भारतीय विज्ञान शिक्षा एवं अनुसंधान संस्थान मोहाली

मानव संसाधन विकास मंत्रालय, भारत सरकार द्वारा स्थापित

सैक्टर81,नॉलेजसिटी,प॰ओ॰ मनोली, एस॰ ए॰ एस॰ नगर,मोहाली, पंजाब 140306

INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH MOHALI

(Established by Ministry of Human Resource Development, Govt. of India)
Sector-81, Knowledge city, PO-Manauli, SAS Nagar Mohali-140306, Punjab
PAN No. - AAAAI1781K   GST No- 03AAAAI1781K1ZT

● **Phone : +91-172-2240086 & 2240121** ● **Fax : +91-172-2240124, 2240086** ● **http://www.iisermohali.ac.in** ● **Email:** stores@iisermohali.ac.in

CPPP/Institute Website

IISERM(802)17/18Pur. Dated: 21st July 2017

E-TENDER NOTICE

Online tenders are invited on behalf of Director, IISER Mohali in **TWO BID SYSTEM** {Technical and commercial separately} for the supply and installation of Oscilloscope, Functional Generator and Digital card PCI as per given technical specification and BOQ list from the original manufacturer/supplier at CPPP i. e. **https://eprocure.gov.in/eprocure/app**. Tender documents may please be downloaded from the E-procurement portal website **https://eprocure.gov.in/eprocure/app**& Institute website **www.iisermohali.ac.in.**

-sd-
(Mukesh Kumar)
Assistant Registrar (S&P)

भारतीय विज्ञान शिक्षा एवं अनुसंधान संस्थान मोहाली

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E-TENDER NOTICE

Tender Ref.- IISERM(802)17/18Pur	Dated :- 21st July 2017

Critical Date Sections

Sr.	Description	Date	Time
1.	Tender Publishing Date and time	21st July 2017	6:00pm
2.	Tender Document download start Date & Time	21st July 2017	6:00pm
3.	Bid Submission start Date &Time	21st July 2017	6:00pm
4.	Bid Submission End date and Time	10th August 2017	Upto 11:00am
5.	Tender opening Date and Time	11th August 2017	At 11.30 am

Online tenders are invited on behalf of Director, IISER Mohali in **TWO BID SYSTEM** {Technical and Commercial separately} for following item(s) from the original manufacturer/supplier at CPPP i.e. **https://eprocure.gov.in/eprocure/app**. Tender documents may please be downloaded from the E-procurement portal website **https://eprocure.gov.in/eprocure/app** & Institute website **www.iisermohali.ac.in.**Tender fee in shape of DD/Banker Cheque of Rs 500/- (Non-refundable) and EMD of Rs 1,00,000/- should be submitted by DD /Banker Cheque/FDR/ Bank Guarantee in favour of the Registrar, IISER Mohali payable at Mohali. However, scanned copy of the both tender fee and EMD should be upload on website along with technical bid part. The hard copy of the same in original to be send to the address mentioned below duly superscribing the supply/work name and reference/ tender ID on the envelope and same must reach before opening the bid and if not received within due date the bid will be rejected summerly.

The Original EMD and tender fee should be sent to:
Assistant Registrar (S&P)
Indian Institute of Science Education and Research Mohali
Sector-81, Knowledge City, SAS Nagar, Mohali, Punjab,
India, Pin: 140306

Non-receipt of original EMD and tender fee will lead to rejection of tender.

Item Details: -

Sr.	Description	Units/Qty.
01	4CH, 70MHz Digital Storage Oscilloscope (As per Specification)	18
02	4 Ch,200 MHz Digital Storage Oscilloscope (As per Specification)	02
03	Triple Output DC Power Supply (As per Specification)	18
04	Programmable Triple Output DC Power Supply (As per Specification)	01
05	Programmable DC Power Supply (As per Specification)	01
06	25MHz Abitrary Function Generator (As per Specification)	02
07	150 MHz Abitrary Function Generator (As per Specification)	02
08	4 channels, 1 GHz-2 GHz bandwidth Oscilloscope (As per Specification)	01
09	Digitizer Card PCI, 12 bit, 5GS/s -6GS/s, 10kHz- 2GHz BW, 40-60dB gain external (2 AI or 1+1) PreAms (As per Specification)	01
10	150 MHz Arbitrary Function Generator (As per Specification)	01
11	Programmable Triple Output DC Power Supply (As per Specification)	01

Specifications:-

Sr. 01 = 18 units: 4CH, 70MHz Digital Storage Oscilloscope: -

Bandwidth	70 MHz
No. Channels	4
Sampling Rate (Each Channel)	1GS/s or better
Record Length	20 M points or better
FFT Function	Dedicated short key for FFT , Zoom on FFT and Simultaneous display of Time and FFT
Display	9 inch WVGA or better
No. of Direct Measurements	32 or more
Courseware Feature	DSO should have capability of course content storage/integration up to 100MB and direct report generation
Auto set	Enable/Disable function protected with password
Interface	USB Host on front panel , USB device port on back panel for PC connectivity
Time base Range	2ns to 100s
Time base accuracy	±25 ppm
Accessories	Probes : 4 Nos., Certificate of Calibration, CD: containing product documentation and software for Course Content Generation compatible with DSO
Warranty	5 Years

Sr. 02. = 2 units: (4 Ch,200 MHz Digital Storage Oscilloscope)

Bandwidth	200 MHz
No. Channels	4
Sampling Rate (Each Channel)	1GS/s or better
Record Length	1M points or better
Display	7 inch WVGA or better
No. of Direct Measurements	29 or more
Pan and Zoom Key	Dedicated keys for Zoom and Search at particular time base
Interface	USB Host on front panel , USB device port on back panel for PC connectivity
Time base Range	2ns to 100s
Time base accuracy	±25 ppm
Accessories	Probes : 4 Nos., Certificate of Calibration, CD: containing product documentation
Warranty	5 Years

Sr. 03. = 18 units: (Triple Output DC Power Supply)

Sr. No.	Parameter	Specification
1	No of outputs	3

2	Ratings	Two outputs @ 30V/3A and One @ 5V/3A
3	Isolation	All three outputs must be isolated from each other and ground
4	Polarity	Bipolar
5	Ripple	Not to exceed 1mvrms and 6mArms
7	Load and Line Regulation	Voltage<0.02%+5mV and Current 0.2%+4mA or better
8	Setting Resolution	Voltage @ 10mV and Current @ 1mA or better
9	Display	Vacuum fluorescent display ; Display voltage and current measurements continuously from all three outputs
10	Tracking And Combination Modes	Tracking Mode: to Maintain the ratio on the two 30V output channels Combination V1 + V2 Series Mode: should Deliver up to 60V Meter reads back combined voltage. Combination I1 + 12 Parallel Mode: should Deliver up to 6A when CH1 and CH2 are wired in parallel. Meter reads back combined current.
11	Memory	Facility to Store frequently used configurations in any of 30 setup memory locations
12	Timer	Facility to Turn off any output after a predetermined test time with each channel's output timer
13	Interface	USB Interface adapter with USB cable to control the supply through PC & Upload data to PC.
14	Warranty	3 years

Sr. 04. = 1 Unit: (Programmable Triple Output DC Power Supply)

Sr. No.	Parameter	Specification
1	No of outputs	3
2	Ratings	Two outputs @ 30V/1.5A and One @ 6V/5A
3	Isolation	All three outputs must be isolated from each other and ground and should be fully programmable
4	Polarity	Bipolar
5	Ripple	Not to exceed 1mvrms and 6mArms
7	Load and Line Regulation	Voltage<0.03% +10mV and Current 0.1% +3mA or better
8	Setting Resolution	Voltage @ 1mV and Current @ 1mA or better
9	Display	Vacuum fluorescent display ; Display voltage and current measurements continuously from all three outputs
10	Tracking And Combination Modes	Tracking Mode: to Maintain the ratio on the two 30V output channels Combination V1 + V2 Series Mode: should Deliver up to 60V Meter reads back combined voltage. Combination I1 + 12 Parallel Mode: should deliver up to 3A when CH1 and CH2 are wired in parallel. Meter reads back combined current.
11	Memory	Facility to Store frequently used configurations in any of 30 setup memory locations
12	Timer	Facility to Turn off any output after a predetermined test time with each channel's output timer range 0.1s to 99999.9s.
13	Interface	USB Interface adapter with USB cable to control the supply through PC & Upload data to PC and LabView
14	Warranty	3 Years

Sr. 05. = 1 unit: (Programmable DC Power Supply)

Sr. No.	Parameter	Specification
1	No of outputs	1
2	Ratings	Voltage : 0-30V and Current: 0-5A
3	Mode	Fully Programmable
4	Power	150W or more
5	Ripple	Not to exceed 1mvrms and 4mArms
7	Line Regulation	Voltage<0.05% +1mV and Current 0.05% +0.1mA or better
8	Setting Resolution	Voltage @ 1mV and Current @ 0.1 mA or better
9	Display	Vacuum fluorescent display ; Display voltage and current measurements continuously
10	Interface	USB Interface adapter with USB cable to control the supply through

