INDIAN INSTITUTE OF TECHNOLOGY GOA
At Goa Engineering College Campus
Farmagudi, Ponda, Goa 403401
E-mail: purchase@iitgoa.ac.in

GSTIN: 30AABAI1653D1ZF
PAN: AABAI1653D
TAN: BLRI08261B

Enquiry No: IITGOA/2021-22/015 **Date: 14/07/2021**

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

Sl. No.	Description of Item	Qty
1	8 Channel Digital Storage Oscilloscope **(Detailed Specifications Attached)**	01

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: 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. 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.
8. Any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Department for Promotion of Industry and Internal Trade (DPIIT).
9. The suppliers shall provide the banking details along with their quote on their letterhead duly signed and stamped.
10. 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.

11. IIT Goa reserves the right to accept or reject any or all the bids without assigning any reason in public interest.
12. The successful bidder has to submit a Performance Guarantee Bond for 3% of the Purchase Order value and valid till one year OR up-to warranty period plus sixty days 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.
13. For any clarification, you may kindly contact Dr. Sashidhar Sampathirao (E-mail: ssd@iitgoa.ac.in and Stores & Purchase Department (email: purchase@iitgoa.ac.in) till 27/07/2021.
14. 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 04/08/2021.

Sd/-

Asst. Registrar (S&P)

Technical Specifications for 8-Channel Digital Storage Oscilloscope with Power Analyzer

8-Channel Digital Storage Oscilloscope - Quantity 1 number		
S.No.	**Parameters**	**Specifications**
1	Number of Channels	Support for 32 Analog channels (Plug-in modular inputs for analog channels)
2	Maximum Memory Length	1 GPts of memory or higher
3	Sample Rate	10 MS/s, 3MHz, 12 bit resolution
4	Type of input, Number of channels	Isolated BNC, 8 channels
5	Operation Modes	Scope, Recorder
6	Recording	SSD recording of 512GB
7	Time axis setting range	100 ns/div to 1 s/div (1-2-5 steps), 2 s/div, 3 s/div, 4 s/div, 5 s/div, 6 s/div, 10 s/div, 20 s/div, 30 s/div, 1 min/div to 6 min/div (1 min steps), 10 min/div, 12 min/div, 30 min/div, 1 h/div to 6 h/div (1 h steps), 8 h/div, 10 h/div, 12 h/div, 1 day/div to 5 day/div (1 day steps)
8	Time axis accuracy	+/ -4.6 ppm or better
9	Acquisition mode	Normal, Envelope, Averaging
10	Maximum sample rate and bandwidth support	Minimum 40 MHz, 200 MS/s, 16 bit resolution
11	Multi-sample rate	To be supported
12	History memory	Maximum 5000 pages or more
13	Linear scaling	Set AX+B mode or P1-P2 mode independently for CHn
14	Statistics	Max, Min, Avg, Sdv, Cnt Mode-All waveforms/cycle statistics/history statistics
15	Cursor measurement	Horizontal, Vertical, Marker, Degree (for T-Y waveform display only), H&V
16	FFT and XY modes	FFT - 8 or more, XY - 2 or more
17	Trigger Mode	auto, auto level, normal, single, single (N), ON start
18	Trigger Types	A->B (N), A Delay B, Edge on A, OR, AND, Period, Pulse Width, Wave Window
19	Action on trigger	Screen image data output, waveform data storage, buzzer notification, mail transmission
20	Display & Zoom function	Instantaneously zooms into two locations
21	Display	Minimum 12-inch color TFT LCD (capacitive touch panel), 1024×768 (XGA)
22	Display format	T-Y, X-Y, FFT, harmonics
23	GO/NO-GO determination	Operate selected actions based on the determination criteria to the captured waveform.
24	Dual Capture Mode	Perform data acquisition on the same waveform at 2 different sample rates.
25	Snapshot	Retain the current displayed waveform on the screen. Snapshot waveforms to be saved/loaded

26	Isolation Voltage and resistance	1500 V for 1min , 10 M Ohms or greater across power supply and ground minute
27	Storage	SD Card, USB
28	Communication Ports	USB, Ethernet, VGA
29	Software	To be provided
30	Accessories	Voltage probes /channels to be provided
31	Future Compatibility	To be able to use CAN/LIN application.
32	**Minimum 10 MS/s, 12-Bit Isolation Modules** ● Input channels ● Input type ● Maximum sample rate ● Frequency range (-3dB) x 1 ● A/D conversion resolution ● In combination with 10:1 isolation probe	**Quantity 4 numbers*** • 2 per bmodule *(2 x 4 = 8 numbers) • Isolated unbalanced, BNC Input • 10 MS/s • DC to 3 MHz • 12-bit (150 LSB/div) • 800 V (DC+ACpeak)
33	**10:1 Isolated Probe, 1000 V**	**Quantity 6 numbers.**
34	Power Analysis Function	Instrument should have facility to upgrade it for Power Analysis function to measure active, reactive, harmomic power and power factor.

Power Analyzer - Quantity 1 number	
Sl.No	**Specifications**
1	6 isolated input elements for voltage
	6 isolated input elements for current
	With integrated Power measurement
2	Basic Power accuracy of 0.05% of reading +/- 0.05% of range
3	A/D Converter – 16 Bit resolution, Sampling Rate 2 MS/s
4	Display: Mimimum 8-inch color TFT LCD display to view Numerical Data, Trend display to view voltage/current waveform, and Harmonic data as Bar Graphs, Vectors and Lists.
	Display Parameters
	Max. 6 divisions wave
	Max. 146 parameters
5	Data update rate – 5 ms to 20 s selectable
6	Input Ranges:
	Voltages – Minimum 0.015V

	Intermediate Ranges 1.5 V, 3 V, 6 V, 10 V, 15 V, 30 V, 60 V, 100 V, 150 V, 300 V, 600 V, 1000 V AC/DC,
	Current Minimum of 0.01A
	Intermediate Ranges 1 A, 2 A, 5 A, 10 A, 20 A, 50 A
7	Power & Current values integrated separately for positive & negative polarities.
8	Wiring combinations: 1 Phase 2 wire, 1 Phase 3 wire, 3 Phase 3 wire, 3 Phase 3 wire- Two loads, 3 Phase 4 wire, 3 Phase 4 wire- Two loads & 6 Voltages, 6 Currents together. Measurement Modes: RMS, Mean value and DC
9	Measurement Parameters:
	Voltage of each phase, Current of each phase, Watt of each phase, Power Factor of each phase , ± kWh, ± kVAh, kVAr, kVA, Current, Frequency of each phase, Voltage frequency of each phase, Phase angle, Voltage peak, Current peak, Crest factor of Voltage & Current,Simultaneous dual harmonic measurement
10	Maths Function: Input crest factor measurements, arithmetic calculation between two channels. Motor evaluation function with speed and torque inputs to perform efficiency measurement
11	Auto ranging integration capability
12	Bandwidth
	0.1Hz to 5MHz (U & I)
	0.1Hz to 1MHz (P)
13	User programmable CT/PT ratio Scaling Function for obtaining direct display of voltage & current of primary side
14	Frequency response: 0.5 Hz to 5 MHz, Integration Mode with timer, repeat or manual start & stop. Energy Measurement up to 10,000 hours in 1-second increments.
15	Line filter function to measure fundamental wave rms values of inverter output, Max, hold function and Average Active Display function Built in Hard Drive, USB for Data Storage
16	Harmonics Measurement function upto 500th Order.
17	Harmonic Analysis up to 500th order simultaneously, System Frequency 10 Hz to 2.6KHz, Analysis Parameters such as Voltage, Current, Active Power, Reactive Power, Apparent Power, Phase difference of harmonic competent relative to fundamental wave for each order, Harmonic content of Voltage, Current and Active Power for each order, Total Harmonic Distortion of Voltage, Current and Active Power , Voltage / Current telephone harmonic factor, Voltage/Current telephone influence factor, Harmonic voltage/current factor
18	Measurement of Multiple harmonic parameters such as THD, HDF, THF, and Impedance
19	Averaging function: Exponential average & moving average up to 64 numbers. Inbuilt USB, Ethernet, Modbus TCPIP with Modbus registers Interface for PC communication, acquiring, Software for communication, acquiring & managing measurement data on PC Power Supply 230V, 50Hz AC
20	Voltage and current connecting leads - **Quantity 1**
21	Should be able to do power quality analysis on three phase input and output sides simultaneously

Note: Warranty should be provided on the equipment and probes for a minimum of 36 months.

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.

UNDERTAKING FOR BID SECURITY

(To be issued by the bidder on company's letterhead in lieu of EMD)

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

We, M/s ..... (name of the firm), with ref. to enquiry no.

..... dtd ..... hereby undertake that:

1) We accept all the terms and conditions of the tender document.
2) We accept that, we will not modify our bid during the bid validity period, submit performance guarantee within the stipulated period and honor the contract after award of contract.
3) In the event of any modification to our bid by us or failure on our part to honor the contract after final award or failure to submit performance guarantee, our firm may be debarred from participation in any tender/contract notified by Indian Institute of Technology, Goa for a period of one year.

Yours faithfully,

(Signature of the bidder with date and seal)

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.

As per Office Memorandum dated 04/03/2021 issued by Ministry of Commerce and Industry, services such as transportation, insurance, installation, commissioning, training and after sales support like AMC/CMC etc. are not considered as local value addition.

"*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)