



# INDIAN INSTITUTE OF SCIENCE BANGALORE

Notice Inviting Domestic Tender (NIDT) under Two-Cover Bid System

for

**Supply and Installation of a Cobot Manipulator, Robert Bosch  
Centre for Cyber Physical Systems (RBCCPS), Indian Institute of  
Science, Bangalore**

Tender No.: IISC/Purchase/RBCCPS/2024-25/01

Date: 8<sup>th</sup> April 2024

Chair  
RBCCPS Purchase Committee  
Division of Interdisciplinary Sciences  
Indian Institute of Science  
C. V. Raman Road  
Bangalore 560012 (INDIA)

Website: [www.iisc.ac.in](http://www.iisc.ac.in)

GSTIN: 29AAATI1501J2ZV

Email ID for this tender  
[office.cps@iisc.ac.in](mailto:office.cps@iisc.ac.in)



## **INTRODUCTION**

The Robert Bosch Centre for Cyber-Physical Systems (RBCCPS) (henceforth referred to as the Purchaser) under the Division of Interdisciplinary Sciences, Indian Institute of Science (IISc), is planning to set up an Cobot Manipulator. This facility will be used to conduct research on perception, Pick-and-place, testing Machine learning Algorithms etc., in the field of robotics and autonomous systems.

The test-facility is required to support the evolving robotic paradigms and should be compatible with software's such as ROS (Robot Operating System) and MATLAB. In accordance with the specialised nature of planned experiments, the Purchaser has identified the OEM equipment that needs to be procured for the tracking system. Bids are invited from bidders in two-cover format for the test-bed equipment, along with the management software, as per the bill of quantity in Annexure-I. The proposed topology of the test-bed is illustrated in Annexure-II.

## **1. SCOPE OF WORK**

The bidders have to ensure that the resources (personnel) allocated for each one of the above tasks are competent and capable to meet all the technical requirements in order to ensure that the broad objective of delivery of services as per expectations is fully met.

## **2. BIDDER'S ELIGIBILITY CRITERIA**

- 1) Bidder should be a registered vendor in India in accordance with law.
- 2) The quotations should be on FOR-IISc Bangalore basis in INR only.
- 3) Quote should come only from the Indian Original Equipment Manufacturer (OEM) or their Indian Authorized Distributor (AD).
- 4) The OEM/AD distributor must be either a Class-I Class-II local supplier as specified by the GoI public procurement order (2017, revised on 4th June 2020).
- 5) In the technical bid, the bidder should clearly demarcate the responsibilities between the OEM and the bidder. Complete details of the same have to be submitted in the technical bid. However, for complete supply, installation, and post-installation service, the bidder shall be responsible.
- 6) The bidder has to provide an undertaking on the official letter-head of the company that it has not been blacklisted by any department or undertaking of the Central or State Government department/Public Sector Undertakings (PSU)/Public Sector Enterprises (PSE)/ Banks in India.
- 7) The bidder (along with the OEM) should be in a position to demonstrate their competence and capability (with a sales office and service centre based in Bangalore), as a team, to deliver all the services expected during the contract period.



- 8) The bidder should have a track record of having previously supplied similar equipment to Central/State Government or other reputed firms. Purchase order copies of previous installations are required along with customer contact details.
- 9) The Bidder should belong to either Class-1 or Class-2 suppliers distinguished by their “local content” as defined by recent edits to GFR. They should mention clearly which class they belong to in the cover letter. a) Class-1 supplier: Goods and services should have local content of equal to or more than 50%. b) Class-2 supplier: Goods and services should have local content of equal to or more than 20 % and less than 50%.
- 10) Quote should come only from Indian Original Equipment Manufacturer (OEM) or their Indian authorized distributor.
- 11) Bidders offering imported products will fall under the category of non-local suppliers. They cannot claim themselves as Class-1 local suppliers/Class-2 local suppliers by claiming the services such as transportation, insurance, installation, commissioning, training, and other sales service support like AMC/CMC, etc., as local value addition.
- 12) Purchase preference as defined by the recent edits to GFR (within the “margin of purchase preference”) will be given to the Class-1 supplier.
- 13) MSMEs can seek an exemption to some qualification criteria. IISc follows GFR2017 for such details.

### **3. SUBMISSION OF BID**

- 1) The offer should be in the two-bid system in a two-cover format – i.e., “Technical bid” and “Commercial bid”.
- 2) Technical bids must contain only the technical details. This part must not include the price offered by the bidder. The price must be mentioned only in the commercial bid part.
- 3) Late or delayed tenders shall be summarily rejected.
- 4) Bidder(s) must submit their PAN issued by Income Tax authorities, TIN, and a copy of the PAN / TIN with the bid.
- 5) Bid document(s) and all enclosures must contain the name and address of the bidder, as well as the signature and seal of the authorised representative of the bidder.
- 6) The Bank/RTGS details on the letter-head of the bidder(s) must be submitted along with the tenders (technical bid). A copy of the cancelled cheque should also be attached.
- 7) The bidders are required to register themselves with IISc through the website <https://hellovendor.iisc.ac.in> for receiving payment in due course of time.



