

NOTICE INVITING TENDER



EPABX System of "CIPET:CSTS- Ranchi"

Date of Tender	:	02.01.2020
Last Date & Time for submission of Tender	:	16.01.2020 & 2.30PM
Date & Time of Opening of Tender	:	16.01.2020 & 4.30PM
Tender processing fee	:	Rs.1000.00+ 18%GST=Rs.1180.00

CIPET : Centre for Skilling and Technical Support (CSTS), Hehal, Ranchi - 834005, Jharkhand.
Mobile No.: +91-9445035650, Phone No.: +91-651-2511118
Email: cipetranchi@gmail.com.
www.cipet.gov.in

SECTION – 1

SCOPE OF WORK

1. INTRODUCTION

CIPET : CSTS - Ranchi was established in the year 2017 to cater the needs of plastics and allied industries in Jharkhand and other adjoining areas. The institute is situated in the holistic land of Bhagwan Birsa Munda at Ranchi and spread over sprawling area of having 13.00 acres Administrative buildings, hostel, Workshops and adequate green landscape for extracurricular activities and equipped with the state of the art facilities in Design, CAD/CAM/CAE, Tooling, Plastic Processing, Testing, Quality Control & Inspection services in order to meet the customer requirements of Plastics & allied industries.

This portion of tender is for works related to supply, installation, testing & commissioning of ISDN EPABX System (main) with wired capacity of 1200 ports (analog & digital extensions), PRI lines, BRI ports to be installed in administration building and EPABX system with wired capacity of 100 ports in guest house building for new CDRI campus at Lucknow.

2. SCOPE OF WORK

In general the works to be performed under this contract shall comprise of :

- (i) Design, engineering, manufacture, inspection & testing, supply, transportation to site, storage, installation, system integration, testing & commissioning of the following items with all required accessories.
 - (a) ISDN EPABX System (main) in administration building.
 - (b) EPABX System and its connectivity with main EPABX in administration building alongwith associated cabling work. (Distance between main exchange and guest house is approximately 350 meters).
 - (c) Required MDF/IDF and associated wiring/cabling
 - (c) Telephone sets

The bidder shall be responsible for engineering and providing all materials, equipment and services specified or otherwise, which are required to fulfill the intent of ensuring operability, maintainability, completeness and reliability of the total work. Item wise bill of quantity (BOQ) indicated in price schedule is based on which work shall be executed. Any other equipment, material, component, accessories which are not specifically mentioned in price bid and technical specification but necessary for satisfactory installation and trouble free operational and maintenance of the equipment / system adopting good engineering practice shall be in the scope. The offered equipment shall be new, employing proven and established latest technology suitable for Indian conditions.

- (ii) Providing complete design, engineering data, BOQ, detailed drawings, schemes, commissioning procedure, O&M manuals, catalogue, reference documents etc. for EPI/CDRI 's review/reference / records in requisite sets of hard copy and soft copy.
- (iii) Installation, testing & integrated commissioning of the complete system
- (iv) Execution of works shall be as per tender conditions & technical specification, relevant applicable IS, ITD/DoT requirements code of practice in conformity with the Indian Electricity Act , 1910 and the Indian Electricity rules 2005 amended up to date, CPWD specifications for Electrical works Part - I (internal) 2005, Part -II (External) 1994, Part IV as amended up to date of receipt of tender, CDRI requirement and requirements of the Local Electricity supply authority and other regulations and safety codes in the locality where the equipment will be installed.
- (v) Ensuring interlocking/integration/interconnection among various equipment/system, earthing of equipment and safety aspects as per the requirements.
- (vi) All Statutory approvals / license for the equipment(s) / system(s) shall be obtained by the successful bidder as needed including approval of relevant drawings, approval for the entire installation and after completion of work, as per the approved drawings. Cost for obtaining such approvals from statutory authority/DoT/TEC shall be borne by the bidder.
- (vii) Effective co-ordination with the other agencies to carry out the work smoothly.

