



**DATE: 07/07/2023**

**INVITATION OF BIDS FOR WIRELESS CONTROLLER AND WIRELESS**

**ACCESS POINTS**

**ENQUIRY NO: IITGOA/2023-24/005 DTD 07/07/2023**

1. Quotations are invited in two bid system for the procurement of Wireless Controller and Wireless Access Points in separate envelopes. Please mention the above-mentioned title, enquiry number and due date for submission of bids on the sealed cover to avoid the bid being declared invalid.
2. The address and contact numbers for sending bids or seeking clarifications regarding this RFP are given below –

**Deputy Registrar  
(Stores & Purchase),  
IIT GOA, At GEC Campus,  
Farmagudi, Ponda – Goa.  
403401  
dr\_sp@iitgoa.ac.in / purchase@iitgoa.ac.in**

3. This bid enquiry is divided into three parts as follows:
  - a. Part I – Contains General Information such as the time, place of submission and opening of tenders, Validity period of tenders, etc.
  - b. Part II – Contains Instructions for the Bidders and essential details of the items/services required, such as the Schedule of Requirements (SOR), Technical Specifications, Delivery Period, Place of Delivery and Consignee details.
  - c. Part III – Contains Price Bid format, other details etc.
4. This bid enquiry is being issued with no financial commitment and the Institute reserves the right to change or vary any part thereof at any stage and to withdraw it at any stage.



**Part I – General information**

Tender No.	IITGOA/2023-24/005		
Tender Date	07.07.2023		
Tender Category	Goods		
Tender Type	Open		
No. of Envelopes	2		
Covers Information / Submission of Bids			
Cover No.	Cover Type	Description	Document Type
1	Technical	Technical Specification, Tender Document, Schedule of Requirement and Compliance, Bidders Information, PAC, Declaration of Local Content, Undertaking for Bid Security etc.	.pdf
2	Financial	Financial Bid	.pdf
<p>Two Bid System:</p> <ul style="list-style-type: none"> <li>❖ The two-bid system will be followed for this tender. In this system bidder must submit their offer in separate sealed envelopes as – Technical Bid and Financial Bid.</li> <li>❖ Separate technical bid and financial bid envelopes should be clearly marked as "Envelope No. 1 - Technical Bid" and "Envelope No. 2 - Financial Bid".</li> <li>❖ Both these sealed covers are to be put in a bigger cover which should also be sealed and duly super scribed with our Tender No., Due Date and Name of the items quoted and to be submitted to the concern department/section mentioned in tender document.</li> <li>❖ Bids should be forwarded by Bidders under their original memo / letter head inter alia furnishing details like GST number, Bank Details etc. and complete postal &amp; e-mail address of their office.</li> </ul> <p>Note:</p> <ul style="list-style-type: none"> <li>• The technical offer should not contain any price information. If the price quoted is submitted in technical bid the tender will be rejected at the sole discretion of IIT Goa.</li> <li>• Initially Technical Bids will be opened and evaluated by the purchase committee. Financial Bid of only Technically qualified bidders will be opened later.</li> <li>• Contract/ Purchase Order will be awarded to the lowest bidder(L1) of Financial Bid among them.</li> </ul>			
Form of Contract	Supply		
Bid Validity (Days):	120 days		
Period of Work/Delivery Period (Days):	60 days		

Pre-Bid Meeting Date & Time:	17.07.2023 from 04:00 PM to 05:00 PM
Pre-Bid Meeting Place & Address:	Mahalaxmi bungalow, GEC campus, Farmagudi, Ponda, Goa - 403401
Modification and Withdrawal of Bids:	A prospective bidder who requires clarification regarding the contents of the bidding documents shall notify to the Buyer in writing about the clarifications sought not later than 7 (Seven) days prior to the date of opening of the Bids. Copies of the query and clarification by the purchaser will be sent to all prospective bidders who have participated the bidding documents.
Clarification regarding contents of the tender document/RFP:	A bidder may modify or withdraw his bid after submission provided that the written notice of modification or withdrawal is received by the Buyer prior to deadline prescribed for submission of bids. A withdrawal notice may be sent by email but it should be followed by a signed confirmation copy to be sent by post and such signed confirmation should reach the purchaser not later than the deadline for submission of bids. No bid shall be modified after the deadline for submission of bids. No bid may be withdrawn in the interval between the deadline for submission of bids and expiration of the period of bid validity specified. Withdrawal of a bid during this period will result in Bidder's forfeiture of bid security.
Rejection of bids:	Canvassing by the Bidder in any form, unsolicited letter and post-tender correction may invoke summary rejection with forfeiture of EMD (if any). Conditional tenders will be rejected.
Unwillingness to quote:	Bidders unwilling to quote should ensure that intimation to this effect reaches before the due date and time of opening of the Bid, failing which the defaulting Bidder may be delisted for the given range of items as mentioned in this RFP.
Contract Type:	Tender
Delivery Location:	Indian Institute of Technology Goa Goa Engineering College Campus, Bhausahab Bandodkar Technical Education Complex, Veling, Farmagudi, Ponda, Goa
Pin Code:	403401
Bid Submission End Date/Date & Time Submission:	28.07.2023 at 17:00 Hrs
Place of Submission of Bid:	The Stores & Purchase Section, IIT Goa, Admin Block, At GEC Campus, Farmagudi, Ponda, Goa-403401
Bid Opening Date & Time:	31.07.2023 at 15:00 Hrs
Bid Opening Place:	IIT Goa, Admin Block, At GEC Campus, Farmagudi, Ponda, Goa-403401

