

# 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/2020-21/024**

**Date: 17/02/2021**

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

Sl. No.	Description of Item	Qty
1	Software Defined Radio module with accessories (Detailed specifications attached)	01

## **Terms & 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: Prices should be quoted in INR – F.O.R., IIT Goa basis only.
5. Payment terms: Within 30 days after the delivery and successful installation of items at IIT Goa.
6. Delivery and installation should be made within 4 weeks of getting a confirmed order.
7. Supplier should provide minimum one-year warranty for the above stated items.
8. The suppliers shall provide the banking details along with their quote on their letterhead duly signed and stamped.
9. It is mandatory for bidders to quote items having Local Content more than 20%. Refer revised Public Procurement (Preference to Make in India), Order 2017 P- 45021/2/2017 – B. E. II dated 04.06.20 issued by DPIIT, Ministry of Commerce and Industry, Govt. of India.
10. The successful bidder has to submit a Performance Guarantee Bond for 3% of the Purchase Order value and valid till one year plus 60 days OR up-to warranty period whichever is later from the date of issue of Purchase Order. Performance Guarantee Bond may be submitted within 15 (Fifteen) days from the date of order acknowledgment as a successful bidder.
11. IIT Goa reserves the right to accept and/or reject any/all bids without assigning any reason in public interest.
12. For any clarification, you may kindly contact Dr. Kuntal Deka (E-mail: [kuntal@iitgoa.ac.in](mailto:kuntal@iitgoa.ac.in)) and Stores & Purchase Department (email: [purchase@iitgoa.ac.in](mailto:purchase@iitgoa.ac.in)) till 26/02/2021.

13. All sealed quotations must be super scribed with the tender enquiry number and should reach to the Assistant Registrar (Stores & Purchase), IIT Goa, at Goa College of Engineering Campus, Farmagudi, Ponda, Goa, 403 401 by 17.00 Hrs on or before 10/03/2021.

**Sd/-**

**Asst. Registrar (S&P)**

## Specifications for Single Software Defined Radio Module with Accessories:

Sl. No.	Item	Details
<b>1.</b>	<b>RF Front End</b>	
1.1	Frequency Range	10MHz – 6GHz or better
1.2	Total No. of Channels	4 channels or 2 RF Front End Modules with each having 2 channels.
1.3	Independent Tx and Rx	2×2 MIMO, independent two TXs and two RXs
1.4	Bandwidth of Tx or Rx	$\geq 160$ MHz
1.5	Rx Noise Figure	$< 7$ dB
1.6	Rx IIP3 (max)	$\geq 4$ dBm
1.7	Rx/Tx IQ Imbalance	$< -30$ dBc
1.8	Tx Power	$\geq 7$ dBm @ 5-6 GHz
<b>2.</b>	<b>SDR Baseband</b>	
2.1	No. of Channels	4
2.2	Frequency Range	DC-6 GHz or better
2.3	ADC	Dual, 14 bit, 200MS/s or better
2.4	DAC	Dual, 16 bit, 800MS/s or better
2.6	Gigabit Streaming	200 MS/s or above
2.7	Fully Coherent MIMO capability	Coherent MIMO Capability should be present
2.8	FPGA	Kintex 7 or better
2.9	Auxiliary Analog and Digital Channel	Auxiliary Analog and Digital Channels should be provided
2.10	GPS Synchronization Option	Should be compatible with a GPS synchronization module
2.11	Interface	Ethernet 1G, 10G, PCIe x4
<b>3.</b>	<b>Other features</b>	
3.1	Accessories	All accessories like power adapters, clock synchronizations modules, 10 Gigabit Ethernet PCIe Adapter Card for desktop, etc. are to be provided for programming/ controlling the SDR with PC

3.2	Software Interface	Matlab and Above
3.3	Operating Temperature	0-40°C
3.4	Antenna	Log periodic antenna covering frequency range of 900 MHz to 6 GHz freq. band

Other Requirements	
<b>Demonstration of instrument performance.</b>	The Supplier Should give the demonstration of all the basic subunits in detail and manual should be provided in hard copy with detailed instructions

