

TENDER (E - PROCUREMENT MODE)

FOR

**SUPPLY, INSTALLATION & COMMISSIONING OF ELECTRONIC PRIVATE AUTOMATIC
BRANCH EXCHANGE (EPABX) SYSTEM AT IIT MANDI**



Tender No.: IITMANDI/S&P/PUR-376/2019-20/13330-13331

Tender date: 14.01.2020

Last Date of submission: 04th February,2020

Store & Purchase Section

Indian Institute of Technology Mandi

2nd floor, A7 Building, South Campus,

Kamand – 175 005 District – Mandi, Himachal Pradesh (H.P)

Tel.: 01905-267039/267048

Email: addileep@iitmandi.ac.in & arsp@iitmandi.ac.in

Indian Institute of Technology Mandi, Kamand invites online Bids for supply, erection, installation, commissioning, testing, demonstration and training of **“Electronic Private Automatic Branch Exchange (EPABX)”** as per specifications given in the Annexure attached to the Tender form. All offers should be made in English and should be written in both figures and words. Tender forms can be downloaded from the CPP Portal (<http://eprocure.gov.in/eprocure/app>) & Institute website <http://iitmandi.ac.in/administration/tenderseoi.php>.

The bidders are requested to read the tender document carefully and ensure compliance with all specifications/instructions herein. Non-compliance with specifications/instructions in this document may disqualify the bidders from the tender exercise. The Director, IIT Mandi, Kamand reserves the right to select the item (in single or multiple units) or to reject any quotation wholly or partly without assigning any reason. Incomplete tenders, amendments and additions to tender after opening or late tenders are liable to be ignored and rejected.

Instruction to bidder:

1. There are various search options built in the CPP Portal, to facilitate bidders to search active tenders by several parameters. These parameters could include Tender ID, organization name, location, date, value, etc. There is also an option of advanced search for tenders, wherein the bidders may combine a number of search parameters such as organization name, form of contract, location, date, other keywords etc. to search for a tender publishing on the CPP Portal.
2. Bidder should take into account any corrigendum published on the tender document before submitting their bids.
3. Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid. Please note the number of covers in which the bid documents have to be submitted, the number of documents – including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.
4. The tenders will be received online through portal <http://eprocure.gov.in/eprocure/app>. In the Technical Bids, the bidders are required to upload all the documents in .pdf format. All quotation (**both Technical and Financial should be submitted in the E-procurement portal**).
5. Possession of a Valid Class II/III Digital Signature Certificate (DSC) in the form of smart card/e-token in the company's name is a prerequisite for registration and participating in the bid submission activities through <http://eprocure.gov.in/eprocure/app>. Digital Signature Certificates can be obtained from the authorized certifying agencies, details of which are available in the web site <https://eprocure.gov.in/eprocure/app> under the link “Information about DSC”.

Instruction for Preparation & Submission of bids:

1. Technical & Financial Bids should be submitted in PDF format.
2. **In case of Financial bids**, , a standard BOQ format has been provided in Excel format. Bidders are required to download the BoQ Excel file and fill their financial offer on the same BOQ format. After filling the same, submit it online in Excel format, without changing the financial template format. However, if bidder wants to modify in its financial offer, then bidder can modify.
3. Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document / schedule and generally, they can be in PDF formats. Bid documents may be scanned with 100 dpi with black and white option.

4. The bidder has to digitally sign and upload the required bid documents one by one as indicated in the tender document.
5. The uploaded tender documents become readable only after the tender opening by the authorized bid openers.
6. **Kindly add scanned PDF of all relevant documents in a single PDF file like, compliance sheet, OEM/Principle Certificate etc.**
7. Bidder should log into the site well in advance for bid submission so that he/she upload the bid in time i.e. on or before the bid submission time. Bidder will be responsible for any delay due to other issues.
8. Upon the successful and timely submission of bids, the portal will give a successful bid submission message & a bid summary will be displayed with the bid no. and the date & time of submission of the bid with all other relevant details.
9. The technical and financial bids should be submitted online through portal <http://eprocure.gov.in/eprocure/app> in original. The financial bid should include the cost of main equipment/item and its accessories. If there is any separate cost for installation etc. that should be quoted separately.
10. Each bidder should be marked with the following reference on the top bids submitted online: **“IITMANDI/S&P/PUR-376/2019-20/13330-13331/EPABX dated 14th January, 2020”**.
11. The printed literature and catalogue/brochure giving full technical details should be included with the technical bid to verify the specifications quoted in the tender. The bidders should submit copies of suitable documents in support of their reputation, credentials and past performance in .pdf format.
12. The rates should be quoted in figures (typed or printed) and cutting should be avoided. The final amount should be in figures as well as in words. If there are cuttings, they should be duly initialed, failing which the bids are liable to be rejected.
13. **Tender Cost:** The bidder should submit a demand draft of **Rs. 1,180/- (Tender Fee inclusive GST) in Words Rupees One Thousand One Hundred & Eighty only** towards non-refundable tender fee, drawn in favour of **“The Registrar, IIT Mandi”** payable at Mandi in a sealed envelope super-scribed as **“Tender fee & NIT No. “IITMANDI/S&P/PUR-376/2019-20/13330-13331/EPABX dated 14th January, 2020”** on or before last date & time of submission of bids. In the absence of tender cost, the tender will not be accepted. In the absence of tender fee, bids for evaluation shall not be accepted. NSIC/MSME exemption certificate shall be considered only against EMD (detail as mentioned in S.No.15).
14. **Earnest Money Deposit (EMD):**

