



Chaudhary Ranbir Singh University, Jind
(Established by the State Legislature Act 28 of 2014)



Tender Ref. No.....

Date:

TENDER NOTICE

E-tender on behalf of Registrar, Chaudhary Ranbir Singh University, Jind is invited subscribed as “TENDER” for “ **HYBRID Telephone Exchange and its accessories items**”at Chaudhary Ranbir Singh University, Jind on the basis of quality and technical expertise from the Reputed Firms / Service Providers latest by 26.08.2019 up to 3.00 P.M. as per details given on website along-with security amount/EMD of Rs. 50,000 / (Rupees Fifty thousand only) through offline mode (DD/FD/BG) and a separate fee of Rs. 1,000/- as Tender Docs Fee (non-refundable) will also be deposited through offline mode i.e. DD in favor of Registrar, C.R.S. University, Jind. The E-tender technical bids and financial bids will be opened on 26.08.2019 at 03.10 PM. For more details may visit on website www.crsu.ac.in / <https://etenders.hry.nic.in>.

Last date of receipt of tender bids: 26.08.2019 at 3:00 PM

Date of opening of Technical Bids: 26.08.2019 at 3:10 PM

Date of opening of Financial Bids: 26.08.2019 at 3:10 PM

Note: The Tender will be received only through e-tendering i.e. online mode only.

Registrar

C.R.S. University, Jind



Chaudhary Ranbir Singh University, Jind
(Established by the State Legislature Act 28 of 2014)



STANDARD BIDDING DOCUMENTS FOR “HYBRID Telephone Exchange and its accessories items” at Chaudhary Ranbir Singh University, Jind on behalf of C.R.S. UNIVERSITY, JIND.

Name of work: “HYBRID Telephone Exchange and its accessories items” at Chaudhary Ranbir Singh University, Jind.

PRESS NOTICE

Chaudhary Ranbir Singh University, Jind (Haryana)-126102

Notice Inviting E-Tender

Name of Work	“Hybrid Telephone Exchange and its accessories items” at Chaudhary Ranbir Singh University, Jind
Tender Docs Fee	1000/-
Tender Estimated Amount	15,000,00/- (Fifteen Lakh rupees only)
EMD Amount	50,000/- (Fifty thousand rupees only)
Start date of Tender submission	05.08.2019 (5:00 PM)
Last date of Tender submission	26.08.2019 (03:00 PM)
Tender opening date – Technical Bids and Financial Bids respectively	26.08.2019 3:10 PM

- i) The tenders will be received only through E-tendering for further details visit website <https://etenders.hry.nic.in> and www.crsu.ac.in.
- ii) Cost of Bid documents / Processing Fee (to be paid through offline via DD) Rs. 1000/- (non-refundable) in favor of “Registrar, C.R.S. University”, payable at Jind.
- iii) The security amount/EMD amount of the tender (to be paid through offline through FD/DD/BG in favor of Registrar, CRS University, Jind) is Rs. 50,000/- (Rs. Fifty thousand only).
- iv) The university reserve the right to increase or decrease the items without any change of terms and conditions on proportionate increase and decrease in rates.

Registrar

C.R.S. University, Jind

DETAIL NOTICE INVITING TENDER

Registrar, Chaudhary Ranbir Singh University, Jind invites the bids from eligible bidders through online bids.

On behalf of Registrar, Chaudhary Ranbir Singh university, Jind the tender is invited for **“HYBRID Telephone Exchange and its accessories items”** at Chaudhary Ranbir Singh University, Jind through e-tendering with below mentioned work are hereby invited from eligible dealer/distributor/ firms under appropriate class/ category. The tender form “along with conditions of contract” to be fulfilled, can be obtained from the website <https://etenders.hry.nic.in>.

Sr. No	Description of work / Items	EMD to be deposited by Bidder	Tender Document Fee	Start Date & Expiry Date of Bid Submission	Expiry Date & Time of EMD Submission	Tender Opening Date – Technical bid and Financial bid respectively
1.	HYBRID Telephone Exchange and its accessories items with Telephone and 3 Years onsite Warranty	Rs. 50,000/- (To be paid Offline through FD/DD/BG in the favor of Registrar, CRS University, Jind)	Rs. 1000/- & Rs. 1000/- (To be paid offline through DD in favor of Registrar, CRS University, Jind)	05.08.2019 (5:00 PM) to 26.08.2019 (3:00 PM)	26.08.2019 03:00 PM	26.08.2019 03:10 PM

Under this process, the Pre-qualification/ Technical online bid Application as well as online Price Bid shall be invited at single stage under two covers i.e. PQQ/Technical & Commercial Envelope. Eligibility and qualification of the Applicant will be first examined based on the details submitted online under first cover (PQQ or Technical) with respect to eligibility and qualification criteria prescribed in this Tender document. The Price Bid under the second cover shall be opened for only those Applicants whose PQQ/ Technical Applications are responsive to eligibility and qualifications requirements as per Tender document.

1. **The payment for Tender Document Fee shall be made by eligible bidders offline directly through DD in favor of Registrar, Chaudhary Ranbir Singh University, Jind and the payment for EMD can also be made offline directly through DD/FD/BG in favor of Registrar, CRS University, Jind and also submitted in the office of Registrar, Chaudhary Ranbir Singh University, Jind in a sealed envelope with the same title of E-Tender Document.**

2. Intending bidders will mandatorily be required to online sign-up (create user account) on the website <https://etenders.hry.nic.in> to be eligible to participate in the e-Tender. **NSIC/MSME Registered vendors are exempted from submission of EMD, valid NSIC Certificate to be attached along with the offer.**

The Bidders can submit their tender documents (Online) as per the dates mentioned in the key dates:-

Key Dates

Sr. No.	Department Stage	Bidder's Stage	Start date and time	Expiry date and time
1		Tender Document Download and Bid Preparation/Submission	<u>05.08.2019</u> 05:00 PM	<u>26.08.2019</u> Upto 3:00 PM
2	Technical Bid Opening			<u>26.08.2019</u> 03:10 PM
3	Financial Bid Opening			<u>26.08.2019</u> 03:10 PM

Instructions to bidder on Electronic Tendering System

These conditions will over-rule the conditions stated in the tender documents, wherever relevant and applicable.