		PC & Upload data to PC and LabView
121	Warranty	3 Years

Sr. 06. = 2 units : **25MHz Abitrary Function Generator:**

Sr. No.	Parameter	Specification
1	No. of Channels	2
2	Waveforms	Sine, Square, Pulse, Ramp, Triangle, Sin(x)/x, Exponential Rise and Decay, Gaussian, Lorentz, Haversine, DC, Noise
3	Built in display	5.5 inch or more color TFT displaying values and parameters for both the channels
4	Frequency Range	Sine Wave – 1 uHz to 25MHz or better Square Wave – 1uHz to 25 MHz or better Ramp – 500kHz or better Pulse – 1mHz to 25MHz or better Arbitrary – 1 Hz to 12.5 MHz or better Others – 1uHz-1.5 MHz or better
5	Amplitude	50 Ohm : 10mVpp to 10Vpp or better for entire range of frequency Open Ckt/High Z : 20mVpp to 20Vp-p or better for entire range of frequency
6	Other Characteristics	**Square Wave**:- Rise/Fall Time $\leq$ 9ns or better , Jitter(rms) 500ps or better, **Pulse :-** width - 16.00 ns to 999.99 s or better, duty cycle - 0.001% to 99.999% or better, Jitter (rms) 500ps or better **Sine Wave :-** Harmonic distortion (1 Vp-p) : 10 Hz to 20kHz: < -70 dBc or lower ≥1 MHz to < -50 dBc or lower ≥10 MHz to ≤25 MHz: < -40 dBc or lower
7	General Characteristics	Memory and Sampling Rate: 1288k 250MS/s sampling rate Nonvolatile Memory : 4 or more
8	Software	Should be able to define waveforms by functions, equation editor, and waveform math
9	Interface	USB,GPIB and LAN
10	Modulations	AM,FM,PM,FSK,PWM
11	Warranty	3 Years

Sr. 07.= 2 unit 150 MHz Abitrary Function Generator

Sr. No.	Parameter	Specification
1	No. of Channels	2
2	Waveforms	Sine, Square, Pulse, Ramp, Triangle, Sin(x)/x, Exponential Rise and Decay, Gaussian, Lorentz, Haversine, DC, Noise
3	Built in display	5.5 inch or more color TFT displaying values and parameters for both the channels
4	Frequency Range	Sine Wave – 1 uHz to 150MHz or better Square Wave – 1uHz to 100MHz or better Ramp – 1MHz or better Pulse – 1mHz to 100MHz or better Arbitrary – 1 mHz to 100MHz or better Others – 1MHz or better
5	Amplitude	50 Ohm : 10mVpp to 10Vpp or better for entire range of frequency Open Ckt/High Z : 20mVpp-20Vpp or better for entire range of frequency
6	Other Characteristics	**Square Wave**:- Rise/Fall Time $\leq$ 3.6ns or better , Jitter(rms) 150ps or better, **Pulse :-** width - 5.00 ns to 999.99 s or better, duty cycle - 0.001% to 99.999% or better, Jitter (rms) 150ps or better

		Sine Wave :- Harmonic distortion (1 Vp-p) : 10 Hz to 1 MHz: < -60 dBc or lower ≥1 MHz to < -50 dBc or lower ≥5 MHz to ≤150 MHz: < -37 dBc or lower
7	General Characteristics	Memory and Sampling Rate: 16 k for up to 1GS/s sampling rate 128k for up to 250MS/s sampling rate Nonvolatile Memory : 4 or more
8	Software	Should be able to definewaveforms by functions, equation editor, and waveform math
9	Interface	USB,GPIB and LAN
10	Modulations	AM,FM,PM,FSK,PWM
11	Warranty	3 Years

Item No. 1-7 will be consider under Integrated wireless control system through software which can control power supply, oscilloscope, function generator all together. System can be setup via Wi-Fi and the all basic instruments from 5-30 benches are recognized automatically when connected to the system. Automatic recording of integrated instruments asset info including model number, serial number, location and utilization time. No additional cost for this arrangement.

