

**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/2021-22/002	
Description	TENDER FOR SUPPLY & INSTALLATION OF EQUIPMENT (Network Equipment & Related Peripherals) AT INDIAN INSTITUTE OF TECHNOLOGY DHARWAD	
Tender Date	01.04.2021	
Tender Category	Goods	
Tender Type	Open Tender	
No. of Covers	2	
<b>Covers Information / Submission of Bids</b>		
<b>Cover No.</b>	<b>Cover Type</b>	<b>Description</b>
<b>1</b>	Technical	Schedule of Requirement and Compliances, Bidders Information, Previous Supply Orders etc.
<b>2</b>	Financial	Financial Bid
<b>Two Bid System: -</b>		
The two bid system will be followed for this tender. In this system bidder must submit their offer in separate sealed envelopes as – <b>Technical Bid (Envelope No. A)</b> and <b>Commercial Bid (Envelope No. B)</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.		
<b>Note:</b> 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	
Bid Validity (Days):	90 Days	
Period of Work/Delivery Period (Days)	30 Days	
Start date for Submission of queries via email to armm@iitdh.ac.in	01.04.2021	
End date for Submission of queries via email to armm@iitdh.ac.in	08.04.2021 till 11:00 AM	
Date of rebuttal/reply of queries (to be uploaded on the website) and publishing revised tender (if required)	08.04.2021 at 04.00 PM	
Contract Type:	Open Tender	
Delivery Location:	IIT Dharwad, Karnataka, India	
Pin Code	580011	
Bid Submission Start Date	01.04.2021	
Bid Submission End Date & Time	22.04.2021 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	22.04.2021 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 &amp; INSTALLATION OF EQUIPMENT</u> <u>(Network Equipment &amp; Related Peripherals) AT</u> <u>INDIAN INSTITUTE OF TECHNOLOGY</u> <u>DHARWAD</u>	Individual item requirements as per <b><u>Section IV</u></b>

7. It may kindly be noted by all the prospective bidders that the **tender will be awarded to the lowest successful bidder (L<sub>1</sub>) 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	Technical Bid documents
B	Commercial Bid / Price Bid / BOQ

**Envelope – A** (duly sealed): 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](mailto: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	Duly signed & stamped copy of the entire tender document.	The entire tender document to be duly signed & stamped by the bidder on each page.
B	PAN Card and GST certificate	Copy of PAN Card and GST certificate to be provided.
C	Income tax returns (ITRs) for last three consecutive financial years	Copy of Income tax returns for last three consecutive financial years (period from 2018-19, 2019-20 and 2020-21).
<b>FOR ACTIVE COMPONENTS</b>		
D	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 2018 or earlier). If the Bidder is an authorised partner then a Manufacturer's Authorization Form (MAF) must be submitted along with the bid.
E	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 <sup>th</sup> 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)
OEM must provide active support contract for all hardware, software updates and upgrade free of cost till contract period of 3 years.		
<b>FOR PASSIVE COMPONENTS</b>		
F	OEM should possess below given criteria:	Necessary documents should be submitted in this regard along with the technical bid.
	OEM shall provide min 1 year of warranty on component as well as performance for all the offered products	
	All Passive Components should be ROHS Complied- Supporting ROHS Certificated to be attached	
	Only Premium Brand and No Class B Products should be quoted	
	OEM should have 10+ years of Manufacturing presence in India.	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	Copy of at-least one purchase order of

	certificates along with Purchase Orders	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 <sup>th</sup> 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)
G	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.
H	<p style="text-align: center;"><b>Duly filled and completed Section-IV</b></p> <ul style="list-style-type: none"> <li>• Compliance for commercial terms of tender</li> <li>• Compliance for technical specifications of the equipment to be supplied &amp; country of origin details.</li> <li>• Bidders information &amp; Reasonability of prices</li> </ul>	<p>The following information on the letter head of the company / bidder:</p> <ul style="list-style-type: none"> <li>• Compliance for commercial terms of tender</li> <li>• Compliance for technical specifications of the equipment to be supplied &amp; country of origin details.</li> <li>• Bidders information &amp; Reasonability of prices</li> </ul>

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).



