



राष्ट्रीय प्रौद्योगिकी संस्थान अगर्तला  
NATIONAL INSTITUTE OF TECHNOLOGY AGARTALA  
Fax : 0381 254-6360, Website : [http:// www.nita.ac.in](http://www.nita.ac.in)

No.F.NITA.12(99-EE)/Procurement Principles of Communication Lab/2024/4446-49,

Date: 13 / 12 / 2024

**E-Tender Notice**

On behalf of National Institute of Technology Agartala, bids are invited in sealed cover from the reputed resourceful Manufacturers / Authorized Distributors/ Authorized Suppliers for supply of item(s)/goods as per specification mentioned in Annexure of tender document available at our website [www.nita.ac.in](http://www.nita.ac.in).

Sl. No	Department / Section	Ref. No.	Items	Estimated cost (Rs.)	Last date of receipt of tender	Time and date of opening of Technical bid
1	Electrical Engineering	No.F.NITA.12(99-EE)/Procurement Principles of Communication Lab/2024	Laboratory and Scientific Equipment	4,46,000.00	04 / 01 / 2025 Up to 3:00 PM	06 / 01 / 2025 At 3:00 PM

The interested Manufacturers / Authorized Distributors/Authorized Suppliers may arrange online submission of the tender through [www.eprocure.gov.in](http://www.eprocure.gov.in) along with scan copy of essential documents mentioned in the tender document.

Tender(s) is/are to be submitted only online through central public procurement portal i.e. "<http://eprocure.gov.in>". All the documents are to be scanned and uploaded along with the tender documents.

Tender sent by any other mode will not be accepted.

Registrar

  
Registrar 11/12/24  
NIT Agartala

Copy to:

1. The P.S. to the Director for kind information.
2. The Nodal Officer, e-Procurement, NITA with a request to kindly arrange uploading the Tender Documents in the CPP portal <https://eprocure.gov.in/cppp>.
3. Mr. Kamal Kanti Paul, System Administrator, Computing & ICT Unit with a request to uploading the Tender documents in the Institute website site.
4. The Deputy Registrar (F & A).

  
Registrar  
NIT Agartala



# राष्ट्रीय प्रौद्योगिकी संस्थान अगर्तला

National Institute of Technology Agartala

AGARTALA - 799 046 (TRIPURA)

No.F.NITA.12(99-EE)/Procurement Principles of Communication Lab/2024/4446-49

Date: 13/12/2024

## E- Tender Enquiry

### IMPORTANT INFORMATION

Name of the Institute : NATIONAL INSTITUTE OF TECHNOLOGY  
AGARTALA  
GST Number of the Institute : 16AAAGN0550K1ZG  
PAN of the Institute : AAAGN0550K  
TAN of the Institute : SHLN00719F  
DSIR No. : TU/V/RG-CDE(1053)/2022 dated 18/12/2022  
Institute Bank A/C No. : 030936141729 (IFSC: SBIN0011491) under SBI, NIT  
Agartala Branch.  
Name of Department / Branch : Electrical Engineering Department  
Enquiry / Reference Number : No.F.NITA.12(99-EE)/Procurement Principles of  
Communication Lab/2024/

Some important/Critical dates:

Uploading on CPP Portal and Department's web-site	Date: 13 / 12/2024	Time: 5:00 PM
Bid submission start date	Date: 13 / 12/2024	Time: 5:00 PM
Bid submission end date	Date: 04 / 01/2025	Time: 3:00 PM
Opening of technical bid	Date: 06 / 01 /2025	Time: 3:00 PM



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**National Institute of Technology Agartala**

**AGARTALA - 799 046 (TRIPURA)**

## **Details of e-tender document.**

NIT, Agartala intends to purchase the commodities/serrie(s) specified in Annexure enclosed and invites quotations in accordance with the terms and conditions detailed in the bid document. If you are interested, kindly submit your offer with prices within the time mentioned above fulfilling all the terms and conditions marked in the bid documents.

**Registrar**

National Institute of Technology  
Agartala – 799 046, Tripura

Encl :

- (1) Schedule of requirement, specifications, dates etc.
- (2) Bid document containing detail terms and conditions.



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1. Schedule of requirements

Sl. No.	Description of Goods/Service	Quantity
	1. Amplitude Modulation Transmitter Kit	02 nos
	2. Amplitude Demodulation Receiver Kit	02 nos
	3. Frequency Modulation Transmitter Kit	02 nos
	4. Frequency De-Modulation Kit	02 nos
	5. Basic Digital Communication Training System.	02 nos
	6. Advanced Digital Communication Training System	02 nos
(Details as per Sl No.1 to 6 at Annexure-A).		

