**No: ED/001/2013-14/SPL Date: April 04, 2013**

**Due Date: April 26, 2013**

Dear Sir,

1. Quotations are invited in duplicate for the various items shown below/overleaf/enclosed list.
2. The quotations duly sealed and superscribed on the envelope with the reference No. and due date, should be addressed to the undersigned so as to reach him on or before the due date stipulated above.
3. The quotations should be valid for sixty days from the due date and the period of delivery required should also be clearly indicated.
4. If the item is under DGS & D Rate Contract, Rate Contract Number and the price must be mentioned. It may also please be indicated whether the supply can be made direct to us at the rate contract price. If so, please send copy of the R.C. (Please note that we are not Direct Demanding Officers).
5. Relevant literature pertaining to the items quoted with full specifications (and drawing, 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.
6. **Local Firms:** Quotations should be for free delivery to this Institute. If quotations are for Ex-Godown, delivery charges should be indicated separately.
7. **Firms outside Chennai:** Quotations should be for F.O.R Chennai. If F.O.R. Consigner stationer freight charges by passenger train/lorry transport must be indicated. If Ex-Godown, Packing, forwarding and freight charges must be indicated.
8. The rates of Sales/General Taxes and the percentage of such other taxes legally leviable and intended to be claimed should be distinctly shown along with the price quoted. Where this is not done, no claim for Sales/General Taxes will be admitted at any stage and on any ground whatsoever. **The taxes leviable should take into consideration that we are entitled to have concessional sales tax applicable to non-government educational institutions run with no profit motive for which a concession. Sales tax certificates will be issued at the time of final settlement of the bill.**
9. Goods should be supplied carriage paid and insured.
10. Goods shall not be supplied without an official supply order.
11. **Payment:** Every attempt will be made to make payment within 30 days from the date of receipt of bill/acceptance of goods, whichever is later.
12. Terms and conditions related to standard warranty and extended 2 year warranty including technical support and after sales services should be clearly mentioned in the quotation.
13. Proprietary information certificate for technology should be provided with the quotation.
14. Instrument calibration certificate should be provided with the quotation.
15. Details of the number of similar equipments delivered to other IITs, IISc and other reputed R&D laboratories in India during the past 10 years should be provided with contact information for verification.
16. Expertise of the firm in manufacturing and sales of the requested equipment should be provided with the quotation.
17. Last date for submitting quotation is **April 26, 2013**. Quotations should be received on or before 4 pm on the 26th of this month.

**Technical specifications of the equipment are listed below.**

Equipment: Sampling Oscilloscope with time domain reflectometry (TDR):

Equivalent time sampling scope features

* 20 GHz electrical bandwidth
* 0.5-1 mV RMS noise
* Input dynamic range ±400mV
* Maximum input signal ±2V
* 50 Ω impedance
* Transition time 17.5 ps
* 14 bit or better vertical resolution
* Record length of 15000 samples
* Electrical connectors 3.5mm or SMA type
* Internal or external trigger
* Hard disk storage
* Computer control via USB, GPIB or LAN
* Calibration certificate
* Ability to operate as a standalone oscilloscope
* Proprietary information certificate
* 2 meter coaxial cable pair with SMA type connector
* Provision to earth the equipment

TDR system features

* Normalize, Response, Rise Time, Fall Time, Δ Time, Minimum, Impedance, Maximum Impedance, Average Impedance, Single-ended and Mixed-mode S-parameters measurement software
* TDR step rise time 40ps or lesser
* TDR step flatness <0.5%
* TDR step level 0-200mV
* 2 TDR channels
* S-parameter in time and frequency domains
* TDR calibration kit with dust caps
* True differential and single ended measurements
* TDR bandwidth 18 GHz or better
* 50 Ω port impedance
* System/module Calibration certificate
* Computer control via USB, GPIB or LAN
* 20 dB coaxial attenuator DC-20GHz with SMA type connector
* 3 dB power splitter DC-20 GHz, 50 Ω impedance with SMA type connector
* 2 meter calibration standard coaxial cables for TDR measurement/calibration

Kindly send the technical and commercial bids (2 bid system) separately on or before 4:30 pm on Monday, April 26th, 2013.

Sincerely,

Dr. Kavitha Arunachalam

Assistant Professor  
Department of Engineering Design  
Indian Institute of Technology Madras  
Chennai, Tamil Nadu 600036  
India

Phone: 91-4422574740

Fax: 91-4422574732   
E-mail: [akavitha@iitm.ac.in](mailto:akavitha@iitm.ac.in)