# NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA, SURATHKAL

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING POST SRINIVASNAGAR, MANGALORE – 575 025 (D K)

Phone: (0824) 2474000. Fax: (0824) 2474033

E- mail: info@nitk.ac.in Website: http://www.nitk.ac.in



#### **NOTICE INVITING QUOTATION**

Notification. No: NITK/EEE/1383/04 Dated: 26-08-2022

Notification, No. NITTYLLL/1303/07	Dateu. 20-00-2022
Name of Goods	Digital Storage Oscilloscope
Estimated Amount:	₹ 1,10,000 (Including GST)
Estimated Amount.	(Including 651)
Time for Supply of item after release of Purchase order	120-140 <b>(Days)</b>
Time for ouppry of item after release of a dichase order	120 140 (bays)
Document Download / Sale Start Date	26-08-2022 3:30PM
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Clarification Start Date	26-08-2022 3:30PM
Clarification End Date	05-09-2022 5:30PM
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Bid Submission Start Date	26-08-2022 3:30PM
Last Date for submission of bids	15-09-2022 before 3:00 PM
Rid Ononing Rate	46.00.2022 0.20AM
Bid Opening Date	16-09-2022 9:30AM
Address for Submission of bids	Dept. of E& E Engineering NITK Surathkal
Addiess for admillissibil of pids	Dr. Md Waseem Ahmad,
	Assistant Professor
	Mob.No:7753058434
	WOD.NO. 1 10000404



#### NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA, SURATHKAL DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

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#### Notification No: NITK/EEE/1383/04

## Date: 26-08-2022 NOTICE INVITING QUOTATION (NIQ)

The National Institute of Technology Karnataka, Surathkal (in short – NITK, Surathkal) is an Institute Of National Importance Under Ministry of Education Govt of India, imparting Technical Education and engaged in Research Activities. It is proposed to procure the items for the departmental academic/research activities.

Sealed Quotations as per the Price Schedule given in this NIQ are invited for the following items subject to the terms and conditions, from the reputed manufacturers or its authorised dealers so as to reach on or before scheduled date and time. The quotations in the firm's Business letter head should be address to the "Director, NITK, Surathkal". The envelope shall be superscribed with the Quotation Notification Number and the Name of the Goods for which quotation is submitted.

Name of Goods	Digital Storage Oscilloscope
Estimated Amount:	₹ 1,10,000 (Including GST)
Time for Supply of item after release of Purchase order	120-140 (Days)
Document Download / Sale Start Date	26-08-2022 3:30PM
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Clarification End Date	05-09-2022 5:30PM
Bid Submission Start Date	26-08-2022 3:30PM
Last Date for submission of bids	15-09-2022 before 3:00 PM
Bid Opening Date	16-09-2022 9:30AM

Sd/-[HOD]

Note: Institute shall not be responsible for any postal delay about non-receipt /non-delivery of the bids or due to wrong addressee.

#### SECTION-1 Terms and Conditions

- 1. The rates should be quoted for preferably FOR destination from supply within India.
- 2. The bidder shall indicate the excise duty exemption for the goods if applicable.
- 3. The rate quoted should be on unit basis. Taxes and other charges should be quoted separately, considering exemptions if any. The rate should be quoted in INR only
- 4. Rate quoted should be inclusive of Testing, commissioning and Installation of equipment and Training.
- 5. Payment: No advance payment will be made. Payment will be made only after the supply of the item in good and satisfactory condition and receipt of performance security by supplier.
- 6. Guarantee/Warrantee period should be specified for the complete period should be specified in section 3 of this tender document.
- 7. Period requirement for the supply and installation of item should be specified in section 3 of this tender document.
- 8. In case of dispute, the matter will be subject to Mangalore Jurisdiction only.

#### SCHEDULE OF REQUIREMENTS, SPECIFICATIONS AND ALLIED DETAILS

[ To be filled up by the Department / Centre of NITK, Surathkal ]

Item(s) Name to be Procured : Digital storage oscilloscope

Brief Specifications of the Item(s) : DSO: 200 MHz, 500 MS/s per Ch, 1 GS/s interleaved, 4

CH, 14 Mpts/Ch DSO including standard accessories.

(Attached Additional Sheet)

(Attach Additional Sheet if necessary)

Quantity : 01

Any other details / requirement :

Warranty Period required : 36 months

Delivery Schedule expected after placement of Purchase order

(in Weeks) : 18-20 weeks

# SECTION 3 PRICE SCHEDULE

[ To be used by the bidder for submission of the quotation]

1.	Item Name	:		
2.	Specifications (Conforming to Schedule of requirements Enclose additional sheets if necessary)	:		
3.	Currency and Unit Price	:		
4.	Quantity	:		
5.	Item Cost (SI No. 3 * SI. No. 4 )	:		
6.	Taxes and Other Charges (i) Specify the type of taxes and duties in percentages and also in figures. (ii) Specify Other Charges in figures.	:		
7.	Warranty Period (Conforming to the Schedule of requirements)	:		
8.	Delivery Schedule (Conforming to the Schedule of requirements)	:		
9.	Name and address of the Firm for placing purchase order	:		
10.	Name and address of Indian authorized agent ( in case of imports only)	:		
Signature of the Bidder:				
Name	and Designation:		_	
Business Address :				
			_	
Place: Date:		Seal of the	Bidder's Firm	

## SECTION 4 CONTRACT FORM

[ To be provided by the bidder in the business letter head]

- 1. (Name of the Supplier's Firm) hereby abide by the delivery schedule mentioned in this document for supply of the items if the purchase order is awarded.
- 2. The item will be supplied conforming to the specifications stated in this document without any defect and deviations.
- 3. Warranty will be given for the period mentioned in this document and service will be rendered to the satisfaction of NITK, Surathkal during this period.

Signature of the Bidd	er:	
Name	:	
Business Address	:	
Place : Date :		Seal of the Bidder's Firm

SI. No.       Parameters       Specifications         1       Analog Bandwidth       200 MHz         2       Input Channels       4 Analog channel         3       Input impedance       DC: (1 MΩ ± 2 %)    (15 pF ± 2 pF) (Four channel series)         4       Sampling Rate       1 GSa/s (single channel/pair), 500 MSa/s (two channels/pair)         5       Input Coupling at 1MΩ       AC, DC & GND         5       Input Coupling at 1MΩ       AC, DC & GND         6       Vertical Resolution       >8 Bits         7       DC Gain Accuracy       ≤ ± 3.0%; 5 mV/div − 10 V/div ≤ ± 4.0%; ≤ 2 mV/div         8       Max Input Voltage       1 MΩ ≤ 400 Vpk (DC + Peak AC <= 10 kHz)         9       Risetime       <= 1.8 ns         10       Timebase Accuracy       ≤ ± 25 ppm         11       Waveform Capture Rate       >=100,000 wfm/s (normal mode), >=400,000 wfm/s (sequence mode)         12       Memory Depth       >=14 Mpts/Ch (single channel/pair), >=7 Mpts/Ch (two channels/pair)         13       Display/ Resolution       >=7-inch TFT LCD equal or better than 800 X 480 pixels         14       I/O ports       USB Host, USB Device (USB-TMC), LAN, Trigger Out         15       Operating Humidity       85 % RH, 40 Deg C, 24 hours         16       Operating T	SPECIFICATIONS FOR DIGITAL STORAGE OSCILLOSCOPE Qty. 01 No.		
2 Input Channels  4 Analog channel  DC: (1 MΩ ± 2 %)    (15 pF ± 2 pF) (Four channel series)  4 Sampling Rate  1 GSa/s (single channel/pair), 500 MSa/s (two channels/pair)  Trigger  Edge, slope,pulse.video  5 Input Coupling at 1MΩ  AC, DC & GND  6 Vertical Resolution  >8 Bits  7 DC Gain Accuracy  ≤ ± 3.0%: 5 mV/div −10 V/div ≤ ± 4.0%: ≤ 2 mV/div  8 Max Input Voltage  1 MΩ ≤ 400 Vpk (DC + Peak AC <= 10 kHz)  9 Risetime  < = 1.8 ns  10 Timebase Accuracy  ± 25 ppm  11 Waveform Capture Rate  >= 100,000 wfm/s (normal mode), >=400,000 wfm/s (sequence mode)  12 Memory Depth  ⇒ 14 Mpts/Ch (single channel/pair), >=7 Mpts/Ch (two channels/pair)  13 Display/ Resolution  ⇒ 7-inch TFT LCD equal or better than 800 X 480 pixels  USB Host, USB Device (USB-TMC), LAN, Trigger Out  15 Operating Humidity  85 % RH, 40 Dcg C, 24 hours  16 Operating Temperature  10 to +40  17 Input Voltage  100 to 240 VAC, CAT II, Auto selection  18 Warranty  3 Years for Oscilloscope & 1 Year for probes and other option  19 Accessories  4 Nos. of passive probes and other necessary accessories for standard operation to be supplied along with the equipment, calibration certifcate	SI. No.	Parameters	
Input impedance   DC: $(1 \text{ M}\Omega \pm 2\%) \parallel (15 \text{ pF} \pm 2 \text{ pF})$ (Four channel series)   1 GSa/s (single channel/pair), 500 MSa/s (two channels/pair)   Trigger   Edge, slope,pulse.video	1	Analog Bandwidth	200 MHz
Geour channel series    Sampling Rate   1 GSa/s (single channel/pair), 500 MSa/s (two channels/pair)     Trigger   Edge, slope,pulse.video     Support	2	Input Channels	4 Analog channel
Trigger  Edge, slope,pulse.video  Input Coupling at IMΩ  AC, DC & GND  Vertical Resolution  >8 Bits  DC Gain Accuracy  ≤±3.0%: 5 mV/div − 10 V/div  ≤±4.0%: ≤2 mV/div  1 MΩ ≤ 400 Vpk (DC + Peak AC <= 10 kHz)  Risetime  =1.8 ns  10 Timebase Accuracy  ±25 ppm  Waveform Capture Rate  >=100,000 wfm/s (normal mode), >=400,000 wfm/s (sequence mode)    Memory Depth   >=14 Mpts/Ch (single channel/pair), >=7 Mpts/Ch (two channels/pair)    Display/ Resolution   >=7-inch TFT LCD equal or better than 800 X 480 pixels    VO ports   USB Host, USB Device (USB-TMC), LAN, Trigger Out    Operating Humidity   85 % RH, 40 Deg C, 24 hours    Operating Temperature   100 to 240 VAC, CAT II, Auto selection    Warranty   3 Years for Oscilloscope & 1 Year for probes and other option    Accessories   4 Nos. of passive probes and other necessary accessories for standard operation to be supplied along with the equipment, calibration certificate	3	Input impedance	
5 Input Coupling at 1MΩ AC, DC & GND  6 Vertical Resolution >8 Bits  7 DC Gain Accuracy ≤± 3.0%: 5 mV/div − 10 V/div ≤± 4.0%: ≤ 2 mV/div  8 Max Input Voltage 1 MΩ ≤ 400 Vpk (DC + Peak AC <= 10 kHz)  9 Risetime <= 1.8 ns  10 Timebase Accuracy <± 25 ppm  11 Waveform Capture Rate >= 100,000 wfm/s (normal mode), >= 400,000 wfm/s (sequence mode)  12 Memory Depth >= 14 Mpts/Ch (single channel/pair), >= 7 Mpts/Ch (two channels/pair)  13 Display/ Resolution >= 7-inch TFT LCD equal or better than 800 X 480 pixels  14 I/O ports USB Host, USB Device (USB-TMC), LAN, Trigger Out  15 Operating Humidity 85 % RH, 40 Deg C, 24 hours  16 Operating Temperature 10 to +40  17 Input Voltage 100 to 240 VAC, CAT II, Auto selection  18 Warranty 3 Years for Oscilloscope & 1 Year for probes and other option  19 Accessories 4 Nos. of passive probes and other necessary accessories for standard operation to be supplied along with the equipment, calibration certificate	4	Sampling Rate	
6 Vertical Resolution >8 Bits  7 DC Gain Accuracy ≤± 3.0%: 5 mV/div − 10 V/div ≤± 4.0%: ≤ 2 mV/div  8 Max Input Voltage 1 MΩ ≤ 400 Vpk (DC + Peak AC <= 10 kHz)  9 Risetime <= 1.8 ns  10 Timebase Accuracy <± 25 ppm  11 Waveform Capture Rate >=100,000 wfm/s (normal mode), >=400,000 wfm/s (sequence mode)  12 Memory Depth >=14 Mpts/Ch (single channel/pair), >=7 Mpts/Ch (two channels/pair)  13 Display/ Resolution >=7-inch TFT LCD equal or better than 800 X 480 pixels  14 I/O ports USB Host, USB Device (USB-TMC), LAN, Trigger Out  15 Operating Humidity 85 % RH, 40 Deg C, 24 hours  16 Operating Temperature 10 to +40  17 Input Voltage 100 to 240 VAC, CAT II, Auto selection  18 Warranty 3 Years for Oscilloscope & 1 Year for probes and other option  19 Accessories 4 Nos. of passive probes and other necessary accessories for standard operation to be supplied along with the equipment, calibration certifcate		Trigger	Edge, slope,pulse.video
7 DC Gain Accuracy $≤± 3.0\%: 5 \text{ mV/div} - 10 \text{ V/div}$ $≤± 4.0\%: ≤ 2 \text{ mV/div}$ 8 Max Input Voltage $1 \text{ M}Ω ≤ 400 \text{ Vpk (DC + Peak AC} <= 10 \text{ kHz})}$ 9 Risetime $<= 1.8 \text{ ns}$ $<= 1.8 \text{ ns}$ 10 Timebase Accuracy $<± 25 \text{ ppm}$ 11 Waveform Capture Rate $>= 100,000 \text{ wfm/s (normal mode)}, >= 400,000 \text{ wfm/s (sequence mode)}}$ 12 Memory Depth $>= 14 \text{ Mpts/Ch (single channel/pair)}, >= 7 \text{ Mpts/Ch (two channels/pair)}}$ 13 Display/ Resolution $>= 7 \text{ inch TFT LCD}$ equal or better than 800 X 480 pixels  14 I/O ports USB Host, USB Device (USB-TMC), LAN, Trigger Out  15 Operating Humidity $= 85 \text{ Weak}$ RH, 40 Deg C, 24 hours  16 Operating Temperature $= 100 \text{ to } 240 \text{ VAC}$ , CAT II, Auto selection  18 Warranty $= 100 \text{ to } 240 \text{ VAC}$ , CAT II, Auto selection  19 Accessories $= 4  Nos. of passive probes and other necessary accessories for standard operation to be supplied along with the equipment, calibration certificate$	5	Input Coupling at 1MΩ	AC, DC & GND
$ \leq \pm 4.0\% : \leq 2 \text{ mV/div} $ 8 Max Input Voltage 1 $M\Omega \leq 400 \text{ Vpk (DC + Peak AC} <= 10 \text{ kHz}) $ 9 Risetime $<= 1.8 \text{ ns} $ 10 Timebase Accuracy $<\pm 25 \text{ ppm} $ 11 Waveform Capture Rate $>=100,000 \text{ wfm/s (normal mode), }>=400,000 \text{ wfm/s (sequence mode)} $ 12 Memory Depth $>=14 \text{ Mpts/Ch (single channel/pair), }>=7 \text{ Mpts/Ch (two channels/pair)} $ 13 Display/ Resolution $>=7 \text{-inch TFT LCD} = \text{equal or better than } 800 \text{ X } 480 \text{ pixels} $ 14 I/O ports USB Host, USB Device (USB-TMC), LAN, Trigger Out   15 Operating Humidity 85 % RH, 40 Deg C, 24 hours   16 Operating Temperature   10 to +40   17 Input Voltage   100 to 240 VAC, CAT II, Auto selection   18 Warranty   3 Years for Oscilloscope & 1 Year for probes and other option   19 Accessories   4 Nos. of passive probes and other necessary accessories for standard operation to be supplied along with the equipment, calibration certificate	6	Vertical Resolution	>8 Bits
9 Risetime <= 1.8 ns 10 Timebase Accuracy <± 25 ppm 11 Waveform Capture Rate >=100,000 wfm/s (normal mode), >=400,000 wfm/s (sequence mode)  12 Memory Depth >=14 Mpts/Ch (single channel/pair), >=7 Mpts/Ch (two channels/pair)  13 Display/ Resolution >=7-inch TFT LCD equal or better than 800 X 480 pixels  14 I/O ports USB Host, USB Device (USB-TMC), LAN, Trigger Out  15 Operating Humidity 85 % RH, 40 Deg C, 24 hours  16 Operating Temperature 10 to +40  17 Input Voltage 100 to 240 VAC, CAT II, Auto selection 18 Warranty 3 Years for Oscilloscope & 1 Year for probes and other option  19 Accessories 4 Nos. of passive probes and other necessary accessories for standard operation to be supplied along with the equipment, calibration certificate	7	DC Gain Accuracy	_
10   Timebase Accuracy   <± 25 ppm	8	Max Input Voltage	$1 \text{ M}\Omega \le 400 \text{ Vpk (DC + Peak AC} \le 10 \text{ kHz)}$
Waveform Capture Rate	9	Risetime	<= 1.8 ns
Sequence mode    12   Memory Depth   >=14 Mpts/Ch (single channel/pair), >=7 Mpts/Ch (two channels/pair)     13   Display/ Resolution   >=7-inch TFT LCD equal or better than 800 X 480 pixels     14   I/O ports   USB Host, USB Device (USB-TMC), LAN, Trigger Out     15   Operating Humidity   85 % RH, 40 Deg C, 24 hours     16   Operating Temperature   10 to +40     17   Input Voltage   100 to 240 VAC, CAT II, Auto selection     18   Warranty   3 Years for Oscilloscope & 1 Year for probes and other option     19   Accessories   4 Nos. of passive probes and other necessary accessories for standard operation to be supplied along with the equipment, calibration certificate	10	Timebase Accuracy	<± 25 ppm
channels/pair)    13   Display/ Resolution   >=7-inch TFT LCD   equal or better than 800 X 480 pixels     14   I/O ports   USB Host, USB Device   (USB-TMC), LAN, Trigger Out     15   Operating Humidity   85 % RH, 40 Deg C, 24 hours     16   Operating Temperature   10 to +40     17   Input Voltage   100 to 240 VAC, CAT II, Auto selection     18   Warranty   3 Years for Oscilloscope & 1 Year for probes and other option     19   Accessories   4 Nos. of passive probes and other necessary accessories for standard operation to be supplied along with the equipment, calibration certificate	11	Waveform Capture Rate	
equal or better than 800 X 480 pixels  14 I/O ports  USB Host, USB Device (USB-TMC), LAN, Trigger Out  15 Operating Humidity  85 % RH, 40 Deg C, 24 hours  16 Operating Temperature  10 to +40  17 Input Voltage  100 to 240 VAC, CAT II, Auto selection  18 Warranty  3 Years for Oscilloscope & 1 Year for probes and other option  19 Accessories  4 Nos. of passive probes and other necessary accessories for standard operation to be supplied along with the equipment, calibration certificate	12	Memory Depth	
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17 Input Voltage 100 to 240 VAC, CAT II, Auto selection 18 Warranty 3 Years for Oscilloscope & 1 Year for probes and other option 19 Accessories 4 Nos. of passive probes and other necessary accessories for standard operation to be supplied along with the equipment, calibration certificate	15	Operating Humidity	85 % RH, 40 Deg C, 24 hours
18 Warranty  3 Years for Oscilloscope & 1 Year for probes and other option  19 Accessories  4 Nos. of passive probes and other necessary accessories for standard operation to be supplied along with the equipment, calibration certificate	16	Operating Temperature	10 to +40
option  19 Accessories  4 Nos. of passive probes and other necessary accessories for standard operation to be supplied along with the equipment, calibration certificate	17	Input Voltage	100 to 240 VAC, CAT II, Auto selection
for standard operation to be supplied along with the equipment, calibration certificate	18	Warranty	
20 Delivery time 18-20 Weeks	19	Accessories	for standard operation to be supplied along with the
	20	Delivery time	18-20 Weeks