- (viii) Proper handing over of the installations in satisfactory working conditions along with required as built drawings, documents, maintenance tools /tackles and items as specified in the tender.
- (ix) The work shall also include all incidental job connected with the installation of equipments.
- (x) All the equipment except battery shall be designed considering 45° C as ambient temperature. Battery shall be designed considering minimum ambient temperature (5°C). Where equipment are installed outside and exposed to direct sun-rays, rigorous weather conditions under which they are required to operate shall be taken into consideration.
- (xi) Any work like chipping/breaking of existing structure like walls, floors, fabrications etc. with prior approval of the EPI/CDRI's representative.
- (xii) In case any existing structure is affected/damaged due to the installation work, the repairing to the same shall be done to the satisfaction of the EPI/CDRI's representative without any extra cost.
- (xiii) Any modifications/rework required on account of wrong practices shall be done without any extra cost.

3. TECHNICAL REQUIREMENTS AND STANDARDS:

The specification defines the requirements for a continuous duty, highly reliable, latest and state of art technology EPABX Systems for effective intercommunication in the CDRI campus.

All equipment of system shall comply in all respects with the requirements of the latest edition of the relevant codes and Indian Standard. The technical specifications for the system to be executed are enclosed. Items which are not covered under the technical specifications and are required for completeness of the system shall be executed as per latest IS/ IE rules and Indian telecom department requirements

The EPABX system shall be TEC/DOT approved and conform to the latest issue of relevant applicable International standards/IEC standard /Indian standards for design, manufacturing, safety, inspection and installation.

4. SITE CONDITIONS:

The main EPABX shall be installed in the EPABX room in administration building and EPABX for guest house shall be installed in guest house reception area .

Max. ambient temp	-- 45°C
Min. ambient temp	-- 5°C
Max. R.H.	-- 90%
Min R.H.	-- 20%
Altitude above means sea level	-- 1000 mtrs.

5. POWER SUPPLY :

	230 V \pm 10% , 50 Hz \pm 3%
Power Supply	415 V \pm 10%, 3-phase, 4 wire, 50Hz \pm 3%, effectively earthed.

6. INSPECTION OF SITE :

The bidder to inspect and examine the site and its surrounding and shall satisfy as to the nature of the ground and sub soil, the quantities and nature of work, materials necessary for completion of the work and their availability, means of access to site and in general to obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect his offer. No extra claim consequent on any misunderstanding or otherwise shall be allowed.

7. PRICES :

- Price shall be Inclusive of all taxes & duties, what so ever including excise duty, sales tax, VAT, service tax, octroi (if any), work contract tax, commissioning spares, labour, tools & plants, packing, freight/ transportation & insurance up to the site, loading, unloading, fee (s) for testing, license, inspection, documents, etc, where applicable.

- CDRI does not give any confessional forms/ certificates/ permits towards any taxes, duties & other levies like sales tax, customs duty, road taxes/ permits, etc.
- Prices shall be firm through out the contract period.

8. BOQ QUANTITIES:

The quantities given in the tender BOQ/price bid may vary as per the site / system/CDRI requirements. Only required items & quantities are to be supplied/ installed. The rate shall remain valid for any variations in the estimated quantities given in price bid. The bidder shall take detailed site measurements for the items like supply of power cables; earth strips/wire etc, before placing purchase order/taking procurement action.

9. MAKES :

- In general make of various items shall be as per the recommended vendor list enclosed. Where makes have not been indicated in the list, the items shall be of ISI marked.
- Sample of the items or makes or the items for manufacture/ supply/ use in the work irrespective of appearing in the approved list shall be got approved from Engineer- in-charge before incorporation.

10. SPARES :

The bidder shall indicate and include in quoted price, all the start-up and commissioning spares and furnish the complete list of recommended spares with unit rate for 3 years of normal operation and maintenance for the equipments.

11. NEW MATERIALS :

All equipment, materials used in the work shall be brand new and free from manufacturing defects.

12. REPLACEMENT OF DEFECTIVE/ DAMAGED ITEMS

All defective/damaged items shall be replaced with the good ones without any extra cost to purchaser (during guarantee period)

13. TOOLS & TACKLES:

- All the required special tools & tackles for executing this work shall be in the scope .Bidder to furnish the list of such tools alongwith the offer.

14. MAN POWER:

- Authorized, experienced, competent work force shall be deployed with competent supervision.
- They should possess requisite qualifications/ valid permits/ license/ competency certificates to work .
- The engineer shall have minimum qualification of degree in engineering. Where as supervisor shall have minimum qualification of diploma in engineering and technicians shall have minimum ITI.

16. QUALITY OF WORK & WORKMANSHIP:

The quality of work, workmanship, finishing etc should be satisfactory to the CDRI / EPI.