2. Specifications and allied Technical Details

1. Amplitude Modulation Transmitter Kit
2. Amplitude Demodulation Receiver Kit
3. Frequency Modulation Transmitter Kit
4. Frequency De-Modulation Kit
5. Basic Digital Communication Training System.
6. Advanced Digital Communication Training System
(Details as per Sl No.1 to 6 at Annexure-A).

1. Estimated Cost

₹ 4,46,000.00
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2. Quotations should be valid for a period of **180** days from the opening date of the technical bid.
3. Bid Security or EMD: 2% of the estimated cost of the tender **or** Bidders should submit "**Bid Security Declaration Form**" on company letter head as per annexure-D of this tender document.
4. Performance Security: The amount of the Performance Security shall be 5%(five percent) (not applicable for consumable item(s)) of the Purchase Order / Contract value, valid up to 60 days after the date of completion of contract obligations including warranty obligations.
5. Delivery Option: 60 (sixty) days after receipt of the purchase/work order(s).
6. Please go through the enclosed "bid document" carefully for other bidding instructions.
7. For any technical details, you may contact through email-id: [nitapurchasesection2@gmail.com](mailto:nitapurchasesection2@gmail.com).

Yours sincerely,

Registrar

National Institute of Technology  
Agartala – 799 046, Tripura



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No.F.NITA.12(99-EE)/Procurement Principles of Communication Lab/2024//

Date: / /2024

## **BID DOCUMENT**

### 1. Instructions to the bidders:

- 1.1 Bids are invited through e-tender on behalf of the National Institute of Technology Agartala, Tripura, Agartala-799046 from the intending bidders for supply of the goods/stores/ equipments/Learning resources for the Institute as detailed in the enquiry letter.
- 1.2 The bidders should quote their rates in clear terms without ambiguity. The quotation should be only in Indian Rupees.
- 1.3 The last date & time for submission of the bid is marked in the enquiry.
- 1.4 The bids should be submitted online through [www.eprocure.gov.in](http://www.eprocure.gov.in) before the last date & time of submission specified in tender document.
- 1.5 Bids received after the deadline of receipt indicated in para 1.4 above, shall not be taken into consideration.
- 1.6 Each bidder shall submit only one bid **against one enquiry**. A bidder, who submits more than one bid against single enquiry, shall be disqualified and considered non-responsive.
- 1.7 The bidder has to enclose a check list at per Annexure - C duly filled in along with all relevant/supporting documents while submitting technical bid through [www.eprocure.gov.in](http://www.eprocure.gov.in).
- 1.8 Opening of Bids by the Purchaser will be done as per the provisions of the e-procurement system.
- 1.9 At any time prior to the due date for submission of bids, the Purchaser 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.
- 1.10 All prospective bidders are expected to surf the website before formulating and submitting their bids to take cognizance of the amendments.
- 1.11 Custom Duty Exemption Certificate will be provided from the Institute for availing Custom Duty Exemption in trams of notification No. 51/96-Custom dated 23-07-1996, amended by notification No. 43/2017 dated 30-06-2017, further amended by notification No. 42/2022 dated 13-07-2022, as amended from time to time in case of imported items per OM No. F.4/1/2021-PPD dated 01-09-2021.

Yours sincerely,

Registrar

National Institute of Technology  
Agartala – 799 046, Tripura



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## 2. General Terms & Conditions:

- 2.1 **The rates quoted by the Supplier/Bidders should preferably be on basic price, Annual Maintenance Charges(if applicable), packing, forwarding, freight, Insurance and all other incidental charges including delivery of the Materials at National Institute of Technology, Agartala.**
- 2.2 **All taxes and duties will be paid extra and such amounts of mandatory/statutory taxes & duties shall be explicitly mentioned in BOQ while submitting of bid. If GST amount not quoted in the BOQ (price bid), the total cost will be treated as inclusive of GST.**
- 2.3 Price has to be filled through CPP portal as per BOQ (<https://www.eprocure.gov.in>). The scanned copy of Price Bid, dully filled in, has to be uploaded on the above e-procurement site. The prices filled in the e-procurement site will be treated final and shall be binding to the vendor.
- 2.4 Insurance: The Goods supplied under the Contract shall be fully insured against any loss or damage incidental to manufacture or acquisition, transportation, storage and delivery up to the final destination.
- 2.5 All the Machines/Equipments/goods will be covered by Annual Maintenance Contract (AMC) / CMC/ Warranty beyond the normal warranty/guarantee period. Interested bidders are requested to quote price against AMC/Extended warranty as an optional item in the price bid. **Optional items will not be taken into consideration while selecting L<sub>1</sub> bidder.**
- 2.6 AMC/CMC/Extended Warranty will be awarded after completion of standard warranty period. AMC/CMC/Extended Warranty may be carried out only after receipt of confirmation letter from this Institute. The Institute will not be responsible for any due payments / obligations may arise as a result of execution of AMC/CMC/Extended Warranty without confirmation letter from this Institute.
- 2.7 Conditional discount, if any, offered by the bidder shall not be considered at the time of evaluation.
- 2.8 **The bidders who are registered as a Micro or Small Enterprise as per latest definitions under MSME rules, Govt. of India for exemption of submitting EMD/Bid security must enclose relevant documentary proof of authentication of their firm's registered as a Micro or Small Enterprise as per latest definitions under MSME rules, Govt. of India.**



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- 2.9 If the bidder is a Micro or Small Enterprise as per latest definitions under MSME rules, the bidder shall be exempted from the requirement of "Bidder Turnover" criteria and "Experience Criteria". If the bidder is OEM of the offered products, it would also be exempted from the "OEM Average Turnover" criteria. In case any bidder is seeking exemption from Turnover /Experience Criteria, the supporting documents to prove his eligibility for exemption must be uploaded with technical bid.
- 2.10 If the bidder is a Startup, the bidder shall be exempted from the requirement of "Bidder Turnover" criteria and "Experience Criteria". If the bidder is OEM of the offered products, it would also be exempted from the "OEM Average Turnover" criteria. In case any bidder is seeking exemption from Turnover / Experience Criteria, the supporting documents to prove his eligibility for exemption must be uploaded with technical bid.
- 2.11 National Institute of Technology, Agartala is following and abide with the Public Procurement (Preference to Make in India), Order 2017, DIPP, MoCI Order No. P-45021/2/2017-B.E.II dated 15th June 2017 and subsequent amendments to the order. Accordingly preference will be given to the Make in India products while evaluating the bids, however, it is the sole responsibility of the bidder(s) to specify the product quoted by them is of Make in India product along with respective documentary evidence as stipulated in the aforesaid order in the technical bid itself. A self-declaration as per Annexure- G should be enclosed in the technical bid.
- 2.12 **On site Comprehensive Warranty:**
- The successful bidder shall provide a Comprehensive Warranty for minimum period of 2 years (not applicable for consumable item(s)) after the installation and commissioning of the instrument / software/items. If within a warranty period after installation any such product or component is proven to be defective such product shall be repaired or replaced by the supplier/vendor. Such repair and replacement shall be sole obligation of supplier/vendor. Supplier / vendor shall be responsible for payment for all charges (to-and-fro) for repair/ replacement. Any design defects or installations deficiencies or any outer defects, if noticed during the warranty/ maintenance period, shall be rectified promptly by the successful bidder with no cost at all the places, which also includes the field installations.
  - Down-time call attendance should be within 48 hrs.
  - In case the Equipment / System remains non-operational for more than 5 days then warranty period will be extended for the equal period for which Equipment / System remained non-operational. Warranty extension in such case shall be done without prejudice to any other Term & condition of the contract.

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# राष्ट्रीय प्रौद्योगिकी संस्थान अगर्तला

## National Institute of Technology Agartala

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- 2.13 The documentary evidence of the bidders qualification to perform the contract if the bid is accepted shall establish to the purchasers satisfaction that:

(a)	The bidder meets the qualification criteria listed in bidding documents, if any.
(b)	Bidder who doesn't manufacture the goods it offers to supply shall submit Manufacturers' Authorization Form using the form specified in the bidding document to demonstrate that it has been duly authorized by the manufacturer of the goods to quote and / or supply the goods/services.

- 2.14 The successful bidder has to furnish "Performance Guarantee/Security" (not applicable for consumable item(s)) for an amount specified in the enquiry by E-Payment System to NITA Account within 15(fifteen) days of intimation of contract/supply order.

Alternatively, "Performance Guarantee/Security" will be retained by the Institute from the billed amount of the contract/supply order which will be released two months after the completion of warranty period (not applicable for consumable item(s)).

- 2.15 **Delivery Schedule:** As per e-Tender.