Other Terms & Conditions:	As mentioned in technical specification
Technical Clarification:	Name: System Administrator Center for IT Services IIT Goa  Email: sysad@iitgoa.ac.in
Tender Inviting Authority:	Name: Registrar Address: IIT Goa Email: dr_sp@iitgoa.ac.in / purchase@iitgoa.ac.in  IIT Goa, Admin Block, At GEC Campus, Farmagudi, Ponda, Goa - 403401
Signing Authority:	Registrar



**Part II: Instructions to Bidders**

1. **Schedule of Requirements** – List of items are attached as **Annexure ‘A’**
2. **Technical Details:** Technical details are attached in **Annexure ‘B’**
3. **Two-Bid System:** In respect of Two-bid system, Bidders are required to furnish clause by clause compliance of specifications bringing out clearly the deviations from specification, if any.

**i) The Bidders are advised to submit the following documents along with Technical Bid–**

- a) Compliance certificate in the following format;

Para of tender enquiry specification item-wise (As per annexure B)	Specification of Item offered	Compliance – whether YES/NO	In case of non-compliance, deviation to be specified in unambiguous terms

The offers must strictly be as per the specifications given in Annexure-A. At the same time, it must be kept in mind that mere copying of our specifications in the quotation shall not make the technical bid eligible for consideration. **A bid has to be supported with original catalogue (not of photo copy) of the quoted model duly signed by the OEM and the same must be sent along with the technical bid.** The quoted model should not become obsolete for a minimum period of 5 years (This is for the availability of spares). Therefore, the model quoted should invariably be highlighted in the leaflet/literature enclosed with the quotation. Non-compliance with above shall be treated as incomplete/ambiguous and the bid may be ignored without giving an opportunity to the bidder for further clarification/negotiation etc.

b) Bidders Information (**Annexure ‘C’**).

- c) A copy of Indian Agent Agreement / Authorization letter from OEM / OEMs along with tender to be submitted by All Indian Agents, if the manufacturer/supplier is based in abroad.
- d) GST and PAN details
- e) The Bidder should provide a list of customers of previous supply of a similar/ same range of equipment to IIT's/ NIT's/Universities with contact details.
- f) IIT Goa shall compare all substantially responsive bids to determine the lowest evaluated bid. The Institute is following and abide with the revised Public Procurement (Preference to Make in India), Order 2017 P- 45021/2/2017 – B. E. -II dated 16.09.20 issued by DPIIT, Ministry of Commerce and Industry, Govt. of India & subsequent amendments/instructions of Ministry. Accordingly, preference will be given to the make in India products while evaluating the bids. However, it is sole responsibility of the bidder(s) to specify the product quoted by them is of Make in India along with respective documentary evidence in the technical bid itself.
- g) Any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Department for Promotion of Industry and Internal Trade (DPIIT). This is also applicable for bidders bidding for finished goods procured directly/indirectly from the vendors from the countries sharing land border with India.
- h) The bidder must be either OEM or authorized dealers or resellers of the original manufacturer of the proposed equipment in India. Both cannot bid simultaneously for the same item/product in the same tender.

**ii) The following documents should be submitted along with Financial Bid –**

- a) Price Bid.
- b) Previous order of supplies/Justification of quoted rates. (**Annexure ‘D’**)

4. **Delivery Period** – Supply to be made within **60 days** from the effective date of issuance of Purchase Order. Please note that P.O. can be cancelled unilaterally by the Institute in case items are not received within the delivery period. Extension of delivery period will be at the sole discretion of the Institute, with applicability of LD clause.

