Ref. No.: IIITT/ECE/Laboratory/2023/12-04 DATE: 03/12/2024

NOTICE INVITING TENDERS

FOR THE SUPPLY AND INSTALLATION OF LABORATORY COMPONENTS FOR ELECTRONICS AND COMMUNICATION ENGINEERING DEPARTMENT AT IIIT TIRUCHIRAPPALLI CAMPUS, SETHURAPATTI, TIRUCHIRAPPALLI



Indian Institute Information Technology Tiruchirappalli,

Sethurapatti, Trichy-Madurai Highway, Tiruchirappalli-620012, Tamil Nadu.

Proprietary & Confidential:

No part of this document can be reproduced in any form or by any means, disclosed or distributed to any person without the prior consent of The Director, IIIT Tiruchirappalli, Tamil Nadu, except to the extent required for submitting bid and no more.

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Advertisement

Ref. No: IIITT/ECE/Laboratory/2023/12-04



IIIT Tiruchirappalli, Tamil Nadu

Ref. No.: IIITT/ECE/Laboratory/2023/12-04

Open Tenders are hereby invited from reputed Registered Firms/Agencies/Vendors/Suppliers for providing the following items at IIIT Tiruchirappalli, Sethurapatti, Trichy-Madurai Highway, Tiruchirappalli – 620012, Tamil Nadu.

"Tender for the Supply and Installation of Laboratory Components for Electronics and Communication Engineering Department at IIIT Tiruchirappalli"

Tender Schedules can be downloaded from IIIT Tiruchirappalli website from 03/01/2024. Along with tender schedule, bidders need to submit signed relevant documents in hard copies.

The last date for submission of tenders is 24/01/2024.

For further details regarding Tender notification & specifications, please visit: www.iiitt.ac.in_

Date: 03/01/2024 **Director**

IIIT Tiruchirappalli

Time Schedule of various tender related events

(FOR THE SUPPLY AND INSTALLATION OF LABORATORY COMPONENTS FOR ELECTRONICS AND COMMUNICATION ENGINEERING DEPARTMENT AT IIIT TIRUCHIRAPPALLI CAMPUS, TAMIL NADU)

Bid document downloading Start Date	03/01/2024
Pre-bid meeting based on queries of Bidders/Tenderers	09/01/2024
Bid document downloading End Date	24/01/2024
Last Date and Time for the receipt of Bids	24/01/2024, 3.00 PM
Technical Bid Opening Date	25/01/2024
Financial Bid Opening Date	29/01/2024
Contact Person	The Registrar (i/c), IIIT Tiruchirappalli, Tiruchirappalli.
Reference No:	IIITT/ECE/Laboratory/2023/12-04

CLARIFICATIONS

Queries, if any, can be made through e-mail only to registrar@iitt.ac.in on or before 18/01/2024. Queries received via any mode other than e-mail id mentioned above will not be entertained. The queries should only be sent in the following format on the official letter head of the company.

S. No.	Page No. (Tender Ref.)	Clause (Tender Ref.)	Description (Tender Ref.)	Query

If there is any addendum/corrigendum related to tender, it shall only be published on IIIT Tiruchirappalli website (www.iiitt.ac.in). The Bidders are advised to check IIIT Tiruchirappalli website regularly. No other mode of notice will be given.

The Bidders are requested to submit the bids after issue of clarifications duly considering the changes made, if any. Bidders are totally responsible for incorporating/complying with the changes/amendments issued in their bid, during pre-bid meeting.

If the last date of receiving/opening of the bids coincides with a holiday, then the next working day shall be the receiving/opening date of the bids.

The Technical Bid along with relevant signed documents should be attached with original EMD. Physical submission of financial bid only shall be considered.

Sd/-

REGISTRAR (i/c)

BID

Ref. No.:: IIITT/ECE/Laboratory/2023/12-04 Dated: 03/01/2024

Subject: Tender For the Supply and Installation of Laboratory Components for Electronics and Communication Engineering department at IIIT Tiruchirappalli campus, TamilNadu.

Sir/Madam,

Bids are invited on the Open Tender platform from the reputed Registered and experienced Firms/ Agencies/Bidders/Suppliers. The details of bidding conditions and other terms can be downloaded from IIIT Tiruchirappalli Website: http://www.iiitt.ac.in/.