17. ACTION PLANS/ PROGRAMME/ WORK SCHEDULING/ CPM & PERT CHARTS / PROGRESS REPORTS/ BAR CHARTS /REPORTS & RECORDS :

The successful bidder shall submit necessary reports during various stages of contract which include action plans/ programme/ work scheduling/ CPM (Critical Path Method) & PERT (Project Evaluation

and Review Technique) charts / progress reports/ bar charts and various records, statements, reports, documents related to the work.

A comprehensive action plan/programme/schedule has to be made based on the completion period, inter related activities and got approved from CDRI.

18. REVIEW MEETINGS/ SITE INSPECTIONS:

As and when required the successful bidder shall attend the review meetings and take necessary actions with regard to the pending works, targets, co-ordination with other agencies.

Senior/ competent officials/ engineers who can take decisions and implement from their side to take stock of the situation and do the needful shall also make regular site inspections.

19. PRIOR APPROVAL FOR DISPATCH SCHEDULE:

Dispatch schedules shall be informed and got approved from engineer in charge before dispatch of the materials.

20. TESTING AND INSPECTION:

- All equipment/systems to be supplied shall conform to the applicable relevant standards. The Bidder/vendor shall furnish the reports of all the type tests carried out/ conducted in last five years on identical/similar components/equipment/systems. In case bidder/vendor is not able to submit report of type test conducted in last five years or in case type test reports are not found to be meeting the specifications/relevant standard requirement then all such tests shall be conducted under this contract by the bidder/vendor free of cost to the purchaser and reports shall be submitted for approval.
- All acceptance and routine tests as per the relevant standards shall be carried out by the supplier and charges for such tests shall be deemed to be included in the bid price. All the routine test/acceptance test shall be carried out in the presence of the inspecting officer from EPI/CDRI./their representative.
- All major items to be supplied shall be factory inspected. The decision to inspection/waiver shall rest with the EPI / CDRI. The list of approved makes enclosed is indicative, CDRI/EPI can add/delete/modify the same in the interest of organization/work from time to time considering cost, quantity, significance, completion schedules etc.
- At least 15 days advance notice to be given for factory inspection and all internal test reports to be submitted with inspection call while inspection call is given, the actual status and details of test to be offered shall be communicated. Relevant applicable Indian standards & International standards shall be made available during inspection.
- If any equipment/material fails in the tests conducted during factory inspection, necessary rework/replacement shall be done and equipment shall be re-offered for inspection without any extra cost to purchaser. Further, the traveling, boarding & lodging expenses of inspecting officer for re-inspection shall be recovered from the supplier's bills as per the CDRI's rules.

21. PACKING/ TRANSPORTATION/ HANDLING:

- Equipment/ materials shall be properly packed with appropriate packing materials & means. Special care shall be taken for fragile items. Item description, qty, code, instructions etc should be marked for easy identification etc.
- The equipment/ materials should be transported by appropriate transport mode up to the site/ destination.
- Due care should be taken for loading, handling, unloading, shifting, lifting, jacking etc by suitable means like Cranes, Fork lifts, Chain pulley blocks, mechanized means etc. and experienced man power.
- Relevant documents shall be accompanied with the items.

22. SECURITY NORMS/GUIDELINES:

The successful bidder shall obtain necessary entry pass/ token/ identity card from CDRI/BCAS/CISF/CRPF, who is in charge of security matters, for their workforce. and fulfill all the formalities viz. police verification, photographs, addresses and keeping in safe custody and bear the fee, if any.

23. DRAWING & DOCUMENTATION TO BE SUBMITTED WITH BID :

Following information and documentations in addition to what has been asked for in respective equipment specifications shall be furnished by the bidder:

- System Block Diagram
- Technical particulars, catalogue & literature for the equipment.
- Performance certificates of all major equipment.
- Type test certificates.
- Q-SIG compliant certificate
- Valid TEC approval in the name of manufacturer for the make and model no. offered.
- List of Past contract for similar type of equipment and certificates from purchaser for successful installation & commissioning.
- GA drawings of all major equipment.

- Time frame of major activities including Bar chart.