Sr. 08. =

4 channels, 1 GHz-2 GHz bandwidth Oscilloscope: Details Specification:
4 Analog Channels and 32 digital channels, Bandwidth 1 GHz (option for upgrading to 2 GHz in future) Sampling rate : 6.25 GS/s on all analog channels simultaneously, Record length 62.5 Mpoints on all analog, option for upgrade to 125M , Waveform capture rate: >500,000 wfms/s, Math waveforms , Option for 50MHz, Acquisition: Sample, Peakdetect ,Averaging, Envelope ,Hires, fastAcq , LXI Class C interface, Minimum 15.6 in monitor, DVM>4 digit Embedded Linux, inter i7-i5, 2.7 GHz, 64-bit, dual core processor, 16-32 GB of DDR3-1866 DRAM, DP Port, DVI Connector, VGA, Ext ref in,USB3.0 and 2.0, LAN,Aux out, 1-2GHz/Passive Probes per chs, One digital probe (8 channels), trigger mode: Auto, Normal, and Single

Sr. 09. =

Digitizer Card PCI, 12 bit, 5GS/s -6GS/s,   , 10kHz- 2GHz BW, 40-60dB gain external (2 AI or 1+1) PreAms - Details Specifications:
2 Channels Digitizer Card PCI, Sampling Rate : 3-6 GSPS/channel, input 1.5-2GHz BW
Resolution : 12/14 bit, Input Impedance : 50-100ohm, Input Coupling : DC (Standard), Input Voltage Range: ±100 mV, ±200 mV, ±500 ,±1 V, ±2 V, ±5 V , FPGA Firmware for averaging signal, 2-4GS(4-8GB) onboard memory, DTK: SDK Pack (C/C#, MATLAB, LabVIEW) , Set 4 SMA to BNC cable , Desktop System i7, 32GB RAM, PCI(PCle), 250 GB SSD,1TB HHD, 24' monitors(with PCI Slot) External pre amplifier: 2-4 GHz Analog bandwidth, Lower cut off frequency 5-10KHz, 50-100 Ohm input/ output impedance, AC coupling, 1+1 or 2 analog input chs, 40dB-60dB fixed/variable amplification, SMA connection, Gain accuracy +/- 1dB

Sr. 10. =

150 MHz Arbitrary Function Generator:

Sr. No.	Parameter	Specification
1	No. of Channels	2
2	Waveforms	Sine, Square, Pulse, Ramp, Triangle, Sin(x)/x, Exponential Rise and Decay, Gaussian, Lorentz, Haversine, DC, Noise
3	Built in display	5.5 inch or more color TFT displaying values and parameters for both the channels
4	Frequency Range	Sine Wave – 1 uHz to 150MHz or better Square Wave – 1uHz to 100MHz or better Ramp – 1MHz or better Pulse – 1mHz to 100MHz or better Arbitrary – 1 mHz to 100MHz or better

		Others – 1MHz or better
5	Amplitude	50 Ohm : 10mVpp to 10Vpp or better for entire range of frequency Open Ckt/High Z : 20mVpp-20Vpp or better for entire range of frequency
6	Other Characteristics	**Square Wave**:- Rise/Fall Time ≤ 3.6ns or better , Jitter(rms) 150ps or better, **Pulse :-** width - 5.00 ns to 999.99 s or better, duty cycle - 0.001% to 99.999% or better, Jitter (rms) 150ps or better **Sine Wave :-** Harmonic distortion (1 Vp-p) : 10 Hz to 1 MHz: < -60 dBc or lower ≥1 MHz to < -50 dBc or lower ≥5 MHz to ≤150 MHz: < -37 dBc or lower
7	General Characteristics	Memory and Sampling Rate: 16 k for up to 1GS/s sampling rate 128k for up to 250MS/s sampling rate Nonvolatile Memory : 4 or more
8	Software	Should be able to definewaveforms by functions, equation editor, and waveform math
9	Interface	USB,GPIB and LAN
10	Modulations	AM,FM,PM,FSK,PWM
11	Warranty	3 Years

Sr. 11 =

(Programmable Triple Output DC Power Supply) :