Bidder should furnish an EMD of a refundable amount of **Rs. 80,000/-** in the shape of DD/FDR from a scheduled bank in India drawn in favour of **“The Registrar, IIT Mandi” payable at Mandi**. This EMD should be submitted in sealed envelope super-scribed as EMD & NIT No. **“IITMANDI/S&P/PUR-376/2019-20/13330-13331/EPABX dated 14th January, 2020”**. The bidders should enclose a pre-receipted bill for the EMD to enable us to return the EMD of unsuccessful bidders. **Failure to deposit Earnest Money will lead to rejection of tender**. In the event of the awardee bidder backing out, EMD of that bidder will be forfeited.

- **Note: Both (tender fee & EMD) envelops should be placed in another sealed envelope and address to:**

**“Assistant Registrar, Stores and Purchase”
Indian Institute of Technology Mandi (IIT Mandi),
S & P Section, 2nd Floor, A7 Building, South Campus,**

Kamand – 175 005, District – Mandi (H.P), India”

This envelop having tender fee & EMD should reach on or before last date & time of submission of bid.

15. EMD Exemption:

The Institute may accept bids without EMD from those bidders who are registered with the Central Purchase Organization, National Small Industries Corporation (NSIC) or the concern Ministry or Department **as Manufacturer**. To claim the exemption, the bidder must be offering goods manufactured by themselves. Exemption will not be granted in case the bidder is acting as an agent for some other vendor.

General Terms & Condition:

1. While sending rates, the firm shall give an undertaking to the effect that **“the terms/conditions mentioned in the enquiry letter/Tender Notice against which the rates are being given are acceptable to the firm.” in .pdf format**. In case the firms do not give this undertaking, their rates will not be considered.
2. If the supplier/firm is original equipment manufacturer (OEM)/authorized dealer/sole distributor of any item, the certificate to this effect should submit in .pdf format.
3. The quantity shown against the item is approximate and may vary as per demand of the Institute at the time of placing order.
4. Any bids received after **03:00 P.M. on 04th February, 2020** shall not be considered
5. The Technical Bids will be opened on **05th February, 2020 at 03:00 P.M.** The date & time for opening of Financial Bids will be informed later on to the technically qualified bidders.
6. The tenders will be received online through portal <http://eprocure.gov.in/eprocure/app>. All tender documents received after the specified date and time shall not be considered.

For any correspondence regarding tenders is on below address:

**“Assistant Registrar, Stores and Purchase”
Indian Institute of Technology Mandi (IIT Mandi),
S & P Section, 2nd Floor, A7 Building, South Campus,
Kamand – 175 005, Distt. – Mandi (H.P), India”**

7. **Arbitration Clause:** In the event of any dispute or difference(s) between the vendee Institute (IIT Mandi) and the vendor(s) arising out of non-supply of material or supplies not found according to specifications or any other cause whatsoever relating to the supply or purchase order before or after the supply has been executed, shall be referred to “The Director, IIT Mandi”, Kamand who may decide the matter himself or may appoint arbitrator(s) under the arbitration and conciliation Act,1996. The decision of the arbitrator shall be final and binding on both the parties.
 - a) In case of a dispute between the purchaser and a foreign supplier, the dispute shall be settled by arbitration in accordance with provision of sub-clause above. But if this is not acceptable to the supplier then dispute shall be settled in accordance with provisions of UNCITRAL (United Nations Commission on International Trade Law) Arbitration Rules.
 - b) The venue of the arbitration shall be the place from where the order is issued.

- c) The place of arbitration and the language to be used in arbitral proceedings shall be decided by the arbitrator.
- d) All disputes shall be subject to Mandi Jurisdiction only.
8. All tenders in which any of the prescribed conditions is not fulfilled or any condition is put forth by the tenderer shall be summarily rejected.
9. The bidders or their authorized representatives may also be present during the opening of the Technical Bid, if they desire so, at their own expenses.

Note: Price bids of only those bidders will be opened whose technical bids are found suitable by the committee appointed for the purpose. Date and time of opening of price bids will be decided after technical bids have been evaluated by the committee. Information in this regard will be intimated only to the technically qualified bidders. In exceptional situation, an authorized committee may negotiate price with the qualified bidder quoting the lowest price before awarding the contract.

10. **Clarifications:**

In case the bidders requires any clarification regarding the tender document, they are requested to submit their queries on the e-mail i.e. adileep@iitmandi.ac.in, arsp@iitmandi.ac.in on or **before 27.01.2020**.

11. **Assistance To Bidders:** Any queries relating to the tender document and the terms & conditions contained therein should be addressed to tender Inviting Authority for a tender or relevant contact person indicated in the tender.

