

नेशनल ऑटोमोटिव टेस्ट ट्रैक्स NATIONAL AUTOMOTIVE TEST TRACKS

Limited Tender Document

For

SITC of IPPBX System for Internal/External communication at NATRAX

PITHAMPUR, DIST. DHAR (Madhya Pradesh)

Tender No. - NATRAX/PROC/A&IT/24/47

National Automotive Test Tracks (NATRAX)/ नेशनल ऑटोमोटिव टेस्ट ट्रैक्स (NATRAX)

A unit of National Automotive Board (NAB)/ राष्ट्रीय मोटर वाहन बोर्ड (एनएबी) की एक इकाई NH-52, Old Agra- Mumbai Highway/ NH-52, पुराना आगरा-मुंबई राजमार्ग,

Next to Pithampur Flyover/ पीथमपुर फ्लाईओवर के बगल में,

Post Khandwa (Near Pithampur)/ पोस्ट खंडवा (पीथमपुर के पास)

Dhar District, Madhya Pradesh-454774/ धार जिला, मध्य प्रदेश -454774

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Email: a.prabhakar@natrip.in, anuj.kumar@natrip.in

1. General Instructions:

नेशनल ऑटोमोटिव टेस्ट ट्रैक्स (NATRAX) नेशनल ऑटोमोटिव बोर्ड (NAB) के तहत एक ऑटोमोटिव टेस्टिंग एंड सर्टिफिकेशन सेंटर है, जो भारी उद्योग मंत्रालय, भारत सरकार द्वारा गठित एक स्वायत निकाय है। NATRAX को लगभग 3000 एकड़ भूमि पर पीथमपुर, जिला धार, (मध्य प्रदेश, भारत) के पास, सभी प्रकार के ऑटोमोबाइल के व्यापक परीक्षण और मूल्यांकन के लिए स्थापित किया गया है।

National Automotive Test Tracks (NATRAX) is an Automotive Testing & Certification Centre under National Automotive Board (NAB) which is an autonomous body constituted by Ministry of Heavy Industries, Government of India. NATRAX has been set up on approx. 3000 acres of land for comprehensive testing and evaluation of all types of automobiles, near Pithampur, Dist. Dhar, (Madhya Pradesh, India).

नेशनल ऑटोमोटिव टेस्ट ट्रैक्स (NATRAX), ऐसे योग्य और अनुभवी बोलीदाताओं से पासवर्ड संरक्षित या सीलबंद कोटेशन / बोलियां आमंत्रित करता है, जो काम करने, निष्पादित करने और कार्यान्वित करने के लिए इस दस्तावेज़ में निर्दिष्ट पात्रता मानदंड को पूरा करते हैं।तथा निर्धारित शर्तों पर कार्य करने के इच्छुक हैं । कार्यों का संक्षिप्त विवरण और एनआईक्यू/निविदा की समय-सीमा नीचे दी गई तालिका में संक्षेप में दी गई है: The National Automotive Test Tracks (NATRAX), invites **Password Protected OR Sealed Quotations/Bids** from the qualified and experience Bidder(s) who meets the specified eligibility criteria in this document in the prescribed Proforma for performing, executing and implementing the works on the terms and conditions contained in this Bid document. Brief description of works and the timelines for NIQ/tender are summarised in the table below:

		निविदा के	बोली जमा	बोली	
	अनुबंध	फ्लोटिंग	करने की	खोलने की	
	की	की श्रुआत	अंतिम	तिथि और	अनुमानित
कार्य का वर्णन	अवधि /	की तिथि /	तिथि /	समय /	लागत /
/Description of Work	Period	Date of	Last date	Date &	Estimated
	of	start of	for	Time of	Cost
	Contract	floating of	submissio	Bid	
		tender	n of Bid	opening	
CITC of IDDDY Creators	60 Days				
SITC of IPPBX System	from				
for Internal/External	the	OAth April	15 th April	15 th April	
communication at	date of	04 th April 2024	2024 at	2024 at	Rs. 7.00 Lakh
	Issue of	2024	1500 Hrs	1530 Hrs	
NATRAX	Work				
	Order.				

Per bid meeting at 1100 hrs on 12th April 2024 at NATRAX HQ (in case of any query please write us at <u>je.procurement@natrax.in</u>;

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2. कोटेशन/बोली प्रस्त्त करने का विवरण/ Quotations/Bid Submission details:

पासवर्ड से सुरक्षित बोली/कोटेशन बोलीदाता द्वारा निम्नलिखित ईमेल आईडी पर उपरोक्त समय और तारीख के बाद या पूर्व सूचना पर अगली सुविधाजनक तारीख और समय के रूप में प्रस्तुत किया जाना है।