5. **Delivery and Transportation** - Place for supply / installation is '**Indian Institute of Technology Goa, Ponda – Goa**'. The transportation cost & Insurance charges up to the destination is to be borne by the bidder.

### Part III: Conditions of Contract

1. Award of Contract:
  - i. IIT Goa shall award the contract to the technically qualified eligible BIDDER whose bid has been determined as the lowest evaluated financial bid.
  - ii. If more than one BIDDER happens to quote the same lowest price, IIT Goa reserves the right to award the contract to more than one BIDDER or any BIDDER.
2. Prices:
  - a. It is mandatory to quote prices in INR – F.O.R., IIT Goa basis only.
  - b. In case of multiple options of same product, bidders are requested to quote only one best option and not multiple options.
  - c. The supplier shall pay and bear all other liabilities, taxes and duties not specifically agreed by the Purchaser in the contract.
3. Pre-installation:
  - i. Please also mention the pre-installation requirements for the equipment like cabling, ambient temperature, humidity, civil work, weather specifications, power specifications, etc. When items are provided full performance satisfaction should be demonstrated.
4. Installation:
  - i. Supplier shall be responsible for installation / demonstration wherever applicable and for after sales service during the warranty period and thereafter as mentioned in the contract.
  - ii. Installation / demonstration to be arranged by the supplier free of cost and the same is to be done within 30 days of the arrival of the equipment at site.
5. Training:
  - i. The supplier shall submit training proposal for the operation and maintenance to the personnel of IIT Goa on the offered equipment/machinery.
  - ii. Wherever needed, our technical persons should be trained by the supplier at the project site free of cost. In case the person is to be trained at supplier's site abroad or in India it should be mentioned in the quotation clearly. The supplier should bear all the expenses for such training including 'to & fro' fares and lodging & boarding charges.
6. Terms of Payment:
  - i. 100% within 30 days after the delivery and successful installation of the items at IIT Goa.
  - ii. Payments towards AMC shall be paid at the end of each quarter/ year.
7. Legal Matter:
  - i. All disputes are subject to Goa jurisdiction only.
8. Rights to Accept, Reject, Amend, Modify:
  - i. The basic eligibility conditions and conditions of contract are broad guidelines for pre-qualification and the Director, IIT Goa reserves the right to relax / alter / modify / add / delete any or all the conditions without notice. The Director, IIT Goa also reserves the right to accept or reject any or all bids without assigning any reason in public interest.
9. Penalty/ Liquidated Damages:
  - i. Timely delivery is essence of the contract and hence if any consignment be delayed, liquidated damages at the rate 0.5% of the price of the delayed consignment, for each week or part whereof shall be levied and recovered subject to maximum of 10% of total purchase order value.
  - ii. IIT Goa reserves the right to cancel the order in case the delay is more than 6 weeks. Penalties if any will be recovered by forfeiting PBG at vendor's cost and risks.
10. Supervision of Erection and Commissioning:
  - i. Successful BIDDER shall depute concerned specialist, for supervision of erection & commissioning of the machine to be carried out. The successful BIDDER shall make necessary arrangement at their own expenses for stay, transport and other expenses of their Specialist during their stay in Goa which also includes imparting free of cost training to IIT Goa personnel.

#### 11. Performance Guarantee (GFR 2017 Rule 171):

- i. Performance Guarantee Bond is mandatory.
- ii. Successful tenderer/ bidder should submit performance guarantee as prescribed above to be sent to The Deputy Registrar, Stores & Purchase section, IIT Goa on or before 15 days from the due date of issue of order acknowledgement. The PBG to be furnished in the form of bank guarantee as per proforma or annexure of the tender documents, for an amount covering 3 % of the purchase order value.
- iii. The Performance Guarantee should be established in favour of "The Registrar, IIT Goa".
- iv. PBG to be established through any of the National Banks (whether situated at Goa or outstation) with a clause to enforced the same on their local branch of Goa or any scheduled bank (other than national bank) situated at Goa. Bonds issued by co-operative banks will not be accepted.
- v. Performance Guarantee Bond shall be for the due and faithfully performance of the contract and shall remain binding, notwithstanding such variations, alterations for extensions of time as may be made, given, conceded or agreed to between the successful tenderer and the purchaser under the terms & conditions of acceptance to the tender.
- vi. The successful tenderer is entirely responsible for due performance of the contract in letter and spirit and all other documents referred to in the acceptance of tenders.
- vii. The PBG shall be kept valid during the period of contract and shall continue to be enforceable for a period of one year/two years (as mentioned in the tender document) or up to warranty period, plus 60 days whichever is later from the date of order acknowledge. In case PBG needs extensions up to warranty period then supplier shall initiate extensions to PBG one month prior to expiry of PBG.
- viii. **No interest shall be payable by the buyer to the Bidder on PBG.**