The item(s)/goods are required to be delivered at the indenting Department of National Institute of Technology, Agartala, and must be dispatched within specified days from the date of placement of the supply/purchase/work order.

If the supplier fails to Supply, Install and Commission the system/instrument as per specifications mentioned in the order within the due date, the Supplier is liable to pay liquidated damages of 0.5% of order value per week or part thereof of delay subject to a maximum of 10%, as the case may be, beyond the due date. Such money will be deducted from any amount due or which may become due to the supplier. Any exemption towards delay without LD can be resolved through mutual consent under exceptional circumstances.

- 2.16 Force Majeure: Notwithstanding the provisions of clauses relating to Extension of Time, Penalty and Termination for Default the Supplier shall not be liable for forfeiture of its Performance Security, Liquidated Damages or Termination for Default, if and to the extent that, its delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.

- 2.17 Evaluation of Bid: The Technical Bid shall be evaluated on the basis of technical and other parameters usually taken in to consideration. Financial bid shall be evaluated on the basis of financial parameters. Govt. of India rules shall be taken in to account for evaluating both technical and financial bids.

- 2.18 The successful bidder(s) may be required to execute a contract on the basis of evaluation as per annexure(s) (as applicable).





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- 2.19 NIT Agartala will reject a proposal for award if it determines that the Bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive or coercive practices in competing for the Contract in question.
- 2.20 The bidder has to submit valid trade license, GST registration certificate, Last filled ITR and last filed GST return.
- 2.21 Payment: **100% will be made in INR (Indian National Rupees)** after successful Installation, Commissioning of item against submission of Performance Guaranty (PG) otherwise an equal amount of PG will be retained by the Institute till the completion of warranty obligations.
- Note:** All payments due under the contract shall be paid after deduction of statutory levies at source (like ESIC, IT (TDS), GST, LBT / Octroi etc.), wherever applicable.
- 2.22 In the event of any dispute arising out of the bid or from the resultant contract, the decision of the Competent Authority, National Institute of Technology, Agartala shall be final.
- 2.23 The bid document/resultant contract will be interpreted under Indian Laws.
- 2.24 National Institute of Technology, Agartala will not take any responsibility for arranging road permit/way bill or clearance from tax department for delivery of goods. All such requirements should be completed by the bidder for delivery of goods at National Institute of Technology, Agartala. GST payment, if required, should be paid by successful bidder and if GST not paid, National Institute of Technology, Agartala will deduct the applicable amount from successful bidder's bills and pay the same to Tax Authority. If there is any mandatory tax(es) other than GST/other taxes mentioned in this tender document, imposed by State Govt., the same may also be deducted from the bills of the successful bidder, as applicable.
- 2.25 **Competent Authority of National Institute of Technology, Agartala reserves the right to cancel the entire e-tendering process at any stage of the procurement process without mentioning any reason.**
- 2.26 **Legal disputes, if any with NIT Agartala will be restricted within the jurisdiction of Agartala only.**

Yours sincerely,

Registrar

National Institute of Technology  
Agartala – 799 046, Tripura



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No.F.NITA.12(99-EE)/Procurement Principles of Communication Lab/2024/

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### 3. Special Terms & Conditions:

- 3.1 Acceptance of Technical bid strictly depends on National Institute of Technology, Agartala's requirements credentials, manufacturing capability, quality control systems, past performance, after-sales service, financial background, commercial terms & conditions etc. of the supplier(s).
- 3.2 Detailed Specifications, brand, make, model & parts number, tolerance limit, resolution, corresponding ISO standard etc. of quoted Equipments/Items should be mentioned with supported leaflet/catalogue/brochure and list of buyers for acceptance of technical bid.
- 3.3 The technical bid and the financial bid should be submitted through [www.eprocure.gov.in](http://www.eprocure.gov.in). The technical bids shall be opened and evaluated by the competent committee/authority. At the second stage, financial bids of only the technically qualified bidders shall be opened for further evaluation and recommendations for awarding the purchase order/contract.  
  