12. **Pre – Qualification Criteria:**

- Bidders should be the manufacturer / authorized dealer. Letter of Authorization from original equipment manufacturer (OEM) on the same and specific to this tender should be enclosed.
- An undertaking from the OEM is required stating that they would facilitate the bidder on a regular basis with technology/product updates and extend support for the warranty as well.
- OEM should be internationally reputed Branded Company.
- Non-compliance of tender terms, non-submission of required documents, lack of clarity of the specifications, contradiction between bidder specification and supporting documents etc. may lead to rejection of the bid.
- The Vendors who have earlier supplied the equipment to any of the IITs, IISc, IISERs and other Scientific Institute of National Repute may only tender. The details of such institutions and the cost with name of equipment may also be supplied with the bids.
- **In the tender, either the Indian agent on behalf of the Principal/OEM or Principal/OEM itself can bid but both cannot bid simultaneously for the same item/product in the same tender.**
- **If an agent submits bid on behalf of the Principal/OEM, the same agent shall not submit a bid on behalf another Principal/OEM in the same tender for the same item/product.**

- **Furnishing of wrong/ambiguous information in the compliance statement may lead to rejection of bid and further black listing of the bidder, if prima-facie it appears that the information in the compliance statement was given with a malafide/fraudulent intent.**

13. **Prices:**

- The Prices quoted should be inclusive of all taxes or duties, packing, forwarding, freight, insurance, delivery and commissioning etc. at destination site (IIT Mandi, Mandi/Kamand). IIT Mandi is registered with DSIR, Govt. of India and is exempted from Custom / Excise Duty. Exemption Certificate to this effect will be issued by IIT Mandi. **Hence, Customs/Excise Duty exempted price should be quoted.** The rates shall be firm and final. Nothing extra shall be paid on any account.
- **In case of imports/foreign supplier, the price should be quoted on ex-work price/FOB/FCA basis only. Under special circumstance (e.g. perishable chemicals), when the item is imported on CIP/CIF, please indicate CIF/CIP charges separately upto Delhi indicating the mode of shipment. IIT Mandi will make necessary arrangements for the clearance of imported goods at the Airport/Seaport.**
- In case of imported equipment(s)/item(s), the agency commission, if any, payable in Indian rupees should be mentioned separately. **IAC shall be paid after satisfactory installation & commissioning of the goods at the destination.** For imported equipment, the Letter of Credit will be opened for the amount excluding agency commission in Indian Rupees. The firm should clearly mention the address of foreign bank in the financial bid.
- **In case of indigenous item, the vendor should clearly mention the final FOR IIT Mandi, Kamand Campus Price, as applicable in their bid.**

14. **Validity:**

The bid should be valid for acceptance up to a period of 180 Days. The Bidders should be ready to extend the validity, if required without any additional financial implications.

15. **Delivery:**

The Equipment should be delivered and installed within the period as specified in the purchase order and be ready for use within **4-6 weeks** of the issue of purchase order unless otherwise prescribed. If the bidder fails to deliver and place any or all the Equipment's or perform the service by the specified date, penalty at the rate of 1% per week of the total order value subject to the maximum of 10% of total order value will be deducted.

16. **Installation, Training & Demonstration:**

Bidders need to provide adequate training (2-3 days) to the nominated persons of IIT Mandi at their cost. IIT Mandi will not bear any training expenditure. The supplier is required to do the installation and demonstration of the equipment within **one month** of arrival of materials at the IIT Mandi site of installation, otherwise the penalty clause will be the same as per the supply of material.

In case of any mishappening/damage to equipment and suppliers during the carriage of suppliers from the origin of equipment to the installation site, the supplier has to replace to it with new equipment/supplies immediately at his own risk. Supplier will settle his claim with the

insurance company as per his convenience. IIT Mandi will not be liable to any type of losses in any form.

17. **Insurance:** For delivery of goods at the purchaser's premises, the Insurance shall be obtained by the supplier on **"All Risk"** basis. The insurance shall be valid for a period of not less than 3 months after installation and commissioning. **In case of order placed on FOB/FCA basis, the purchaser shall arrange insurance. If order placed on CIF/CIP basis, the insurance should be up to New Delhi.**

18. **Warranty Declaration:**

Bidders must give the comprehensive on-site warranty as required from the date of successful installation of Equipment against any manufacturing defects and also give the warranty declaration that *"everything to be supplied by us hereunder shall be free from all defects and faults in material, workmanship and shall be of the highest quality and material of the type ordered, shall be in full conformity with the specification and shall be complete enough to carry out the experiments, as specified in the tender document.*

Any deviation in the material, and the specifications from the accepted terms may liable to be rejected and the bidders need to supply all the goods in the specified form to the satisfaction/specifications specified in the order / contract and demonstrate at their own cost.

- The Purchaser Shall Promptly notify the Supplier in writing of any claims arising under this warranty. Upon receipt of such notice, the Supplier shall immediately within **Two weeks** arrange to repair or replace the defective goods or parts thereof free of cost at the ultimate destination. The Supplier shall take over the replaced parts/goods at the time of their replacement. No claim whatsoever shall lie to the Purchaser for the replacement parts/goods thereafter. The period for correction of defects in the warranty period is **Two week**. If the supplier having been notified fails to remedy the defects within **Two week**, the purchaser may proceed to take such remedial action as may be necessary, at the supplier's risk and expenses without prejudice to any other rights, which the purchase may have against supplier under the contract.
 - The warranty period should be clearly mentioned. The maintenance charges (AMC) under different schemes after the expiry of the warranty should also be mentioned. The comprehensive warranty will commence from the date of the satisfactory installation/commissioning of the equipment against the defect of any manufacturing, workmanship and poor quality of the components.
 - After the warranty period is over, Annual Maintenance Contract (AMC)/Comprehensive Maintenance Contract (CMC) should be started. The AMC/CMC Charges will not be included in computing the total cost of the equipment.
19. **Performance Bank Guarantee:** A performance bank guarantee from a scheduled bank in India for an amount equal to 10% of the price for duration of two months beyond the expiry of warranty period will be taken from the supplier or Indian agent.
20. **Terms of Payment:** Payment will generally be made only after delivery and satisfactory installation, testing, commissioning etc. **This must be specified in the tender/quotation.**
- In case of imported supplies, payment (excluding Indian agency commission, if any) will be made through irrecoverable Letter of Credit in two installments. 80 % of the money will be released on submission of shipping of documents. Remaining 20 % will be released after successful installation of the instrument and submission of a performance bank guarantee for

10% of the order value from a nationalized bank, valid for 2 months beyond the expiry of the warranty. All the bank charges within India will be borne by the Institute and outside India will be borne by the Supplier.