## Annexure - A

### List of items required

Sl. No.	Description of Items	Qty
1	Wireless Controller	01
2	Outdoor wireless access points	03
3	Indoor wireless access points	162

## Procurement of Wireless Controller and Wireless Access Points for IIT Goa

### Introduction

Indian Institute of Technology Goa (IIT Goa) has a campus-wide network spread over the academic, hostel, and office areas, based on optical fiber as a backbone. This state-of-the-art scalable campus network is expanding on a regular basis as per Institute's needs. In view of this, the Institute has decided to procure the necessary devices.

### 1. Scope of work:

- A. The scope of the work includes supply, installation, commissioning, and integration of the wireless controller and wireless access points over the IIT Goa campus as per the institute's requirement and maintenance of the same for five years.
  
- B. All items supplied must have a comprehensive onsite OEM warranty/ license for a period of five years. All the equipment mentioned in *Table-1* should be quoted from a single vendor.
  
- C. Selected bidders will have to support IIT Goa personnel to configure and integrate the Ethernet switches and indoor wireless access points as and when required within the warranty period without disturbing the current architecture of the network.
  
- D. Institute has Cat 6 cable structure ready to deploy wireless access points. The selected bidder needs to integrate and configure all the access points as per the institute's requirements.
  
- E. The bidder will be liable for any hardware and software up-gradation for maintenance without any extra cost during the warranty period. The technical bid must contain the make, model, and part number of all supplied components along with the supported part code.

### 2. Bidder Eligibility Criteria:

- A. The bidder must have successfully completed two Wireless LAN Access Infrastructure (Wi-Fi Solution) implementations in India in the last three years; one must be a Wi-Fi Solution. The value of any one turnkey solution implemented must be at least Rs. 1 crore. A complete list and the customers' contact details must be provided.
  
- B. The bidder should not have been blacklisted by any IITs or similar Autonomous Institutions /Universities, Government /Public Sector Undertakings on the date of submission of this bid. A declaration from the bidder must be submitted.

- C. Bidders should be the manufacturer / authorized dealer. A letter of Authorization from the original equipment manufacturer (OEM) on the same and specific to the tender should be enclosed.
- D. The quoted products should not be under the end of sales or end of support in the next five years from the date of submission. Documentary proof must be submitted.
- E. The offered or a similar product from the same OEM of at least 1000 wireless access points must have been deployed in at least one of any IITs, NITs, or similar Autonomous Institutions /Universities; Related documents must be provided with contact person details.
- F. The bidder must have an office in Goa/ Karnataka/ Maharashtra with Service/Support Engineers. Documentary proof must be submitted.
- G. Non-compliance with tender terms, non-submission of required documents, lack of clarity of the specifications, the contradiction between bidder specification and supporting documents, etc., may lead to rejection of the bid.

**3. Pre-bid Meeting: Site survey and resolution of technical queries:**

**Date: 17-07-2023**

**Time: 4 PM to 5 PM**

**Location: Mahalaxmi bungalow, GEC campus, Farmagudi, Ponda, Goa - 403401**

**4. Requirement:**

<b>TABLE-1</b>			
<b>Sl.no.</b>	<b>Description</b>	<b>Specification</b>	<b>Qty in nos.</b>
1	Wireless Controller	As per Annexure-1	01
2	Outdoor Wireless Access Points	As per Annexure-2	03
3	Indoor Wireless Access Points	As per Annexure-3	162

**5. Technical Bid format:**

1. Must provide compliance certificate as per Annexure 1 and 2 format failing which bids will not be considered.
2. Must mention the offered product, OEM details, and delivery period in the following format.

Product Offered					
Sl.no.	Description	Qty	Make	Model	Country of Origin
1	Wireless Controller	01			
2	Outdoor wireless access points	03			
3	Indoor wireless access points	162			

**6. Price Bid format:**

Sl.no.	Description	Qty	Unit Price with 5-year warranty In Rs.	Tax @ ____ in Rs.	Total Price in Rs.
1	Wireless Controller	01			
2	Outdoor wireless access points	03			
3	Indoor wireless access points	162			
Total					
Grand Total					
In Words:					