24. DRAWING & DOCUMENTATION TO BE SUBMITTED BY SUCCESSFUL BIDDER AFTER AWARD OF CONTRACT:

Following information and documentations in addition to what has been asked for in respective equipment specification shall be furnished by the successful bidder in requisite no of hard copy and soft copy after award of contract for approval/reference/record of the purchaser.

- Layout drawing showing location of equipment, cable routing, etc.
- Earthing layout showing connections to equipment..
- Wiring diagram and cable termination details.
- Write-up on the features of the system.
- Civil foundation and structural drawing for Installation.
- Bill of materials for hardware and software.
- System Configuration
- Operating manual on EPABX system and accessories.
- Operating and maintenance software
- All other required drawings/documents/technical information required during various stages of works shall be submitted by the vendor as and when required by the purchaser.
- All drawings to be submitted shall have sufficient detail to indicate the type, size, general arrangement & foundation drawing, weight, the external connections, fixing arrangement required, the dimensions required for installation and interconnections with other equipment and materials, clearances and space required between various portions of equipment and any other information specifically requested.
- The successful bidder shall provide a complete bar chart based on the time period of the completion of the project. within 2 weeks of award of work The bar chart shall elaborate procurement, installation, testing & commissioning of the complete system.

25. TOOLS & TACKLES:

Wherever special tools & tackles are required for operation & maintenance of units/systems, the same shall be provided ..

26. STATUTORY LAWS/RULES/APPROVALS/LICENSE:

The system supplier/agency shall abide by the relevant statutory rules, laws, and guidelines and arrange for the approvals, if any required. Those include adhering to labor laws, abiding local electricity rules etc.

Where ever formal approvals/ license are essential, clearance by the local authorities/telephone department etc. shall be arranged by the successful bidder

27. FEES FOR TESTING/CALIBRATION/APPROVALS/LICENSE:

Unless otherwise specified, the fees/charges involved for this purpose shall be borne by the successful bidder

28 SITE TESTS/ PERFORMANCE TESTS:

Necessary site tests/ performance tests shall be conducted on the equipment to ascertain the functional / design/ site requirements. Reports shall be prepared recording the various values, parameters, observations, settings made etc. In case of unsatisfactory results, the same shall be replaced/ rectified as per the requirement without any extra cost.

29. HANDING OVER/ CERTIFIED DATE OF COMPLETION:

After the satisfactory commissioning of the entire system, the system shall be observed for 15 days. After this satisfactory trial period, the system shall be handed over officially and completion date recorded by Engineer-in- charge with all the prescribed formalities for handing over.

This date shall be reckoned, as the certified date of completion and the defects liability period shall commence from this date.

Until the handing over of the installation, the responsibility lies with the supplier for safety, upkeep etc.

30 TRAINING/ FAMILIARIZATION ABOUT OPERATION & MAINTENANCE:

Proper training/ familiarization regarding operation & maintenance of the equipment /system shall be given to CDRI staff by the successful bidder.

31. COMPLETION PLANS:

On completion of work, the 10 sets of following as built drawings/documents to be submitted to the purchaser/user

- General Arrangements, Layout drawings with dimensions, plans, sections etc
- Bill of Quantities indicating makes, Technical specs, quantity etc.
- Data Sheets
- Details of Inventory
- Equipment name plate details
- Instruction / Maintenance Manuals
- Test Certificates (Factory Tests, sites Test)
- Guarantee/ warranty Certificates (where applicable)
- Other documents/ drawings as per the instructions of Engineer-in- Charge.
- Keys, tools etc .
- Other drawings/documents mentioned at clause no. 24.0 above.

32 DEFECTS LIABILITY PERIOD:

Defects liability period shall be from the certified date of satisfactory completion & handing over of entire work to Engineer-in-charge of work.

During this period, the supplier shall hold himself responsible for reinstallation or replace with good ones free of cost to the CDRI in respect of any defective item/material/equipment/component supplied and installed. The supplier shall bear all the cost involved for supply, transportation and installation etc. of such items.

33 GUARANTEED PERFORMANCE:

The performance figures quoted in Guaranteed Technical Particulars shall be with in the tolerance permitted by relevant Indian Standards unless otherwise stated in Technical Specification. Incase of failure of the equipment to meet the guarantee parameters the equipment may be liable for rejection.