- In case of required item quoted in INR, 80% payment will be made through E-payment after receipt of material in good condition and Remaining 20% will be released on successful installation of the instrument and on submission of a performance bank guarantee for 10% of the order value from a nationalized bank, valid for 2 months beyond the expiry of the warranty.
21. **Tender expenses and documents:** All costs incurred by the bidder in the preparation of the tender shall be at the entire expense of the bidder.
22. **Tender Evaluation Criteria:** The technical bids will be opened and evaluated by a duly constituted committee. After evaluation of the technical bid, the financial bid for only those offers which have qualified in the evaluation of technical bid will be opened.
23. **Return of EMD:**
- The earnest money of unsuccessful bidders will be returned to them without any interest within 15 working days after awarding the contract.
 - The earnest money of the successful bidder will be returned to them without any interest within 15 Days after supply of material.
24. **Manual and documentation:** All the manuals necessary for operating and servicing the equipment (including details of electronic circuits) will have to be provided along with the instrument.
25. The IIT Mandi reserves the right to cancel the tender at any stage (point of time) without assigning any reason.
26. Bidders should go through the tender terms, conditions and specifications carefully and fill in the attached compliance statement accurately and unambiguously. They should ensure that all the required documents are furnished along with the bid.

Sd/-
Assistant Registrar
Stores & Purchase

BID PARTICULARS

1. Name of the Supplier :

2. Address of the Supplier :

3. Availability of demonstration of equipment : Yes / No

4. Tender cost enclosed: : Yes/No if yes

D.D. No. _____ Bank _____ Amount _____

5. EMD enclosed : Yes / No if Yes

D.D. No. _____ Bank _____

6. Name and address of the Officer/contact person to whom all references shall be made regarding this tender enquiry.

Name :

Address :

Telephone No. :

Fax No. :

Mobile No. :

e-Mail :

Web :

< Organization Letter Head >>

DECLARATION SHEET

We, _____ hereby certify that all the information and data furnished by our organization with regard to this tender specification are true and complete to the best of our knowledge. I have gone through the specification, conditions and stipulations in details and agree to comply with the requirements and intent of specification. This is certified that our organization has been authorized (Copy attached) by the OEM to participate in Tender. We further certified that our organization meets all the conditions of eligibility criteria laid down in this tender document. Moreover, OEM has agreed to support on regular basis with technology / product updates and extend support for the warranty.

We, further specifically certify that our organization has not been Black Listed/De Listed or put to any Holiday by any Institutional Agency/ Govt. Department/ Public Sector Undertaking in the last three years.	NAME & ADDRESS OF THE Vendor/ Manufacturer / Agent
1 Phone	
2 Fax	
3 E - mail	
4 Contact Person Name	
5 Mobile Number	
6 TIN Number	
7 PAN Number	
8 GST Number	
9 Kindly provide bank details of the bidder in the following format: a) Name of the Bank	
b) Account Number	
c) Kindly attach scanned copy of one Cheque book page to enable us to return the EMD to unsuccessful bidder	

Annexure-I

Ref:-ENQUIRYNO:-“IITMANDI/S&P/PUR-376/2019-20/13330-13331/EPABX dated 14th January, 2020”

ANNEXURE-1

Technical Specifications for Supply, Installation and Commissioning of Electronic Private Automatic Branch Exchange (EPABX) at IITMandi H.P.

Sl. No.	Specification	Compliance (Yes/ No)	Remarks
System Architecture :-			
1.	The System should be fully IP system supporting IP connectivity with other survivable remote unit located in the same premises or geographically spread location on LAN/WAN through distributed IP solutions across data networks. The backplane switching will be 100% IP and not TDM. System should support traditional TDM or mixed IP-TDM configurations. It should also support the following devices:- <ul style="list-style-type: none"> • IP Phones • Mobile IP Phones • Multimedia PCs • SIP phones • Soft phones H.323 & SIP audio and video terminal devices should be support from the day one		
2.	Legacy TDM communication devices (Digital and/or Analog 2 Wire telephone instruments with or without caller-id (Both FSK and DTMF), Fax, modems etc.)		
3.	IP PBX software up gradation patches should be provided free of cost for lifetime of the exchange initially as part of warranty and then as part of AMC.		
4.	The IP PBX system with capability for 2000 subscriber lines with a provision of expandability minimum up to 4000 subscriber's lines.		
5.	IP PBX must be SIP/H.323 enabled from day one.		
6.	The voice and signalling frames should assign priority and it should seamlessly propagate across all layer 2, layer 3 elements on the network.		
7.	The communication architecture should work as a CLUSTER of distributed telephony units. Each cluster unit should support minimum 256 ports.		
8.	Each telephony units installed at main & remote locations should communicate with each other on IP.		
9.	In Cluster architecture, the system backup of all the CPUs in the Cluster should be maintained on the other CPU of the Cluster.		
10.	When any Telephony Unit is added to the cluster and a parameter change is made, this change should be sent to all Telephony Units, all Telephony Units should use current parameters. When a CPU of Telephony Units fails and a new CPU is installed, the parameters of the defective CPU should automatically be loaded into the new CPU so replaced.		
11.	The communication system should work as a single Exchange with full feature transparency both in the Main location and geographically distributed locations without losing any features and without the need of a central processor or server		
12.	Main Location and geographically distributed locations should be interconnected via IP network (LAN/WAN) without any need of VPN.		
13.	AES 256 encryption should be used for securing communication between		

