



NIELIT CALICUT
 (Autonomous Scientific Society of Ministry of Electronics & Information Technology, Govt. of India)
NIT Campus Post, CALICUT-673 601, KERALA
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 Phone: 0495-2287266 Fax: 0495-2287168

LIMITED TENDER ENQUIRY (RE-TENDER)

By Speed Post

Ref. No.: 2(1144)/2019-20/EVTS/MSO/RT

Date: **26.02.2020**

To

DUE DATE: 11.03.2020

1. Quotations are invited for the supply of the items as per Annexure.
2. The quotations duly **SIGNED, SEALED AND SUPERSCRIBED ON THE ENVELOPE WITH THE REFERENCE No. AND DUE DATE**, should be addressed to the undersigned so as to reach on or before the due date stipulated above. Quotations received after the due date will not be considered.
3. The quotations should be valid for acceptance for a period of **sixty days** from the due date
4. Quotations will not be accepted by Fax, Email or any such electronic data transfer form.
5. The quotations should be for goods exactly conforming to our requirements and specifications.
6. If the item is under DGS&D Rate contract, the number and the price applicable must be mentioned. It may also please be indicated whether the supply can be made direct to us at the DGS&D Rate Contract Price.
7. Relevant literature pertaining to the items quoted with full specifications and drawings, if any should be sent along with the quotations, wherever applicable. Samples, if called for, should be submitted free of charges and collected back at the supplier's expenses.
8. Copy of Manufacturing licence, Principal or Authorized Distributor/Dealer Certificate, and Proprietary Certificate, as applicable, should be enclosed.
9. Quotations should be for **free delivery** at our Centre and should clearly specify the **delivery period**. If delivery quoted is Ex-Godown/Consignor Station, delivery charges consisting of freight, packing & forwarding charges, insurance, etc. should be indicated separately. Goods should be supplied duly carriage paid and insured.
10. GST Registration Number of NIELIT Calicut is: **32AAATD0315M1Z6**. GST or any other taxes may be charged as per the rates applicable to Scientific/Educational institutions.
11. Security Deposit @ 5% of the Purchase Order/Invoice value shall be retained, in case order/contract value exceeds Rs.1 lakh, which will be released after the expiry of warranty period.
12. Goods shall not be supplied without an official purchase order.
13. Payment : Payment will be made after completion of supply, installation/assembly and commissioning of the items covered by the order along with necessary spares supplied to the entire satisfaction of NIELIT CALICUT. Payment against invoices shall normally be made within 30 days of receipt and acceptance of equipment/materials at our office. **No advance payment will be made under any circumstance.**
14. Incomplete quotations and quotations which do not comply with all the above instructions are liable to be summarily rejected.
15. NIELIT CALICUT does not bind itself to accept the lowest or any such quotation and has the right to accept or reject whole or any part of tenders or a portion of the supply of goods without assigning any reasons. No correspondence in case of rejected tenders will be entertained.
16. **Earnest Money Deposit (E.M.D.) for Rs. 16,250/-** be deposited by NEFT in the Bank Account No. 10401158037 (IFSC: SBIN0002207) at State Bank of India, NIT Calicut Branch, CREC Campus, Chathamangalam, Calicut – 673 601, in favour of Director, NIELIT CALICUT, failing which the quotation will be rejected. Proof of Deposit of EMD amount with Tenderer's Bank Account No. and IFSC No. should be submitted with the Quotation.

Yours faithfully,

**Purchase In-Charge
For Executive Director**

Encl: **Annexure**

ANNEXURE TO ENQUIRY

Your Quotation No.

Date:

1	Name of item(s)	MSO with Protocol Analyser & High Voltage Probe – QTY. 1 No.
2	Specifications & Quantity As per Specifications attached.	
3	Price per unit in Rs. (in figures & words)	Attach separate list, if required.
4	Total Price in Rupees (in figures & words)	
5	Delivery Period	
6	Terms of Delivery	
7	Taxes, Duties, Octroi & any other statutory levies or charges	
8	Transportation, Insurance, Packing & Forwarding etc.	
9	Discount/off etc., if any	
10	GST Registration No.	
11	Payment Terms	
12	Validity of Tender	
13	Warranty	
14	Any other remarks / EMD Amount and Payment details	
15	Signature of the Tenderer with Name and Date	
16	Address with Email ID & Mobile No.	
17	Central Public Procurement Portal (www.eprocure.gov.in) Registration, Email login ID	

- NB:** (1) The prices quoted and Taxes charged should be Academic/Educational Prices/rates, wherever applicable.
- (2) Enquiry for the above items and specifications can also be downloaded from our website <http://nielit.gov.in/calicut> or www.eprocure.gov.in
- (3) Please register at www.eprocure.gov.in and intimate login details without fail. Watch website for regular updates

Specification of MSO with Protocol Analyser & High Voltage Probe

Sl. No	Parameter	Specification	Compliance (Y/N)
1	Make and Model (Specify)		
2	Product Type	Handheld	
3	Analogue Input Channels	4Nos, Isolated	
4	Bandwidth	500MHz, 5Gsample/second	
5	Input Sensitivity	2mV/div to 100V/div	
6	Max., Input voltage (with BNC)	≥ 300V (RMS) , ≥400V(peak) CAT IV	
	Max., Input voltage (with Additional Probe)	CAT IV 600 V, CAT III 1000 V	
7	Real-time waveform acquisition rate	≥ 50 000 waveforms/s	
8	Time base range	1 ns/div to 500 s/div	
	ADC Resolution	10bit	
Logic Analyser (MSO) functionality			
9	No. of input channels	≥ 8	
10	Bandwidth	≥ 250MHz	
11	Memory depth	≥ 125 ksample	
Protocol Analyser functionality			
12	Supported Protocols	CAN, LIN, I2C, SPI, UART/RS-232/RS-422/RS-485, CAN FD, SENT	
13	CAN Analyser	signal type: CAN_H, CAN_L bit rate : standard bit rate (10/20/33.3/50/83.3/ 100/125/250/500/1000 kbps) or user defined bit rate in range from 10 kbps to 1 Mbps auto threshold setup: assisted threshold configuration for CAN triggering and decoding (software) source: any input channel or logical channel	
14	LIN Analyser	version 1.3, 2.x or SAE J602 bit rate (1.2/2.4/4.8/9.6/10.417/ 19.2 kbps) or user-defined bit rate in range from 1 kbps to 20 kbps signal polarity idle low, idle high device list associate frame address with symbolic ID (software) auto threshold setup assisted threshold configuration for LIN triggering and decoding (software)	
15	I2C Analyser	bit rate : up to 3.4 Mbps (auto-detected); auto threshold setup : assisted threshold configuration for I2C triggering and decoding (software) device list: associate frame address with symbolic ID (software)	
16	SPI Analyser	Type : 2-wire, 3-wire and 4-wire SPI	

		bit rate : up to 50 Mbps (auto-detected) bit order : LSB first, MSB first word size : 4/8/12/16/20/24/28/32 bit frame condition : SS, timeout polarity : (MOSI, MISO, SS) active high, active low slope : (CLK) rising edge, falling edge auto threshold setup : assisted threshold configuration for SPI triggering and decoding (software)	
17	UART/RS-232/RS-422/RS-485 Analyser	bit rate : 300 bps to 20 Mbps signal polarity : idle low, idle high number of bits : 5 bit to 9 bit bit order : LSB first, MSB first parity : odd, even, none stop bits : 1, 1.5 or 2 end of packet : timeout, none auto threshold setup : assisted threshold configuration for UART triggering and decoding	
18	CAN-FD triggering and decoding	signal polarity : CAN_H, CAN_L standard ISO, non-ISO (Bosch) bit rate arbitration rate standard bitrate :(10/ 20/ 33.3/ 50 /83.3 / 100/ 125/ 250/ 500/1000 kbps) or user defined bit rate in range from 10 kbps to 1 Mbps data rate : standard bit rate (10/20/33.3/50/83.3/ 100/125/250/500 kbps; 1/1.5/2/4/6/8/10/12/14/15 Mbps) or user defined bit rate in range from 10 kbps to 15 Mbps auto threshold setup : assisted threshold configuration for CAN triggering and decoding (software)	
19	SENT Triggering & Decoding	signal polarity : idle low, idle high clock period : (clock tick) 1 μ s to 100 μ s clock tolerance : 0 % to 25 % data nibbles : 1 to 6 serial message type : none, short serial message and enhanced serial message auto threshold setup : assisted threshold configuration for SENT triggering and decoding (software)	
Waveform Measurements			
20	Automatic measurements	period, frequency, rise time, fall time, positive pulse width, negative pulse width, positive duty cycle, negative duty cycle, delay, phase mean value, RMS value, crest factor, standard deviation, minimum, maximum, peak-to-peak, base level, top level, amplitude, area, overshoot, pre shoot, AC, DC, AC+DC count positive pulses, count negative pulses,	

		count rising edges, count falling edges active power, apparent power, reactive power, power factor, VPWM, fPWM, V/fPWM	
Digital Multimeter			
21	Measurements	Voltage: DC, AC, AC+DC Current: with current clamp or shunt resistance, continuity test, diode test, temperature, frequency, capacitance	
22	Maximum resolution	10000 counts, 4 digits	
23	Maximum input voltage	≥ 1000 V (RMS) CAT III, 1414 V (peak)	
24	DC accuracy	≤ ±(0.05 % + 0.03 % of range) @100 V range	
25	AC accuracy (AC coupling)	≤ ±(0.2 % + 0.05 % of range)	
FFT			
26	Number of simultaneous spectra	1	
27	Source	4 Channels	
28	FFT sizes	64 ksample or 8 ksample	
29	Window types	rectangular, flat-top, Hamming, Hann, Blackman	
30	Sampling frequency	equal to sampling rate of current horizontal scale for FFT size of 64 ksample	
General			
31	Display Type	7.0" LC TFT color display	
32	Resolution	800 × 480 pixel (WVGA)	
33	Certifications	VDE, CCSAUS	
34	AC supply	100 V to 240 V at 50 Hz	
35	Battery	Li-Ion rechargeable smart battery operating time ≥ 4 h	
36	Memory Card	SDHC, min. 4 Gbyte, max. 32 Gbyte	
37	High Voltage Probe (3 Nos)	400MHZ HV probe, Passive, 100x, 50Mohm, 7.5pF, 1kVRMS, 4kV Trans, 2 m Cable, including standard accessory	
38	Warranty	3 Years, Quote for additional 2 years.	

* Attach detailed Technical catalogue

Sign of Authorized Signatory with Name & Seal