Password protected Bid/Quotation is to be submitted by the Bidder at the following email ID's not later than the aforesaid time & date or as next convenient date & time on pre-intimation

mail to: a.prabhakar@natrip.in, anuj.kumar@natrip.in, & je.procurement@natrax.in

OR

मोहरबंद बोलियां/कोटेशन भी पूर्वोक्त तिथि और समय पर NATRAX हब कार्यालय में सीलबंद लिफाफों में हार्ड कॉपी में जमा किए जा सकते हैं। हालांकि, मौजूदा कोविड महामारी को देखते हुए बोलीदाताओं को इलेक्ट्रॉनिक मोड के माध्यम से बोली लगाने के लिए प्रोत्साहित किया जाता है Sealed Bids/quotations may also be submitted in the hard copy in <u>sealed</u> <u>envelops at NATRAX Hub office</u> in the aforesaid date and time. However, Bidders are encourged to Bid/quote through electronic mode considering the ongoing Covid pandemic

उक्त तिथि एवं समय के बाद कोई बोली स्वीकार नहीं की जायेगी। हालाँकि, असाधारण मामलों में, NATRAX के पास बोली खोलने से पहले बोली जमा करने के समय/अंतिम तिथि को अगली सुविधाजनक तिथि/समय तक बढ़ाने का अधिकार सुरक्षित है। No Bids will be accepted after the aforesaid date and time. However, on exceptional cases, NATRAX reserves the right to extend the time/last date of submission of Bid to a next convenient date/time before opening of the Bids.

टेलीग्राफिक रूप से या ट्रांसिमशन के अन्य माध्यमों (टेलीफैक्स, आदि) के माध्यम से भेजी गई बोलियां जो पासवर्ड से सुरक्षित नहीं हैं, उन्हें दोषपूर्ण, अमान्य माना जाएगा और खारिज कर दिया जाएगा।

Bids sent telegraphically or through other means of transmission (telefax, etc.) which are not Password Protected shall be treated as defective, invalid and shall stands rejected.

NATRAX गैर-प्राप्ति/गैर-वितरण/या किसी तकनीकी तुटि या गलत प्राप्तकर्ता के कारण किसी भी देरी के लिए जिम्मेदार नहीं होगा। बोलीकर्ता NATRAX से अपनी बोली प्रस्तुत करने की प्राप्ति की पुष्टि कर सकते हैं

NATRAX shall not be responsible for any delays for non-receipt /non-delivery/or any technical errors or due to wrong addressee. Bidders may confirm the receipt of their Bids submission from NATRAX

Disclaimer/ अस्वीकरणः

NATRAX बिना कोई कारण बताए किसी या सभी प्रस्तावों को स्वीकार/अस्वीकार/संशोधित/विभाजित करने के सभी अधिकार सुरक्षित रखता है।

NATRAX reserves all rights to accept/reject/modify/split any or all proposals without assigning any reasons. Bidders shall not have any cause of action or claim against NATRAX for any of its decisions.

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	For NATRAX
दावा नहीं होगा।	
बोलीदाताओं के पास कार्रवाई का कोई कारण या	
NATRAX के किसी भी निर्णय के लिए	

Head Procurement & Stores

इस निविदा में आगे चार अनुबंध शामिल हैं/

- अनुबंध-I (ए)-बोलीदाताओं के लिए निर्देश (आईटीबी)/
- अन्बंध- I (बी) अन्बंध की विशेष शर्तें।/
- अनुबंध-II- अनुबंध/विनिर्देश/ड्राइंग और
 डिजाइन की तकनीकी शर्तें।/
- अन्बंध-III- वितीय प्रस्ताव/
- अनुबंध IV- प्रस्तुत करने की विधि
 (ऑनलाइन माध्यम से)।/

This tender further contain four Annexures:

- Annexure-I (A)-Instructions to Bidders (ITB).
- Annexure-I (B)- Special conditions of contract.
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- Annexure-II- Technical Conditions of contract/Specification/Drawin gs & Design.
- Annexure-III- Financial Proposal.
- Annexure-IV- Method of submission (in case of Bid submission through online mode).

A. ANNEXURE I (A)- INSTRUCTION TO BIDDERS (ITB)

1. Bidders are required to submit their Bids in a Password Protected PDF format, named as "Quotation/Bid for Tender No. NATRAX/PROC/A&IT/24/47" on the subject of the email, containing two separate Password Protected PDF document, as given below. The Password Protected Bids shall be submitted at the mentioned email ID(s) before the closure of Bid submission date/time.

OR

Sealed Bids/quotations may also be submitted in the hard copy in sealed envelopes at NATRAX office in the aforesaid date and time. However, Bidders are encouraged to Bid/quote through electronic mode.

a) In case of online Bid submission, the password of the documents shall be submitted by the Bidders at the time of the Quotation/Bid opening.

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b) The bidders are advised to submit the bid after duly signed submitted on each page, the bids received without sign and numbered may be rejected by NATRAX.

All bidders may visit NATRAX office based on the given date and time for Bid opening.

- 2. **Minimum Eligibility Criteria (MEC):** the bidder should meet the following eligibility criteria to be Technically Qualified:
 - **2.1. Legal Valid entity:** the bidder should be a legal valid entity in form of Propritorship/Partnership/Pvt. Ltd Company/Public Company/Govt Entity PSU etc, in support the appropriate documents should be submitted.
 - **2.2. Experince:** Bidder should have at least 3 years *similar works experince and also completed at least one out of following:

One *similar work not less than 80% of estimated value

OR

Two *similar works not less than 50% of estimated value of each.

