

**Punjab Engineering College
(Deemed to be University),
Chandigarh
Sector 12, Chandigarh 160012**



**E-tender document
For
Procurement of Hybrid EPABX and IP Phones**

**PUNJAB ENGINEERING COLLEGE (DEEMED TO BE UNIVERSITY),
CHANDIGARH**

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SECTION I: INVITATION FOR E - TENDER

FOR HYBRID EPABX AND IP PHONES

1. The Punjab Engineering College (Deemed to be University), Chandigarh invites e-bids from eligible bidders for supply of the items as per table -1
2. Interested eligible Bidders may obtain further information from Computer Centre, Punjab Engineering College (Deemed to be University), Sector 12, Chandigarh 160012, India.
3. The bidding document can be downloaded from institute website <http://www.pec.ac.in>.
4. All bids must be accompanied by an EMD as specified in the bid document and must be delivered to the office address mentioned below by the date and time indicated below.
5. Bids will be opened in the presence of Bidders' representatives who choose to attend on the specified date and time.

TABLE – 1

S. No.	Name of the Equipment	Quantity	EMD	Performance Security Deposit
1	Hybrid EPABX	1	Rs. 60000/-	@ 10% of the value of the contract
2	IP Phone type 1 (Director/Deans/Registrar/HoDs)	20		
3	IP Phone Type 2 (Faculty/Other Functionaries)	130		
4	IP User License for IP Phone	145		
5	Mobile UC client for Android/iPhone	50		

TABLE - 2 Time Schedule

I	Date of publication	04.01.2018
I	Downloading of e-tender document	Start date: 04.01.2018 End date: 29.01.2018
II	Pre- Bid Meeting	12.01.2018 at 3:00 PM
III	Date of submission of e-tender	Start date: 16.01.2018 End date: 05.02.2018
IV	Physical submission of EMD	Start date: 16.01.2018 End date: 05.02.2018
V	Opening of Technical Bid (online) and meeting for scrutiny of technical bid and declaring eligible bidders.	Date: 06.02.2018
VI	Opening of Financial Bid of only eligible technically qualified bidder as determined by the Committee.	To be informed after checking eligibility of Bidders
VII	Place of opening of bids	Computer Centre Punjab Engineering College (Deemed to be University), Sector 12, Chandigarh 160012
VIII	Address for communication	Head, Computer Centre Punjab Engineering College (Deemed to be University), Sector 12, Chandigarh 160012

Important Notes:

I.	Bidders shall have to submit their bids on-line in Electronic Format with Digital
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	Signatures.
II.	All terms and conditions, instructions to bidder regarding e-tendering process etc. may kindly be seen from the Detailed Notice Inviting Tender (DNIT) available on Chandigarh Administration website (http://etenders.chd.nic.in) or on the Punjab Engineering College (Deemed to be University) institute website (www.pec.ac.in).
III.	The bidder has to submit the original documents in physical form such as EMD, eligibility documents and other desired documents on the date fixed for the same as above. The failure will entail summarily rejection of its tender.
IV.	The undersigned reserves the rights to reject or accept any or all tenders without assigning any reasons.

Director,
Punjab Engineering College
(Deemed to be University)
Sector-12, Chandigarh

CHECKLIST FOR TENDER DOCUMENT

S.No	Checklist	Tick (Yes/No)
1.	Whether name of the firm/organization & address and telephone/mobile number/fax number on letter pad of the company/firm have been mentioned	Yes/No
2.	Whether EMD as mentioned in Table-1 of Section I in the shape of FDR/Demand Draft/Banker Cheque/Bank Guarantee from any commercial Bank in favor of Director, Punjab Engineering College (Deemed to be University) Chandigarh which shall be valid for 45 days beyond final bid validity period. has been attached?	Yes/No
3.	Whether copies of audited financial statement of the last three financial year i.e. 2014-15, 2015-16 and 2016-17 with minimum annual turnover of Rs. 50 lakhs or more attached?	Yes/No
4.	Whether Document showing experience of providing similar items in minimum one Govt. institutes/Departments/College/ research labs etc. in INDIA having order value of ₹ 30 lakhs or above in last two financial years i.e. 2015-16 & 2016-17 and providing satisfactory performance certificate from such institutes/Departments/College/ research labs etc. is attached (Annexure 2.3 of SECTION II).	Yes/No
5.	Do you agree to provide 120 days validity of tender as per point 4 of Section-VI?	Yes/No
6.	Whether attested photocopy of PAN/TAN /GST Card is attached?	Yes/No
7.	Whether manufacturer authorization certificate is attached?	Yes/No
8.	Do you comply with the specification and details given in SECTION IV with Make and model quoted	
9.	Whether attested photocopy of Registration Certificate attached?	Yes/No
10.	Whether Affidavit of not being black listed has been attached? (Annexure 2.2 of SECTION II)	Yes/No
11.	Covering letter (Annexure 2.1 of SECTION II) is attached	Yes/No
12.	Do you agree to provide delivery period (Including complete installation) less than 30 days as per Table No. 3 of Section-III?	Yes/No
13.	Do you agree that no advance payment will be made by the Punjab Engineering College (Deemed to be University) in view of condition No. 7 of SECTION-VI?	Yes/No
14.	Service support center at Chandigarh/Panchkula/Mohali?	Yes/No

