

To,

**Ref No: IIT/ SIIC/Mole/EMI-EMC/BV/17-03-2015**

**INVITATION FOR QUOTATIONS FOR SUPPLY OF 3 EMI/EMC Testing Setup**

Brief Description of the Goods	Specifications*	Qty.	Delivery Period	Place of Delivery	Installation Requirement if any
EMI/ EMC Testing Setup	Mentioned below	01	4-6 Weeks	Central Store, IIT Kanpur	Yes

The test setup should have the facility to conduct the EMI/EMC (Radiated and Conducted Emission) testing of Electrical & Electronic Equipments, circuits etc as per different standards like MIL, CISPR & IEC etc. The setup should have the required Receiver, LISN, Software, Probes, Antennas, PC and other accessories

S. No.	Parameter	Specifications
i.	Frequency Range	20 Hz - 8.4 GHz with strip chart measurements
ii.	EMI Bandwidths	200 Hz, 1kHz, 9 kHz, 10kHz, 100kHz, 120 kHz, 1 MHz
iii.	Pre-amplifier	> 20 dB
iv.	Detectors	Peak, Average, Quasi-peak, detectors & CISPR detectors
v.	Displayed average noise level (without pre-selection and without pre-amplifier)	-46 dBuV/Hz (100 MHz - 1 GHz)
vi.	RF Input Port	N Female, 50 Ohm
vii.	RF Input Level	+ 30 dBm
viii.	Audio Demodulation AM, FM to loud speaker and headset	
ix.	VSWR	9 kHz - 1 GHz : 2.0:1 1 GHz - 6 GHz : 2.5:1
x.	Interface	GPIB, LAN, USB, Printer Port & VGA External port
xi.	Input Power Supply	Single Phase 230 V AC, 50 Hz
xii.	Calibration	Calibration Certificate traceable to NIST or Equivalent
xiii.	Compliance	CISPR 16-1-1 2010 & IEC/EN 61326-2-1
xiv.	Inbuilt Vector Signal Analysis capability with the Signal Analyzer capable of Digital Demodulation of various standards, Displays: vector/ constellation diagrams, EVM, magnitude/phase error, eye and trellis diagrams, demodulated data tables and I-Q measurements, frequency, and time domain. The VSA software should also run on PC /laptop (desired) and with one instructor license and 15 licenses for various wireless standards available.	

xv.	Features	*Receiver should be Fully CISPR , IEC compliant, with ALL detectors and bandwidths and should serve the purpose of full fledged spectrum Analyzer *Amplitude correction and Limit Lines, Measure at Marker, Tune and Listen, CISPR presets*Real Time Detector Meters*Receiver Scan measurement with Swept mode and Log Display ,Multi-trace option ,simultaneous scanning capability and Enhancement Display package (Spectrogram, Trace Zoom, Zone Span)*Built in cal source and preamp, input protection*20 Hz to 1 GHz for Conducted Emissions (built-in limiter and correction )* 20 Hz to 8.4 GHz for Radiated Emissions* Compliant Pre-selection 20 Hz to 3.6 GHz in both EMI Receiver Mode and SA Mode on Both Inputs* two inputs and Real Time Detector Meters* Digital IF w/ overload detector- no log amp - accuracy independent of reference level* High speed scanning with no waiting between should have Strip Chart measurement, 20 min of data capture and display versus time*Spectrogram, Trace Zoom, and Zone Span * Modular, upgradable CPU with removable hard drive * inbuilt Vector Signal Analysis for powerful demodulation , signal capture and digital analysis *Open Windows platform and inbuilt measurement software.* Self calibration feature without any additional hardware support.
xvi.	Future upgradeable	Analog Demodulation option Phase Noise Measurement option Noise Figure Measurement option
2.	Active Monopole Antenna Qty. - 01	30 Hz - 50 MHz Frequency Range 50Ω, BNC (F) Connector Adjustable Monopole Element, Antenna Base with a Built-in Preamplifier.
3	Bi-Conical Log Periodic Antenna Qty. - 01	26 MHz - 6 GHz Frequency Range Max Continuous Power upto 500W till 1GHz & 200W upto 200W Antenna Assembly, Mounting Bracket & Tripod Mounts. Stinger Mount n Individually Calibrated at 10m H pol. per ANSI C63.5. Actual Antenna Factors and a Signed Certificate of Calibration Conformance Included in
4	LISN (Line Impedance Stabilization Network) Qty. - 01	9 kHz to 30 MHz Frequency Range, single phase 16 A Continuous Current Rating, Earth Line Choke, High Pass Filter. An Artificial Hand circuit for testing handheld equipment which does not have a connection to protective earth ground
5	Current Probe Qty. - 01	Frequency range from 10 kHz to 250 MHz, Current range 16 A ( RF CW ) , Pulsed 70A , BNC termination Should provide frequency coverage for all conducted emissions tests, both commercial and military
6	Personal Computer Qty. - 01	Core i3 or above, RAM- 4GB, HDD-500GB, with 19 or 20 inch LED Monitor

**Terms & Condition**

SIDBI INNOVATION AND INCUBATION CENTRE, INDIAN INSTITUTE OF TECHNOLOGY KANPUR, KANPUR-208016

Phones: 91-512-2597057/2597979(O) Fax: 91-512-2596177

e-mail: [bvphani@iitk.ac.in](mailto:bvphani@iitk.ac.in) web: [www.iitk.ac.in/siic](http://www.iitk.ac.in/siic) <http://home.iitk.ac.in/~bvphani/>





**1. The scope includes:**

- a. Setting up machine in IIT Kanpur.
- b. Initial Installation and configuration.
- c. Training.