It may specifically be mentioned whether quotation is strictly as per terms and conditions of the tender. Deviation, if any, must be spelt out specifically in technical bid. In the absence of this, the quotation may be rejected.
- 3.4 Installation & Commissioning: Within 15 (fifteen) days after delivery (if applicable).
- 3.5 The Quantity of each Item(s)/Equipment(s) may increase (as per Govt. Norms) or decrease at the time of issued of Purchase / Supply / Work Order. The Institute reserves right to purchase partly or not to purchase any item / cancel the entire process at any stage of procurement process.
- 3.6 Penalty: Penalty will be charged @ 0.5 % of per week or part thereof except for force majeure conditions for the unexecuted part of the supply/work order.
- 3.7 Arbitration: All disputes should be attempted to be resolve mutually between the National Institute of Technology, Agartala and the suppliers failing which jurisdiction of any Court of Agartala shall be applicable.
- 3.8 The successful bidder has to give at least 3-4 days on site training for each & every items/equipments by Certified Person (if required).
- 3.9 Model No. of the product should be given with catalogue (if any).
- 3.10 Items/Goods should be sent through Registered Transporter (preferably).
- 3.11 Bidders are required to upload a declaration on letter head stating that the bidder has not been black-listed & holiday listed by any Ministry/Department/Organization.



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**AGARTALA - 799 046 (TRIPURA)**

- 3.12 Bidder(s) is/are required to upload a self-certificate as per applicability (Annexure- E or F) regarding offered item(s) as per Office Memorandum No. 6/18/2019-PPD dated 23-07-2022 & 24-07-2020 and Office Memorandum No. F.18/37/2020-PPD dated 8<sup>th</sup> February, 2021 issued by Department of Expenditure, Procurement Policy Division, Ministry of Finance, Govt. of India.
- 3.13 Bidders are requested to provide valid e-mail ID and phone number for further communication.
- 3.14 Bank A/C in the Exact Name of Bidder/Firm/Supplier with Name, A/C No., IFSC code must be furnished with technical bid.
- 3.15 Bidder has to submit annual turnover not less than 2.30 lakh per year with technical bid for last 3 (three) years. Bidder also has to submit OEM turnover not less than 17.85 lakhs per year for last 3(three) years (if bidder is not OEM).
- 3.16 If bidder itself OEM, has to be submit turnover not less than 17.85 lakhs per year for last 3 (three) years with technical bid.

Yours sincerely,

**Registrar**

**National Institute of Technology  
Agartala – 799 046, Tripura**



3	<p><b>FREQUENCY MODULATION TRANSMITTER KIT</b>  Model: ACL-FM Make: Akademika</p> <p><b>TECHNICAL SPECIFICATIONS:</b>  Synchronous Function Generator:  Waveforms :Sine, Triangular, Square  Frequency Range :1)100 Hz to 1KHz  :2)1 KHz to10 KHz</p> <p>FM Modulators 2 Nos.  Varactor Modulator with carrier frequency adjustment Mixer (Frequency Converter):  Dual gate MOSFET Inputs: Local oscillator and RF Signal.  Output Frequency : 455 KHz adjustable  PM Modulator  Operating Frequency: Adjustable from 400 KHz To 500KHz  Input Amplitude: 1V p-p with integration circuit  Pre-Emphasis Circuit: Time period of 50us  Switch Faults: 4 Switch Faults should be provided on board</p>	02
4	<p><b>FREQUENCY DE-MODULATION KIT</b>  Model: ACL-FD  Make: Akademika</p> <p><b>FREQUENCY DEMODULATION RECEIVER KIT TECHNICAL SPECIFICATIONS:</b>  Foster- Seely Detector:  Operating frequency: Adjustable from 400 KHz to500KHz.  Ratio Discriminator Detector:  Operating frequency: Adjustable from 400 KHz to 500 KHz.  Phase Lock Loop Detector:  Operating frequency: Adjustable from 400 KHz to 500 KHz.  Phase Detector and FM Quadrature Detector:  Operating frequency: Adjustable from 400 KHz to 500 KHz.  Input Amplitude:1.5Vp-p  De-emphasis Circuit: Time period of 50 us  Amplitude Limiter:  Operating frequency:455KHz.  Low Pass Filter: 4<sup>TH</sup> Order Butterworth Filter.  Audio Output: Amplifier with Speaker and Headphones.  Switch Faults:4 Switch Faults should be provided on board</p>	02
5	<p><b>Basic Digital Communication Training System</b>  Model: DCS-B  Make: Akademika</p> <p>Digital Communication System should be a single board system based on VLSI technology for the study of basic digital communication techniques.  The Board should have various test points for the students to view intermediate signals on an Oscilloscope.  It should be accompanied with a Learning Resource Software consisting of Animations explaining various Digital Modulation Techniques like Sampling, PCM, ASK,FSK,PSK etc and Experiments for the Students to understand the basic concepts of Digital Communication.</p> <p>Specifications:</p>	02