OR

Three *similar works not less than 40% of estimated value of each.

*Similar works: Supply & Installation of IP PBX Systems OR Servicing (AMC) of any IP PBX etc, for any Govt/Reputed Private Organization/Institution. In support the copy of completion certificates with work order/purchase order should be submitted.

- 3. The Bidders are expected to carefully examine all the contents of the Tender documents/NIQ including instructions, conditions, terms, specifications, drawings (if any), shall inspect the Site with prior notice to NATRAX and at Bidders own cost, acquaint himself with all local conditions, means of access to the work, nature of the work and all matters pertaining thereto & take them fully into account before submitting their offer. Failure to comply with the requirements as detailed in these documents shall be at the Bidder's own risk. Bids which are not responsive to the requirements of the Tender will be rejected.
- 4. While all efforts have been made to avoid errors in drafting of the Tender documents, the Bidder is advised to check the same carefully. No claim on account of any errors detected in the Tender documents shall be entertained.

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- 5. The Bidder shall carry out all the work strictly in accordance with Specification, Standard Practices and instructions of NATRAX or NATRAX's representative and deviation on any account will not be permitted. If in the opinion of NATRAX, changes have to be made and it desires the Bidder to carry out the same. The decision of NATRAX in such cases shall be final and shall not be open to arbitration.
- 6. The successful Bidder is bound to carry out associated work necessary for the completion of the job even though such items are not included in the quantities to achieve end results and deemed to be priced in the other items. No claim on this account shall be entertained.
- 7. Addendum / Corrigendum (if required) to the Tender may be issued prior to the date of opening of the Bid to clarify or to intimate any changes/modifications etc. All such addendum / corrigendum shall be treated as an integral part of the Tender.
- 8. Any effort by a Bidder to influence NATRAX or any of its functionaries in the process of examination, clarification, evaluation and comparison of tenders and in decisions concerning award of contract, may result in rejection of the Bid.
- 9. In order to afford prospective bidders, reasonable time for preparing their Quotes after taking into account such amendments, NATRAX may, at its discretion, extend the deadline for submission of Bids.
- 10. Information relating to the examination, clarification, evaluation and comparison of Bids and recommendations concerning the award of Contract shall not be disclosed to Bidders or other persons not officially concerned with such process.
- 11. NATRAX reserves the right to accept / reject or modify any Bids, and to annul the Tender process and reject all Bid(s)/quotation(s), at any time prior to award of Contract, or to divide the Contract between/amongst Bidders without thereby incurring any liability to the affected Bidder or Bidders or any obligations to inform the affected Bidder or Bidders of the grounds for NATRAX's action. Any Bidder not following ITB stands rejected.

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12. BID OPENING & EVALUATION

- a) The bids shall be opened by committee at NATRAX. Bidder or Bidder Authorized Representative are advised to attend the bid opening on the given date and time.
- b) The L-1 bidder in the quoted rates shall be deemed as successful Bidder) to determine the successful Bidder.
- c) For the evaluation of the Bids, the eventual Bid prices shall be ascertained after considering all the terms and conditions associated with the Bid price specified in the Bid document and after detailed scrutiny of the quotations/bids.
- a) No Bidder shall be allowed to propose/carry out any revision / correction / modification in his Price Bid offer.
- b) If there is a discrepancy between the sub total/s and the total price that is obtained by multiplying the unit price and quantity/adding the sub total/s, the sub total/s shall prevail and the total price shall be corrected, unless in the opinion of the Employer that there is an obvious misplacement of the decimal point in the sub total price, in which case the total price as quoted shall govern and the sub total/s shall be corrected;
- c) If there is an error in a total, corresponding to the addition or subtraction of sub totals, the subtotal/s shall prevail and the total shall be corrected; and
- d) The Bidder needs to fill the rates against each item in word as well as in figures as mentioned in BOQ (Financial Bid). In case of any discrepancy, the rate provided in word shall prevail and correct the amount against the item. All the prices should be inclusive of all taxes and GST.
- e) The amount stated in the Letter to Bid will be adjusted by the Employer in accordance with the above procedure for the correction of errors and, shall be considered as binding upon the bidder. If the Bidder does not accept the corrected amount of Bid, the bid will be rejected.
- f) Contract negotiations, if any, will be held before the issuance of Letter of Acceptance/ Notification of Award. The negotiation shall conclude with a revised

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offer letter from the successful bidder, affecting the discounts if any and accepted by NATRAX.

13. Award of Work:

a) Prior to the expiry of the period of Bid validity prescribed, NATRAX will issue to the Successful Bidder, the Work Order. The Successful Bidder shall return one copy of the Work Order to NATRAX duly acknowledged and signed by the authorized signatory, within two [2] days of receipt of the same by him.

14. Validity of bids:

The rate quoted should be valid for a minimum period of 90 days from the last date of Submission of Quotation. No claim for escalation of rate will be considered at any point of time.

- 15. Prospective bidders requiring any clarification of the Tender may write to a.prabhakar@natrip.in; anuj.kumar@natrip.in, je.procurement@natrax.in
- 16. The Bids / related correspondences shall be made in English language.

