This is a Request for Quote (RFQ) from domestic (India-based) vendors, for the supply and installation of a Flip Chip Bonder at Systems and Packaging Lab Facility (SAPF), CeNSE, IISc Bangalore.

Section 1 - Bid Schedule

1	Tender No	IISC-CeNSE-FCB-01
2	Tender Date	15th September 2022
3	Item Description	Supply and installation of Flip Chip Bonder at Systems and Packaging Facility, CeNSE, IISc Bangalore
4	Tender Type	Two bid system (i) Technical Bid (Part A) (ii) Commercial Bid (Part B)
5	Place of tender submission	Chairperson Office First Floor Centre for Nano Science and Engineering Indian Institute of Science, Bangalore 560012
6	Last Date & Time for submission of tender	6th October 2022
7	For further clarification	SYSTEMS AND PACKAGING FACILITY (SAPF) Centre for Nano Science and Engineering Indian Institute of Science, Bangalore 560012 Mr. Krishna Prasad Email: krishnaprasad@iisc.ac.in

Section 2 – Eligibility Criteria

Prequalification criteria:

1. The Bidder's firm should have existence for a minimum of 5 years. (Enclose Company Registration Certificate).

2. The Bidder should belong to either class 1 or class 2 supplier 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%.

3. Quote should come only from Indian Original Equipment Manufacturer (OEM) or their Indian authorized distributor.

4. The quotations should be on FOR-IISc Bangalore basis in INR only.

5. Bidders offering imported products will fall under category of Non-local suppliers. They cannot claim themselves as Class-1 local supplier/Class-II 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.

6. Purchase preference as defined by the recent edits to GFR (within the "margin of purchase preference") will be given to Class-1 supplier.

7. MSME can seek exemption to some qualification criteria. IISc follows GFR2017 for such details

8. The bidder should sign and submit the declaration for Acceptance of Terms and Conditions as per -Annexure 4.

9. The Bidder must not be blacklisted/banned/suspended or have a record of any service-related dispute with any organization in India or elsewhere. A declaration to this effect has to be given as per Annexure 3.

Section 3 – Terms and Conditions

A) Submission of Tender:

1. All documentations in the tender should be in English.
2. Tender should be submitted in two envelops (two bid system).
    a. Technical Bid (Part-A) – Technical bid consisting of all technical details and check list for conformance to technical specifications.

       The technical proposal should contain a technical compliance table with 5 columns.
        I. The first column must list the technical requirements, in the order that they are given in the technical requirement below.
        II. The second column should provide specifications of the instrument against the requirement. Please provide quantitative responses wherever possible.
        III. The third column should describe your compliance with a “Yes” or “No” only. Ensure that the entries in column 2 and column 3 are consistent.
        IV. The fourth column should state the reasons/explanations/context for deviations, if any.
        V. The fifth column can contain additional remarks from the OEM. You can use this opportunity to highlight technical features, qualify response of previous columns, or provide additional details, compare your solution with that of your competitors or provide details as requested in the technical requirements table below.

    b. Commercial Bid (Part-B) – Indicating item wise price for the items mentioned in the technical bid, **as per the format of quotation provided in tender**, and other commercial terms and conditions.

3. The technical bid and price bid should each be placed in separate sealed covers, superscripting on both the envelopes the tender no. and the due date. Both these sealed covers are to be placed in a bigger cover which should also be sealed and duly superscripted with the Tender No, Tender Description & Due Date.

4. The SEALED COVER superscripting tender number / due date & should reach Chairperson Office, Centre for Nanoscience and Engineering, Indian Institute of Science, Bangalore – 560012, India on or before due date mentioned in the tender notice. In case due date happens to be holiday the tender will be accepted and opened on the next working day. If the quotation cover is not sealed, it will be rejected.

5. All queries are to be addressed to the person identified in “Section 1 – Bid Schedule” of the tender notice.

6. GST/other taxes, levies etc., are to be indicated separately. The BIDDER should mention GST Registration and PAN in the tender document.

7. If price is not quoted in Commercial Bid as per the format provided in tender document

the bid is liable to be rejected.

8. The purchase committee reserves the right to accept or reject any bid and to annul the bidding process and reject all bids at any time prior to the award of contract, without there by incurring any liability to the affected bidder or bidders or any obligation to inform the affected bidder or bidders.

9. Incomplete bids will be summarily rejected.

B) Cancellation of Tender:

Notwithstanding anything specified in this tender document, IISc purchase committee, in its sole discretion, unconditionally and without having to assign any reason, reserves the rights:

a. To accept OR reject lowest tender or any other tender or all the tenders.
b. To accept any tender in full or in part.
c. To reject the tender, offer not confirming to the tender terms.

C) Validity of the Offer:

The offer shall be valid 90 Days from the date of opening of the commercial bid.