*Handwritten signature and date:*  
29/11/24

Noise

- Whitenoise 0~2Vp-p
- Transmitter clocks
- 16KHz, 32KHz, 64KHz, 128KHz, 256KHz, 512KHz and 1.024MHz

Output

- 4digit, 7segment, LED bank Input
- Three 8-bit switch banks for data generation Transmitter section
- Differential encoder
- Dibit encoder
- Tribit encoder
- Scrambler
- BPSK, DPSK modulation
- QPSK modulation
- QAM modulation
- MSK modulation
- DPCM and ADPCM modulation Receiver section
- Differential decoder
- Dibit decoder
- Tribit decoder
- Un-scrambler
- BPSK, DPSK demodulation
- QPSK demodulation
- QAM demodulation
- MSK demodulation
- DPCM and ADPCM demodulation
- Digital PAM
- Error bit adder and inter symbol interference
- Low pass Butterworth filters

*Shree*  
29/11/27

6	<p><b>Advanced Digital Communication Training System</b>  Model: DCS-A Make: Akademika</p> <p>Advance Digital Communication System should be a single board system based on VLSI technology for the study of basic digital communication techniques.  The Board should have various test points for the students to view intermediate signals on an Oscilloscope.</p> <p>Various Digital Modulation Techniques like PSK,QPSK,QAM,MSK,DPCM,ADPCM etc Experiments should be possible</p> <p>Specifications:  Clock and signal generation Sine wave</p> <ul style="list-style-type: none"> <li>• Fixedfrequency1KHzwith0~2V Carrier</li> <li>• Synchronized carrier of 00 phase</li> <li>• Synchronized carrier of 900 phase</li> <li>• Synchronized carrier of 1800 phase</li> <li>• Synchronized carrier of 2700 phase</li> <li>• Data pattern</li> <li>• 8-Bit,16-Bitand24-Bit</li> <li>• PRBS generator</li> <li>• 16-bit with switch selectable</li> </ul>	02
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Clock & Signal generation section:

• Sine wave:

Fixed Frequency : 250Hz approx., 500 Hz approx., 1 KHz approx. approx., 2KHz approx.

Variable Frequency: 1Hz approx. to 30 Hz approx., 0 -2Vpp

Sampling clock:

Frequency: 2 KHz approx. approx., 4 KHz approx. approx., 8 KHz approx. approx.,

16 KHz approx. approx., 32 KHz approx. approx., 64 KHz approx. approx., 128 KHz approx. approx.

Duty Cycle: 10-90% Selectable in steps of 10%

D.C. Signal: 0 -5V

Tx Clock Frequency : 240KHz approx. approx. Fast Mode

Tx Frame Frequency: 8 KHz approx. approx.

Carrier Sine Waves: 500KHz approx. approx. (0deg), 1MHz approx. approx. (0 deg), 1 MHz approx. approx. (180 deg)

Data Pattern: 8bit variable NRZ-L pattern PRBS generator : 14 bit

Transmitter Section and Receiver Section

Analog signal sampling: Sample & Hold; Natural Sampling, Flat-top Sampling

4-Channel Analog Time Division Multiplexing & Demultiplexing Odd, Even Parity & Hamming Code Generator

Pulse Code Modulation & Demodulation

Data Encoding & Decoding of NRZ(L), NRZ(M), NRZ(S), Bi-phase (Manchester), Bi-phase(Mark), Bi-phase (Space), URZ, Alternate Mark Inversion (AMI), Unipolar to Bipolar & Bipolar to Unipolar

ASK, FSK, PSK Modulation & Demodulation

Delta / Adaptive Delta / Sigma Delta / CVSD Modulation & Demodulation

PAM/PPM/PWM Modulation & Demodulation

Audio Preamplifier with microphone interface

*She*  
29/11/24





# राष्ट्रीय प्रौद्योगिकी संस्थान अगर्तला

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**AGARTALA - 799 046 (TRIPURA)**