Annexure-I (B)

17. Special Conditions of contract:

a.	Scope of work	SITC of IPPBEX System for Internal/External communication at NATRAX		
b.	Contract Period	60 Days from the date of Issue of Work Order.		
C.	Engineer Incharge (EIC)	Shall be notified to successful bidder.		
d.	Rate Firmness	The charges/rate quoted by supplier must be firm throughout the Contract period and no escalation of any kind is permissible. The "final contract value" shall be derived on the completion of work at actual.		
e.	Warranty period	2 years from the date of completion & acceptance of work.		
	Payment, Mode and Retention	 70% Payment shall be made on delivery of material at NATRAX on submission of tax invoice along with supporting document and certified by EIC, within 15 days. 		

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		ii. 20% shall be made on successful completion of work		
		and acceptance by NATRAX, within 15 days.		
		iii. Balance 10% shall be release only after successful		
		completion of warranty period, within 15 days.		
		iv. Payment shall be made after statutory deduction as		
		applicable.		
		v. Advance payment : maximum 10% of contract value may be paid after receiving request from contractor and submission of bank guarantee of 110% of the requisite amount. An interest 10% per annum shall be charged on the outstanding advance payment. The said advance		
		payment shall be released in minimum two instalments.		
		Contractor has to submit a utilization certificate for the		
		said advance payment.		
		vi. The GST/Taxes & duties of Govt. will be reimbursed on actual basis upon the submission of original receipt/documentary evidence.		
		All the payments shall be made through RTGS only.		
		In case of delay in completion of work by contractor, NATRAX		
	Liquidated	reserve the rights to impose an LD @ 0.1% of contract value per		
g.	Damages	days up to maximum 10% of contract value, and same shall be		
		adjusted from the payment of contractor.		
	Project Facility /	NATRAX Site		
	Place of	NH-52, Old Agra- Mumbai Highway,		
h.	Installation/deliv	Near to Pithampur Flyover, Post Khandwa (Near		
	ery	Pithampur), Dhar District, Madhya Pradesh-454774		
	Water supply &	i. Electricity (if any): Free of Cost		
i.	Electricity	ii. Water supply (if any): Free of Cost		
	Charges	, , , , , , , , , , , , , , , , , , , ,		
		If the work/service is found to be not satisfactory or not found		
		as per the specification indicated in this document, the Contract		
	Termination of	will be terminated with short notice of 14 days in writing.		
j.	Contract	In case of termination the balance work shall be completed by		
		NATRAX through any other party on the risk & cost of		
		contractor.		
k.	Integrity pact	The successful bidder needs to execute an integrity pact (as per		
K.		Appendix-A).		

18. The bidder should give the following, duly signed and sealed, failing to which the

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bids will be summarily rejected:

19. DECLARATION:

(To be executed on Bidder's letter head)

I/We having aquainted with t	the content & requirement of this Tender No. NATRAX/
, dated	and do hereby accept to furnish the same in compliance
with all terms & conditions.	I/we have not tampered/modified the tender in any manner
and breach of any such, will re	esult in rejection of Tender and / or prosecuted.
I / We hereby declare that the	ne firm/company has not been blacklisted or debarred in the
past by any other Government	t organization from taking part in Government tenders.
In case the above information	found false or in case of breach of any of terms and conditions
at any stage of Tender or Cor	ntract, I/We are fully aware that the Tender/ Contract will be
rejected / cancelled by NA	TRAX and Payments (for completed/partially completed),
Retention, Bid Security (EMD)	, Performance Security, etc., shall be forfeited.
Signature of the Bidder:	
Name and Designation:	
Address:	
Contact details:	
Place:	
Date:	
	Seal of the Bidder's Firm

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ANNEXURE - II

TECHNICAL CONDITIONS OF CONTRACT/ SCOPE OF WORK/TECHNICAL SPECIFICATIONS

SUBJECT: SITC of IPPBEX System for Internal/External communication at NATRAX

The scope of work and technical specification shall be as per below table and BOQ.

S.No	Description	Items
1	IP-PBX with Paging Pro Server Features: Caller ID Support, Conference Call, Call Transfer, Call Forwarding, Call Recording, Do Not Disturb, Call Waiting, Call History, Detail Records, Call Event Logging, Speed Dials, Caller Blacklisting, Call Screening, Voicemail, Voicemail to E-mail, Three-Way Calling Support, Open SIP, Webgui, Interactive Voice Response (IVR), Unlimited IP extensions, Unlimited IP Concurrent call, Ring Groups, Music on Hold, Find Me / Follow Me Calling, Support for Video Calling, Secure Communications (SRTP/TLS), Support for SIP Trunk, GSM/FXO/FXS Gateway, PSTN, PRI, Gigabit Ethernet, SMNP, etc. IPPBX features required: Annuncement, Zone selection, SPMP (Scheduled Pre- recorded Message Play), Message upload, Remote Management, Internet Protocol Version 4, Multiple announcement zone. Hardware Specification-1U RACK Server with Railkit, Intel Xeon Processor 4 Core, 8GB RAM, 256GB SSD with RAID1.	IP-PBX
2	Wireless VoIP Gateway (4 Ports) Key Features and Benefits: GSM/CDMA/LTE wireless gateway Complete Protocols Range- Support both 2G/3G/4G wireless network, including both GSM/CDMA/LTE and More High Voice Optimization Capability- crystal clear communication, including DSP-based 128mc echo cancellation High Flexibility and Scalability- 2~32 Ports of Wireless- to-IP transmission User-friendly GUI	Wireless VoIP Gateway

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High Interoperability with Terminals- Compliant with all brands of terminal mobile devices and a complete range of SIP trunking worldwide

Telco-Grade Reliability

Open and programmable API

PIN management

Call time restriction: SIM Card/Single Call

Operator locking BCCH management

Call hold
Call transfer

SMPP

• Voice

Silence suppression and detection

CNG (Comfort Noise Generator) support VAD (Voice Activity Detection) support Echo cancellation (G.168), up to 128ms

Self-adaptive dynamic buffering

Call progress tone generation

AGC (Automatic Gain Control) support

• Protocol

SIP V2.0 RFC3261

SDP RFC2327

Session Timer RFC4028

RTP/RTCP RFC3551

SIP registration

SIP trunk (Point-to-Point)

SIP trunk group

Ringback (Immediate/normal)

SIP/GSM release cause configurable

DNS SRV/A query
Out-of-stack agent

DTMF mode: Signal/RFC2833

NAT traversal

Dynamic NAT, Static NAT, STUN

• Physical Interface

SIM Card Socket: 8 or 4-port

Ethernet interface: RJ45, 2 ETH, 10/100M Base

CONSOLE: RJ45, RS232, 115200bps

Antenna interface: SMA

Status indicator: PWR, RUN, ALM, Channel state, Signal strength, ACT per network, LINK status.

Reset button

• Network Protocol

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IP v4, UDP/TCP, PPPoE, DHCP

FTP/TFTP ARP, RARP, NTP

HTTP, Telnet

• Management

Configuration management based on WEB

Configuration backup/restore

Interface in Chinese/English

Firmware upgrade via HTTP/TFTP

Password modification for WEB sign-in

Factory settings restore

CDR and tracking information output

Syslog

Ping and Tracet tests based on WEB

Transport Protocol Count: TCP, UDP, RTP

VoIP Call Count

PSTN Count: ASR, ACD, PDD

Voice loopback test IVR Customizable

System Log

Centralized cloud-platform integrated management

Environment

Operating temperature: 0°C -55°C Storage temperature: -20°C -85°C Humidity: 8% - 90% non-condensing

Storage humidity: 8% – 90% non-condensing

• LAN

Amount: 2 (10/100 BASE-TX (RJ-45)) Self-adaptive bandwidth supported

Auto MDI/MDIX supported

• Console Port

Amount: 1 RJ-45 (RS-232) Baud rate: 115200bps

Data bits: 8 bits Stop bit: 1 bit

Parity unsupported

Flow control unsupported

• Power Requirements

Input voltage: DC 12V ± 10%

Input current: ≥3A
• Signaling Protocol:
SIP V2.0 RFC3261

• Network Protocol

IP v4, UDP/TCP, PPPoE, DHCP

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	FTP/TFTP ARP, RARP, NTP	
	HTTP, Telnet	
	·	
	Audio Encoding & Decoding C 711 A (4 labor)	
	G.7111 (41)	
	G.711U 64 kbps	
	G.729 A/B 8 kbps	
	G.723 5.3/6.3 kbps	
	G.722 64 kbps	
	AMR 4.75 kpbs	
	iLBC 13.3/15.2 kbps	
	• Sampling Rate	
	8kHz	
	Wireless Feature	
	Frequency band:	
	GSM: 850/900/1800/1900MHz	
	CDMA: 800Mhz	
	UMTS: 850/900/1900/2100Mhz	
	SMS CODEC: ASCII/UCS2	
	32 Port FXS Gateway	
	Key Features and Benefits	
	Caller ID Display (CLI) CLI Restriction	
	Call Hold	
	3-Party Conference Call Transfer	
	Call Waiting	
	Do Not Disturb (DND) Distinctive Ring	
	Pick Up	
	Firewall Traversal Standard SIP Protocol	
	TR069/SNMP/Web System Logs	
	Login Logs	
	QoS	
	VLAN	A 1 EVCD (C)
3	Broadcast Storm Suppression	Analog FXS Port Gateway
	Soft Access Control List (Soft ACL)	
	Hotline	
	Polyphonic Ringtone Black List	
	White List	
	POS Machine	
	Fax	
	Primary/Standby SBC Reversal Of Polarity NAT	
	Interfaces- FXS Ports 32, FXO Port-0	
	WAN Port- 1*10/100M Base-T	
	LAN Port- 1*10/100M Base-T	
	Console Port- 1*RS232 for RJ45	
	LED Indicators-Power, Active, Ready Console	
	LLD Malcators-1 ower, Active, Ready Console	

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	MEDIA PROCESSING	
	VoIP Protocol-SIP 2.0 (RFC2543, RFC3261). IMS-SIP	
	Network Protocol-	
	IP/TCP/UDP/TRP/TRCP/ICMP/ARP/RARP/SNTP	
	Codec-G.711A/U-LAW, G.729a/ab, G.723.1	
	Transport- UDP	
	Voice Capability- TOS/JITTER	
	BUFFER/VAD/GNC/Diff-SERV/Gain Control/Packet	
	Loss Compensation	
	DTMF Mode- InBand, SIP Info, RFC 2833	
	Fax-T.30, T.38, Bypass	
	QoS- 802.1q DSCP	
	IP Assignment- Static/DHCP/PPPoE	
	Firewall- Built-in firewall, packet filtering, IP Port	
	filtering, Whitelist	
	Network Services- DHCP/DNS/Telnet/HTTP/NAT	
	"TELEPHONY FEATURES FXS Outbound Concurrent	
	Call- 32"	
	Management Protocol- Web OMC, SNMP, TR069	
	Provisioning- HPPT, TFTP	
	Configuration- Remote Management, System Logs,	
	Voice, Menu for FXS Gateway Basic Configuration	
	CONNECTIVITY Cascading- 2	
	Size (LxWxH)-(mm)435*199*44	
	Weight-3.3 KG	
	Power Supply- Power Adapter-AC 85-265 V,47-63 Hz	
	Consumption-<=35W	
	Surge Protection-4 KV	
	Working Temperature-10 ~ 60 °C	
	Storage Temperature-10 ~ 60 °C	
	Humidity-10 ~ 95% (non-condensation)	
	Wired Length- <=500m	
	Mounting- Rack-mount	
	SIP Phone	
	Dual Port Fast/Gigabit Ethernet Port, 1 SIP Entry Level	
	IP Phone, 1 SIP accounts and 2-line buttons, Higher level	
	voice quality, monochrome screen, HD speaker, Anti-	
	electromagnetic feature on handset and speaker, support	
4	auto provision via WAN and LAN, PoE Enabled,	SIP Phone
	graphic character dot matrix with full view of backlight	
	LCD, 1 SIP accounts, Call Forward, Call Transfer, Call	
	Waiting, Hotline, Call Hold, Auto Answer, Redial, Mute,	
	DND, Local 3-Way Conferencing, Speed Dial, Voice	
	Mail, Local Phonebook (up to 1000), Direct IP call	

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	without SIP proxy, Black list, Dialled/Received/Missed/Forwarded call (400 total), Call Centre Headsets mode	
5	Optical Fiber Patch Cord, SM, LC-LC Patch cord with LSZH jacket, F8 2.7x5.5 mm, yellow, single mode G652.D 9/125 μ m (OS1, OS2). Mounted on both sides with LC-Duplex connectors in acc. with IEC 61754-4. Zirconia (ceramic) ferrule with a PC polished end face geometry, connectors tuned in accordance with IEC 61755-3-1 and qualified in acc. with IEC 61753-1 for category U (uncontrolled environment). Blue connector housing (single mode), material PBT / UL 94 V-0, black duplex clip, 1 x blue and 1 x red strain relief, material TPE / UL 94 V-0 and plastic dust cover. Optical specifications (random mated): Performance: Insertion loss (IL) Grade C for 97% of the tested specimen: \leq 0.50 dB / typical \leq 0.25 dB Return loss (RL) Grade 2: \geq 45 dB (typical \geq 55 dB) Length $-$ 3 m Length $-$ 5 m	Optical Fiber Patch Cord, SM, LC-LC
6	24 Port Gigabit Ethernet Smart Managed PoE Switch with 2 Giga SFP Ports with Trans receivers Form Factor-Wall/Desktop Mountable Architecture-Non-Blocking Ports-24 Port 10/100/1000 with PoE Web Managed Switch + 2/4 Fiber SFP ports GBIC/SFP-It should be loaded with 2 No's 1000 Base mini GBIC/SFP tans receivers LC connector for single mode from the same OEM PoE-270W/75W (PoE+ supported) Port Status-Display Each port must have a dedicated LED status display. MAC Addresses-Supported Up to 8K MAC addresses Switching capacity-At least 20 Gbps and forwarding rate-Packet throughput 14 Mbps or more VLANs Supported-Support for up to 4096 VLANs simultaneously Port-based and 802.1Q tag-based VLANs MAC-based VLAN Management-Web Management Traceroute; single IP management; HTTP; SSH; RADIUS; port mirroring; TFTP upgrade; DHCP client; BOOTP; SNTP; cable diagnostics; ping; syslog; Telnet client (SSH secure support)	24 Port Gigabit Ethernet Smart Managed PoE Switch

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RMON

L2 Loop Protection-IEEE 802.1d Spanning tree protocol IEEE 802.1W RSTP (Rapid spanning Tree Protocol) IEEE 802.1s Multiple Spanning Tree Protocol (MSTP) Link Aggregation-Support for IEEE 802.3ad Link Aggregation Control Protocol (LACP)

- Up to 8 groups
- Up to 8 ports per group with 16 candidate ports for each (dynamic) 802.3ad link aggregation

QOS Support-At least 4 nos of 802.1p Priority Queues per Port.