TECHNICAL SPECIFICATIONS OF THE ISDN EPABX SYSTEM

34. EPABX System Requirements:

A. Technical Parameters

S.NO	DESCRIPTION	SPECIFICATION	DETAILED COMPLIANCE/ DATA TO BE FURNISHED BY BIDDER
1	Technology	Latest Convergence Technology using fully digital employing SPC using PCM/TDM , IP technologies with 100 % non blocking characteristics, ISDN compatibility, VoIP switch, conforming to latest ITU-T (CCITT) standards .	
2	Processor Used	Pentium microprocessor (latest version) with minimum 64 bit processor	
3	BHCA	Minimum 250000	
4	Run distance (a) Analog	1000 meters	
	(b) Digital	200 meters	
5	FCBC	FCBC with SMF batteries back up for the complete system at full load in the main campus building for 8 hours during power failure	
6	Redundancy	Hot Standby, Hot Swappable, Duplicated control cards and duplicated power supply unit . No single point of failure and no dropping of established calls even during change over of duplicated cards	
7	Wireless Telephony Services	System shall have integrated DECT capability. Campus – wide wireless solution DECT base station should support the 8 simultaneous voice and up to 12 signaling channels. DECT phone shall have all the common features.	
8	Network Features	System shall comply and work under the recognized international telephone standards Q-SIG. OEM should be member of ECMA	
9	Auto Attendant	Auto attendant facility for 16 ports simultaneously.	
10	Voice over IP	System should have in-built VoIP solution. VoIP solution should meet all latest protocols and standards as below: - IP Phones - IP soft phones - H.323 compliant standards	
11	Conference	Conference facility for upto 6 parties with any combination of Internal and External (minimum 20 Groups)	
12	TEC Approval	System should be TEC approved. Confirming to ITU & CCITT standards	
13	Standard	Confirming to DoT/ITU & CCITT Standards	
14	Approvals	Copies of valid TEC approvals in the name of manufacturer for make and model offered. (Bidder to submit)	
15	Make & Model	Complete technical literature on offered make &	

		model. (Bidder to submit).	
16	Capacity to be used	<p>Main EPABX</p> <ul style="list-style-type: none"> - 32 Analog Extension - 32 Digital Extension - 4 P&T Lines - 2 ISDN PRI Line - 2 BRI Ports <p>System shall have universal ports Two PC based console 2 nos 24 ports LAN switches supporting SM fiber cable (6core) to be used for connecting main system and remote gateway on IP. Auto attendant with 16 ports</p>	
17	Safety Measures	The offered system shall meet the international standards (IEC)	
19	Administration	System shall have remote maintenance facility	
20	Video Conferencing	Video Conferencing shall be possible.	
21	Voice Mail	The offered system shall have an integrated voice mail facility of 16 ports with storage facility. Voice Mail system shall be of same make as exchange.	
22	Integrated line testing & diagnostic feature	System shall have integrated line testing & diagnostic feature. This facility shall provide information about short circuit, open circuit, high voltage on each line.	
23	Call Billing Software	Shall be provided.	
24	Computer telephone integration	System shall have CTI facility.	
26	Tools/tackles for Maintenance	Multi-Meter, Crimping Tools, Testing jack/ Krone tool etc. (Bidder to furnish the complete list)	
27	Diagnostic & maintenance facility	Shall be provided	

The offered system shall have the following features:

- (i) System shall have the client / server architecture between the main control and the port shelf controls.
- (ii) System shall be based on universal port architectural & shall not impose any restriction whatsoever in terms of slot uses for particular functional benefit.
- (iii) System shall have minimum redundancy of CPU, main memory, secondary memory, tone generator, main power supply, shelf power supply, ringer power supply units, shelf controller etc. by way of duplication (multiple modules). In case main CPU fails the established call shall not get disconnected, the redundant CPU shall take over seamlessly and provide the system function.
- (iv) Redundant Controls, all line and trunks cards shall be hot swappable i.e it shall be possible to remove and put back these modules from the system in power on conditions.
- (v) System shall support VoIP solutions as an integral part of the system.
- (vi) System shall be fully compliant to VoIP standards like H.323 and SIP / applicable international. Bidder to give clear compliance for the requested standards..