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## **ANNEXURE – B**

### **PRICE BID**

As per BOQ



# राष्ट्रीय प्रौद्योगिकी संस्थान अगर्तला

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## ANNEXURE - C

### Documents for Comprising the Bid

Sr.No.	TENDER REQUIREMENT	COMPLIANCE	Document Submitted
1	Name of the Firm / Agency / Dealer / Supplier with full address including contact number and email id etc.	Yes / No	Yes / NA
2	Trade License issued by Government / Statutory Body or Company Registration on the item(s) related to this tender.	Yes / No	Yes / NA
3	GST Registration of the Supplier/Firm/Bidder.	Yes / No	Yes / NA
4	PAN Registration of the Supplier/Firm/Bidder	Yes / No	Yes / NA
5	Financial Solvency issued by Bank(as per RBI guidelines) (in case of estimated cost is Rs.25.00 lakhs and above).	Yes / No	Yes / NA
6	Up to date GST return / any other tax clearance certificate. (last filed GST return, GSTR 9 and 9B)	Yes / No	Yes / NA
7	Annual Turnover	Yes / No	Yes / NA
8	Up to date Income Tax Return (Last filed ITR)	Yes / No	Yes / NA
9	“Bid Security Declaration form” on Company Letter Head (Scanned copy to be uploaded along with Technical bid).	Yes / No	Yes / NA
10	Service Support details (if applicable)	Yes / No	Yes / NA
11	Certification of holiday and non-black listing (Self Certification)	Yes / No	Yes / NA
12	Certification as per memorandum No. F.18/37/2020-PPD dated 8 <sup>th</sup> February 2021, Dept. of Expenditure, Ministry of Finance, Govt. of India (Self Certification)	Yes / No	Yes / NA
13	Proprietary Certificate from OEM to be uploaded along with the Technical Bid in case of Proprietary items	Yes / No	Yes / NA
14	Manufacturers Authorization Form (MAF) (if applicable)	Yes / No	Yes / NA
15	Certificate under MSME, NSIC, Make-in-India & Startup as per Govt. of India Norms (if applicable).	Yes / No	Yes / NA
16	Experience, if any, with govt. sector /Public Undertaking /Private sector (if applicable) (May be relaxed for MSME, NSIC & Startup as per Govt. of India Norm)	Yes / No	Yes / NA
17	Any other criteria related to this tender.	Yes / No	Yes / NA
18	Supplier/Firm/Bidder should accept all Terms & Conditions and specification of the items given in the Tender Document.	Yes / No	

(Signature of the bidder)



# राष्ट्रीय प्रौद्योगिकी संस्थान अगरतला

**National Institute of Technology Agartala**

**AGARTALA - 799 046 (TRIPURA)**

No.F.NITA.12(99-EE)/Procurement Principles of Communication Lab/2024/

Date: / /2024

## **Annexure-D**

### **Bid Securing Declaration Form**

Date:..... Tender Ref. No: ..... Tender ID: .....

To (insert complete name and address of the purchaser)

I/We. The undersigned, declare that:

I/We understand that, according to your conditions, bids must be supported by a Bid Securing Declaration.

I/We accept that I/We may be disqualified from bidding for any contract with you for a period of one year from the date of notification if I am /We are in a breach of any obligation under the bid conditions, because I/We

a) have withdrawn/modified/amended, impairs or derogates from the tender, my/our Bid during the period of bid validity specified in the form of Bid; or

b) having been notified of the acceptance of our Bid by the purchaser during the period of bid validity (i) fail or reuse to execute the contract, if required, or (ii) fail or refuse to furnish the Performance Security, in accordance with the Instructions to Bidders.

I/We understand this Bid Securing Declaration shall cease to be valid if I am/we are not the successful Bidder, upon the earlier of (i) the receipt of your notification of the name of the successful Bidder; or (ii) thirty days after the expiration of the validity of my/our Bid.

Signed: (insert signature of person whose name and capacity are shown)

in the capacity of (insert legal capacity of person signing the Bid Securing Declaration)

Name: (insert complete name of person signing he Bid Securing Declaration)

Duly authorized to sign the bid for an on behalf of (insert complete name of Bidder)

Dated on \_\_\_\_\_ day of \_\_\_\_\_ (insert date of signing)

Corporate Seal (where appropriate)

(Note: In case of a Joint Venture, the Bid Securing Declaration must be in the name of all partners to the Joint Venture that submits the bid)



# राष्ट्रीय प्रौद्योगिकी संस्थान अगर्तला

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No.F.NITA.12(99-EE)/Procurement Principles of Communication Lab/2024/

Date: / /2024

## Annexure-E

(Compliance to be submitted in the bidder's letterhead)  
(as applicable)

Sub: Compliance to Government of India order OM No.6/18/2019-PPD dated 23.07.2020 & 24.7.2020 and OM No. F.18/37/2020-PPD dated 8th February, 2021 regarding restrictions under Rule 144 (XI) of the General Financial Rules (GFRs), 2017.

