ODISHA COMPUTER APPLICATION CENTRE
BHUBANESWAR

TENDER DOCUMENT

Enquiry No. - OCAC-SEGP-INFRA-0026-2020-ENQ-20029

Supply, Installation, Implementation and Maintenance of Unified Wireless Network System at Orissa High Court Building, Cuttack.

Period of Sale of Tender Document	:Dt. 22-09-2020 to 19-10-2020 at 02:00 PM
Last date for receiving queries	:Dt. 28-09-2020 by 04:00 PM
Pre Bid Conference	:Dt. 29-09-2020 at 04:00 PM
Issue of Corrigendum if any	:Dt. 03-10-2020
Last Date for Submission of Tender	:Dt. 19-10-2020 at 03:00 PM
Place of Submission of Tender Document	: Odisha Computer Application Centre, Plot No.-N-1/7-D, Acharya Vihar Square, RRL Post Office, Bhubaneswar-751013
General & Technical Bid Opening	:Dt. 19-10-2020 at 04:00 PM
Financial Bid	: Intimate later
Cost of Tender Document	:₹ 1120/-(inclusiveof12%GST)

Place:
Date:

Signature & Seal of the Bidder

SECTION-I
NOTICE INVITING TENDER

Sealed tendersare invitedfrom the prospective Bidder to undertake the work of Supply, Installation, Implementation, Operation and Maintenance ofCentrally Managed Campus Wireless Network at Odisha High Court, Cuttack Office.RFP document shall be downloaded from the web site www.ocac.in and www.odisha.gov.in from 22-09-2020 to 19-10-2020, 02:00 P.M. The tender document shall be deposited along with anon-refundable tender document fee of Rs.1120/- (Rupees One Thousand One Hundred Twenty Only) in shape of Demand Draft drawn in favour of Odisha Computer Application Centre, Bhubaneswar.

Theauthorityreservestherighttoaccept/rejectanyandpartofthere orallthetendersand without assigning any reason thereof.

GENERAL MANAGER (Admn.)
ODISHA COMPUTER APPLICATION CENTRE
PLOTNO.-N-1/7-D, ACHARYA VIHAR SQUARE, P.O.-RRL, BBSR-13
PHONE: 91-674-2567280, 2567064, 2567295
FAX: 91-674-2567842

Place:
Date:

Signature & Seal of the Bidder

SECTION – II
INVITATION FOR BIDS

1.1 INTRODUCTION

Odisha Computer Application Centre (OCAC), Bhubaneswar on behalf of Odisha High Court, Cuttack invites competitive bid proposals from interested bidders who have sufficient experience in Supply, Installation, Commissioning and Operation & Maintenance of Wire & Wireless Networking Equipments.

1.2. OBJECTIVES

Odisha Computer Application Centre **(OCAC)** intends to setup/commission a secured and centrally managed campus wireless network system based on the latest 802.11ac standard. The services includes supply, installation, commission of wireless equipment with its required accessories for Odisha High Court, Cuttack office and Operate & Maintain the System for a period of 3 (Three) Years.

Bill of Material

Sl. No.	Description	UoM	Quantity
Active Component			
1	Next Generation UTM/Firewall	Pair.	1
2	PoE Access Switch (24 Port)	Nos.	11
3	Dual Radio 802.11ac Indoor Access point	Nos.	81
4	1G SM Transceiver for existing switch Cisco Catalyst 4506-E	Nos.	2
5	1G SM Transceiver for above Access switch	Nos.	7
6	Wireless Controller	Pair	1
7	5KVA Online UPS with 1hr Backup	Nos.	2
8	1KVA Online UPS with 30min Backup	Nos.	11
Passive Components			
1	Cat6 UTP Cable 23 AWG CM Rated FR PVC	Meter	2430
2	CAT6 INFORMATION OUTLET WITH FACE PLATE AND BACK BOX (IO Box)	Nos.	81
3	CAT6 24 PORT JACK PANEL Loaded	Nos.	13
4	CAT6 UTP PATCH CORDS (1Mtr)	Nos.	162
5	6 Core SM outdoor Optical Fibre Cable	Nos.	400
6	12-Port Rack Mount Sliding LIU with Loaded SC/LC SM Adaptor/Coupler	Nos.	5
7	Pigtail SC SM 1.5M LSZH	Nos.	48
8	SC-LC SM OFC Duplex Patch Cord-2 meter	Nos.	9
9	Wall mount 9U 600D Equipment Rack	Nos.	10

Place:
Date:

Signature & Seal of the Bidder

10	42U Floor mount Rack Aluminium Frame-800X1000 with Side Panels of 2nos and Heavy Duty Castors with break	Nos.	1
11	Chemical Earthing	Nos.	2
Services			
1	OFC Underground Laying with supply of ISI mark HDPE conduit including Overhead / Road Cutting / Boring per Meter	Meter.	400
2	LIU Termination Charges	Nos.	5
3	SC/LC Connection/Splicing (per core)	Nos.	48
4	Cat-6 Cable Laying with double lock casing capping / PVC conduit	Meter	2430
5	I/O punching & fixing	Nos.	81
6	Rack (42U/9U) Fixing	Nos.	11
7	Patch Panel Punching & Fixing	Nos.	13
8	Access point Installation with protective Enclosure	Nos.	81

SECTION-III
GENERAL TERMS & CONDITIONS

1. Scope of Work:

Scope of work includes Supply, Installation; Commission & Maintenance of Wire & Wireless Networking Equipments at Odisha High Court, Cuttack. The selected bidder shall be responsible for execution of the following work.

- Site survey & feasibility is to be undertaken for identification of the actual places in the premises where network & Wi-Fi points are required to be installed.
- To ensure link level reliability and maximum uptime, the network should be designed with OFC backbone connectivity.
- Design and deployment of wire & wireless Network infrastructure in order to provide mobility with latest wireless security with benefits like seamless roaming and connectivity anywhere and anytime to the staff.
- Deployment of wireless network across the Old & New High Court building and to form 1G backbone connectivity to distribution/access switches.
- Deployment of 24 ports PoE/PoE+ switches across the locations for powering of wireless access points.
- The Wireless Network should be deployed using Wi-Fi Certified Product.
- Deployment of the latest 802.11ac Standard Wireless Access Points (WLAN AP's) across various floors with centralized control, provisioning and management through one Wireless AP as Controllers(Virtual AP Controller can manage more than 100 AP with automatic failover of Master AP.

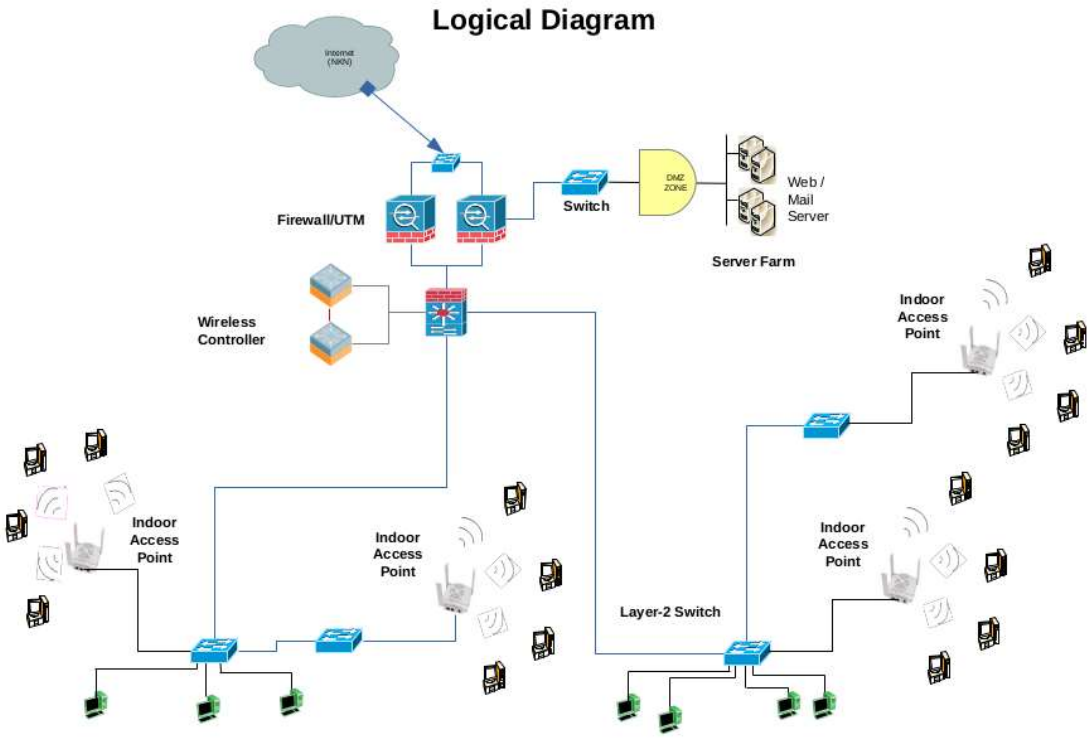
Place: **Signature & Seal of the Bidder**
Date:

- The Wireless System should have automated WLAN configuration and management functions so that the network managers have the control, security, redundancy and reliability needed to cost–effectively scale and mange the wireless networks.
- The Wireless controller should have the capability to support wireless data, voice, and video applications and deliver centralized security policies, wireless intrusion prevention system (IPS) capabilities, RF management, quality of service (QoS) and mobility..
- The Wireless Network should support role based access for device/user on the network connected to any available wire/wireless Ethernet port and get the desired access.
- The Network should support role based access for device/user on the network connected to any available wire/wireless Ethernet port and get the desired access.
- User based authentication and policy management relating to bandwidth, VLAN, and QoS must be implemented to access the Network.
- The Network should support similar access rights and /or differentiated access rights to users across wired and wireless network.
- The WLAN system should be virtually hack proof with capability to prevent a wireless activity not conforming to the security policy of High Court for unauthorized access.
- The Network must be configured with a single SSID to join the Network for optimized use of WLAN setup.
- The Wireless Network should able to monitor the interference and be able to take correction action like changing to least interfering channels for proper functioning.
- The WLAN System should have provision for providing only internet access over the Wi-Fi network for a pre-designated limited period for the guests.
- The network should be able to detect rouge Access points, prevent any valid Client from connecting to the rouge access point. If the rouge AP is also connected to the Ethernet port of the wired Network, the WLAN system should have the capability to BLOCK/Shut that Ethernet port.
- Supply of all the networking equipments for implementation LAN & Wi-Fi Complying to the Technical Specifications given in **SECTION-IV**.
- Supply, Installation, Commission & Maintenance of the entire networking equipments for a period of 5 years from the date of final acceptance.
- Supply any other items (like screws, clamps, fasteners, ties, anchors, supports, grounding strips, wires, termination kits etc.) required for installation of all the required items for implementation of Networking Equipments for setting up LAN and WiFi at Odisha High Court.
- Coordination for resolution of reported issues within the timeframe as per the SLA.
- The selected bidder shall be responsible to provide maintenance support of all supplied items for a period of 3 years and keep 99% uptime of the Network,
- The warranty & maintenance support shall start from the date of Final Acceptance Test (FAT).

Place: **Signature & Seal of the Bidder**
Date:

- At the time of equipment delivery, the selected bidder shall submit a certificate/ undertaking from OEMs mentioning the fact that the equipment supplied are covered under warranty & support for a period of 3 years.

2. Logical Diagram



3. Eligibility Criteria:

i. The bidder should be a company registered under Indian Companies Act, 1956 and operating since last 5 years from the date of publication of RFP. It should be registered with GST Authorities. The bidder should furnish the copy of company registration certificate, GST registration certificate, PAN card and up to date IT return till 31st March 2019 along with the tender document.

ii. Consortiums are not allowed.

iii. The firm should have a local office at Bhubaneswar.

iv. The average annual turnover of the firm for last three financial years must be**10** Cr. Proof of audited balance sheets as evidence that the bidder has financial capability to perform the contract and that the bidder is a profit making company. A certificate from the bankers of the company should also be submitted in respect of financial capability.

Place: **Signature & Seal of the Bidder**
Date:

v. The Bidder should have valid ISO 9001 & 27001 Certification.

vi. The bidder has to submit tender specific valid authorization certificate(s) from the OEMs for the items they quoted stating their participation in the said RFP, which is mandatory.

vii. The bidder and his OEMs shall have adequate repair facilities for repair of faultyequipment in India. The number and location of repair facilities should be such as tomeet the uptime and SLA. Both the bidder and his OEM should commit full professional services support and resources for the successful completion of the project. A documentary proof to the above effect signed by both the bidder and his OEM must be submitted along with the bid inclusive of the following:-

"This is to confirming that the entire equipment being quoted for this project in the bid should not be declared as End of Sale / End of Support on the date of submission of the bid. Service/Support including spares, patches for the quoted products shall be available for the complete duration of the project or 5 years whichever is higher from the date submission of bid."

viii. The bidder should have experience of implementation/commission of the similar nature work in any Govt./PSU during last 05 financial years. Similar nature of work means implementation of Wire & Wireless Network Infrastructure Solution. Proofs of the same like PO copies, installation & completion reports, performance certificates, with address & contact details of the reference installation list should be submitted along with the bid. In absence of supporting documents, the bid is liable to be rejected.

1 No. (One) work order must be of 250 ports (Switch Ports) and 80 Nos of Wireless AP.

OR

2 Nos. (Two) work order, each must be of 200 ports (Switch Ports) and 60 Nos. of Wireless AP.

OR

3 Nos. (Three) work order, each must be of 150 ports (Switch Ports) and 50Nos of Wireless AP.

ix. The bidder should not be under a declaration of ineligibility for corrupt and fraudulent practices issued by Government of India or any State Government/PSU in the country of India. A self-declaration certificate to this effect should be enclosed.

Necessary supporting documents on fulfillment of eligibility criteria should be attached for authentication along with a signed copy of the tender document to indicate

acceptance of all terms and conditions set forth in the tender. Organizations failing to provide complete information on any of the requirements are liable to be rejected.

4. Cost of Tender Document:

Costs of Tender document will ₹ 1120/-(Inclusive of 12% GST).The tender document fee must be submitted before the Pre-Bid conference at OCAC office, failing which the bidder will neither be allowed to attend the pre-bid conference nor their queries, be entertained by OCAC.

5. Pre-Bid Conference/Meeting:

The bidder or its official representative (not more than two representatives per bidder) is invited to attend the pre-bid meeting. The objective of this meeting is to address the generic queries of the prospective bidders related to the tender document. The queries by the applicants will be provided in the specified format attached in **Annexure-G6**.

Only the bidders, who have deposited the tender document fee in shape of DD in favour of "Odisha Computer Application Centre (OCAC), Bhubaneswar" are allowed to attend the pre-bid conference/meeting and submit their pre-bid queries in the specified format. Such bidders can download the tender document from the specified website and submit the queries as per the format given in the tender document. Tendering authority shall respond to the queries of only those bidders who have deposited the tender document fee before the Pre-Bid conference/meeting.

As a result of discussions in the pre-bid conference, if modifications in the tender document, specifications of services and/ or goods are considered necessary, they may be done by issuing a addendum/ corrigendum and its copies shall be sent through email/ post to all the bidders having purchased the bidding document. The corrigendum/addendum and the final bidding document will be placed on the websites.

The tendering authority reserves the right not to respond to any/all queries raised or clarifications sought if, in their opinion and at their sole discretion, they consider that it would be inappropriate to do so or do not find any merit in it.

6. Time of Completion of the Project:

Supply, Installation & Integration of work shallbecompletedwithin**12 Weeks**fromthedate of issue of Purchase Order.

7. Earnest Money Deposit:

a) EMDistobefurnishedbythebidder as mentioned below alongwiththe tender.

Sl. No.	Category Description	EMD Amount
1	Supply, Installation, Implementation, Operation and Maintenance of Centrally Managed Campus	₹.2,00,000/-

Place: **Signature & Seal of the Bidder**
Date:

	Wireless Network	

b) The EMD shall be only in the form of Demand Draft in favour of **Odisha Computer Application Centre**, payable at **Bhubaneswar** drawn in any schedule bank. The validity of DD should be at least three months from the date of floating of tender.

c) Bidder should write the organization name at the back side of the DD.

d) The demand draft shall be submitted along with General bid envelope. Bids without EMD shall be rejected.

e) The EMD shall be forfeited if a bidder withdraws its bid during the period of bid validity.

f) The EMD of unsuccessful bidders will be returned to them within a month of selection of vendors.

g) In case of a successful bidder the EMD may be forfeited if the bidder fails to accept the Purchase Order.

8. Performance Bank Guarantee (PBG):

The bidder shall furnish a Performance Bank Guarantee (PBG) for 10% (ten percent) of the contract price while submission of bill for payment. The PBG must be from the nationalized bank only in India.

9. Payment Term:

1. 90% of payment will be made after successful completionof the work and successful Final Acceptance Test (FAT).
2. Balance 10% will be released after 30 days of successful operation of the equipment.

10. Offer Validity Period:

The tender offer must be valid for 180 **Days**. Any offer falling short of the validity period is liable for rejection.

11. Service Level Standards & Support:

A dedicated on-site support team will manage the Wireless Network, Network Security, Physical Infrastructure Security and Help Desk System. The bidder shall provide prices for support services for the three years; however the bidder will be provide the services for one year initially and based on the satisfactory performance the extension of support services will be extended to the bidder.

Place:
Date:

Signature & Seal of the Bidder

Wireless Network Management Services:-

The objective of this service is to ensure continuous operation and upkeep of the Wire and Wireless network infrastructure at the hub points including all active and passive components. The services to be provided under Network Management shall include the below activities:-

- Configure and manage the point to point device installed at each location.
- Mapping the ports and IPs as per the requirement of projects.
- Structure the IPs as per the VLAN and Zone.
- Manage the bandwidth as per the application requirements.
- Attending to and resolving network failures and issues
- Support and maintain the overall network infrastructure including but not limited to LAN passive components, switches, firewall etc.
- Configuration and backup of network devices including documentation of all configurations.
- Monitoring of the network to spot the problems immediately.
- Provide information on performance of Ethernet segments, including capacity utilization and error statistics for the segment.

Security Administration and Management Services:-

The objective under this service is to provide a network secure environment through implementing the standard security policy. The services includes:-

- Managing and monitoring various devices/ tools such as firewall, intrusion detection, content filtering and blocking, virus protection, and vulnerability protection.
- Capping and controlling the bandwidth usages and network flood.
- Maintaining an updated knowledge base of all the published security vulnerabilities and virus threats for related software and microcode etc.
- Ensuring that latest patches/ workarounds for identified vulnerabilities are applied immediately w.r.t. operating system, system software.
- Respond to security breaches or other security incidents and coordinate with respective OEM in case a new threat is observed to ensure that workaround / patch is made available for the same.
- Maintenance and management of security devices, including, but not limited to maintaining firewall services to restrict network protocols and traffic, detecting intrusions or unauthorized access to networks, systems, services, applications or data, protecting email gateways, firewalls, servers, from viruses.
- Ensuring that the security policy is maintained and updates to the same are made regularly as per ISO 27001.

Physical Infrastructure Management and Maintenance Services:-

- The scope of the project also includes proactive and reactive maintenance, repair and replacement of defective components.
- The records of all maintenance of the system and a logbook should be prepared and product with department for further verification and information.

Helpdesk Services:-

The help desk service will serve as a single point of contact for all related complain/issues/incidents and service requests. The activities includes:-

- Help Desk for reporting issues / problems.
- To provide a dedicated service desk facility and set-up all necessary activities for reporting issues to helpdesk. The incident reporting/monitoring personnel will have the following:
    - Specific E-Mail account
    - Dedicated Phone Numbers

The prime objective of the service levels is to ensure high quality of services from the selected bidder. The service levels defined below indicate the target level of services required, measurements parameter with penalties.

Sl. No.	Measurement Parameter	Service Level	Penalty
1	Time to resolve complaints after lodging the complaint	Within next 48 hours of lodging the complaint	No Penalty
		> 48 Hours of lodging the complaint	A penalty of Rs. 200 for every day, subject to maximum 10% of the cost of the equipment.

Note: -

a) If the call is not resolved and the value of penalty for any supplied item reaches value of the item, a NOTICE shall be issued. If two such notices are issued during a year for any item or if tendering authority feels that Selected Bidder is not performing as per requirement, then tendering authority may terminate the contract and forfeit the remaining payable amount along with the Performance security deposit.

b) Maximum applicable penalty shall not exceed 10% of the total contract value. If the penalty exceeds maximum applicable penalty, OCAC at its discretion may terminate the contract and forfeit the remaining payable amount along with the Performance security deposit.

Place: **Signature & Seal of the Bidder**
Date:

12. Manpower Support:

Considering the above scope of work, the expert manpower should be recruited for this solution. The scope of this unit is not only to manage all the activities starting from implementation to maintenance but also monitor & managing the whole network after full-phase installation.

Sl. No.	Manpower	Total	Qualification
1	Network Administrator	01	Degree with MCSE/CCNA/Wireless and Security Certification with 7 years of Experience
2	Support Engineer	01	Diploma with MCSE/CCNA with 2 years of wireless /Fiber network experience
3	Help Desk Engineer	01	Graduate with network knowledge and excellent communication skills

13. Rejection

Before acceptance of the items if the equipment supplied by the bidder is found defective in materials or workmanship or otherwise not in conformity with the requirements of the contract, the purchaser shall have the right to either reject or to request in writing for rectification of the defects. Then the vendor shall with utmost diligence, at his own expense, make good the defects so specified or replace the defective equipment if the vendor fails to do so, the purchaser either.

h) May at its option to replace or rectify such defective equipment and charge to the vendor the excess cost incurred by the purchaser plus 15% (Fifteen percent) extra as administrative charges.

OR

ii) Terminate the contract for default. Further, in the event, the vendor is not able to rectify or replace the faulty equipment within reasonable time, the decision of the Odisha Computer Application Centre, Bhubaneswar shall be final.

14. Delay in completion of the Project

The time schedule for completion of the project as mentioned in Clause 5 above is very important and the bidder must take utmost care to complete the delivery and installation within scheduled time. If the work is delayed for any reason for which Odisha Computer Application Centre is not responsible, a penalty @0.5% of the cost of the purchase order will be charged to the supplier for a delay of one week or part thereof, subject to maximum 5% of the cost of the purchase order.

The purchaser reserves the right to cancel the order if it is not executed within the prescribed completion time and forfeit the entire **EMD** amount. Delay in supply / installation /

Commissioning in the part of the supplier for materials/equipments shall be treated as delay in the delivery/ installation of the goods. The purchaser reserves the right to cancel the order in full or in part. In the event of such cancellation, the purchaser shall have the right to **collect penalty from the performance bank guarantee**. However, for valid reasons (like any unavoidable situation at the client site) duly notified in advance and considered by the purchaser, revised delivery schedule may be accepted at the sole discretion of the purchaser.

15. Force Majeure Condition

If the execution of the contract/supply order is delayed beyond the period stipulated in the supply order as result of outbreak of hostilities, declaration of an embargo or blockade of fire, flood, acts of God, then OCAC may allow such additional time by extending the project execution timeframe as considered to be justified by the circumstances of the case and its decision will be final. If additional time is granted by the OCAC, the supply order shall be read and understood as if it had contained from its inception the execution date as extended.

16. Insurance of Equipments

The materials to be supplied should be **insured** by the vendor on behalf of the purchaser from his warehouse to the installation site. The insurance coverage should cover the transport of materials by Rail/Road to the destination and till handing over the same to the client after successful installation. The materials/equipment found lost or damaged in transit or during installation and commissioning should be immediately replaced to avoid delay in commissioning the equipments.

17. Installation Supervision and Services

The supplier shall depute experienced persons for installation and testing of equipment supplied.

18. Replacement

If the material/ equipment or any portion thereof gets damaged or lost during the transit and installation, the vendor shall effect the replacement of such materials/ equipment within a reasonable agreed time or **15 days whichever is earlier** to avoid delay in commissioning the equipment.

19. Purchaser's Procurement Rights

Without incurring any liability, whatsoever to the affected bidder or bidders, the Purchaser reserves the right to:

i) Amend, modify, or cancel this tender and to reject any or all proposals without assigning any reason.
i) Change any of the scheduled dates stated in this tender.
ii) Reject proposals that fail to meet the tender requirements.
iii) Should the Purchaser be unsuccessful in negotiating a contract if required with the

selected bidder, the Purchaser will begin contract negotiations with the next best value bidder in order to serve the best interest.

iv) Make typographical correction or correct computational errors to proposals

v) Request bidders to clarify their proposal.

20. Inspections

i) The representatives of Odisha Computer Application Centre shall have the right to make inspection during the execution of work at the site.

ii) The items of supply/installation shall be verified by the authorized representatives of OCAC during final inspection and the bills shall be submitted by the party after such inspection.

21. Other Instructions

a) The bidder must organize the bid in accordance with the format specified in the tender document.

b) The tenders not submitted in the prescribed format or incomplete after due date in any sense are liable to be rejected.

c) OCAC is not responsible for non-receipt of tenders within the specified date and time due to any reason including postal delay or holidays.

d) The rates should be valid for a minimum period of 180 days.

e) OCAC reserves the right to accept or reject any bid without assigning any reason thereof and OCAC's decision in this regard will be treated as final.

f) OCAC reserves right to cancel the Purchase Order in the event of one or more of the following situations:-

   a. Delay in delivery and installation beyond the specified period for delivery.

   b. Major discrepancy in hardware & other components noticed during any stage of the project.

g) OCAC reserves the right to ask for any type technical clarification and make technical presentation before the technical committee members failing which it may leads to CANCEL the bid.

h) OCAC reserves the right to verify the equipments as per the specifications asked in the RFP.

i) Un-signed & un-stamped bid shall not be accepted.

j) Undertaking for subsequent submission of any of the document asked in the tender will not be entertained under any circumstances. However, OCAC reserves the right to seek fresh set of documents or seek clarifications on the already /submitted documents.

k) Upon verification, evaluation / assessment, if in case any information furnished by the vendor is found to be false/incorrect, their total bid shall be summarily rejected and no correspondence on the same, shall be entertained.

l) No deviations from tender terms and conditions will be accepted. Any violation thereof will lead to the rejection of the bid.

Place: **Signature & Seal of the Bidder**
Date:

m) OCAC will not be responsible for any misinterpretation or wrong assumption by the vendor.
n) OCAC reserves the right to alter / increase / decrease the quantity of items, as the case may be, to meet the requirements at any point of time.
o) OCAC is not responsible for non-receipt of tenders within the specified date and time due to any reason including postal delay or holidays.
p) Over-writing/over-typing or erasing of the figures are not allowed and shall render the tender invalid.

22. Detailed Evaluation

i) Only the bids considered to be substantially responsive shall be considered for detailed evaluation.

ii) The evaluation of the tender will be made on the basis of least cost for the entire range of product (sum of all quoted prices inclusive of taxes). In case there is any discrepancy between unit price & total price, the unit price will prevail.

iii) The purchaser shall evaluate each bid in detail in respect of Technical specifications; Price quoted and compares them with other bids in the above mentioned aspects.

iv) The purchaser reserves the right to evaluate each item either by basic configuration or by combining with one or more of the options asked. Purchaser's decision in this matter shall be final and binding.
v) The purchaser reserves the right to negotiate specifications, prices during evaluation if found necessary.

23. Jurisdiction Of High Court Of Odisha

Suites, if any arising out of the contract shall be filed by either party in a court of Law to which the jurisdiction of the High Court of Odisha extends.

24. Right To Reject/Accept The Tender

The purchaser reserves the right either to reject or accept any or all tenders. The purchaser has exclusive right to alter the quantities of materials at the time of placing the final purchase order. After placing the purchase order, the purchaser may order to defer the delivery of the material. It may be clearly understood by the tenderer that the purchaser need not assign any reason for the above action.

25. Final Authority

The final authority for payments will be the consignee except otherwise specifically stated and if the vendor/supplier desires to appeal against any matter he shall appeal to Odisha Computer Application Centre, N-1/7-D, Nayapalli, near Planetarium, Acharya Vihar square, Bhubaneswar-751013 whose decision on such matters shall be final and conclusive.

Place: **Signature & Seal of the Bidder**
Date:

24. Dispute Resolution

Any dispute or difference, whatsoever, arising between the parties to this agreement arising out of or in relation to this agreement shall be amicably resolved by the Parties through mutual consultation, in good faith and using their best endeavours. Parties, on mutual consent, may refer a dispute to a competent individual or body or institution or a committee of experts appointed By OCAC (Nodal Authority) for such purpose and abide by the decisions thereon.

On non settlement of the dispute, same shall be referred to the commissioner-cum-secretary to Government, IT department, and Government of Odisha for his decision and the same shall be binding on all parties, unless either party makes a reference to arbitration proceedings, within sixty days of such decision.

Such arbitration shall be governed in all respects by the provision of the Arbitration and Conciliation Act, 1996 or later and the rules framed there under and any statutory modification or re-enactment thereof. The arbitration proceeding shall be held in Bhubaneswar, Odisha.

Accepting all above terms and conditions.

Annexure: G-1
(To be in Company letter head)

General Information

Company Name			
Registered Office Address			
City		Pin	
State		URL	
Telephone		Cell	
Fax		E-mail	
Office Address (in Odisha)			
City		Pin	
State		URL	
Telephone		Cell	
Fax		E-mail	

Place:
Date:

Signature & Seal of the Bidder

Annexure: G-2
(To be in Company letter head)

Self Declaration

Date : _____

Ref : _____

To,

ODISHA COMPUTER APPLICATION CENTER
OCAC BUILDING, PLOT NO. N1/7-D,
RRL POST OFFICE, BHUBANESWAR-751 013

In response to the invitation No. **ENQUIRY No. - OCAC-xx-xx/2020, Dt: xx-xx-2020** Ms. /Mr. _____, as a _____, I / We hereby declare that our company _____is having unblemished past record and was not declare ineligible for corrupt & fraudulent practices either indefinitely or for a particular period of time.

Signature of the witness
Date:
Place:

Signature of the Tenderer
Date:
Place:

Place:
Date:

Signature & Seal of the Bidder

Annexure: G-3
(To be in Company letter head)

Self Declaration

Date : _____

Ref : _____

To,

ODISHA COMPUTER APPLICATION CENTER
OCAC BUILDING, PLOT NO. N1/7-D,
RRL POST OFFICE, BHUBANESWAR-751 013

In response to the invitation No. **ENQUIRY NO. - OCAC-xx-xx/2020, Dt: xx-xx-2020,** Ms. / Mr. _____, as a _____, I / We hereby declare that our company _____is having unblemished past record and have not been declared blacklisted by any Central/State Government institution and there has been no pending litigation with any government department on account of similar services. I/We further declare that our company has not defaulted in executing any Government order in the past.

Signature of witness
Date:
Place:

Signature of the Tenderer
Date:
Place:

Place:
Date:

Signature & Seal of the Bidder

Annexure: G-4
(To be in Company letter head)

Representative Authorization Letter

Date : _____

Ref : _____

To,

ODISHA COMPUTER APPLICATION CENTRE
OCAC BUILDING, PLOT NO. N1/7-D,
RRL POST OFFICE, BHUBANESWAR-751 013

Ms. /Mr. _____ is hereby authorised to sign relevant documents on behalf of the company in dealing with invitation reference No. **ENQUIRY NO. - OCAC-xx-xx/2020, Dt: xx-xx-2020**. He is also authorised to attend meetings & submit technical & commercial information as may be required by you in the course of processing above said application.

Thanking you,

Authorized Signatory
Representative Signature

Signature attested

Place:
Date:

Signature & Seal of the Bidder

Annexure: G-5
(To be in Company letter head)

Acceptance of terms & conditions contained in the tender documents

To
The General Manager (Admin.)
Odisha Computer Application Centre
OCAC Building, Plot No. N-1/7-D
Acharya Vihar Square
RRL Post Office, Bhubaneswar
Odisha - 751013

Sir,

I have carefully gone through the terms & conditions contained in the tender document - **OCAC-xx-xx/2020, Dt: xx-xx-2020**, – regarding **"Supply, Installation, Implementation, Operation and Maintenance of Centrally Managed Campus Wireless Network at Odisha High Court, Cuttack Office".**

I declare that all the provisions of this Tender Document are acceptable to my company. I further certify that I am an authorised signatory of my company and am, therefore, competent to make this declaration.

Signature of witness
Date:
Place:

Signature of the Tenderer
Date:
Place:

Place:
Date:

Signature & Seal of the Bidder

Annexure: G-6

Pre-Bid Queries Format

RFP Enquire No. – XXX-XXX-XXX

Name of the Company/Firm:

_____

_____

Tender Fee Receipt No. _____Dated _____ for Rs. _____/-

Name of Person(s) Representing the Company/ Firm:

Name of Person	Designation	Email-ID(s)	Tel. Nos. & Fax Nos.

Company/Firm Contacts:

Contact Person(s)	Address for Correspondence	Email-ID(s)	Tel. Nos. & Fax Nos.

Query / Clarification Sought:

Sl. No.	RFP PageNo.	RFP ClauseNo.	Clause Details	Query / Suggestion / Clarification

Note: - Queries must be strictly submitted only in the prescribed format (.XLS/ .XLSX). Queries not submitted in the prescribed format will not be considered/ responded at all by the tendering authority. Also, kindly attach the colored scanned copy of the receipt towards the submission of the bidding/tender document fee.

Place:
Date:

Signature & Seal of the Bidder

Annexure: G-7

List of Enclosures

Sl. No.	Enclosure description	Enclosed (Yes / No)	Annexure / Attachment / Page No. / Envelop No. of the enclosure
1	Annexure-G1 General Information		
2	Copy of Registration Certificate of the Bidder		
3	Organization Profile		
4	Documentary proof of an authorized partner of manufactures of items quoted.		
5	Declaration of ineligibility for corrupt and fraudulent practice (Annexure-G2)		
6	Self Declaration that the bidder hasn't been black listed by any Govt./PSU (Annexure-G3)		
7	Representative Authorization Letter (Annexure-G4)		
8	Acceptance of terms and Condition (Annexure-G5)		
9	Copy of PAN no allotted by Income Tax Department		
10	Copy of GST Registration Certificate		
11	Experience / Work completion certificates from the client.		
12	Copy of valid ISO 9001 & 27001 certificates.		
13	Tender document fee in a sealed envelope (Super scribe Tender document fee on the top of the sealed envelope) with General Bid	DD No : Amount : Bank:	
14	EMD amount in a sealed envelope (Super scribe EMD amount on the top of the sealed envelope) with General Bid	DD No : Amount : Bank:	
15	General bid duly signed (sealed envelope)		
16	Technical specification with printed technical brochure duly signed (sealed envelope)		
17	Commercial bid duly signed (sealed envelope)		

Place:
Date:

Signature & Seal of the Bidder

SECTION-IV
TECNICAL SPECIFICATION

Technical Specification for Networking Equipments (Passive & Active)

Technical Specification Passive Components
• All Passive materials i.e. (Cat6 UTP Cable, Fibre Cables/Components) should be from the same OEM. The OEM should be ISO 9001:2015 & ISO 14001: 2015 Certified. Copy of ISO Certificates need to submit with the bid. • CAT 6 UTP components should have independent lab verification like ETL certificates. Need to submit the copy of certificates. • OEM and their quoted Brand should have minimum 10 Years of Installation presence in India. Proof of Documents to be attached.

Sl. No.	Specification		Complied (Yes/No)	Reference Page No
A	**Cat 6 UTP 23 AWG UTP Cable**			
Model:				
01	Cat 6	Should meet minimum Category 6 requirements		
02	Type of Conductors and Grade	4 Pair 23 AWG Solid Copper Conductors with FR Grade PVC		
03	Frequency	Characterized to 600Mhz.		
04	Standards in Compliance	ETL Certified & Compliant to TIA / EIA 568-C.2 Category 6 cable specifications		
05	Performance Testing Compliance	Zero Bit Error Performance Testing by ETL		
06	Jacket	Fire Retardant PVC		
07	Separator	Incorporates central X-shaped polymer spine maintaining 4 pairs separation.		
08	Pull Thread / Strip Thread	Should have Cable Pull Tension Thread inside the UTP Cable		
09	Mechanical Characteristics	Conductor: Solid Bare Copper 23 AWG Conductor Dia Norm: 0.574 Insulation: PE Average Thickness (±0.03mm): 0.23 Min. Point Thickness (mm): 0.18 Insulation Dia. (±0.05mm): 1.04 Twisting Lay Length (mm): 30underneath Cabling Lay Length (±10mm): 140		

Place:
Date:

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		Average Thickness (±0.05mm): 0.50 Min. Point Thickness (mm): 0.46 Outer Dia. (±0.15mm): 6.20 Temperature: Max 75°C		
10	Electrical/Optical Characteristics	Current Rating: 1.5 A Max Conductor DC Resistance: 66.5Ω/km Voltage: 150VAC Propagation delay: 535ns/100m @ 250MHz		
11	Certification	UL Listed and ROHS Compliant		
12	Rating	CM Rated - For Horizontal Cabling		
13	Meter Marking	Printed with every Feet Lengths of the UTP Cable		
B	**Cat6 24 Port Loaded UTP Patch Panel 1U Height**			
Model:				
1	Material	CRS - Cold Rolled Steel (Thickness - 1.5mm) with ROHS Compliant		
2	Dimension	44mm H x 483mm W x 98mm D		
3	Rear Cable Manager	Flat type metal with Perforated Rear Cable Manager to hold CAT6 UTP Cable with Velcro cable ties		
4	Labels	Should include labels with transparent clear label covers at the front and Port number at the back. 4 x 6 ganged jack configuration		
5	Jack Connector	Plastic Housing: Polycarbonate, UL94V-0 rated Operating Life: Minimum 750 insertion cycles Contact Material: Copper Alloy Contact Plating: 50µ" Gold/100µ" Nickel Contact Force: 100g minimum Plug Retention Force: 15 lb. Operating Life: Minimum 200 determinations IDC Contact Plating: Tin/Lead Plate Wire Accommodation: 22-24 AWG solid		
6	RJ45 I/O Compatibility	Individual Jack Compatible with RJ45, RJ11 & RJ12		
		Pointed IDC Tower on RJ45 Jack for easy termination		
		Half Plugged Patch Cord should be spitted out if not properly plugged in		
7	Dust Proof	Each port features the patented spring-loaded shutter: – prevents incomplete mating – protects from dust and		

Place:
Date:

Signature & Seal of the Bidder

		contaminants		
8	Commercial Standards:	TIA/EIA-568-B.2-1 Component Compliant FCC Subpart F 68.5 Compliant IEC-603-7 Compliant ISO 11801 Class E Compliant ETL Verified for Category 6 Component Compliance		
C	**Cat 6 UTP Patch Cords 1Mtrs**			
Model:				
1	Mechanical Characteristics – Cable	Conductor size: 24 AWG stranded copper wire Nom. O.D.: 5.9mm Sheath: LS0H Bend radius: 4X O.D.		
2	Mechanical Characteristics – Plug	MIN operating life: 750 insertion cycles RJ45 plug and boot material: Clear polycarbonate Contact material: 0.35mm thick copper alloy Contact plating: Selective gold RJ45 plug dimensions compliant with: ISO/IEC 60603-7-4 and FCC 47 Part 68		
3	Electrical Characteristics	Max voltage: 150 VAC (max) Max current: 1.5A @ 25°C		
4	Boots	Transparent Plug with anti-snag slip on boots		
5	Sheath Standards	LS0H Sheath: CSA FT1, IEC 60332-1, IEC 61034		
6	Separator	Cross / Star Spine to separate 4Pairs Patch Cords		
7	Standards	ETL Certified with ANSI/TIA-568-C.2, ISO/IEC 11801 Category 6		
8	Operating Temperature	-20 Degrees to +60 Degrees		
D	**Cat 6 Information Outlet**			
Model:				
1	Material	Category 6, EIA/TIA 568-C.2, FCC Subpart F 68.5 Compliant, IEC-603-7 Compliant. Should support EJ45, RJ11 & RJ12		
2	Wire terminal	200 termination cycles		
3	Modular Jack	750 mating cycles		
4	Plastic Housing	Polycarbonate, UL94V-0 rated or equivalent		
5	IDC Contact Plating	Tin/Lead Plate		
6	Dust Proof	The Jack should have integrated		

Place:
Date:

Signature & Seal of the Bidder

		spring-loaded shutter : – prevents incomplete mating – protects from dust and contaminants		
7	Electrical Characteristics	Interface Resistance: 20 milliohms Initial Contact Resistance: 2.5 milliohms Insulation Resistance: >100 Mega ohms		
8	ROHS/ELV	ROHS Compliant		
9	Commercial Standards:	TIA/EIA-568-C.2 Component Compliant FCC Subpart F 68.5 Compliant IEC-603-7 Compliant ISO 11801 Class E Compliant ETL Verified for Category 6 Component Compliance & UL listed		
E	**Cat6 Face Plate**			
Model:				
1	Face Plate	Synergy Face plates 86 x 86mm. Colour of the Jack should be visible to identify the application of Data, Voice and Redundant Port		
2	Colour of the Face Plate	White		
3	Grade	Fire Retardant		
4	Material	Made of PS / ABS Rugged plastic with ROHS Compliant		
5	Face Plate should support Multiple Jack	Capable of supporting – UTP Jack, STP Jack, Fiber Coupler and Coax Connector.		
6	Back Box	Back Box should be supplied as per Faceplate		
F	**SM Fiber Optic Cable**			
1	Cable Type	6-core, Single mode, OS2, Steel Tape Armored polyethylene (HDPE) outer sheathed embedded with two steel wires on the periphery, Multitude, water blocked loose-tube. The cables are with UV Stabilized PE Jacket and protected from Rodent attacks.		
2	Fiber type	Single Mode, 9/125 micron primary coated buffers, OS2 (IEC 60793-2-50, B1.3 and ITU T G652.d). Shall be manufactured using Vapor Axial Deposition technology.		
3	Construction type			
(a)	Tube	Polybutylene, Terephthalate(PBT)		
(b)	No of fibers	6		
(c)	Fibre colour	Blue, Orange, Green, Brown, Slate		

	sequence	(Grey), White, Red, Black, Yellow, Violet, Pink, Aqua		
(d)	Water Blocking	Thixotropic Gel (Tube) Petroleum Jelly (Interstices)		
(e)	Armoring:	Corrugated Steel Tape Armor (ECCS Tape) Thickness > 0.125mm		
(f)	Peripheral Strength Member	Two Steel wires (0.9 mm dia)		
(g)	Outer Sheath	UV Stabilized Polyethylene (HDPE)		
(h)	Standards	Complying to ISO/IEC 11801 2nd Edition, type OS1/OS2; AS/ACIF S008; AS/NZS 3080 ; TIA/EIA 568.C.3; IEC- 60793-1, 60793-2 EN50173, ANSI/TIA 568-C.3, Telcordia GR-20; suitable for use in indoor / outdoor ducts, direct burial and backbone cabling		
4	Mechanical Characteristics :			
(a)	Dimensions and Mass Overall Cable (Nominal):	9.0 MM		
(b)	Max. Bending Radius (during installation)	20 X Overall diameter		
(c)	Max. Tensile Strength-Short Term	1500N		
(d)	Max. Crush Resistance-Short Term:	2000N/10 cm		
(e)	Operating Temperature range	-40°C ±70°C		
5	Optical Characteristics :			
(a)	Core Diameter @ 1310nm	9 + 0.6 µm		
(b)	Cladding Diameter	125 + 1.0 µm		
(c)	Cladding Non circularity	< 1.0 %		
(d)	Zero dispersion wavelength	1310-8/+12 nm		
(e)	Cut-off wavelength	< 1260 nm		
(f)	Mode field diameter at 1310	9.3 ± 0.5 µm		

Place:
Date:

Signature & Seal of the Bidder

(g)	Mode field diameter at 1550	10.4 ± 0.8 µm		
(h)	Macro bending loss @ 1550 nm, 100 turns on a 60mm mandrel	<0.5 db		
(i)	Max (chromatic)dispersion:			
	@1270-1340nm	<5.3ps/nm-km		
	@1285-1330nm	<3.5ps/nm-km		
(j)	PMD Link Design Value	< 0.2 ps/sq km) RoHS Complaint		
	Attenuation	Characteristics - Optical Performance Max. Attenuation (Cable with fibers) At 1310 nm: 0.35 dB/km At 1550 nm: 0.22 dB/km Max. Average Attenuation; At 1310 nm: 0.33 dB/km At 1550 nm: 0.21 dB/km		
G	**12 Way Rack Mount LIU**			
1	Rack Mount	Lockable 19" rack mounted with 1U height, Sliding Drawer Type with 4 Cable entry/exit points (covered with rubber grommets) loaded with 4Nos of 6-port SC adapter panel & required SC adapter/coupler		
2	Material	Powder coated mild steel		
3	Accommodation and Supports	Accommodation of single mode cable multimode fibers Capable of supporting SC and LC interface - For 24 Port with SC Coupler Configurable. Fits up to four 6 pack plates/Angled 6 pack plates Management rings within system to accommodate excess fibre bend radius.		
4	Compatibility	Labelling for port identification, Fiber Management rings to accommodate excess fiber cordage behind the trough adapters and maintain fiber bend radius		

Place:
Date:

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9U WALL MOUNTED EQUIPMENT RACK

Sl. No.	Specification	Complied (Yes/No)	Reference Page No
1	Racks manufactured out of steel sheet punched, formed, welded and Powder coated		
2	Rack should be manufactured byISO 14001 Certified Company & quoted product Shouldbe UL Certified.		
3	Standard for Racks configuration will be welded frame and vented top cover		
4	Rack should have Front Toughened Glass Door with lock & Key		
5	Rack should be 9U (1U=44.45 mm) in Height, minimum 600MM Depth		
6	Rack should Conforms to DIN 41494 or Equivalent EIA /ISO / EN/CEA Standard		
7	Rack should have Adjustable mounting depth,		
8	Rack should have 4Nos Adjustable channel, 19" verticals with Punched 10mm Square Hole and Universal 12.7mm-15.875mm-15.875mm alternating hole pattern offers greater mounting flexibility, maximizes usable mounting space.		
9	Rack should have Numbered U positions.		
10	Rack should have 100% assured compatibility with all equipments conforming to DIN 41494 (General industrial standard for equipments)		
11	Should meeting the seven Tank pretreatment process for Powder coated finish.		
12	Rack should have one cantilever shelf		
13	Rack should have Fan module Mount Provision on top Cover with 2 fans		
14	Rack Should have 1Ph, 230V, 8A, 2U standard rack mount power distribution unit with 6 X Indian Round Pin 5A, Inlet Plug type 6A Indian Round Pin, 8A Fuse - PDU Rating 1.8KVA		
15	Rack should have 1 No Horizontal Cable Organizer with Plastic Loops.		
16	Rack should have provision for cable entry Exit from Both top & Bottom.		
17	Rack should have 1 Packet of Mounting hardware, Pack of 10		

42U EQUIPMENT RACK

Sl. No.	Specification	Complied (Yes/No)	Reference Page No
Specify Make & Model:			
01	**Features:** Confirms to EIA 310 Standards. The mounting dimensions on the 19" panel mounts & the spacing & entry dimensions, useable heights etc. are maintained as per IEC – 297, EIA 310 DIN 41494		
02	**Construction:** - An Aluminum extruded frame structure design, i.e. Aluminum extruded depth support member, Aluminum extruded width support member joined with special locking keys		

Place: **Signature & Seal of the Bidder**
Date:

	to the aluminum extruded vertical member to form a robust frame structure to have a safe load carrying capacity of 650 kgs. This aluminum frame structure is chromate treated & later epoxy powder coated.		
03	**Usable Space:** Should have usable height: 1866.9mm, Width: 482.6mm, Depth: 879mm or more suitable for Networking Equipments.		
04	**Lockable rear/front door fully perforated:** Should have fabricated the front door a single sheet which has hexagonal punching. Should give 85% opening for ventilation. Ventilation slots are provided all along the height to enable natural cooling in the rack.		
05	**Removable side panels:** To facilitate installation & servicing easily removable side panels based on slam latch concept. Functionality of removable side panels is combined with security of a lock. CNC vent. Slots provided on 1/3RD height.		
06	**Top covers with CNC ventilation slots along the sides:** Top cover is provided with CNC ventilation slots all along the sides. Top is provided with cable entry provision with gland plates & rubber grommets.		
07	**19" panel mount at front & rear:** 19" panel mount fabricated out of 14SWG steel & CNC punched to meet IEC 297 & DIN 41494 standards are provided at the front & rear. These panel mounts are adjustable all along the depth.		
08	**Castor:** For easy movement of the cabinet castor wheel should be provided with foot operated break.		
09	**Cooling:** Should have roof mounted fan housing unit with 4nos exhaust axial type fans of 90CFM capacity to take care of heat pockets.		
10	**PDU:** In the form of vertical rack mounted power distribution box with 12Nos 5/15Amp Socket.		
11	**Shelves:** 700mm heavy duty self should be provided to support equipment up to 75kg.		
12	**Ventilation:** The cabinets should be designed to draw cold air from the lower areas and exhaust hot air from the top by providing selective ventilation patterns on the front, rear side, top and bottom panels.		
13	**Joint Free gasket:** Joint free gasket used throughout the frame on top & back side for effective cooling & dust protection.		
14	**Earthing kit:** Copper earthing bars and braids should be provided for achieving electrical ground.		

CHEMICAL EARTHING

Sl. No.	Specification	Complied (Yes/No)	Reference Page No
01	**Pit Type Chemical Earth: -** Provision of Chemical earthing using G.I. Pipe, Electrodes, Chemical salt as specified for chemical earthing etc as required to give result of earth resistance value less than or equal to 2 ohms and not deteriorates with time, including provision of required material, labour work, Earth Chamber etc as required. The earth resistance below 2 ohms must be maintained for the		

	safety of the equipments from foreign voltage, electrical spurts and lightening. Earth system employed in a buildingaccommodating horizontal office will consists of following parts. • EARTH ELECTRODE • EARTH CONDUCTOR • EARTH COLLECTOR Earthing here means termination of earth electrode from pit to earth collector. Resistive value of the earth at the point of termination on earth collector should be less than or equal to 2 ohms. Pit type earth indicated in RFP means type of earth made with electrode consisting of chemical. The chemical earthing should be maintenance free.		
02	**EARTH ELECTRODES** It will consist of 3 to 4 Nos. of Chemical Electrodes of size of at least 2 to 3 Meter in length (Qty and size as required to achieve the desired value of earth resistance i.e. <= 2 ohms). These Electrodes are placed vertically at the distance of one meter to each other in the earth by excavation of the earth. The leading GI Pipe carrying the main earth conductors should be as close to tails of theElectrodes as possible. After installation of earth electrode system, suitable visible markers should be laid over the electrode. The System Integrator (bidder) should draw up a route map for the earth conductor for display in the equipment room of horizontal office.		
03	**EARTH CONDUCTOR** The earth conductor should be of copper strip/wire. This is to be brought from the point where earth lead is spliced and jointed with tinned copper surface inside the pit near earth plate. The other end of this strip is to be terminated in equipment room of horizontal office properly supporting via trench/GI Pipe at equipment room of horizontal office on earth distribution/Copper Plate.		
04	**EARTH COLLECTOR** Earth distribution plate/earth bus bar at Equipment room of horizontal office act as earth collector and thus supplier will provide copper earth distribution plate of at least of size (300 × 45 × 6mm – Length × Width × Thickness) fixed above with Bakelite sheet with Fiber insulators fixed on wall at height of 30 cm from the ground floor level and having brass nut and bolts of 10 mm holes with two Brass washers. The supplier will be required to exhibit an earth resistance of less than or equal to 2 ohms. Higher resistance will not be admissible.		

Place: **Signature & Seal of the Bidder**
Date:

Next Generation UTM/Firewall

Sl. No.	Specification	Compliance (Yes/ No)	Reference Page No
1	**Performance Specification**		
	The firewalls must have the following specifications :		
1.1	Appliance must deliver at least 1.5 Gbps Next Generation Firewall throughput (min HTTP 21kB payload) enabling Firewall, IPS, File Filtering and application control.		
1.2	Appliance must deliver at least 50 Gbps of Firewall throughput (UDP 1518 byte).		
1.3	Appliance must Support at least 7.5 Million Concurrent connections on device from day-1		
1.4	Firewall must support 100K of new connections/sec		
1.5	Support of at least deliver 4.5 Gbps IPSec VPN throughput (AES-GCM-256)		
1.6	Support of at least 20K IPSec VPN Tunnels		
1.7	The Appliance must deliver the SSL/TLS inspection throughput of 800 Mbps (44kB payload)		
1.8	No limitation for client connecting using SSL VPN		
1.9	Should support at least 8*1GB RJ 45 ports, 2*10GB ports		
2	**Platform Architecture**		
2.1	The Firewall shall be a non-ASIC based firewall and should have Multi core architecture to mitigate against the sophisticated threats. If option to disable ASIC is there than OEM must mention the performance numbers in datasheet (without ASIC)		
2.2	The platform must have a centralized management to manage all firewalls in every site. Reporting solution must be quoted along with solution to generate Firewall and other next generation features.		
2.3	The firewall shall not restrict number of IP addresses and users by licenses.		
2.4	The firewall shall not impose restriction on the numbers of policies or rules exist on the system.		
2.5	For future redeployment flexibility, the firewall shall be a dedicated appliance supporting multi product roles capable of switching between Layer 2 Firewall, Dedicated IPS or NGFW roles without change of licenses and additional cost.		
2.6	The firewall shall support deployment in Amazon Web Service (AWS) or Microsoft Azure to protect data centers in the clouds, and must be centrally managed by the same management for other platforms.		

Place:
Date:

Signature & Seal of the Bidder

2.7	The firewall shall support proxy of services, which terminate connections at the firewall and make separate connections with each of the communicating hosts, to enforce protocol validation and to restrict the allowed parameters for each protocol.		
2.8	The firewall shall achieve the following industry recognized security certification standards: · Common Criteria Protection Profile · FIPS 140-2 · Tested and achieve recommended status by NSS Labs Next Generation Firewall Group Test. With blocking 99% of exploits in NSS Labs		
3	High Availability requirements		
3.1	The firewall must include support for the following high availability feature. · Active-Active Load Balancing or Active-Standby · Stateful failover including VPN connections		
3.2	The firewall must support high availability clustering operating with mixture of firewall software versions within the same HA cluster.		
3.3	The firewall shall include the ability to support high availability of different model of appliances within the same HA cluster.		
3.4	The firewall shall be able to support minimum 16 nodes of native firewall clustering for future expansion with mix of appliance flavor.		
3.5	The firewall shall support minimally 5 independent ISP/WAN connections concurrently and the ability to combine multiple ISP/WAN link. (not just active/standby)		
3.6	Solution must be capable of prioritization the applications traffic (like Skype, O365 or more)among all the ISPs. E.g. It should have the capability to prioritize O365 through a dedicated link and fallback should happen if that link is unavailable.		
3.7	Solution must support application routing wherein O365 should be routed towards internet and rest of traffic can be routed through MPLS for Datacenter/Corporate office		
4			
4.1	The firewall shall support both static routing and the following dynamic routing. - OSPF - BGP - RIP		
4.2	The firewall shall support dual IPv4 and IPv6 stacks including application control and inspection.		

Place:
Date:

Signature & Seal of the Bidder

4.3	The firewall shall provide support for at least VLANs (802.1Q) on each interface and multiple VLAN trunks on the same firewall.		
4.4	The firewall shall support aggregation of links on all interface ports based on IEEE 802.3ad.		
4.5	The firewall shall be able to support TCP windows scaling and jumbo frame of up to 9000KB.		
4.6	The firewall must support static ARP entries and proxy ARP		
4.7	The firewall must support dynamic interfaces where it can get assigned IP information as a DHCP client		
4.8	The firewall must also support being a DHCP server on the interfaces to issue IP addresses to DHCP clients. It must support IPv6 also		
4.9	The firewall must support DHCP relay locally and over GRE/IPSec tunnel		
4.1	The firewall must support policy based routing		
4.11	The firewalls shall minimally support the following NAT deployment modes for IPv4 and IPv6:		
	· Static NAT;		
	· Dynamic NAT;		
	· PAT (Port Address Translation).		
4.12	The firewall must support Full QoS or DSCP/ToS Throttling with granular QoS configuration per interface and by individual rule basis		
4.13	The firewall QoS must support matching incoming packet DSCP/ToS value to a QoS rule and marking outgoing packet with new DSCP value by per rule		

Technical Specification WLAN Components
• All Wi-Fi, Switching and Transceivers components should be from single OEM except the transceivers for existing switch. • OEM should be in Wi-Fi business for at least 5 years and should be present in Indiafor minimum 7 years. • Should have TAC support centre and R&D centre in India. • The OEM shall be in the leader's quadrant as per latest published Gartner's MQ report for Wire and Wireless LAN Access Infrastructure during last 3 consecutive reports.

Wireless Controller:

Sl.No.	DESCRIPTION	Compliance (Yes/ No)	Reference Page No
Make: Model:			
01	The proposed architecture should be based on centralized controller		

Place:
Date:

Signature & Seal of the Bidder

	with thin AP deployment. AP's should download OS and configuration from controller for improved security.		
02	The controller should be capable of supporting 200 AP's (indoor or outdoor) from day-1 with the offered controller without any addition of Hardware components. Licenses should be based on number of AP's is being asked in the tender.		
03	The controller should have minimum of 2 x 1GE port and 2x10G SFP+ for connecting to LAN		
04	The controller should support IEEE 802.11ac standard.		
05	The controllers will be implemented in HA mode. When the primary controller fails and secondary controller comes up, the clients connected at point in time and all applications running on the clients should not disconnect.		
06	WLAN Controller should be provided differentiated accesss for any user group on same SSID, guests should have restricted access like not able to telnet & SSH to servers while connecting on same SSID.		
07	The system should enable single session for Guest Wireless Access implying to disable multiple authentications using same user account		
08	The controller should support deep packet inspection either as an integrated feature or through add-on components to implement role based access for data, voice and video applications. Rules for access rights should be based on any combination of time, location, user identity and device identity.		
09	The controller should be capable of dynamic Channel allocation to AP. The controller should have the capability to monitor interference and respond by allocating least or non-interfering channel to the AP's automatically. No manual intervention should be required.		
10	WLAN system should be capable enough to detect video & voice applications to provide priority. System should dynamically defer off-channel scanning upon detection of voice and video traffic from device.		
11	WLAN system should allow unauthenticated user or guests to allow navigate to only campus webpage & all its contents.		
12	The controller should provide latest network authentication (WEP, WPA, WPA2) and encryption types like DES/3DES, TKIP and AES.		
13	WLAN system or external wireless intrusion detection & prevention solution should be provided for full-fledged wireless intrusion prevention system to protect the network against wireless threats, internal server access, unauthorized Wi-Fi access, DoS attacks etc.		
14	WLAN system should comply to latest regulation/directive of Department of Telecommunications (Govt. of India) on Wi-Fi security which includes Login ID &password based authentication (not just keys), one session allowed for login ID etc.		

Place: **Signature & Seal of the Bidder**
Date:

Dual-band Wireless Access Point

Sl. No.	Description	Complied (Yes/No)	Reference Page No
Make:	Model:		
1	It should provide High performance IEEE 802.11n in 2.4 GHz and 5 GHz band with data rates up to 450Mbps per Radio and backward compatible with 54 Mbps (IEEE 802.11g).		
2	Should have Auto-sensing 10/100/1000 on the network port.		
3	Should have 2x2 MIMO Dual-radio and 2 spatial streams.		
4	The Wireless AP should have RJ-45 console interface.		
5	802.11 a/b/g/n/ac functionality certified by the Wi-Fi alliance		
6	Access Point can have integrated or external Antenna.		
7	The min transmit power of AP should be 21dbm for both 2.4 and 5 ghz radio however Max transit power of the AP + Antenna should be as per WPC norms for indoor Access Points. OEM to give a undertaking letter stating that the AP will configure as per WPC guidelines for indoor AP and also submit the WPC certificate showing approval.		
8	Transmit power of AP's should be in incremental of 0.5 db/as per regulatory domain		
9	The access point should be capable of performing security scanning and serving clients on the same radio. It should be also capable of performing spectrum analysis and security scanning using same radio.		
10	Should support 8x BSSID per AP radio.		
11	Should support BPSK, QPSK, 16-QAM and 64-QAM modulation types		
12	Association rate from 1Mbps-54Mbps for b/g/a and MCS0 - MSC15 for 802.11ac		
13	Should be UL2043 certified		

PoE Access Switch

Sl. No.	Description	Complied (Yes/No)	Reference Page No
	Make: Model:		
1	Shall have minimum 24 x 10/100/100 Base-T ports with 4 SFP Ports.		
2	Should support IEEE 802.3af & 802.03at on all copper ports Simultaneously with minimum 15W PoE power budget per port.		
3	Should have wire speed switching capacity		
4	Should support IEEE 802.1Q VLAN encapsulation and up to 1000 active VLANs per switch		
5	Should support LACP		
6	Should support LLDP and LLDP-MED		
7	Should support full featured CLI		

Place:
Date:

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8	Should support MSTP		
9	Shall have minimum 16K MAC Address support and minimum 8MB packet buffer		
10	Should support IEEE 802.1p		
11	Should have at least 8 Queues to differentiate and prioritize different applications (Voice / Video / Data)		
12	Should Support for IGMP and MLD Snooping		
13	Should support port-based QoS		
14	Should support IEEE 802.1x to allow dynamic, port-based security, providing user authentication		
15	Should support Voice VLAN		
16	Should support Port-based ACL		
17	Should support STP BPDU port protection / STP Root Guard or equivalent		
18			
19	Should support RADIUS and TACACS+		
20	Should support RMON		
21	Should support Port Mirroring		
22	Should support IPv6 addressing, ICMPv6, TCP/UDP over IPv6, HTTP over IPv6, HTTPS over IPv6, SNMP over IPv6, Syslog over IPv6, IPv6 based QoS and ACL.		
23	Should support management using SNMP v3, SSHv2, SSLv3, Console access, easier software upgrade through network using TFTP etc. Configuration management through CLI, GUI based software utility and using web interface.		
24	Should support physical Stacking.		

Place:
Date:

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SECTION-V
COMMERCIAL OFFER

Price Bid
(To be in Company letter head)

Sl. No	Description	Make & Model	UoM	[A] Quantity	[B] Unit Price for the Equipment (INR)	[C] Taxes as Applicable Per Unit (INR)	[D] Total Unit Price Including Tax (B + C)	D = A x [B+C] Total Cost (INR)
Active Component								
1	Next Generation UTM/Firewall		Pair.	1				
2	PoE Access Switch (24 Port)		Nos.	11				
3	Dual Radio 802.11ac Indoor Access point		Nos.	81				
4	1G SM Transceiver for existing switch Cisco Catalyst 4506-E		Nos.	2				
5	1G SM Transceiver for above Access switch		Nos.	7				
6	Wireless Controller		Pair	1				
7	5KVA Online UPS with 1hr Backup		Nos.	2				
8	1KVA Online UPS with 30min Backup		Nos.	11				
Passive Component								
1	Cat6 UTP Cable 23 AWG CM Rated FR PVC		Meter	2430				
2	CAT6 INFORMATION OUTLET WITH FACE PLATE AND BACK BOX (IO Box)		Nos.	81				
3	CAT6 24 PORT JACK PANEL Loaded		Nos.	13				
4	CAT6 UTP PATCH CORDS (1Mtr)		Nos.	162				
5	6 Core SM outdoor Optical Fiber Cable		Nos.	400				
6	12-Port Rack Mount Sliding LIU with Loaded SC/LC SM Adaptor/Coupler		Nos.	5				
7	Pigtail SC SM 1.5M LSZH		Nos.	48				
8	SC-LC SM OFC Duplex Patch Cord-2 meter.		Nos.	9				
9	Wall mount 9U 600D Equipment Rack		Nos.	10				

Place:
Date:

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10	42U Floor mount Rack Aluminum Frame-800X1000 with Side Panels of 2nos and Heavy Duty Castors with break		Nos.	1				
11	Chemical earthing		Nos.	2				
Service Component								
1	OFC Underground Laying with supply of ISI mark HDPE conduit including Overhead / Road Cutting / Boreing per Meter		Meter.	400				
2	LIU Termination Charges		Nos.	5				
3	SC/LC Connectrisation/Splicing (per core)		Nos.	48				
4	Cat-6 Cable Laying with double lock casing capping / PVC conduit		Meter	2430				
5	I/O punching & fixing		Nos.	81				
6	Rack (42U/9U) Fixing		Nos.	11				
7	Patch Panel Punching & Fixing		Nos.	13				
8	Access point Installation with protective Enclosure		Nos.	81				
Manpower Support								
1	Network Administrator (Man Months Rate)		No	12				
2	Support Engineer (Man Months Rate)		No	12				
3	Help Desk Engineer (Man Months Rate)		No	12				

Note:-

- Prices shall be quoted inclusive of all taxes, duties, freight and forwarding and cost of labor for installation.
- Printed brochures of items quoted should be enclosed with make & model.

Place:
Date:

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