### 3.1 TECHNICAL BID

The technical bid should contain the following:

- 1) Overall compliance statement indicating adherence to each and every clause in the terms and conditions, as per Annexure-III.
- 2) Detailed technical description of the products and datasheets for the specific configuration options quoted.
- 3) Terms for licensing (perpetual or linked with support contract) and service/support for each hardware/software component. Terms for software usage and update should be unambiguously stated.
- 4) A clear installation-deployment-testing plan for the test-facility, with requirements from purchaser clearly identified phase-wise.
- 5) A copy of the masked commercial bid of the bill-of-materials.
- 6) It is mandatory that the BoQ adequately covers all hardware/software necessary for satisfactory operation of the test-bed. The bid has to quote for the entire solution as per BoQ, and partial offers will not be accepted.

The bidder is required to indicate, by filling-in Annexure-IV, whether each line item in the BoQ is quoted.

### 3.2 COMMERCIAL BID

- 1) The commercial bid should contain details of the prices for each of the subsystems (including the software licences), clearly mentioning the rate and the quantity.
- 2) Price must be offered only in the prescribed priced bid format for all the line items.
- 3) Price should include all discounts applicable to research institutions given that the test-facility will be used for research purposes.

## **4. INSTALLATION, TRAINING AND DOCUMENTATION, SUPPORT**

### **CONTRACT**

#### 4.1 INSTALLATION

The total solution consisting of supply, installation, and commissioning, as per the PO (purchase order), should be completed within 8 weeks after receiving firm PO from IISc.



#### 4.2 TRAINING AND DOCUMENTATION

Appropriate number of training sessions for IISc technical staff for effective operation and management of the test-facility, including the configuration/usage of the management software supplied shall be held.

Documentation (manuals, operating instructions, etc.) for all hardware, software, and services offered (in printed/digital format) shall be provided to the Purchaser.

A technical report on the test-bed specific hardware and (management) software configuration will be a prerequisite condition for granting acceptance from the Purchaser.

#### 4.3 WARRANTY AND OEM SUPPORT CONTRACT

- 1) The bidder/OEM shall be fully responsible for the warranty period.
- 2) Preventive maintenance and repairs of the components supplied by the bidder are the responsibilities of the bidder.
- 3) OEM support contract should be for a period of three years from the date of acceptance of the equipment for both hardware and software.
- 4) While the support contract is valid, the bidder/OEM shall attend to all the hardware and/or software problems on site and shall replace the defective parts at no extra cost to the purchaser within 5 working days after reporting the issue.
- 5) All critical security updates must be promptly applied by the bidder/OEM personnel. The purchaser should be intimated about all non-critical security updates within a week of their release by the OEM. All feature update releases for software must be made available to the Purchaser during the validity period of the support contract.
- 6) All software tools should also be provided in CD/USB format and the purchaser shall be permitted to make at least 2 copies of the software tools /updates for emergency recovery.
- 7) Performance security guarantee through any nationalised bank in India for 5% of the total purchase order amount shall be given by the selected bidder to the Purchaser. Format of the performance security guarantee will be given by the purchaser at the time of issuing the purchase order.
- 8) OEM/bidder shall clearly specify the conditions over which the service obligations will be void. Detailed documents regarding warranty conditions and applicability should be submitted along with a bid with a declaration of accepting the warranty conditions of the purchaser stated at above clause 4.3.



## 5. ADDITIONAL GUIDELINES

- 1) Regarding any clarification on technical aspects or any other issue, a pre-bid meeting will be held on a date and time as mentioned in this tender document at Indian Institute of Science, Bangalore (Robert Bosch Centre for Cyber-Physical Systems). Queries, if any, may only be submitted to the email ID [office.cps@iisc.ac.in](mailto:office.cps@iisc.ac.in) before the pre bid meeting. No queries will be entertained after the pre-bid meeting.

The changes in the tender, if any, made after pre-bid meeting, would be published on the RBCCPS website <https://cps.iisc.ac.in>. Any kind of corrigendum/ addendum will become an integral part of this tender document.

- 2) Delayed and/or incomplete tenders are liable to be rejected.
- 3) The technical bid should not contain any price information. Non-conformance will result in disqualification.
- 4) All pages of the technical bid should be duly signed by the bidder.
- 5) The bidders are requested to go through the terms and conditions detailed in this document, before filling out the tender. Agreeing to the terms and conditions of the tender document (by signing all pages of the copy of the tender document) is a mandatory requirement.
- 6) Award criteria: the two-cover system will be followed; the technical and commercial bids will be opened:
  - a. Commercial bids of technically qualified bids alone will be taken up for further processing. Decision of IISc will be final and binding.
  - b. Subject to Clause 5(11), IISc will award the contract to the bidder whose technical bid has been determined by the Purchase Committee to meet technical evaluation criteria, and who has offered the lowest evaluated bid price.
- 7) IISc reserves the right to accept or reject any bid, and to cancel the tender process and reject all bids, at any time prior to the award of contract, without thereby incurring any liability to the affected bidder(s) or any obligation to inform the affected bidder(s) of the grounds for the IISc's action.
- 8) The Director, IISc, Bangalore-12 reserves the right to modify the technical specifications or the required quantity at any time.
- 9) IISc will place the purchase order only on the successful bidder. Courts of Bangalore/New Delhi shall have exclusive jurisdiction over matters covered in this tender.