Item Name:	
Enquiry No.:	

We M/s. ....(name of the bidder company) have read the clauses pertaining to the Department of Expenditure's (DoE) Public Procurement Division Order (Public procurement no 1,2 & 3 vide ref. F.No.6/18/2019-PPD dated 23.07.2020 & 24.7.2020) regarding restrictions on procurement from a bidder of a country that shares a land border with India.

We hereby certify that **we are not from such a country** and eligible to be considered for this tender.

(Note: Non-compliance of above said GoI Order and its subsequent amendment, (if any), by any bidder(s) shall lead to commercial rejection of their bids by NIT-Agartala)

For and behalf of .....(Name of the bidder)

(Signature, date & seal of an authorized representative of the bidder)



# राष्ट्रीय प्रौद्योगिकी संस्थान अगरतला

National Institute of Technology Agartala

AGARTALA - 799 046 (TRIPURA)

No.F.NITA.12(99-EE)/Procurement Principles of Communication Lab/2024/

Date: / /2024

## Annexure-F

(Compliance to be submitted in the bidder's letterhead)  
(as applicable)

Sub: Compliance to Government of India order OM No.6/18/2019-PPD dated 23.07.2020 & 24.7.2020 and OM No. F.18/37/2020-PPD dated 8th February, 2021 regarding restrictions under Rule 144 (XI) of the General Financial Rules (GFRs), 2017.

Item Name:	
Enquiry No.:	

We M/s. .... (name of the bidder company) have read the clauses pertaining to the Department of Expenditure's (DoE) Public Procurement Division Order (Public procurement no 1,2 & 3 vide ref. F.No.6/18/2019-PPD dated 23.07.2020 & 24.7.2020) regarding restrictions on procurement from a bidder of a country that shares a land border with India.

**We are from such a country** which shares a land border with India & have been registered with the Competent Authority as specified in the above-said order. We hereby certify that we fulfill all requirements in this regard and are eligible to be considered.

Evidence of valid registration by the Competent Authority is attached.

(Note: Non-compliance of above said GoI Order and its subsequent amendment, (if any), by any bidder(s) shall lead to commercial rejection of their bids by NIT-Agartala)

For and behalf of .....(Name of the bidder)

(Signature, date & seal of an authorized representative of the bidder)



# राष्ट्रीय प्रौद्योगिकी संस्थान अगर्तला

**National Institute of Technology Agartala**

**AGARTALA - 799 046 (TRIPURA)**

No.F.NITA.12(99-EE)/Procurement Principles of Communication Lab/2024/

Date: / /2024

## Annexure -G

### Self-Certification on the letterhead of the company

In line with Government Public Procurement Order No. P-45021/2/2017-BE-II dt. 15.06.2017, P-45021/2/2017-PP (BE-II) dated 28.05.2018, P-45021/2/2017-PP (BE-II) dated 29.05.2019 and P-45021/2/2017-PP (BE-II) dated 16.09.2020,

We hereby certify that ..... (Supplier name) are local supplier meeting requirement of minimum local content..... % defined in as above orders for the material against Enquiry / Tender No ..... dated.....

Details of the location at which local value addition will be made are as follows:

.....  
.....  
.....  
.....

We also understand false declarations will be in breach of the Code of Integrity under Rule 175(1)(i)(h) of the General Financial Rules for which a bidder or its successors can be debarred for up to two years as per Rule 151 (iii) of the General Financial Rules along with such other actions as may be permitted under law.

Date:  
Place:

Signature:  
Name and Designation:  
Mobile no:  
Office Telephone No:  
Email ID: Office Seal



# राष्ट्रीय प्रौद्योगिकी संस्थान अगरतला

**National Institute of Technology Agartala**

**AGARTALA - 799 046 (TRIPURA)**

No.F.NITA.12(99-EE)/Procurement Principles of Communication Lab/2024/

Date: / /2024

## Annexure -H

### NON BLACKLISTING SELF CERTIFICATE

[To be submitted on letterhead]

I/We hereby certify that the ----- [Name of the company / firm] has not been ever blacklisted/debarred by any Central / State Government / Public Undertaking / University / Institute on any account.

I/We also certify that firm will provide material as per the specification given by NIT Agartala and also abide all the terms and conditions stipulated in the bid document.

I/We also certify that the information given in bid is true and correct in all aspects and in any case at a later date it is found that any details provided are false and incorrect, contract given to the concerned firm or participation may be summarily terminated at any stage, the firm will be blacklisted and NIT Agartala may impose any action as per the rules.

Date :

Name :

Place :

Business Address:

Signature of Service Provider:

Seal of the Service Provider: