

INDIAN INSTITUTE OF TECHNOLOGY DHARWAD
Off Pune Bengaluru Highway, Near High Court,
Dharwad, Karnataka - 580011

TENDER FOR SUPPLY AND INSTALLATION OF EQUIPMENT (NETWORK EQUIPMENT & RELATED PERIPHERALS) AT INDIAN INSTITUTE OF TECHNOLOGY DHARWAD

NOTICE INVITING TENDER (NIT) / RFP

Tender No.	IITDH/MMD/CCS/2020-21/96	
Description	TENDER FOR SUPPLY & INSTALLATION OF EQUIPMENT (Network Equipment & Related Peripherals) AT INDIAN INSTITUTE OF TECHNOLOGY DHARWAD	
Tender Date	10.08.2020	
Tender Category	Goods	
Tender Type	Open Tender	
No. of Covers	2	
Covers Information / Submission of Bids		
Cover No.	Cover Type	Description
1	Technical	EMD, Schedule of Requirement and Compliances, Bidders Information, Previous Supply Orders etc.
2	Financial	Financial Bid
Two Bid System: -		
The two bid system will be followed for this tender. In this system bidder must submit their offer in separate sealed envelopes as – Technical Bid (Envelope No. A) and Commercial Bid (Envelope No. B) . Both these sealed covers are to be put in a bigger cover which should also be sealed and duly super-scribed with our Tender No. & Due Date and to be submitted to IIT Dharwad.		
Note: The technical offer should not contain any price information. If the price quoted is submitted in technical bid the tender will be rejected by IIT Dharwad.		
Initially Technical Bids will be opened and evaluated by the purchase committee. Commercial bids of only Technically qualified bidders will be opened later. Contract/ Purchase Order will be awarded to the lowest bidder (L-1) identified for entire set of items based on the Sub-Total.		
Form of Contract	Buy	
EMD Fee Details (in the form of Demand Draft or Bank Guarantee)		
EMD Fee INR:	Rs.42,000/- (Rupees Forty-Two thousand only)	
Payable to:	The Registrar, IIT Dharwad	
Payable at:	Hubli-Dharwad	
Bid Validity (Days):	90 Days	
Period of Work/Delivery Period (Days)	60 Days	
Start date for Submission of queries via email to armm@iitdh.ac.in	10.08.2020	
End date for Submission of queries via email to armm@iitdh.ac.in	17.08.2020 till 11:00 AM	
Date of rebuttal/reply of queries (to be uploaded on the website) and publishing revised tender (if required)	17.08.2020 at 04.00 PM	
Contract Type:	Open Tender	
Delivery Location:	IIT Dharwad, Karnataka, India	
Pin Code	580011	
Bid Submission Start Date	10.08.2020	
Bid Submission End Date & Time	04.09.2020 till 10:00 AM	
Place of Submission of Bid	The Assistant Registrar (MMD), IIT Dharwad Off Pune Bengaluru Highway, Near High Court, Dharwad, Karnataka- 580011, India	
Bid Opening Date & Time	04.09.2020 at 11:00 AM	
Bid Opening Place	The Assistant Registrar (MMD), IIT Dharwad Off Pune Bengaluru Highway, Near High Court, Dharwad, Karnataka- 580011, India	
Other Terms & Conditions	Warranty as per mentioned in technical specification	
Tender Inviting Authority:	The Assistant Registrar (MMD), on behalf of Director, IIT Dharwad Address: Off Pune Bengaluru Highway, Near High Court, Dharwad, Karnataka- 580011, India	

Sd/-
Assistant Registrar (MMD), IIT Dharwad
(For and on behalf of Director, IIT Dharwad)

Section - I: Invitation of the Bids & Submission Procedure details

1. Indian Institute of Technology Dharwad, Dharwad invites sealed tenders (under two bid system) from reputed suppliers/manufacturers OR authorized dealers for Supply & Installation of equipment (Network Equipment & Related Peripherals) at Indian Institute of Technology Dharwad as per the Technical Specifications given in the schedule annexed to the tender.
2. The bidder should note that the technical specifications mentioned in **Section IV** form the core of the product. The offers must strictly be as per the specifications given. At the same time, it must be kept in mind that mere copying of our specifications in the quotation shall not make the technical bid eligible for consideration. A bid has to be supported with original catalogue of the quoted item duly signed by the principals and the same must be sent along with the technical bid. Non-compliance with above shall be treated as incomplete/ambiguous and the bid may be ignored without giving an opportunity to the bidder for further clarification/negotiation etc.
3. In order to specify/modify technical specifications of the equipment and clarify various issues as may arise, a query session (by email) for clarification is provided. Resultant rebuttal/re-publishing of modified RFP (as the case may be) will be published, if required. **The bidders are advised to utilise the period given for clarifying any issue pertaining to RFP and to bring out any limitation / suggestion in the RFP. After the period is over, no issue will be addressed and the institute will assume general acceptance of RFP terms and conditions.** Prospective bidders have to submit their bids post rebuttal/modification in RFP (as the case maybe).
4. Any item not specifically mentioned in the tender document but essential in the opinion of the bidder for successful SUPPLY & INSTALLATION OF EQUIPMENT (Network Equipment & Related Peripherals), should be brought to the notice of the IIT Dharwad within the pre-bid clarification period and before end date of submission of queries. On clearance from our side, the same may be included in the modified RFP (as the case may be). However, the decision as to whether to consider such items or not, rests with the Institute.
5. The bidder shall ensure that the bid submitted by him includes all accessories (as per annexures) for full execution of contract. The bidder shall not charge extra for additional items required to meet the operational requirement at the stage of installation and commissioning.
6. Quantity requirements of each item as per the specification enclosed at **Section IV**.

Sl. No.	Particulars of the item(s)	Requirement
(a)	<u>SUPPLY & INSTALLATION OF EQUIPMENT</u> <u>(Network Equipment & Related Peripherals) AT</u> <u>INDIAN INSTITUTE OF TECHNOLOGY</u> <u>DHARWAD</u>	Individual item requirements as per <u>Section IV</u>

7. It may kindly be noted by all the prospective bidders that the **tender will be awarded to the lowest successful bidder (L₁) for the entire set of items based on the Sub-Total.**

Procedure for Bid submission

8. Every page, containing the said procedure for submission of bid and other important conditions, are to be signed by the bidder (to be serially numbered & bounded) and to be submitted along with their Technical bids towards their acknowledgement that they have gone through all the contents in these pages and in the Annexure as well and they are agreeing to comply to all of the conditions mentioned there. Non adherence to this may lead to the disqualification of the bid without further notice.

9. Two bid system: The offers/bids are to be submitted under a two bid system, namely (i) Technical Bid and (ii) Commercial Bid. The Technical Bid must contain all the details as specified in the Annexures along with the terms and conditions whereas Commercial Bid must indicate the quantity & rate only. There must not be any price element in the technical bid.

10. Sealing & marking of bid: The tender should be submitted in a proper manner with index for easy identification i.e.: -

<u>Envelope Number</u>	<u>To be super-scribed as</u>
A	EMD for Tender & Technical Bid documents
B	Commercial Bid / Price Bid / BOQ

Envelope – A (duly sealed): should contain the EMD & documents as listed under Technical Bid Qualification.

Envelope – B (duly sealed): should contain the Commercial Bid (strictly as per the format provided).

Both the above envelopes should clearly be marked on top about the type of envelopes (i.e. A or B), details of contents in envelopes and name of agency submitting the bid.

The envelopes (A & B) after sealing must be kept in one bigger envelope and shall be addressed to:

The Assistant Registrar (MMD)

IIT Dharwad, Off Pune Bengaluru Highway,

Next to High Court, Dharwad - 580011, Karnataka, KA, INDIA

The bigger envelope must be sealed and must bear the following identification on top: -

a) Tender for 'SUPPLY & INSTALLATION OF EQUIPMENT (**Network Equipment & Related Peripherals**)'

b) Tender Number: _____ Date: _____ and

c) Name and Address of the Bidder.

If the outer envelope is not sealed and not marked as above, the Institute will assume no responsibility for the misplacement or premature opening of Bid.

11. **Submission of tender:** The tender can be personally dropped in the tender box (kept near the IIT Dharwad building entrance outside MMD Section under supervision of a security guard) on all working days during working hours (except Saturday, Sunday & Holidays) before the date and time as specified in the Tender Notice and up to 10.00 AM on the last date of submission of tender. The tender can also be sent by registered post to The Assistant Registrar (MMD), Indian Institute of Technology Dharwad, Off Pune Bengaluru Highway, Next to High court, Dharwad - 580011, Karnataka, INDIA. Tender shall not be received after expiry of the time as specified in the tender notice. Late bids will not be accepted. However, in case the due date of tender submissions happens to be a holiday or office is closed due to any reason, then the tender submission date will automatically extend to the next working day (end submission time remains same).