1. Registration of bidders on e-Procurement Portal:-

All the bidders intending to participate in the tender's process online are required to get registered on the centralized e - Procurement Portal i.e. <https://etenders.hry.nic.in>. Please visit the website for more details.

2. Obtaining a Digital Certificate:

2.1 The Bids submitted online should be encrypted and signed electronically with a Digital Certificate to establish the identity of the bidder bidding online. These Digital Certificates are issued by an Approved Certifying Authority, by the Controller of Certifying Authorities, Government of India.

2.2 A Digital Certificate is issued upon receipt of mandatory identity (i.e. Applicant's PAN Card) and Address proofs and verification form duly attested by the Bank Manager / Post Master / Gazetted Officer. Only upon the receipt of the required documents, a digital certificate can be issued. For more details please visit the website – <https://etenders.hry.nic.in>.

2.3 The bidders may obtain Class-II or III digital signature certificate from any Certifying Authority or Sub-certifying Authority authorized by the Controller of Certifying Authorities or may obtain information and application format and documents required for the issue of digital certificate from.

2.4 The bidder must ensure that he/she comply by the online available important guidelines at the portal <https://etenders.hry.nic.in> for Digital Signature Certificate (DSC) including the e-Token carrying DSCs.

2.5 Bid for a particular tender must be submitted online using the digital certificate (Encryption & Signing), which is used to encrypt and sign the data during the stage of bid preparation. In case, during the process of a particular tender, the user loses his digital certificate (due to virus attack, hardware problem, operating system or any other problem) he will not be able to submit the bid online. Hence, the users are advised **to keep a backup of the certificate** and also keep the copies at safe place under proper security (for its use in case of emergencies).

2.6 In case of online tendering, if the digital certificate issued to the authorized user of a firm is used for signing and submitting a bid, it will be considered equivalent to a no-objection certificate /power of attorney / lawful authorization to that User. The firm has to authorize a specific individual through an authorization certificate signed by all partners to use the digital certificate as per Indian Information Technology Act 2000. Unless the certificates are revoked, it will be assumed to represent adequate authority of the user to bid on behalf of the firm in the department tenders as per Information Technology Act 2000. The digital signature of this authorized user will be binding on the firm.

2.7 In case of any change in the authorization, it shall be the responsibility of management / partners of the firm to inform the certifying authority about the change and to obtain the digital

signatures of the new person / user on behalf of the firm / company. The procedure for application of a digital certificate however will remain the same for the new user.

2.8 The same procedure holds true for the authorized users in a private/Public limited company. In this case, the authorization certificate will have to be signed by the directors of the company.

3 Online Viewing of Detailed Notice Inviting Tenders:

The bidders can view the detailed N.I.T and the time schedule (Key Dates) for all the tenders floated through the single portal eProcurement system on the Home Page at <https://etenders.hry.nic.in>.

4 Download of Tender Documents:

The tender documents can be downloaded free of cost from the e-Procurement portal <https://etenders.hry.nic.in>

5 Key Dates:

The bidders are strictly advised to follow dates and times as indicated in the online Notice Inviting Tenders. The date and time shall be binding on all bidders. All online activities are time tracked and the system enforces time locks that ensure that no activity or transaction can take place outside the start and end dates and the time of the stage as defined in the online Notice Inviting Tenders.

6 PREPARATION & SUBMISSION Of online APPLICATIONS/BIDS:

Detailed Tender documents may be downloaded from e-procurement website (<https://etenders.hry.nic.in>) and tender mandatorily be submitted online.

Scan copy of Documents to be submitted/uploaded for Prequalification or Technical bid under online PQQ/ Technical Envelope: The required documents (refer to DNIT) shall be prepared and scanned in different file formats (in PDF /JPEG/MS WORD format such that file size is not exceed more than 10 MB) and uploaded during the on-line submission of PQQ or Technical Envelope.

FINANCIAL or Price Bid PROPOSAL shall be submitted mandatorily online under Commercial Envelope and original not to be submitted manually)

NOTE:- Bidders participating in online tenders shall check the validity of his/her Digital Signature Certificate before participating in the online Tenders at the portal <https://etenders.hry.nic.in>. For help manual please refer to the 'Home Page' of the e-Procurement website at <https://etenders.hry.nic.in>, and click on the available link 'How to...?' to download the file.

**TENDER NOTICE INVITING QUOTATIONS FOR HYBRID TELEPHONE EXCHANGE
AND ITS ACCESSORIES ITEMS AT CHAUDHARY RANBIR SINGH UNIVERSITY,
JIND (HARYANA)**

1-Technical Bid Terms & Conditions

- 1.1 Bidder firm / company should be minimum 3 years old registered in field of Electronics & IT(Registration Certificate Copy Required).
- 1.2 Bidder firm PAN & GST Registration Copies.
- 1.3 Bidder Firm must have ISO 9001 certified company copy of valid Certificate must be attached with the offer (at least from last one year).
- 1.4 Bidder Firm should have a minimum average turnover of Rs 50 Lakhs in last three years(Average). Copies of Balance Sheet, PL Statement & ITR of FY 2017-18, FY 2016-17 & FY 2015-16 required.
- 1.5 Valid NSIC Certificate of firm (In case exemption of EMD & Security Deposit / (BG required)by firm as per Ministry of Small & Medium Enterprises Government of India rules & regulation.
- 1.6 Bid Specific OEM's Authorization Certificate on Company Letter Head.
- 1.7 Non Black Listing Undertaking on a Rs. 10 Non Judicial Stamp Paper.
- 1.8 Bidder have to provide list of 5 Customers to whom they served for product/services for Electronics and IT. Out of 5, two should from Government departments /Institutes.
- 1.9 In case of non-compliance with any of above mentioned terms & conditions, bid shall berejected immediately.