## **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. F.No.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. 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. 14<sup>th</sup> November 2017, Notification No. 45/2017-Central Tax (Rate) dt. 14<sup>th</sup> November 2017 and Notification No. 45/2017-Union Territory Tax (Rate) dt. 14<sup>th</sup> 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. 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 3% 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.
- 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 BID SECURITY DECLARATION**

(To be typed on Firms letterhead)

I/We will not withdraw or modify the bid submitted by me/us during the period of validity or if awarded the contract and fail to sign the contract or to submit a performance security before the deadline defined in the tender document.

Yours sincerely,

Date:  
**bidder)**  
Address:

(Authorised signature & seal of the



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. .... {**@3% (three 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
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	GST Rate (If Local supply in India)	Applicable rate @5% Confirm point 2 of Section-III	
8	Training & Pre-installation checks	Confirm point 5 of Section-III	
9	Terms of Payment	Confirm point 6 of Section-III	
10	PBG	Confirm point 11 of Section-III	
11	Complete tender document copy	Signed & stamped copy required	
12	PAN	Copy of PAN required	
13	GST	Copy of GST certificate required	
14	ITRs (2018-19 to 2020-21)	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 <sup>th</sup> 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)	
15	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 <sup>th</sup> 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)	
16	Previous Experience (Refer point 13 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 <sup>th</sup> 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)	
17	Blacklisting status	Certificate required to confirm the status	
18	Technical compliance for equipment	Please complete the table in point (ii) under Section-IV to establish the technical eligibility	
19	OEM Details	Please attach the OEM details (Manufacturer's Authorization Form (MAF))	
20	Country of Origin Details	Please explicitly mention the country of origin	
21	Bidders Information	Please complete the table in point (iii) under Section-IV to ascertain all relevant details	
22	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	Required Quantity
<b>Active</b>		
1	Access Switch with 48 Port 1000Base-T and 2 Port SFP	3
2	Access Switch with 8 Port PoE 1000Base-T and 2 Port SFP	3
3	Core license for Existing Core Switch	1
<b>Passive</b>		
4	UTP - Enhanced CAT6 Reel (Minimum Length of Cable per Reel: 300m)	15
5	CAT6 Patch Cord 1 Meter	150
6	CAT6 Patch Cord 2 Meter	150
7	CAT6 I/O Port	150
8	Fully Loaded 24 Port Patch Panel	3
9	Fully Loaded 48 Port Patch Panel	3
10	Single Face Plate with Back Box	150
11	Cable Labelling Tag (Packets of minimum 100 Tags)	1
12	6 Core Multi Mode Fiber Cable (per Meter)	500
13	6" x 8" x 2" Enclosure for installing Wi-Fi AP on the wall/ceiling	15
14	9U Wall Mount Rack with PDU and Other Necessary Accessories	3



**Access Switch 48 Port (Non PoE)**

Sl. No.	Parameters	Description	Compliance (Yes/No)
1	<b>Technical Specification Specifications</b>		
1.1	Form Factor	19 Inch Rack mountable Ethernet switch.	
1.2	Architecture	Non-Blocking architecture.	
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 Modular Operating system and latest version	
1.5	Feature Availability	All the specified features/parameters/certifications must be available on the Technical Bid opening date. Features /parameters /certifications proposed to be available in near future / on roadmap shall not be considered.	
1.6	Basic Layer-3 Support	Switches must be managed Basic layer-3 type for better broadcast segmentation.	
1.7	Interface Specifications:		
1.8	Ports	Should support at least 48 x10/100/1000T ports with min 2x 10G BaseT and 2 x10G SFP+ ports. Switch should support 40 Gbps stacking bandwidth and minimum 8 switches in single stack. Switch should support stacking for 5 meter and more as a solution requirement. All the stacking accessories should be provided from day 1.	
1.9	SFP Transceivers	All the Transceivers/Modules used to connect the Switches should be from the same OEM/make of the switches only	
1.10	Port status display	Each port must have a dedicated LED for status display.	
1.11	Telecom standard	CE 2.0 support should be available from day 1	
2	<b>Hardware Specifications</b>		
2.1	Switching Capacity	At least 176 Gbps switching bandwidth	
2.2	Forwarding Rate	130.5 Mpps or more for each member switch.	
2.3	MAC Addresses and MTBF	MAC: -16 K or more and MTBF 530000 Hrs. or more	
2.4	VLANs (802.1q tagged VLAN)	4000 or more Concurrent	
3	<b>Standards and Protocols</b>		
3.1	L2 Loop Protection	IEEE 802.1d Spanning tree protocol, PVST+	
		802.1s MSTP (Multiple instances of STP)	
		802.1w RSTP (Rapid spanning tree), Should support ITU G.8032 for ring architecture	
3.2	Link Aggregation	802.3ad Link Aggregation	
3.3	QOS Support	At least 8 nos of 802.1p Priority Queues per port.	