Place: _____
Tenderer _____

Signature of

Dated: _____

Full Name of the Tenderer

Address: _____

**PUNJAB ENGINEERING COLLEGE (DEEMED TO BE UNIVERSITY),
CHANDIGARH
SECTION II
TERMS AND CONDITIONS OF CONTRACT**

1. Tenderers are advised to study all technical and commercial aspects, instructions, forms, terms and specifications carefully in the tender document. Failure to furnish all information required in the tender document or submission of a bid not substantially responsive to the tender document in every respect will be at the tenderers risk and may result in the rejection of the bid.
2. The tenderer should indicate specifically the Basic Price, Taxes/Excise duty, other duties (if any) and levies chargeable. No additional information will be entertained after due date.
3. The tenderers should give their quote in Indian currency only keeping in mind that our institute (i.e. Punjab Engineering College (Deemed to be University)) is exempted from the payment of custom and excise duty. Only custom & excise duty exemption certificate will be issued.
4. The Bidders shall have to submit their Bids online in Electronic Format with Digital Signatures. For participation in the e-tendering process, the Bidders need to register themselves on <http://etenders.chd.nic.in/nicgep>. On registration, they will be provided with a user ID and a system generated password enabling them to submit their Bids online using Digital System Certificates (DSC).
5. Tenders without digital signatures will not be accepted by the Electronic Tendering System. No Tender will be accepted in physical form and in case, it has been submitted in the physical form only, it shall be rejected out rightly.
6. Bids will be opened online as per time schedule mentioned in e-tender notice (**SECTION I Table 2**).
7. Before submission of online bids, bidders must ensure that self-attested scanned copies of all the necessary documents as mentioned in SECTION III “Technical Bid” and SECTION V “Financial Bid” of this tender document have been uploaded with the bid, failing which their bids may be out-rightly rejected and will not be considered.
8. It is mandatory for all the bidders to upload all the documents mentioned under tender document.
9. Bidder is required to upload scanned copy of EMD as specified in the tender documents and send original along with other hard copies of desired documents to be sent in technical bid envelope.
10. The details of EMD and tender cost specified in the tender documents should be the same as submitted online (scanned copies) otherwise tender will be rejected.
11. The conditional bids shall not be considered and may be rejected out rightly in very first instance.
12. The financial bids through e-tendering of only those bidders shall be opened who will qualify in the technical bid criteria.
13. The bidder must have an experience of providing similar equipment’s in Govt. Institutes/Departments/College/ research labs etc. in India . having order value of ₹ 30lakhs or above in last two financial years 2015-16 & 2016-17.
14. An affidavit as per specimen enclosed as Annexure – 2.2 of SECTION II should accompany the tender. The tenderer who has been black-listed or his/her tenders have ever been cancelled or any legal proceedings have ever been initiated/pending or any penalty has ever been levied on account of delay or non-completion of supply order by any State/UT/Central Government, his/her tender will be out rightly rejected.
15. Downloading and submission of Tender will be done by E-tendering process through the website of Chandigarh Administration <http://etenders.chd.nic.in/nicgep>.

16. **EARNEST MONEY DEPOSIT (EMD):** The Tender should be accompanied with Earnest Money as mentioned in the Table-1 of SECTION I to be paid in the shape of FDR/Demand Draft/Banker Cheque/Bank Guarantee from any commercial Bank in favor of Director, Punjab Engineering College (Deemed to be University) Chandigarh which shall be valid for 45 days beyond final bid validity period. No firm/tenderer will be exempted from submission of EMD. The EMD deposited by the tenderer in respect of another similar tender will not be considered against this tender. Apart from submission of EMD in physical form, scanned copy of EMD duly attested and countersigned by the firms shall also be uploaded. The EMD of unsuccessful tenders will be refunded immediately after finalization/allotment of tender. No interest will be payable on the EMD. The EMD will be forfeited, if the tenderer withdraws his/her bid after submission of the Tender. Expression of Interest without the EMD shall be rejected.
17. **TECHNICAL BID:** The tenderer should submit scanned copy of documentary proof of his/her eligibility as mentioned in SECTION III “Technical Bid” of this tender document.
18. Financial Bid will be opened of only those bidders who qualify in the technical bid criteria through e-tendering process.
19. **FINANCIAL BID:** The financial bid (SECTION V) shall be quoted by the bidder through e-tendering. The financial bid should contain rates only. The rates should be mentioned both in figures as well as in words in Indian rupees. Any change in rate quoted by the tenderer afterwards will entail forfeiture of earnest money deposit, cancellation of tender and blacklisting of the firm.
20. The bid should not contain corrections or over writing.
21. **Performance Security Deposit:** The successful tenderer will have to deposit performance security @10% of the total value of tender awarded (Table -1 of SECTION I) within 15 days of issuance of letter of intent by the competent authority to be paid in the shape of Fixed Deposit Receipt or Bank Guaranty, from any commercial bank in favour of Director, Punjab Engineering College (Deemed to be University) Chandigarh which shall remain valid for a period of 60 days beyond the completion of warranty/contract period and the security deposited in connection with any other similar tender will not be considered against this tender. Thereafter, the work order will be issued. If successful tenderer fails to submit the requisite performance security deposit within prescribed 15 days, earnest money deposit (EMD) deposited by the tenderer will be forfeited.
22. Tender received through e-tendering shall be opened online by the committee duly constituted by the authorities of Punjab Engineering College (Deemed to be University), as per schedule given in Tender Notice in the office of the Head, Computer Centre, Punjab Engineering College (Deemed to be University) Chandigarh. In the event of date of opening of Tender being declared a holiday, the due date of opening of the Tender will be the next working day at the same hours.
23. Tender is nontransferable.
24. The bidder shall submit the hard copy of e-tender along with forwarding letter (Annexure - 2.1 of SECTION II) duly signed by the authorized signatory.
25. The Director, Punjab Engineering College (Deemed to be University) Chandigarh reserves the right to accept or reject any or all tenders without assigning any reason.

ANNEXTURE – 2.1

From

Subject: Submission of Tender for Procurement Procurement of Hybrid EPABX and IP Phones

Dear Sir,

With reference to your above-mentioned notice inviting tenders, I/We hereby offer to provide **Hybrid EPABX and IP Phones**, at Punjab Engineering College (Deemed to be University), Chandigarh.

I/We shall supply the Equipment's truly and faithfully as set forth in the terms and conditions of the tender document. I/We shall be responsible for all complaints as regards to the quality of product and in case of any dispute; the decision of the Director, Punjab Engineering College (Deemed to be University), Chandigarh shall be final and binding on me/us.

A FDR No. _____ Dated _____ drawn on _____ intended for the prescribed amount of Rs. _____ (Rupees _____ Only) in favor of Director, Punjab Engineering College (Deemed to be University), Chandigarh, payable at Chandigarh is enclosed as earnest money as desired.