## Annexure-1

### Wireless Controller Specification

S.No.	Specification required	Compliance (Yes/ No)	Remarks
1	The Controller should be VM based.		
2	Scalability up to 3000 devices in single instance and licensed up to 500 devices from day one.		
3	Controller should support Active-Active or Active passive redundancy		
4	Support for Multi-tenancy to allow multi-level access to network management team.		
5	Should be capable to manage and Monitor through mobile application		
6	Controller should support quick configuration to onboard devices on controller by accessing Web GUI or Mobile App.		
7	LLDP support to identify the network topology.		
8	Should support distributed architecture from day one for Data Plane		
9	Flexibility to segregate networks into multiple sites and Multi-site management support needs to be there for easy management.		
10	Support for multi-tenancy control: Should have capability of Roles based Administration as Organisation-wise, site-wise management.		
11	The Wireless Controller should have role-based admin rights and provide granular control on each and every access rights.		
12	Audit trail for multi-admin scenario to track and undo config by multiple users.		

13	The Wireless Controller must support Real Time Push Notifications via Email, Mobile App and Web Notifications		
14	Management data or controller should pass through at least a 256-bit encrypted tunnel to ensure frames protection.		
15	Should support Wireless Security standards of WPA/WPA2/WPA3/WPA3-2-Mixed.		
16	Should support 802.1x Authentication Methods(Protected EAP (PEAP), EAP-Transport Layer Security (EAP-TLS), EAP-Tunnelled TLS (EAP-TTLS), MAC Auth for wireless client authentication purpose.		
17	Management data or controller should pass through at least a 256-bit encrypted tunnel to ensure frames protection.		
18	Support for Dual-Stack: Ability to support addressing for both IPv4 and IPv6 and work actively between the two networks.		
19	Should have capability to manage User Access Policy for L2, L3 and L4 ACL.		
20	Should have L7 Application filtering to ensure better traffic control.		
21	Support for fast roaming using IEEE 802.11r and assisted roaming via 802.11k/v. And OKC for 802.1x clients.		
22	Should Support function for reporting access point theft.		
23	Should support RF management features like Airtime fairness and Band Steering.		
24	The Wireless Controller must support AP over-the-air packet capture to ensure airtime fairness.		
25	Should support Hotspot WISPr and Hotspot 2.0.		

26	The wireless controller must have capability to customize/integrated captive portal with possibilities to display the captive portal in languages (English as well as regional languages). The language configuration must be simple and editable.		
27	Should support Coupon Based and Sponsors (Email/Domain) Based guest authentication process.		
28	Should support SMS(Supporting Indian SMS services) and Email Coupon code for to allow the guest for internet Access		
29	Support for single/bulk coupon generator.		
30	QR code generator for quick connection for guest as well as internal users.		
31	Should have capability of controlling per client internet access, i.e. block Internet without disconnecting the client from network with single click.		
32	Should have capability to share devices from internal network to Guest Network in simple manner with a simple click.		
33	Should have capability integrate with external RADIUS for 802.1x Auth Support as Authenticator		
34	Should have capability to integrate with Syslog server to offload the logs		
35	Should have capability allow client device connection even if disconnected from the controller		
36	Should give internet upload and download speeds along with Jitter and Latency in realtime, when required.		
37	Should support secured onboarding on WLAN with per-user password bound with MAC allowed by IT.		

38	Should have mechanism for taking care of MAC Randomisation by auto registration of MAC on user authentication, this can be achieved using a third-party solution integration.		
39	Should support both auto and Manual TX Power Management.		
40	Should provide for concurrent support for high definition Video, Voice and Data application without needing any configuration.		
41	Should support Transmit power tuning in percentage increments in order to reduce interference and RF hazards.		
42	Should support SNMP v1,v2c and v3 for centralised NMS management.		
43	Should support Logs as Events, Alert, User Log, Admin Activity Log, Guest Log.		
44	Should support Client management Like Internet restrict, internet blocking, Disconnect, Block and Unblock.		
45	Support for Bandwidth Control: - SSID wise bandwidth control - OS-Wise bandwidth control - user-wise bandwidth control - user group wise bandwidth control		
46	To avoid broadcasting in the network, the AP should have a provision to control session type and count for all or subset of hosts/subnets/ports.		
47	Support for client isolation for Inter and Intra VLAN to avoid intercommunication between faculty and student VLANs.		
48	Should support Client Troubleshooting tools Like Ping, Traceroute, Internet Speed Test, Intranet Speed test etc.		
49	Should support Client Troubleshooting with Client Journey to identify the network issues via PCAP and Host discovery.		