2-Earnest Money Deposit

Bidder has to submit EMD amount of Rs. 50,000/- in favor of “Registrar CRS University, Jind” through offline mode via DD/FD/BG. EMD of successful bidder shall be deposited as security deposit and shall be released only after successful completion of project. EMD of unsuccessful bidders shall be refunded back within 15 working days. If the successful bidder fails to start maintenance activity for more than 6 weeks, the CRSU Jind has right to cancel the contract and forfeit the Security Amount / EMD amount with proper reason.

NSIC/MSME Registered vendors are exempted from submission of EMD, valid NSIC Certificate to be attached along with the offer.

3-Tender Fee:

Bidder has to submit e-tender document fee of Rs. 1000/- in favor of “Registrar CRS University, Jind” through offline mode which is non-refundable.

4-Financial Bid

The technical and financial bids will be submitted by single methods i.e. online mode only.

Technical bid: ‘**Annexure – A**’ - The bidders shall upload the required eligibility & technical documents online in the Technical Bid.

Financial Bid shall be filled properly by the bidder as per **Annexure – B** and it shall be submitted into a under Commercial Bid. If any financial bid shall be found in technical bid envelop, Bid shall be rejected immediately. Prices mentioned in the Financial Bid shall be exclusive of GST, GST shall be paid extra on quoted price. Financial bid shall be opened to technically qualified bidder firm only.

5-Work Allocation

Work Order shall be given to Lowest Price Bidder (L-1) only. L-1 shall be decided on term basis but rates are to be quoted items wise only.

6-Scope of Work

6.1 Successful Bidder / Vendor will supply ,Install ,commission and maintain the Hybrid Telephone Exchange and its accessories as per the BoQ mentioned in “**Annexure-A** “-

6.2 Cost of any faulty part (if changed) shall not be paid extra to vendor. Vendor will deploy minimum 01 (one only) resident engineer (RE) in CRSU premises in reasonable working hours (Excluding all holidays).

6.3 Cost of Software / Software License shall be given extra (other than Maintenance Monthly Price) to vendor for example: Antivirus, Original Window OS, any other software license required in any equipment etc.

7-Validity & Termination of Contract

Validity of work order / contract for CMC shall be initially for 5 years which can further be extended for next 5 years on the basis of work satisfaction level. Vendor can surrender work only after giving 1 month notice period.

8-Payment Schedule

(i) 75% (Seventy Five Percent) of the order value shall be paid after the receipt of material in good & satisfactory condition at the CRSU, Jind premises after inspection by duly authorized officer of CRSU, Jind.

(i) Balance 25% (Twenty Five Percent) of the order value shall be paid after Satisfactory Installation & Commissioning and handing over of the equipment in faultless working condition including system integration for the period of 10 (Ten) consecutive days from the date of handing over.

(ii) The payment shall be made through electronic clearing i.e. RTGS/NEFT to the bank account of the Supplier/Contractor and for this purpose Supplier /Contractor are required to submit their complete bank account details duly signed by the concerned bank authority while submitting the Pre-Qualification Bid itself.

9-Timelines & Penalty for Works

Vendor has to Supply, install the Hybrid Telephone Exchange within 90 days from the date of LOI issued to successful bidder. –

Site Preparation

The Supplier/Contractor shall have to inform the CRSU about the preparation of site for Installation of the equipment, immediately after the receipt of Letter of Award. The Supplier/Contractor shall have to provide the complete details regarding Space, Power, Cooling and all other infrastructural requirements needed for making of arrangements for Installation of equipment prior to actual delivery at site of the equipment so as to complete the work in a smooth manner.

The successful bidder to whom the work has been awarded shall immediately after the issue of the Letter of Award visit the sites of the CRSU for advice / Technical Assistance where the equipment

are to be installed and commissioned. However, it is clarified that the expense on account of site preparation is not in the scope of this work contract.

If the successful bidder fails in supply, satisfactory Installation & Commissioning of the equipment including system integration in stipulated time then liquidated damages / penalty will be charged as per Account Code of the Chaudhary Ranbir Singh University, Jind.

10-Warranty

The bidder must be quoted with 03 (Three) years comprehensive On-Site Warranty which shall be considered from the Date of Completion of project and 05 (Five Years) comprehensive On-Site Warranty charges may also be applicable after the warranty period i.e. 3 years and submit the CMC rates Year wise also.

11-Tender Preparation Expenses

The tenderer shall solely bear all cost associated with the preparation and submission of the bid. The CRSU shall in no case be responsible or liable for such cost, regardless of the conduct or outcome of the tender process. In no case, such cost shall be reimbursed by the CRSU.

12-Jurisdiction

The dispute, if any, shall be subject to the jurisdiction of Courts at Jind. Any other jurisdiction mentioned in the tender or invoices of the manufacturers/distributors/ dealers/suppliers etc. shall be invalid and shall have no legal sanctity.

13 -University reserves the right at the time of award of Work Order to increase or decrease or even delete the number of items without any change in terms and conditions.

14- The Sub Committee reserves the right for negotiation thereafter if considered necessary.

15-The performance security i.e. EMD amount shall be deposited/treated in the shape of Fixed Deposit Receipt or Bank Guarantee by the successful bidder i.e. who has been awarded supply order. The performance security shall remain valid for a period of 60 days beyond the date of completion of warranty period.

ANNEXURE “A”(Part of Annexure- A)

Bidders Technical Qualification Check List

Sr. No	Description	Bidders (Yes/No)	Remarks
1	Bidder firm / company should be minimum 3 years old registered in field of Electronics & IT (Registration Certificate Copy Required).		
2	Bidder firm PAN & GST Registration Copies		
3	Bidder Firm must have ISO 9001 certified company copy of valid Certificate must be attached with the offer(at least from last one year).		
4	Bidder Firm should have a minimum average turnover of Rs 50 Lakhs in last three years (Average). Copies of Balance Sheet, PL Statement & ITR of FY 2017-18, FY 2016-17 & FY 2015-16 required		
5	Valid NSIC Certificate of firm (In case exemption of EMD & Security Deposit / (BG required) by firm as per Ministry of Small & Medium Enterprises Government of India rules & regulation.		
6	Bid Specific OEM's Authorization Certificate on Company Letter Head.		
7	Non Black Listing Undertaking on a Rs. 10 Non Judicial Stamp Paper.		
8	Bidder have to provide list of 5 Customers to whom they served for product/services for Electronics and IT. Out of 5, two should from Government departments /Institutes.		
9	In case of non-compliance with any of above mentioned terms & conditions, bid shall be rejected immediately.		