Sl. No.	Parameters	Description	Compliance (Yes/No)
3.4	IP Multicast	IGMP Snooping, MLD v1/v2 support from day 1	
3.5	Port Mirroring / Span port	Port mirroring must be available.	
4	<b>Routing Features</b>		
4.1	Routing Protocols	The switch shall have hardware-based forwarding for IPv4 & IPv6. Following protocols shall be supported in future with IPV4/Ipv6: Static routing, PBR, OSPFv2 The switch shall have Dual stack mode to run both IPv4 & IPv6 RIP and RIPng should be supported on same hardware.	
5	<b>Security Features</b>		
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	
5.4	AAA (authentication, authorization and accounting)	AAA using RADIUS must be available	
6	<b>Management and Monitoring</b>		
6.1	Management	Following in-band management methods shall be available: Secure Web based management (On https) SSH based management (SSH v2).	
6.2	Out-of-band management	Following out-of-band management methods shall be available: Serial console port Management Ethernet port. Dedicated OOB port	
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	Should support RMON, ITU- Y.1731, IEEE 802.1ag and IEEE 802.3ah RFC 5357 for measuring round-trip performance between two devices	
6.5	Network Management	The switch should support SNMP V2c and V3, XML Api	
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	Config/image upload and download from TFTP/FTP server shall be available.	

Sl. No.	Parameters	Description	Compliance (Yes/No)
	download		
7	<b>Other Requirements</b>		
7.1	Memory /capacity and other features /standards	Switch Must support 1 GB RAM or more and 4 GB FLASH or more ,3 MB or more packet buffer. . Should support IEEE standards: -IEEE 802.3ab, IEEE 802.3ae, IEEE 802.1ba, IEEE 802.3ad, IEEE 802.1AB, IEEE 802.1v,802.1Q	
7.2	Safety certification	The switch shall conform to IEC-60950/CSA-60950/EN-60950/UL-60950 standard for safety requirements of information technology equipment.	
7.3	Environmental conditions	The offered equipment must be able to operate in the following environmental conditions	
		“ Operating temperature: 0°C to 40°C or better	
		“ Relative Humidity: 10% to 95% Non-condensing	
7.4	Electromagnetic interference	The Offered equipment shall have FCC certification.	
7.5	OEM Criteria and Support	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. <b>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.</b>	

**8 Port PoE Access Switch**

Sl. No.	Parameters	Description	Compliance (Yes/No)
1	<b>Technical Specification Specifications</b>		
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	The switch should support at least 8x10/100/1000BaseT, 2x1G SFP, POE+ 120W PoE.	
2	<b>Hardware Specifications</b>		
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	<b>Standards and Protocols</b>		

Sl. No.	Parameters	Description	Compliance (Yes/No)
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: 1500 or more	
3.4	Port Mirroring / Span port	Port mirroring must be available.	
4	<b>Security Features</b>		
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	<b>Management and Monitoring</b>		
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	<b>Other Requirements</b>		
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	

Sl. No.	Parameters	Description	Compliance (Yes/No)
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°C 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. <b>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.</b>	

**Core License for Existing Core Switch**

- To Upgrade from the **Extreme XOS Advanced Edge License** to **Extreme XOS Advanced Core License**;
- Details of Existing Core Switch at IIT Dharwad :-  
*Summit X460 & X460-G2 Series Switches, [Part Number:- 16423];*