12. **Those prospective vendors who are facing issues related to courier/postal services in their areas due to the current lockdown scenario, are hereby intimated to send their bids via email to armm@iitdh.ac.in. Two Password Protected files (.pdf) (One Technical Bid & One Price Bid) can be submitted over e-mail. The corresponding passwords may be shared half an hour before the scheduled opening of respective bids. There is no chance for submission of revised bids for bids submitted once over email.**

13. TECHNICAL BID DOCUMENTS & ELIGIBILITY CRITERIA:

Only those bidders fulfilling the following Eligibility Criteria (supported by documents) are expected to participate in the Tender (**all criteria to be mandatorily fulfilled for technical qualification**): -

S. No.	Eligibility Criteria	Document required
a	EMD as sought under this tender document. (or) In case EMD exemption is sought under SME/ MSME/ NSIC (for bids not involving Imports and quoted in INR). Note: EMD exemption is not permissible in case of Import purchases or for bids quoted in Foreign currency.	EMD in the form of Demand Draft or bank guarantee. (or) Valid SME/ MSME/ NSIC to be provided.
b	Duly signed & stamped copy of the entire tender document.	The entire tender document to be duly signed & stamped by the bidder on each page.
c	PAN Card and GST certificate	Copy of PAN Card and GST certificate to be provided.
d	Income tax returns (ITRs) for last three consecutive financial years	Copy of Income tax returns for last three consecutive financial years (period from 2016-17, 2017-18 and 2018-19).
FOR ACTIVE COMPONENTS		
e	Proof of establishment of company/business for a period of more than 3 years.	The Bidder must be OEM/an authorised partner in the business of Network Equipment & Related Peripherals for a period not less than 3 years (i.e. must be in this business from July 2017 or earlier). If the Bidder is an authorised partner then a Manufacturer's Authorization Form (MAF) must be submitted along with the bid.
f	Previous experience & copy of performance certificates along with Purchase Orders	Copy of at-least one purchase order of successful execution of supply and installation of Network Equipment (Active Component/ Network Equipment & Related Peripherals) to IITs/ NITs/ IISc/ IISERs/ IIM's / Central Universities/ Laboratories/ other Institutes of national importance or PSU/Government bodies with minimum of 500 active users in a particular location. (Relaxation as per Ministry of Micro, Small & Medium Enterprises Policy Circular No. 1(2) (1)/2016-MA Dt. 10 th March 2016, Ministry of Finance OM No. F.20/2014-PPD(Pt.) dt 20/09/2016 and 25/07/2016 & Ministry of Finance OM No. F.18/14/2020-PPD dt. 29/06/2020)
FOR PASSIVE COMPONENTS		
g	OEM should have members participating in:	Necessary documents should be submitted in this regard along with the technical bid.
	TIA TR-42.1 Subcommittee on Commercial Building Telecommunications Cabling	
	TIA TR-42.7 Telecommunication Copper Cabling Systems	
	TIA TR-42.12 Subcommittee on Optical Fibers and Cables	
	OEM should be a member of Global Telecommunications Industry Association (TIA) Information and Communications Technology (ICT) Companies ICT Green Initiative to support energy efficient environment.	
	OEM shall provide minimum 1 replacement warranty on components as well as performance for all the offered products	
	End to End products should be manufacture in India, especially splitters with ISO certification.	
	OEM should have 10+ years of Manufacturing presence in India.	
Previous experience & copy of performance certificates along with Purchase Orders	The Bidder must be OEM/an authorised partner in the business of subject items. A manufacturer's Authorization Form (MAF) must be submitted along with the bid.	
Previous experience & copy of performance certificates along with Purchase Orders	Copy of at-least one purchase order of successful execution of supply and installation of Network Equipment & Related Peripherals to IITs/ NITs/ IISc/ IISERs/ IIM's / Central Universities/ Laboratories/ other Institutes of national importance or PSU/Government bodies with minimum of 500 active users in a particular location. (Relaxation as per Ministry of Micro, Small & Medium Enterprises Policy Circular No. 1(2) (1)/2016-MA Dt. 10 th March 2016, Ministry of Finance OM No. F.20/2014-PPD(Pt.) dt 20/09/2016 and 25/07/2016 & Ministry of Finance	

		OM No. F18/14/2020-PPD dt. 29/06/2020)
h	Proof that the bidder / Manufacturer had not been blacklisted or debarred anywhere in India or abroad by any organization.	A Certificate/Undertaking on the letter head of the Company to the effect that the bidder/ Manufacturer had not been blacklisted or debarred anywhere in India or abroad by any organization.
i	<p style="text-align: center;">Duly filled and completed Section-IV</p> <ul style="list-style-type: none"> • Compliance for commercial terms of tender • Compliance for technical specifications of the equipment to be supplied & country of origin details. • Bidders information & Reasonability of prices 	<p>The following information on the letter head of the company / bidder:</p> <ul style="list-style-type: none"> • Compliance for commercial terms of tender • Compliance for technical specifications of the equipment to be supplied & country of origin details. • Bidders information & Reasonability of prices

14. The tenderer must submit all documents required for evaluation of technical bid and sought in the RFP as forming part of technical evaluation with signature and seal of the competent authority of the firm. In the event of non-receipt of any of the documents forming part of Technical Bid, tenderer may be disqualified from the process. No paper relating to the technical bid will be received during the Technical Bid evaluation or afterwards except for cases recommended & decided by the Procurement Committee. Further, any separate correspondence in the matter shall also not be entertained.
15. During evaluation of the Technical Bid, the Procurement Committee will scrutinize the documents mentioned above and may forward any or all the documents to the concerned authorities for verification and authentication. In case of any document(s) as submitted by the tenderer is found/reported to be fake, the tenderer will be out of the tendering process and suitable legal action may be initiated against the tenderer.
16. Besides, scrutinizing the documents submitted with the Technical Bid, the tenderer may be interviewed by the Committee to assess the eligibility, capability, and suitability of the tenderer. As such, the presence of the tenderer or any authorized representative of the tenderer in the Technical Bid meeting & commercial bid opening or as and when desired by authorities of IIT Dharwad is preferable.
17. The above-mentioned basic eligibility conditions and additional clauses are broad guidelines for pre-qualification and the Director, IIT Dharwad hereby reserves the right to relax/ alter/ modify/ add any or all the conditions.
18. **Delivery terms (only DDP mode of shipment acceptable):**
Items should be door delivered at IIT Dharwad, Karnataka, India – 580011.
In order to obtain the concessional GST certificate, the bidder must quote in INR only and the delivery term acceptable shall only be door delivery at IIT Dharwad. The supplier should arrange for entire process from origin of equipment to the Stores at IIT Dharwad (including charges for safe packing, Marking & labeling, loading charges, road/air freight, insurance of goods, unloading charges, transport & unloading at buyer destination, installation and commissioning; within the quoted price).
CDEC/DSIR or any other import related document will not be issued in case of indigenous supplies (or for bids quoted in INR).
19. **Freight & Insurance:**
No freight and insurance charges will be provided and the materials are to be delivered at IIT Dharwad WALMI Campus, IIT Dharwad at the cost and risk of the supplier/Bidder within quoted price as per the delivery terms mentioned in the above paragraphs.
20. **Warranty declaration:**
- a. The Bidder/supplier must give a comprehensive on-site support and maintenance for a period specified in respect of the subject item (mentioned in Section-IV & 13 (g) of Section-I) from the date of commissioning and acceptance of the items.
 - b. Any deviation in the equipment and the specification from the accepted terms and conditions may lead to rejection and non-acceptance of stores. In such case, the bidder/manufacturer is required to supply all the items in the specified form to the satisfaction/ specifications mentioned in the order and demonstrate at their own cost. The payments shall be made only after receiving

the materials as per required specification and quality to the satisfaction of the competent authority of IIT Dharwad.

21. Installation & Commissioning:

- a. The supplier is required to carry out the supply, & installation of the subject items at IIT Dharwad installation site within the delivery period or as per institute instructions; otherwise the penalty clause will be the same as per the supply of material (refer to the liquidated damages below).
- b. In case of any mishandling/damage to items and supplies during carriage from the origin of items to the installation site, the supplier has to replace it with new items/supplies immediately at his own risk of cost. Supplier will settle his claim with the insurance company as per his convenience. IIT Dharwad will not be liable for any type of losses in any form.

22. Liquidated Damages:

The equipment should be delivered/dispatched to destination and ready for use not later than the delivery period specified. If the supplier/Bidder fails to deliver any or all the stores or perform the service by the specified date, liquidated damages @0.5% per week or part thereof in respect of the value of the delayed stores will be deducted from the bill subject to a maximum of 10% value. Same terms are applicable for installation, and commissioning clause mentioned above.

23. Dispute and Jurisdiction:

Any legal disputes arising out of any breach of contract pertaining to the whole process of this tender shall be settled in the court of competent jurisdiction in the district of Dharwad, Karnataka.

24. Acknowledgement by the Bidder:

It is hereby acknowledged that we have gone through all the schedules as well as the conditions mentioned above and we agree to abide by these.

Date:

Signature of the Bidder along with official seal.

Place:

CANVASSING OR OFFERING AN ADVANTAGE OR ANY OTHER INDUCEMENT BY ANY PERSON WITH A VIEW TO INFLUENCING ACCEPTANCE OF A BID WILL BE AN OFFENSE UNDER LAWS OF INDIA. SUCH ACTION WILL RESULT IN THE REJECTION OF BID, IN ADDITION TO OTHER PUNITIVE MEASURES.

Sd/-

Assistant Registrar (MMD), IIT Dharwad
(For and on behalf of Director, IIT Dharwad)

Section II: Instructions to Bidders

1. Any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority. (Refer to OM No. ENo.6/18/2019-PPD dt. 23/07/2020 of Ministry of Finance).
2. "Bidder" (including the term 'tenderer', 'consultant' or 'service provider' in certain contexts) means any person or firm or company, including any member of a consortium or joint venture (that is an association of several persons, or firms or companies), every artificial juridical person not falling in any of the descriptions of bidders stated hereinbefore, including any agency branch or office controlled by such person, participating in a procurement process.
3. "Bidder from a country which shares a land border with India" for the purpose of this Order means: -
 - a. An entity incorporated, established or registered in such a country; or
 - b. A subsidiary of an entity incorporated, established or registered in such a country; or
 - c. An entity substantially controlled through entities incorporated, established or registered in such a country; or
 - d. An entity whose beneficial owner is situated in such a country; or
 - e. An Indian (or other) agent of such an entity; or
 - f. A natural person who is a citizen of such a country; or
 - g. A consortium or joint venture where any member of the consortium or joint venture falls under any of the above
4. The beneficial owner for the purpose of (iii) above will be as under:
 - i. In case of a company or Limited Liability Partnership, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has a controlling ownership interest or who exercises control through other means.

Explanation-

- a) "Controlling ownership interest" means ownership of or entitlement to more than twenty-five per cent. of shares or capital or profits of the company;
 - b) "Control" shall include the right to appoint majority of the directors or to control the management or policy decisions including by virtue of their shareholding or management rights or share holders agreements or voting agreements;
 - ii. In case of a partnership firm, the beneficial owner is the natural person(s) who, whether acting alone or together, or through one or more juridical person, has ownership of entitlement to more than fifteen percent of capital or profits of the partnership;
 - iii. In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has ownership of or entitlement to more than fifteen percent of the property or capital or profits of such association or body of individuals;
 - iv. Where no natural person is identified under (1) or (2) or (3) above, the beneficial owner is the relevant natural person who holds the position of senior managing official;
 - v. In case of a trust, the identification of beneficial owner(s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership.
5. An Agent is a person employed to do any act for another, or to represent another in dealings with third person.

6. **Cost of Bidding:**

The Bidder shall bear all costs associated with the preparation and submission of its Bid and the Purchaser shall not be held responsible or liable for those costs incurred regardless of the conduct or outcome of the bidding process.

7. Amendments to Tender Document:

- a) At any time prior to the deadline for submission of bids, IIT Dharwad may, for any reason, whether on its own initiative or in response to the clarification sought by a prospective BIDDER may modify the bid document by issuing necessary corrigendum.
- b) All prospective BIDDERS who have downloaded the tender document are requested to visit IIT Dharwad website for any amendments / modifications and make a note of the same, which will be binding on them.

8. Bid Opening Process:

- a) In case of one bid system, technical & financial bid will be opened simultaneously in the presence of representatives of the bidders at IIT Dharwad.
- b) In case of two bid system, The Technical Bid will be opened in the first instance in the presence of Technical Evaluation Committee (TEC)/MMD & representatives of the bidders at IIT Dharwad.
- c) Financial bids of only those bidders, whose bids are found technically qualified, by the Technical Evaluation Committee, will be opened in the presence of the Technical Evaluation Committee (TEC)/MMD & bidders' representatives subsequently at a later date for further evaluation. Date and Time of financial bid opening shall be intimated to technically qualified bidders only.
- d) One authorized representative of each of the bidder would be permitted to be present at the time of opening of the bids.
- e) The authorized representative of bidders, present at the time of opening of the bids shall be required to sign an attendance register as a proof of having attended the Technical/Commercial bid opening session.

9. Supplementary offer /Modification of Original Bid:

BIDDER desirous to modify their offer/terms may submit their revised / supplementary offer (s) strictly within the Tender Opening Date (TOD) by clearly stating to the extent of updation done to the original offer. The purchaser reserves the right to open the original offer along with the revised offer.

10. Confidentiality:

- a) Information relating to the evaluation of bids, and recommendation of Contract award, shall not be disclosed to Bidders or any other persons not officially concerned with such process until information on Contract award is communicated to all Bidders. On completion of Technical Evaluation by the Committee, Vendors whose offer do not meet with the users Technical Specification will be restricted to participate in commercial bid opening process. Information regarding the criteria for disqualification of the tender would be communicated to the bidder in writing (preferably through email provided in the bid).
- b) Any attempt by a Bidder to influence the Purchaser in the evaluation of the Bids or Contract award decisions may result in the rejection of its Bid.
- c) Notwithstanding, from the time of Bid opening to the time of Contract award, if any Bidder wishes to contact the Purchaser on any matter related to the bidding process, it must be done either through e-mail or in writing.

11. Deviation, Reservations and Omissions:

During the evaluation of Bids, the following definitions apply:

- a) "Deviation" is a departure from the requirement specified in the Tender Documents;
- b) "Reservation" is the setting of limiting conditions or withholding from complete acceptance of the requirements specified in the Tender Documents; and
- c) "Omission" is the failure to submit part or all of the information or documentation required in the Tender Documents.

12. Correction of Arithmetical Errors:

- a) Provided that the Bid is substantially responsive, the Purchaser shall correct arithmetical errors on the following basis:
 - i. if there is a discrepancy between the unit price and the line item total that is obtained by multiplying the unit price by the quantity, the unit price shall prevail and the line item total shall be corrected, unless in the opinion of the Purchaser there is an obvious misplacement of the decimal point in the unit price, in which case the line item total as quoted shall govern and the unit price shall be corrected;
 - ii. if there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; and
 - iii. if there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (a) and (b) above.
- b) Bidders shall be requested to accept correction of arithmetical errors. Failure to accept the correction in accordance with the same, shall result in the rejection of the Bid.

13. Evaluation of Bid:

- a) Technical bids will be evaluated for suitability as per documentary validation, eligibility criteria and technical specifications laid out in this tender document. The bids found suitable will be recommended by the Procurement committee and after approval of competent authority shall be deemed as technically suitable offers. The technically qualified bidders will be informed accordingly and commercial bids of such offers will be evaluated on a suitable designated time and date. Unopened commercial bids of the other bidders, who are not found technically suitable will be returned.
- b) IIT Dharwad will evaluate technical and commercial acceptable offers on landed **Net Price basis**.
- c) In case any BIDDER is silent on any clauses mentioned in this tender documents, IIT Dharwad shall construe that the BIDDER had accepted the clauses as per the invitation to tender no further claim will be entertained.
- d) No revision in the terms and conditions quoted in the offer will be entertained after the last date and time fixed for receipt of tenders.

14. (a) Price Bid (For Indigenous Supplies to be quoted in INR only):

- i. Quoting of Price (s): **Price quoted should be in Indian Rupees only and free delivery at IIT Dharwad Campus site.**
- ii. **PRICE BID must be submitted in enclosed Price Bid Format only (designed for indigenous/local supplies only).**
- iii. Prices should include all the taxes including concessional GST @5% and all other duties/levies.
- iv. If the price is not quoted in Price Bid Format provided in the tender document then, IIT Dharwad will reject the bid. The bidders are required to attach their blank price bid format in technical bid documents for this purpose (without indicating the price quoted).
- v. If the bidder wishes to give pricing details, it may be attached in separate sheet. It is requested not to quote optional or multiple items, otherwise your quote may be rejected. The bidders are requested to quote only one option satisfying the tender terms & not multiple options.

15. Corrupt & Fraudulent Practices:

IIT Dharwad requires that bidders, suppliers, contractors and consultants, if any, observe the highest standard of ethics during the procurement and execution of such contracts. In pursuit of this policy, the terms set forth below are defined as follows:

- a) "Corrupt practice" means the offering, giving, receiving, or soliciting, directly or indirectly, of anything of in kind/value to influence the action of a public official in the procurement process or in contract execution;
- b) "Fraudulent practice" means a misrepresentation or omission of facts in order to influence a procurement process or the execution of a contract;
- c) "Collusive practice" means a scheme or arrangement between two or more bidders, designed to establish bid prices at artificial, non- competitive levels; and
- d) "Coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the procurement process or affect the execution of a contract;

IIT Dharwad will reject a proposal for award if it determines that the Bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive or coercive practices in competing for the Contract in question.

16. Cancellation of Tender:

- a) Notwithstanding anything specified in this tender document, Purchaser/IIT Dharwad in his sole discretion, unconditionally and without assigning any reasons, reserves the rights:
 - i. To accept or reject lowest tender or any other tender or all the tenders.
 - ii. To accept any tender in full or in part.
 - iii. To reject the tender, offer not confirming to the tender terms.
 - iv. To cancel the tender at any stage during the evaluation & before award of work
- b) Offer which deviates from the vital conditions (as illustrated below) of the tender shall be rejected:
 - i. Non-submission of complete offers as mentioned in the tender document,
 - ii. Receipt of offers after due date and time and or by email / fax (unless specified otherwise).
 - iii. Receipt of offers in open condition.
 - iv. Conditional Tenders and Unsigned Tenders will also be rejected.

17. Delivery:

The successful BIDDER should deliver the material as per tender document/purchase order. **The successful bidder should also emboss stickers of purchase order number on the material to be delivered at IIT Dharwad.**

Sd/-
Assistant Registrar (MMD), IIT Dharwad
(For and on behalf of Director, IIT Dharwad)

Section III: Conditions of Contract

1. Award of Contract:
 - a) IIT Dharwad shall award the contract to the technically qualified eligible BIDDER whose bid has been determined as the lowest evaluated commercial bid under this tender subject.
 - b) If more than one BIDDER happens to quote the same lowest price, IIT Dharwad reserves the right to award the contract to more than one BIDDER or any BIDDER.
2. **Prices & Taxes applicable (Customs Duty / IGST / SGST / CGST):**

For Indigenous Supplies (bids in INR) - As per Govt. of India Notification No. 47/2017-Integrated Tax (Rate) dt. 14th November 2017, Notification No. 45/2017-Central Tax (Rate) dt. 14th November 2017 and Notification No. 45/2017-Union Territory Tax (Rate) dt. 14th November 2017; IIT Dharwad is eligible to avail concessional GST rates. The applicable rate of IGST shall be 5% in case of Inter-state purchase and shall be the same as 5% (CGST @2.5% & SGST @2.5%) in case of purchases within the state. We shall provide the concessional GST certificate under this notification to enable you to deliver the goods as per the rates specified and to raise an invoice subsequently on this rate only. The supplier shall pay and bear all other liabilities, taxes and duties not specifically agreed by the Purchaser in the contract.
3. Pre-installation:

Please also mention the pre-installation requirements for the equipment like ambient temperature, humidity, civil work, weather specifications, power specifications, etc. When all items are provided, full performance satisfaction should be demonstrated to IIT Dharwad.
4. Installation:
 - a) BIDDER shall be responsible for installation / commissioning wherever applicable and for after sales service during the warranty period and thereafter as mentioned in the contract.
 - b) **Installation and commissioning to be arranged by the supplier within the quoted price and the same is to be done after the arrival of the equipment at site or whenever informed by IIT Dharwad.**
5. Training and pre-installation checks:
 - a) The BIDDER shall also submit training proposal for the operation and maintenance to the personnel of IIT Dharwad on the offered equipment/machinery.
 - b) Wherever needed, our technical persons should be trained by the supplier at the project site free of cost. In case the person is to be trained at supplier's site abroad or in India, it should be mentioned in the bid clearly. The supplier should bear all the expenses for any such training or for any pre-installation check to be conducted by officials of IIT Dharwad including 'to & fro' fares and lodging & boarding charges.
6. a) **Terms of Payment (For Indigenous Supplies and quotes in INR):**
 - i. Payment within 30 days from the date of delivery, installation, commissioning, testing and receipt of Acceptance Certificate of concerned Department / Section / Materials Management Division, IIT Dharwad.
 - ii. Payment shall be made by electronic fund transfer or such other mode offered by the Bank.
 - iii. IIT Dharwad does not pay advance payment to party. Any request of Advance payment will be summarily rejected.
7. Transfer and Subletting:

The seller shall not sublet, transfer, assign or otherwise part with the acceptance to the tender or any part thereof, either directly or indirectly, without the prior written permission of the Purchaser.
8. Force Majeure:

Force Majeure will be accepted on adequate proof thereof.
9. Specification and Samples:

The suppliers shall supply the stores in accordance with the specifications/ descriptions of stores given in the acceptance of tender. The Purchaser reserves the rights to alter the description of stores including drawings given in the acceptance of tender. In the event any such alteration

result in any implication to the deliver and price, such implication shall be mutually agreed between the Purchaser and supplier. In case certified sample has been issued by the Purchaser and the Specifications / Drawings also exist in the acceptance of tender then the certified sample will govern the supply to the extent of material, workmanship and finished product.

10. Supervision of Commissioning:

Successful BIDDER shall depute concerned specialist, for supervision of commissioning of the machine to be carried out. The successful BIDDER shall make necessary arrangement at their own expenses for stay, transport and other expenses of their specialist during their stay in Dharwad which also includes imparting free of cost training to IIT Dharwad personnel. Supplier should do the complete installation of the supplied products and commissioning of the same according to IIT Dharwad's requirements until the OEM Warranty Expiry date

11. EARNEST MONEY DEPOSIT (GFR 2017 Rule 170):

- i. **Earnest Money Deposit is mandatory to be enclosed in the tender.**
- ii. While submitting bid, the BIDDER shall deposit an amount mentioned in tender document as Earnest Money, with the IIT Dharwad through the following instruments:
A confirmed Bank Guarantee or Demand Draft by an Indian Nationalized Bank/Scheduled bank promising payment of the guaranteed sum to the BUYER without any demur whatsoever and without seeking any reasons whatsoever.
- iii. The Earnest Money shall be valid up to a period of 90 days or the complete conclusion of the contractual obligations.
- iv. Bidders registered with any of the following agencies/ bodies as per Public procurement policy for Micro & Small Enterprises (MSE) order 2012 are exempted categories from payment of EMD provided that the registration certificate issued by any one of these below mentioned agencies must be valid as on close date of tender. Micro small or medium enterprises who have applied for registration or renewal of registration with any of these agencies/bodies but have not obtained the valid certificate as on close date of tender are not eligible for exemption.
 - a. Khadi and Village Industries Commission (KVIC)
 - b. National Small Industries Corporation (NSIC)
 - c. Any other body specified by Ministry of MSME/GOI
- v. **EMD Exemption against NSIC/MSME and KVIC certificate will not be applicable for import purchases (and bids quoted in Foreign currency).**
- vi. No interest shall be payable by the BUYER to the BIDDER on Earnest Money for the period of its currency.
- vii. If successful bidder fails to submit the Performance Guarantee Bond within 15 days from the date of placing of Purchase Order, then purchase order may be cancelled and then EMD will be forfeited.
- viii. If there is any difficulty in submitting Bank Guarantee then Demand draft can be submitted in the favour of 'The Registrar, IIT Dharwad' payable at Hubli-Dharwad.
- ix. Return of EMD: In case of successful BIDDER, EMD will be returned within 30 days from the date of submission of Performance Guarantee Bond.
- x. For unsuccessful bidders, EMD will be returned within 30 days from the date of placing the Purchase Order.

12. Performance Guarantee (GFR 2017 Rule 171):

- i. Performance Guarantee Bond is mandatory.
- ii. Successful tenderer/ bidder should submit performance guarantee on or before 15 days from the date of issue of order acknowledgement. The PBG to be furnished in the form of bank guarantee as per proforma, for an amount covering 10% of the purchase order value.
- iii. The Performance Guarantee should be established in favour of “The Registrar, IIT Dharwad”.
- iv. PBG to be established through any of the National Banks/Scheduled bank (whether situated at Dharwad or outstation) with a clause to enforce the same on their local branch or any scheduled bank (other than National bank). Bonds issued by co-operative banks will not be accepted.
- v. Performance Guarantee Bond shall be for the due and faithful performance of the contract and shall remain binding, notwithstanding such variations, alterations for extensions of time as may be made, given, conceded or agreed to between the successful tenderer and the purchaser under the terms & conditions of acceptance to the tender.
- vi. The successful tenderer is entirely responsible for due performance of the contract in letter and spirit and all other documents referred to in the acceptance of tenders.
- vii. The PBG must be valid upto two months after the warranty period. For successful suppliers, if PBG is not submitted within **15 days** from the date of Order Acknowledgement, then the Purchase Order may be cancelled with forfeiting of EMD.
- viii. **No interest shall be payable by the buyer to the Bidder on PBG.**



INDIAN INSTITUTE OF TECHNOLOGY DHARWAD
Off Pune Bengaluru Highway, Near High Court,
Dharwad, Karnataka - 580011

FORMAT FOR EARNEST MONEY DEPOSIT / BID BOND

(To be typed on Non-judicial stamp paper of the value of One Hundred Indian National Rupees)

{TO BE ESTABLISHED THROUGH ANY OF THE NATIONALIZED BANKS/SCHEDULED BANKS WITH A CLAUSE TO ENFORCE THE SAME ON THEIR LOCAL BRANCH OR ANY SCHEDULED BANK (OTHER THAN NATIONALIZED BANK). BONDS ISSUED BY CO-OPERATIVE BANKS ARE NOT ACCEPTED}

LETTER OF GUARANTEE

To,
The Assistant Registrar (MMD)
Indian Institute of Technology Dharwad
Dharwad, Karnataka – 580 011

IN ACCORDANCE WITH YOUR TENDER No: dated.....for supply of M/s. (hereinafter called the “Bidder”) having its Registered Office at , wish to participate in the said bid for the supply as an irrevocable Bank Guarantee against Earnest Money Deposit for an amount of Rs. (Rupees.....) valid up to (90 days from the date of issue of Bank Guarantee), is required to be submitted by the bidder as a condition precedent for participating in the said bid, which is liable to be forfeited by the Purchaser on

- (1) the withdrawal or revision of the offer by the bidder within the validity period,
- (2) Non acceptance of the Letter of Intent/Purchase order by the Bidder when issued within the validity period,
- (3) failure to execute the contract as per contractual terms and condition with in the contractual delivery period and
- (4) on the happening of any contingencies mentioned in the bid documents.

During the validity of this Bank Guarantee:

We,(Bank name) having its registered Office at guarantee and undertake to pay immediately on first demand by IIT Dharwad, the amount of Rs..... (Rupees.....) without any reservation, protest, demur and recourse. Any such demand made by the IIT Dharwad shall be conclusive and recourse. Any such demand made by the purchaser shall be binding on the Bank irrespective of any dispute or difference raised by the Bidder.

The Guarantee shall be irrevocable and shall remain valid up to(90 days from the date of issue of Bank Guarantee) If any further extension is required, the same shall be extended to such required period on receiving instruction form the Bidder, on whose behalf the is Guarantee is issued.

Notwithstanding anything contained herein:

* Our liability under this Bank Guarantee shall not exceed Rs..... (Rupees.....).

*This Bank Guarantee shall be valid up to(date).

*We are liable to pay the guaranteed amount or any part thereof under this Bank Guarantee Only and only if you serve upon us a written claim or before (date).

This Bank further agrees that the claims if any, against this Bank Guarantee shall be enforceable at our branch office at situated at (Address of local branch).

Yours sincerely,

Date:

Signature and seal of the guarantor:

Name of Bank:

Address:

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



INDIAN INSTITUTE OF TECHNOLOGY DHARWAD
Off Pune Bengaluru Highway, Near High Court,
Dharwad, Karnataka - 580011

FORMAT FOR PERFORMANCE GUARANTEE BOND

(To be typed on Non-judicial stamp paper of the value of One Hundred Indian National Rupees)

{TO BE ESTABLISHED THROUGH ANY OF THE NATIONALIZED BANKS/SCHEDULED BANKS WITH A CLAUSE TO ENFORCE THE SAME ON THEIR LOCAL BRANCH OR ANY SCHEDULED BANK (OTHER THAN NATIONALIZED BANK). BONDS ISSUED BY CO-OPERATIVE BANKS ARE NOT ACCEPTED}

To,
The Assistant Registrar (MMD)
Indian Institute of Technology Dharwad
WALMI Campus, Dharwad – 580011

LETTER OF GUARANTEE

WHEREAS Indian Institute of Technology Dharwad (Buyer) have invited Tenders vide Tender No..... Dt. for purchase of AND WHEREAS the said tender document requires that any eligible successful tenderer (seller) wishing to supply the equipment / machinery, etc. in response thereto shall establish an irrevocable Performance Guarantee Bond in favour of “**The Registrar, Indian Institute of Technology Dharwad**” in the form of Bank Guarantee for Rs. {**@10% (ten percent) of the purchase value**} and valid till **one year or up to OEM warranty period whichever is later** from the date of issue of Performance Guarantee Bond is required be submitted within 15 (Fifteen) days from the date of Order Acknowledgment as a successful bidder.

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

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

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

Notwithstanding anything contained herein:

- i. Our liability under this Bank Guarantee shall not exceed Rs.(Indian Rupees only).
- ii. This Bank Guarantee shall be valid up to(date) and
- iii. We are liable to pay the guaranteed amount or any part thereof under this bank guarantee only and only if IIT Dharwad serve upon us a written claim or demand on or before(date).

This Bank further agrees that the claims if any, against this Bank Guarantee shall be enforceable at our branch office at situated at (Address of local branch).

Date: _____ Yours sincerely,
Signature and seal of the guarantor:
Name of Bank: _____

Address:

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

Section IV – Complete Schedule of Requirements and Compliance

This section has following compliance requirements:	
i	Compliance for commercial terms and conditions of tender
ii	Compliance for technical specifications of the equipment to be supplied
iii	Bidders information & Reasonability of prices

i. Table of compliance for commercial terms & conditions of tender (to be filled by bidder)

(NO FIELD TO BE LEFT BLANK)

S. No.	Terms and Conditions	IIT Dharwad tender requirements	Response by Bidder M/s
1	Nature of supply (to be specified)	Indigenous/Local supply	
2	Price Bid Format (to be specified) (Refer point 14 of Section-II)	Section- V for Local & INR	
3	Delivery terms (to be specified)	Indigenous/Local then Door Delivery (Refer point 18 of Section-I)	
4	Freight & Insurance	Confirm point 19 of Section-I	
5	Comprehensive On-site Warranty (as per technical specifications)	Confirm point 20 of Section-I	
6	Installation & Demo	Confirm point 21 of Section-I	
7	Custom Duty (If import & Forex)	Applicable rate @5.5% Confirm point 2-(a) of Section-III	
8	GST Rate (If Local supply in India)	Applicable rate @5% Confirm point 2-(b) of Section-III	
9	Training & Pre-installation checks	Confirm point 5 of Section-III	
10	Terms of Payment	Confirm point 6 of Section-III	
11	EMD	Confirm point 11 of Section-III & point 13 (a) of Section-I	
12	PBG	Confirm point 12 of Section-III	
13	Complete tender document copy	Signed & stamped copy required	
14	PAN	Copy of PAN required	
15	GST	Copy of GST certificate required	
16	ITRs (2017-18 to 2019-20)	Last 3 financial years' ITR required (Relaxation as per Ministry of Micro, Small & Medium Enterprises Policy Circular No. 1(2) (1)/2016-MA Dt. 10 th March 2016, Ministry of Finance OM No. F20/2014-PPD(Pt.) dt 20/09/2016 and 25/07/2016 & Ministry of Finance OM No. F18/14/2020-PPD dt. 29/06/2020)	
17	Proof of Business existence	For a period of more than 3 years required (Relaxation as per Ministry of Micro, Small & Medium Enterprises Policy Circular No. 1(2) (1)/2016-MA Dt. 10 th March 2016, Ministry of Finance OM No. F20/2014-PPD(Pt.) dt 20/09/2016 and 25/07/2016 & Ministry of Finance OM No. F18/14/2020-PPD dt. 29/06/2020)	
18	Previous Experience (Refer point 13 (f) &13 (g) of Section-I)	At-least one performance certificate with Purchase Order copy is required (Relaxation as per Ministry of Micro, Small & Medium Enterprises Policy Circular No. 1(2) (1)/2016-MA Dt. 10 th March 2016, Ministry of Finance OM No. F20/2014-PPD(Pt.) dt 20/09/2016 and 25/07/2016 & Ministry of Finance OM No. F18/14/2020-PPD dt. 29/06/2020)	
19	Blacklisting status	Certificate required to confirm the status	

20	Technical compliance for equipment	Please complete the table in point (ii) under Section-IV to establish the technical eligibility	
21	OEM Details	Please attach the OEM details (Manufacturer's Authorization Form (MAF))	
22	Country of Origin Details	Please explicitly mention the country of origin	
23	Bidders Information	Please complete the table in point (iii) under Section-IV to ascertain all relevant details	
24	Reasonability of prices		

ii. Table of compliance for technical specifications of the equipment to be supplied (to be filled by bidder)

Technical specifications of the Network Equipment's & Related Peripherals

Sl. No.	Item	Quantity
Active		
1	Distribution switch with 24 Port SFP and 4 Port SFP+	1
2	Access Switch with 8 Port 1000Base-T and 2 Port SFP	8
3	SMF 10G Ethernet SFP+ Module	4
4	MMF 1000BASE-X SFP Module	16
Passive		
5	Fiber Optic Patch Cable SC-LC Single Mode (Minimum Length of Cable per Piece: 3M)	4
6	Fiber Optic Patch Cable SC-LC Multi Mode (Minimum Length of Cable per Piece: 3M)	16
7	Fiber LIU 6 Port Fully Loaded Single Mode (Along with Sufficient no: of Pigtails and Splice Holders)	2
8	Fiber LIU 12 Port Fully Loaded Single Mode (Along with Sufficient no: of Pigtails and Splice Holders)	1
9	Fiber LIU 6 Port Fully Loaded Multi Mode (Along with Sufficient no: of Pigtails and Splice Holders)	8
10	Fiber LIU 24 Port Fully Loaded Multi Mode (Along with Sufficient no: of Pigtails and Splice Holders)	1
11	Fully Loaded 24 Port Patch Panel	9
12	24 Port Patch Panel loaded with 12 Ports	4
13	CAT6 I/O Port with Face Plate	250
14	CAT6 Patch Cord 1 Meter	250
15	CAT6 Patch Cord 2 Meter	225
16	6" x 8" x 2" Enclosure for installing Wi-Fi AP on the wall/ceiling	12
17	UTP - Enhanced CAT6 Reel (Minimum Length of Cable per Reel: 300m)	15
18	6 Core Single Mode Fiber Cable (per Meter)	1750
19	6 Core Multi Mode Fiber Cable (per Meter)	1250
20	HDPE 32mm Pipe for 6 Core Fiber Laying ISI Certified (per Meter)	300
21	1" Casing & Capping (per Meter)	500
22	1" Flexible Pipe (per Meter)	50
23	9U Wall Mount Rack with Accessories	2
24	12U Wall Mount Rack with Accessories	2
25	15U Wall Mount Rack with Accessories	1
26	18U Wall Mount Rack(Integrated A/C) with Accessories	1

NB: - As per attached Technical Specification Annexure-1.

Distribution Switch

Make			
Model			
Sl. No.	Parameters	Description	Compliance (Yes/No)
1	Technical Specification Specifications		
1.1	Form Factor	19 Inch Rack mountable Ethernet switch.	
1.2	Architecture	Non-Blocking architecture. Must have EAL3 /NDcPP or above common criteria certification.	
1.3	IPV6 Compliance	All Functionalities of Switch shall be IPv6 compliant and it should work on IPv6 Platform without any additional hardware/ software.	
1.4	Latest OS version	The switch shall be supplied with the latest Modular OS .	
1.5	Feature Availability	All the specified features/parameters/certifications must be available on the Technical Bid opening date.	
1.6	Basic Layer-3 Support	Switches must be manageable basic layer-3 type for better broadcast segmentation .	
1.7	Ports	Switch Should support at least 20 x100/1000X SFP port with min 8 x10/100/1000T ports. Min 4 x 10 G Based SFP+ port should be ready from day 1. The switch should be scalable to min 2 x QSFP+ ports for future requirement. The switch should have min 40 gbps stacking bandwidth and the stacking could be achieved over geographically diversified location as min over 2 Kilometers.	
2	Hardware Specifications		
2.1	Back Plane Bandwidth	minimum 292 Gbps or more switching bandwidth	
2.2	Packet throughput	minimum 220 Mpps or more for each member switch.	
2.3	MAC Addresses and MTBF	MAC:- 88K or more	
2.4	VLANs (802.1q tagged VLAN)	4000 or more user configurable active VLAN	
3	Standards and Protocols		
3.1	L2 Loop Protection	IEEE 802.1d Spanning tree protocol	
		802.1s MSTP (Multiple instances of STP)	
		802.1w RSTP (Rapid spanning tree). Should support ITU G.8032 or equivalent	
3.2	Link Aggregation	802.3ad Link Aggregation	
3.3	QOS Support	At least 8 Queues per port.	
3.4	IP Multicast	IGMP V1/v2/v3 and MLD v1/V2 support from day 1	
3.4	Port Mirroring / Span port	Port mirroring must be available.	
4	Routing Features		
4.1	Routing Protocols:	Static Routing, PBR, RIP, RIPng and OSPF ready from day 1.	
		Switch should support MPLS,BGP,IS-IS for future scalability in same hardware.	
5	Security Features		
5.1	Network Login	MAC and 802.1 X based Login must be available	
5.2	Port Security	MAC Address based Lockdown and Limited Learning	
5.3	Access Control Lists:	L2/L3/L4 IP based, Source port, destination port, MAC based	

6	Management and Monitoring		
6.1	Management	<p>Following in-band management methods shall be available:</p> <p>1) Secure Web based management (On https)</p> <p>2) SSH based management (SSH v2)</p>	
6.2	Out-of-band management	<p>Following out-of-band management methods shall be available:</p> <p>1) Serial console port</p> <p>2) Management Ethernet port .Dedicated OOB port</p>	
6.3	Role based Administration	The switch shall support multiple administrator accounts. Each administrator account shall be configurable with the desired level of management privileges.	
6.4	Remote Monitoring	RMON Support	
6.5	Network Management	The switch should support SNMP V2c and V3, API and SDN-OpenFlow.	
6.6	Log Management	Syslog shall be supported with multiple syslog destinations.	
6.7	Flow export	Shall support Netflow/IPFIX/sflow for flow exports.	
6.8	Time synchronization	Time synchronization using Network time protocol must be available.	
6.9	Configuration backup & restore	The switch shall have feature of backing up the configuration & restoring a backed- up configuration. Multiple Configuration files must be supported.	
6.10	TFTP/FTP upload and download	Config/image upload and download from TFTP/FTP server shall be available.	
7	Other Requirements		
7.1	Standards and Protocols	Switch should support IEEE 802.3ab ,IEEE 802.3z ,IEEE 802.1ab, IEEE 802.3ae , IEEE 802.3az,IEEE 802.3u,IEEE 802.1ad,IEEE 802.1ba,IEEE 802.1Q	
7.2	Safety, EMI/EMC and regulatory certification	The switch shall conform to IEC-60950/CSA-60950/EN-60950/UL-60950 ,RoHS and WEEE	
7.3	Environmental conditions	<p>The offered equipment must be able to operate in the following environmental conditions</p> <p>1) Operating temperature: 0°C to 40° or better</p> <p>2) Relative Humidity: 10% to 95% Non-condensing</p>	
7.4	OEM and Support Criteria	All the Switches and Transceivers should be from the same OEM. The OEM should be Leaders in latest Gartner Magic Quadrant for wired and wireless segment. The OEM should have not only TAC centre in India, but also 24x7 TAC support with Indian Toll free number – reflected in official website/documents. OEM must provide active support contract for all hardware, software updates and upgrade free of cost till contract period of 3 years.	

8 Port Access Switch

Make			
Model			
Sl. No.	Parameters	Description	Compliance (Yes/No)
1	Technical Specification Specifications		
1.1	Form Factor	19 Inch Rack mountable Ethernet switch. (Clamp/Tray solution is also acceptable)	
1.2	IPV6 Compliance	All Functionalities of Switch shall be IPv6 compliant and it should work on IPv6 Platform without any additional hardware/ software.	
1.3	Latest OS version	The switch shall be supplied with the latest Modular OS .	
1.4	Feature Availability	All the specified features/parameters/certifications must be available on the Technical Bid opening date.	
1.5	Basic Layer-2 Support	Switches must be manageable basic layer-2 type	
1.6	Ports	switch should support at least 8x10/100/1000BaseT, 2x1G SFP, POE+ 120W PoE Budget should be available from day 1.	
2	Hardware Specifications		
2.1	Back Plane Bandwidth	minimum 35 Gbps or more switching bandwidth	
2.2	Packet throughput	minimum 26 Mpps or more	
2.3	MAC Addresses and MTBF	MAC:-16 K or more	
2.4	VLANs Ids	2500 or more	
3	Standards and Protocols		
3.1	L2 Loop Protection	IEEE 802.1d Spanning tree protocol	
		802.1s MSTP (Multiple instances of STP)	
		802.1w RSTP (Rapid spanning tree). Should support ITU G.8032 or equivalent	
3.2	Link Aggregation	802.3ad Link Aggregation	
3.3	QOS Support	At least 8 Queues per port.	
3.4	IP Multicast	IP Multicast (s, v, g) entries: 1024 or more	
3.4	Port Mirroring / Span port	Port mirroring must be available.	
4	Security Features		
4.1	Network Login	MAC and 802.1 X based Login must be available	
4.2	Port Security	MAC Address based Lockdown and Limited Learning	
4.3	Access Control Lists:	L2 MAC/IP based, Source port, destination port, MAC based	
5	Management and Monitoring		
5.1	Management	Following in-band management methods shall be available:	
		Secure Web based management (On https)	
		SSH based management (SSH v2).	
		Following management methods shall be available:	
		console port	
		USB port	

5.2	Role based Administration	The switch shall support multiple administrator accounts. Each administrator account shall be configurable with the desired level of management privileges.	
5.3	Remote Monitoring	RMON Support	
5.4	Network Management	The switch should support SNMP V2c and V3 & API.	
5.5	Log Management	Syslog shall be supported with multiple syslog destinations.	
5.6	Flow export	Shall support Netflow/IPFIX/sflow for flow exports.	
5.7	Time synchronization	Time synchronization using Network time protocol must be available.	
5.8	Configuration backup & restore	The switch shall have feature of backing up the configuration & restoring a backed- up configuration. Multiple Configuration files must be supported.	
5.9	TFTP/FTP upload and download	Config/image upload and download from TFTP/FTP server shall be available.	
6	Other Requirements		
6.1	Standards and Protocol	Switch should support IEEE 802.1ab,IEEE 802.3ab ,IEEE 802.3az,IEEE 802.3u,IEEE 802.1ad,IEEE 802.1ba,IEEE 802.1Q,IEEE 802.3ad	
6.2	Safety, EMI/EMC and regulatory certification	The switch shall conform to IEC-60950/CSA-60950/EN-60950/UL-60950 ,RoHS and WEEE	
6.3	Environmental conditions	The offered equipment must be able to operate in the following environmental conditions	
		1) Operating temperature: 0°C to 40° or better 2) Relative Humidity: 10% to 95% Non-condensing	
6.4	OEM and Support Criteria	All the Switches and Transceivers should be from the same OEM. The OEM should be Leaders in latest Gartner Magic Quadrant for wired and wireless segment. The OEM should have not only TAC centre in India, but also 24x7 TAC support with Indian Toll free number – reflected in Official website/documents. OEM must provide active support contract for all hardware, software updates and upgrade free of cost till contract period of 3 years.	

Modules

Sl. No	Description	Compliance Yes/No
I	10 G Based SFP+ Single-Mode Transceiver Module *It should be of same OEM brand as that of the distribution switch	
II	1G SFP Multi-Mode Transceiver Module *It should be of same OEM brand as that of the access switch	

Passive Components

Sl. No	Description	Compliance Yes/No
I	<u>CAT 6 UTP LSZH CABLE REEL</u>	
	Minimum Specifications	
1	Shall be of 4 twisted pairs of 23 AWG solid conductors	
2	Shall support network line speeds up to 1 gigabits per second.	
3	Shall be 4-pair Unshielded twisted pair with a cross filler/ isolator (+), meeting Category 6 tested to 500 MHz or more (4 connector test report from Intertek to be submitted with Bid).	
4	Should comply with all of the performance requirements for current and proposed applications such as Gigabit Ethernet, 100BASE-Tx, token ring, 155 Mbps ATM, 100 Mbps TP-PMD, ISDN, analog (broadband, baseband) and digital video and analog and digital (VoIP) voice.	
5	Shall provide the above performance up to 4 connections, for 100 meters. ETL(Intertek) report for 4 connections tested up to 500 MHz shall be submitted.	
6	The Category 6 Solution shall fully comply with the link segment specifications for 1000 Base-TX in addition to the ANSI/TIA and ISO/IEC Category 6 requirements.	
7	Shall be RoHS Compliant	
8	Installation Temperature shall be 0 °C to +60 °C (+32 °F to +140 °F) & Operating Temperature shall be -20 °C to +60 °C (-4 °F to +140 °F)	
9	Shall be Fire-Retardant, Low-Smoke & Zero-Halogen as per IEC 60332-3-22, IEC 61034-2 & IEC 60754-2 respectively	
10	Shall be certified by independent labs like ETL(Intertek) for compliance to ANSI/TIA-568C.2 for Cat 6 Channel and ISO/IEC 11801 for class E Channel	
11	Shall be supplied in Reel of 305 Meters/ 1000 feet packed in Boxes	
CAT 6 UTP LSZH PATCH CABLE		
II	<u>Cat 6 UTP Patch Cable, TIA-568C Category-6</u>	
	Minimum Specifications	
1	Length shall be available in 1/2/3/5 meters or equivalent length in feet	
2	All patch cords shall conform to Category 6 & conductor shall be stranded for better flexibility	
3	Shall support network line speeds up to 1 Gbps	
4	Shall have RJ-45 jacks with transparent plugs at both the ends	
5	All patch cords shall be factory crimped and packed	
6	Shall be RoHS Compliant	
7	Shall have LSZH jacket for safety measures	
8	Shall have a transparent / clear boot	
9	Outside Diameter shall be 5.9 mm / 0.24 inches	
10	Shall have Plug Insertion Cycles (>=) 750 cycles	
11	Shall have minimum 25-Year Extended Product Warranty and system warranty	
12	Colors- Blue, Green, White, Grey, Yellow, Red & Orange	

Sl. No	Description	Compliance Yes/No
CAT 6, UTP JACK		
III	<u>PCB based Information Outlet (I/O) RJ45, TIA-568C Category-6, Termination of Category-6 UTP Cable.</u>	
	Minimum Specifications	
1	Shall conform to Category-6 as per the EIA/TIA-568C.2	
2	Shall support network line speeds up to 1 Gbps	
3	Shall have RJ-45 type connector with strain relief for securing IDC contacts from external forces. Shall have a feature to maintain the bend radius of the cable while entering the jack. Shall not have an integrated spring shutter as the shutter malfunctions and causes operational issues.	
4	Shall have minimum durability of 750 mating cycles and 200 termination cycles	
5	Shall Snap into standard faceplates, surface-mount boxes, consolidation point boxes, and Modular Panels	
6	Shall be mountable either at 90 degrees (straight) or 45 degrees (angled) in any faceplate.	
7	Shall be certified by independent labs like ETL/GHMT for compliance to EIA/TIA-568C.2, (Report required)	
8	Shall be RoHS Compliant	
9	Shall have minimum 25-Year Extended Product Warranty and system warranty	
CAT 6 JACK/PATCH PANEL		
IV	<u>UTP Jack Panel UL listed, Unloaded/loaded with 24 nos. UTP ports for PCB based IO Jacks (RJ45, TIA-568C Category-6, Installation and Termination of all 24 nos. Category-6 UTP Cable</u>	
	Minimum Specifications	
1	Shall be unloaded or loaded with individually replaceable 24 nos. Category-6 I/O Jacks complying with TIA-568. C.2	
2	Shall be 19" rack mountable and of 1U height & complete with all mounting accessories, UL listed	
3	Shall have labels for identification of ports	
4	Should have integrated bonding bar for grounding individual jacks	
5	Shall be RoHS Compliant	
6	Shall have minimum 25-Year Extended Product Warranty and System Warranty	
7	Shall be having a 6 port module construction for better cable dressing at the rear	
8	Shall have Comprehensive port numbering on front	
9	Shall be suitable for loading unshielded & shielded jacks for different category systems (CAT 6 & CAT 6A)	
10	Shall be certified by independent labs like ETL/UL etc.	
SINGLE/DUAL/QUAD PORT FACEPLATE		
V	<u>Faceplate Single/Dual/Quad Port (Work Area End)</u>	
	Minimum Specifications	
1	Shall be Single/Dual/Quad Port (RJ45) square plate, dimension as per commercially available.	
2	Shall have spring shuttered front access for preventing ingress of dust, shall have no connection with the performance of the jack.	
3	Shall be supplied with Gang Box of the same size by System Integrator or OEM.	
4	Shall have Write on labels in transparent plastic window along with the plate	
5	Shall have Screw hole covers along with the plate	
6	Shall be able to support variety of jacks – UTP and STP information outlets	

Sl. No	Description	Compliance Yes/No
Fiber Cable & Components (Multi Mode)		
VI	6 CORES – MM – OM3, LSZH SHEATH, INDOOR/OUTDOOR FIBER CABLE	
	Minimum Specifications	
1	Shall be 50/125 micron, Multimode (OM3), Single Jacket, Indoor/Outdoor Low Smoke Zero Halogen Riser Distribution Cable, 6 fiber single-unit.	
2	Qualification Standards: ANSI/ICEA S-104-696, EN 187105, Telcordia GR-20(Water Penetration) and Telcordia GR-409	
3	Regulatory Compliance: RoHS 2011/65/EU compliant All MM-OM3 Fiber strands shall be Bend-Insensitive Multimode Fiber	
4	No. of Fibers: 6 Fiber Type: MM OM3 Filler Quantity: 6	
5	Construction Materials: a) Outer Jacket Material: Non-Armored, LSZH Sheath b) Jacket Color: Black c) Jacket UV Resistance: UV stabilized d) Subunit Type: Gel-free e) Strength Member: Aramid Yarn f) No. of Rip cords: 1	
6	Dimensions: a) Cable Diameter (less than or equal to): 5.50 mm b) Cable Weight (less than or equal to): 26.0 kg/km	
7	Physical Specifications: a) Cladding Diameter: 125.0 μm b) Core Diameter: 50.0 μm c) Minimum Bend Radius loaded: 8.3 cm d) Minimum Bend Radius unloaded: 5.5 cm e) Tensile Load, long term, Max: 400 N f) Tensile Load, short term, Max: 1335 N	
8	Flame Test Specifications: a) Flame Test Listing: NEC OFNR-LS (ETL) and c(ETL) b) Flame Test Method: IEC 60332-3, IEC 60754-2 & IEC 61034-2	
9	Environmental Specifications: a) Environmental Space: Low Smoke Zero Halogen (LSZH) / Riser b) Installation Temperature: -30 degree Celsius to +60 degree Celsius c) Operating Temperature: -40 degree Celsius to +70 degree Celsius d) Storage Temperature: -40 degree Celsius to +75 degree Celsius e) Heat Age, Test: -40 degree Celsius to +85 degree Celsius (as per IEC 60794-1 F9)	
10	Mechanical Test Specifications: a) Compression: 22 N/mm (as per IEC 60794-1 E3) b) Flex: 100 Cycles (as per IEC 60794-1 E6) c) Impact: 5.88 N-m (as per IEC 60794-1 E4) d) Twist: 10 Cycles (as per IEC 60794-1 E7)	

Sl. No	Description		Compliance Yes/No
11	Optical Specifications:		
	Standard Compliance: IEC 60793-2-10 & TIA492AAAC (OM3) at 850nm		
	Attenuation, Maximum		
	1.00 dB/km @ 1300 nm		
	3.00 dB/km @ 850 nm		
	Index of Refraction		
	1.479 @ 1300 nm		
	1.483 @ 850 nm		
	Bandwidth, Laser, minimum		
	500 MHz-km @ 1300 nm		
	2000 MHz-km @ 850 nm		
	Differential Mode Delay		
	0.70 ps/m @ 850 nm		
	0.88 ps/m @ 1300 nm		
12	Distance Supported		
	1 Gbps Ethernet Distance: 600 m @ 1300 nm & 1020 m @ 850 nm		
	10 Gbps Ethernet Distance: 300 m @ 850 nm		
6/ 12/24 Fiber Rack Mount LIU			
VII	Fiber Optic LC style fully loaded Patch Panel (FOPP), 19" Rack Mount with 6/12/24 nos. of OM3 50/125µ Pigtailes.		
	Minimum Specifications		
1	Shall have 6/12/24/48 nos. of ISO/IEC-11801-OM3 Pigtailes with LC Type Connectors		
2	Shall have all accessories including coupler plates pre-loaded with duplex LC couplers (OM3), pigtailes for terminating fibers on the FOPP		
3	Shall be Front Patching Type, 1U high and rack mountable on standard 19" rack with mounting arrangements		
4	Shall be supplied with fusion splicing sleeves for termination of fiber.		
5	Shall be made of powder coated steel or aluminium		
6	Shall be slide-out type drawer enclosure for Easy access to splicing tray, Easy access to back side of the connector and have labels for better identification		
7	Shall have trays with hinges(book type) which facilitates easy Fiber management and greater access during installation and rework		
8	Shall have all necessary accessories for fiber management inside such as fiber guides, radius controls, splice protector sleeves & secure tie downs within the FOPP		
VIII	SC to LC Patch Cord		
1	Make and Type	SC to LC Duplex tuned Fiber Optic Patch Cord 3 Meter	
2	Cable Sheath	LSZH	
3	Cable Diameter	1.6mm	
4	Cable Retention strength, Maximum	11.24 lb @ 0 ° 4.40 lb @ 90 °	
5	Fiber Mode	Multi-Mode	
6	Fiber Type	OM4	
7	Operating Temperature	-10 °C to +60 °C (+14 °F to +140 °F)	
8	Certification	ISO 9001:2015	

Sl. No	Description		Compliance Yes/No
9	ROHS	ROHS/ELV Compliant	
Fiber Cable & Components (Single Mode)			
IX	6 Core Fiber Outdoor Armored SM cable, OS2		
	Minimum Specifications		
1	Cable Type	6 Core fiber Single Mode, Armoured, Multi-tube, Gel filled cable complying to ISO/IEC 11801, EN50173, ANSI/TIA 568-C.3, Telcordia GR-20; suitable for use in direct burial, outdoor ducts and backbone cabling	
2	Fiber Type	Single Mode, 9/125 micron primary coated buffers, OS2 (IEC 60793-2-50, B1.3 and ITU T G652.d)	
3	Armour	Electrolytically Chrome-Coated Steel (ECCS) Armour of min. 0.15 mm thickness	
4	Cable Construction Type	BELLCORE GR 20 / IEC 794-1	
5	Attenuation	@ 1310nm <=0.34 db/Km MAX @1550nm <=0.22 db/Km MAX @ 1380-1386nm <= 0.31db/Km	
6	Cut Off Wave length (nm)	<1260	
7	Point Discontinuity (db)	<= 0.1	
8	Chromatic Dispersion @ 1310nm (ps/nm x Km)	<=3.5	
9	Chromatic Dispersion @ 1550nm (ps/nm x Km)	<=18	
10	Core/Mode-Field (um)	9	
11	Clad Diameter (um)	125	
12	Coat Diameter	250	
13	Loose tube material	PBTP Loose tubes filled with water blocking Thixotropic gel.	
14	Loose Tube Color	Blue & Orange	
15	Loose tube diameter (Nominal)	3 mm	
16	Jacket material	HDPE outer jacket. HDPE jacket shall be type tested as per IEC 60332-3 for vertical flame spread.	
17	Jacket thickness	2 mm Min.	
18	Strength members	Water blocking Glass yarn strength members at the periphery of the multiple loose tube arrangement Central FRP rod strength member around which the loose tubes should be arranged symmetrically	
19	Core Wrapping	The loose tubes should be wrapped first by glass yarns and then by polyester tape	
20	Tensile Strength	4000 N	
21	Crush Resistance	4000 N	
22	Min Proff Strength (Kpsi)	100	
23	Cable Diameter	15.5 + - 0.5 mm	
24	Min Bend Radius – Installation (mm)	310	

Sl. No	Description		Compliance Yes/No
25	Min Bend Radius – Service (mm)	248	
26	Cable weight Kg/Km	<= 220	
27	Operating Temperature	-20 Degree C to +70 Degree C	
X	Fiber LIU Rack-mountable, 1U fully loaded		
Minimum Specifications			
1	Fiber Management shelf	The fiber management shelf shall have compact design and be ideal for high density front patching applications.	
		Should be fully loaded and factory fitted assembly with no assembling required during installation at site	
		• High Density: 1U: 6/12/24/48 Fiber terminations	
		• Should be supplied loaded with SC adapters, splice trays, SC SM Pigtails and fiber management rings	
		• Min 4 cable entry points	
2	Drawer style shelf	o Easy access to splicing tray	
		o Easy access to back side of connector	
3	Accessories	Fiber management guides, radius controls & secure tie downs provided	
		Pre-loaded with labelling strips	
		Sealed cable inlets for dust and rodent protection	
4	Material	Min 1.6mm CRCA Sheet steel with powder coating	
5	Approvals	Intertek ETL certified	
6	Compact size (mm)	44 x 450 x 320 (HxWxD)	
7	Pigtails loaded in Shelf:		
i	Type	SC Type, SM 1.5 Meters.	
ii	Attenuation	<=0.3 dB, at 1310 nm	
iii	Return Loss	>= 20 dB	
iv	Cable Info	9/125 um	
v	Outer Dia	0.9 mm	
vi	Jacket material	LSZH	
vii	Buffer Color	Gold Metallic	
viii	Buffer Material	UV Cured Acrylate	
8	Warranty	25 year warranty	
9	Compliance	ROHS / ELV Compliant	
XI	SC to LC Patch Cord		
Minimum Specifications			
1	Make and Type	SC to LC Duplex tuned Fiber Optic Patch Cord 3 Meter, 9/125 Micron	
2	Cable Sheath	LSZH	
3	Cable Diameter	3.6 mm twin zip	
4	Ferrule	Ceramic	
5	Buffer	Tight buffered	
6	Insertion Loss	MAX .3 db	
7	Return Loss	> 45 db	
8	Temperature Range	-25 Degree C to +70 Degree C	
9	ROHS	ROHS/ELV Compliant	