Port mirroring /span Port-Traffic on a port can be mirrored to another port for analysis with a network analyser or RMON probe. Up to 8 source ports can be mirrored to one destination port. A single session is supported.

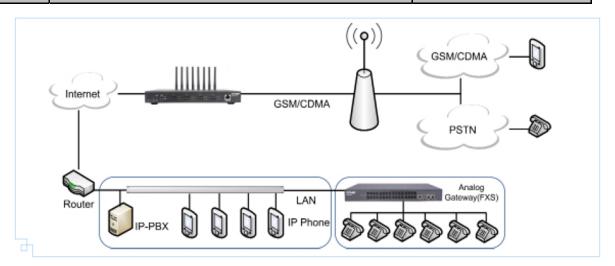
TFTP or FTP Support-For Configuration file backup and restore.

Port Security-The ability to lock Source MAC addresses to ports, and limits the number of learned MAC addresses.

Access Control-Should support standard and extended ACLS. Should support various types of ACLS like port based/time based.

Power-Should support external power adapter for the switch.

ISO-OEM should be ISO-9001:2015, 14001:2015 certified Support-Should provide online support until product warranty for free



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Derails of requirement IPPBX-Networking Phase-I				
S.No.	Item	UoM	Qty	
1	IP-PBX Server- Attached technical detail in Technical Compliance sheet	Nos	1	
2	Wireless VoIP Gateway- Attached technical detail in Technical Compliance sheet	R-Nos	1	
3	Analog FXS Gateway- Attached technical detail in Technical Compliance sheet	R-Nos	2	
4	IP Phone- Attached technical detail in Technical Compliance sheet	R-Nos	5	
5	Optical Fiber Patch Cord, SM, LC-LC	Nos	2	
6	24 Port Gigabit Ethernet Smart Managed PoE Switch with 2 Giga SFP Ports with transreceiver	Nos	2	
7	Fiber Optic Joint Termination Enclosure Box with OFC Splicing Tray	Nos	2	
8	Fiber splicing Charges as per actual	Nos	4	
9	Installation, testing, and commissioning with configuration of PBX, FXS Gateway, SIP Phones, Switch configuration, splicing.	Nos	1	

Scope of work (as per requirement of NATRAX):

- 1. IPPBX Installation and Configuration Qty1.
- **2.** Wireless VoIP Gateway Configuration Qty1. (GSM/VoLTE SIM will be provided by us)
- **3.** FXS Gateway Device Configuration Qty2.
- **4.** IPPHONEs Installation and Configuration Qty5.
- **5.** 24 Port PoE Gigabit Switch Installation and Configuration Qty.2
- **6.** Fiber splicing as per requirement.
- 7. Operational support and training must be provided by successful bidder throughout the warranty period.

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Form for the submission of Financial Bid

Financial Proposal Submission Form

(To be Executed on Letterhead of the Bidder)

FINANCIAL PROPOSAL SUBMISSION FORM

[Location, Date] To: The Head Procurement NH-52, Old Agra- Mumbai Highway, Near to Pithampur Flyover, Post Khandwa (Near Pithampur) Dhar District, Madhya Pradesh-454774 Dear Sir. We, the undersigned, offer to provide the equipment & services in accordance with your Tender No. ______, dated _____ and our Technical Bid. Our attached Financial Bid includes the price in the format for financial bid provide as part of tender documents. The total of offer price _ (in figures and words) and includes all the deliverables under this tender as per our Technical Bid. We hereby declare that all the information and statements made in this Bid is true and complete in all respects and is as per the guidelines and terms & conditions laid down in the tender document. We further understand that any information which is found false or is not as per the guidelines and terms & conditions of the tender document may lead to our disqualification. Our Financial Bid shall be binding upon us subject to the modifications resulting from Contract negotiations, up to expiration of the validity period of the Bid. We understand NATRAX has right to accept or reject our Bid as per its discretion. Yours sincerely, Authorized Signature [In full]: ______ Authorized Signature [In initials]: Name and Title of Signatory: _____ Name of Firm: Address:

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[Note : To be signed in blue ink]



ANNEXURE-III

Bill of Quantities (BOQ)/Financial Bid

S.No.	Item	UoM	Qty	Rate	Amount
1	IP-PBX Server- Attached technical detail in Technical Compliance sheet	Nos	1		
2	Wireless VoIP Gateway- Attached technical detail in Technical Compliance sheet	R-Nos	1		
3	Analog FXS Gateway- Attached technical detail in Technical Compliance sheet	R-Nos	2		
4	IP Phone- Attached technical detail in Technical Compliance sheet	R-Nos	5		
5	Optical Fiber Patch Cord, SM, LC-LC	Nos	2		
6	24 Port Gigabit Ethernet Smart Managed PoE Switch with 2 Giga SFP Ports with transreceiver	Nos	2		
7	Fiber Optic Joint Termination Enclosure Box with OFC Splicing Tray	Nos	2		
8	Fiber splicing Charges as per actual	Nos	4		
9	Installation, testing, and commissioning with configuration of PBX, FXS Gateway, SIP Phones, Switch configuration, splicing.	Nos	1		

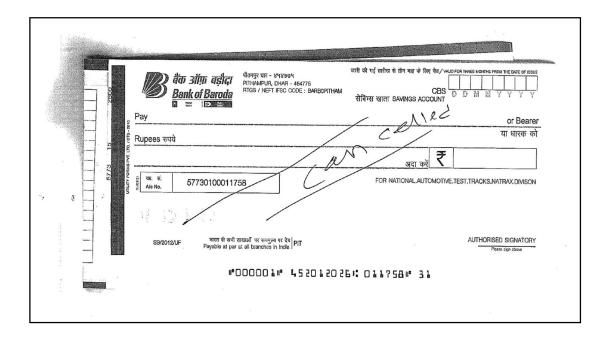
Note: the quoted rates should be inclusive of GST, Transportation, Labour charges etc all.

SEAL & SIGNATURE OF BIDDER'S

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ANNEXURE -IV

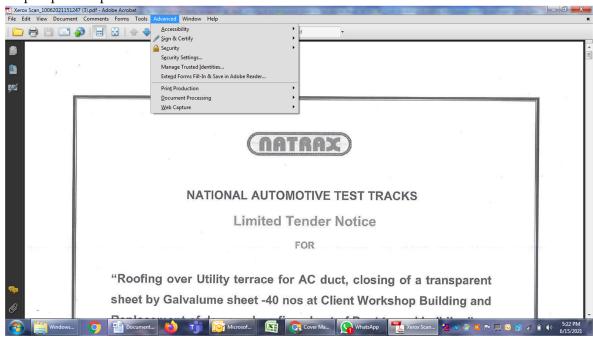
NATRAX Bank details to be used for submission of EMD/Tender Fee (if any) & procedure for passwords protection



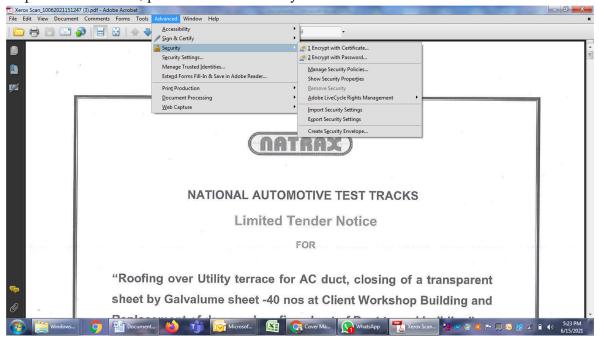
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Steps for loading passwords in PDF Files-Method I

Step 1- please open PDF file and click on "Advance" tab.



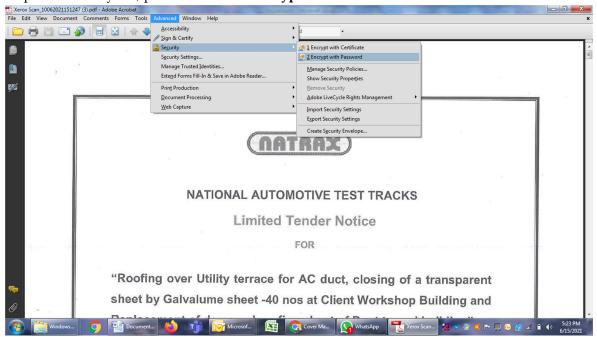
Step 2- in advance tab, please click on "Security" tab.



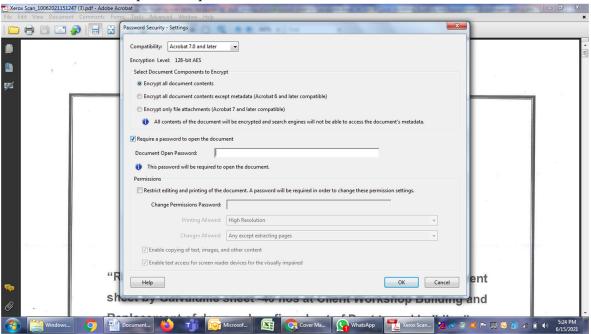
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Step 3- in security tab, please click on "2 Encrypt with Password".



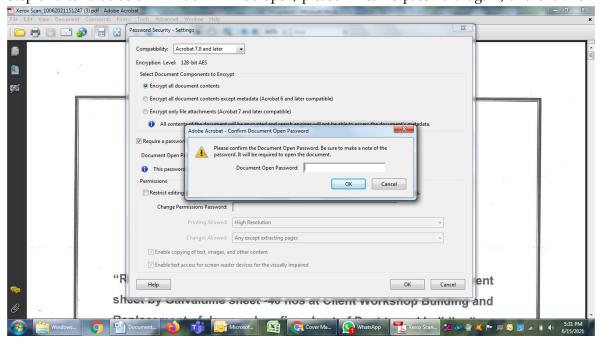
Step 4- after that below window will open, please check in option "Required a password to open the document". Than please fill password and click "ok".



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Step 5- after that below window will be open, please fill same password again, and click "ok".



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