	Main Location and geographically distributed locations. All such encryption should be built into the device and no external device should be used for facilitating such encryption.		
14.	The system Database of configuration and programming should be saved/mirrored in each CPU of distributed telephony units across network (LAN/WAN).		
15.	The cluster common database should be backed up separately in each telephony unit. Automatic license sharing between units, automatic software update, automatic synchronization and intelligent information sharing ensure that communication is uninterrupted, maintaining communication flawlessly without the need for any central backup or central units		
16.	Each telephony units of the cluster should have power supply redundancy		
17.	The Telephony units should be equipped with hot-swappable redundant power supplies. In case of a malfunction in any of the Telephony Units power supplies, the defective power supply can be changed while the units are in running state.		
18.	The system should be easily managed from anywhere and from any device with the ability to program via Web interface.		
19.	System should support API for integration with 3rd party Applications		
20.	The Power Supply Unit in each Telephony unit should have inbuilt Battery Charger.		
21.	Telephony units should be 19 inch Rack Mountable.		
22.	Each Telephony units should work as an individual System and capable of terminating PSTN, PRI, BRI, FXS, FXO, Digital, SIP, H.323 and E&M ports as per the requirement. All these interfaces should be available as plug-in cards and no external gateway is permitted to be used for these interface functionality.		
23.	The system should support for voice encoding using following standards:- (i)G.711, G.729, G.723, G729A (ii)SIP Signalling protocol –UDP,TCP,TLS (iii)Call Switching: Internal calls: Based on the G.711 uncompressed PCM standard. WAN based calls can be based on higher compression algorithm not less than 8 kbps per channel.		
24.	The system should have non-blocking architecture at all levels like (i) System processing, Switching fabric, power supplies. (ii) Other resources like DTMF receivers, R2 Receivers. (iii) Following Conference facility should be provided as part of solution (aa) 30 party voice conference. (ab) Subscriber initiated six party conference calls.		
25.	<u>VoIP Support.</u> System should support VoIP solutions as an integral part of the system.		
26.	The proposed system should Support Automatic Route Selection (ARS) and Least Cost Routing (LCR) features to route the calls based on priorities related to user profile and network availability, along the most cost-effective path. This service should be transparent for users and irrespective of the physical carrier connection.		
System features:-			
27.	The system should be capable of terminating multiple PRI Lines and SIP Trunk.		
28.	System should be expandable by using additional racks/cabinets and cards.		

29.	Self-contained dual-channel power supply unit.		
30.	System Slots should be Universal in nature and capable of taking any interface card in any slot barring the slot reserved for CPU and PSU.		
31.	System should support Analog Trunks, E1/PRI, SIP Trunk E&M as plugin cards. No external gateway is permitted		
32.	The system should be equipped to provide an interactive voice response system (IVRS) without any additional hardware.		
33.	Unlimited access channel between main and remote locations		
34.	Each user should have their own portal to activate/de-activate the services on their extensions		
35.	Should have inbuilt capability of Voice Recording (Instant and Auto), of Analog, Digital and SIP Users		
36.	System should have provision of Automatic License sharing across all Telephony units in the cluster		
37.	System should have Automatic synchronization of data, where complete programming configuration should be replicated across all distributed units		
38.	System should support Automatic backup of programming data		
39.	System should support E1/PRI Trunk with following protocols: (i) ISDN (Euro ISDN, DSS1), ETSI EN 300 403, ISDN Supplementary services: 3PTY, AOC, CCBS, CCNR, CFU, CFNR, CLIP, CLIR, COLP, COLR, ECT, DDI, HOLD, MCID, MSN, UUS (ii) ISDN (QSIG), ECMA-143 PISN (iii) V5.2 LE protocol, ETSI EN 300 347, V5.2 Access Network AN protocol, ETSI EN 300 347 (iv) SS7 ISUP (CCS no. 7), ETSI EN 300 356, ITU-T		
System Security:-			
40.	The System must support Syslog services for both internal and external command and configuration control accounting with a minimum of 120 day history.		
41.	The password and access control must include at least:- (i):-Management console access to be provided by dual role based authentication (one of user rep and one of administrator rep). (ii):- Management console access must allow only access to level of viewing of running configuration and status of current configurations and sys logs.		
42.	The system should support on static IP addressing.		
System Network Support:-			
43.	Should support Q SIG standards over IP/ TDM/ WAN trunks.		
44.	(i) Homogeneous, Heterogeneous, open numbering plan.		
45.	(ii) Calling/Connected Line Identification Presentation and Restriction.		
46.	(iii) Calling/Connected Name Identification Presentation and Restriction.		
47.	(iv) Call Forwarding Unconditional, Busy, No Reply, Call Transfer.		
48.	(v) Call Completion to Busy Subscriber, on No Reply, call Offer.		
49.	The system should have options to network over any of MPLS, ATM, IP, ISDN, Frame Relay technologies.		
50.	The system must support the following external telephony interface signalling:-		
51.	(i) E1 CCS PRI		
52.	(ii) E1 CAS		
53.	(iv) E&M.		
54.	(v) Analog Loop Start and Ground Start.		
System Management and monitoring:-			

55.	The System should have GUI support web based management console.		
56.	System should provide management tool to monitor system performance, device status, device discovery and CTI applications.		
57.	Should provide alert notifications for troubleshooting performance.		
58.	Generate various alerts online on management console in different colours when values go over / below preconfigured threshold levels.		
59.	Should monitor the system in real-time on a set of preconfigured parameters.		
60.	The management platform must provide different levels for accessing the system based on the role being played by the user who is accessing the system. The administrator should have the highest authority.		
61.	The management platform should support the following tasks :- <u>Configuration and Programming</u> :- Services, users, categories and all system parameters and features. Provide centralized management in local or remote environments of a single system or a network. The network manager will be able to quickly and easily edit, create or delete any subscriber profile/network object by the use of import/export functions and multiple operations.		
Survivable Media Gateway Unit (SMGU):-			
62.	Media Gateways must support and be configured for survival mechanisms that allows them to maintain telephony services for their users.		
63.	In case of the failure of connectivity with main system the SMGU shall work independently without rebooting till the connectivity is restored with the main system.		
64.	The SMGU should be able to automatically provide telephony services as mentioned above without human intervention.		
65.	Should provide full telephony features.		
66.	It should be capable of providing telephony services from and to all other exchanges to which it is connected on an E1/ PRI link and this must occur without need for a manual intervention.		
Physical (Common for MGU and SMGU):-			
67.	Should have universal slots in cabinet/ chassis.		
68.	System shall have backup power supply through redundant Power supply.		
69.	<u>Environmental Conditions</u>		
70.	The equipment offered shall be capable of maintaining its guaranteed performance when operating continuously for 24 hours a day and 365 days a year under the following environmental conditions :-		
71.	(i) Operational temperature : 0 to 40 Degree C.		
72.	(ii) Storage -20 degree C to +70 degree C		
73.	(iii) Humidity 20% to 80% without condensation		
74.	Should have universal slots in cabinet/ chassis.		
User features :-			
	User should be able to log in from any IP Phone using username and password and all the privilege should extend to that physical IP phone		
	Mobility features providing Simultaneous ringing on both Desk phone and GSM Mobile phone. This feature should allow for seamless transfer of a live call from Mobile phone to desk phone and vice-a-versa.		
	Should support at least 8 party Ad-hoc conferencing on IP phones.		
	Message-waiting indicator (MWI)		
75.	Abbreviated Dial		
76.	Call park and pickup		
77.	Call status per line (state, duration, number)		
78.	Calling Line Identification (CLID)		
79.	Calling party name identification		

80.	Direct inward dial (DID)		
81.	Direct outward dial (DOD)		
82.	Directory dial from phone—corporate, personal		
83.	Directories—missed, placed, received calls list stored on IP phones		
84.	Distinctive ring (on net vs. off net)		
85.	Shared Line support		
86.	Multiple line appearances per phone		
87.	Station volume controls (audio, ringer)		
88.	Transfer		
89.	Video (SIP and H.323)		
90.	Boss secretary feature support		
91.	On hook dialing Call waiting		
92.	Call Conference		
Analog Subscriber Card:-			
93.	Should support 16/24/32 or more ports.		
94.	Each port should support CLIP features (FSK or DTMF).		
95.	Loop Resistance > 2800 ohms or better.		
Digital Subscriber card:-			
96.	Should support 8/16 or more ports. User to define No. Of ports required. Vendor has the flexibility to provide N x port cards to meet this user requirement.		
97.	Each port should support CLIP features (FSK or DTMF).		
98.	Distance from the System: 1 km or more		
99.	Provide digital ports for connecting digital telephones, attendant consoles etc.		
IP Subscribers:-			
100.	Should not require specific hardware for extension of IP subscribers.		
101.	Should support latest SIP RFCs equivalent or higher.		
102.	Should extend QSIG transparency along with CLIP features.		
Trunk Cards:-			
103.	CO Trunks:- Should allow line impedance to be modified to identify the caller and to detect the metering pulses. Should support both DTMF and FSK individually per card.		
104.	E1 Trunks:-) Should be able to take on E1-CCS: ISDN, Q-SIG, CAS & DPNSS streams.		
105.	E & M Cards:- Should universally support 2/4 wire E&M circuits on the same physical card.		
Operator Console:-			
106.	<u>General.</u> (i) The system should support both PC based and hardware based consoles working in tandem. (ii) Fully functional PC based Operator console that should enable the PC and phone to work together. (iii) Should have Caller ID information while making basic features such as number keying, holding, parking, voice recording etc. Via main menu (iv) PC Based Operator Console should have memory menu, which should allow user to create unlimited contacts. Direct search should be possible by clicking on this menu. You can easily transfer using the transfer Key. (v) Detailed history log should be available for each number. (vi) Busy display panel should be available to show the busy status of extensions defined. 400 DSS keys		
107.	<u>Telephone Application Keys :-</u> (i) Audio keys and speaker allow activation/deactivation of the speaker or the hands free mode, as well as volume control		