**2. Bid Price**

- a) The contract shall be for the full quantity as described above. Corrections, if any, shall be made by crossing out, initialing, dating and re writing.
- b) All duties, taxes and other levies payable on the raw materials and components shall be included in the total price. **Except Central Excise Duty & CDEC** (custom duty), as IIT Kanpur is exempted from these duty.
- c) Sales tax in connection with the sale shall be shown separately.
- d) The rates quoted by the bidder shall be fixed for the duration of the contract and shall not be subject to adjustment on any account.
- e) The Prices shall be quoted in Indian Rupees only.

3. Each bidder shall submit only one quotation.

**4. Validity of Quotation**

Quotation shall remain valid for a period not less than 60 days after the deadline date specified for submission.

**5. Evaluation of Quotations**

The Purchaser will evaluate and compare the quotations determined to be substantially responsive i.e. which

- (a) are properly signed ; and
- (b) Conform to the terms and conditions, and specification

**The Quotations would be evaluated separately for each item**

Sales tax in connection with sale of goods shall not be taken into account in evaluation.

**6. Award of contract**

SIDBI INNOVATION AND INCUBATION CENTRE, INDIAN INSTITUTE OF TECHNOLOGY KANPUR, KANPUR-208016

Phones: 91-512-2597057/2597979(O) Fax: 91-512-2596177

e-mail: [bvphani@iitk.ac.in](mailto:bvphani@iitk.ac.in) web: [www.iitk.ac.in/siic](http://www.iitk.ac.in/siic) <http://home.iitk.ac.in/~bvphani/>



**SIDBI INNOVATION AND INCUBATION CENTRE  
INDIAN INSTITUTE OF TECHNOLOGY KANPUR**



The Purchaser will award the contract to the bidder whose quotation has been determined to be substantially responsive (includes technically suitable) and who has offered the lowest evaluated quotation price.

- 6.1 Notwithstanding the above, **the Purchaser reserves the right to accept or reject any quotations and to cancel the bidding process and reject all quotations at any time prior to the award of contract.**
- 6.2 The bidder whose bid is accepted will be notified of the award of contract by the Purchaser prior to expiration of the quotation validity period. The terms of the accepted offer shall be incorporated in the purchase order.
- 7. Payment shall be 90% against the delivery and 10% after satisfactory installation & configuration.
- 8. Warranty/ guarantee shall be 60 months to the supplied goods.
- 9. You are requested to provide your offer latest by 2.30 p.m. hours on 26/03/2015
- 10. We look forward to receiving your quotations and thank you for your interest in this project.

**FORMAT OF QUOTATION \***

Sl. No.	Description Goods	Specifications	Qty.	Unit	Quoted Unit Rate in Rs.	Total Amount	
						In Figures	In Words
	<b>TOTAL</b>						
	<b>Sales Tax</b>						

**Gross Total Cost : Rs. ....**





**SIDBI INNOVATION AND INCUBATION CENTRE  
INDIAN INSTITUTE OF TECHNOLOGY KANPUR**



We agree to supply the above goods in accordance with the technical specifications for a total contract price of Rs. ....(amount in figures ) (Rs. .... amount in words) within the period specified in the Invitation for Quotations.

We also confirm that the normal commercial warrantee/guarantee of 60 months shall apply to the offered goods.

**Signature of Supplier**

**SPECIAL CONDITION**

**1) Authorization from Manufacturer**

In the case of a Bidder offering to supply goods under the contract which the Bidder did not manufacture or otherwise produce, the Bidder has been duly authorized by the goods' Manufacturer or producer to supply the goods in India.

**2) Proof of Manufacturing and past performance.**

Details of experience and past performance of the bidder on equipment offered and on those of similar nature within the past one years and details of current contracts in hand and other commitments.

Dr. B.V Phani

Associate Dean, Innovation & Incubation

Associate Professor, Finance, Innovation & Entrepreneurship, IME

Coordinator, SIDBI Innovation & Incubation Centre

Coordinator, Syndicate Bank Entrepreneurship Research and Training Centre

Email: [bvphani@iitk.ac.in](mailto:bvphani@iitk.ac.in)/[siic@iitk.ac.in](mailto:siic@iitk.ac.in)

Tel. No.:- 0512-259-7979

Fax No.:- 0512-259-7553