D) Evaluation of Offer:

1. The technical bid (Part A) will be opened first and evaluated.

2. Bidders meeting the required eligibility criteria as stated in Section 2 of this document shall only be considered for Commercial Bid (Part B) opening. Further, agencies not furnishing the documentary evidence as required will not be considered.

3. Pre- qualification of the bidders shall not imply final acceptance of the Commercial Bid. The agency may be rejected at any point during technical evaluation or during commercial evaluation. The decision in regard to acceptance and / or rejection of any offer in part or full shall be the sole discretion of IISc Bangalore, and decision in this regard shall be binding on the bidders.

4. The award of contract will be subject to acceptance of the terms and conditions stated in this tender.

5. Any offer which deviates from the vital conditions (as illustrated below) of the tender is liable to be rejected:

    a. Non-submission of complete offers.
    b. Receipt of bids after due date and time and or by email / fax (unless specified otherwise).

   c. Receipt of bids in open conditions.

6. In case any BIDDER is silent on any clauses mentioned in these tender documents, IISc Bangalore shall construe that the BIDDER had accepted the clauses as of the tender and no further claim will be entertained.

7. No revision in the terms and conditions quoted in the offer will be entertained after the last date and time fixed for receipt of tenders.

8. Lowest bid will be calculated based on the total price of all items tendered for Basic equipment along with accessories selected for installation, operation, preprocessing and post processing, optional items, recommended spares, warranty, annual maintenance contract. The purchase committee is looking for the most cost-effective solution of obtaining a new tool. Vendors are encouraged to propose all avenues, including but not limited to buy back of the exiting tool, turnkey upgrade of existing tool or purchase of a new tool.

E) Pre-requisites:

The bidder will provide the prerequisite installation requirement of the equipment along with the technical bid.

F) Warranty:

The complete system is to be under warranty period of minimum 3 years (year wise breakup value should be shown in the commercial bid) Vendor should include cost of any spares that are expected to be needed during the warranty period, including electronics, subcomponents, and software. Vendors can assume usage of 1000 hours/year for this calculation If the instrument is found to be defective, it has to be replaced or rectified at the cost of the bidder within 30 days from the date of receipt of written communications from IISc, Bangalore. If there is any delay in replacement or rectification, the warranty period should be correspondingly extended.

G) Annual Maintenance Contract:

An annual maintenance contract for a period of at least 3 years post warranty should be provided as an essential optional item on completion of warranty period.

The AMC costs will not be considered towards classifying the domestic nature (class 1 or class 2) of the vendor (see eligibility criteria in section 2).

H) SPARES:

CeNSE, IISc is buying the Flip Chip Bonder, the Vendors have to provide detailed list of Spares and User Manual with Bill of Materials of all Parts in detail as per Spares Column with Manufacturer part Number, Qty, Availability of stock after 3 Years.

I) Purchase Order:

The quantity of the items in tender is only indicative. IISc, Bangalore reserves the right to increase /decrease the quantity of the items depending on the requirement.

If the quality of the product and service provided is not found satisfactory, IISc, Bangalore reserves the right to cancel or amend the contract.

J) Delivery, Installation and Training:

The bidder shall provide the lead time to delivery, installation and made functional at IISc, Bangalore from the date of receipt of purchase order. The system should be delivered, installed and made functional within 120 days from the date of receipt of purchase order. The supply of the items will be considered as effected only on satisfactory installation and inspection of the system and inspection of all the items and features/capabilities tested by the IISc, Bangalore. For acceptance, the vendor will have to demonstrate the technical specifications mentioned in the tender. After successful installation and inspection, the date of taking over of entire system by the IISc, Bangalore shall be taken as the start of the warranty period. No partial shipment is allowed.

The bidder should also arrange for technical training to the local facility technologists and users.

K) Payment Terms:

100% payments (except AMC) will be released after completion delivery, satisfactory installation and qualification subject to TDS as per rules. AMC cost (if ordered), after completion of warranty period) will be released on half-yearly basis at the end of each six months subject to satisfactory services. Price basis must be on FOR-IISc Bangalore basis only. As per GFR no advance payment can be made to domestic vendors, unless an equal amount of bank guarantee is provided.

L) Statutory Variation:

Any statutory increase in the taxes and duties subsequent to bidder’s offer, if it takes place within the original contractual delivery date, will be borne by IISc, Bangalore subject to the claim being supported by documentary evidence. However, if any decrease takes place the advantage will have to be passed on to IISc, Bangalore.

M) Disputes and Jurisdiction:

Any legal disputes arising out of any breach of contract pertaining to this tender shall be settled in the court of competent jurisdiction located within the city of Bangalore, India.

N) General:

1. All amendments, time extension, clarifications etc., within the period of submission of the tender will be communicated electronically. No extension in the bid due date/time shall be considered on account of delay in receipt of any document(s) by mail.

2. The bidder may furnish any additional information, which is necessary to establish capabilities to successfully complete the envisaged work. It is however, advised not to furnish superfluous information.

3. The bidder may visit the installation site before submission of tender, with prior intimation.

4. Any information furnished by the bidder found to be incorrect, either immediately or at a later date, would render the bidder liable to be debarred from tendering/taking up of work in IISc, Bangalore.

Section 4 – Technical Specifications

The specifications have to be demonstrated during system installation and acceptance.

Equipment Capability	Requirement	Compliance	Remarks
Final bonding alignment accuracy (flip chip)	± 1 µm or better		
Component size (minimum)	30 x 30 µm		
Component size (maximum)	100mm x 100mm x 10mm (L x W x H)		
Substrate size (maximum)	300mm x 300mm x 15mm (L x W x H)		
Bonding technologies	Thermo-compression (Au-Au, Cu-Cu)		
	Thermosonic		
	Ultrasonic		
	Soldering (Indium-bump, Au-In, Au-Sn)		
	Adhesive (UV or thermal)		
	Sintering		
Working stage travel minimum	X -Stage 300 mm, resolution 1 µm		
	Y-Travel 150 mm, resolution 1 µm		
	Z-Travel 10 mm		
	Theta rotation coarse ± 15 degrees		
	Theta rotation fine ± 2 degrees		
Optical system	Vision alignment with digital zoom		
	FOV: 3 mm x 3 mm or larger		
	Optical resolution 1µm/pixel		
	Display overlay		
Bonding force	Software controlled close loop force control		
	Up to 500 N		
	Tolerance of 1% of set value		
	Touchdown sensing		

Placement arm / component holder with heating	Heated placement tool for chip heating		
	Capability to pick up chips with through holes (e.g. MEMS devices)		
	Fast chip heating up to 450°C		
	Ramp rate better than 10°C/s		
	Switchable vacuum		
	UV module		
	Integrated feed for process gas		
	Arm adjustment range (X and Y) 20mm or more		
Substrate heating	Heating plate size 50 mm x 50 mm or bigger		
	Heating up to 450 °C		
	Ramp rate better than 10°C/s		
	Force up to 500N		
	Fast cooling		
	Programmable heating profile		
Formic acid module	Flow control of nitrogen carrier gas		
	Control of mixing ratio		
	Exhaust option		
Integrated process management	Synchronized control for all process modules		
	Software controlled verification of alignment		
	Chip and substrate heating control (complex temperature profiles)		
	Bonding force control		
	Control for process gas		
	Illumination control		
	Dispenser control		
	Die flip module control		
	Vacuum control		
Dispenser module (Adhesive dispensing)	Dispense size 0.1 mm		
	Dispense pith 0.5 mm		

Processes Supported	Flip Chip Bonding(Face Down)		
	Precise Die Bonding(face up)		
	Wafer Level Packaging (FOWLP,W2W,C2W)		
	2.5D & 3D Packaging (Stacking)		
	Multi Chip Packaging (MCM, MCP)		
	Chip on Glass (COG)		
	Chip on Flex/Film (CoF)		
	Chip on Board (CoB)		

SUPPORTING SOFTWARE / Service			
Software	Software supporting all modules, alignment and bonding process control		
	Post placement accuracy check		
	Free upgrade for future software versions		
	Manual		
	Data logging		
	Video capture		
Services	In event service is required the firsts response has to be within 48 hours.		
	In event of breakdown where visit from a service engineer has to be within 2 weeks.		

SITE PREPARATION REQUIREMENTS			
The chosen supplier shall indicate all site requirements including those for stable equipment operation within one month of order placement			
It is the responsibility of IISc to ensure that the site meets with all specifications of the supplier in time for equipment installation			

Spares List Module Wise			

Section 5- Technical Bid

The technical bid should furnish all requirements of the tender along with all annexures in this section and submitted to

The Chairperson,
Attn: Mr Krishna Prasad N
Centre for Nano Science and Engineering
Indian Institute of Science
Bangalore – 560012, India

Annexure-1:

Details of the Bidder

The bidder must provide the following mandatory information & attach supporting documents wherever mentioned:

Details of the Bidder

Sl. No	Items	Details
1.	Name of the Bidder	
2.	Nature of Bidder (Attach attested copy of Certificate of Incorporation/ Partnership Deed)	
3.	Registration No/ Trade License, (attach attested copy)	
4.	Registered Office Address	
5.	Address for communication	
6.	Contact person- Name and Designation	
7.	Telephone No	
8.	Email ID	
9.	Website	
10.	PAN No. (attach copy)	
11.	GST No. (attach copy)	

Signature of the Bidder

Name
Designation, Seal

Date:

Annexure-2:

Declaration regarding experience

To,
The Chairperson,
Centre for Nanoscience and Engineering,
Indian Institute of Science,
Bangalore – 560012, India

Ref: Tender No: XXXXXXXXX
Dated: XXXXX

Supply and installation of Flip Chip Bonder at Systems and Packaging Facility (SAPF), CeNSE, IISc Bangalore Sir,

I've carefully gone through the Terms & Conditions contained in the above referred tender. I hereby declare that my company / firm has --- years of experience in supplying and installing Flip Chip Bonders.