108.	The operator console(if PC based) must not require a Computer telephony interface link of any sort for the provision of voice path and must be a truly IP system in which no telephone (IP/Analog/Digital) are used in conjunction with the operator console PC.		
109.	The operator console must provide monitoring capability of availability and status of busy, free subscribers and trunks with visual indication on the home screen/ display panel. This should be in form of soft/ hard keys with colour indication for checking status of a specified subscriber or trunk.		
Voice Mail Features:-			
110.	<u>General</u> :- The system must be equipped with voice mail, offering the best interactivity with user. The voice mail must work as a centralized resource in case remotes are connected to the main exchange.		
111.	<u>Service Support</u> :- (i) Must support Voice messaging features allowing the owner of a mailbox to send messages to other mailbox users, whether they are part of the same system or remote users.		
112.	(ii) <u>Should support Automated attendant</u> (automatic switchboard) features allowing the voice mail system to act like an attendant: answer incoming calls, transfer them to a requested or predefined number or mailbox, using addressing by name or by number.		
113.	(iii) <u>Shall support e-Messaging service</u> , allowing mailbox owners to access their voice mail from a remote PC (e-mail client) via the IP network.		
114.	<u>Voice Messaging System</u> .		
115.	(i) Call answering or call/record answering function with time stamp.		
116.	(ii) Customization of an announcement.		
117.	(iii) Call forwarding to the voice mail.		
118.	(iv) System should support on line live conversation recording.		
119.	(v) Message notification.		
120.	(vi) It should be feasible to vary the size of mailbox.		
Distribution Frames (MDF and IDF):-			
121.	IDF with IPMs and all accessories and connect/disconnect modules with proper earthing with minimum 35 sq mm cable on shortest possible route to the earth bar.		
122.	The MDF/IDF shall be of Krone only, complete with all its accessories for interconnecting and jumpering the various terminations to and from EPABX.		
123.	The IDF should have lock and key mechanism.		
124.	The termination strips shall be disconnection type provided with isolation facility. Suitable protection shall be provided against induced voltages and currents due to lightning, high voltages line etc.		
125.	The MDF/IDF shall mainly consist of the self-supporting frame work to mount the connector box on the wall with sufficient no of jumper guides and rings.		
126.	The MDF/IDF shall have Krone connector block of sufficient pairs for EPABX.		
General term and conditions:-			
127.	All equipments/materials shall be covered under an on-site comprehensive warranty of three years from the date of the final acceptance of the system. The warranty shall include free replacement of the faulty parts.		
128.	Installation, commissioning, testing and acceptance of the IP PBX at IIT MANDI. This includes transport, material handling, man power, integration of the system with the existing systems, connection to the field cabling through MDF, installation and configuration of the system, software, stations, customization, etc.		
129.	Vendor shall deploy a qualified service engineer at IIT MANDI for six months after successful handover of the site and send qualified		

	engineer for fault rectification during the warranty period as per scope of work and services.		
130.	During the warranty period, the supplier shall maintain an uptime of 99% or more. In case of lesser availability, the warranty will be extended by one month for each 1% of shortfall in availability of the complete system.		
131.	Training :- The vendor shall organize the following training programs without additional charges. Training shall be provided to minimum two people for system configuration/programming and System Management software e t c . at IIT MANDI site. Similarly, on the job training shall also be provided during installation and commissioning of the system at the site.		
132.	The firm should have executed at least one orders of similar nature (Supply, Installation, Configuration, Commissioning and maintenance of IP PBX System with capacity of 1500 ports or more at any IIT's ,NIT's, IIIT's, IISER's, and Central / State Govt. Departments. Copy of purchase order and Proof of satisfactory completion services from the clients should be attached		
133.	Vendor should have well established service / support centre with trained / certified manpower in providing warranty support / post warranty maintenance support service. Vendor to mention full address of technical support centre with contact details of responsive engineers.		
134.	The Firm should be having ISO 9001:2015, ISO 14001:2015 & ISO 27001:2013 . Copy of the same should be attached with the technical bid. In case, the same is not provided then the bid shall be rejected.		
135.	The Firm should be having a valid TEC Certificate duly issued by TEC, Department of Telecom, Min. of Communication & IT, Govt. of India . Copy of the same should be attached with the technical bid. In case, the same is not provided then the bid shall be rejected.		
136.	Vendor shall submit the mechanism of the service support in the form of the flow diagram starting from the lodging of the complaint to the fault rectification along with the organization and skilled manpower strength of their service centre from where the engineer must reach on site, IIT Mandi at Kamand, within 12 hours.		
137.	If required, the bidder/s may be asked to demonstrate IP PBX setup along with sample equipment before BOO to verify the technical specification of the system. In case of failure the bidder will be declared disqualified.		
138.	Vendor shall submit authorization letter / certificate from competent authority of the original equipment manufacturer (OEM) for supply, installation, testing, commissioning and maintenance supports for the offered system in India against this tender.		
139.	At the time of installation and commissioning , in case if it is found that some additional hardware accessories/software items with licenses are required to complete the proposed configuration, then the vendor is required to supply such items to ensure the completeness of the configuration at no cost to IIT Mandi.		
140.	If desired, the vendor may visit the proposed location for the system at IIT MANDI site (with prior appointment) to understand the room layout, fibre cable route and scope of the supply, works and services.		