50	Should support remote diagnostic tools Internet speed, Access point health, WLAN configuration, guest management etc.		
51	Support to fetch neighbor AP details, for ensuring the APs are correctly deployed physically.		
52	System should include a precision to create database of users along with user group configuration for atleast 50000 users.		
53	Proposal should include all licences and support for a mininum of 5 years.		
54	Support for WIDS: - Mobile ad-hoc connection - WIDS- Password Guessing - Denial-Of-Service Prevention - De-auth Prevention		

**Annexure-2**  
**Outdoor wireless access point specification**

<b>S.No.</b>	<b>Specification required</b>	<b>Compliance (Yes/ No)</b>	<b>Remarks</b>
1	The APs must support 802.11b/g/n/ac/ax.	-	-
2	Should provide at least 25 dBm Radio output power on both radios	-	-
3	Access Point must be having integrated internal antenna only.	-	-
4	To benefit fully from WIFI6, the 5GHz radio should support MU-MIMO 4x4:4 to serve the client devices better.	-	-
5	It Should Support up to 32 SSID (16 On Each Band).	-	-
6	Encryption supported should include WPA/WPA2/WPA3/WPA3-2-Mixed.	-	-
7	Should support 802.1x Authentication Method with MAC auth for wireless client authentication purpose.	-	-
8	Should be configurable to work as stand-alone or cloud managed without any hardware or firmware changes.	-	-
9	Should come with quick configuration mode and can be monitored, configured and managed by Web GUI or Mobile App.	-	-
10	For bulk deployment, the AP should support static IP and VLAN assignment from controller at the time of provisioning before deployment.	-	-
11	Support for DHCP Option 43 and 60 for auto controller discovery.	-	-
12	Should be configurable as bridge mode or router mode without any hardware or firmware changes at time of first-time setup or after deployment.	-	-
13	Access point should support Bridge and router mode simultaneously.	-	-

14	Should support wireless client airtime fairness from day one	-	-
15	Should not be configured as standalone if it is managed by cloud controller	-	-
16	In case of theft, the AP should have a provision to block any new configuration for disabling any misuse.	-	-
17	Support for disabling the reset/reboot button on the AP via controller.	-	-
18	WMM and 802.11d support	-	-
19	Support for fast roaming using IEEE 802.11r and assisted roaming via 802.11k/v.	-	-
20	Should support both auto and Manual channel Management with DFS Enablement.	-	-
21	Should support both auto and Manual TX Power Management.	-	-
22	Should support Forced DHCP assignment.	-	-
23	Should support Management Frame Protection via 802.11w	-	-
24	Should support RTS(Request To Send) and CTS(Clear To Send) thresholds to avoid frame collisions and hence avoid packet drops resulting in improved network performance.	-	-
27	Should have 2 x 10/100/1000/2500 Ethernet POE port, for port resiliency.	-	-
28	Support for individual port management for disabling the port to avoid misuse when unused.	-	-
29	Should have both option of powering on the device (Through POE port or separate DC power source)	-	-
30	Should have both ports with POE-In 802.3at support.	-	-

31	Should have 1 x USB 2.0 Port for IoT technologies and USB Internet dongle for internet connectivity.	-	-
32	Should support multiple ISP links when deployed on a gateway or router mode.	-	-
33	Should have capability to allow client device connection even if disconnected from the controller.	-	-
34	Should be mountable in Wall, Ceiling, and on Metal Ceiling Tiles without any Additional Cost or Component	-	-
35	Should have diagnostics tools like Ping, Traceroute and NsLookup	-	-
36	Operating Temperature: -20° ~ +65°C	-	-
37	Operating Humidity: 5~100% non-condensing.	-	-
38	Should have a link failover functionality on LAN ports and USB port, in case of primary connective goes down.	-	-
39	When in router mode, the AP should have the provision to have VPN tunnels to different sources if and when required.	-	-
40	AP should have IP67 rated housing.	-	-
41	AP should be quoted with TAC Support and Warranty for 5 years.	-	-
42	AP Should have minimum of 1x1000SFP Port	-	-

### Annexure-3

#### Indoor wireless access point specification

S.No.	Specification required	Compliance (Yes/ No)	Remarks
1	The APs must support 802.11b/g/n/ac/ax.	-	-
2	Should provide at least 25 dBm Radio output power on both radios	-	-
3	Access Point must be having integrated internal antenna only.	-	-
4	To benefit fully from WIFI6, the 5GHz radio should support MU-MIMO 4x4:4 to serve the client devices better.	-	-
5	Should Support up to 32 SSID (16 On Each Band).	-	-
6	Encryption supported should include WPA/WPA2/WPA3/WPA3-2-Mixed.	-	-
7	Should support 802.1x Authentication Method with MAC auth for wireless client authentication purpose.	-	-
8	Should be configurable to work as stand-alone or cloud managed without any hardware or firmware changes.	-	-
9	Should come with quick configuration mode and can be monitored, configured and managed by Web GUI or Mobile App.	-	-
10	For bulk deployment, the AP should support static IP and VLAN assignment from controller at the time of provisioning before deployment.	-	-
11	Support for DHCP Option 43 and 60 for auto controller discovery.	-	-
12	Should be configurable as bridge mode or router mode without any hardware or firmware changes at time of first time setup or after deployment.	-	-
13	Access point should support Bridge and router mode simultaneously.	-	-