I/WE shall have no claim to the refund of earnest money / performance security prescribed against this tender in the event of my/our non-compliance of the contract, provided such contract is implemented within the period of validity of my/our tender.

I/We further understand that my/our earnest money shall stand forfeited in case of unsatisfactory supply of equipment's/service/violation of any term, or if I/We withdraw my/our tender at any stage during the period of validity. My/Our tender shall remain valid for a period of 120 days from the last date prescribed for submission of the tender against the above-mentioned notice. My/Our tender along with terms and conditions with relevant columns and annexure duly filled in under my/our attestation and with each page of the tender paper including the enclosed terms and conditions signed by me/us (in the capacity of sole owner/general or special attorney attached) is submitted for your favorable consideration.

I/We have read the terms and conditions carefully and have signed the same in token of our absolute and unqualified acceptance.

Thanking you,

Place

Yours
faithfully,

Signatures
Date with
stamp &

ANNEXURE - 2.2

(To be furnished on non-judicial stamp paper duly attested by the 1st Class
Magistrate/Notary).

AFFIDAVIT

I/We/ M/s _____ are registered
Company/Ltd Company etc. as per Registration Certificate No.
_____ issued by _____ having registered
office at _____

_____ and manufacturing/supply base at
_____ do hereby declare and solemnly affirm that
I/We have not been Black-listed, nor mine/our Tenders have ever been cancelled by any
State/UT/Central Government or any partner or shareholder either directly or indirectly
connected with or has any subsisting interest in the business of my/our firm nor any legal
proceedings have ever been initiated/pending or any penalty has ever been levied due to delay
of non-completion of work/service/supply order by any State/UT/Central Government or by
any authority.

Place: _____
DEPONENT

Dated : _____

Verification

I/We do hereby solemnly declare and affirm that the above declarations are true and correct
to the best of my knowledge and beliefs. No part of it is false and nothing has been concealed
therein.

Place : _____
DEPONENT

Dated : _____

**PUNJAB ENGINEERING COLLEGE (DEEMED TO BE UNIVERSITY),
CHANDIGARH**

**SECTION III
“Technical Bid”
SCHEDULE OF REQUIREMENTS**

TABLE 3 SCHEDULE OF REQUIREMENT

S. No.	Name of the Equipment	Quantity	Delivery Schedule	Bid Security In Rupees
1	Hybrid EPABX	1	30 Days	60,000/-
2	IP Phone type 1 (Director/Deans/Registrar/HoDs)	20		
3	IP Phone Type 2 (Faculty/Other Functionaries)	130		
4	IP User License for IP Phone	145		
5	Mobile UC client for Android/iPhone	50		

PRE-QUALIFYING CRITERIA

Offer will be accepted/uploaded in two covers under Details containing:

First cover titled as “Technical Bid” should contain the Self-attested scanned copies of following with consecutive Sr. No. :-

1. Name of the firm/organization & address Contact person name and telephone/ Mob. No./Fax. No./ on letter pad of the company/firm.
2. Earnest money deposit as mentioned in Point 16 of SECTION II of this tender document.
3. Bidder should have a turnover of at least Rs. 50 lakh in each of last three Financial Years i.e. 2014-15, 2015-16 and 2016-17. Audited copies of Financial Statement shall be submitted as proof.
4. Document showing experience of providing equipment and completion of similar projects for at-least one Govt. Institute/Department/College/Research lab etc. having order value of ₹ 30 lakhs or above in last two financial years i.e. 2015-16 & 2016-17 and satisfactory performance certificate from such Institutions/Departments/College/etc..
5. Complied statement the specification and details given in SECTION IV with Make and model quoted.
6. Self-attested copies of PAN/TAN Card / GST No.
7. Certificate of acceptance of terms & condition mentioned in Section II and Section VI of Tender Document.
8. Manufacturer authorization certificate for servers.
9. Registration Certificate of the company issued by the competent authority
10. Affidavit of not being Black Listed (Affidavit as per **Annexure 2.2 of SECTION II**)
11. The bidder should have a service support center at Chandigarh/Panchkula/Mohali.

12. Covering letter (**Annexure 2.1 of SECTION II**)

NOTE: All the above mentioned documents should be duly in order and are essential to qualify at Technical Bid Stage.

**PUNJAB ENGINEERING COLLEGE (DEEMED TO BE UNIVERSITY),
CHANDIGARH**

SECTION IV

TECHNICAL SPECIFICATIONS AND DETAILS

SPECIFICATIONS AND DETAILS

1. HYBRID EPABX

- It should be suitable for DTMF as well as the FSK type of telephone instruments.
- It should be possible to reach the maximum capacity of main system up to 1296 extensions, 24 PRI and 128 digital extensions, 128 CO lines, 99 SIP trunks, 2000 IP extension, 16 radio ports & 32 E&M, 32 BRI and 64 GSM trunk on the same platform without adding any cabinet and with single power supply.
- The system memory should be based on Flash EPROM for higher reliability and faster rebooting minimum storage capacity of 256 MB ROM, 2GB RAM & 900 MHZ clock speed
- System power supply should be inbuilt and SMPS type, It shall also work on 48 V DC +/- 20%
- The system should support 19" Rack mount with 16U enclosure, wall mount & table top mount
- The EPABX systems should be fully redundant systems which should offer 100% duplication of Power Supply and Control card. The system should provide duplication for power supply as well as for Control Cards configured in Hot Standby Mode. In the event of failure of primary power supply or control Card, the standby set should automatically and transparently take over, without any disruption of services or disconnection of ongoing calls. It should be possible to remove the power supply or control card in Power on condition for maintenance without affecting functioning of the system.
- All the peripheral cards (extension cards, trunk cards (GSM/CO/ISDN etc.) should be hot-swappable. i.e. it should be possible to replace a peripheral card while SYSTEM power is on)
- System shall support E & M Port to connect E & M Lines, Magneto ports to connect Magneto phone
- The system shall have an ISDN Digital platform and shall be compatible with ISDN PRI line of Local Service Provider, SYSTEM should support networking over PRI with fiber optic connectivity. External media converter should not be required.
- Multiple systems at different locations should be able to connect with each other without any link licenses.
- The system should have inbuilt Power failure transfer functionality on card. No external devices for Power failure required. The system should have built-in Power Failure Transfer for minimum 4 ports of PSTN Trunks.
- It should have set of hybrid cards such as 8 PSTN+24 Extensions, to save on the resources of universal slots and investment only on the required number of ports.
- The system should have in-skin GSM card so that the multiple SIMs can be inserted on the GSM card plugged on to the PBX platform. Hence, the calls on GSM mobile can be

routed through this SIMs and contribute in reduction of overall telecom bill. No requirement of external device for GSM connectivity.