Annexure-B

Telephone Instrument basic specification:-

Analog Telephones technical specification			
	DTMF/FSK CLI Compatible		
	16-digit LCD display with Blue backlight		
	37 Incoming calls memory (Dynamic memory)		
	37 VIP calls memory (Dynamic memory)		
	15 Outgoing call memory (Dynamic memory)		
	10-One touch memories		
	Programmable flash time		
	Tone /Pulse dialing mode compatible		
	Music on Hold		
	16 Ring melodies		
	4 – Level ringing volume control		
	2 - Way Speaker function with adjustable volume		
	Do Not Disturb function		
	DTMF/FSK compatible with auto –detection.		
	3 – Alarm clock setting)		
	5-levels of		
	LCD contrast adjustable		
	Anti-steal dialing function		
	Mechanical key Lock function		
Digital Telephones Specification			
	The Digital Phone should be from the same OEM :-		
	Minimum Screen Size: 6 inch LCD Touch Screen		
	800*480 screen resolution		
	Onscreen soft QWERTY Keyboard		
	Soft DSS Keys – 30 Keys		
	HD Voice Quality		
	Full Duplex enhanced speaker		
	3.5mm Headset Input		
	4 Call Parking Keys		
	Busy Display Panel Mode		
	Tilt able screen		
	Embedded Help System		
	Various Telephone features like Call Back, Intrusion, Conference, Mute, redial, CLID		
SIP/IP Phones Specification :-			
	Call forward, Call transfer, Call waiting, Call timer as a phone feature.		
	Callers list, Missed Call Notification		
	One-touch call transfer, conference or call park		
	Busy Lamp Field (BLF) support & Shared call and bridged line appearances (SCA, BLA) support		
	Boss and Secretary feature		
	Voicemail key with LED		
	Modular Headset Connector		
	Codecs: G.711 μ -law / A-law, G.729		

	User and administrator level passwords for login		
	Encryption of configuration files		
	HTTPS configuration download and web management		
	SIP Digest Authentication		
	Transport layer Security (TLS)		
	Secure Real-Time Transport Protocol (SRTP) support		
	Dual 10/100/1000 Mbps switched Ethernet ports (LAN and PC ports)		
	Manual or Dynamic Host Configuration Protocol (DHCP) IP address setup		
	Time and date synchronization using SNTP		
	Quality of Service (QOS) support – IEEE 802.1 p/Q VLAN and priority tagging, Type of Services (TOS), and Differentiated		
	Integrated HTTP/HTTPS server for web administration and maintenance including a built-in troubleshooting section		
	Redundant server support e.g. Local backup registrar and/or proxy server		
	RTCP support (RFC1889)		
	Integrated IEEE 802.3af Power Over Ethernet (PoE) support.		

ESSENTIAL DETAILS OF ITEMS/SERVICES REQUIRED

Sl. No	Description	Quantity	Unit Price	Total Price	Remarks
1.	2500 Line IP PABX comprising of the following:- Analog subscribers-2000 Digital Subscriber-45 IP Subscriber Licence-200 Analog Trunk- 32 E1/PRI Ports -06	01 No.			Item requires as per specification mentioned in Annexure -A
2	MDF & IDF with IPMs 2200 Ports and accessories	2200 No's			Item requires as per specification mentioned in Annexure -A
3.	Analog phone	50 No's			Item requires as per specification mentioned in Annexure -B
4.	Digital Telephone	08 No's			Item requires as per specification mentioned in Annexure -B
5.	SIP/IP Phones	30 No's			Item requires as per specification mentioned in Annexure -B
6.	Installation, commissioning and testing of all devices/ component as per the direction of Network and Communication I/c, IIT Mandi H.P.-175005	-	-	-	-

**COMPLIANCE STATEMENT FOR THE TENDER SPECIFICATIONS
INDIAN INSTITUTE OF TECHNOLOGY MANDI HIMACHAL PRADESH-175001**

Ref:- ENQUIRYNO:- "IITMANDI/S&P/PUR-376/2019-20/13330-13331/EPABX dated 14th January, 2020"

Sr. No.	Check list of documents/ Undertakings?	YES/NO	Remarks (Give explanation if answer is No)
1	Is Tender fees attached?		
2	Is EMD attached? (if applicable)		
3	Is the bidder original equipment manufacturer (OEM)/authorised dealer?		
4	If authorised dealer, recent dated Certificate to this effect from OEM, attached or not?		
5	Undertaking from OEM regarding technical support & extended warranty period		
6	Validity of 180 days or not?		
7	Undertaking from bidder regarding acceptance of tender terms & conditions		
8	Whether list of reputed users (along with telephone numbers of contact persons) for the past three years specific to the instrument attached.		
9	Whether special educational discount for Indian Institute of Technology (IIT) Mandi (H.P) given.		
10	Whether two weeks training of operator and research students without any charges offered.		
11	Does the instrument comply with all the required specifications as per annexure 1. IMPORTANT: Attach a separate sheet highlighting compliances with the specifications and explanations thereto if the equipment's vary from the requested specifications.		
12	Whether free Installation, Commissioning and Application Training offered.		
13	Whether warranty as per requirement offered.		
14	Whether Annual maintenance after expiry of comprehensive onsite warranty quoted separately as optional.		