Sr. No.	Parameter	Specification
1	No of outputs	3
2	Ratings	Two outputs @ 30V/1.5A and One @ 6V/5A
3	Isolation	All three outputs must be isolated from each other and ground and should be fully programmable
4	Polarity	Bipolar
5	Ripple	Not to exceed 1mvrms and 6mArms
7	Load and Line Regulation	Voltage<0.03% +10mV and Current 0.1% +3mA or better
8	Setting Resolution	Voltage @ 1mV and Current @ 1mA or better
9	Display	Vacuum fluorescent display ; Display voltage and current measurements continuously from all three outputs
10	Tracking And Combination Modes	Tracking Mode: to Maintain the ratio on the two 30V output channels Combination V1 + V2 Series Mode: should Deliver up to 60V Meter reads back combined voltage. Combination I1 + 12 Parallel Mode: should deliver up to 3A when CH1 and CH2 are wired in parallel. Meter reads back combined current.
11	Memory	Facility to Store frequently used configurations in any of 30 setup memory locations
12	Timer	Facility to Turn off any output after a predetermined test time with each channel's output timer range 0.1s to 99999.9s.
13	Interface	USB Interface adapter with USB cable to control the supply through PC & Upload data to PC and LabView
14	Warranty	3 Years

SUBMISSION OF TENDER

I. All bid/ tender documents are to be uploaded online at Central Public Procurement portal i.e.**https://eprocure.gov.in/eprocure/app** only and in the designated cover/ part on the website against tender ID. Technical bid and financial bid shall be submitted in the designated online cover/part Tenders/ bids shall be accepted only through online mode and no manual submission of the same shall be entertained except tender fee and EMD. Late tenders will not be accepted.

II.   The online bids shall be opened at the office of the Assistant Registrar (P&S), IISER Mohali, on above given date and time. If the tender opening date happens to be on a holiday or non-working day due to any other valid reason, the tender opening process will be attended on the next working day at same time and place. IISER Mohali will not be responsible for any error like missing of schedule data while downloading by the Bidder.

III.   The bidder shall upload the tender documents duly filled in and stamped by the authorized signatory on each and every page. Tender not submitted/uploaded in the prescribed form and as per the tender terms and conditions shall be liable for rejection.

IV.   The bidder shall upload scanned copy of the PAN Card, GST registration number duly signed and stamped.

V.   E-procurement system ensures locking on the scheduled date and time. The system will not accept any bid after the scheduled date and time of submission of bid.

INSTRUCTIONS

1. The Online bids should be submitted directly by the original manufacturer/supplier, If quotation is submitted/filled by any representative/agent/dealer then they must upload a authority certificate from the principal company for quoting the price otherwise such quotation will be rejected.

2. The quantity mentioned in this inquiry is and shall be deemed to be only approximate and will not in any manner be binding on the Institute. Before the deadline for submission of the online bid, IISER Mohali reserves the right to modify the tender document terms and conditions. Such amendment/modification will be notified on website against said tender ID

3. The rates offered should be FOR Chandigarh/Mohali in case of firms situated outside Chandigarh/Mohali, and free delivery at the Institute premises in case of local firms. Supplier from outside India should mention the Ex-works/FOB/FCA/CIF/CIP price clearly. Conditional tenders will be summarily rejected.

4. In case of Ex-godown terms the amount of packaging forwarding freight etc should clearly be indicated by percentage or lump sum amount. Institute has policy not to make any advance payments towards any purchase, Letter of credit can be opened if required.

5. THE INSTITUTE IS EXEMPTED FROM EXCISE AND CUSTOM DUTY under notification no-51/96 –CUSTOM DATED 23/7/1996 AND DSIR REGISTRATION NO TU/V/RG/-CDE(1062)/2011 DT. 02/09/2011 / EXCISE NOTIFICATION NO. 10/97- CENTRAL EXCISE DT. 01.03.1997.

6. Tax: This Institute is not exempted from the payment of GST. The current rate (i.e. percentage of GST should be clearly indicated included or excluded) wherever chargeable. Please also provide/upload the copy of PAN card, GST number duly self-attested.

7. The delivery period should be specifically stated. Earlier delivery will be preferred

8. The firms are requested to provide/upload detailed description and specifications together with the detailed drawings, printed leaflets and literature of the article quoted. The name of the manufactures and country of manufacture should also invariably be stated. In the absence of these particulars, the quotation is liable for rejection.

9. Validity of offer: 90 days. The warranty period after satisfactory installation should be mentioned and firm should replace all manufacturing defect parts/ whole item under warranty without any extra cost including clearance, freight, taxes. Security deposit/ Bank Performance Guarantee @ 10 % of the value of supply order as per norms may be sought from the firms.

10. The right to reject all or any of the quotation and to split up the requirements or relax any or all the above conditions without assigning any reason is reserved by the IISER Mohali. For any corrigendum and addendum please be checked the website https://eprocure.gov.in/eprocure/app and http:/www.iisermohali.ac.in

11. Disputes, if any, shall be subject to jurisdiction in the court of Mohali only.

-sd-
(Mukesh kumar)
Assistant Registrar (S&P)