- (vii) System shall support AUTOMATIC ROUTE SELECTION (ARS) and LEAST COST ROUTING (LCR) features to route the calls based on priorities related to user profile, tariff and network availability, along the most cost effective path. This service will be transparent for users and irrespective of the physical carrier connection.
- (viii) In the night mode when the operator is not present at the console, the direct line should be routed to different extensions for incoming calls.
- (ix) The system shall be able to start automatically without human intervention when the external AC power is resumed after complete power failure i.e. even after the battery are discharged.
- (x) The system software shall be protected against loss/alteration of memory due to power failure, unauthorized command or any other faulty conditions.
- (xi) Operator console

The operator consoles shall have following features (but not limited to)

- a. Centralized Electronic Telephone Directory with Dialing facility.
- b. Number of inbound calls, return calls, call in hold, etc.
- c. Details about the call queue status, name of the internal called-party, status of the terminal etc.
- d. Visual display of calling and called stations
- e. External line hold.
- f. Busy override
- g. Supervision of the user extensions and trunks
- h. Call Conferencing
- i. Call Park / Hold
- j. Call waiting, call splitting
- k. Serial calling abbreviated dialing
- l. Routing of calls
- m. Selective pickup of calls on hold
- n. It should be possible to automatically switch attendant consoles to specific modes / night mode based on the time and day of the week.
- o. Trunk to CO transfer, key pad dialing

(xii) Telephone - user features

- a. The system should support the Boss/Secretary feature between the digital phones. It should be possible to implement this feature with the software itself. Boss and secretary can call each other using single digit keys. There may be more than one secretary for one Boss.
- b. The boss should also benefit from the following additional service:
 - (i) Direct secretaries call key
- c. It should be possible for an user to make an external call from other sets via a PIN thus bypassing the external call-barring category for that set.

The system should have the following basic telephone features (but not limited to):

- a) Abbreviated dialing
- b) Automatic DISA, user authentication
- c) Call forwarding unconditional on busy/no reply to extension, hunting, group voice mail, operator, paging, etc.
- d) Call pick-up
- e) Call parking
- f) Call waiting indication.
- g) Calling line identification restriction for internal calls
- h) Controlled private call by Pin code and password
- i) Do not disturb

- j) General night service
- k) Hunting group
- l) Pad locking to prevent the outgoing calls.
- m) Last number redial
- n) Priority call
- o) Priority cut in
- p) Minimum six party conference

Telephone features in addition to above basic features (but not limited to):

Digital set:-

- a. Adjustable handset volume
- b. Caller name display
- c. Distinctive ringing according to hierarchical level
- d. Fixed function keys
- e. Duplex hands-free
- f. Multi-line: multi-appearance and multi-numbers
- g. Multi-line selective forwarding
- h. Message waiting indication
- i. Calling line identification presentation/restriction (CLIP/CLIR)
- j. Minimum 6 party conference call
- k. Storage of unanswered calls with date, time, and callback

Analog Set:-

- Pulse/Tone sustainable.
- Modular connection plugs for line & handsets.
- Electronic ringer with adjustable volume & melodies ring.
- Flash, Pause, redial, mute function.
- Desktop Model.
- Message Wait Lamp.
- Line Cord – detachable – 2 Metre long.
- Handset – Cord – detachable.
- Termination Box.
- Hook switch endurance.
- With CLI P

(xiii) Call Metering Application

- a. A Call accounting application should be implemented in the system.
- b. The Call billing application shall be a windows based call billing software. The applications should run on any node of the LAN and communicate with the PABX over Ethernet TCP / IP link.
- c. System should store all the call records (approx 1,00,000 calls) for a minimum period of one month.

(xiv) Mobile phone integration

The system should support advanced mobility solutions in addition to the inbuilt DECT feature. The system should have parallel ringing facility.

(xv) The system shall have centralized network management system based on open platform with user friendly interface.

(xvi) Voice messaging system

- a. The system at the Main building should be equipped with voice only offering the best interactivity with user. The voicemail should be implemented in a centralized fashion catering to all the users.
- b. The hardware and the software of the voicemail should be embedded within the PABX through interface boards. The specific needs of the present specifications are:
 - 1. 750 voice mails boxes equipped expandable upto 1000.
 - 2. 500 hrs storage (Min)

Voice messaging system should have following features:

- 1) Call answering or call/record answering function with time stamp.
- 2) Customization of an announcement
- 3) Call forwarding to the voice mail
- 4) Message notification via message indicator LED or voice prompts
- 5) Security : Access to voice mail box through a personal code.
- 6) Distribution list : The user should be able to create their personal distribution list
- 7) Message archiving in case of no action.
- 8) Multilingual function support .
- 9) The proposed messaging system should offer the Unified messaging solution for voice. It should be possible to integrate voicemails, fax mails and emails in one mail box and should be accessible from the one single client application like Microsoft outlook or Lotus notes. Voice Mail system should be of same make as EPABX.