- System should support HF/VHF/UHF radio from a single card.
- The System should support Radio Connectivity with the in-skin card. It should have minimum 4 radio interface port per card. It should support HF/VHF/UHF with the same RIC card. It should be interoperable with following make of Radios:
 - MOTOROLA GM338, TADIRAN RT 6001/PRC 6020 (HF), TADIRAN RT - 7330M VHF
 - STARS V MKII 25 W , LUP 322(V/VHF trans receiver)
 - HYT TM -610
 - CODAN HF Radio
 - Motorola XIR M8268 UHF
 - ICOM IC-F 110
- The offered exchange should be an ISDN ready switch. The system platform should always be ready for ISDN and only the necessary in skin ISDN cards need to be added for functionality.
- The system should support SMPP protocol to send/receive SMS using in-skin GSM SIMs within System. Any software required to send/receive SMS shall also to quote separately.
- The system can be programmed through Analog telephone, Digital key phone, and Ethernet without any external devices.
- the system shall have a built-in remote maintenance facility. The system can be programmed remotely over the internet without any modem required on the PBX side.
- The call ringing sequence would be programmable and have options such as simultaneous, hunting off, round robin and delayed simultaneous.
- Caller line identification (CLI) on Analog and digital/PRI trunks shall be built-in for both DTMF and FSK telephone instrument.
- Detail reports of all system parameters should be generated through the SMDR port of System. External third party Billing software shall not be required for basic report generation. Reports shall be directly saved in PDF format.
- The offered system should be QSIG ready (for PRI) for Networking and Feature Transparency between two or more exchanges.
- Each port of the system shall be programmable. It shall have programmable features port-wise/extension-wise.
- The system shall support flexible numbering for extensions such as it may have extensions with 1 digit, 2 digits and up to 6 digits numbers as well as in combination of all.
- The system shall have built-in web based software programming tool for system administration.
- Access codes, system timers and access to features shall be programmable.
- Storage of outgoing, incoming and internal call reports shall be generated on SMDR port of the system. It shall also be available online through Ethernet Port.
- The system should have built-in outgoing Call Log buffer of 10000 calls, incoming call log buffer of 10000 and call log buffer of 2000 internal calls.
- Voice guided auto-attendant shall be preferably built-in.

- System should support dial form the directory. There shall be minimum 2900 numbers possible and shall also possible to dial it as an abbreviated number.
- Features given to an extension shall be accessed from any other extension by dialing the secret codes.
- System features shall have class of service, night service, conference, auto diagnostic etc. Class of service shall be unrestricted. STD restricted and semi restricted
- System shall support SMS to Email and Email to SMS Feature without use of any additional software
- System shall support SMS on NO reply
- System shall support 128 VMS extensions over QSIG
- SNTP client should be inbuilt in System
- The system shall have features as CLI based routing, call duration control, least cost routing i.e. time, number or combination of both.
- Extension features shall have an extension to extension call, extension to central office, extension to operator, automatic call back, call transfer, call forward, follow me, executive/secretary, do not disturb, barge-in, raid, Boss ring, Priority, emergency reporting etc.
- The system shall have a conversational recording in the mail box should be available with voice mail system card of System. Conversation recording should be possible on Analog/Digital/IP as well as Mobile SIP Smartphones (Android/iPhone).
- System's UC Client should support up to 1000 DSS, 600 BLF and drag & drop conference
- The system must support following features of IP telephony: Dynamic DNS, Registrar Server, Proxy Server, Presence Server, NAT and STUN, VoIP codec G.711u, G.711a, G.723, G.729.
- Varied type of open SIP IP Terminals such as IP Phone, SIP soft phone and Mobile SIP Client shall be supported.
- The manufacturer should also have an application for Android and iPhone so that the enterprise mobility can be extended for the Smartphone users.
- Supplied IP Phones and PC based soft phones should be of the same manufacturer.
- The system shall have a conversational recording in the mail box should be available with voice mail system card of System. Conversation recording should be possible on Analog/Digital/IP as well as Mobile SIP Smartphones (Android/iPhone).
- IP phone operational functionality should be same as Digital Extension of PBX
- system shall support SNMP
- System shall support video conferencing over ISDN PRI/BRI
- System should have capability to support Video call Over IP
- System shall support Direct termination of E1 over Fiber without using any external media convertor
- System shall support in skin Data card for data transfer over E1 copper & E1 fiber
- System should be Fully operational between Temperature 0°C to +45°C
- System should be certified for EMI/EMC, CE, FCC15B.

System should have in-skin Voice Mail System with following features:

- Attend as much as 64 calls simultaneously with flexibility of routing callers to desired extension or delivering information depend upon the selection
- Dial-by-Name to reach the intended user directly without knowing/remembering extension number
- Selectively allocate voicemails to users with the flexibility of customizable mailbox size and greetings for All/Selective users
- Group mailbox to share messages between departmental groups
- Anywhere access to voice mail with just a phone call
- Password protected secured voice mail access
- Record important conversations for future reference and record maintenance
- Redirection of voice mails to another extension in case of non-availability
- Tag voice mails while Forwarding Messages to Another Mailbox
- Broadcast voice message to a group of personnel, at a go
- Distribution lists for delivery of voice mails to different set of users or groups
- Message wait indication via ring, change in dial-tone, voice message or message wait lamp
- Notification of a new voice mail via email alert or a phone call
- Extension features shall have an extension to extension call, extension to central office, extension to operator, automatic call back, call transfer, call forward, follow me, executive/secretary, do not disturb, barge-in, raid, Boss ring, Priority, emergency reporting etc.
- Operator features shall have the assistance to extension, attended call transfer, call intercept, indication of call waiting, night service control etc.

EPABX should comply following feature list

- Abbreviated Dialing (Global & Personal)
- Access Codes (Programmable)
- Account Codes (Forced)
- Alarm-Multiple
- Alarms
- Alarm-Snooze
- Allowed and Denied Lists
- Alternate Number Dialing
- Anonymous Call Rejection (SIP)
- Auto Call Back (Busy, No Reply)
- Auto Redial
- Auto-Attendant
- Background Music
- Backup SMDR
- Backup-System Configuration
- Backup-System Software
- Barge-in
- Boss Ring
- Call Budget on Extensions
- Call Budget on Trunks

- Call Chaining
- Call Cost Calculation
- Call Duration Control
- Call Follow Me
- Call Forward (Busy, No Reply , Dual Ring and to External Number)
- Call Park (General and Personal Orbit)
- Call Pick Up (Group and Selective)
- Call Progress Tones (Programmable)
- Call Splitting
- Call Taping
- Call Transfer (Screened, On Busy , While Ringing, Trunk to Trunk)
- Calling Line Identification & Presentation (CLIP)
- Calling Line Identity Restriction (CLIR)
- Cancel All Station Features
- Class of Service (COS)
- CLI based Routing
- Closed User Group (With/Without Exchange ID)
- Computer Telephony Integration (CTI)
- Conference Dial-in
- Conference – Multiple Participants
- Conflict Dialing
- Continued Dialing
- Conversation Recording
- Date and Time Format
- Daylight Saving Time (DST)
- Direct Inward Dialing (DID)
- Day-Night Mode
- Department Call
- Digest Authentication (on SIP)
- Direct Dialing-In (DDI on T1/E1/PRI)
- Direct Inward System Access (DISA)
- Direct Outward System Access (DOSA)
- Direct Station Selection Console (DSS Console)
- Distinctive Rings
- Do-Not-Disturb (DND)
- Do-Not-Disturb (Remote)
- Dual Ring
- Dynamic DNS (DDNS)
- Dynamic Lock (Manual)
- E-mail Notification (VMS)
- Embedded Registrar and Proxy Servers (SIP Server)
- Emergency Calls Detection and Reporting
- Emergency Conference

- Emergency Number Dialing
- External Call
- External Call Forward (ECF)
- Fax over IP (T .38 Relay and Pass-Through)
- File Transfer Protocol
- Flexible Numbers (Up to 6 Digits)
- Forced Answer
- Help Desk
- Hold
- Hot Desking
- Hot Outward Dialing (With/Without Number & Delay)
- Hotline (Immediate and With Delay)
- Hunting/User Group
- Incoming Call Management
- Installation Wizard
- Internal Call
- Internal Call Restriction
- Interrupt Request
- Last Caller Recall
- Last Number Redial
- Least Cost Routing (Number , Time and Service)
- Provider to Service Provider , Carrier Pre-Selection)
- Live Call Screening (VMS)
- Live Call Supervision
- Logical Partitioning
- Maturity (Polarity Reversal, Delay , CPD)
- Menu based Command (DKP)
- Message Wait Indication
- Missed Calls
- Music-On-Hold
- Mobile Port (GSM/3G Port)
- Multi-Stage Dialing
- Mute
- Name Programming (Station, Trunk)
- NAT and STUN (VoIP)
- Network Selection (GSM)
- Off-Hook Alert (DKP)
- Online SMDR
- Operator (Single, Multiple)
- Override
- Paging (Internal)
- Peer-to-Peer Calling
- Priority (Intercom and Trunk)
- Privacy
- Programming the System

- (Using SL T , DKP , Ethernet Port)
- Quick Dial
- Raid
- Real Time Clock
- Region Selection
- Remote Alarm
- Remote Call Forward
- Remote Programming
- Routing Group
- Return Call to Original Caller (RCOC)
- Room Monitor
- SMDR Posting (Call Accounting System Interface)
- SMS Gateway
- SMS Server
- Self-Ring Test
- Selective Trunk Access
- SIP and RTP QoS (VoIP)
- Station Groups
- Station Message Detail Record - 22000 Records)
- Station Name
- System Activity Log and Display
- System Administrator (SA) Mode
- System Engineer (SE) Mode
- System Fault Log
- System Security (Password)
- Time Tables
- Time Zone Display
- Toll Control
- Trunk Access Group
- Trunk Auto Answer
- Trunk Connectivity (BRI)
- Trunk Connectivity (GSM/3G)
- Trunk Connectivity (T1/E1/ISDN PRI)
- Trunk Connectivity (TWT or CO)
- Trunk Connectivity (VoIP)
- Trunk Reservation
- Upgrading the Software
- User Absent/Present
- Virtual Stations
- Voice Message Applications
- Voice Prompts for Tones
- Walk-In Class of Service (Single/Multiple calls)
- Web based Programming
- GSM Trunk Connectivity
- Automatic Call to Missed (Predefined) Calls on Trunks

- Routing of calls to only permissible legal networks (Logical Partitioning)
- SMDR through Ethernet Port

2. IP Phone Type 1

- 240*64 Pixels Graphical LCD with Backlit
- LED for Incoming/Ongoing Call, Mute, Hold
- Add on 32 key module support, maximum key modules shall be supported
- Intuitive User Interface with Icons
- Multiple Languages Caller ID with Name, Number
- 49 keys including 4 Context Sensitive Hard Keys
- 1 x RJ9 Handset Port
- 1 x RJ9 Headset Port
- 1 x 3.5 mm Headset Port
- Installation: Wall Mount, Table-top
- CE,FCC-15,RoHS
- Power over Ethernet (IEEE 802.3af)
- Power Consumption: 5W (Typical)
- Connector: DC Power Jack, 5VDC/600mA
- Operating Temperature Range =0 to 45°C
- Storage Temperature = 0 to 55°C
- Message wait Lamp
- Ringer Lamp
- Voice Mail
- Call Pickup – Group and Selective
- Paging