**Passive Components**

Sl. No	Description		Compliance Yes/No
I	<b><u>CAT 6 UTP 4 PAIR CABLE REEL (Minimum Length of Cable per Reel: 300m)</u></b>		
	<b><u>Minimum Specifications</u></b>		
1	Type	Unshielded twisted pair cabling system, TIA / EIA 568-C.2 Category 6 Cabling system	
2	Network Support	Supports ultrahigh speed data networks such as Gigabit Ethernet (1000 Base-T and 1000 Base-TX) and beyond.	
3	TIA / EIA 568-B.1	ETL Verified, UL Listed and UL channel verified- All three Certificates are mandatory	
4	IEEE 802.3ab	Zero-bit Error, ETL verified	
5	Warranty	25-year systems warranty; Warranty to cover Bandwidth of the specified and installed cabling system, and the installation costs. Site certificate must be issued by OEM	
6	Performance characteristics to be provided along with bid	Attenuation, Pair-to-pair and PS NEXT, ELFEXT and PSELFEXT, Return Loss, ACR and PS ACR for 4-connector channel	
7	Manufacturer	All passive cabling must be from same OEM ( UTP and Fiber)	
8	Conductors	23 AWG solid bare copper	
9	Insulation	Polyethylene	
10	Approvals	a) UL Listed and UL Channel verified	

Sl. No	Description		Compliance Yes/No
		b) ETL verified to TIA / EIA Cat 6	
11	Frequency tested up to	600 MHz minimum	
12	Packing	Box of 305 meters	
13	Impedance	100 Ohms + / - 15 ohms	
14	Performance characteristics to be provided along with bid	Attenuation, Pair-to-pair and PS NEXT, ELFEXT and PSELFEXT, Return Loss, ACR and PS ACR	
15	Delay Skew	45ns Max	
16	Impedance	100 ± 15 Ohms	
17	Current Rating	1.5 A Max	
18	Conductor DC Resistance	66.5Ω/km	
19	Voltage	150VAC	
20	Propagation delay	535ns/100m @250MHz	
21	Mutual Capacitance	5.6nF/100m Nominal	
22	Insulation Resistance	500 MΩ Minimum	
23	Dielectric Strength	1000 V RMS	
24	Contact Resistance	10 mΩ Max	
<b>CAT 6 UTP PATCH CABLE</b>			
<b>II</b>	<b>Cat 6 UTP Patch Cable (Required Lengths:- 1 Meter and 2 meter)</b>		
	<b>Minimum Specifications</b>		
1	Type	Cat 6 U/UTP End-to-End Solution and are designed to support data networks for 10/100BASE-T and 1000BASE-T applications.	
2	Conductor Size	24 AWG stranded copper wire	
3	Nom. O.D.	5.9mm	
4	Sheath	LSOH	
5	Bend Radius	4X O.D.	
6	Boots	Transparent Plug with anti-snag slip on boots	
7	RJ45 Plug Standard	ISO/IEC 60606-7-4 and FCC 47 Part 68	
8	Sheath Standards	Fire Propagation compliant with CSA FTI, IEC 60332-1, IEC 61034	
9	Operating Temperature Range	-20°C to 60°C	
10	MIN Operating Life	750 insertion cycles	
11	RJ45 Plug and Boot Material	Clear polycarbonate	
12	Contact Material	0.35mm thick copper alloy	
13	Contact Plating	Selective gold	