14	Should support wireless client airtime fairness from day one	-	-
15	Should not be configured as standalone if it is managed by cloud controller	-	-
16	In case of theft, the AP should have a provision to block any new configuration for disabling any misuse.	-	-
17	Support for disabling the reset/reboot button on the AP via controller.	-	-
18	WMM and 802.11d support	-	-
19	Support for fast roaming using IEEE 802.11r and assisted roaming via 802.11k/v.	-	-
20	Should support both auto and Manual channel Management with DFS Enablement.	-	-
21	Should support both auto and Manual TX Power Management.	-	-
22	Should support Forced DHCP assignment.	-	-
23	Should support Management Frame Protection via 802.11w	-	-
24	Should support RTS(Request To Send) and CTS(Clear To Send) thresholds to avoid frame collisions and hence avoid packet drops resulting in improved network performance.	-	-
27	Should have 2 x 10/100/1000/2500 Ethernet POE port, for port resiliency.	-	-
28	Support for individual port management for disabling the port to avoid misuse when unused.	-	-
29	Should have both option of powering on the device (Through POE port or separate DC power source)	-	-
30	Should have both ports with POE-In 802.3at support.	-	-

31	Should have 1 x USB 2.0 Port for IoT technologies and USB Internet dongle for internet connectivity.	-	-
32	Should support multiple ISP links when deployed on a gateway or router mode.	-	-
33	Should have capability to allow client device connection even if disconnected from the controller.	-	-
34	Should be mountable in Wall, Ceiling, and on Metal Ceiling Tiles without any Additional Cost or Component	-	-
35	Should have diagnostics tools like Ping, Traceroute and Nslookup	-	-
36	Operating Temperature: 0°C ~ +55°C	-	-
37	Operating Humidity: 0~90% non-condensing.	-	-
38	Should have a link failover functionality on LAN ports and USB port, in case of primary connective goes down.	-	-
39	When in router mode, the AP should have the provision to have VPN tunnels to different sources, if and when required.	-	-
40	BLE beacon support with a Transmit gain of min 4dBi	-	-
41	AP should be quoted with TAC Support and Warranty for 5 years.	-	-

**(To be printed on letterhead of the bidder)**

**Annexure - C**

**Bidders Information**

1.	Name of the Bidder	
2.	Address of the Bidder	
3.	PAN No.	
4.	GSTIN	
5.	State of GST Registration	
6.	E-mail	
7.	Contact Person's Name & Designation	
8.	Mobile No.	



## Annexure - D

### Reasonability of Prices

Please quote best minimum prices applicable for a premier Educational and Research Institution. The party must give details of at least two purchase orders identical or similar equipment, supplied to any IITS/Research Institutions/ other organisation as per below Format **(to be enclosed in Financial Bid)** along with the final price paid and details are mandatory.

### Previous Supply Orders

Name of the Firm \_\_\_\_\_

S.No.	PO No. & Date	Description & Quantity of ordered equipment	Value of Order	Date of completion of delivery as per contract	Remarks indicating reasons for late delivery, if any and justification of price difference of their supply order & those quoted to us	Has the equipment being installed satisfactorily (attach a certificate from the Purchaser/ Consigner)	Contact Person along with Telephone no., Fax No. and e-mail address

Place: \_\_\_\_\_

Date: \_\_\_\_\_

(Signature of the Bidder, with date and seal)

## FORMAT FOR PERFORMANCE GUARANTEE BOND

(To be typed on Non-judicial stamp paper of the value of Indian Rupees of One Hundred) (TO BE ESTABLISHED THROUGH ANY OF THE NATIONAL BANKS (WHETHER SITUATED AT GOA OR OUTSTATION) WITH A CLAUSE TO ENFORCE THE SAME ON THEIR LOCAL BRANCH AT GOA OR ANY SCHEDULED BANK SITUATED AT GOA. BONDS ISSUED BY CO-OPERATIVE BANKS ARE NOT ACCEPTED.

