date of opening of the Tender. Quotation with firm prices will be preferred.  
(b). Prices are required to be quoted according to the units indicated in the Invitation to Tender. When quotations are given in terms of units other than those specified in the tender form, relationship between the two sets of units must be furnished.
5. (a) Preference will be given to those tenders offering supplies from ready stocks and on the basis of delivery at IISER site.  
(b) Preference will also be given to those who agree our payment terms of within 30 days of receipt and acceptance of the item at our site.
6. (a) All available technical literature, catalogues and other data in support of the specifications and details of the items should be furnished along with the offer.  
(b) Samples, if called for, should be submitted free of all charges by the tenderer and the IISER shall not be responsible for any loss or damage thereof due to any reason whatsoever. In the event of non-acceptance of tender, the tenderer will have to take back the samples at his own expense.  
(c) Approximate net and gross weight of the items offered shall be indicated in your offer. If dimensional details are available the same should also be indicated in your offer.  
(d) **Specifications:** Stores offered should strictly conform to our specifications. Deviations, if any should be clearly indicated by the tenderer in their quotation. The tenderer should also indicate the Make/Type number of the stores offered and provide catalogues, technical literature and samples, wherever necessary along with the quotations. Test Certificates wherever necessary should be forwarded along with supplies. Whenever specifically mentioned by us the tenderer could suggest changes to specifications with appropriate reasons for the same.
7. IISER shall be under no obligation to accept the lowest or any tender and reserves the right of acceptance of the whole or any part of the tender or portion of the quantity offered and the tenderers shall supply the same at the rates quoted.
8. Corrections, if any, in the Quotation must be attested. All amounts shall be indicated both in words as well as in figures. Where there is difference between amounts quoted in words and figures, amount quoted in words shall prevail.
9. The tenderer should mention the name of his bankers, Sales Tax Registration, PAN number etc in the tender.
10. The authority of the person signing the tender, if called for, should be produced.
11. The purchaser reserve the right to accept or reject the lowest or any other offer in whole or in part without assigning any reason.
12. IISER being a Govt of India Educational and Research Institute, is exempted from payment of Excise Duty and Customs Duty under Notification No. 51/96- Customs dated 23<sup>rd</sup> July 2009. Also, we can issue Form 16 as per VAT Rules.
13. There is no EMD or Tender Cost.

  
DR [F&A]

ADDL. CHARGE [P&S]