Phone Features

- Mute
- Call Hold
- Do Not Disturb
- Speed Dial
- Hotline
- Redial
- Call Back
- Auto Answer
- Call Forward
- Call Waiting
- Call Transfer
- Room Monitoring
- Conference
- Directory
- Call Logs
- Paging
- Dial-by-Name

3. IP Phone Type 2

- 132 x 64 Pixel Graphical Display

- Context Sensitive and Fixed Function Keys
- Full Duplex Speakerphone with AEC, VAD, CNG
- TLS/SRTP for Voice Security
- Integrated PoE (802.3af)
- Auto Provision, TR069
- IPv6 Ready, PC and LAN Ports
- 132x64-pixel Graphical LCD
- LED for Incoming/Ongoing Call, MWI, Mute, Hold
- Intuitive User Interface with Icons and Soft keys
- Multiple Languages
- Caller ID with Name, Number
- 2 x 10/100 Mbps LAN & PC Ports
- 29 keys including 4 Soft Keys
- 1 x RJ9 Handset Port
- 1 x RJ9 Headset Port
- Installation: Wall Mount, Table-top
- CE, FCC-15 (Class-B), RoHS

Phone Book

- Local Phonebook up to 1000 entries Black List
- XML Remote Phonebook
- Intelligent Search Method
- Phonebook Search/Import/Export
- Call History: Dialed/Received/Missed/Forwarded

Phone Features

- Full-duplex Hands-free Speakerphone with AEC
- Codecs: G.711(A/μ), G.722, G.723, G.729, G.726, iLBC
- DTMF: In-band, Out-of-band (RFC 2833) and SIP INFO
- VAD, CNG, AEC, PLC, AJB, AGC
- 1 VoIP Account
- Call Hold, Mute, DND
- One-touch Speed Dial, Hotline
- Redial, Call Return, Auto Answer
- Call Forward, Call Waiting, Call Transfer
- Local 3-way Conferencing
- Direct IP Call without SIP Proxy
- Ringtone Selection/Import/Delete
- Keypad Lock, Emergency Call
- Set Date & Time Manually or Automatically
- Dial Plan, XML Browser, Action URL/URI
- Instant Messaging (Web UI and Phone)

Call Management

- Anonymous Call (CLIR)
- Anonymous Call Rejection
- Message Waiting Indicator (MWI)
- Voicemail, Call Pickup

- Intercom, Music on Hold
- Call Completion, Hot-desking
- Dial out Number from Web UI

Networking and Security

- SIP v1 (RFC2543), v2 (RFC3261)
- IPv6
- NAT Transverse: STUN Mode
- Proxy Mode and Peer-to-Peer SIP Link Mode
- IP Assignment: Static/DHCP/PPPoE
- HTTP/HTTPS Web Server
- Time and Date Synchronization using SNTP
- UDP/TCP/DNS-SRV (RFC 3263)
- QoS: 802.1p/Q Tagging (VLAN), Layer 3 ToS, DSCP
- SRTP for Voice
- Transport Layer Security (TLS)
- HTTPS Certificate Manager
- AES Encryption for Configuration File
- Digest Authentication using MD5/MD5-sess
- IEEE802.1X
- SNMP v1/v2

Management

- Configuration: Browser/Phone/Auto Provision
- Auto Provision via FTP/TFTP/HTTP/HTTPS for Mass Deploy
- Server Redundancy
- Factory Reset
- Soft Reboot
- Package Tracing
- System Log

Power Supply

- Power Adapter: 5VDC/600mA (Included in the Box)
- Power over Ethernet (IEEE 802.3af)
- Power Consumption: 5W (Typical)
- Connector: DC Power Jack

4. Mobile UC client for Android/iPhone

- Shall be installed on android OS 2.2 or later
- Shall be installed on IOS 7 or later
- Comprehensive Call Management
- One-Touch Access to PBX Features
- Corporate Directory Integration
- Video Calling
- Favorites

- Presence Sharing and Instant Messaging
- Voice Mail Access
- Conversation Recording
- Call management – call hold, transfer, forward, DND and intercom
- Multiparty audio conferencing
- Blind transfer
- Menu options - Call Pickup, Paging, Message wait, Call Retrieve, Alarm and Reminder, Dynamic Lock, Dial-In Conference, CLIR, Room monitoring & Call supervision
- Dial by extension
- Call Screening - ACB, Forced Answer, Global Hold, General Call Park, Call Chaining, IR & Barge-IN
- Multiple call support
- SMS over IP
- One touch transfer
- Wi-Fi to cellular handover
- Multiple language support
- Call toggle
- Auto call back
- Auto redial
- Forced answer
- Open a door
- Call logs
- Missed calls notification
- DND override
- It shall employ IP at its core with IP switching technology and 100% non-blocking.
- It shall have distributed processing architecture, SLIC and SMT Design.
- The system should have VOIP and VMS at its core .i.e. VOIP and VMS Daughter-board modules should be on CPU.
- The VOIP module should have 64 channels per module and such 4 modules shall be used to increase the number of VOIP channels.
- The VMS module should support 64 channel expansion, VMS shall support features like call queuing, multi-language support, multiple MOH
- The system shall provide IP functionality at its core to support SIP/IP extensions and trunks over SIP protocol. It should be possible to support SIP Trunks and SIP/IP Extension with the single VOIP module. It should support 99 SIP trunks and 2000 SIP/IP users (SIP/IP Phone, Mobile softphones, UC Client) on single VOIP module.
- It should support 248 IP-TDM calls and 500 IP-IP calls (non-transcoding).
- The system shall integrate in-skin voice mail module on CPU with 2170 hours of storage capacity and dedicated mailbox for each extension.
- It should support SIP over TLS and SRTP. It should be IPv6 ready.
- System should have 2 USB port with storage capacity up to 64 gb
- System should have Gigabit Ethernet ports and there should be provision to have LAN and WAN port separated out to create two different networks.