To,  
The Registrar,  
Indian Institute of Technology, Goa  
Farmagudi, Ponda,  
Goa – 403401

### *LETTER OF GUARANTEE*

WHEREAS Indian Institute of Technology, Goa (Buyer) have invited Tenders vide Tender No..... Dt. .... for purchase of .....  
AND

WHEREAS the said tender document requires that any eligible successful tenderer (seller) wishing to supply the equipment / machinery, etc. in response thereto shall establish an irrevocable Performance Guarantee Bond in favour of “**Registrar, Indian Institute of Technology, Goa**” in the form of Bank Guarantee for Rs ..... (**3% (three percent) of the purchase value**) and valid till **one year or up to warranty period plus sixty days whichever is later** from the date of issue of Purchase Order. Performance Guarantee Bond may be submitted within 15 (Fifteen) days from the date of Order Acknowledgment as a successful bidder.

NOW THIS BANK HEREBY GUARANTEES that in the event of the said tenderer (seller) failing to abide by any of the conditions referred in tender document / purchase order / performance of the equipment / machinery, etc. this Bank shall pay to Indian Institute of Technology, Goa on demand and without protest or demur Rs..... (Rupees.....).

This Bank further agrees that the decision of Indian Institute of Technology, Goa (Buyer) as to whether the said Tenderer (Seller) has committed a breach of any of the conditions referred in tender document / purchase order shall be final and binding.

We, ..... (name of the Bank & branch) hereby further agree that the Guarantee herein contained shall not be affected by any change in the constitution of the Tenderer (Seller) and/ or Indian Institute of Technology, Goa (Buyer).

#### **Notwithstanding anything contained herein:**

1. Our liability under this Bank Guarantee shall not exceed Rs. .... (Indian Rupees ..... only).
2. This Bank Guarantee shall be valid up to .....(date) and
3. We are liable to pay the guaranteed amount or any part thereof under this bank guarantee only and only if IIT Goa serve upon us a written claim or demand on or before .....(date).
4. This Bank further agrees that the claims if any, against this Bank Guarantee shall be enforceable at our branch office at ..... situated at ..... (Address of local branch).

Date:

Yours truly,  
Signature and seal of the Guarantor:  
Name of Bank:

**Instruction to Bank:** Bank should note that on expiry of Bond Period, the Original Bond will not be returned to the Bank. Bank is requested to take appropriate necessary action on or after expiry of bond period.

**UNDERTAKING FOR BID SECURITY**

(To be issued by the bidder on company's letterhead in lieu of EMD)

To,  
The Registrar,  
Indian Institute of Technology Goa,  
At GEC Campus, Farmagudi, Ponda – Goa

We, M/s ..... (name of the firm), with ref. to enquiry no. .... dtd ..... hereby undertake that:

- 1) We accept all the terms and conditions of the tender document.
- 2) We accept that, we will not modify our bid during the bid validity period, submit performance guarantee within the stipulated period and honor the contract after award of contract.
- 3) In the event of any modification to our bid by us or failure on our part to honor the contract after final award or failure to submit performance guarantee, our firm may be debarred from participation in any tender/contract notified by Indian Institute of Technology, Goa for a period of one year.

Yours faithfully,

(Signature of the Bidder, with date and seal)

## DECLARATION OF LOCAL CONTENT

(To be given on company letter head - For tender value below Rs.10 crores)  
(To be given by Statutory Auditor/Cost Auditor/Cost Accountant/CA for tender value above  
Rs.10 crores)

Date:

To,  
The Registrar,  
Indian Institute of Technology Goa,  
At GEC Campus, Farmagudi, Ponda - Goa

Sub: Declaration of Local content

Tender Reference No: \_\_\_\_\_

Name of Tender: - \_\_\_\_\_

**Country of Origin of Goods** being offered: \_\_\_\_\_  
We hereby declare that an item offered has \_\_\_\_\_ % local content. \_\_\_\_\_

“Local Content” means the amount of value added in India which shall, be the total value of the item being offered minus the value of the imported content in the item (including all customs duties) as a proportion of the total value, in percent.

We understand that, as per Office Memorandum dated 04/03/2021 issued by Ministry of Commerce and Industry, services such as transportation, insurance, installation, commissioning, training and after sales support like AMC/CMC etc. are not considered as local value addition.

“\*False declaration will be in breach of Code of Integrity under Rule 175(1)(i)(h) of the General Financial Rules for which a bidder or its successors can be debarred for up to two years as per Rule 151 (iii) of the General Financial Rules along with such other actions as may be permissible under law.”

Yours faithfully,

(Signature of the Bidder, with date and seal)