Sl. No	Description		Compliance Yes/No
14	RJ45 Plug Dimensions Compliant with	ISO/IEC 60603-7-4 and FCC 47 Part 68	
15	Commercial Standards	ISO/IEC 11801:2002/Amd 2:2010 Cat 6-, TIA-568-C.2 Cat 6	
		ETL Verified	
16	Fire Propagation Tests	LSOH Sheath: CSA FT1, IEC 60332-1, IEC 61034	
17	Standard Length Available	0.5mt to 10 mts	
<b>CAT 6, UTP JACK</b>			
<b>III</b>	<b>CAT 6, UTP JACK</b>		
	<b>Minimum Specifications</b>		
1	Features and Benefits	Patented Spring-Loaded Shutter: prevents incomplete mating protects from dust and contaminants	
		Patented IDC V-shaped contacts that flex not fatigue when terminated	
		Features pointed IDC towers to speed termination and enhance cable retention	
		Dual color-coding allows for 568 A/B wiring configuration	
		Can be terminated using industry standard punch-down tools	
		RJ-11 compatible	
		Molded category identification on jack face as well as optional port identification icons USOC Wiring Sequences Available	
2	Dust Proof	RJ45 Jack should be supplied with Cap or Shutter to avoid Dust	
3	RJ45 I/O Compatibility	a) Individual Compatible RJ45 Jack	
		b) Pointed IDC Tower on RJ45 Jack for easy termination	
		c) Half Plugged Patch Cord should be spitted out if not properly plugged in	
4	<b>Mechanical Characteristics</b>		
	Plastic Housing	Thermoplastic UL94V-0 rated or equivalent	
	Operating Life	Minimum 750 insertion cycles	
	Contact Material	Copper Alloy	
	Contact Plating	50µ" Gold/100µ" Nickel	
	Contact Force	100g minimum	
Plug Retention Force	11 lbf minimum		
5	<b>IDC Connector</b>		
	Plastic Housing	Thermoplastic UL94V-0 rated or equivalent	
	Operating Life	Minimum 20 re-terminations	
	Contact Material	Copper Alloy	
	IDC Contact Plating	Tin/Lead Plate	
Wire Accommodation	22-24 AWG solid		
6	<b>Electrical Characteristics</b>		
	Interface Resistance	20 milliohms	

Sl. No	Description		Compliance Yes/No
	Initial Contact Resistance	2.5 milliohms	
	Insulation Resistance	>100 Megaohms	
7	Parts List	Generic Jack with Stuffer Cap	
<b>CAT 6, JACK/PATCH PANEL</b>			
<b>IV</b>	<b><u>24 or 48 loaded Patch Panel with RJ45 UTP Ports</u></b> <b><u>1U Height or 2U Height respectively;</u></b>		
	<b>Minimum Specifications</b>		
1	Features and benefits	Available in 1U 24 Port and 2U 48 Port density	
		Each port features the patented spring-loaded shutter – prevents incomplete mating – protects from dust and contaminants	
		Patented IDC V-shaped contacts that flex not fatigue when terminated	
		Features pointed IDC towers to speed termination and enhance cable retention	
		Dual colour-coding allows for 568 A/B wiring configuration	
		Front and rear port labelling (port sequence 1–480) as well as panel identification label	
		4 x 6 ganged jack configuration	
		Individually removable patch panel ports	
		Removable cable management shelf(s) ensure bend radius compliance	
		Available with either ANSI and metric hardware kit	
		Can be terminated using industry standard punch-down tools	
		RJ45 port which is RJ-11 compatible	
Molded category identification on each port face as well as optional port identification icons			
2	Rear Cable Manager	Flat type metal with Perforated Rear Cable Manager to hold CAT6 UTP Cable with velcro cable ties	
3	Dust Proof	RJ45 Jack should be supplied with Cap or Shutter to avoid Dust	
4	RJ45 I/O Compatibility	a) Individual compatible RJ45 Jack	
		b) Pointed IDC Tower on RJ45 Jack for easy termination	
		c) Half Plugged Patch Cord should be spitted out if not properly plugged in	
5	<b>Mechanical Characteristics</b>		
	Material:	CRS (cold rolled steel)	
	Thickness:	.060” (1.52mm)	
	Coating:	Grey / Option for Black	



