Office of the Principal, Rajiv Gandhi Institute of Technology, Kottayam

SHORT TENDER NOTICE

No. D3/2993/23/RIT

Dated: 13.11.2023

e- tenders are invited for the supply and installation of Wi-Fi access point for Intranet with

License to MH2 and Architecture Block of Rajiv Gandhi Institute of Technology, Kottayam.

SI.No	Tender No	ltem
1		supply and installation of Wi-Fi access point for
	D3/2993/23/RIT	Intranet with License to MH2 and Architecture
		Block of RIT (specification attached)

Cost of a tondar	: ₹ 3068/- including GST ₹
	468/-
Last date and time of submission of e- tender	: 20.12.2023 3 pm
Date and time of opening of Technical Bid of e-tender	: 22.12.2023 2 pm
Date up to which rates are to be firm	:31.03.2024

Total Estimated cost : 17,40,000/- (Seventeen lakh forty thousand only)

Cost of tender form is acceptable only by on-line payment. As per condition the tender should sent along with his tender an agreement executed and signed in Kerala Stamp paper worth Rs.220/- and Earnest money deposit 1% (Minimum amount Rs.1500/- of the total cost of articles tendered. Tenders without agreement, tender form and Earnest money deposit will be rejected.

While filing the BOQ care should be taken , there as only gross amount will be consider for financial bid. GST may be calculated on the total amount (column 13) and should be on par with government approved rate.

Dr.Prince A

Principal

Copy to 1.Official website of RIT (www.rit.ac.in)

2. SF/OC

The document is digitally approved. Hence signature is not needed.

Detailed specification for equipment (Quantity required : 30 Nos)

- Dual-band 802.11abgn/ac/ax Wireless Access Point with Multi-Gigabit Ethernet backhaul and onboard BLE/ZIgbee,, 2x2:2 streams (2.4GHz/5GHz) OFDMA, MU-MIMO, Beam Flex+, dual ports, 802.3at PoE support. Includes Limited Lifetime Warranty.
- 2. Multipurpose mounting bracket for R-Series indoor AP's. Supports mounting to hard wall, ceiling, pole or truss
- 3. PoE+ Injector

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4. Warranty : 5 Year

Installation Requirements as follows:-

	Description	
	Architecture	Compliance
		(Yes/No)
	WLAN Controller should be hardware based controller OR appliance-based	
	controller OR software-based controller in which APs acts as a virtual controller.	
	In case of software-based controller it should be bundled with server hardware / VM	
	licenses if needed.	
	Scalability	
	Any type of controller quoted by bidder shall be capable of supporting minimum of	
	30 AP's from day one and scalable to 120 AP's for future requirements.	
	High Availability	
	High availability should be provided for controllers. In the event of a failure of the	
	hardware/virtual controller, a standby/secondary controller/master AP shall	
	automatically take over.	
	WLAN Features	
4	Should support Band Steering feature that forces the dual-band capable clients to	
	the 5 GHz band on dual-band access points. Should have Band balancing to	
	balance the client load on radios by distributing clients between the 2.4 GHz and 5	
	GHz radios.	

5	Controller should involve only in management of Wi-Fi network.	
6	Should support intelligent edge architecture for Wi-Fi access. Wi-Fi should be	
	functional on the device if the link between AP and management controller or the	
	controller itself goes down	
_	Should balance wireless clients across APs on different channels, based upon the	
Ĺ	client load on the APs.	
8	Should support internal DHCP server.	
	Should support IEEE 802.11r Fast BSS Transition and IEEE 802.11 802.11k Radio	
G	Resource Management neighbour reports. Should support Client load balancing to	
	improve WLAN performance by helping to spread the client load between nearby	
	access points.	
	Network Policy Features	
10	WLAN solution should be able to create access policies in order to allow or block	
	packets for inbound traffic/outbound traffic.	
11	WLAN solution to support URL Filtering to block access to unwanted sites.	
	WLAN solution (either integrated or through external) shall provide unique	
12	preshared keys to each and every user in single SSID. All licenses for this solution to	
	be included.	
	WLAN solution (either integrated or through external) shall have a capacity to	
13	inspect all traffic from each wireless client and allow or deny any traffic that does not	
	satisfy specified policies.	
14	It should be possible to create network access policies using Layer 2, Layer 3, Layer	
14	4, client operating system and even whitelisting of clients.	
	WLAN Security	
15	Should prevent users connecting to rogue AP and also prevent an outside user	
15	trying to connect to campus WLAN.	
16	Should protect Wireless network from Denial of Service (DoS) attacks and Intrusion	
	attempts.	
17	Should be able to temporarily block wireless clients with repeated authentication	
	failures for configurable timers.	
1.0	Solution Should support L2 Client Isolation so User cannot access each other's	
10	devices. Isolation should have option to apply on AP or SSID's.	
	1	i