35. TELEPHONE SETS

The bidder must describe the make & model no of telephone sets.(Analog set, Digital set & Boss-Secretary phone set) to be used with the system. The proposed solution must support a variety of telephone instruments, requiring no more than single twisted-pair wiring. Bidder to enclose their recommendations with the documents.

36 Exchange Earthing

The EPABX system & its accessories shall be grounded to a common ground point to prevent interference from the external & internal sources. Earthing electrode shall be as per the relevant applicable standard/B.S. 3043 (latest) for EPABX MDF/IDF and batteries. The earthing material shall be as per the applicable IS/Internationally applicable standards. Required earth pits for earthing shall be made by bidder for EPBAX system, power supply unit and MDF / IDF .Earthing shall be done as per the ITU recommendation.

37 MDF/IDF

Suitable MDF/IDF shall be provided for termination of the extension, trunk lines The MDF/IDF shall be housed in self standing/wall type metal frame. 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. The devices shall provide prompt isolation and protection from accidental high voltage power contact and safe guard the equipment against any damage.

38 FCBC

FCBC with SMF batteries to provide back up of 8 hours for main EPABX system and 8 hours for guest house EPABX. The FCBC shall be SMPS based with modular design.

39 Inspection and Testing

Inspection shall be done as per approved QAP. System shall be tested to confirm the defined specifications. All routine and acceptance tests shall be conducted on complete system. Supplier shall submit the QAP for the EPABX system and its accessories alongwith test certificates and internal test reports before inspection. Purchaser may ask to conduct type tests, same shall be conducted by supplier free of cost.

Factory Test : The bidder shall conduct factory test and same shall be witnessed by CDRI/EPI./their representative In case inspection is waived off, complete report of all factory test results shall be provided to CDRI/EPI before dispatch.

Site Acceptance : All the system configuration checks/tests to demonstrate the various components, sub-assemblies of hardware and software shall be carried out to check/test that system complies with the specification.

40 Approvals

Bidder shall submit all the approval certificates from DOT for the offered model along with the offer. The statutory clearance and certificate from Govt. agencies/DOT/TEC for installation and operation shall be arranged by bidder.

41 Installation and commissioning

The installation and commissioning of complete system including laying and termination of cables shall be in the scope of bidder. All routine testing and operation of the system shall be carried out by the bidder at site. Installation shall be done as per the applicable relevant standard. All the required commissioning spares and consumables shall be in the bidder's scope.

42 Training

The vendor shall provide comprehensive training on various operation and maintenance aspects of EPABX system to CDRI's representatives/operators (6 personnels). The training shall be conducted at supplier's works and at site (Bidder to include training charges, if applicable)

43 Tools & Tackles

Supply of all the Special tools / tackles like Krone tool, Crimping tool for RJ Connector, Testing jack, Disconnection plug, Multi-meter shall be in the scope of the bidder.

**TECHNICAL PARTICULARS/COMPLIANCE
- TO BE FURNISHED BY THE BIDDER
SECTION – 3**

(I) SYSTEM FEATURES :

Sl.No	Particulars	Nos.	Rate	Total
i.	IP based Digital Hybrid EPABX system	01		
ii.	Digital Key Phone Set (minimum 12 keys)	15		
iii.	Analog Key Phone Set	10		
iv.	Battery for power back up for minimum 2-3 hours			
v.	Provision for minimum 3 Ω (Ohm) earthing			
vi.	Total charges on supply, installation & commissioning of above equipment (in Nrs.) (including all taxes/duties and other involved charges)			