Sl. No	Description		Compliance Yes/No
6	<b>Jack Connector</b>		
	Plastic Housing:	Thermoplastic UL94V-0 rated or equivalent	
	Operating Life:	Minimum 750 insertion cycles	
	Contact Material:	Phosphor Bronze	
	Contact Plating:	50µ" Gold/100µ" Nickel	
	Contact Force:	100g minimum	
	Plug Retention Force:	11 lbf minimum	
7	<b>IDC Connector</b>		
	Plastic Housing:	Thermoplastic UL94V-0 rated or equivalent	
	Operating Life:	Minimum 20 re-terminations	
	Contact Material:	Phosphor Bronze	
	IDC Contact Plating:	Solder Plate (60% tin/40% lead)	
	Wire Accommodation:	22-24 AWG solid	
8	<b>Electrical Characteristics</b>		
	Interface Resistance:	20 milliohms	
	Initial Contact Resistance:	2.5 milliohms	
	Insulation Resistance:	>100 Megaohms	
9	Standards	ETL Verified to ANSI/TIA-568-C.2, ISO/IEC 11801 Category 6	
<b>SINGLE PORT FACEPLATE WITH BACK BOX</b>			
V	<b>Faceplate Single Port (Work Area End) with Back Box</b>		
	<b>Minimum Specifications</b>		
1	Shall be Single Port (RJ45) square plate, dimension as per commercially available.		
2	Features and Benefits	The stylish unloaded Synergy Wallplates were designed specifically to accept the UTP standard Connector. The unloaded Synergy Wallplates are available in 1, 2 and 4 port variants, in five colours, to coordinate with any decor and any installation size.	
3	Equipment Accommodations	It accommodates UTP, STP standard jacks It accommodates standard single bezel Fibre modules It accommodates standard media configurable modules	
4	Material	VE10 ABS	
VI	<b>6 CORES – OPTICAL FIBER ARMORED MM – OM3 CABLE</b>		
	<b>Minimum Specifications</b>		
1	Cable Type	Optical fibres in water blocked loose tube, taped, corrugated steel tape armoured (STA) polyethylene (HDPE) outer sheathed embedded with two steel wires on the periphery. The cables are with UV Stabilized PE Jacket and protected from Rodent attacks. complying to ISO/IEC 11801, EN50173,	

Sl. No	Description		Compliance Yes/No
		ANSI/TIA 568-C.3, Telcordia GR-20; suitable for use in indoor / outdoor ducts, direct burial and backbone cabling	
2	Fiber Type	Multi-Mode, 50/125 micron primary coated buffers, OM3 (IEC 60793-2-50, B1.3 and ITU T G652.d). Shall be manufactured using Vapor Axial Deposition technology.	
4	<b>Construction type</b>		
	Number of elements	1	
	Tube:	Polybutylene, Terephthalate (PBT)	
	Tube colour:	White	
	Tube diameter	3.0/2.0 mm nominal OD/ID	
	No of fibres:	4/6/8/12	
	Fibre colour sequence	Blue, Orange, Green, Brown, Slate (Grey), White, Red, Black, Yellow, Violet, Pink, Aqua	
	Water Blocking	Thixotropic Gel (Tube) Petroleum Jelly (Interstices)	
	Core Wrapping	Polyethylene Terephthalate	
	Armouring:	Corrugated Steel Tape Armour (ECCS Tape) Thickness > 0.125mm	
	Peripheral Strength Member	Two Steel wires (0.9 mm dia)	
	Ripcord:	Polyester based yarns below armoured tape for easy ripping	
	Outer Sheath	UV Stabilised Polyethylene (HDPE)	
Sheath thickness	2.0 mm nominal		
Sheath colour	Black		
5	<b>Standards</b>		
	Complying to ISO/IEC 11801 2nd Edition, type OS1/OS2; AS/ACIF S008; AS/NZS 3080 ; TIA/EIA 568.C.3; IEC-60793-1, 60793-2 EN50173, ANSI/TIA 568-C.3, Telcordia GR-20; suitable for use in indoor / outdoor ducts, direct burial and backbone cabling		
6	<b>Mechanical characteristics</b>		
	Dimensions and Mass Overall Cable (Nominal):	9.0 MM	
	Mass (Nominal)	80 kg/km	
	Cable length	2 km ± 10%	
	Max. Bending Radius (during installation)	20 X Overall diameter	
	Max. Bending Radius (during full load):	10 X Overall diameter	
	Max. Tensile Strength-Short Term	1500N	
	Max. Crush Resistance-Short Term:	2000N/10 cm	
	Operating Temperature range	-40°C ± 70°C	
7	<b>Optical characteristics</b>		
	Mode Field Diameter @ 850nm	50 + 3.0 µm	
	Cladding Diameter	125 + 2.0 µm	
8	<b>Electrical/Optical Characteristics</b>		

Sl. No	Description		Compliance Yes/No
	Attenuation	Characteristics - Optical Performance Max. Attenuation (Cable with fibres) At 850 nm: 3.0 dB/km At 1330 nm: 1.0 dB/km	
9	<b>Minimum Bandwidth</b> At 850 nm: 2000MHz At 1300 nm: 500MHz		