services and acts as the gateway router. 20 The solution should support 802.1x authentication using an external radius server. 21 Should include WIPS to detect and mitigate rogue access points, Spoofing of SSID and Mac spoofing. 22 System should be able to send Email notification when Rogue AP is identified. 23 The solution should provide a Guest Login portal to authenticate users that are not part of the organization. 24 The solution should be able to provide a web-based application that allows non-technical staff to create Guest accounts with validity for fixed duration like hours or days. 25 System should support internal and External Database for user authentication. 26 The controller should support WLAN that will allow users to login through social media like Facebook, LinkedIn, Google/Google+ or Microsoft. 27 Buthorization code to login to the guest network without the intervention of the administrator. The authorization code should be sent directly to the device or via SMS or email. 28 Guest login should also support sponsorship so that guest login requests have to be approved by an admin before allowing access to guest network. 29 WLAN Solution should be able to present a dashboard with information on the status of the WLAN network and internet connectivity. 20 The controller should be able to present a dashboard with information on the status of the WLAN network and internet connectivity. 21 Hea	services and acts as the gateway router.20The solution should support 802.1x authentication using an external radius server.21Should include WIPS to detect and mitigate rogue access points. Spoofing of SSID and Mac spoofing.22System should be able to send Email notification when Rogue AP is identified.23 Guest and BYOD 24The solution should provide a Guest Login portal to authenticate users that are not part of the organization.23The solution should be able to provide a web-based application that allows non- technical staff to create Guest accounts with validity for fixed duration like hours or days.26System should support internal and External Database for user authentication.27The controller should support WLAN that will allow users to login through social media like Facebook, LinkedIn, Google/Google+ or Microsoft.28Guest login should allow for guest users to enter contact information and receive authorization code to login to the guest network without the intervention of the approved by an admin before allowing access to guest network.29VLAN Solution should be manageable using SNMP, CLI, GUI and Mobile app of the WLAN network and internet connectivity.20Licenses21All licenses required for the solution should be provided on day one. The vendor should specify if all features are available with the basic access controller pricing or if should specify which feature requires which type of licensing including its cost.22Controller and access point to be provided with 24/7 tac support and warranty for 5 years.	19	Should support a router mode where Access point can provide NAT and DHCP	
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Access Points		
SL No	Specification / Requirement	Compliance (Yes/No)
	The APs should support the 802.11a, 802.11b, 802.11g and 802.11n, 802.11ac and	
1	802.11ax standards. Each access point to include one POE injector as well with	
	India power cord.	
2	Simultaneous client support on dual band radio is essential.	
3	Shall provide Min 24 dBm Radio output power for both Radio's.	
	Should support minimum 2x2:2 or higher MIMO on both radio bands for an	
4	aggregate capacity of around 1700 Mbps	
E	The Access points should be Centrally Managed by a full-fledged controller/Virtual	
b	Controller/Virtual appliance	
	Since most radio interference come from the WLAN network itself the vendor should	
6	specify what mechanisms such as beam steering/ adaptive antenna technology/	
	beamforming are available in combination to focus the energy on the destination	
	STA and minimize radio interference with the surrounding of the AP.	
	Since the WLAN network will be using an unlicensed band the solution should have	
7	mechanisms that reduce the impact of interference generated by other radio	
	equipment operating in the same band. Describe techniques supported.	
g	The access point should be able to detect clients that have dual band capability and	
	automatically steer those client to use the 5GHz band instead of the 2.4GHz band.	
	The antennas to be dual polarised and should be integrated inside the access point	
9	enclosure to minimize damage and create a low profile unit that does not stand out	
	visually.	
10	The access point should have minimum 2×1 Gigabit Ethernet port	
11	The access point should support 802.1q VLAN tagging	
12	The access point should support IOT based technologies such as Bluetooth, zigbee	
	either inbuilt or using an external usb module.	
13	The access point should support WPA2 and WPA3 enterprise authentication and	
	AES/CCMP encryption. AP should support Authentication via 802.1X and Active	
	Directory.	
14	Implement Wi-Fi alliance standards WMM, 802.11d, 802.11h and 802.11e	
—	1	

15	Should support the following channelization - 20MHz, 40MHz, 80MHz	
	The Access Point should provide for concurrent support for high definition IP Video,	
16	Voice and Data application without needing any configuration. This feature should	
	be demonstrable.	
17	The access point should support application recognition and control	
18	Should support Transmit power tuning in 1dB increments in order to reduce	
	interference and RF hazards	
19	Should support 1GB RAM and 512 MB flash	
20	Should support upto 30 simultaneous Voip clients	
21	Should support min 500 clients per AP or more	
22	Should support location based services	
23	AP should support DHCP and NAT	
24	Should support tunneling such as Layer 2 Tunnelling protocol and Generic routing	
24	Encapsulation.	
25	Should support meshing technologies where cable infrastructure may not be	
2.5	available	
26	Shall support 30 SSID's per AP.	
27	Shall support 1 USB port also.	
28	Operating Temperature: 0°C - 45°C	
29	Operating Humidity: 10 % - 95% non-condensing.	
30	Should be plenum rated and comply to RoHS	
31	Should be WiFi certified; WiFi certificate to be enclosed	
32	Should be WPC approved; ETA certificate to be enclosed	
33	Should support the following standards - WEEE & RoHS, EN 60950, EN 61000	
34	Device should be UL 2043 Plenum Rated.	