_(V) To be furnished by bidders for the EPABX

		Main Exchange	Guest House Exchange
1.	Make		
2.	Model Number		
3.	Capacity		
	<u>Ultimate</u>		
	a) Total number of ports		
	b) Maximum CO lines possible		
	c) Maximum extensions possible		
	d) Whether the allocation of ports for CO lines and extensions flexible		
	e) No. of ports required for each console		
	f) No. of consoles that can be connected		
	<u>Capacity offered</u>		
	a) Total number of ports		
	b) Ports for CO lines		
	c) Ports for extension (Net)		
4.	Technology		
5.	Whether 100% non-blocking (indicate the number of time slots)		
6.	No. and type of consoles offered.		
7.	.Whether the extension cords can support message waiting lamp in case of voice mail facility		
8.	The number of CO lines each card will support.		
9.	The number of extensions each card will support.		
10.	FCBC & Standby Power		
	a) Make		
	b) Model Number		
	c) Boost charge rate		
	d) Trickle charge rate		
	e) Input volts tolerance		
	f) Output volts		
	g) No. of batteries		
	h) Volts of each battery		
	i) Amp. Hours rating of battery		
	j) Back up time (min 8 hours required)		

15.	Whether Krone type tag blocks for CO lines and extension lines included.		
16.	Exchange Software		
	a) Whether a closed user group facility available.		
	b) Whether restricted inward dialing facility available.		
17.	Voice Mail and Direct Inward Dialling		
i)	Direct Inward Dialling		
	a) Whether this will accept dialing from DTMF and DP type of telephone instruments.		
	b) Whether pulse tone converter cards included		
	c) How many ports each card can support.		
	d) Automatic transfer to operator in case all the DID ports are busy is available for the incoming calls.		
	e) In case of the extension being busy, no response or faulty, whether the call is automatically directed to the extensions voice mail box.		
	f) If programmed by the extension, whether the caller will be directed automatically to the respective voice mail box.		
ii)	Voice Mail		
	No. of ports quoted for voice mail.		
	b) How many ports will be supported by each card?		
	c) Whether facility to access mail box from external line is available.		
	d) Voice Mail Hardware		
	(1) Make of PC		
	(2) Type		
	(3) RAM		
	(4) HDD		
	(5) FDD (size)		
	(6) Monitor (Type, size, model)		
	(7) Keyboard (type, make)		
	e) Uninterrupted Power Supply		
	(1) Make		
	(2) Type		
	(3) Capacity		
	(4) Battery backup		
	f) Software (name & version)		
	g) Size of voice mail box		
	k) What is total time of voice mail recording?		
18.	Telephone Instruments		
	a) Analog Type (750 Nos.)		
	Make		
	Model		
	b) Digital type (50 Nos)		
	Make		
	Model		
	c) DECT type (10 Nos.)		
	Make		
	Model		

Section-4

LIST OF RECOMMENDED VENDORS

S. No.	Items	Approved Makes
1.	ANALOG PHONE	ALCATEL/SIEMENS/NORTEL/AVAYA/BEETEL
2	DIGITAL PHONE	ALCATEL/SIEMENS/NORTEL/AVAYA/ ERICSSION.
3	PC BASED OPERATOR CONSOLE	ALCATEL/SIEMENS/NORTEL/AVAYA/ERICSSION.
4	FCBC	HBLPOWER/AMARARAJA/STATCON /DYNA
5	BATTERIES	EXIDE/ HBL POWER/ GLOBAL YOUASA/AMARARAJA
6	MDF/IDF, TAG BLOCKs	KRONE
7	PC	HP/HCL/IBM/DEL/COMPAQ
8	PRINTER	EPSON,HP, TVSE
9	TELEPHONE WIRES/ DATA CABLE	DELTON/.FINOLEX/SKYTONE/HAVELL'S LAPP/BELDEN/SYSTIMAX/AMP
10	24 PORTS LAYER SWITCH	CISCO/NORTEL

Note : Items not covered in the above makes shall be get approved from EPI / CDRI by vendor before procurement

Other terms and Conditions

The Tender Documents can be obtained from the Office of the Director & Head, CIPET :CSTS- Ranchi, Hehal, Ranchi – 834 005 or the Tender Form may also be downloaded from the Institute's website: www.cipet.gov.in.

Agencies/Transport Service Providers are requested to submit their bid document, complete in all respects along with the copies of Trade License & PAN and the cost of Tender Document of Rs.100/- and Earnest Money Deposit (EMD) amounting to Rs.10,000/- by Demand Draft each drawn in favour of " Central Institute of Plastics Engineering & Technology" and payable at Ranchi, and other requisite documents in the Office of the Director & Head, CIPET :CSTS- Ranchi, Hehal, Ranchi – 834 005.

Director & Head