<b>9U Rack</b>		
Sl. No.	Parameter	Specifications
1	Size	600W x 600D
2	Form factor	9U
3	Construction	Clear 'U' usable space, fan or extra cables should not occupy usable space
4	Basic Frame	CRCA
5	Assembly	Assembled / SKD
6	Top & Bottom Cover	Integrated to both sides and Frame. Cable entry cut outs.
7	Front Door	Lockable Toughened Glass Door
8	Rear side	Wall Mounting brackets
9	19" Mounting Angle	4 No Adjustable. 19" verticals with Punched 9.5mm Squarer Hole and Universal 12.7 mm-15.875 mm- 15.875 mm alternating hole pattern offers greater mounting flexibility, maximizes usable mounting space.
10	Std. Equipment Mounting	9.5mm Sq. Slots and Universal 12.7mm-15.875mm-15.875mm alternating hole pattern
11	Static Load	Upto 70Kgs
12	Standard Finish	Epoxy polyester Powder coated 60-80 micron thickness
13	Colour	Combination of RAL 7035 & 7037 OR RAL 9005
14	Accessories	Horizontal power distribution unit, Metal Cable manager, Hardware packet and Cantilever Shelf
15	Equipment cooling	1 or 2 Fan Mount provision on top cover
16	Rack Standards	IS 9606-1980, UL 2416, IEC EN 60529, IEC EN 62262, ISO 9001:2008, ISO14001: 2015
17	Degree of Protection	IP 20 according to IEC 60529:2013, IK08 according to IEC EN 62262:2002
18	Warranty	One year
19	PDU	Power Distribution Unit - 06 Amp Universal - 04 Socket - 16 Amp Switch with Indicator - 06 Amp Fuse - 06 Amp 3 Pin Plug with Power Cable 0.75 sq.mm 1.5 meter Length - Black Fine Tex.
20	Cable Manager	Metal Cable Manager - 01U - Plastic Cable Loop's Mountable - Black Fine Tex. - Assembly

**iii. Country of Origin Details**

Sl. No.	Item	Country of Origin
<b>Active</b>		
1	Access Switch with 48 Port 1000Base-T and 2 Port SFP	
2	Access Switch with 8 Port PoE 1000Base-T and 2 Port SFP	
3	Core license for Existing Core Switch	
<b>Passive</b>		
4	UTP - Enhanced CAT6 Reel (Minimum Length of Cable per Reel: 300m)	
5	CAT6 Patch Cord 1 Meter	
6	CAT6 Patch Cord 2 Meter	
7	CAT6 I/O Port	
8	Fully Loaded 24 Port Patch Panel	
9	Fully Loaded 48 Port Patch Panel	
10	Single Face Plate with Back Box	
11	Cable Labelling Tag ( Packets of minimum 100 Tags )	
12	6 Core Multi Mode Fiber Cable (per Meter)	
13	6" x 8" x 2" Enclosure for installing Wi-Fi AP on the wall/ceiling	
14	9U Wall Mount Rack with PDU and other necessary 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 - PRICE BID**  
**For Indigenous / Local Supplies (to be quoted only in INR)**

Sl. No.	Item	Required Quantity	Unit Price	Total Price
<b>Active</b>				
1	Access Switch with 48 Port 1000Base-T and 2 Port SFP	3		
2	Access Switch with 8 Port PoE 1000Base-T and 2 Port SFP	3		
3	Core license for Existing Core Switch	1		
<b>Passive</b>				
4	UTP - Enhanced CAT6 Reel (Minimum Length of Cable per Reel: 300m)	15		
5	CAT6 Patch Cord 1 Meter	150		
6	CAT6 Patch Cord 2 Meter	150		
7	CAT6 I/O Port	150		
8	Fully Loaded 24 Port Patch Panel	3		
9	Fully Loaded 48 Port Patch Panel	3		
10	Single Face Plate with Back Box	150		
11	Cable Labelling Tag ( Packets of minimum 100 Tags )	1		
12	6 Core Multi Mode Fiber Cable (per Meter)	500		
13	6" x 8" x 2" Enclosure for installing Wi-Fi AP on the wall/ceiling	15		
14	9U Wall Mount Rack with PDU and other necessary accessories	3		
15	Sub Total			
16	GST @ 5%			
17	<b>Grand Total</b>			

- \* Please refer clause 18 (Section-I), 14(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.