The attested copies of all the documents of Technical bid, signed undertaking of Bidder should be submitted offline mode only to **The Director**, **IIIT Tiruchirappalli**, **Tamil Nadu**.

The participating Bidder/s will have to pay EMD for the amounts specified in the Statement related to bids, in the form of Demand Draft drawn from any Nationalized Bank, in favour of The Director, IIIT Tiruchirappalli, Tiruchirappalli.

Further, the Successful Bidder shall furnish a part of the bid as Performance Guarantee specified in the Statement related to bids, to be paid in the form of Bank Guarantee as mentioned in the Tender Schedule.

IIIT Tiruchirappalli, Tamil Nadu will not accept tenders from blacklisted companies or undependable suppliers, whose past performance with IIIT Tiruchirappalli was found poor due to delayed and/or erratic supplies and those with frequent product failures, and also against whom there have been adverse reports of sub-standard quality/poor services, as defined in the other parts of the bidding documents.

STATEMENT RELATED TO BIDS

EMD	Rs. 5000/- by way of DD from any Nationalized bank drawn in favor of The Director, IIIT Tiruchirappalli , Payable at Tiruchirappalli. The EMD or Performance guarantee will bear no interest whatsoever. A copy of the payment receipt should be enclosed along with the Technical bid of tenderdocument. EMD exemption is applicable to bidders as per norms of Govt. of India, (GFR).
Bid Validity Period	90 days from the date of opening of Financial bid
EMD Validity Period	90 days from the date of opening of Financial bid
Period of furnishing Performance Guarantee	Within 7 days from date of receipt of LOA
Performance Guarantee Value	3% on the work order value (in the form of BG)
Performance Guarantee Validity period	26 months from the date of commencement of services
Period for signing the Order of Acceptance	Within 14 days from date of receipt of LOA

TENDER SCHEDULE

PREMEABLE:

Indian Institute of Information Technology Tiruchirappalli is the one among the chain of IIITs started by the Government of India. IIIT Tiruchirappalli was established in the state of Tamil Nadu in the academic year 2013 – 2014.

IIIT Tiruchirappalli, Tamil Nadu invites tenders from reputed agencies / companies (no brokers, intermediaries or aggregators) to purchase Laboratory equipment as per the requirements of IIIT Tiruchirappalli, Tamil Nadu based on the eligibility criteria and general terms and conditions mentioned in this document.

PERIOD OF WARRANTY:

The warranty for the purchased laboratory equipment shall be for a period of atleast one (01) year.

- 1. Separate warranty / validity certificate should be produced along with the invoice for release of payment. The supplied product of Laboratory equipment should be produced along with the invoice for release of payment.
- 2. The warranty start and end date will be counted from the product delivered date and not from the date of shipment/ billing.
- 3. Comprehensive on-site warranty with on-site support and service for both parts and labours mean that your labours should visit the site / location where the problem is reported, identify the problem and replace the faulty parts. IIITT will not provide or do any troubleshoot at our end.

SCOPE OF WORK

The supply and installation of Laboratory Components for Electronics and Communication Engineering department at IIIT Tiruchirappalli Campus, Sethurapatti, Tiruchirappalli

Name and Signature of the bidder with seal

ELIGIBILITY CRITERIA

An Agency/ Firm having an experience of at least three (3) years of supplying and installing laboratory equipments or similar items in any educational institutions /autonomous bodies etc. is eligible to apply. The firm shall have requisite registration certificate for dealing with laboratory equipments.

TERMS AND CONDITIONS

The tenderer submitting the tender document for the supply and installation of laboratory equipments Items should comply with the following terms and conditions.

- 1. The purchase order will be awarded based on lowest charges (L-1).
- 2. Tenders shall be submitted in official tender form only. If submitted in any other form the same shall be summarily rejected. No tenderer shall be issued more than one tender form.
- 3. Tenders received without prescribed Earnest Money Deposit (EMD) shall not be considered.
- 4. The schedules issued with the form of tender listing the services to be rendered must not be altered by the tenderer. Any modifications/alterations of the schedules considered necessary by the tenderer should be in the separate letter accompanying the tender.
- 5. No paper shall be detached from the tender.
- 6. The name and address of the tenderer shall be clearly written in the space provided and no overwriting corrections, insertion shall be permitted in any part of the tender. The tender form should be filled in and submitted in strict accordance with the instructions laid down herein otherwise the tender is liable to be ignored.
- 7. The tender is liable to be ignored if complete information is not given therein or if the particulars and date (if any) asked for in the Schedule to the tender are not filled in.
- 8. Each bidder shall submit only one bid. If a bidder or if any of the partners in a joint venture or any one of the members of the consortium participate in more than one bid, the bids (of both the individual and the partnership/consortium/joint venture) are liable to be rejected.
- 9. The bidder shall bear all costs associated with the preparation and submission of his/her bid and IIITT shall in no case be responsible or liable for those costs, regardless of the conduct or outcome of the tender process.
- 10. IIITT will respond to any request for clarification or modification of the Tender Documents that are received up to TWO DAYS prior to the deadline for submission of bids prescribed by IIITT. For this purpose, the prospective bidder(s) requiring clarification in the Tender Document shall notify IIITT through Email ONLY. Any such clarification, together with all details on which the clarification had been sought, will be published in the institute website only.

- 11. Individual signing the tender or other documents connected with the tender must specifywhether he/she signs as:
 - (i) A sole proprietor of the concern or constituted attorney of such sole proprietor.
 - (ii) A partner of the firm if it is a partnership firm, in that case he must have authority to execute contracts on behalf of the firm and refer to arbitration disputes concerning the business of the partnership either by virtue of partnership agreement or by a power of attorney duly executed by the partners of the firms.
 - (iii) Director or Principal Officer duly authorized by the Board of Directors of the company.
 - (iv) In case of (ii) a copy of the partnership agreement or general power of Attorney, in either case attested by a Notary Public should be furnished or an affidavit on stamp paper duly sworn or affirmed by all the partners admitting execution of the partnership agreement or the general power of attorney should be furnished. The attested copy of the certificate or registration of firm should be attached along with the tender papers. In case of partnership firm, where no authority to refer dispute concerning the business of the partnership has been conferred on any partner, the tender and all other related documents must be signed by all the partners of the firm. In case of (iii) the person signing the tender should be authorized by a resolution passed by the board of directors and a copy of the resolution attested by the Principal Officer should be attached.
- 12. A demand draft of Rs. 5000/- (Rupees Five Thousand only) is required to be deposited as an Earnest Money Deposit in favour of "The Director, IIIT Tiruchirappalli". The Earnest Money Deposit (EMD) of the successful tender shall be liable to be forfeited if he/she does not fulfill any of the following conditions.
 - (i) An agreement is signed by him/her in the prescribed form after the receipt of the letter awarding the contract.
 - (ii) Maintenance of the purchased items until the warranty period.
- 13. The bids should be valid in the case of all the tenders for at least three (3) months from the date of opening of the tender and if any tenderers withdraw or alters the terms of the tender during the period, the Earnest Money Deposit shall be forfeited. In the case of the successful tenderer, rates quoted shall be valid for the entire period of the contract.
- 14. Late tenders will not be considered as per GFR.
- 15. IIIT Tiruchirappalli reserves the right to accept or reject any or all the offers either fully or partly without assigning any reasons.
- 16. Tender shall be accompanied by the copy of relevant documents including the following:
 - (i) Certificate in support of experience for having undertaken this kind of business along with a list of organizations where the Vendor is currently providing / has provided items.
 - (ii) PAN Card
 - (iii) Certificate of incorporation in case of a Company/ Partnership deed in case of partnership/certificate of registration in case of Sole Proprietorship
 - (iv) GST Registration Certificate

- (v) All necessary documents required for the fulfillment of the Eligibility Criteria including proof of supply and installation of laboratory components mandated in the tender document.
- 17. The L-1 vendor shall deposit 3% of the total tender amount as Security Deposit with IIITT. No interest shall accrue on this deposit, which will be returned after the successful completion of contract and after adjusting dues if any, of the vendor to IIITT. The EMD of successful tender will be converted as security deposit and the EMD of unsuccessful tenders will be refunded.
- 18. The vendor should show a sample of each item if he/she is awarded the purchase order.
- 19. Liquidated Damages: If a firm accepts an order and fails to execute the order, in full or part, as per terms and conditions, stipulated therein, it will be open to the Institute to recover liquidated damages from the firm at the rate of 0.5% of the value of the undelivered goods per month or part thereof, subject to a maximum of 5% of the value of the undelivered goods. It will also be open to the Institute alternatively, to arrange procurement of the required stores from any source, at the risk and expense of the firm, accepted and failed to execute the order according to stipulations agreed upon. This will also entail removal of the defaulters' name from the approved/registered list of Suppliers.
- 20. Payment and receipts to Government and Semi Government Agencies would be rounded off to the nearer higher rupee and in other cases the rounding off will be to nearest, i.e. paise 50 or above will be rounded off the near higher rupee and paise less than 50 will be ignored.
- 21. Canvassing or offer of an advantage or any other inducement by any person with a view to influencing acceptance of a bid is an offence under Laws of India. Such action will result in the rejection of bid, in addition to other punitive measures.
- 22. All rules will be governed by Govt. of India, General Financial Rules 2017 and bidders are requested to make themselves aware of the same.

Name and Signature of bidder with seal

METHOD OF SUBMISSION OF BIDS

- The Bid documents can be downloaded from Institute website http://www.iiitt.ac.in/main/tender.
- The bids should be filled in two bid formats with all the required documents as enclosures in separate sealed covers i.e., (a) Part-I Technical bid, (b) Part-II Financial bid
 Two separate sealed covers should be specifically super-scribed as (a) "Technical bid for the supply and installation of Laboratory Components for Electronics and Communication Engineering department at IIIT Tiruchirappalli, Tamil Nadu and (b) "Financial bid for the supply and installation of Laboratory Components for Electronics and Communication Engineering department at IIIT Tiruchirappalli, Tamil Nadu. Both the sealed envelopes (a) and (b) are to be kept in another Master envelope, which should also be sealed and submitted.
- The Master envelope should be super-scribed with "Tender for the supply and installation of Laboratory Components for Electronics and Communication Engineering department at IIIT Tiruchirappalli, Tamil Nadu" and shall be addressed to "The Tender Box, C/o The Director, Indian Institute of Information Technology Tiruchirappalli, Trichy- Madurai highway, Sethurapatti, Tamil Nadu -620012".
- The Bidders must submit signed hardcopies of all relevant documentary proofs for the tender.
- Last date for submission of bid documents is 24/01/2024.
- Bids received after the due date and time shall be summarily rejected.
- Incomplete bids or bids submitted not in prescribed format are liable for rejection.
- Institute will not be responsible for postal delay

EVALUATION OF THE BIDS

- **1.** The tender box shall be opened in the presence of Bidders, who may like to be present on technical bid opening in **IIIT Tiruchirappalli**, Tamil Nadu-620012.
- **2.** The Technical bid should consist of all the details as specified in the schedules along with commercial terms and conditions. There should be no cost indication in the Technical bid.
- **3.** A Committee duly constituted by the Competent Authority would evaluate the Technical bids submitted by the Bidders.
- **4.** At first, bidders are expected to meet the Pre-requisite eligibility criteria. Bidders failing to meet these criteria or not submitting requisite supporting documents / documentary evidence for supporting the eligibility criteria, are liable to be rejected summarily. If any document produced in support of the eligibility criteria turns out not to be genuine, the EMD/Security Deposit stands automatically forfeited, whether before award of purchase order.

OPENING OF FINANCIAL BID AND EVALUATION

Financial Bids of only the technically qualified bidders in technical evaluation will be opened. The financial bids shall be evaluated for completeness and accuracy.

Date			
Place:			

I / we accept all the terms and conditions of the tender notice.

Name and Signature of bidder with Seal

DISCLAIMER:

Even though adequate care has been taken in the preparation of this Tender Schedule the Bidder should satisfy himself that the Schedule is complete in all respects.

IIIT Tiruchirappalli not their employees make any representation or warranty as to the accuracy, reliability or completeness of the information in this Tender Schedule and it is not possible for IIIT Tiruchirappalli to consider the investment objective, Financial situation and particular needs of each party who reads or uses the Tenders Schedule. Certain prospective Bidders may have a better knowledge of the scope of work than others. Each prospective Bidder should conduct his/her own investigations and analysis and check the accuracy, reliability and completeness of the information in the Tender Schedule and obtain independent advice from appropriate sources.

The Registrar, IIIT Tiruchirappalli reserves the right to change any or all of the provisions of this tender document. Such changes would be intimated to all parties procuring this tender document. The Registrar, IIIT Tiruchirappalli reserves the right to reject any or all the bids submitted in response to this tender document at any stage without assigning any reasons whatsoever.

Name and Signature of bidder with Seal

PART-I (TECHNICAL BID)

All the commercial conditions shall also be indicated in this part. Deviations, if any, to our specifications shall be brought out very clearly. Bidders shall mention point-wise and conform to technical specifications given in our Enquiry.

S No.	Particulars	Details
1	Bidder's name	
2	Registered office and Address	
3	Working Place of the office	
4	Year of Establishment	
5	Type of Firm (Ownership, Partnership, Pvt Ltd or Ltd Co.)	
6	Details of ownership (Name and Address of the Board of Director, Partners etc)	
7	Name of the authorised signatory who is authorised to sign all the relevant documents (power of attorney, if any to be submitted)	
8	Contact Details	
	Name of the contact person	
	Designation	
	Telephone Number (Office)	
	Mobile Number(s)	
	Email Id	

9	Address for communication	
-		
10	Registration Numbers:	
	Firm Registration No.	
	GST No.	
	MSME Registration No.	
	Any other registration which is mandatory	
	for such agencies stipulated by concerned	
	authorities:	
11	Is it a latest ISO Certified company	YES/NO
12	BANAL I	
12	PAN Number	
13	Total Annual Turnover for last three years	2020-21: Rs
		2021-22: Rs
		2022-23: Rs
14	Whether Agency has been blacklisted by any	YES/NO
	Govt or Semi-Govt. organization or any other	
	organization? If yes, provide details	
15	Do you accept all terms and conditions of	YES/NO
	tender document and signed the tender	
	document?	
17	Do you agree to provide services as per the	YES/NO
	Institute's requirement?	
19	Have you submitted the previous work	YES/NO
13	order(s), work completion certificate(s),	1 L3/ NO
	satisfactory certificates, audited accounts	
	statement / bank statement?	
20	DD Number, Amount and Date of the EMD	
	submitted	

21	Bank Particulars	
	Account name	
	Type of A/C: (SB/CA/CC)	
	A/C No.	
	IFS code	
	Name of the Bank	
	Branch	

Enclose all certificates in support of above statements.

Date:	Authorized Signatory
Date.	Authorized Signatory

Name:

Place: Designation:

Company: Contact No.

Company Seal

CHECK LIST

The Bidder may use the check list below, to ensure that the tender submitted is complete in all respects.

Cover (a) "Technical Bid" should contain the following documents:

S. No	Particulars	Yes	No
1	Signed the original tender schedule downloaded from the IIIT Tiruchirappalli website.		
2	Crossed Demand Draft from National Bank towards EMD		
3	Experience certificates		
4	Relevant work orders		
5	Work satisfactory certificates, if any		
6	Financial turnover certificates issued from competent authority		
7	List of present clients with address & phone numbers		
8	Documents for having three years' experience in Marketing and sale of Laboratory equipment		
9	Documents for supply and installation of Laboratory equipment or similar items to any educational institutions /autonomous bodies etc. for last three years		
10	Attested and Submitted all the relevant hard copies		
11	Latest Income Tax Saral form/Returns		
13	Copy of PAN card		
14	Copy of GST registration		
15	Copy of MSME registration		
17	Copy of ISO Certificate		
18	Signed undertaking by the Bidder/Agency (as per Annexure - 1)		

Cover **(b) "Financial Bid"** should contain the following documents:

S. No	Particulars	Yes	No
1	Signed undertaking by the Bidder/Agency (as per Annexure - 8)		

Note: i) All the pages of the original bid document may be serially numbered.

- ii) The original bid document along with relevant proofs should be signed with seal.
- iii) Annexure-8 and any other financial related documents should not be attached in the technical bid.

DECLARATION

(To be provided on letter head of the Bidder and submit along with Technical bid)

I / We	do hereby certify that our firm is
,	g against us by Govt. of India / Govt. of Tamil Nadu
or by any State Board Universities, since inception	of the firm / company.
_	draft "for supply and installation of Laboratory
	<u> Engineering department at</u> IIIT Tiruchirappalli,
Tamil Nadu" issued by IIIT Tiruchirappalli, Tamil Na	du, are acceptable to us.
every respect and explicitly agree that in case at Tiruchirappalli, Tamil Nadu) that any details pro	the submitted documents is true and complete in a later date it is found out by the Institute (IIIT vided herein by us are incomplete/incorrect, any forthwith, our firm may be blacklisted, and that the occedings, as deemed fit by it.
Date:	Authorized Signatory
Date.	Name:
Place:	Designation:
	Company:
	Contact No.
	Company Seal:

BID SECURITY DECLARATION FORM

		Date:
Name of Work/Item De Tender No. and Date:	scription:	
To (insert complete nar	ne and address of th	e purchase)I/We. The undersigned,
declare that:		
I/We understand that, laration.	according to your co	onditions, bids must be supported by a Bid Securing Dec-
year from the date of conditions, because I/V a) Have withdraduring the period b) Having been validity (i) fail of	f notification if I an Ve awn/modified/amend od of bid validity spec notified of the accep r reuse to execute t	rom bidding for any contract with you for a period of one may /We are in a breach of any obligation under the Bidded, impairs or derogates from the tender, my/our Biddified in the form of Bid; or obtance of our Bid by the purchaser during the period of Bidders.
I/We understand this B Bidder, upon the earlie	-	ion shall cease to be valid if I am/we are not the successfu
		e name of the successful Bidder or e validity of my/our Bid.
		person whose name and capacity are shown) in the ity of person signing the Bid Securing Declaration)
Name:		(complete name of person signing the Bid gn the bid for an on behalf of (complete name of Bidder)
Dated on	day of	(date of signing)
Corporate Seal (where	appropriate)	

Note:

- (i) 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.
- (ii) This letter should be on the letterhead of the quoting firm and should be signed by a Competent Authority. Non-submission of this will lead to DISQUALIFICATION of bids.

FALL CLAUSE NOTICE CERTIFICATE

(To Be Submitted in Appropriate Format)
This is to certify that we have offered the maximum possible discount to you in our Quotation No.
dated (Please do not
reveal the prices here, which will lead to outright rejection of your bid). The prices charged for the
Stores supplied under tender should under no event be higher than lowest prices at which the party sells
the items of identical description to any other Govt. organization/PSU"s/Central Govt, /State Govt.
Autonomous bodies/Central/state Universities/Central/State Educational Institutions, failing which the
"FALL CLAUSE" will be applicable. The institute will look into a reasonable past period to ensure this. In
case, if the price charged by our firm is found to be more, IIIT Tiruchirappalli will have the right to
recover the excess charged amount from the subsequent/unpaid bill of the supplier.

Note: This letter of authority should be on the letterhead of the quoting firm and should be signed by a Competent authority and having the power of attorney.

Annexure-5

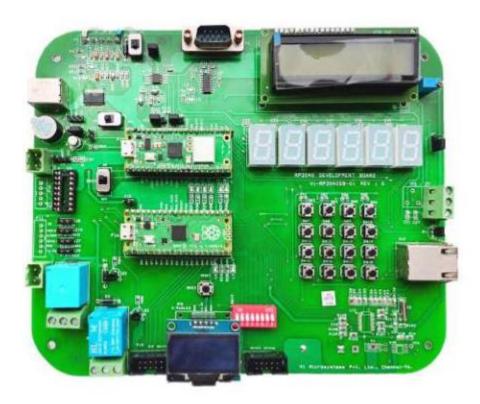
Specification and Sample Image of Laboratory equipment

Item.No	Name	Description	
1.	ADALM PLUTO SDR Active Learning Module	 Portable self-contained RF learning module Cost-effective experimentation platform Based on Analog Devices AD9363Highly Integrated RF Agile Transceiver and Xilinx® Zynq Z-7010 FPGA RF coverage from 325 MHz to 3.8 GHz Up to 20 MHz of instantaneous bandwidth Flexible rate, 12-bit ADC and DAC One transmitter and one receiver, half or full duplex MATLAB®, Simulink® support GNU Radio sink and source blocks libiio, a C, C++, C#, and Python API USB 2.0 Powered Interface with Micro-USB 2.0 connector High quality plastic enclosure. 	

Sample Image:



Item.No	Name	Description
2	RP2040 Development Board	RP2040 Development Board: Features of Raspberry Pi RP2040 Module: * Based on Raspberry RP2040 Dual Core Cortex M0+ MCU * Digital I/O Pins: 22 headers * UART, SPI, I2C * Memory: Flash :2 MB, SDRAM: 264KB * Clock Speed: up to 133 MHz * Microcontroller: Dual Core Cortex M0+, 32bit ARM MCU * Digital I/O Pins: 8 nos. * PWM Pins: 6nos. * Analog Inputs: 6nos, 12bit Features of Raspberry Pi Pico W Module: * Based on Raspberry RP2040 Dual Core Cortex M0+ MCU * Digital I/O Pins: 22 headers * UART, SPI, I2C * Memory: Flash :2 MB, SDRAM: 264KB * Clock Speed: up to 133 MHz * Microcontroller: Dual Core Cortex M0+, 32bit ARM MCU * Digital I/O Pins: 8 nos. * PWM Pins: 6nos. * Analog Inputs: 6no, 12bit * 2.4GHz 802.11n wireless LAN VI - RP2040DB Board Features: Module-1 Raspberry Pi RP2040 Interface Devices: * RS 232 signal at 9 pin D type connector / USB interface * Stepper Motor Driver /SPI signals terminated for 1No of PMOD angled connector * 8-nos of Digital Input by using 8-way Dip switch * 8-nos of Digital Input by using 8-nos of LED's IZC based 0.96 Inch OLED * LM 35 Temperature sensor is provided * 1No of PWM Termination connector is provided.



Item.No	Name	Description
	Microprocessor	PROCESSOR:
	8086	* INTEL 8086CPU AT 4.77 MHZ CLOCK SPEED
		MEMORY:
		* 16KB for monitor EPROM upgradable to 64kb * 16KB RAM expandable to 64KB * 3.0V Lithium Battery backup provision for RAM up to 64KB
		KEYBOARD AND DISPLAY:
		* 16 x 2 Alphanumeric LCD display * PC Keyboard (105 keys)
		TIMER, PARALLEL I/O, SERIAL AND BUS EXPANSION:
3		* 48 TTL I/O lines brought out to two nose of 26 pin FRC connector * 1 number of standard RS232C compatible serial port brought out to a pin D Type male connector/ USB to serial converter. * 3 channel 16 bit counter/timer using 8253. * Fully buffered address data and control signals terminated at a 50 pin header (VXT BUS) for interfacing VBMB series of experiment boards and bus expansion.
		SPECIAL FEATURES:
		* The kit and the power supply are mounted on a attractive light gray color Cabinet.
		SOFTWARE:
		* Built-in line assembler & Dissembler * Powerful debugging monitor to develop user program.
		DOCUMENTATION SUPPORT:
		i) E manual provide in CD
		BUILT-IN POWER SUPPLY:
		INPUT: 230V A.C OUTPUT: +5V/3.5A, +12V/150ma.



RS232 Cable

2 meters length

Sample Image:



8255 Interfacing

- Incorporates INTEL 8255, Programmable Peripheral Interface Chip
- * All essential extra hardware provided to operate 8255 in Mode 0 or Mode 1 or Mode 2
- * 8 Nos. of SPDT Switches provided at Port A for giving 8 TTL inputs
- * 8 Nos. of LED's provided at Port B for outputs
- * Provision to interrupt the CPU in Mode 1 and Mode 2
- * All the ports lines are terminated in a standard 26 Pin Header FRC OEN make
 - Male connector for high reliability
- * Provision for test points & fault analysis points
- * 50 Pin FRC-OEN type connector for high reliability to interface with VXT with VXT bus
- * 5 Nos. of LED's provided at port "C" [Control Port] to indicate IBF A, IBFB, OBFA, and OBFB & INTR in Mode 1 and Mode 2
- * 3 Instrument type high quality switch with de bouncing logic provided
 - For generating ACK A, ACKB, STBA and STBB in Mode 1 & Mode 2.
- * All Address, data and control lines are terminated in a 50 Pin FRC OEN
 - Make male connector to interface with VXT bus.
- * 50 Core Cable



A/D (Analog to Digital Converter) Interfacing with 8086

8 CHANNEL ADC INTERFACE BOARD

- * Incorporates one number or ADC 0809
- * Start of Conversion by manual switch or software
- * End of Conversion (EOC) monitored through Interrupt / Polling
- * Display of digital data using LED's
- * All the 8 channel analog inputs terminated at Screw type connector.
- * Trim pot is provided on-board to channel 0 or 3 or 6
- * Provision for test points & fault analysis points
- * 50 Core Cable provided
- * All Address, data and control lines are terminated in a 50 Pin FRC OEN

Make male connector to interface with VXT bus.

Sample Image:



D/A (Digital to Analog Converter) Interfacing with 8086

2 CHANNEL DAC INTERFACE BOARD

- * Two numbers of DAC 0800
- * Analog Output: +5V to -5V
- * DAC outputs are terminated at a suitable connector available onboard
- * Provision for test points & fault analysis points
- * All Address, data and control lines are terminated in a 50 Pin FRC OEN make male connector to interface with VXT bus
- * 50 Core Cable provided.



Note:

- 1. The suppliers can submit the bid for all three items or two items or one item. The institute has rights to select the suppliers for all three (or) some of items based on technical and financial bids.
- 2. The above sample images are shown only for the illustration of the product.
- 3. The vendor should show a sample of each item if they are awarded the purchase order.

SCHEDULE OF QUANITTY

(To Be Submitted in Appropriate Format)

Item No	Description of the Item	Quantity (Nos)
1	Adalm Pluto SDR Active Learning Module as per the specification and sample image given in Annexure 5.	6
2	RP2040 Development Board as per the specification and sample image given in Annexure 5.	10
3	Microprocessor 8086, RS232 cable, 8255 Interfacing board, A/D converter and D/A converter as per specification and sample image given in Annexure 5.	Each 10

Note: In case of increase in quantity upto 10%, the items will be purchased for the same amount quoted by the bidder (L1).

COMPLIANCE STATEMENT

(Part of Technical Bid)

(To Be Submitted in Appropriate Format)

The vendor shall,

- 1. Prepare, sign and upload the Compliance Statement of the specification of the items in the format given below along with the technical bid in the company letter head.
- 2. Submit separate Compliance Statement of specification sheets for each item
- 3. Ensure that the component number and heading in the Technical Specifications is clearly mentioned in the document. If there are any deviations from the specifications mentioned by IIIT Tiruchirappalli, the vendor should clearly indicate the deviations and give reasons for the deviation with proper justification.
- 4. Provide the technical leaflet/literature/catalogue or any relevant document for all the quoted items/components to IIIT Tiruchirappalli. The information provided in the compliance statement without supporting documents will not be considered for the evaluation of the technical bid and will be treated as non-compliance and may lead to the disqualification of the technical bid.
- 5. Clearly respond to every requirement given in the technical specifications. Lack of clarity may be considered as lack of information and may subsequently lead to disqualification of the technical bid.

Format of Compliance Statement:

Item	IIIT	Specifications	Vendor's	Deviation, if	Page no. of
No.	Tiruchirappalli's	of model	specification	any, to be	relevant
	technical	by the vendor	complies with	indicated in	specification for
	specification of		IIIT	unambiguous	the quoted
	components as		Tiruchirappalli's	terms	model in the
	given in		technical		technical
	Annexure-5		specification?		manual/ leaflet
			(YES/		
			NO)		

PART-II FINANCIAL BID

(To be provided on letter head of the Agency)

То

The Director IIIT Tiruchirappalli, Tiruchirappalli, Tamil Nadu

Sir,

Sub: Tender for supplying and Installation of Laboratory equipment at IIIT Tiruchirappalli, Tamil Nadu.

Ref:: IIITT/ECE/Laboratory/2023/12-04, DATED: 03/01/2024

With the above cited reference and subject, we submit herewith our financial bid.

Sl.no	Description	Rate quoted by the tenderer (in Rs.)
1	ADALM PLUTO SDR Active Learning Module	
	In words ()
2	RP2040 Development Board	
	In words ()
3	Microprocessor 8086, RS232 cable, 8255 Interfacing board, A/D converter and D/A converter	
	In words ()

NOTE:

- 1. Rate quoted should be **inclusive of all taxes/levies** (service tax /GST and any other statutory Central/State Govt. taxes).
- 2. No claim for compensation or loss due to fluctuations in the market rate of any item or any other reasons/ causes will be entertained.
- 3. If there is a discrepancy between the rate quoted in words and in figures, the value in words shall prevail.
- 4. Bidder with the lowest quoted amount shall be selected as L-1.

Date:	Signature of the Bidder with seal
Place:	Name:

(ADDRESS SLIP)

Please paste this on your envelope)

Tender No. & Date: Name of the item(s): (as mentioned in the tender) Due Date:				
To,		TENDER BOX C/o. The Director, Indian Institute of Information Technology Tiruchirappalli, Sethurapatti, Tiruchirappalli - 620012, Tamil Nadu.		
From:	Address:			
	Contact No Email ID:			