

NIT NO.:/ MDU-R/JAN/2017/002



TENDER DOCUMENT

NAME OF WORK: WI-FI ACCESS POINTS & INTEGRATED SOLUTION
GP SAROHA

Last date submission of the filled Tender document: 15.02.2017 up to 2:30 pm. (The Tender document is to be submitted duly signed in blue/black ink on each page and stamped with official seal on each page)

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Maharshi Dayanand University, Rohtak

[Established in Act No. 25 of 1975 of the Haryana Legislative Assembly in 1976]

NAAC Accredited 'A' Grade

No. UCC/2017/

Dated : 25/01/2017

University Computer Center

Phone: 01262-393548

E-mail: dir.ucc@mdurohtak.ac.in

STANDARD BIDDING DOCUMENT FOR PURCHASE OF **Procurement of WI-FI ACCESS POINTS & INTEGRATED SOLUTION** ON BEHALF OF REGISTRAR, MAHARSHI DAYANAND UNIVERSITY, ROHTAK.

PART1: COMPLETE BIDDING DOCUMENT

Name of work: Procurement of WI-FI ACCESS POINTS & INTEGRATED SOLUTION .

PRESS NOTICE

M. D. UNIVERSITY, ROHTAK	
Notice Inviting E-Tender	
Name of work	PROCUREMENT OF WI-FI ACCESS POINTS & INTEGRATED SOLUTION
E Service Fees+ Tender Doc. Fees	1000/- + 4,000/- =5,000/- (TO BE PAID ONLINE)
Earnest Money	2% OF THE QUOTED RATE OF PROCUREMENT OF WI-FI ACCESS POINTS & INTEGRATED SOLUTION
Time Limit	02 TO 03 WEEKS
Tenders to be received till: dated 15.02.2017 till 02:30 P.M	
(1) THE TENDERS WILL BE RECEIVED ONLY THROUGH E-TENDERING FOR FURTHER DETAILS VISIT WEBSITE HTTPS://HARYANAEPROCUREMENT.GOV.IN.	

REGISTRAR

The Bidders can download the tender documents from the Portal: <https://haryanaeprocurement.gov.in>.

- 1) Earnest Money and Document Fee Deposit have to be deposited through Online Mode Only.
- 2) Willing Contractors shall have to pay the e- service fees of Rs.1000/- through Online mode
- 3) However, the details of the EMD, Tender document Fee & E-Service Fee are required to be filled/provided scan copies at the time of online Bid Preparation Stage the Bidders are required to keep the EMD, Tender document fee & E- Service fee details ready beforehand. The contractual Agencies can submit their tender documents as per the date mentioned below:

KEY DATES

Sr. No.	M.D.U. Rohtak Stage	Contractor Stage	Start Date & Time	End Date & Time
1		Tender Document Download and Bid Preparation & Submission	25-01-2017	dated 15.02.2017 till 02:30 P.M
3		Submission of Tender Fees and online EMD Fees	25-01-2017	13-02-2017 till 4.00 PM
4		Manual Submission of Specification of Item, Tender Document Fee, EMD, E-Service Fee etc. in University Computer Center	25-01-2017 From 9:00 AM	15-02-2017 Upto 2:30 PM
5	Technical Opening/ Technical Evaluation/ Opening of Financial Bid		15-02-2017 at 3.00 PM FIANNCE DATE WILL DECIDED LATER ON	

Important Note:-

- 1) The bidders shall have to complete Bid Preparation & Submission" stage on scheduled date & time as mentioned above. If any bidder failed to complete his/her aforesaid stage in the stipulated online time schedule for this stage, his/her bid status will be considered as "bids not submitted".
- 2) Bidder must confirm & check, his/her bid status after completion of his/her all activities for e bidding.
- 3) Bidder can rework on his/her bids even after completion of "Bid Preparation & submission stage" (Bidder Stage), subject to the condition that the rework must take place before the stipulated time frame of the Bidder Stage.

DETAIL NOTICE INVITING TENDER

e-Tender is invited for purchase of below mentioned items in single stage two cover system i.e. Request for Technical Bid (online Bid under PQQ/ Technical Envelope) and Request for Financial Bid (comprising of price bid Proposal under online available Commercial Envelope).

Sr. No	Name of work	Appx. Cost (Rs. In lacs)	EMD to be deposited by Bidder	Tender Document Fee & eService Fee (Rs.)	Start Date & Time of Bid Preparation & Submission	Expiry Date & Time of Bid of EMD Submission	Expiry Date & Time of Bid Preparation & Submission
1.	Procurement of WI-FI ACCESS POINTS & INTEGRATED SOLUTION in MDU, Rohtak.	0	2% of the cost	Rs. 4000/-for Tender Document fee & Rs. 1000/- for e-Service fee	25-01-2017	dated 15.02.2017 till 02:30 P.M	25-01-2017 From 9:00 AM to 2:30PM

1. Detailed notice inviting tender/estimate drawing can be seen in the office of the undersigned during office hours.
2. Bidding documents available on website <http://mdurohtak.haryanaeprocurement.gov.in>
3. Newly enlisted contractors/societies/suppliers/manufactures should bring with them proof of their enlistment in appropriate class.
4. The bidders would submit bid through e-tendering only on the website i.e. <http://haryanaeprocurement.gov.in>

Under this process, the Pre-qualification/ Technical online bid Application as well as online Price Bid shall be invited at single stage under two covers i.e. PQQ/Technical & Commercial Envelope. Eligibility and qualification of the Applicant will be first examined based on the details submitted online under first cover (PQQ or Technical) with respect to eligibility and qualification criteria prescribed in this Tender document. The Price Bid under the second cover shall be opened for only those Applicants whose PQQ/ Technical Applications are responsive to eligibility and qualifications requirements as per Tender document.

1. The payment for Tender Document Fee and e-Service Fee shall be made by eligible bidders online directly through Debit Cards & Internet Banking Accounts and the payment for EMD can be made online directly through RTGS/NEFT or OTC Please refer to 'Online Payment Guideline' available at the Single e-Procurement portal of GoH (Govt. of Haryana) and also mentioned under the Tender Document.
2. Intending bidders will be mandatorily required to online sign-up (create user account) on the website <https://haryanaeprocurement.gov.in> to be eligible to participate in the e-Tender. The firm will be required to make online payment of **2% of the bid cost** towards EMD fee in due course of time. The intended

bidder fails to pay EMD fee under the stipulated time frame shall not be allow to submit his / her bids for the respective event / Tenders.

3. The interested bidders must remit the funds at least T+1 working day (Transaction day + One working Day) in advance i.e. on or before **13-02-2017 till 4.00 PM** and make payment via RTGS /NEFT or OTC to the beneficiary account number specified under the online generated challan. The intended bidder / Agency thereafter will be able to successfully verify their payment online, and submit their bids on or before the expiry date & time of the respective events/Tenders at <https://haryanaeprocurement.gov.in>.

The interested bidders shall have to pay mandatorily e-Service fee (under document fee – Non-refundable) of Rs.1000/- (Rupee One Thousand Only) online by using the service of secure electronic gateway. The secure electronic payments gateway is an online interface between bidders & online payment authorization networks.

The Payment for document fee/ e-Service fee can be made by eligible bidders online directly through Debit Cards & Internet Banking.

The Bidders can submit their tender documents (Online) as per the dates mentioned at Page no 3 of Document: -

Important Note:

1. The Applicants/bidders have to complete 'Application / Bid Preparation & Submission' stage on scheduled time as mentioned above. If any Applicant / bidder failed to complete his / her aforesaid stage in the stipulated online time schedule for this stage, his / her Application/bid status will be considered as 'Applications / bids not submitted'.
2. Applicant/Bidder must confirm & check his/her Application/bid status after completion of his/her all activities for e-bidding.
3. Applicant/Bidder can rework on his/her bids even after completion of 'Application/Bid Preparation & submission stage' (Application/Bidder Stage), subject to the condition that the rework must take place during the stipulated time frame of the Applicant/Bidder Stage.
4. In the first instance, the online payment details of tender document fee + e-Service and EMD & PQQ/Technical Envelope shall be opened. Henceforth financial bid quoted against each of the item by the shortlisted bidder/ Agency wherever required shall be opened online in the presence of such bidders/ Agency who either themselves or through their representatives choose to be present. The bidder can submit online their bids as per the dates mentioned in the schedule/Key Dates above.

The bids shall be submitted online in two separate envelopes:

Envelope 1: Technical Bid

The bidders shall upload the required eligibility & technical documents online in the Technical Bid.

Envelope 2: Commercial Bid

The bidders shall quote the prices in price bid format under Commercial Bid.

CONDITIONS: -

1. DNIT & prequalification criteria can be seen on any working day during office hours in office of the undersigned.
2. Conditional tenders will not be entertained & are liable to be rejected.
3. In case the day of opening of tenders happens to be holiday, the tenders will be opened on the next working day. The time and place of receipt of tenders and other conditions will remain unchanged.
4. The undersigned reserve the right to reject any tender or all the tenders without assigning any reasons.
5. The societies shall produce an attested copy of the resolution of the Co-operative department for the issuance of tenders.
6. The tender without earnest money/bid security will not be opened.
7. The Jurisdiction of court will be at **Rohtak**.
8. The tender of the bidder who does not satisfy the qualification criteria in the bid documents are liable to be rejected summarily without assigning any reason and no claim whatsoever on this account will be considered.
9. The bid for the work shall remain open for acceptance during the bid validity period to be reckoned from the last date of 'Manual submission of BS. If any bidder/tenders withdraws his bid/tender before the said period or makes any modifications in the terms and conditions of the bid, the earnest money shall stand forfeited. Bids shall be valid for 120 days from the date of bid closing i.e. from last date of manual submission of EMD. In case the last day to accept the tender happens to be holiday, validity to accept tender will be the next working day.

For & on behalf of Registrar, MDU, Rohtak

DIRECTOR, UCC

M. D. University, Rohtak

INSTRUCTIONS TO BIDDER ON ELECTRONIC TENDERING SYSTEM

These conditions will over-rule the conditions stated in the tender documents, wherever relevant and applicable.

REGISTRATION OF BIDDERS ON E-PROCUREMENT PORTAL: -

All the bidders intending to participate in the tenders process online are required to get registered on the centralized e - Procurement Portal i.e. <https://haryanaeprocurement.gov.in>. Please visit the website for more details.

OBTAINING A DIGITAL CERTIFICATE:

- 1.1 The Bids submitted online should be encrypted and signed electronically with a Digital Certificate to establish the identity of the bidder bidding online. These Digital Certificates are issued by an Approved Certifying Authority, by the Controller of Certifying Authorities, Government of India.
- 1.2 A Digital Certificate is issued upon receipt of mandatory identity (i.e. Applicant's PAN Card) and Address proofs and verification form duly attested by the Bank Manager / Post Master / Gazetted Officer. Only upon the receipt of the required documents, a digital certificate can be issued. For more details, please visit the website – <https://haryanaeprocurement.gov.in>.
- 1.3 The bidders may obtain Class-II or III digital signature certificate from any Certifying Authority or Sub-Certifying Authority authorized by the Controller of Certifying Authorities or may obtain information and application format and documents required for the issue of digital certificate from:

M/s Nextenders (India) Pvt. Ltd.

O/o. DS&D Haryana,

SCO – 09, IIInd Floor,

Sector – 16,

Panchkula – 134108

E-mail: chandigarh@nextenders.com

Help Desk: 1800-180-2097 (Toll Free Number)

- 1.4 The bidder must ensure that he/she comply by the online available important guidelines at the portal <https://haryanaeprocurement.gov.in> for Digital Signature Certificate (DSC) including the e-Token carrying DSCs.
- 1.5 Bid for a particular tender must be submitted online using the digital certificate (Encryption & Signing), which is used to encrypt and sign the data during the stage of bid preparation. In case, during the process of a particular tender, the user loses his digital certificate (due to virus attack, hardware problem, operating system or any other problem) he will not be able to submit the bid online. Hence, the users are advised **to keep a backup of the certificate** and also keep the copies at safe place under proper security (for its use in case of emergencies).
- 1.6 In case of online tendering, if the digital certificate issued to the authorized user of a firm is used for signing and submitting a bid, it will be considered equivalent to a no-objection certificate /power of attorney / lawful authorization to that User. The firm has to authorize a specific individual through an authorization certificate signed by all partners to use the digital certificate as per Indian

Information Technology Act 2000. Unless the certificates are revoked, it will be assumed to represent adequate authority of the user to bid on behalf of the firm in the department tenders as per Information Technology Act 2000.

- 1.7 The digital signature of this authorized user will be binding on the firm.
- 1.8 In case of any change in the authorization, it shall be the responsibility of management / partners of the firm to inform the certifying authority about the change and to obtain the digital signatures of the new person / user on behalf of the firm / company. The procedure for application of a digital certificate however will remain the same for the new user.
- 1.9 The same procedure holds true for the authorized users in a private/Public limited company. In this case, the authorization certificate will have to be signed by the directors of the company.

OPENING OF AN ELECTRONIC PAYMENT ACCOUNT:

For purchasing the tender documents online, bidders are required to pay the tender documents fees online using the electronic payments gateway service shall be integrated with the system very soon till then it will be submitted manually. For online payments guidelines, please refer to the Home page of the e-tendering Portal <https://haryanaeprocurement.gov.in>.

Pre-requisites for online *bidding*:

In order to operate on the electronic tender management system, a user's machine is required to be set up. A help file on system setup/Pre-requisite can be obtained from Nextenders (India) Pvt. Ltd. or downloaded from the home page of the website -<https://haryanaeprocurement.gov.in>. The link for downloading required java applet & DC setup are also available on the Home page of the e-tendering Portal.

ONLINE VIEWING OF DETAILED NOTICE INVITING TENDERS:

The bidders can view the detailed N.I.T and the time schedule (Key Dates) for all the tenders floated through the single portal eProcurement system on the Home Page at <https://haryanaeprocurement.gov.in>.

DOWNLOAD OF TENDER DOCUMENTS:

The tender documents can be downloaded free of cost from the eProcurement portal <https://haryanaeprocurement.gov.in>

KEY DATES:

The bidders are strictly advised to follow dates and times as indicated in the online Notice Inviting Tenders. The date and time shall be binding on all bidders. All online activities are time tracked and the system enforces time locks that ensure that no activity or transaction can take place outside the start and end dates and the time of the stage as defined in the online Notice Inviting Tenders.

ONLINE PAYMENT OF TENDER DOCUMENT FEE, ESERVICE FEE , EMD FEES & BID PREPARATION & SUBMISSION (PQQ/ TECHNICAL & COMMERCIAL/PRICE BID):

i) Online Payment of Tender Document Fee + e-Service fee:

The online payment for Tender document fee, eService Fee & EMD can be done using the secure electronic

payment gateway. The Payment for Tender Document Fee and eService Fee shall be made by bidders/ Vendors online directly through Debit Cards & Internet Banking Accounts and the Payment for EMD shall be made online directly through RTGS / NEFT & OTC. The secure electronic payments gateway is an online interface between contractors and Debit card / online payment authorization networks.

ii) PREPARATION & SUBMISSION of online APPLICATIONS/BIDS:

Detailed Tender documents may be downloaded from e-procurement website (<https://haryanaeprocurement.gov.in>) and tender mandatorily be submitted online.

Scan copy of Documents to be submitted/uploaded for Prequalification or Technical bid under online PQQ/ Technical Envelope: The required documents (refer to DNIT) shall be prepared and scanned in different file formats (in PDF /JPEG/MS WORD format such that file size is not exceed more than 10 MB) and uploaded during the on-line submission of PQQ or Technical Envelope.

FINANCIAL or Price Bid PROPOSAL shall be submitted mandatorily online under Commercial Envelope and original not to be submitted manually)

ASSISTANCE TO THE BIDDERS: -

In case of any query regarding process of e-tenders and for undertaking training purpose, the intended bidder can also avail the following and can contact service provider as per below:

Office Timings of Help-desk support for Single e Procurement Portal of Government of Haryana- Technical Support Assistance will be available over telephone Monday to Friday (09:00 am. to 5:30 pm) & Training workshop will be conducted on every 1st, 2nd Friday (from 3:30 pm upto 6:00 pm) and 4th Saturday (from 11:30 am upto 3:00 pm) of each month.

All queries would require to be registered at our official email-chandigarh@nextenders.com for on-time support (Only those queries which are sent through email along with appropriate screenshots or error description will be considered as registered with the Help-desk)

IMPORTANT NOTE: -

- (a) Any intending bidder can contact the helpdesk on or before prior to 4 hours of the scheduled closing date & time of respective e-Auction/ Tender event.
- (b) For queries pertaining to e-Payment of EMD, please contact the helpdesk at least 2 business days prior to the closing date & time of e-Auction/Tender event.
- (c) Help-desk support will remain closed during lunch break i.e. from 1:30 PM up to 2:15 PM on each working day.

SCHEDULE FOR TRAINING:

Training workshop will be held on 1st, 2nd Friday (from 3:30 pm upto 6:00 pm) and 4th Saturday (from 11: 30 am upto 3:00 pm) of each month at following addresses:

Nextenders (India) Pvt. Ltd Municipal Corporation Faridabad, Near B.K. Chowk, Opp. B.K.Hospital, NIT, Faridabad Contact no.	Nextenders (India) Pvt. Ltd. Public Health Division No. 2 Hisar, Model Town Opp. N.D Gupta Hospital, Hisar	Nextenders (India) Pvt. Ltd., Nirman Sadan (PWD B&R), Plot No.- 01, Basement, Dakshin Marg, Sec- 33 A, Chandigarh -160020 For Support- 1800-180- 2097,
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Haryana eProcurement Help Desk Office will remain closed on Saturday (except 4th Saturday), Sunday and National Holidays

NOTE:- Bidders participating in online tenders shall check the validity of his/her Digital Signature Certificate before participating in the online Tenders at the portal <https://haryanaeprocurement.gov.in>.

For help manual please refer to the 'Home Page' of the e-Procurement website at <https://haryanaeprocurement.gov.in>, and click on the available link 'How to...?' to download the file.

GUIDELINE FOR ONLINE PAYMENTS IN E-TENDERING

Post registration, bidder shall proceed for bidding by using both his digital certificates (one each for encryption and signing). Bidder shall proceed to select the tender he is interested in. On the respective Department's page in the e-tendering portal, the Bidder would have following options to make payment for tender document & EMD:

- i. Debit Card
- ii. Net Banking
- iii. RTGS/NEFT

OPERATIVE PROCEDURES FOR BIDDER PAYMENTS
A) DEBIT CARD

The procedure for paying through Debit Card will be as follows.

- i. Bidder selects Debit Card option in e-Procurement portal.
- ii. The e-Procurement portal displays the amount and the card charges to be paid by bidder. The portal also displays the total amount to be paid by the bidder.
- iii. Bidder clicks on "Continue" button

- iv. The e-Procurement portal takes the bidder to Debit Card payment gateway screen.
- v. Bidder enters card credentials and confirms payment
- vi. The gateway verifies the credentials and confirms with “successful” or “failure” message, which is confirmed back to eProcurement portal.
- vii. The page is automatically routed back to e-Procurement portal
- viii. The status of the payment is displayed as “successful” in e-Procurement portal. The e-Procurement portal also generates a receipt for all successful transactions. The bidder can take a print out of the same,
- ix. The e-Procurement portal allows Bidder to process another payment attempt in case payments are not successful for previous attempt.

B) NET BANKING

The procedure for paying through Net Banking will be as follows.

- i. Bidder selects Net Banking option in e-Procurement portal.
- ii. The e-Procurement portal displays the amount to be paid by bidder.
- iii. Bidder clicks on “Continue” button
- iv. The e-Procurement portal takes the bidder to Net Banking payment gateway screen displaying list of Banks (v) Bidder chooses his / her Bank
- v. The Net Banking gateway redirects Bidder to the Net Banking page of the selected Bank
- vi. Bidder enters his account credentials and confirms payment
- vii. The Bank verifies the credentials and confirms with “successful” or “failure” message to the Net Banking gateway which is confirmed back to e-Procurement portal.
- viii. The page is automatically routed back to e-Procurement portal
- ix. The status of the payment is displayed as “successful” in e-Procurement portal.

The e-Procurement portal also generates a receipt for all successful transactions. The bidder can take a print out of the same. (xi) The e-Procurement portal allows Bidder to process another payment attempt in case payments are not successful for previous attempt.

C) RTGS/ NEFT

The bidder shall have the option to make the EMD payment via RTGS/ NEFT. Using this module, bidder would be able to pay from their existing Bank account through RTGS/NEFT. This would offer a wide reach for more than 90,000 bank branches and would enable the bidder to make the payment from almost any bank branch across India.

- I. Bidder shall log into the client e-procurement portal using user id and password as per existing process and selects the RTGS/NEFT payment option.
- II. Upon doing so, the e-procurement portal shall generate a pre-filled challan. The challan will have all the details that is required by the bidder to make RTGS-NEFT payment. iii.
- III. Each challan shall therefore include the following details that will be pre- populated:
 - Beneficiary account no: (unique alphanumeric code for e-tendering)
 - Beneficiary IFSC Code:
 - Amount:
 - Beneficiary bank branch:
 - Beneficiary name:
- iv. The Bidder shall be required to take a print of this challan and make the RTGS/NEFT on the basis of the details printed on the challan.
- v. The bidder would remit the funds at least T + 1 day (Transaction + One day) in advance to the last day and make the payment via RTGS / NEFT to the beneficiary account number as mentioned in the challan.
- vi. Post making the payment, the bidder would login to the e-Tendering portal and go to the payment page. On clicking the RTGS / NEFT mode of payment, there would be a link for real time validation. On clicking the same, system would do auto validation of the payment made.

D) OVER-THE-COUNTER (OTC)

This solution shall allow the bidder having account with ICICI Bank, to make the payment from any CMS enabled Branch of ICICI Bank in India. Bidders can make the payment via cash (if amount is <= 49,999), ICICI Bank Cheque.

The procedure for paying through OTC mode is as follows:

- i Bidder selects Over-the-Counter remittance option in e-Procurement portal.
- ii The e-Procurement portal displays the amount to be paid. Bidder chooses the bank account no. for refund of the amount.
- iii Bidder clicks on "Continue" button
- iv (iv)The e-Procurement portal displays the details of payment. Bidders clicks on "print _challan" and prints the OTC challan.
- v Bidder submits the OTC challan at the counter of any designated branch of ICICI Bank with
- vi Cash / Demand Draft / ICICI Bank Cheque (Payment in cash is allowed upto Rs. 49,999/-)
- vii ICICI Bank verifies the URN (format to be discussed and decided) and Amount with e-Procurement portal prior to accepting the payment
- viii On successful verification from e-Procurement portal, ICICI Bank accepts the payment. In case of failure, ICICI Bank shall return back the OTC challan and payment to the Bidder.

- ix ICICI Bank will commit the payment transaction (in case of successful verification from e-Procurement portal) and sends the Bank Transaction Number (I-Sure Reference Number) online against the URN and Amount.
- x ICICI Bank will generate receipt for the payment transaction and issues the same to the Bidder.
- xi The e-Procurement system updates the bank transaction number against the URN and Amount based on details sent by ICICI Bank online prior to generation of receipt.
- xii The status of payment will be displayed as “verification successful” in e-Procurement portal, when the bidder clicks on verification option in the portal
- xiii Bidder would be required to upload the scan copy of receipt as received from ICICI Bank as part of proof in Nex-tender portal before submitting the tender

IMPORTANT NOTES(DO'S/DON'T)

Sr no.	Scenario	Do's / Don'ts
1	<p>In the event of making Payment through NEFT/RTGS</p>	<p>Do's</p> <ul style="list-style-type: none"> • It is the bidder's responsibility to ensure that RTGS/NEFT payments are made to the exact details as mentioned in the challan which are: 1) Beneficiary account no: <client code> + <random number> 2) Beneficiary IFSC Code: As prescribed by ICICI Bank (this shall remain same across all tenders) • Amount: As mentioned on the challan. It is specific for every tender/transaction • Beneficiary bank branch: ICICI Bank Ltd, CMS • Beneficiary name: As per the challan • For every tender, details in the challan are different and specific to that tender only. Bidder should not make use of a challan for making payment for another tenders' EMD • It is advised that all the bidders make payment via RTGS/NEFT at least one day in advance to the last day of tender submission as certain amount of time is required for settlement and various parties are involved. The payment may not be available for the bidder validation. In such cases bidder may not be able to submit the tender • Bidder has to make only single payment against a challan as per the amount mentioned on the challan. • Bidder must do the payment before tender validity gets expired <p>Don'ts</p> <ul style="list-style-type: none"> • Bidder should not enter erroneous details while filling the NEFT/RTGS form at their bank. The following possibilities may arise: <ol style="list-style-type: none"> 1) Incorrect IFSC code mentioned: - Transaction would be rejected and the amount would be refunded back in to the bidders account 2) Incorrect Beneficiary account number mentioned (<client code> + <random number>): - <ol style="list-style-type: none"> a) In case, the beneficiary account number mentioned is incorrect the transaction would be rejected and the bid would not be accepted. 3) Incorrect Amount mentioned: The amount would be rejected if the amount mentioned in while making the payment is incorrect. Such cases will be captured as unreconciled transactions and will be auto-refunded directly to bidder's account. <p>In the event of any discrepancy, payment would not be considered and bidder would not be allowed to bid/ participate.</p> <ul style="list-style-type: none"> • Bidder is not supposed to use challan generated in one tender for payment against another tender since details in the challan are unique to the tender and bidder combination. • Bidder must not make multiple or split payments against a particular challan. Any split payment received against the same challan will be refunded back to the bidder.

		<ul style="list-style-type: none"> Bidder would not be entitled to claim that he is deprived of participating in the tender because his funds are blocked with the division on account of incorrect payment made by the bidder
2	In the event of making Payment through OTC	<p>Do's</p> <p>It is the bidder's responsibility to ensure that OTC payments are made to the exact details as mentioned in the challan which are:</p> <p>Beneficiary account no: <client code> + <random number> Amount: As mentioned on the challan It is specific for every tender/transaction</p> <p>Beneficiary name: As per the challan</p> <p>Bidder has to make only single payment against a challan as per the amount mentioned on the challan</p> <p>Bidder must do the payment before tender validity gets expired</p> <p>Bidder needs to mandatorily upload the scan copy of the payment receipt issued by ICICI Bank, in Nextender Portal before submitting the Tender</p>
		<p>Don'ts</p> <ul style="list-style-type: none"> If the bidding amount is greater than Rs49,999, then Bidder should not make payment in cash. In this case, Bidder should pay via Demand Draft/ICICI Bank Cheque It is bidder's responsibility to ensure that Demand draft should be valid and should not have discrepancies such as signature not found, stale DD, mutilated, material alteration, favouring third party etc., In the event of Demand Draft returned by bidder's Bank on account of such discrepancies, ICICI Bank shall ensure that such communication is sent to the Client within 3 days from the date of rejection by the Bidder's Bank For every tender, details in the challan are different and specific to that tender only. Bidder should not make use of a challan for making payment for another tenders' EMD

COVERING LETTER:

Format of letter to be submitted with the Tender for **Procurement of WI-FI ACCESS POINTS & INTEGRATED SOLUTION University Computer Centre, M.D. University, Rohtak- 124001.**

TO,

Deputy Registrar
Purchase & Supply Branch
MD University
Rohtak – 124001 (Haryana)

SUB: PROCUREMENT OF WI-FI ACCESS POINTS & INTEGRATED SOLUTION TO UNIVERSITY COMPUTER CENTRE ROHTAK.

Dear Sir,

1. This is with reference to your TENDER notice dated I have examined the TENDER document and understood its contents. I hereby submit **Procurement of WI-FI ACCESS POINTS & INTEGRATED SOLUTION University Computer Centre, M.D. University, Rohtak- 124001,**
2. The Bid is unconditional for the said Tender. This bid is valid for a period not less than 180 days.
3. It is acknowledged that the Authority will be relying on the information provided in the Tender and the documents accompanying such Tender for qualification of the bidders for the above subject items and we certify that all information provided in the Tender and in Annexures are true and correct; nothing has been misrepresented and omitted which renders such information misleading; and all documents accompanying the bid are true copies of their respective originals.
4. This statement is made for the express purpose of the above mentioned subject.
5. We shall make available to the Authority any additional information it may find necessary or require to supplement or authenticate the Qualification statement.
6. We acknowledge the right of the Authority to reject our bid without assigning any reason or otherwise and hereby relinquish, to the fullest extent permitted by applicable law, our right to challenge the same on any account whatsoever.
7. It is declared that:
 - a) We have examined the Tender document and have no reservations to the Tender document.
 - b) We have not directly or indirectly or through an agent engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice in respect of any Bid or request for proposal issued by or any Agreement entered into with the Authority or any other public sector enterprise or any Government, Central, State or local.
8. It is understood that the University may cancel the Bidding Process at any time without incurring any liability to the University and that you are neither bound to invite the applicants to Bid for the items nor to accept any bid that you may receive.
9. It is understood that the University can use any evaluation scheme/evaluation metrics/weightage or take the help of any consultant, as required in selecting the successful agency/agencies and we agree to abide by it.
10. It is certified that we have not been convicted by a Court of Law or indicted or adverse orders passed

by a regulatory authority which could cast a doubt on our ability to undertake the Services or which relates to a grave offence that outrages the moral sense of the community.

11. It is here by certified that the firm has not been debarred/blacklisted for any reason/period by any central/state Govt. department/University/PSU etc. if so particulars of the same may be furnished. Concealments of facts shall not only lead to cancellation of the order but may also warrant legal action. University may reject bids of firms which has been blacklisted at any time.
12. It is hereby affirmed that we are in compliance of/shall comply with the statutory requirements, as applicable.
13. We hereby irrevocably relinquish any right or remedy which we may have at any stage at law or howsoever otherwise arising to challenge or question any decision taken by the Authority in connection with the selection of bidders, selection of the Tenderer, or in connection with the selection/Bidding Process itself, in respect of the above mentioned items and the terms and implementation thereof.
14. We agree to undertake to abide by all the terms and conditions of the TENDER document.
15. We agree to undertake to be liable for all the obligations of the Tenderer under the Agreement. In witness thereof, we submit this application under and in accordance with the terms of the TENDER document.

Place:-

Date :.....

Yours faithfully,

(Signature, name and designation of the Tenderer/Authorized Signatory)

Official Seal



CHECK LIST FOR DOCUMENTS TO BE SUBMITTED ALONGWITH TECHNICAL BID

1. Processing Charge Rs. 4000/- through Demand Draft (Non-Refundable).
2. Bid document signed & stamped on each page.
3. A photocopy of the Authorization Certificate from OEMs.
4. Power of Attorney, as applicable, on company letter head.
5. Details of service support centers located in Delhi/NCR/Haryana.
6. EMD 2% of total Bid Amount.
7. Attested photocopies of Income **Tax and Sales Tax returns** for the last three Financial Years (2011-12, 2012-13, 2013-14).
8. Contact details of 5 customers, along with P.O. photocopy and/or installation report.
9. Financial Bid in separate sealed envelope.
10. A duly attested photo copy of the Firm Registration number and PAN Number.
11. Any other information that the bidder may like to submit in support of his capabilities and performance etc.

NOTE

1. In case of any queries on technical specifications, please refer the specifications mentioned in "Annexure A" only.
2. Delivery to be made at :
 UNIVERSITY COMPUTER CENTRE ROHTAK
MD University
Rohtak-124 001
Haryana, India
3. VAT will be at concessional rates, as applicable to non-profit, own-use institutions.
4. Filled quotations may be personally submitted DIRECTOR, UCC Branch Rohtak or sent through Registered Post or Courier addressed to:
 UNIVERSITY COMPUTER CENTRE ROHTAK
MD University
Rohtak-124 001
Haryana, India
5. The decision of acceptance of the quotation will lie with the competent authority of University, who does not bind himself to accept the lowest quotation and who reserves the right to himself to reject or accept any or all quotations received, without assigning any reason.
6. The quotations are liable to be rejected if any of the above conditions are not fulfilled or if the bid is not accompanied with EMD and Processing Charge.
7. Number of items may vary, as required.
8. The University reserves the right to split the order among more than one Tenderers.
9. Financial Bid of the Tenderers who qualify in the Technical Bid shall be opened in presence of the authorized designated representatives and Tenderers who wish to be present there. The date of Financial Bid opening will be informed to the shortlisted bidders subsequently.
10. The University will be at liberty to involve any expert or consultant in evaluating the bid for completing the entire bid process.

SUBMISSION OF TENDER

SEALING AND MARKING OF TENDER:

1. The TENDER for **Procurement of WI-FI ACCESS POINTS & INTEGRATED SOLUTION** must be complete in all aspects and should contain requisite certificates, informative literature etc.
2. Tender Document can be downloaded from MD University Rohtak website (www.mdurohtak.ac.in).
3. This is a two part bid consisting of Technical Bid and Financial bid. The Technical and Financial bids should be sealed in separate envelopes and then both to be sealed together in one large envelope clearly superscribed on the envelope, "**Procurement of WI-FI ACCESS POINTS & INTEGRATED SOLUTION**". The EMD shall be enclosed with the Technical Bid.