ANNEXURE “A”

Bill of Quantity (BoQ) for Supply , installation , testing and commissioning of Hybrid Telephone Exchange and its accessories items for the period 3 years

Sr. No	Item Description	Qty	UoM	Make	Model
1	EPABAX				
i	IP PBX as per the specifications attached VOIP and Unified Communication enabled IP-PBX expandable upto 1250 Ports and Brief features and Port Count are as below	1	Set		
ii	ISDN PRI Ports for trunk line	2	Nos		
iii	IP Gateway Card	2	Nos		
iv	Analog Extensions with CLI (with message wait lamp indication)	228	Nos		
v	8 Port Auto Attendant and VRS/ IVR	1	Nos		
	Rates only				
a	VOIP Cards for 256 Channel	1	Set		
b	Digital Extension Circuits- 200 Nos	1	Set		
c	Voicemail Box license	1	Nos		
d	IP Extensions - 72 Nos License	1	Set		
2	HANDSETS/ Phones as per the Technical Specifications given in Annexure A				
A	Analog Phones/ Handsets- as per the technical specifications attached (<i>Rates Only</i>)	1	Nos		
B	Digital Phones/ Handsets- as per the technical specifications attached (<i>Rates Only</i>)	1	Nos		
c	IP / SIP Telephone Instrument/ Extension Type-1-- as per the technical specifications attached (<i>Rates Only</i>)	1	Nos		
d	IP / SIP Telephone Instrument/ Extension Type-2-- as per the technical specifications attached (<i>Rates Only</i>)	1	Nos		
3	1000 Pair MDF	1	Set		
4	16 Port Voicemail-- as per the technical specifications attached	1	Nos		
5	Structured Cabling				
i	Single Port Cat-6 Information Outlets,Face Plate with Gang Box (<i>Rates Only</i>)	1	Nos		

ii	Cat-6 24 Port Jackpanel (Rates Only)	1	Nos		
iii	Cable Manager High Quality PVC Type (Rates Only)	1	Nos		
iv	Cable Boxes - CAT-6 - Gray (305 Mtrs) (Rates Only)	1	Box		
v	50 Pair Riser Cable	1	Mtr		
vi	Patchcords- CAT 6- 7 fts-Blue- (RJ45- RJ45) for Field & Resource side (Active Data) (Rates Only)	1	Nos		
vii	Patchcords- CAT 6- 4 fts-Blue- (RJ45- RJ45) for Resource side (Active Data) (Rates Only)	1	Nos		
viii	42U Rack (W600 x D1000) open Rack	1	Nos		
6	Services				
i	SITC of 1" conduit- PVC	1	Mtrs		
ii	Laying of Cat 6 Cable in above PVC conduit or existing duct, (Rates Only)	1	Mtrs		
iii	Laying of 50 Pair Riser cable	1	Mtrs		
iv	MDF Termination and Punching- 100 Pair	1	set		
v	Fixing of Jack Panel (Rates Only)	1	Nos		
vi	Fixing of I/O (Rates Only)	1	Nos		
vii	Fixing of Rack	1	Nos		
viii	Installation, testing and commissioning of Entire system.	1	Job		
ix	Cost of one Resident Engineer- Per Year	3	Years		
x	CMC Charges- Per year after expiry of 3 years warranty period	1	Years		

Technical specification (Part of Annexure-A)

SN	Description of Specification	Compliance Statement
I.	Technical Specification of ISDN & IP Ready EPABX System (Schedule Item No. 1):	
1.	General Requirement:	
1.1	<ul style="list-style-type: none">) IP based Communication EPABX System should be a full-featured IP based communications system providing a rich feature set of the system, with Voice over IP (VoIP) communications, across corporate Local and Wide Area Networks (LAN and WAN)and expandable up to 1250 port) System Architecture should be latest IP and must be 19”Rack mount with 2U chassis based architecture 	

	<ul style="list-style-type: none">) The OEM should be listed in the Gartner Magic Quadrant for Unified Communications published in years 2015 to 2018) Should be ROHS complied as green product with power saving) System Architecture should have networking capability with (1+49) location with full feature enabled <p>Below optional features (same OEM) must be supported and should be available on Controller of the EPABX System:</p> <ul style="list-style-type: none"> ➤ 4 party video conference (MCU) feature over intranet. ➤ Caller-Id (Name and Number) ➤ Meet-me conference 32 party X 2 or 8 party X 4. ➤ Remote Conferencing 32 party X3 with password protection ➤ WEB based 4 party Video conference expandable up to 8 party and system should support 4 session of 8 party WEB based Video Conference ➤ 4 Mobile Client user 	
	Environmental Conditions:	
	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.	
	Operational temperature: 0 to 45 Degree C.	
	Humidity: 10% to 95% RH (non-condensing)	
	Note: Offered product must be IS9000 Certified for Environmental conditions. Bidder must submit test report from Central Govt/ NABL approved / ILAC accredited lab to provide conformity to the specifications including Environmental Test Sequence. <ul style="list-style-type: none"> i) Cold Test: At Zero degree C for 2 Hrs as per IS9000/ Pt 2/Sec4 ii) Dry Test: At 45 degree C for 16 Hrs as per IS9000/ Pt 3/Sec5/1977 iii) Damp Heat (Steady State) Test: At 40 degree C & 95% RH for 2 cycles as per IS9000/ Pt 5/Sec 1/1977. 	
1.2	The Centralized architecture will be based on use of a communication system to provide support for:	
a)	Peripheral shelves to allow for legacy connectivity (TDM)	
b)	IP communication devices (IP desktop, IP soft phone, SIP phone, SIP trunks.)	
c)	TDM communication devices (Analog Extensions, Digital Extensions, Analog Trunk, ISDN (PRI, BRI) Trunk, E&M Trunk.	
d)	Local or remote network management system.	
1.3	Central Processing Unit: The system main software should be open architecture based. The CPU of main system shall be 32 bit processor. The system software shall be on flash memory of minimum 1 GB capacity. The system should be 19" rack mountable.	
a)	Power supply, Control Processor and Common Control Units	
b)	Highway Interface Cards in the peripheral shelf	
c)	TDM and IP Highway Link	
d)	Memory (Flash based)	
e)	Power Supply for expansion cabinets/ Peripheral Shelf's	
1.4	The system should be able to use P2P video calling over intranet & internet if video end point installed. No additional hardware/software is required to use	

	video phone.	
1.5	The system should be able to use SIP endpoints as extensions for the users and SIP trunks should be able to be interconnected with any SIP based IP PBXs.	
1.6	The system must be capable of providing MCU feature for 4 party video conference.	
1.7	Walking Class of Service, Auto Call Back, CLI (Caller Line Identification) etc. under networking environment.	
1.8	The failure of any component / sub system in the exchange should not result in the failure of the complete exchange.	
1.9	Minimum 10 numbers of attendant/operator consoles should be supported by exchange.	
1.10	Provision for remote maintenance of the exchange from a remotely located operation & maintenance center shall exist in the system without addition of any extra hardware / software. Remote maintenance device / Interface should be built-in with the system.	
1.11	System proposed should be non-blocking and must be able to handle 100% traffic.	
1.12	The exchange should support simultaneous transfer of voice, data & images without any degradation of service quality.	
1.13	<u>Booting from Flash:</u> The system should boot from Flash Memory /Flash Disk for faster booting. It should be possible to take back-up in Flash Memory /Flash Disk. The system should not use FDD drives, HDD and optical drives. The total software up-gradation of system should be possible by uploading the Flash Memory / Flash Disk with upgraded software. During any update & upgrade of the system software, there should be zero downtime.	
1.14	It should be possible to virtually partition the EPABX system in required numbers of sub-systems and use them as different intercom exchanges. It should be possible to block dialing from one sub-system to another sub-system.	
2.	Technical Requirements:	
2.1	The system modularity shall be such that there is no requirement of traffic study or load study to configure the system in case more numbers of lines of applications are added. The system shall be of completely Non-Blocking type & all the cards shall have equal access to any free available time slot, i.e. there shall be no segmentation of the time slots required for particular shelf of cards.	
2.2	Suitable marking shall be done for different types of cards to enable easy identification & replacement.	
2.3	The system offered must support Redundancy of Sensitive Elements as an optional feature so that same can be availed as and when required by user	
a.	The system must have option to provide duplicity of main controller. In case main controller fails then secondary controller shall act as disaster recovery controller of main IP-PBX System	
b.	The main and standby EPBX should be in complete sync with main EPBX.	
c.	The system must have option to provide duplicity of power supply unit i.e. Main PSU & Standby PSU but should not be installed in same cabinet	
d.	Media gateways should also provide distributed power supplies to ensure reliable gateway architecture.	
2.4	It should support following minimum Trunk Features:	
a.	Support all signaling standards	

b.	Transit calls	
c.	CO to Tie line restriction	
d.	Tie Line Tandem Restriction	
e.	Trunk Camp ON	
f.	Digital Tie Line	
h.	CO to CO transfer	
j.	Area code restriction	
k.	Call Monitoring system/Call Billing	
l.	Silent Monitoring	
m.	Night Attendant Console	
n.	SIP	
2.5	The system shall support Multi Party Video Telephony over IP Soft Phone Terminals, Multi-Media transportation by mere addition of customer premises ISDN / IP compatible terminal equipment's, documentary proof of which is to be submitted.	
3.	Hardware:	
3.1	Hardware shall be modular in design with standardized modules. The modular design shall permit growth in small steps. The hardware shall be server based architecture and to be housed in 19" suitable cabinet with front & back door.	
3.2	The system shall have universal slots architecture.	
3.3	The system will have to permit a step-by-step details on IP evolution or migration of its architecture from a centralize PBX type to an architecture completely distributed on IP while reusing the existing material including the terminals, and without interruption of service. In a distributed IP architecture, Media-Gateways shall be 256 port configured with adequate resources (i.e., VoIP codec etc.) to support the expected traffic coming from the configured non-IP end points in the system, including those for Digital terminals, Analog terminals, Analog CO trunk, ISDN PRI, IP, Digital and Analog tie lines etc.	
3.4	The system shall be able to interoperate with other telephone systems and endpoints using following standards PRI/E1, SIP and 2/4 – wire E&M trunk.	
5.	Number of Dialing Digits:	
5.1	The minimum number of significant digits to be dialed for getting access to the distant end subscriber on STD shall be eight (8) (excluding the access code). It includes the number of digits in the trunk code for the local exchange and the subscribers' telephone number. The supplier shall indicate maximum number of significant digits, which can be dialed to get access to distant exchange.	
5.2	It should be possible to designate subscriber numbers with in exchange with variable numbers of digits from 2 digits to 8 digits.	
7.	Architecture:	
7.1	The system should be the state-of-art based, software controlled and should switch simultaneously Voice, Data & Images without any degradation of service quality. Architecture of the system should be 19" rack mountable communication server and it should allow media gateways to have both IP & TDM communication device (digital terminals, analog terminals, Digital/Analog/ISDN trunks).	

7.2	The system should have IP switching at CPU or VOIP daughter board connected to the CPU. Increase in IP/SIP extensions and trunks license should not include any external/internal media gateway cards, IP cards or signaling server. Increase in IP/SIP capacity should be through license only. DSP resources for conversion of IP to TDM and vice versa should be at CPU or VOIP daughter board at CPU and not through any media card inserted in any time slot of peripheral cabinet.	
7.2	The system shall be IP enable switch. The switch should support Session Initiation Protocol (SIP) for transmission of voice over IP network. It should also support G.711, G.723, G.722 (Wide band) & G.729A/B encoding standards. The system should support IP Video Telephony and IP communication device (IP desktop, IP soft phone, SIP phones etc.) & Video MCU feature	
7.3	The system should support ISDN between premise equipment such as PBX's and desktop equipment such as voice terminals, data terminals and PCs. System should support ISDN BRI / PRI. Trunk limitations, if any regarding maximum number of ports / cards supported should be clearly specified.	
7.4	The system should be totally non-Blocking type and all the port cards should have equal access to any free available time slot and should have equal access time to TDM Bus.	
7.5	System should be based on universal port architecture. Except for Common Control and Power supply card, system should not impose any restriction in terms of slots usage for a particular function.	
7.8	Suitable protective measures shall be provided against surges, earthing, shielding of AC supply induced voltage to ensure normal operation of the exchange.	
8.0	Protocols:	
8.1	The exchanges shall support Caller Line Identification for all ISDN & IP network subscribers including analog subscribers.	
8.2	Exchange shall support following signaling Protocols- (i). ISDN PRI, (ii). ISDN BRI, (iii). E&M (2/4 Wire), (iv). DTMF, (v). Loop Tie on DTMF, (vi). All the Common Signaling Standards adopted for ISDN / Non ISDN connections to PSTN, (vii). SIP	
8.3	Exchange should support Automatic Call Distribution (ACD) functionality.	
8.4	Exchange should be upgradeable to CTI with direct Ethernet Connectivity to LAN at CPU.	
9.	System Facilities and Feature Transparency:	
9.1	The PBXs shall be able to extend feature availability over the VOIP exchange network. The feature availability shall be applicable to at least the following:	
a.	Audio Speech basic call	
b.	Calling line Identification and Name Identification	
c.	Call Forwarding (Busy, No Answer, All Calls)	
d.	Camp ON (Call completion on no reply)	
e.	Call Offer	

f.	Re-routing (call forwarding across network)	
g.	Camp ON (Call completion on busy)	
h.	Calling and Answering party name and No. ID	
i.	Uniform & non uniform Dialing Plan across network	
j.	Do not Disturb	
k.	Follow Me	
l.	Voice Page over IP	
m.	Message feature support over ISDN	
n.	Hot line between two points with ring extended on lifting of the Handset to predefined destination.	
9.2	Abbreviated Dialing: The system shall be able to store at least 1000 lists of abbreviated dialing (AD). The AD list entry size & maximum AD entries per system shall be indicated by the manufacturer / supplier.	
9.3	Integrated Announcement: The system shall be able to store recorded announcements (messages). The announcements shall be digitized and stored in state of art electronic memory devices. These announcements shall be recorded or updated with the help of telephone instrument. The system supplied should be equipped with all necessary hardware & software to support this functionality.	
9.4	Last Number Redial	
9.5	Conference: The system must have at least 8 numbers of eight parties or two numbers of 32 party conferences.	
9.6	Remote Conference/ Meet me Conference: The system should support Meet me conference bridge facility with password protection for minimum 32 participants.	
9.7	Flexible Station Move: The system should give complete flexibility to dial a person his identification number from any location & thus utilize all the facilities from that point.	
9.10	Authorization Codes: Codes shall be of 4 to 7 digits length.	
9.11	Intercom Groups: A minimum of 25 groups with 100 subscribers in each group shall be available. Dialing scheme with in groups should be flexible. The supplier shall indicate the maximum number of groups and subscribers in each group the system can support.	
9.12	Malicious Call Tracing: It shall be possible to identify malicious calls in case it is from within the exchange or from CO, Tie or other outstation exchanges.	
9.13	Following facilities shall be provided without dialing a code.	
a)	Hot Line – The extension with this facility shall be automatically connected to the required subscriber as soon as it goes off hook.	
b)	Outgoing only subscriber.	
c)	Incoming only subscriber.	
d)	Call Pick up – It should be possible for the subscriber of a predefined group to transfer incoming call / calls of the group at his extension.	
	Essential features:	
9.13.1	Forced Release – Forced release shall be applicable for all type of calls under the following conditions.	
9.13.1.1	User exceeds a preset inter digit time interval.	
9.13.1.2	Calling user exceeds a preset time while listening to the ringing or busy tone.	
9.13.1.3	When any of the two users of a normal call terminates.	
9.13.2	Local calls within the exchange should be released by either party. For calls	

	from other exchanges, it should release in case time out for release through calling party is provided.	
9.13.3	For the incoming circuits either from the exchanges or trunk, it shall be possible to insert any number of digits at the beginning of incoming digits.	
9.13.4	It shall be possible to suppress or add digits for outgoing junction.	
9.13.5	In case of more than one outgoing junction, the seizing of circuits should be in sequential order.	
9.13.6	It should be possible to specify maximum number of output digit for tie/ trunk lines. However, circuits shall function with less number of digits and with the receipt of reverse signaling, the speech path should be made through, else the speech path should be made through after time set.	
9.13.7	Tie Line Facility	
9.13.8	STD Barring: Following STD barring feature should be available.-	
9.13.8.1	Selective STD barring and route wise STD barring.	
9.13.8.2	STD barring to any subscriber.	
9.13.8.3	STD barring and route wise barring to subscribers having STD facility.	
9.13.9	Line Lock out: The system shall provide line lockout when user does not start dialing after a preset time interval.	
9.13.10	Group Hunting: Automatic selection of a free / idle line from a group of lines.	
9.14	Announcements & Messaging: Additional hardware & software are to be provided for voice guided DID (Direct Inward Dialing) facility for CO lines. It shall be possible for the subscribers of the DOT/BSNL any other external exchange to dial and reach an extension without intervention of the attendant, if allowed.	
11.	Voicemail: System shall support voicemail feature and must be from same OEM	
11.1	The system should have in-skin 16 port voice mail and auto attendant system with minimum of 12 Hrs storage for minimum 50 mail boxes. System should have capability to configure up to maximum of 800 mail boxes with increase storage capacity to 115 Hrs depending on individual user requirements.	
11.2	The Hardware/software required along with relevant authorized software shall be supplied.	
11.3	The cost shall include the license charges for required voicemail users.	
11.4	Message wait notification on normal Analog Phones should be through visible notifications.	
11.5	Different call treatment for Internal & External calls: The conditions on which particular call (either internal or external) should go to the voice mail should be specified. Typically the call should reach a voice mail on the following conditions:	
11.6	Ring on no answer (Number of rings after which the call to be routed to voice mail is to be specified).	
11.7	Busy / do not disturb / on call forwarding to the respective user / time based transfer to voice mail.	
11.8	Personal Greetings: It should be possible to have different personal greetings for internal, external, and out of hour's calls for the same voice mail- box.	
11.9	It should not use the same voice ports for different functions, thus reducing the actual number of ports effectively for the end user.	

TECHNICAL SPECIFICATIONS OF HANDSETS

SN	Description of Specification	Compliance Statement
II.	Technical Specification of Analog Telephone Instrument: (Sr. No. 2a of BoQ)	
1.	The electronic push button telephone should have following main features.	
1.1	Pulse or Tone dialing, temporary switch over possible.	
1.2	CLI (Caller Line Identification) display minimum 3 line 16 character	
1.3	Recall key	
1.4	Last number redial	
1.5	Ringer volume adjustable	
1.6	Manual pause	
1.7	Visual Message Wait lamp indication for Voice Mail	
1.8	Telephone instruments shall be compatible with the offered digital exchange.	
III.	Technical Specification of Digital Telephone Instrument: (Sr. No. 2b of BoQ)	
1.	Digital Key Telephones system display should have the following minimum specifications:	
1.1	LCD display	
1.2	3 lines x 24 characters per line LCD display	
1.3	Separate Visual Message Wait Indicator Lamp with multicolor option	
1.4	Minimum 6 flexible programmable keys & 4 soft keys support	
1.5	Dual color LED indication, Backlit Dial Pad	
1.6	Up-Down Cursor Keys	
1.7	Incoming Speech Gain Control	
1.8	Ringer Volume Control	
1.9	Display of Incoming call/outgoing calls/ Missed call display	
1.10	Two Step Adjustable Base	
IV.	Technical Specification of IP Telephone Instrument: Type 1 (Sr. No. 2 c of BoQ)	
1.0	IP terminal should have the following minimum technical specifications:	
1.1	XML support	
1.2	2 ports, 10base-T/100base-TX, Full/Half Duplex, Auto Negotiation/Fixed LAN interface	
1.3	Voice Codec G.711, G.729a/G.722	
1.4	IP address setting direct or via DHCP server	
1.5	Qos: ToS (IP Precedence, Diffserv)	
1.6	VLAN Tagged IEEE802.1Q/p	
1.7	Security IEEE802.1x authentication (EAP-MD5/ EAP-TLS, EAPOL Forwarding), RTP encryption, Autoconfig encryption	
1.8	PoE (IEEE802.3af) or Local Power Adaptor	
1.9	2 Step adjustable base	
2.0	4 line X 24 digit display	
2.1	Backlit Display and Dial Pad	
2.2	12 Programmable keys with Dual Color LED support	

2.3	10 Fixed feature keys e.g. Hold, Redial	
2.4	4 Soft keys	
2.5	Full Duplex Hands free mode, Wideband Codec	
2.6	500 Directory Entries	
2.7	Call History 50 records each for Incoming and Outgoing	
V.	Technical Specification of IP Telephone Instrument: Type 2 (Sr. No. 2d of BoQ)	
1.0	SIP terminal should have the following minimum technical specifications:	
1.1	SIP Account and Line: 1 SIP account, up to 2 call appearance	
1.2	132 x 48 LCD display	
1.3	RJ9 headset jack	
1.4	IP address setting direct or via DHCP server	
1.5	Support for G.711 μ /a, G.722 (wide-band), G.723,G.726-32, G.729 A/B, iLBC , in-band and out-of-band DTMF (In audio, RFC2833, SIP INFO)	
1.6	Dual switched auto-sensing 10/100 Mbps Ethernet ports, integrated PoE	
1.7	SIP RFC3261, TCP/IP/UDP, RTP/RTCP, HTTP/HTTPS, ARP/RARP, ICMP, DNS (A record, SRV, NAPTR), PPPoE, SSH, TFTP, NTP, STUN, SIMPLE, LLDPMED, LDAP, TR-069, 802.1x, TLS, SRTP	
1.8	Layer 2 QoS (802.1Q, 802.1P) and Layer 3 (ToS, DiffServ, MPLS) QoS	
1.9	Multilanguage Support	
2.0	PoE (IEEE802.3af) or Local Power Adaptor	
2.1	2 Step adjustable base	
2.2	Call History up-to 200 records each for Incoming and Outgoing	

Offered EPABX Must support below Handset and Technology	
A	Technical Specification of IP DECT Handset
1.0	Call handling features:
	- Auto answer
	- Calling name display
	- Calling line (CLIP) display / digits
1.1	50 Call log
1.2	CAT-iq – HD audio
1.3	Headset- Connector and Bluetooth support
1.4	IP-40 Class
1.5	Standby time- upto 160 Hour
1.6	Talk time- upto 20 Hour
1.7	Display: Color, 128x128, 1.44 inch
1.8	Location detection
1.9	SOS button
1.10	Memory card option for handset settings
1.11	Personal Directory- minimum 200
1.12	Central Directory
1.13	Software download over the air
1.14	Speakerphone / HD quality
1.15	Vibrator alarm

B	Technical Specification of IP DECT Access Point
i	Antenna
	• Standard: internal omni-directional antenna
	• Optional: external antenna
ii	Call handling features
	• Crystal clear speech
	• CLIP and name display
	• Enquiry
	• Conferencing
	• Seamless integration with features of PBX platform 1)
	• Central Directory support 1)
	• DTMF and call progress tones
	• Overlap Sending
	• Multiple call Appearance (2 nd call)
iii	Capacity
	• Channels: 12 channels providing max. 11 simultaneous calls per AP400
	• DECT Access Points- 750 Nos.
	• Number of extensions supported- 18750
iv	Design
	• Very compact unit (less than A5 size) with flexible antenna positioning
v	Housing

	<ul style="list-style-type: none"> • Indoor use: mounting on wall or under ceiling • Optional: weather proof outdoor housing 	
vi	Management through standard Windows PC and shall run in parallel with other applications	
vii	Messaging	
	<ul style="list-style-type: none"> • Messaging (LRMS) support • Maximum message length support: 160 characters 3) • Message broadcast support 1) • Message waiting indication • Message waiting (voicemail) • Support of different urgencies/priorities: Normal, urgent and emergence • Message broadcast support • Voice call to call back number in message 	
viii	Mobility	
	<ul style="list-style-type: none"> • Support to DECT compatible handsets • Roaming and seamless handover • Full non-blind slot radio • Location detection 	
ix	Multi-site support	
x	Network aspects	
	<ul style="list-style-type: none"> • Connects directly to Local Area Network Ethernet • Multicast • Support of G.729AB compression (with G7A add-on board) • 10/100 Mbits Ethernet interface • Support of G.711 and G.722 for CAT-iq 5) 	
xi	Power Supply	
	<ul style="list-style-type: none"> • Power over Ethernet (PoE) according to 802.3af 	
xii	Security	
	<ul style="list-style-type: none"> • Secure DECT authentication on all channels 	
xiii	Service/Maintenance	
	<ul style="list-style-type: none"> • Software upgrading via air interface and Headset Connector • LED status indicator 	
xiv	Web Access	
xv	Must support below SIP RFC	
	<ul style="list-style-type: none"> • RFC2246 • RFC2327 • RFC2822 • RFC2833 • RFC2976 • RFC3261 • RFC3264 • RFC3265 • RFC3311 • RFC3325 • RFC3428 	

	• RFC3515	
	• RFC3578	
	• RFC3665	
	• RFC3711	
	• RFC3842	
	• RFC3891	
	• RFC4568	
xvi	Environmental condition	
	Operating: 5°C to +45°C (class 3.2)	
	Transport: -40°C to +70°C (class 2.3)	
	Storage: -25°C to +60°C (class 1.2)	
	Relative Humidity < 90% (non-condensing)	
xvii	Protection Handset: IP20	
xviii	Range Indoor: 50 m	
xix	Outdoor: 300 m	
xx	Power Supply	
	• Power over Ethernet (PoE) enabled, IEEE802.3af	
xxi	Network	
	• 10/100BASE-T IEEE802.3	
	• IP version 4, DHCP, TFTP	
	• QoS IEEE802.1Q, 802.1p	
	• DiffServ	

ANNEXURE – B

FINANCIAL BID (BoQ):

Fill the Prices in the given Sheet (BoQ):-

Sr. No	Item Description	Qty	Uo M	Make /Model	Warranty	Rate	Amount (A)	GST Amount (B)
1	EPABAX							
i	IP PBX as per the specifications attached VOIP and Unified Communication enabled IP-PBX expandable upto 1250 Ports and Brief features and Port Count are as below	1	Set					
ii	ISDN PRI Ports for trunk line	2	Nos					
iii	IP Gateway Card	2	Nos					
iv	Analog Extensions with CLI (with message wait lamp indication)	228	Nos					
v	8 Port Auto Attendant and VRS/ IVR	1	Nos					
	Rates only							
a	VOIP Cards for 256 Channel	1	Set					
b	Digital Extension Circuits- 200 Nos	1	Set					
c	Voicemail Box license- 50 Clients	1	Nos					
d	IP Extensions - 50 Nos License	1	Set					
2	HANDSETS/ Phones as per the Technical Specifications given in Annexure A							
A	Analog Phones/ Handsets- as per the technical specifications attached (<i>Rates Only</i>)	1	Nos					
B	Digital Phones/ Handsets- as per the technical specifications	1	Nos					

	attached (<i>Rates Only</i>)							
C	IP / SIP Telephone Instrument/ Extension Type-1–as per the technical specifications attached (<i>Rates Only</i>)	1	Nos					
D	IP / SIP Telephone Instrument/ Extension Type-2–as per the technical specifications attached (<i>Rates Only</i>)	1	Nos					
3	1000 Pair MDF	1	Set					
4	16 Port Voicemail–as per the technical specifications attached	1	Nos					
5	Structured Cabling							
I	Single Port Cat-6 Information Outlets, Face Plate with Gang Box (<i>Rates Only</i>)	1	Nos					
Ii	Cat-6 24 Port Jack panel with Earthing Arrangements (<i>Rates Only</i>)	1	Nos					
Iii	Cable Manager High Quality PVC Type (<i>Rates Only</i>)	1	Nos					
Iv	Cable Boxes – CAT-6 – Gray (305 Mtrs) (<i>Rates Only</i>)	1	Box					
V	50 Pair Riser Cable	1	Mtr					
Vi	Patch cords- CAT 6- 7 fts-Blue- (RJ45-RJ45) for Field & Resource side (Active Data) (<i>Rates Only</i>)	1	Nos					
Vii	Patch cords- CAT 6- 4 fts-Blue- (RJ45-RJ45) for Resource side (Active Data) (<i>Rates Only</i>)	1	Nos					
Viii	42U Rack (W600 x D1000) open Rack	1	Nos					

6	Services							
I	SITC of 1” conduit-PVC	1	Mtrs					
Ii	Laying of Cat 6 Cable in above MS conduit or existing duct (Rates Only)	1	Mtrs					
Iii	Laying of 50 Pair Riser cable	1	Mtrs					
Iv	MDF Termination and Punching- 100 Pair	1	set					
V	Fixing of Jack Panel (Rates Only)	1	Nos					
Vi	Fixing of I/O (Rates Only)	1	Nos					
Vii	Fixing of Rack	1	Nos					
Viii	Installation, testing and commissioning of Entire system.	1	Job					
Ix	Cost of one Resident Engineer- Per Year	3	Year s					
X	Complete Project - CMC Charges- Per year after expiry of 3 years warranty period (for next 5 years)	5	Year s					
Sub Total								

Project Cost -Sub Total A+ Sub Total B) = INR _____ (In Figure)

In words (Rupees _____)

****Note: In case of mismatch price quoted in words shall be taken as final.**

Bidder Firm Name:

Address:

Signature with Stamp:

Name:

Date:

Place: