Department of Physics

Indian Institute of Engineering Science & Technology, Shibpur
Howrah – 711103

No. 02/IIEST/Phy/AB/CPDA/Lab.Equip/2016-17 Dated: 13.02.2017

Advt.No. Web/PHY/IIEST/16-17/87

Notice Inviting Quotation

Sealed quotations are invited for supply of the following items/equipment or to carry out works listed below as per mentioned specifications. The relevant bidding document can be downloaded from the website. The document can be also obtained from the Department of Physics (contact: Dr. Abhijit Bisoi) between 12.00 a.m. and 4.00 p.m. on all working days The quotation should include all kinds of taxes/duties and delivery charges of the items to the Office of the Department of Physics, IIEST, Shibpur, Howrah-03. Last date of submission of sealed quotation is **7 working days from the date of publication** in the Website of the Institute and tenders will be opened on the next working day at 12 noon.

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List of Items:

1. <u>User Friendly Analyzer Software for Dual channel Independent 16k Digital MCA</u>

- Should be compatible with the MCA and DPP-PHA firmware as mentioned bellow

Specifications for MCA

Analog Input	Input Features -BNC connector -Single-ended, DC coupled -Impedance: 1 kΩ -Positive and negative signals accepted	-Programmable 4-step analog coarse gain corresponding to 0.3Vpp-1Vpp-3Vpp-10Vpp ranges -Bandwidth: DC to 5 MHz -Programmable DC offset adjustment on each input in the full scale range Number of Inputs 2
ADC	Resolution: 14 bits	Sampling rate: 100 MS/s simultaneously on each channel
Trigger Modes	-Uncorrelated: each channel operates independently (based on channel self-trigger) -Correlated: coincidence/anticoincidence among channels and/or an external trigger (TRG-IN) -External: channels are triggered by external trigger only (TRG-IN)	
Communication interface	**Optical Link** Up to 80 MB/s transfer rate Daisy chain capability: it is possible to connect up to 8 or 32 ADC modules to a single Optical Link Controller (A2818 or A3818 respectively)	**USB** USB 2.0 compliant Up to 30 MB/s transfer rate
Power Requirements	Suitable Power Adapter to be included in the offer	

Specification for Digital Pulse Processing PHA Firmware

- ✓ The firmware should be ideal for energy and time stamp calculation
- ✓ Digital oscilloscope function for an easy setup and signal monitoring
- ✓ Should provide a Digital solution equivalent to shaping amplifier + peak sensing ADC (Multi-Channel Analyzer)
- ✓ The digitize/MCA is directly connected to the charge sensitive preamplifier
- ✓ Programmable input offset, trigger and energy filter parameters
- ✓ Better correction of pile-up and ballistic deficit
- ✓ Higher counting rate (live time)
- ✓ Should also Provide timing information (pulse time stamps and/or rise/fall time)
- ✓ Any time Free Upgradable.

- Should have Complete simultaneous control of different boards
- Full setting of all the relevant DPP-PHA parameters
- Advanced mathematical analysis on collected spectra (peak search, background subtraction, peak fitting, Energy Calibration, Coincidence / anticoincidence spectra etc.)
- Should provide Energy, Time Stamp lists and histograms in ASCII and ANSI N42.42 format
- Supported Operating Systems: Windows (32-64 bit)
- Supported Products: Item no. 1, 2, 3
- Supported Comm. Interface: USB, Optical Link, VME