THE BID SHALL INCLUDE:

- a. Forwarding letter by the Tenderer
 - b. All required documents
 - c. Tender processing charges (non-refundable)
 - d. Interest free EMD (Earnest Money Deposit) in the form of Demand Draft in favour of Finance Officer MD University Rohtak, payable at Rohtak, from a Nationalized Bank to be submitted with Technical Bid.
 - e. Technical Bid
 - f. Financial Bid
4. TENDER should be addressed to: -
- UNIVERSITY COMPUTER CENTRE ROHTAK
MD University
Rohtak-124 001
Haryana, India
- a. The TENDER should be submitted in the office of the DIRECTOR, UCC Branch 3rd Floor Administrative Block MD university, Rohtak before 2.00 PM on 29.01.2015.
 - b. Tenders may be received through Post/courier/by hand. MDU Rohtak will not be responsible for any delay or misplace in postal receipt.

EXPENSES OF AGREEMENT:

All the expenses on the execution of the Agreement (if any) including cost of stamp or any other kind of expenditure incurred in the process of TENDER submission till final compliance shall be borne by the Tenderer.

DEADLINE FOR SUBMISSION OF BIDS:

TENDER must be received by the MD University Rohtak at the date, time and address specified in the TENDER notice/TENDER documents.

LATE BIDS:

Any TENDER received after the deadline specified for submission of TENDER shall be rejected without any further correspondence to the Tenderer.

TENDER OPENING

OPENING OF FINANCIAL BID:

Financial Bid (Tenders) of the Tenderers who qualify in the Technical Bid shall be opened in the presence of designated Authority and Tenderers who wish to be present there. The date of financial bid opening will be informed to the shortlisted bidders subsequently.

CLARIFICATION OF TENDER:

To assist in the examination, evaluation and comparison of Tender, University may at its discretion ask the Tenderers for a clarification on the Tender which is submitted by him. The request for clarification and the response shall be in writing.

EVALUATION OF TENDER:

University will be at liberty to involve any expert or consultant and use appropriate metrics and weightages in evaluating the bid for completing the entire bid process.

AWARD OF PURCHASE ORDER

Successful Tenderer shall be awarded the Purchase Order. If after accepting the Purchase Order, the agency fails to supply the items, EMD will be forfeited and the agency will be blacklisted, in addition to recourse to other penal measures. No grievance will be entertained in this regard.

- 6.1 University reserves the right to negotiate with eligible Tenderer before finalization of the Tender and/or contract.
- 6.2 University reserves the right at the time of award of Purchase Order to increase or decrease even obsolete the number of items without any change in terms and conditions.
- 6.3 The bidders must quote rates and other terms and conditions for all the equipment's/items failing which tender will be rejected. Total cost of the bid will be one of the important deciding factor while deciding the bid in favor or against any bidder.

NOTIFICATION OF AWARD

Prior to the expiration of the period of Tender validity, the University will inform the Tenderer appropriately that the Bid has been accepted and the Purchase Order has been awarded.

(Signature of Tenderer)

Official seal

TERMS AND CONDITIONS FOR PROCUREMENT OF WI-FI ACCESS POINTS & INTEGRATED SOLUTION .

The Procurement of WI-FI ACCESS POINTS & INTEGRATED SOLUTION as per **Annexure 'A'** are required to be purchased for this University. You are requested to kindly quote your rates for the same. The terms & conditions for quoting/tendering the rates given in enclosed page may also be kept in view and signed. Your tender will interalia be subject to the following conditions: -

1. Every tender shall be accompanied by the e- tender fee of Rs.1000/- Online Payment, Rs.4,000/- as tender document fee & earnest money equal to 2% of the cost involved Online payment.
2. The sealed tender, complete in all respects, must reach the Office of the undersigned latest by 15-02-2017(date) by 2:30 p.m.(time). The same shall be opened on 15-02-2017 at 3:00 p.m. in the office of (DIRECTOR, UCC). The quotes or their authorized representatives are allowed to attend the meeting of the Tender Opening Committee at their own costs.
3. The Tender received after due date and time or incomplete shall be rejected out rightly.
4. The following charges and terms may be spelt out in your offer clearly: -
 - ❖ F.O.R. Rohtak
 - ❖ Rates of VAT/Excise Duty (in percent), if any. Please note that the University does not issue Form 'C' or 'D'.
 - ❖ iii. Payment terms.
 - ❖ Delivery period.
 - ❖ Guarantee/Warranty period.
 - ❖ After-sales service.
 - ❖ Installation charges, if any.
 - ❖ Validity period of the tender.
 - ❖ Bank Draft charges, if any.
 - ❖ Misc. charges such as Packing & Forwarding charges, Insurance charges, etc., if any.
5. The packing, forwarding, freight, insurance charges etc. may be quantified in terms of amount. These charges will not be payable against such vague statement as "packing, forwarding, freight and insurance charges etc. extra".
6. Charges not mentioned in the tender shall not be paid.
7. FOR shall be M.D. University, Rohtak or Offices situated at Outstations as the case may be. The rates quoted Ex-warehouse can be rejected.
8. The offer/rates must be valid for a period of at least three months from the date of opening of tender.
9. The authorized bidder must have a minimum annual turnover of Rs. 30.00 crores failing which the bid will be rejected. Proof of turn over may be appended with the bid.
10. The current price list duly authenticated by the Principals with dated signature and seal along with literature/pamphlets may be supplied along with the offer.
11. The quantity may increase or decrease or obsoleted without any notice. The University shall communicate the increase or decrease within 90 days of acceptance of tender.
12. The University is situated within the Municipal Limits. As such, Octroi, if any, shall be payable. In case, the material is supplied through a Transport Company by road, the Transport Company's

- charges, labour charges and octroi charges shall be borne by the supplier. It may be mentioned specifically as to whether the material will be sent by rail or by road through a Transport Company.
13. The goods shall be supplied by the Supplier within the time limit specified in the supply order. The delivery period can be extended by the Director UCC with the approval of registrar only in exceptional cases on written request of the Supplier giving reasons/explaining circumstances due to which delivery period could not be adhered to. In case, the material is not supplied within the delivery period, the supplier shall be liable to pay the University the compensation amount equivalent to 1% (one percent) of the cost of material per week or such other amount as the Registrar may decide till the supply remains incomplete, provided that the total amount of compensation shall not exceed 10% (ten percent) of the total amount of the cost of material supplied. Appeal against these orders shall, however, lie with the Vice-Chancellor, M.D. University, Rohtak whose decision shall be final.
 14. As a general policy, the University tries to make 100% payment within 15 days of the receipt of material subject to proper installation, wherever applicable, and satisfaction of the Inspection Committee. No advance payment or payment against documents negotiated through Bank shall be made. However, Advance payment may be made against security for imported items to avail Custom Duty Exemption.
 15. Though MDU has Import Duty, Excise Exemption Certificate but if the same is applicable, The University will make payment against receipt for the same. MDU will not pay any import handling charges
 16. In case, the supplier/contractor fails to execute the supply order/contract on the rates, and terms and conditions as contained in the supply order within the stipulated period, they shall be liable to such action as blacklisting, debarring from having any business with this University, forfeiture of earnest money/security, besides any other action as may be deemed proper by the University.
 17. The acceptance of the material shall be subject to satisfactory report of this Office's Inspection Committee/Technical Committee/Experts Committee.
 18. The samples of the material, if necessary and possible, shall be supplied with the tender. The unapproved samples shall be collected on receipt of information failing which the same shall be dispatched by Goods Carrier on your risk with the condition of "**Freight to Pay**". Samples **costing less than Rs. 100.00** shall not be returned to the **quotes**. However, if the **quotes** wish to take the same back, it can be collected at their own cost within a period of one month, failing which the samples will be disposed off.
 19. The bidder/OEM should possess minimum 3 Years' experience in direct supply, installation, testing and commissioning of similar equipment and support to the Govt./Public Sector/Reputed Institutions for a minimum of 2 orders of equivalent Scale in last three years. Proof of direct dealership details i.e. OEM authorization letter/dealership certificate for supply along with Prime Customers contact details and photocopies of Purchase Order and/or installation report, to whom the similar Products Have Been supplied by the Tenderers, is required to be submitted along with the Technical Bid.
 20. The vendor will also provide complete technical and operational training without any extra cost and the virtual lab/class will be provided by the vendor at no extra cost for R&D before and after the commencement of project for at least 2 persons at a time.
 21. All the features present in the devices should come with all required licences from day 1.

22. All the ports should carry valid licences for enabling or disabling. No port constraint should be put as a hidden cost on MDU.
23. All Access points and L2 Switches should carry a warranty and support of 8x5 NBD.
24. All Core equipment such as controller should carry a warranty and support of 24x7.
25. All layer 2 switches should be manageable via GUI preferably over http/https.
26. The acceptance of the tender shall rest with the undersigned who does not bind himself to accept the lowest tender and reserves the right to reject any or all items of tender without assigning any reason therefore. The undersigned also reserves the right to accept tender in part i.e. any item or any quantity and to reject it for the rest.
27. The University is registered with the Department of Scientific & Industrial Research, Ministry of Science & Technology, New Delhi in terms of Govt. Notification No. 10/97- Central Excise dated 1 March, 1997 and Notification No. 51/96-Customs dated 23.7.1996 vide Registration No. TU/V/RG-CDE(244)/2015 dated September, 1,2015 up to 31-08-2020. Thus the University is exempted from payment of Custom Duty and Excise Duty. The consignee shall issue necessary certificates duly countersigned by the Registrar, M.D. University, Rohtak to avail of exemption.
28. It may be certified that you have not been debarred/ blacklisted for any reason/period by DGS&D, DS&D (Haryana) or any other Central/State Govt. Dept./University/PSU etc. If so, particulars of the same may be furnished. Concealment of facts shall not only lead to cancellation of the supply order, but may also warrant legal action.
29. In case, any other information/clarification is required, the undersigned may be contacted at Telephone No. 01262-393548 on any working day (Monday to Friday) during office hours (9 a.m. to 5.00 p.m.).
30. The successful bidder has to deposit a Performance Guarantee equal to 5% of annual cost of Software's, in the form of FDR/Bank Guarantee/TDR for the warranty period (3 years), in the name of Finance Officer MD University Rohtak. When Performance Guarantee/warranty is deposited, EMD will be returned subsequently.
31. The Financial Bid should be accompanied with an Earnest Money Deposit (EMD) of Rs. 2% of Bid Amount rounded to the nearest ten thousand through Online using E-tender Portal. EMD of unsuccessful bidder will be returned subsequently. No interest shall be paid on EMD.
32. The Firms registered with NSIC /NSME are exempted from Tender Fee and EMD, copy of the valid certificate must be uploaded with technical cover
33. After winning the order, if the vendor fails to deliver product and provides satisfactory Warranty, EMD will be forfeited and also the vendor will be blacklisted from participating in any future bid.
34. The Sub Committee reserves the right for negotiation thereafter if considered necessary.
35. No tender documents will be issued and rates are to be offered on Company's Letter Pad.
36. The Wireless Access points should not under any circumstances work without central controller.
37. The rates should be quoted for required specifications. The technical specification of the equipment's required must accompany the tender. The decision of the University will be final with regard equipment's to be purchased.
38. The bidders must quote rates and other terms and conditions for all the equipment/items failing which tender will be rejected. Total cost of the bid will be one of the important deciding factors while deciding the bid in favour or against any bidder.
39. University reserves the right at the time of award of Work Order to increase or decrease or even delete the number of items without any change in terms and conditions.

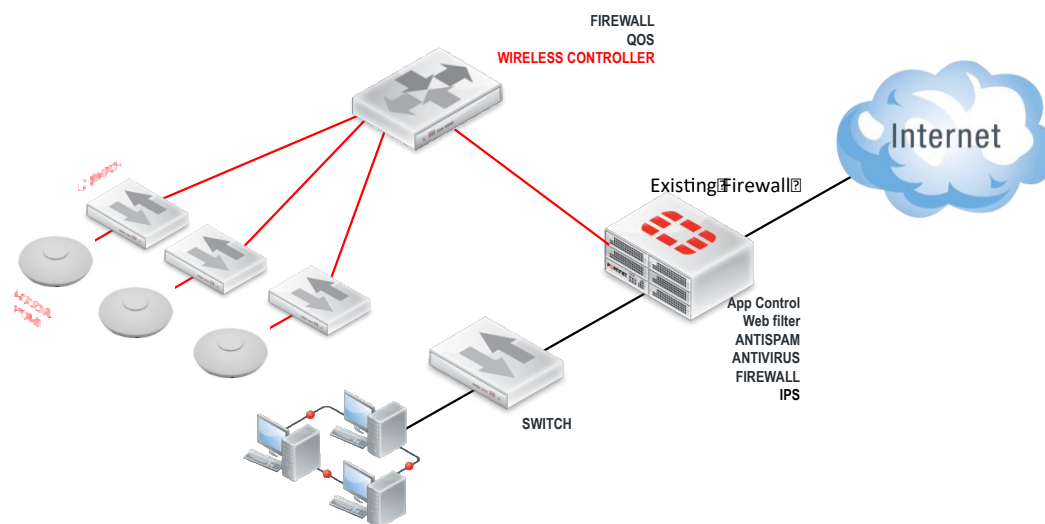
- 40. The tender should be submitted only if the material is readily available in your stock or can be supplied within 45 days after the order is placed.
- 41. The dispute, if any, shall be subject to the jurisdiction of Courts at Rohtak. Any other jurisdiction mentioned in the tender or invoices of the manufacturers/distributors/ dealers/suppliers etc. shall be invalid and shall have no legal sanctity.
- 42. Terms and conditions printed on tender/Invoice of the firm, if any, shall not be binding on the University, except those mentioned specifically on the supply order, and your acceptance of the order shall be construed as your agreement to all the terms and conditions contained in the order.
- 43. No Consortium BID is allowed.
- 44. The Bidder should be doing Business in India for this particular OEM for atleast last 5 years.
- 45. The Bidder should be a company incorporated and registered in India Under the companies Act, 1956.
- 46. Bidder should be ISO 9001 Certified.

Signature _____
Name of the firm with seal/stamp _____
Affix Rubber Stamp of the firm

M. D. University, Rohtak



Security & Wireless Consolidation



Scope of Work (SoW)

- Supply of all Active and Passive components as per BoQ at MDU campus, Rohtak.
- Installation, Configuration and Integration
- Physical installation and powering of all Active and Passive components as per Network diagram provided by MDU.
- Proper marking of cable, Safety Sign board/Route marker to be installed for cable laid underground and other miscellaneous work.
- Any structure, permanent or temporary, dismantled or destroyed during the execution of the work shall be refilled/remake or restore to its original condition by the contractor at his own cost.
- Any extra electrical points and data points required in the server room shall be provided by the Bidder at his own cost.
- The required UPS power points in the rack shall be provided by MDU.
- Configuration and Integration of all of Active and Passive components as per the approved implementation plan.
- Configuration of VLAN and Inter VLAN routing as per implementation plan.

The bidder should design Security will be multi-tier with separate Security Appliances for Wifi Internet Zone. Security Appliances like Firewall & UTM will have ASIC & Network Processor (NP) based architecture to ensure minimal latency while offering maximum security.

Security Appliances should support both Ipv4 + Ipv6 features and appliance performance should be maintained for various packet size of Ipv4 & ipv6.

MDU already have Security Appliance at Internet Gateway will have multiple modules that include Firewall, IPS, VPN- SSL & IPSEC, URL Filtering, DLP, Anti-Virus etc.

The bidder should deploy Wireless Solution

Wireless solution should comprise of controller architecture and Access point should be deployed at all campus and manage by Central Controller place at Data centre to provide wi-fi Zone.

The Access points will be placed at each Building and Hostel and will be managed by the Wireless controller.

In case of controller being failure, the APs will be redirected to the existing Central Controller and the access to end user will be seem less.

Minimum Required Specifications

The bidder should place Wireless Controller at MDU Data centre

- Wireless LANs(WLANs) controller must be dedicated appliance and it should supports min of 1000 Access points in tunnel and 4000 Access point in bridge mode from day one loaded with required AP license. The solution should be scalable in future. The OEM/Bidder can propose controller in a single chassis or multiple controllers to meet the requirement. It should support N+N redundancy.
- The bidder must quote Controller that should have at least 2 x 10Gbps of uplink interfaces and redundant PSU.
- The WLC controller must have inbuilt statefull firewall with required license to configure Qos rules per application(user-defined) and per user (stations, users, and port numbers), per group and bandwidth throttling for users via role-based policies if not in same controller the bidder should quote separate firewall to meet above requirement.
- It Should adhere to the strictest level of security standards, including EAP-TLS EAP-TTLS/MSCHAPv2 EAPv0/EAP-MSCHAPv2 PEAPv1/EAP-GTC EAP-SIM EAP-AKA EAP-FAST
- WLAN Controller shall provide seamless roaming between AP's and Must have Automatic 802.11 interference detection, identification, classification, and mitigation.

Access points

- AP should have Dual Radios to support 2.4 GHz & 5Ghz concurrent users with 802.11 a/b/g/n/ac capability.
- The bidder should configure the multiple SSIDs with equivalent vlan ID for Internal Staff, Students and Guests etc.
- The bidder should follow the VLAN architecture and use that to configure SSIDs
- The Bidder should configure Wireless network to follow all the security policies in accordance with MDU's standard

- The Bidder should configure the Wireless network in appropriate modes: Tunnel/Bridge/Split tunnel in accordance and for the betterment of the Infrastructure
- The Bidder should configure reporting features and should be able to configure new reports according to MDU's requirement. For example Top Used AP, Top talking clients, AP wise traffic report etc
- The Bidder should configure report PCI Compliance Rogue AP detection and wireless intrusion detection are PCI requirements
- The Bidder should configure the security policies on the WLC as suited to the Infrastructure and to achieve compliance with MDU's existing policy
- The Bidder should configure appropriate QOS (Quality of Service) rules as per MDU's requirement
- The Bidder should configure the Guest Portal to achieve secured Guest access on the WLC
- The Bidder should configure the WLC/APs in such a way to achieve Automatic Channel, Automatic power to achieve Self-healing
- The Bidder should configure the WLC in order to achieve network security without compromising on the Throughput of the clients
- The Bidder should use the existing DHCP server-VLAN architecture or configure DHCP/VLAN on the WLC as per the University's requirement
- The Bidder should configure policies based on device types to limit the usage done from certain device types or to give unrestricted access to some devices
- The Bidder should configure certain APs to monitor the air on one radio and to serve the clients on the other one to detect attacks or any other vulnerability
- The Bidder should configure the mesh network where no physical cabling is possible and extend the network wirelessly.

Switches

- The Bidder should mount all the switches to respective HUB room in MDU campus.
- The Bidder should create required Vlan to respective switch.
- The Bidder should configure management access to all switches
- The Bidder should configure centrally management to all switches so administrator can change any setting directly from central management console.

Project Duration:

- a. The entire work including Supply, Installation, Integration, Testing and Commissioning should be completed within four months of releasing the work order.
- b. The entire documentation and testing reports should be submitted within the project duration of four months.

Scope of Acceptance testing and commissioning

- After installation and configuration of each and every subsystem, integrating various systems and providing various services, tests shall be conducted for system performance as a whole.
- Commissioning shall mean end-to-end commissioning of the network with testing of live applications. Test parameters, commitments etc shall be submitted along with implementation plan, which shall be approved by MDU.
- Penetration test of the network after installation of IT/Network Devices.
- Upon Self testing and Commissioning, the system shall be offered for inspection by MDU.
- The successful Bidder, along with MDU shall prepare an inspection and acceptance schedule with details of each activity.

Scope of Documentation

- Providing original manuals of all hardware items supplied.
- Implementation plan, to be approved by MDU before initializing the installation and configuration activity.
- Test parameters, commitments etc for acceptance testing to be enclosed along with Implementation plan.
- Documentation on Equipment/ rack layout plan and connectivity Diagram
- Technical write up of the network design and functioning, System and Network architecture diagram, Active and Passive components configuration details, Security implementation.
- As built network configuration details (portwise) with IP address, subnet, VLAN , port description, etc for all active components.
- Security implementation including VPNs, Firewall rules, IDS/IPS, ACL details etc.
- Operator manual for shutdown/start of the active resources.
- Any other Relevant Documentation

Support Technical Manpower

It is a responsibility of System Integrator (SI) to provide required to provide minimum two technical manpower to manage the total solution supplied and as per mentioned in scope document and to maintain the existing System. The scope of work covers provision of onsite technical staff in MDU from 08:00 a.m. to 06.00 p.m. (Monday to Saturday). If required, on Sundays (occasionally) and after 06.00 p.m. on weekdays. The engineers deputed must have their own vehicles, mobile phones and necessary tools like cable tester, crimping / punching machine etc.

Any reported fault would be taken up by the support staff within 2 hour and a logbook shall be maintained in which all the records should be maintained and submit.

BOQ (CONSOLIDATED REQUIREMENT SHEET)

Proposed BoQ: as per specifications below		
S. No.	Description	Required Qty
1.	TYPE-A Wi-Fi Access Point (Indoor)	604
2.	TYPE-C Wi-Fi Access Point (Outdoor) -	112
3.	Wireless Controller (in HA)	1
4.	Logs & Reporting Device if required	1
5.	POE+ Switch 24 Port	60
6.	POE+ Switch 8 Port	30
7.	Passive Equipment's	
i.	CAT-6 Patch Cords 2 Mtr (Siemon / Corning / Panduit / Molex / AMP)	500
ii.	CAT-6 Patch Cords 1 Mtr Approved Makes(Siemon / Corning / Panduit / Molex / Amp)	500
iii.	IP 55 Rated Box with accessories for mounting at Pole	50
iv.	Single Mode Outdoor OFC 8 core (Siemon / Corning / Panduit / Molex / Amp)	2000
v.	SINGLE MODE OUTDOOR OFC 24 CORE (SIEMON / CORNING / PANDUIT / MOLEX / AMP)	3000
vi.	Fiber Pigtaills 1.5 Mtr. Single mode (Siemon / Corning / Panduit / Molex / Amp)	100
vii.	Fiber Optic Patch Cords: (Siemon / Corning / Panduit / Molex / Amp)	
(a)	3 Mtrs Sc-LC Style Single Mode 50/125 Micron Duplex Patch Cord 3 Mtrs complete as required and as per specification	50
viii.	UTP CAT-6 Cable (Siemon / Corning / Panduit / Molex / Amp)	100
ix.	Information Outlet Single port(Siemon / Corning / Panduit / Molex / Amp)	400
x.	CAT 6 Outside Plant Cable (Outdoor Application)	20
xi.	HDPE PIPE	5000
xii.	Route Marker	50

xiii.	Universal Joint Closure(UJC)	50
xiv.	Compact LIU 8 port with embedded splice tray loaded with SC pigtails and FC couplers	50
xv.	Wi-fi Poles 15 feet	50
xvi.	1GBPS Single Mode Media Convertor for Out Door	50
xvii.	2.5mm sq mm 3 core armoured cable havells/polycab electric Cable	5000
SFP Modules		
8.	1 G Base LR SFP+ Optic LC , SMF complete as per requirement and as per specification	50
Networking Job Works (rates to be Quoted per Mtr) - Complete Connectivity from switch to I/O Port with installation		
9.	Fibre Cable Laying through Conduit Pipe	
	a) Soft Digging(1.5 M depth)	
	b) Hard Digging/Moring/Chamber Installation	
	c) Etc.	
10.	UTP/STP Cabling through Conduit (including Conduit laying/fitting)	
	Underground Pipe laying with Cable with Material;	
	Outer PVC Pipe Laying with Cable with material On wall	
11	Wireless Network Engineer/Assistant on site for a duration of warranty /AMC by the firm for Facility management/onsite warranty & Maintenance	2

Technical Compliance Envelope

ANNEXURE-A

1) Indoor Access Point

1. TYPE-A Wi-Fi Access Point (Indoor-604)				
S.No	Features	Specification	Compliance Yes/ No	Remarks
	Architecture			
		Should have the dual radio option and should be able to support devices on 2.4GHz and 5 GHz simultaneously.		
		Should support radio1 as 2.4 GHz b/g/n and radio2 as 5 GHz a/n/ac		
		Should have at least 4 Internal Antennas		
		Should have minimum 1 x 10/100/1000 Interface.		
		Should support Power over Ethernet (PoE) 802.3af ((12.9 W)		
		Access point should support 2x2 MIMO with 2 spatial streams.		
		The access Point should support throughput in Radio 1: Up to 300 Mbps, and Radio 2: Up to 867 Mbps		
	Mobility			
		Should support L2 and L3 wireless controller discovery		
		Should support auto-selection of RF channel and transmit power		
		Access point must have following wireless monitoring capabilities:		
		a) Frequencies scanned for 2.4 and 5 GHz		
		b) Background scan with client access on 2.4 and 5 GHz		
		c) Full-time scan as dedicated monitor		
		d) Full-time scan with client access on 5G GHz		
		e) Should support one radio for air monitor and another radio for client access.		

		WME Multimedia Extensions support 4 priority queues for voice, video, data and background traffic		
		Certified by the Wi-Fi Alliance's Wi-Fi Multimedia™ certification program		
		Should support 16 Simultaneous SSIDs		
		Should support following EAP types : EAP-TLS EAP-TTLS/MSCHAPv2 EAPv0/EAP-MSCHAPv2 PEAPv1/EAP-GTC EAP-SIM EAP-AKA EAP-FAST		
		support self-healing, self-optimizing local mesh extending network availability to areas without an Ethernet infrastructure. Include if any license required		
		Should support Peak antenna gain of 3.5 dBi for 2.4 GHz, 6 dBi for 5 GHz		
		Should support atleast 20dBm Transmission Power		
		Access Points must support Hardware -based DTLS encryption on CAPWAP Standard		
	Management			
		Should be centrally managed through the wireless controller		
		Should support DNS based Controller discovery, DHCP Based Controller discovery and static discovery		
		Should support Command line(CLI) to access point		
		should support mounting options of Ceiling, T-Rail and wall all these accessories should included with box. If not quote all mounting kit.		
	Environment			
		Operating Temperature - 32 – 104 °F (0 – 40 °C)		
		Access Point must be Wi-Fi Alliance Certified		
		Low Voltage Directive , RoHS complaint		
		Access point should have the Power Consumption 7.8W(Average) and 15.72 W(Maximum)		
	GARTNER REPORT	The OEM should be present in Gartner's leader's quadrant of Wired and wireless access		

2) WIFI- OUTDOOR ACCESSPOINTS

2. TYPE-C Wi-Fi Access Point (Outdoor) -92				
	Features	Specification	Compliance Yes/ No	Remarks
Sr. No.	Architecture			
		The Access Point should support IEEE 802.11a/b/g/n/ac standards		
		Should have the dual radio option. Frequency of one radio must 5 GHz a/n/ac and other one should be at 2.4 GHz b/g/n		
		Should have 4 nos. external N-Type antennas for better coverage with a gain of approx. 3.5dBi (2.4 GHz) to 6dBi (5GHz)		
		AP hardware type should be Outdoor IP67 rated, status LEDs, gore vent for pressure equalization		
		Should have 1 x 10/100/1000 Interface or more		
		Should support Power over Ethernet (PoE) 802.3at, more power required for Point to point architecture		
		Support 2x2 MIMO with 2 spatial streams or better.		
		The access Point should support aggregate throughput/ UP to of minimum 1167 Mbps Bandwidth		
		External Access point must support Point to point and multihop Mesh		
	Mobility			
		Should support L2 and L3 wireless controller discovery		
		Should support auto-selection of RF channel and transmit power		
		Access point must have following wireless monitoring capabilities:		
		a) Frequencies scanned for 2.4Ghz and 5Ghz		

		b) Background scan with client access on 2.4 and 5 GHz		
		c) Full-time scan as dedicated monitor		
		WME Multimedia Extensions support 4 priority queues for voice, video, data and background traffic		
		Certified by the Wi-Fi Alliance's Wi-Fi Multimedia™ certification program		
		Should support 16 Simultaneous SSIDs		
		Support EAP-TLS EAP-TTLS/MSCHAPv2 EAPv0/EAP-MSCHAPv2 PEAPv1/EAP-GTC EAP-SIM EAP-AKA EAP-FAST		
		support self-healing, self-optimizing local mesh extending network availability to areas without an Ethernet infrastructure		
		Should support high Transmission power of at least 26dBm Transmission Power		
		Access Points must support Hardware -based DTLS encryption on CAPWAP Standard		
	Management			
		Should be centrally managed through the wireless controller		
		Should support DNS based Controller discovery, DHCP Based Controller discovery and static discovery		
		should support Command line (CLI) to access point		
		should support mounting options of poll and wall all these accessories should be included with box. If not quote all mounting kit.		
	Environment			
		External Access point must be rugged and must support extreme Temperature : -4 to 140 °F (-40 to 60 °C)		

		Access point should have the Power Consumption - 16 W(Average) and 18.4 W(Maximum)		
		Low Voltage Directive , RoHS complaint		
		Access Point must be Wi-Fi Alliance Certified		
	GARTNER REPORT	The OEM should be present in Gartner's leader's quadrant of Wired and wireless access		

3) WIRELESS CONTROLLER

3. Wireless Controller			
S.No.	Specification	Compliance	Remarks
1.	It must be Rack Mountable appliance based controller. It should not be a software based or virtual controller		
2.	Must be compliant with IEEE CAPWAP or equivalent for controller-based WLANs.		
3.	Controller should support CAPWAP or equivalent encrypted throughput of 20Gbps, maximum to be specified		
4.	Controller should be ready for supporting 1500 AP's from day one. Specify if any AP license required it should also include for 1000 AP license from day one.		
5.	Controller should be able to handle minimum 4000 concurrent users, maximum to be specified.		
6.	Controller hardware should support min of 2 no's 10GE SFP+ ports and preferably min of 8no's GE SFP slots & GE RJ45 Ports, maximum to be specified		
7.	It must have hot swappable dual redundant internal power supply. If not include PSU modules		
8.	It Should have IPV6 ready from day one.		
9.	It should support IPV6		
10.	Controller must be capable of offloading the CAPWAP processing to hardware/ASIC or equivalent method, so it does not create CPU overhead		
11.	Controller should support access points deployed in Centralized deployment mode, Distributed deployment mode.		
12.	The wireless controller support the following types of client load balancing:		

	a)Access Point Hand-off -If the load on an access point(ap1) exceeds a threshold then the client with the weakest signal will be signaled by wireless controller to drop off and join another nearby access point(ap2)		
	b)Frequency Hand-off - the wireless controller monitors the usage of 2.4GHz and 5GHz bands, and signals clients to switch to the lesser-used frequency automatically		
13.	Support Fast Roaming or equivalent. This includes Seamless rapid mobility across VLAN and subnets Includes 802.11i pre-auth and fast roaming		
14.	Controller should have ability to map SSID to VLAN and dynamic VLAN support for same SSID.		
15.	Controller Should support L2 Client Isolation so User cannot access each other's devices.		
16.	The wireless Controller should support Rogue AP detection and Blocking in RF and on wire		
17.	It should be able to detect the 3rd party wireless enabled Mobile devices with Hot spot programs and able to prevent the users from connecting those mobile devices		
18.	It should support guest-access functionality for IPv4 &IPv6 clients		
19.	Captive portals should be configured for both for wired and wireless connections. Portals can also be hosted on external servers		
20.	It should Include Wireless Guest Access Provisioning for Allowing non-IT staff to create Guest account, Assign Time quota, generate temp password, print, email or SMS the information to the Guest user.		
21.	Controller should deny security risk, bandwidth consuming, Potential liable sites, Adult/Mature Content sites for guest users and temporary staff's. If any OEM/Bidder can't provide must proposed for external appliance		
22.	Controller should allow General Interest - Business and personal sites for guest users and temporary staff's. If any OEM/Bidder can't provide must proposed for external appliance.		
23.	It should support for link aggregation using the standard 802.3ad Link Aggregation Control Protocol (LACP) or another non-proprietary link aggregation protocol.		
24.	The controller must have visibility at layer 7 through deep packet inspection to determine applications and OS fingerprinting.		
25.	The Controller must have the ability to recognize 1000+ Applications in categories like File Sharing, Game, Network Service, P2P, Proxy, Remote Access, Social Media, Storage Backup, Update, Video/Audio, VoIP.		

26.	WLAN solution shall provide user identity-based and device identify based control to enforce application-layer security and prioritization. E.g You tube to be given defined bandwidth like 1 Mbps and some apps like Facebook to be denied or given defined bandwidth.		
27.	The wireless Controller should support the following RF Management features		
	a) Automatic Channel Allocation		
	b)Controller should support the Radio resource management for channel allocation activity in a low-traffic period also it should have an option for schedule optimization for a fixed time.		
	c) Automatic Power Control		
	d) Supporting Neighborhood scanning of RF environment to minimize neighboring AP interference and leakage across floors.		
	e) Having Coverage Hole Detection		
	f) Having Self healing - Automatic neighboring AP power increase to fill in for coverage losses		
28.	It should support the following controller discovery mechanism from AP's: a)Static IP, b)Automatic discovery via Multicast AND Broadcast C)DHCP Option, D)DNS FQDN discovery		
29.	Should support the below BYOD features within the controller for employee and guest personal devices. If not bidder can quote for additional devices		
	a) Detect client device Mac address, device type(such as windows device, Android device, Iphone, Ipad, blackberry, etc) and host name		
	b) controller should be able to allow or deny traffic based on device type (such as windows device, Android device, Iphone, Ipad, blackberry, etc)		
	c) Controller should be able control the bandwidth based on device type(such as windows device, Android device, Iphone, Ipad, blackberry, etc)		
30.	Controller should have the below Remote access point features:		
	a) It should support by all access points quoted by bidder		
	b)Enables APs to be deployed remotely (over WAN link) to the centralized wireless controller with encrypted tunnel for management and data traffic		
	c) It should support Split tunnel routing the management frame via tunnel to controller and data traffic locally		
	d) Wireless client connectivity is maintained when the wireless controller is unreachable for open and PSK type SSIDs		

31.	Controller should support Combination of 802.1X, Captive portal and open authentication integrated with Local and External server: Radius, LDAP and TACACS+		
32.	Controller should support MAC filtering per SSID		
33.	Should support mesh capabilities for temporary connectivity in areas with no Ethernet cabling. Also it should support for multiple mesh instances. Add if any license required		
34.	Support 802.11i/WPA/WPA2 Enterprise with standard interface to external AAA/RADIUS Server		
35.	Support Different AAA Server per SSID		
36.	Support IEEE 802.11e Wi-Fi Multimedia (WMM)		
37.	The controller should support Web-based GUI, SNMP, Command-line interface(CLI) via Serial port, SSH, Telnet for management		
38.	Controller should support RADIUS CoA (Change of Authorization)		
39.	Controller should support of LLDP protocol on AP to send switch and port information		
40.	Controller should support VLAN Pooling based on SSID or AP group for network load balancing in tunnel mode		
41.	Controller should have option to disable automatic registration of unknown Access points		
42.	Controller should suppress DHCP, Arp, NETBIOS and other multicast and broadcast packets		
43.	High Availability :		
	Controller Should support Active-Active as well as Active- Passive redundancy.		
	The HA Architecture should have the ability for Device Failure Detection and Notification as well as Link Status Monitor		
44.	Firewall should be part of wireless controller appliance or the vendor can use the existing Firewall Fortigate 1500D or separate appliance can be quoted with Firewall throughput of 20 Gbps with following features:		
	WLAN controller (either integrated or through external state-full inspection firewall) should have a capacity to inspect all traffic from each user session and allow or deny any traffic that does not satisfy specified policies. Specify and include if any license required for integrated state-full firewall		
	Number of sessions : should support at least 10 million TCP concurrent sessions and at least 260,000 new TCP connections per second		
	The proposed solution should support Virtualization (Virtual Firewall, Security zones and VLAN). Firewall should support 2 virtual firewalls from day one and scalable to minimum 5 virtual firewalls as and when required with licenses.		

	Wlan integrated IPv4 & IPv6 firewall throughput should be min 30 Gbps, maximum to be specified		
	It should support IPv4 and IPv6 based firewall policies to inspect all traffic		
	Controller should support static and policy based routing		
	Controller should support Dynamic routing protocol: RIP, OSPF(v2 & v3), BGP		
45	<p>The wireless Controller should able to detect the following Wireless Intrusion Attacks such as:</p> <ul style="list-style-type: none"> a) Asleep Attack b) Association Frame Flooding c) Authentication Frame Flooding d) Broadcasting De-authentication e) EAPOL Packet Flooding f) Invalid MAC OUI g) Long Duration Attack h) Null SSID Probe Response i) Spoofed De-authentication j) Weak WEP IV Detection k) Wireless Bridge l) Ad-hoc Network Detection and Containment 		
46.	It should support for 802.1Q trunking and network address translation (NAT) functionality for wired LAN connectivity.		
47.	Controller should have built in option of IPS and anti-spoofing protection along with Antivirus, if Build is not available than external device should be quoted		
48.	Vendor should also have EAL 4+ and FIPS 140-2 lab certification, not necessary the exact model		
49.	The OEM should be present in Gartner's leader's quadrant of Wired and wireless access		

4) LOG RETENTION & REPORTING DEVICE.

4.	Logs & Reporting Device	Approved Makes(FORTIGATE/CISCO/HPE)	
The Device must support the existing log server(Fortigate 1000D) if not bidder can quote external appliance.			
S.No.	Specification	Compliance	Remarks
1.	The WLAN controller must send log information to an external log server / appliance via an encrypted connection.		
2.	The log server should support min of 5TB hard disk space maximum to be specified.		
3.	The log server should generate report for PCI-DSS compliance		
4.	The logging and analysis platform should either be an appliance or a dedicated Server/ Virtual machine platform. The bidder should take the responsibility of supplying the hardware and the OS with suitable warranty.		
5.	The Log server should process minimum of 200 GB logs per day		
6.	The log server should generate the below Wi-Fi log: <ul style="list-style-type: none"> a. Rogue Aps - Displays the service set identifiers (SSID) of unauthorized Wi-Fi access points on the network. b. Authorized APs - Displays the names of authorized Wi-Fi access points on the network. c. Authorized SSIDs - Displays the service set identifiers (SSID) of authorized Wi-Fi access points on the network d. Wi-Fi Clients - Lists the names and IP addresses of the devices logged into the Wi-Fi network 		
7.	The log server should have provision for Real-Time Traffic Viewer as well as Historical Traffic Viewer		
8.	The logs should be Searchable & the log format must be customizable		
9.	The log server should have options to generate reports in pdf format		

5) 24 PORT POE 1G EDGE/L2 SWITCH

5	POE+ Switch (50)	Compliance(Yes/No)	Remarks(If Any)
a.	Switch proposed should have minimum 20x GE RJ45 ports and 4x GE RJ45/SFP combo ports		
b.	Proposed switch should have minimum 12 PoE Ports (802.3 af) with a PoE Power budget of 180W		
c.	The form factor of the proposed switch should be 1 RU		
d.	Proposed switch should have a RJ-45 Serial console port		
e.	Proposed switch should be managed via both, GUI and CLI		
f.	Switching capacity of the proposed switch should be minimum 48 Gbps		
g.	Packet per second capacity of the switch should be minimum 70 Mpps		
h.	Proposed Switch should support minimum 16000 MAC address storage		
i.	Proposed switch should support 4000 VLANs		
j.	Operating temperature of the proposed switch should be 0-40 degrees celcius		
k.	Proposed switch should be FCC, CE, RCM, VCCI, BSMI, UL, CB, RoHS2 certified/compliant		
l.	RFCs supported :RFC 2571 Architecture for Describing SNMP Framework , DHCP Client, RFC 854 Telnet Server, RFC 2865 RADIUS, RFC 1643 Ethernet-like Interface MIB, RFC 1213 MIB-II, RFC 1354 IP Forwarding Table MIB, RFC 2572 SNMP Message Processing and Dispatching, RFC 1573 SNMP MIB II, RFC 1157 SNMPv1/v2c, RFC 2030 Sntp		
m.	Proposed switch should support: 802.1x Port Authentication MAC Address-Based Authentication MAC Black/White Listing		

	Layer 3,4 Stateful Firewall to Control Access nTACACS+/RADIUS Admin Access DHCP Relay/DHCP Snooping Virtual Domain		
n.	Proposed switch should have the capability to be centrally managed via a central controller/NMS of OEM Itself		

6) 8 PORTS 1G EDGE/L2 SWITCH

Sr.No	Item Specifications/ (Approved Makes)	Compliance Yes/No	Remarks
1	8 port POE Switch with SFP uplink		
a	The switch should support a minimum of 8 x 10/100/1000 Gigabit Ethernet Ports		
b	The switch should support a minimum of 2 x 1G copper and 2 x 1G SFP Uplinks Ports		
c	The switch should support Forwarding bandwidth of 12 Gbps		
d	The switch should have Packet Forwarding Rate of 17 Mpps		
e	The switch should support 4000 VLAN IDs		
f	The switch should have 120W POE budget		
g	The switch should support IEEE 802.1D Spanning Tree Protocol		
h	The switch should support IEEE 802.1p		
i	The switch should support IEEE 802.1Q Trunking		
j	The switch should support IEEE 802.1s Multiple Spanning Tree (MSTP)		
k	The switch should support IEEE 802.1w Rapid Spanning Tree (RSTP)		
l	The switch should support IEEE 802.1x		
m	The switch should support IEEE 802.1ab (LLDP)		
n	The switch should support IEEE 802.3ad Link Aggregation Control Protocol (LACP)		

7) PASSIVE SPECIFICATIONS

Sr.No	Item Specifications/ (Approved Makes)	Compliance Yes/No	Remarks
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I.) CAT-6 PATCH CORDS 2 MTR

a)	CAT-6 PATCH CORDS 2 MTR (SIEMON / CORNING / PANDUIT / MOLEX / AMP)		
A	Category 6 Patch Cords shall be factory terminated with modular plugs featuring a tangle- free latch design and clear strain-relief boots to support easy moves, adds and changes. Each patch cord shall be 100% performance tested at the factory to meet TIA/EIA-568-C.2 Category 6 and ISO 11801 2nd Edition Class E channel requirements at frequencies up to 250 MHz. OUTER SHEATH LSZH		
b	FCC compliance: Meets ANSI/TIA-968-A; contacts plated with 50 microinches of gold		
c	IEC compliance: Meets IEC 60603-7		
d	PoE compliance: Meets requirements of IEEE 802.3af and IEEE 802.3at for PoE applications		
e	UL rated: UL 1863 approved		
f	RoHS compliance: Compliant		
g	The patch cords shall come in standard lengths of 1& 2 mtr and four standard colors of Blue, Green, Red, and Yellow.		
h	Quality Control: Individual Component should have individual QC No. to provide lifetime traceability.		

II.) CAT-6 PATCH CORDS 1 MTR

b)	CAT-6 Patch Cords 1 Mtr Approved Makes(Siemon / Corning / Panduit / Molex / Amp)		
a	Category 6 Patch Cords shall be factory terminated with modular plugs featuring a tangle- free latch design and clear strain-relief boots to support easy moves, adds and changes. Each patch cord shall be 100% performance tested at the factory to meet TIA/EIA-568-C.2 Category 6 and ISO 11801 2nd Edition Class E channel requirements at frequencies up to 250 MHz. OUTER SHEATH LSZH		
b	FCC compliance: Meets ANSI/TIA-968-A; contacts plated with 50 microinches of gold		

c	IEC compliance: Meets IEC 60603-7		
d	PoE compliance: Meets requirements of IEEE 802.3af and IEEE 802.3at for PoE applications		
e	UL rated: UL 1863 approved		
f	RoHS compliance: Compliant		
g	The patch cords shall come in standard lengths of 1& 2 mtr and four standard colors of Blue, Green, Red, and Yellow.		
h	Quality Control: Individual Component should have individual QC No. to provide lifetime traceability.		

III.) IP 55 RATED BOX WITH ACCESSORIES FOR MOUNTING AT POLE

c)	IP 55 Rated Box for mounting accessories at Pole		
a	Size 200 x 200 x150		
b	Made of Stainless Steel		
c	IP 55 rated		
d	Should have PU gasket		
e	Front section with lock & light Facility		
f.	Power strip with 4 socket maximum of 2u		
g.	With fan tray and two fans downwards		
h.	Minimum 2 Duct type cable managers with Rack		

IV.) SINGLE MODE OUTDOOR OFC 8 CORE (SIEMON / CORNING / PANDUIT / MOLEX / AMP)

d)	Single Mode Outdoor OFC 8 core (Siemon / Corning / Panduit / Molex / Amp)		
a	Should be ISO.IEC 11801 - 2nd Edition and ITU-T REC G 652D		
b	Tube Identification : Single tube/Multi-tube		
c	Fibre protection(Tube) : Polybutylene Terephthalate (PBT)		
d	Water Blocking : Thixotropic Gel (Tube) and Petroleum Jelly (Interstices)		
e	Core Wrapping : Polyethylene Terephthalate		

f	Armouring : Corrugated Steel Tape Armour (ECCS Tape)		
g	Peripheral Strength Member: Two Steel wires/Two FRP rods/FRP Central Strength member		
h	Sheath : UV Stabilized Polyethylene (HDPE)		
i	Minimum. Tensile Strength-Short Term : 1500N or better		
j	Minimum Cores 8 or more		

V.) SINGLE MODE OUTDOOR OFC 24 CORE (SIEMON / CORNING / PANDUIT / MOLEX / AMP)

e)	Single Mode Outdoor OFC 24 core (Siemon / Corning / Panduit / Molex / Amp)		
a	Should be ISO.IEC 11801 - 2nd Edition and ITU-T REC G 652D		
b	Tube Identification : Multitube		
c	Fibre protection(Tube) : Polybutylene Terephthalate (PBT)		
d	Water Blocking : Thixotropic Gel (Tube) and Petroleum Jelly (Interstices)		
e	Core Wrapping : Polyethylene Terephthalate		
f	Armouring : Corrugated Steel Tape Armour (ECCS Tape)		
g	Peripheral Strength Member: FRP Central Strength member		
h	Sheath : UV Stabilized Polyethylene (HDPE)		
i	Minimum. Tensile Strength-Short Term : 3500 Newton or Better		
j	Minimum Cores 24 or more		

VI.) FIBER PIGTAILS 1.5 MTR. SINGLE MODE (SIEMON / CORNING / PANDUIT / MOLEX / AMP)

f)	Fiber Pigtails 1.5 Mtr. Single Mode (Siemon / Corning / Panduit / Molex / Amp)		
a	Precision ferrule endface geometry LC type		
b	Factory polished, tested and serialized.		
c	Buffer Diameter: 900um tight buffer		
d	Minimum bend radius: install: 30 mm		

e	Retention Strength: 100N		
f	Cable: 900um Tight Buffered		
g	Bidder to Provide equivalent SM LC adaptors in form of Singlex/Duplex/Quad adaptors		

VII.) FIBER OPTIC PATCH CORDS: (SIEMON / CORNING / PANDUIT / MOLEX / AMP)

g)	Fiber Optic Patch Cords: (Siemon / Corning / Panduit / Molex / Amp)		
a	All optical fiber patch leads shall comprise of Single mode 9/125µm OS2 fiber LC -LC		
b	Jacket should be LSZH sheath		
c	Connector: Zirconia ceramic ferrule		
d	Cable: 9/125, SM Strength member: Aramid Yarn		

VIII.) UTP CAT-6 CABLE (SIEMON / CORNING / PANDUIT / MOLEX / AMP)

h)	UTP CAT-6 Cable (Siemon / Corning / Panduit / Molex / Amp)		
a)	Category 6 Unshielded Twisted Pair 100Ohm cable shall be compliant with EIA/TIA 568-C.2		
b)	Should be 4 pair, 23 AWG		
c)	Cable should be CM rated		
d)	Cable Should Have Internal cross separator		
e)	Jacket: LSZH (Low smoke zero halogen)		
f)	Should ETL verified		
g)	Quality Control: Individual Component should have individual QC No. to provide lifetime traceability		

IX.) INFORMATION OUTLET SINGLE OUTLET FACEPLATE AND GANGBOX CAT6 (SIEMON / CORNING / PANDUIT / MOLEX / AMP)

i)	Information Outlet (Siemon / Corning / Panduit / Molex / Amp)		
a)	Category 6, EIA/TIA 568-C.2		
b)	All information outlets for 22-24 AWG copper		
c)	Should be UL Listed and ETL verified		

d)	Quality Control: Individual Component should have individual QC No. to provide lifetime traceability		
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X.) **CAT 6 OUTSIDE PLANT CABLE (OUTDOOR APPLICATION)**

j)	CAT 6 Outside Plant Cable (Outdoor Application)		
a)	TYPE: 4 pair CAT 6 UTP Cable outdoor cable with Two Jackets Primary and secondary Low Smoke Zero Halogen		
b)	CONDUCTORS Wire gauge: 23 AWG solid copper		
c)	CROSS FILLER Star cross fillers to separate the individual pairs		
d)	OPERATING TEMPERATURE: -40 Deg C to + 70 Deg C		

XI.) **HDPE PIPE**

a)	HDPE pipe should be permanently lubricated type with coefficient of friction between the pipe and OFC to the level of 0.06. The Specifications will be as under: Size 40/33 mm, (OD=40+0.4mm), Wall thickness=3.5mm, PE rating=80, PN rating 10.		
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XII.) **ROUTE MARKERS**

a)	Concrete Coloured Graved Route Markers after every 300 metres and on every corner		
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XIII.) **UNIVERSAL JOINT CLOSURE(UJC)**

a)	Universal Joint Closure(UJC)		
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XIV.) **COMPACT LIU 8 PORT WITH EMBEDDED SPLICE TRAY LOADED WITH SC PIGTAILS AND FC COUPLERS**

a)	Should accepts up to 8 fusion of mechanical splices		
b)	Should have label Holder		
c)	Should have Cable tie feature		
d)	Should have Top, bottom and rear access		
e)	Should be Lockable		

f)	Should be made of Rugged white plastic		
g)	Should Have 08 Dulex LC SM adaptors		
h)	DIMENTION 184 x 127 x 38mm		

XV.) **WIFI POLES**

a)	1.5" Pole 6 Mtr. GI (ISI mark) with Cable Hole at Bottom & Top and T Junction at Bottom including Fixing with Concrete Foundation		
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XVI.) **1 GBPS SINGLE MODE MEDIA CONVERTOR**

b)	Complies with IEEE 802.3ab & IEEE 802.3z standards		
c)	1- SC type Singlemode Fiber port (Duplex)		
d)	1 x 10/10/100Mbps LAN port, supporting Auto MDI/MDI-X for TX port.		
e)	Transmission distance support up to 4 Km		
f)	Output Wavelength: 1310nm		
g)	Plug-N-Play		
h)	LED status indicators for power & network link activity		
i)	Operating Temperature - 0°C ~ 60°C		

XVII.) **2.5MM SQ MM 3 CORE ARMoured CABLE HAVELLS/POLYcab ELECTRIC CABLE**

a)	2.5mm sq mm 3 core armoured cable havells/polycab electric Cable		
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TECHNICAL ENVELOPE

List of Technical Documents:

Sr. No.	Description	Bidders Response (Yes/No)	Remarks
1.	ISO 9001 Certificate Copies		
2.	Registration proof of incorporation in companies' act		
3.	Copy of PAN Card		
4.	Copy of latest Income Tax Return (last Three years) i.e. 2013-14, 2014-15, 2015-16		
5.	Prime Customers Details as per Page no 26, Point no 19		
6.	Online Receipts of Payment		
7.	Declaration of validity of rates as per Page 19, Point no 8.		
8.	OEM Authorization Letter/ MAF's		
9.	Product Brochures/technical Compliances Sheet as per Annexure A(Only Color Print out may be submitted)		
10.	Certificate of not Debarred/blacklisted as page no 21 point no 22		
11.	Proof of Turnover for last 3 years		

NOTE:

All the technical Documents should be uploaded on the e-tender portal and a copy of same in coloured printout state should also be submitted at the time of tender submission in well hard binding manner. The non-submission/poor management of documents may lead to disqualification as well.

FINANCIAL ENVELOPE

Commercial Performa with three year warranty			With three years warranty			Warranty & support cost for 4 th and 5 th year		
S. No.	Description	Required Qty	Product Model No/Part no Quoted	Per Unit Rate including all taxes (applicable)	Total Rate including all taxes (applicable)	Per Unit per year Warranty Rate including all taxes (applicable)	Total Rate including all taxes (applicable) for next two years	Remarks if any
1.	TYPE-A Wi-Fi Access Point (Indoor)	604						
2.	TYPE-C Wi-Fi Access Point (Outdoor) -	112						
3.	Wireless Controller (in HA)	1						
4.	Logs & Reporting Device if required	1						
5.	POE+ Switch 24 Port	60						
6.	POE+ Switch 8 Port	30						
7.	Passive Equipment's							
i.	CAT-6 Patch Cords 2 Mtr (Siemon / Corning / Panduit / Molex / AMP)	500						

ii.	CAT-6 Patch Cords 1 Mtr Approved Makes(Siemon / Corning / Panduit / Molex / Amp)	500						
iii.	IP 55 rated Stainless steel enclosure 200x200x150 with 1 power strip din rail based power supply.	50						
iv.	Single Mode Outdoor OFC 8 core (Siemon / Corning / Panduit / Molex / Amp)	2000						
v.	Single Mode Outdoor OFC 24 core (Siemon / Corning / Panduit / Molex / Amp)	3000						
vi.	Fiber Pigtails 1.5 Mtr. Single mode (Siemon / Corning / Panduit / Molex / Amp)	100						
vii.	Fiber Optic Patch Cords: (Siemon / Corning / Panduit / Molex / Amp)	50						
viii.	UTP CAT-6 Cable (Siemon / Corning / Panduit / Molex / Amp)	100						
ix.	Information Outlet Single port(Siemon / Corning / Panduit / Molex / Amp)	400						
x.	CAT 6 Outside Plant Cable (Outdoor Application)	20						
xi.	HDPE PIPE	2000						
xii.	Route Marker	50						

xiii.	Universal Joint Closure(UJC)	50						
xiv.	Compact LIU 8 port with embedded splice tray loaded with SC pigtails and FC couplers	50						
xv.	Wifi Poles 15 feet	40						
xvi.	1GBPS POE+ Media Convertor for Out Door	50						
xvii.	2.5mm sq mm 3 core armoured cable havells/polycab electric Cable	5000						
SFP Modules								
8.	1 G Base SR SFP+ Optic LC , MMF complete as per requirement and as per specification	50						
Networking Job Works (rates to be Quoted per Mtr) - Complete Connectivity from switch to I/O Port with installation								
9.	Fiber Cable Laying through Conduit Pipe							
	a) Soft Digging(1.5 M depth)							
	b) Hard Digging/Moring/Chamber Installation							
	c) Etc.							
10.	UTP/STP Cabling through Conduit (including Conduit laying/fitting)							
	Underground Pipe laying with Cable with Material;							
	Outer PVC Pipe Laying with Cable with material On wall							

11	Wireless Network Engineer/Assistant on site for a duration of warranty /AMC by the firm for Facility management/onsite warranty & Maintenance							
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All the Financial Documents should be uploaded on the e-tender portal and a copy of same in coloured printout state should also be submitted at the time of tender submission in well hard binding manner. The non-submission/poor management of documents may lead to disqualification as well. Any extra term & conditions may please be mentioned at the time of submission of financial and technical bids