- It should have built-in multi-party conferencing. It should have minimum 15 conference possible of 3-party. The maximum number of participants required in single conference would be 21 minimum
- The system shall have the inbuilt auto attendant facility and shall be able to answer minimum 9 calls simultaneously and should support dial-by-name.
- The system should be built on a universal slot architecture and modular in design to enable seamless growth, by adding the desired necessary cards as and when required. Any peripheral card can be inserted in any slot of the platform, whereby it is possible to increase or decrease the trunk lines or subscriber lines of the system as per the requirement in future as per mentioned maximum requirement.
- The architecture of the System shall be capable of seamless migration to its maximum capacity by simply adding peripherals cards in the same chassis without compromising function/features of the system. The architecture should be non-stackable eliminating individual power supply for each chassis.
- The system shall have multiple port interfaces such as analog extension lines, digital key phone, IP Extension, C.O. Line, GSM/3G, E & M Line, PRI/E1 and VoIP. All interfaces shall be in the form of expansion cards and can be plugged into the universal slots of the system as and when require in the future. VoIP and Voice mail Daughter-board module should be on CPU.
- The system should retain traditional networks (CO, ISDN, and E&M & Radio) along with access GSM networks in single platform just by adding expansion cards.

Warranty: - All Vendors (Manufacturers / Agents) must submit offers with **24 months warranty after installation** at Site (Punjab Engineering College (Deemed to be University), Chandigarh).

Note: EPABX/IP Phone (Type1 & Type 2) and Mobile UC client for Android/IPhone offered should have specifications as mentioned above or better than these.

PUNJAB ENGINEERING COLLEGE (DEEMED TO BE UNIVERSITY), CHANDIGARH

SECTION V

FINANCIAL BID

SECOND COVER TITLED AS “FINANCIAL BID” CONSIST OF

Financial (Price) Bid for **Procurement of Hybrid EPABX and IP Phones** to be delivered by the bidder in the Punjab Engineering College (Deemed to be University), Sector 12, is to be submitted online in excel sheet provided.

Notes:

1. Rate should be quoted in Indian Rupees only. Taxes/Levies as per Indian law shall be made.
2. The institute is registered with the Department of Scientific & Industrial Research (DSIR) for purpose of availing custom duty exemption in terms of Govt. Notification no. 51/96-Customs dated 23.07.1996 and Central Excise Duty Exemption in terms of Govt. notification no. 10/97- Central Excise dated 01-03-1997as amended from time to time.

SECTION VI

GENERAL TERMS AND CONDITIONS

1. Clarification of Bidding Documents

A prospective Bidder requiring any clarification of the bidding documents may notify the PEC in writing or by telex or cable or fax at the PEC's mailing address indicated in the Invitation for Bids. The PEC will respond in writing to any request for clarification of the bidding documents which it receives no later than 15 days prior to the deadline for submission of bids prescribed by the PEC.

2. Amendment of Bidding Documents

At any time prior to the deadline for submission of bids, the PEC may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective bidder, modify the bidding documents by amendment.

In order to allow prospective bidders reasonable time in which to take the amendment into account in preparing their bids, the PEC, at its discretion, may extend the deadline for the submission of bids.

3. Language of Bid

The bid prepared by the Bidder, as well as all correspondence and documents relating to the bid exchanged by the Bidder and the PEC, shall be written in English language. Supporting documents and printed literature furnished by the Bidder may be in another language provided they are accompanied by an accurate translation of the relevant passages in the English language in which case, for purposes of interpretation of the Bid, the translation shall govern.

4. Period of Validity of Bids

Bids shall remain valid for 120 days after the deadline for submission of bids prescribed by the PEC. A bid valid for a shorter period shall be rejected by the PEC as non-responsive.

5. Opening of Bids by the PEC

The PEC will open all bids, in the presence of Bidders' representatives who choose to attend, at 11:30 AM on and in the following location:

Head, Computer Centre
Punjab Engineering College (Deemed to be
University),
Sector 12 Chandigarh 160012

The Bidders' representatives who are present shall sign a register evidencing their attendance. In the event of date of opening of Tender being declared a holiday, the due date of opening of the Tender will be the next working day at the same hours and venue..

6. Warranty

The entire system shall be in warranty (from OEM) for a period of Two year from complete commissioning & handing over the system.

7. Payment

- Payment for Goods and Services shall be made in Indian Rupees only as follows:
 1. On Final Acceptance
 2. 100 percent of the Contract Price shall be paid on the Successful Installation, Training and Satisfactory performance
- The Supplier's request(s) for payment shall be made to the PEC in writing, accompanied by an invoice describing, as appropriate, the Goods delivered and the Services performed, and by documents, submitted and upon fulfillment of other obligations stipulated in the contract.
- Payments shall be made promptly by the PEC
- Payment shall be made in Indian Rupees only.

- No advance payment will be made. Payment will be released after satisfactory receipt of goods/ material, demonstration/training and installation

8. Documents comprising the Bids

The Bids prepared by the Tenderers shall comprise of following components:

- Bid to be furnished as per the format for technical specifications.
- Technical literature for each product/service, covering full technical specifications.
- Bid prices should be quoted item wise as per format provided in excel sheet only duly signed and complete as per the format.
- Maximum educational discount as could be offered should be mentioned.

9. Cost of Tender

The tenderer shall bear all costs associated with the preparation and submission of its Bid, including the cost of presentation for the purpose of clarification of the bid, if so desired by the PEC and the PEC will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the Tendering Process.

10. Others Terms and Conditions

- An EMD/ bid security of equipment should be submitted in form of FDR/Demand Draft/Banker Cheque/Bank Guarantee from any commercial Bank in favor of Director, Punjab Engineering College (Deemed to be University) Chandigarh which shall be valid for 45 days beyond final bid validity period. Tender without earnest money shall be considered unresponsive and rejected.
- A Performance security of 10% of the cost of the equipment will have to be deposited by the successful bidder awarded the supply order in form of Fixed Deposited Receipt or Bank Guarantee from a commercial bank which should be valid for 60 days beyond the completion of warranty/contract period.
- Performance Security will be forfeited and credited to the institute (Punjab Engineering College (Deemed to be University), Chandigarh) in the event the supplier does not honour the warranty/contract and other terms and conditions of the tender.
- It may please be specified if the packing, insurance and sales Tax/Excise Duty etc. will be inclusive or extra of the prices quoted.
- Please quote delivery period also. It should be less than 60 days from the date of supply order.
- Detailed Catalogue should be sent along with supply of equipment.
- All legal disputes will be subject to Chandigarh Jurisdiction and will be interpreted under Indian Laws.
- The Director Punjab Engineering College (Deemed to be University) reserves to himself the right to reject any or all tenders without assigning any reasons.
- The firm who has been blacklisted by Centre/State Govt/UT/Boards/Corporations/any government authority/Punjab Engineering College (Deemed to be University) are not eligible for the Tender.
- The penalty will be charged @ 0.5% of cost of equipment per week after the expiry of delivery period, mentioned in the purchase order if delivery date is extended by the PEC.
- **All the rates will be FOR, Punjab Engineering College (Deemed to be University), Chandigarh.**
- The institute being a premier Education and Research Institute funded by Chandigarh Administration, discounts as applicable to Research Institute/Educational Institutes may be provided in the Tender.

- The bidders shall not be allowed to change, alter or modify the bids after expiry of the deadlines for the receipts of bids.
- The firm is entirely responsible for any damage or losses occurred to the material in the transit. The firm will lodge all complaints regarding the damage occurred in the transit and shall bear all expenses.
- In a tender, either Indian agent on behalf of the Principal/ (Original Equipment Manufacturer) OEM or Principal/OEM itself can bid but both cannot bid simultaneously for the same tender for the same item/ product.
- If an agent bids on behalf of the Principal/OEM, the same agent shall not bid on behalf of another Principal/OEM in the same tender for the same item/ product.
- Situation in which EMD/Performance security will stand forfeited if a bidder withdraws its bid during the period of bid validity specified by the bidder on the bid form (SECTION VII), and in case of successful bidder, if the bidder fails to supply the equipment or to furnish performance security in accordance with the tender.
- Bids received after the due date will not be considered.
- The tenderer is required to bring their own testing and measurement instruments which are required for the installation, commissioning and testing. These can be taken back after completion of the process.
- In case, any free gift scheme / cash scheme is launched by the company same will be offered by the vender to Punjab Engineering College (Deemed to be University), Chandigarh free of cost.
- Generally the bid offer will be received /opened on the day as specified in the schedule. If the scheduled date is declared as a holiday, then the tender shall be received / opened on the next working day at the same time.
- The agency shall arrange to provide demonstration/Training to the concerned lab staff regarding operation / maintenance of equipment free of cost.
- The institute has been exempted from custom and central excise duty.
- A technical compliance chart of the quoted product mentioning technical specifications of quoted product verses asked specifications is compulsory. Attach the compliance chart with technical bid.
- Tender validity should be 120 days from the opening of tender.

All the terms and Conditions of this tender document are acceptable to me /us.

Signature of Bidder

PERFORMANCE SECURITY FORM

(on Non-Judicial Paper)

BANK GUARANTEE BOND FOR PERFORMANCE WARRANTY

To

The President of India, through the Director
Punjab Engineering College (
Deemed to be University), Sector-
12, Chandigarh-160012

Dear Sir,

Sub: _____

1. You, on behalf of President of India, have entered into a contract with reference No. _____ with _____ (herewith after referred to "as the contractor") for the development, fabrication and supply of _____ (herein after referred to as stores) for the price and on the terms and conditions contained in the said contract.
2. In accordance with the terms of said contract the Contractor has undertaken to produce a Bank Guarantee for Rs _____ being 10% of (Rs _____) of the total value of the said stores supplied to you for the due fulfilment of its obligations to the President of India for due performance as per the contract during warranty period.
3. In consideration thereof, we happily expressly, irrevocably and unconditionally undertake and guarantee as principal obligors on behalf of the contractor that in the event that the President of India submits a written demand to us that the contractor has not performed according to the contractual obligations included in the said contract, we will pay you on the written demand, without demur and without reference to the contractor any sum up to a maximum amount of Rs. _____ (Rupees. _____). Your demand shall be conclusive evidence to us that such repayment is due under the terms of the said contract. Payment by us to you will be made within (30) days from receipt of your written request making reference to this guarantee and on demand.
4. This guarantee shall not be revoked without your express consent and shall not be affected by your granting any indulgence to the contractor, which shall include but not be limited to postponement from time to time of the exercise the same in any manner at any time and either to forbear or to enforce any covenant continued or implied in the said contract or any other course remedy or security available to you, and our Bank shall not be released from its obligations under this guarantee by your exercising any of your rights with reference to matters aforesaid or any of them or by reason of any other indulgence shown by you or by any other matter or thing whatsoever which under law would, but for this provision, have the effect of relieving our bank from its obligation under this guarantee.
5. Notwithstanding anything herein contained, our liability under this guarantee is restricted to Rs. _____ (Rupees. _____) and the guarantee

shall remain in force upto and including the _____ day of being reported to us by you returned to us duly discharged.

6. Unless a demand or claim under this guarantee is made on us in writing on or before the aforesaid expiry date as provided above or unless this guarantee is extended by us all your rights under this guarantee shall be prescribed and we shall be discharge from the liabilities hereunder.
7. This guarantee shall not be affected by any change in the constitutions of our Bank or of the contractor or for any other reason whatsoever.

We _____, Lastly undertake not to revoke this guarantee during its currency except with the prior consent from your office in writing.

Not with standing anything contained herein:

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

This Bank Guarantee shall be returned to our Name of the Bank Branch at _____ Office Address, once the purpose of the issuance has been fulfilled or upon expiry of this guarantee whichever is earlier. Even return of Original Bank Guarantee is essential for invoking the guarantee with specific request letter from the beneficiary.

Witness: _____, Signature _____

Witness: _____, Signature _____

For _____ Bank

For _____ Bank

Authorized Signatory

Authorized Signatory