<b>Installation</b>	The Supplier should install the equipment with all accessories as specified with no additional or extra charges. IIT GOA will provide only space and electrical connection.
<b>Training</b>	Supplier should provide free training to IIT GOA Lab Staff's/Research Students on operation and preventive maintenance of the SDR modules.
<b>Warranty</b>	03 Year Standard Warranty

## FORMAT FOR PERFORMANCE GUARANTEE BOND

(To be typed on **Non-judicial stamp paper** of the value of Indian Rupees of One Hundred) (TO BE ESTABLISHED THROUGH ANY OF THE NATIONAL BANKS (WHETHER SITUATED AT GOA OR OUTSTATION) WITH A CLAUSE TO ENFORCE THE SAME ON THEIR LOCAL BRANCH AT GOA OR ANY SCHEDULED BANK SITUATED AT GOA. BONDS ISSUED BY CO-OPERATIVE BANKS ARE NOT ACCEPTED.

To,  
The Registrar,  
Indian Institute of Technology, Goa  
Farmagudi, Ponda,  
Goa – 403401

### LETTER OF GUARANTEE

WHEREAS Indian Institute of Technology, Goa (Buyer) have invited Tenders vide Tender No..... Dt. .... for purchase of .....

AND

WHEREAS the said tender document requires that any eligible successful tenderer (seller) wishing to supply the equipment / machinery, etc. in response thereto shall establish an irrevocable Performance Guarantee Bond in favour of “**Registrar, Indian Institute of Technology, Goa**” in the form of Bank Guarantee for Rs ..... (**3% (three percent) of the purchase value**) and valid till **one year or upto warranty period whichever is later** from the date of issue of Performance Guarantee Bond may be submitted within 15 (Fifteen) days from the date of Order Acknowledgment as a successful bidder.

NOW THIS BANK HEREBY GUARANTEES that in the event of the said tenderer (seller) failing to abide by any of the conditions referred in tender document / purchase order / performance of the equipment / machinery, etc. this Bank shall pay to Indian Institute of Technology, Goa on demand and without protest or demur Rs..... (Rupees.....).

This Bank further agrees that the decision of Indian Institute of Technology, Goa (Buyer) as to whether the said Tenderer (Seller) has committed a breach of any of the conditions referred in tender document / purchase order shall be final and binding.

We, ..... (name of the Bank & branch) hereby further agree that the Guarantee herein contained shall not be affected by any change in the constitution of the Tenderer (Seller) and/ or Indian Institute of Technology, Goa (Buyer).

#### Notwithstanding anything contained herein:

1. Our liability under this Bank Guarantee shall not exceed Rs. .... (Indian Rupees ..... only).
2. This Bank Guarantee shall be valid up to .....(date) and
3. We are liable to pay the guaranteed amount or any part thereof under this bank guarantee only and only if IIT Goa serve upon us a written claim or demand on or before ..... (date).
4. This Bank further agrees that the claims if any, against this Bank Guarantee shall be enforceable at our branch office at ..... situated at ..... (Address of local branch).

Date:

Yours truly,

Signature and seal of the Guarantor:

Name of Bank:

**Instruction to Bank:** Bank should note that on expiry of Bond Period, the Original Bond will not be returned to the Bank. Bank is requested to take appropriate necessary action on or after expiry of bond period.

## **Declaration of Local Content**

(To be given on company letter head - For tender value below Rs.10 crores)  
(To be given by Statutory Auditor/Cost Auditor/Cost Accountant/CA for  
tender value above Rs.10 crores)

Date: \_\_\_\_\_

To,  
The Registrar,  
Indian Institute of Technology Goa,  
At GEC Campus, Farmagudi, Ponda - Goa

Sub: Declaration of Local content

Tender Reference No: \_\_\_\_\_

Name of Tender: - \_\_\_\_\_

Country of Origin of Goods being offered: \_\_\_\_\_

We hereby declare that an item offered has % local content. \_\_\_\_\_

“Local Content” means the amount of value added in India which shall, be the total value of the item being offered minus the value of the imported content in the item (including all customs duties) as a proportion of the total value, in percent.

“\*False declaration will be in breach of 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 permissible under law.”

Yours faithfully,

(Signature of the Bidder, with Official Seal)