- 10) The bid must be addressed to “The Chair, RBCCPS Purchase Committee” and the hard copy should be submitted via post or in person to the RBCCPS Office, which is situated at - 3rd Floor, SID Entrepreneurship Building, Indian Institute of Science, Bangalore – 560012”. In addition, a soft copy should be emailed to office.cps@iisc.ac.in.
- 11) Contact: any queries or requests for clarification must be directed (through email only) to office.cps@iisc.ac.in

## **6. COMMERCIAL TERMS AND CONDITIONS**

- 1) The commercial bid should contain, among other things, payment terms, warranty, installation, and commissioning charges. These charges will be paid only after successful supply, installation and acceptance.
- 2) Vendors should quote the prices for imported items on ‘DDP’ terms.
- 3) Withholding tax, if applicable, will be deducted from the PO amount.
- 4) Price should be quoted per unit and the total amount for the required quantity should also be quoted.
- 5) Offer should be valid for 60 days from the date of submission.

## **7. PAYMENT TERMS**

100% payment as per PO will be released after complete supply, installation, and commissioning of the items followed by submission of invoice and warranty certificate. Any payment will be released only after submission of performance bank guarantee as per clause 4.3(7).



## 8. IMPORTANT DATES

Release of tender document	April 8 <sup>th</sup> 2024
Submission of queries (for pre-bid clarification) by email to office.cps@iisc.ac.in	April 14, 2024 1.00PM
Pre-bid Clarification online teams meeting, IISc link: <a href="https://teams.microsoft.com/l/meetup-join/19%3ameeting_MzJmMDcwNzctNjBjMS00MDgzLTliMjUtNTZjM2U2NjA3ZWZh%40thread.v2/0?context=%7b%22Tid%22%3a%226f15cd97-f6a7-41e3-b2c5-ad4193976476%22%2c%22Oid%22%3a%22defbb279-15b2-46b3-9b6c-9e5efe202756%22%7d">https://teams.microsoft.com/l/meetup-join/19%3ameeting_MzJmMDcwNzctNjBjMS00MDgzLTliMjUtNTZjM2U2NjA3ZWZh%40thread.v2/0?context=%7b%22Tid%22%3a%226f15cd97-f6a7-41e3-b2c5-ad4193976476%22%2c%22Oid%22%3a%22defbb279-15b2-46b3-9b6c-9e5efe202756%22%7d</a>	April 14, 2024 1.30 PM
Deadline for submission of bids	April 29, 2024, 4.00 PM
Opening of technical bids	April 30, 2024, 11:00AM
Technical presentations	May 1 <sup>st</sup> , 2024, 3.00PM. Exact schedule will be sent to individual bidders by email.
Opening of price bids	May 2 <sup>nd</sup> , 2024, 3.00PM





## 9. ANNEXURE-I

The bidders are required to submit their bids as per the following Bill of Quantity:

Sl. No.	Item Description	Part Number	Quantity
	<b>Complete Kit Required for Manipulation tasks:</b>		
1.1	Control station		1
1.2	Robot arm		1
1.3	Software		Supported on Windows and Linux with unlimited departmental licence Must also provide ROS interface support
1.4	Hardware accessories		Required Amount



## 10. ANNEXURE-II: TEST-FACILITY SETUP

### Specific Requirements:

#### HARDWARE:

A Cobot Manipulator with following specs

1. Degree of Freedom : 7
2. Peak Load : 3 Kg
3. Peak speed : 2 m/s at the end effector
4. Max range : 855 mm
5. Human Interactive module for safety
6. Torque sensing capabilities in joints and end-effector
7. Weight: 25 kg max
- 8: Integrated 2 finger gripper
- 9: Accuracy:  $< \pm 0.2$  mm in pose

#### SOFTWARE:

- a. Operating System Compatibility : Ubuntu (18+) and Windows
- b. Specific Software Compatibility : ROS (Robot Operating System), MATLAB and Simulink



**11. ANNEXURE-III: TECHNICAL BID COMPLIANCE CHECKLIST**

Sr. No.	Criterion	Yes/No
1	Whether the bidder has supplied similar equipment to Govt institutes or reputed firms and whether documentary proof attached	
2	Declaration that the bidder is not blacklisted by any Govt entities in India	
3	Detailed technical specifications and datasheets for all line items	
4	Terms for hardware/software licensing, updates and support clearly stated	
5	A clear installation-deployment-testing plan	
6	BoQ compliance sheet filled in and a copy of masked commercial bid attached	
7	To declare that the bidder is not blacklisted by any Govt entities in India or reputed firms and whether document proof attached to the convoluted given the amount of the diversity of the writer	
8	Terms for hardware/software licensing, updates and support clearly stated	
9	The final Compliance structure required to make it all full. The bidder should have supplied the similar equipment. The bidder has to fill - in the matter of the detail and to get that right	