(Signature of the Bidder)
Printed Name
Designation, Seal Date:

Annexure-3:

Declaration regarding track record

To,
The Chairperson,
Centre for Nano Science and Engineering
Indian Institute of Science,
Bangalore – 560012, India

Ref: Tender No: XXXXXXX
Dated: XXXXX

Supply and installation of Flip Chip Bonder at Systems and Packaging Facility (SAPF), CeNSE, IISc

Bangalore

Sir,
I've carefully gone through the Terms & Conditions contained in the above referred tender. I hereby declare that my company/ firm is not currently debarred / blacklisted by any Government / Semi Government organizations / institutions in India or abroad. I further certify that I'm competent officer in my company / firm to make this declaration.

Or

I declare the following

Sl.No	Country in which the company is Debarred /blacklisted / case is Pending	Blacklisted / debarred by Government / Semi Government/Organizations /Institutions	Reason	Since when and for how long

(NOTE: In case the company / firm was blacklisted previously, please provide the details regarding period for which the company / firm was blacklisted and the reason/s for the same).

Yours faithfully
(Signature of the Bidder)

Name
Designation, Seal

Date:

Annexure – 4:

Declaration for acceptance of terms and conditions

To,
The Chairperson,
Centre for Nano Science and Engineering
Indian Institute of Science,
Bangalore – 560012, India

Ref: Tender No: XXXXXX
Dated: XXXX

Supply and installation of Flip Chip Bonder at Systems and Packaging Facility
(SAPF), CeNSE, IISc Bangalore

Sir,

I've carefully gone through the Terms & Conditions as mentioned in the above referred tender document. I declare that all the provisions of this tender document are acceptable to my company. I further certify that I'm an authorized signatory of my company and am, therefore, competent to make this declaration.

Yours faithfully,

(Signature of the Bidder)
Name
Designation, Seal   Date:

Annexure – 5:

Details of items quoted:

a. Company Name
b. Product Name
c. Part / Catalogue number
d. Product description / main features
e. Detailed technical specifications
f. Remarks

Instructions to bidders:

1. Bidder should provide technical specifications of the quoted product/s in detail.
2. Bidder should attach product brochures along with technical bid.
3. Bidders should clearly indicate compliance or non-compliance of the technical specifications provided in the tender document.

Section 6 – Commercial Bid

The commercial bid should be furnished with all requirements of the tender with supporting documents as mentioned under:

Addressed to

The Chairperson,
Attn: Krishna Prasad N
Centre for Nano Science and Engineering
Indian Institute of Science
Bangalore – 560012, India

S.No	Description	Cat. Number	Quantity	Unit Price	Sub total
1.	Essential items noted in the technical specification				
1.a	… (details of essential items)				
1.b	…				
2.	Optional items noted in the technical specification				
2.a	… (details of essential items)				
2.b	…				
3.	Accessories for operation and installation				
4.	All Consumables, spares and software to be supplied locally				
5.	Warranty (3 years)				
6.	AMC 3 years beyond warranty				
7.	Cost of Insurance and Airfreight				
8.	CIP/CIF IISc, Bengaluru				

Any additional items such as Spares and Hardware/PCB'S Likely to going Obsolete after the next 3 Years

S.No	Description	Cat. Number	Quantity	Unit Price	Sub total

Section 7 – Checklist

(This should be enclosed with technical bid- Part A)
The following items must be checked before the Bid is submitted:

1. Sealed Envelope "A": Technical Bid

1. **Section 5- Technical Bid (each page signed by the authorized signatory and sealed) with the below annexures:**
    a. **Annexure 1: Bidders details**
    b. **Annexure 2: Declaration regarding experience**
    c. **Annexure 3: Declaration regarding clean track record**
    d. **Annexure 4: Declaration for acceptance of terms and conditions**
    e. **Annexure 5: Details of items quoted**
2. **Copy of this tender document duly signed by the authorized signatory on every page and sealed.**

2. Sealed Envelope "B": Commercial Bid

Section 6: Commercial Bid

Your quotation must be submitted in two envelopes: **Technical Bid (Envelope A) and Commercial Bid (Envelope B)** super scribing on both the envelopes with Tender No. and due date and both of these in sealed covers and put in a bigger cover which should also be sealed and duly super scribed with Tender No., Tender description & Due Date.