

**INDIAN INSTITUTE OF TECHNOLOGY GOA**

At Goa Engineering College Campus

Farmagudi, Ponda, Goa 403401

E-mail: [purchase@iitgoa.ac.in](mailto:purchase@iitgoa.ac.in)

GSTIN: 30AABAI1653D1ZF

PAN: AABAI1653D

TAN: BLRI08261B

**Enquiry No: IITGOA/2019-20/018**

**Date: 11/07/2019**

IIT Goa invites sealed quotations in two bid form for the supply of below mentioned item.

Sl. No.	Description of Item	Qty
1	PCB Fabrication Facility <b>(Detailed Specifications Attached)</b>	01 No.

**Terms and conditions:**

1. Quotation must be valid for at least 90 days.
2. The GSTIN should invariably be mentioned in your offer.
3. Kindly attach a compliance certificate along with the technical quote.
4. Prices:

**I) For Import Supplies:**

- a) It is mandatory to quote prices in CIP Goa basis only with separate cost breakup of transportation up-to IIT GOA.
- b) All local taxes, customs duty and clearance charges will be borne by the Institute as applicable.
- c) Customs clearance will be done at Mumbai by the Institute's CHA.
- d) In case of Multiple options of same product, bidders are requested to quote only one best option and not multiple options.
- e) Payment terms: 90% payment by letter of credit and balance 10% will be paid by wire transfer after satisfactory installation and commissioning.

**II) For Indigenous Supplies:**

- a) In case of Multiple options of same product, bidders are requested to quote only one best option and not multiple options.
  - b) Payment terms: Within 30 days after the delivery and installation of the items at IIT GOA.
5. Delivery and installation should be made within 4 - 6 weeks of getting a confirmed order.
  6. The suppliers shall provide the banking details along with their quote on their letterhead duly signed and stamped.

7. Quotations shall be submitted in two parts;
  - 1) **Part – I (Technical)** should contain all the technical details and specification of the product. It should contain unpriced bid along with terms and conditions, compliance certificates, proprietary certificates (if applicable), any other certificates/details etc. This envelope should be marked as “Technical Bid”
  - 2) **Part -II (Financial)** The financial bid of the above item should be in a sealed envelope marked as “Financial Bid” and should contain financial terms and conditions.
8. For any clarification, you may kindly contact Dr. Nandkumar Nambath (E-mail: [npnandkumar@iitgoa.ac.in](mailto:npnandkumar@iitgoa.ac.in)) and Stores & Purchase Department (E-mail: [purchase@iitgoa.ac.in](mailto:purchase@iitgoa.ac.in)) till 19/07/2019.
9. All sealed quotations must reach to the Assistant Registrar (Stores & Purchase), IIT Goa, at Goa College of Engineering Campus, Farmagudi, Ponda, Goa by 17.00 Hrs on or before 01<sup>st</sup> August, 2019”.
10. IIT Goa reserves the right to cancel the tender enquiry without assigning any reason in public interest.

**Sd/-**  
**Asst. Registrar (S&P)**

## Specification

The PCB fabrication facility expected to have the following features.

- Should be able to fabricate double-sided PCBs with plated through holes (PTH) with laminates such as FR4, RT-Duroid, flexible PET materials etc.
- Should be able to populate PCBs with through-hole and surface mount components at least in a semi-automatic way though a fully automatic way is preferred.
- Soldering and desoldering/rework stations.

The facility should contain the items 1 to 5, one unit each from the following list.

### **Item 1. PCB prototyping machine with conductive ink technology**

<b>Specification</b>	<b>Details</b>
Minimum trace width	0.25mm or less
SMD component footprint	0603 package or smaller
Maximum board thickness	2.5mm or more
Minimum pin-to-pin pitch for soldering	0.5mm or less
Maximum PCB size	10cmX10cm or more
Maximum speed of drilling	10,000 rpm or more
Drill bit diameter	0.5mm to 2mm or wider range
Reflow soldering of SMD components	Needed
Interface with PC	Needed
Supported OS	Windows or Linux
Compatibility with Gerber file format	Needed
Cooling unit to store the conductive ink (refrigerator)	5 litre or more capacity
Dust free enclosure	To keep the machine(s) free of dust from outside as well as to contain the drill waste
Accessories	Conductive inks, ink dispenser, drilling unit, drill bits, accessories to pick and place SMD components

### **Item 2. Handheld vacuum cleaner to clean the drill waste**

<b>Specification</b>	<b>Details</b>
Maximum vacuum pressure	10kpa or more
Maximum power	500W or more
Weight	5kg or less

### Item 3. Desktop PC to interface with the prototyping machine

Specification	Details
Processor	Intel core i7, base frequency 3.2GHz or higher, 7 <sup>th</sup> generation or later
OS	Windows 10 Home 64
RAM	16GB DDR4 (expandable to 32 GB)
HDD	1TB or more
Monitor	23 inch or more (resolution 1920X1080 or more)
Connectivity	10/100/1000 Gigabit Ethernet and Wireless (802.11ac)
Expansion Slots	PCIe x 16 (min. 2 slots)
Productivity	MS Office (H&S)
USB Ports	Min. 2 of Type 2, at least 1 USB 3.0
HDMI Port	Min. 1
Serial Port	Yes
VGA Port	Yes
Display Port	Yes
Input Devices	Keyboard and optical mouse
OEM	HP/Dell/Lenovo/Aspire preferred

### Item 4. PCB design software compatible with item 1

Specification	Details
Software	Industry standard software such as OrCAD, Allegro, PADS etc. with perpetual license
No. of licenses required	01 (floating license preferred)
OS compatibility	Should be compatible with items 1 and 3

### Item 5. Soldering and desoldering/rework station

Specification	Details
Component types to be handled	Through-hole and SMD (QFN, PLCC etc.)
Pencils to be included	Hot air, soldering, and desoldering
Power	200W or more
Soldering/desoldering/hot air temperature range	200-400 degree Celsius or wider
Hot air flow volume	20litre/min or more
Vacuum suction	500mmHg or more

Accessories

Magnifying system for visual inspection, thermal tweezers set, solder tip activator, solder wire stand, flux/spirit dispensing bottles, flux pen, desoldering pump, solder wire roll, desoldering wick, ESD mat, cutters, ESD safe cleaning brushes, vacuum pickup pen for SMD components, ESD safe soft tip tweezers, curved tweezers, tweezers for SMD chip components etc.