Racks

Sl. No.	Parameters	Description	Compliance Yes/No
I	9U Rack/12U Rack/15U Rack		
1	Size	600mm W x 500mm or 600mm D	
2	Frame	Enclosures in sturdy CRCA sheet steel construction consisting of a minimum 1.5mm thick sheet steel frame folded from one piece and welded, with All-round protective channel on the door aperture, rear side screw fixed panel with holes for wall mounting brackets. With 1 pair of 19" Mounting angles mounted in the front Provision for cable entry. Load bearing capacity should be minimum 50Kg	
3	Front Door	Front 1.5mm sheet steel Glass door, surface mounted, with foamed-in seal, 130° opening angle, cam lock with double-bit insert in Accordance with DIN 43668.	
4	Rear Panel	Rear Panel of 1.5mm sheet thickness	
5	Surface Finish	Sheets cleaned, degreased, phosphated, electro- Dip coat primed and electro statically powder coated with textured Polyester paint RAL 7035.	
6	Additional Accessories	Fan: 230 V AC Fan,90Cfm with 1 meter long Cable Captive Hardware: Pack of 20 Cantilever Shelf occupying not more than 1U PDU: 19' Mountable with 6x 5A Universal socket and 2 meter Power cord.	
II	18U Rack with Integrated AC		
1	Size	600mm W x 600mm D x 900mm (18U) H	
2	Frame	Enclosures in sturdy sheet steel construction consisting of a minimum 1.5mm sheet steel frame folded from one piece and welded, with All-round protective channel on the door aperture, rear side screw fixed panel with holes for wall mounting brackets. With 19" Mounting angles mounted in the front and rear, Cut-out with foam insert at bottom of the Enclosure for cable entry purpose and top cut-out with cover plate. Sides with LH/RH cut-out for Cooling Unit	
3	Front Door	Front 1.5mm sheet steel Glass door, surface mounted, with foamed-in seal, screw fixed hinges with 130° opening angle, cam lock with double-bit insert in Accordance with DIN 43668.	
4	Rear Panel	Rear Panel of 1.5mm sheet thickness screw fixed	
5	Surface Finish	Sheets cleaned, degreased, phosphated, electro- Dip coat primed and electro statically powder coated with textured Polyester paint RAL 7035.	
6	Painting	EC Dip coat powder quoted. Ot should be Triple surface treated by Phosphating, electrophoretic dipcoat – priming and textured powder coating - The coating should be resistant to Minerals Oils, Lubricants, machining emulsions, solvents, weak acids and alkalines. The textured powder coating has to be 80 – 100 microns of Average thickness.	
7	Additional Accessories	Captive Hardware: Pack of 20 Cantilever Shelf occupying not more than 1U PDU: 19' Mountable with 6x 5A Universal socket and 2 meter Power cord	

Cooling Unit					
8	Material	Sheet steel with Nano-coated condenser			
9	Colour	RAL 7035			
10	Protection category IP to IEC 60 529:	External circuit IP 34 Internal circuit IP 54			
11	Details of Minimum/Maximum Heat Dissipation w.r.t. proposed network switches	Total cooling output to DIN EN 14511 at 35°C RAT and 35°C Ambient is to be 0.85 kW and should be operational up to 50°C Ambient temperatures with a capacity reduction of maximum 0.18 kW. Cooling unit should be capable enough to keep proposed distribution switch (And couple of access switches, in case of future expansion of connectivity).			Reference
		Item	Minimum Heat Dissipation (BTU/HR)	Maximum Heat Dissipation (BTU/HR)	
		Distribution Switch	229	427	
		Access Switch	121	410 (@380W PoE)	
12	Airflow:	External circuit: 550 m ³ /h, Internal circuit: 230 m ³ /h			
13	Rated operating voltage:	230 V, 1~, 50 Hz/60 Hz			
14	Dimensions:	Width: 280 mm. Height: 550 mm, Depth: 280 mm			
15	Operating Temperature range	10 degree Celsius to 55°C			
16	Setting range:	20 degree Celsius to 55 degree Celsius			
17	Refrigerant/cooling medium:	Refrigerant: R134a			
18	Power consumption:	0.4 kW to 0.47 kW			
19	Rated current (max.	2.7 A			
20	Start-up current max	6A			
21	Energy efficiency ratio (EER)	50 Hz L35 L35 to DIN EN 14511:2.08			
22	Installation	Wall mount			

iii. Country of Origin Details

Sl. No	Item	Country of Origin
Active		
1	Distribution switch with 24 Port SFP and 4 Port SFP+	
2	Access Switch with 8 Port 1000Base-T and 2 Port SFP	
3	SMF 10G Ethernet SFP+ Module	
4	MMF 1000BASE-X SFP Module	
Passive		
5	Fiber Optic Patch Cable SC-LC Single Mode (Minimum Length of Cable per Piece: 3M)	
6	Fiber Optic Patch Cable SC-LC Multi Mode (Minimum Length of Cable per Piece: 3M)	
7	Fiber LIU 6 Port Fully Loaded Single Mode (Along with Sufficient no: of Pigtails and Splice Holders)	
8	Fiber LIU 12 Port Fully Loaded Single Mode (Along with Sufficient no: of Pigtails and Splice Holders)	
9	Fiber LIU 6 Port Fully Loaded Multi Mode (Along with Sufficient no: of Pigtails and Splice Holders)	
10	Fiber LIU 24 Port Fully Loaded Multi Mode (Along with Sufficient no: of Pigtails and Splice Holders)	
11	Fully Loaded 24 Port Patch Panel	
12	24 Port Patch Panel loaded with 12 Ports	
13	CAT6 I/O Port with Face Plate	
14	CAT6 Patch Cord 1 Meter	
15	CAT6 Patch Cord 2 Meter	
16	6" x 8" x 2" Enclosure for installing Wi-Fi AP on the wall/ceiling	
17	UTP - Enhanced CAT6 Reel (Minimum Length of Cable per Reel: 300m)	
18	6 Core Single Mode Fiber Cable (per Meter)	
19	6 Core Multi Mode Fiber Cable (per Meter)	
20	HDPE 32mm Pipe for 6 Core Fiber Laying ISI Certified (per Meter)	
21	1" Casing & Capping (per Meter)	
22	1" Flexible Pipe (per Meter)	
23	9U Wall Mount Rack with Accessories	
24	12U Wall Mount Rack with Accessories	
25	15U Wall Mount Rack with Accessories	
26	18U Wall Mount Rack (Integrated A/C) with Accessories	

(Authorised signature & seal of the bidder)

iv. Table for bidder information & reasonability of prices (to be filled by bidder)

Bidders Information

1.	Name of the Bidder	
2.	Address of the Bidder	
3.	PAN No.	
4.	GST No.	
5.	State of GST Registration	
6.	E-mail (for the purpose of official communication)	
7.	Contact Person's Name & Designation	
8.	Mobile No.	
9.	Bank Details of the Bidder: a. Name of the A/c Holder b. Name of the Bank c. Branch name d. Account No. e. IFSC Code f. Any other detail	

(Authorised signature & seal of the bidder)

Reasonability of Prices

(Please quote best minimum prices applicable for premier Educational and Research Institution of National Importance)

Previous Supply Orders

Name of the Firm _____

Order placed by (Full address of Purchaser)	Order No. and Date	Quantity	Value of Order	Date of completi on of delivery as per contract	Remarks indicating reasons for late delivery, if any and justification for price difference of their supply order & that quoted for IIT Dharwad	Has the Equipment been installed satisfactorily (Attach a Certificate from the Purchaser/ Consigner)	Contact Person along with Telephone No., Fax No. and e- mail address.

(Authorised signature & seal of the bidder)

INDIAN INSTITUTE OF TECHNOLOGY DHARWAD
Off Pune Bengaluru Highway, Near High Court,
Dharwad, Karnataka - 580011

Section V (b) - PRICE BID
for Indigenous / Local Supplies (to be quoted only in INR)

Sl. No	Item	Quantity	Unit Price	Total
Active				
1	Distribution switch with 24 Port SFP and 4 Port SFP+	1		
2	Access Switch with 8 Port 1000Base-T and 2 Port SFP	8		
3	SMF 10G Ethernet SFP+ Module	4		
4	MMF 1000BASE-X SFP Module	16		
Passive				
5	Fiber Optic Patch Cable SC-LC Single Mode (Minimum Length of Cable per Piece: 3M)	4		
6	Fiber Optic Patch Cable SC-LC Multi Mode (Minimum Length of Cable per Piece: 3M)	16		
7	Fiber LIU 6 Port Fully Loaded Single Mode (Along with Sufficient no: of Pigtails and Splice Holders)	2		
8	Fiber LIU 12 Port Fully Loaded Single Mode (Along with Sufficient no: of Pigtails and Splice Holders)	1		
9	Fiber LIU 6 Port Fully Loaded Multi Mode (Along with Sufficient no: of Pigtails and Splice Holders)	8		
10	Fiber LIU 24 Port Fully Loaded Multi Mode (Along with Sufficient no: of Pigtails and Splice Holders)	1		
11	Fully Loaded 24 Port Patch Panel	9		
12	24 Port Patch Panel loaded with 12 Ports	4		
13	CAT6 I/O Port with Face Plate	250		
14	CAT6 Patch Cord 1 Meter	250		
15	CAT6 Patch Cord 2 Meter	225		
16	6" x 8" x 2" Enclosure for installing Wi-Fi AP on the wall/ceiling	12		
17	UTP - Enhanced CAT6 Reel (Minimum Length of Cable per Reel: 300m)	15		
18	6 Core Single Mode Fiber Cable (per Meter)	1750		
19	6 Core Multi Mode Fiber Cable (per Meter)	1250		
20	HDPE 32mm Pipe for 6 Core Fiber Laying ISI Certified (per Meter)	300		
21	1" Casing & Capping (per Meter)	500		
22	1" Flexible Pipe (per Meter)	50		
23	9U Wall Mount Rack with Accessories	2		
24	12U Wall Mount Rack with Accessories	2		
25	15U Wall Mount Rack with Accessories	1		
26	18U Wall Mount Rack(Integrated A/C) with Accessories	1		
			Sub-Total	
			Discount	
			GST @ 5%	
			Grand Total	

* Please refer clause 18 (Section-I), 14-a(Section-II) & 2 (Section-III) before quoting the prices.

* In case the bidder intends to provide the break-up of prices quoted, then a separate sheet to be attached.

(Authorised signature & seal of the bidder)

Note-1: Price Bid should be submitted in given format only.

Note-2: The quantity mentioned above are subject to upward & downward revision, depending on requirement in future.