

## GLOBAL TENDER

#### Global Tender No: IITH/MAE/MAHESH/2021/T313G

Date: 29/06/2021

Indian Institute of Technology Hyderabad invites online bids (e-tender) in Single Bid (Technical + Financial) System , from Original Equipment Manufacturer (OEM) /Authorized distributers/Authorized dealer of the following categories for the following item

Category of Suppliers invited for this Tender

- i) Class I local Supplier has local content equal to or more than 50%
- ii) Class II local Supplier has local content more than 20% but less than 50%
- iii) Non Local Supplier has local content less than 20%

Item Description	Qty
Item Name: 1. Sensors	02
2. Data Acquisition System	01
Details as per Annexure A	
Annexures:	
Technical Specifications as per Annexure A	
Compliance Statement as per Annexure B	
Bill of Material as per Annexure C	
DPIIT Registration Certificate as per Annexure D	
Declaration for Local Content as per Annexure E	
Bidder Information Sheet as per Annexure F	

The Tender Document can be downloaded from <u>https://mhrd.euniwizarde.com</u> OR Institute website- https://iith.ac.in/tenders

The bid is to be submitted online only through the E-procurement portal of **https://mhrd.euniwizarde.com** up to the last date and time of submission of tender.

Schedule of Dates

Sr.No	Particulars	Date	Time
1	Date of Online Publication/Download of Tender	29/06/2021	05:30 PM
2	Bid Submission Start Date	29/06/2021	06:00 PM
3	Bid Submission Close Date	29/07/2021	11:00 AM
4	Opening of Bids	29/07/2021	11:10 AM

No manual bids will be accepted. All quotation should be submitted online through E-procurement portal of https://mhrd.euniwizarde.com

Any queries relating to the process of online bid submission or queries relating to e-tender Portal in general may be directed to the Helpdesk Support - Phone No. 011-49606060. Mail id: - helpdeskeuniwizarde@gmail.com



## **INSTRUCTIONS FOR ONLINE BID SUBMISSION**

The Tender Document can be downloaded from <u>https://mhrd.euniwizarde.com</u> OR Institute website-<u>https://iith.ac.in/tenders</u>.

The bidders are required to submit soft copies of their bids electronically on the <u>https://mhrd.euniwizarde.com</u> using valid Digital Signature Certificates. The instructions given below are meant to assist the bidders in registering on the Portal, prepare their bids in accordance with the requirements and submitting their bids online.

More information useful for submitting online bids may be obtained at: <u>https://mhrd.euniwizarde.com</u>

#### **GUIDELINES FOR REGISTRATION:**

1.Bidders are required to enrol on the e-Procurement Portal with clicking on the link "Online Bidder Enrolment" on the e-tender Portal by paying the Registration fee of Rs.2000/- +Applicable GST.

2. As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts.

3. Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication with the bidders.

4. Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Only Class III Certificates with signing + encryption key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify / TCS / nCode / eMudhra etc.), with their profile. Or bidders can contact help desk for getting the DSC.

5. Only valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSC's to others which may lead to misuse.

6. Bidder then logs in to the site through the secured log-in by entering their user ID /password and the password of the DSC / e-Token.

7. The scanned copies of all original documents should be uploaded in pdf format on portal <u>https://mhrd.euniwizarde.com</u>

8. After completion of registration payment, bidders need to send their acknowledgement copy on help desk mail id helpdeskeuniwizarde@gmail.com for activation of their account.



## SEARCHING FOR TENDER DOCUMENTS

1. There are various search options built in the e-tender Portal, to facilitate bidders to search active tenders by several parameters.

2. Once the bidders have selected the tenders they are interested in, you can pay the form fee and processing fee (NOT REFUNDABLE) by net-banking / Debit / Credit card then you may download the required documents / tender schedules, Bid documents etc. Once you pay both fee tenders will be moved to the respective 'requested' Tab. This would enable the e- tender Portal to intimate the bidders through e-mail in case there is any corrigendum issued to the tender document.

## **PREPARATION OF BIDS**

1. Bidder should take into account any corrigendum published on the tender document before submitting their bids.

2. Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid.

3. Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document / schedule and generally, they can be in PDF formats. Bid Original documents may be scanned with 100 dpi with Colour option which helps in reducing size of the scanned document.

4. To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN card copy, GST, Annual reports, auditor certificates etc.) has been provided to the bidders. Bidders can use "My Documents" available to them to upload such documents.

5. These documents may be directly submitted from the "My Documents" area while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process.

#### **SUBMISSION OF BIDS**

- 1. Bidder should log into the website well in advance for the submission of the bid so that it gets uploaded well in time i.e. on or before the bid submission time. Bidder will be responsible for any delay due to other issues.
- 2. The bidder has to digitally sign and upload the required bid documents one by one as indicated in the tender document as a token of acceptance of the terms and conditions laid down by IIT Hyderabad.
- 3. Bidder has to select the payment option as "e-payment" to pay the tender fee / EMD as applicable and enter details of the instrument.



- 4. In case of Bank Guarantee (BG) bidder should prepare the BG as per the instructions specified in the tender document. The BG in original should be posted/couriered/given in person to the concerned official of IIT Hyd before the Online Opening of Technical Bid. In case of non-receipt of BG in original by the said time, the uploaded bid will be summarily rejected.
- 5. Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. If the price bid has been given as a standard BOQ format with the tender document, then the same is to be downloaded and to be filled by all the bidders. Bidders are required to download the BOQ file, open it and complete the white Colored (unprotected) cells with their respective financial quotes and other details (such as name of the bidder). No other cells should be changed. Once the details have been completed, the bidder should save it and submit it online, without changing the filename. If the BOQ file is found to be modified by the bidder, the bid will be rejected.
- 6. The server time (which is displayed on the bidders' dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.
- 7. The uploaded tender documents become readable only after the tender opening by the authorized bid openers.
- 8. Upon the successful and timely submission of bid click "Complete" (i.e. after Clicking "Submit" in the portal <u>https://mhrd.euniwizarde.com</u>), the portal will give a successful Tender submission acknowledgement & a bid summary will be displayed with the unique id and date & time of submission of the bid with all other relevant details.
- 9. The tender summary has to be printed and kept as an acknowledgement of the submission of the tender. This acknowledgement may be used as an entry pass for any bid opening meetings.

#### For any clarification in using https://mhrd.euniwizarde.com

1. Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a tender or the relevant contact person indicated in the tender.

2. Any queries relating to the process of online bid submission or queries relating to e-tender Portal in general may be directed to the Helpdesk Support.

Please feel free to contact euniwizard helpdesk (as given below) for any query related to etendering -Phone No. 011-49606060. Mail id: - <u>helpdeskeuniwizarde@gmail.com/</u> Mr.Vijay - 08448288989/Mr.Gagan-8448288987



# **TERMS & CONDITIONS**

1. It may kindly be noted that your bid should:

a) be in single part

2. The acceptance of the quotation will rest with the competent authority, who does not bind himself to accept the lowest quotation and reserves the right to himself to reject, or partially accept any or all the quotations received without assigning any reason.

3. Price quoted should be as per the BoQ and valid for a minimum period of 60 days from the date of opening of the quotation. The rate quoted should be free delivery at IITH Stores, Kandi 502285. The Price quoted should be in INR only.

4. Complete specification with manufacturer's name and address should be given while quoting. Literature/Pamphlets should also be enclosed wherever applicable

5. In cases of agents quoting on behalf of the manufacturers, one agent cannot represent two manufacturers or quote on their behalf in a particular tender enquiry. One manufacturer can also authorize only one agent/dealer. There can be only one bid from the following:

- i) The manufacturer directly or through one agent on his behalf; or
- ii) Agent on behalf of only one principal.

6. IIT Hyd is registered with Dept. of Scientific & Industrial Research, Govt. of India and concessional customs duty and GST & IGST are leviable vide notification no. 54/2002-Customs on all imports covered under notification No.51/96-Customs dated 23.07.1996, Notification No.47/2017-Integrated Tax (Rate) and Notification No.45/2017-Central Tax (Rate) both dated 14th November, 2017.

7. In case the items in the enquiry are covered by any rate contract or running contract finalised by any other state or central Government, it should be specified in your quotation and accepted contract rates should also be mentioned.

8. Delivery period required for supplying the material should be invariably specified in the quotation preferably within 45days. The offered delivery period shall have to be strictly adhered to in case an order is placed.

9. Liquidated Damages Clause for delays: The applicable rate is 0.5% per week and maximum deduction is 10% of the contract price.



10. If the deliveries are not maintained and due to that account the purchaser is forced to buy the material at your risk and cost from elsewhere, the loss or damage that may be sustained there by will be recovered from the defaulting supplier

## 11. Payment: - No advance payments are allowed.

#### A) INDIGENIOUS

For Indigenous items, 90% payment shall be made against delivery, installation, commissioning and balance 10% on demonstration of the whole system to the satisfaction of the Institute/ Scientist/Technologist/Indentor/Professor etc. If the PBG, submitted as per Chapter 2 Clause No 3, requires extension to cover the Warranty Period the same will be done before release of the balance 10% Payment.

#### B) IMPORT

i) **Letter of Credit** will be established for 100% order value excluding the Agency Commission due to the Indian Agents. The Letter of Credit will be established only on receipt of the Security Deposit as per Chapter 2 Clause No. 3.

90% payment shall be made against the presentation of original Shipping documents to our bankers or as per the LC terms and conditions. Balance 10% will be released after completion of satisfactory installation, commissioning, demonstration of the whole system to the satisfaction of the Institute/User Scientist Technologist/Indentor/Professor. If the PBG, submitted as per Chapter 2 Clause No 3, requires extension to cover the Warranty Period the same will be done before release of the balance 10% Payment.

#### OR

ii) **By Wire Transfer -** 90% payment shall be made against delivery, installation, commissioning and balance 10% on demonstration of the whole system to the satisfaction of the Institute/User Scientist /Technologist/Indentor/Professor If the PBG, submitted as per Chapter 2 Clause No 3, requires extension to cover the Warranty Period the same will be done before release of the balance 10% Payment

iii) The payment of local currency portion shall be payable in Indian Rupees, within 30 days after the receipt of the equipment in good condition and after satisfactory installation and commissioning and demonstration.

iv) The Agency Commission to the Indian Agent will be paid in INR only after successful installation, commissioning and satisfactory demonstration and acceptance of the items ordered for by the end user.



12. Warranty & Maintenance contract: The supplier shall warranty equipment, system components for a minimum period of **One Year** following satisfactory installation and commissioning. The defects, if any, during the guarantee/warrantee period are to be rectified free of charge by arranging free replacement wherever necessary. All expenditure including government levies on account of the replacement are to be borne by the supplier/agent.

13. Installation & Testing: The installation shall be completed within a week from the date of intimation regarding the arrival of the equipment in the institute. The installed system shall be performance tested at our premises in accordance with the manufacturer's/supplier's recommendation/specifications. Tests shall demonstrate the proper operation of the instrument and all components.

14. All supplies are subject to inspection and approval before acceptance. Manufacturer warranty certificates and manufacturer/Government approved lab test certificate shall be furnished along with the supply, wherever applicable

15. Kindly furnish your PAN & GST Number etc. in your quotation for our records.

16. Conditional tenders will not be accepted.

**17. Requirement of registration:** Vide Ministry of Finance OM No. 6/18/2019-PPD dated 23rd July 2020.

i. Any bidder from a country sharing a land border with India will be eligible to bid in this tender only if the bidder is registered with the Department for Promotion of Industry and Internal Trade (DPIIT).

ii. "Bidder" (including the term 'tenderer', 'consultant' or 'service provider' in certain contexts) means any person or firm or company, including any member of a consortium or joint venture (that is an association of several persons, or firms or companies), every artificial juridical person not falling in any of the descriptions of bidders stated hereinbefore, including any agency branch or office controlled by such person, participating in a procurement process.

iii. "Bidder from a country which shares a land border with India" for the purpose of this Order means:

a) An entity incorporated, established or registered in such a country; or

b) A subsidiary of an entity incorporated, established or registered in such a country; or

c) An entity substantially controlled through entities incorporated, established or registered in such a country; or

d) An entity whose beneficial owner is situated in such a country; or

e) An Indian (or other) agent of such an entity; or

f) A natural person who is a citizen of such a country; or



g) A consortium or joint venture where any member of the consortium or joint venture falls under any of the above

For details about registration procedures please visit the above mentioned OM. Mandatory documentary evidence regarding the bidder's registration with DPIIT is to be submitted along with the tender, failing which the tender shall be liable for rejection. Bidders are also requested to submit the Model Certificates **as per Annexure** for this tender as mentioned in the Ministry of Finance OM No. 6/18/2019-PPD dated 23rd July 2020.

#### **18.** Public Procurement (Preference to Make in India), Order 2017:

a) IIT Hyd shall compare all substantially responsive bids to determine the lowest valuated bid. This Institute is following and abide with the Public Procurement (Preference to Make in India), Order 2017, DIPP, MoCI Order No. P-45021/2/2017-B.E.II dated 15th June 2017 and its subsequent amendments. Accordingly preference will be given to the Make in India products while evaluating the bids, however, it is the sole responsibility of the bidder(s) to specify the product quoted by them is of Make in India product along with respective documentary evidence as stipulated in the aforesaid order in the technical bid itself.

b) As per the above order and its subsequent amendments "Local Content" means the amount of value added in India which shall be value of the item procured (excluding net domestic indirect taxes) minus the value of the imported content in the item (including all the custom duties) as a proportion of the total value, in percent. Accordingly the suppliers will be classified in following categories.

- i) Class I local Supplier has local content equal to or more than 50%
- ii) Class II local Supplier has local content more than 20% but less than 50%
- iii) Non Local Supplier has local content less than 20%

c) **Verification of Local Content** : The Class I Local Supplier /Class II Local Supplier at the time of bidding shall be required to indicate the percentage of local content and provide self-certification as per Annexure D that the items offered meet the local content requirement. The details of the location(s) at which the local value addition is made also needs to be specified.

The bidders can be debarred for a period up to two years as , per Rule 151(iii) of GFR 2017, in case of false declaration.

#### **Complaint Redressal Mechanism:**

In case any complaint received by the procuring agency or the concerned Ministry/Department against the claim of a bidder regarding local content/domestic value addition in a product, the same shall be referred to competent authority at IITH or the relevant Ministry.



The bidder against whom the complaint is received shall be required to furnish the necessary documentation in support of the domestic value addition claimed in the product to authority. If no information is furnished by the bidder, such laboratories may take further necessary action, to establish the bonafides of the claim

A complaint fee of Rs. 2 lakh or 1% of the value of the domestically manufactured products being procured (subject to a maximum of Rs.5 lakh), whichever is higher, to be paid by Demand Draft to be deposited with Procuring Institute. In case, the complaint is found to be incorrect, the complaint fee shall be forfeited. In case, the complaint is upheld and found to be substantially correct, deposited fee of the complainant would be refunded without any interest.

False declarations will be in breach of the Code of Integrity under Rule 175 (1)(i)(h) of the General Financial Rules for which a bidder or its successors can be debarred for up to two years as per Rule 151 (iii) of the General Financial Rules along with such other actions as may be permissible under law.

19. ARBITRATION: a) Unless otherwise specified, in all cases of disputes which cannot be settled by mutual negotiations, the disputes or differences shall finally be settled and binding on both parties by arbitration in conformity with the rules of Indian Arbitration Act, 1940. All disputes or differences what so ever arising between the parties out of relating to the construction, meaning and operation or effect of the general terms and conditions including the Purchase Order or the breach thereof shall be settled by Arbitration Act, 1940 and the award made in pursuance thereof shall be binding on the parties.

b) Performance of the purchase order shall continue during arbitration and any subsequent proceedings.

c) The Jurisdiction and Venue of arbitration shall be Hyderabad. The Arbitrator will be the Director, IIT Hyderabad, or his nominee.

20. Note: If in the view of bidder, any exemption / relaxation is applicable to them from any of the eligibility requirements, under any Rules / Guidelines/ Directives of Government of India, bidder may submit their claim for the applicable exemption /relaxation, quoting the valid Rule/Guidelines/ Directives with a copy of such notification. In this case the bidder must submit necessary and sufficient documents along with the technical bid, in support of their claim. The relevant and valid certificates in support of claim of exemption must be submitted along with the Technical Bid.

21. All disputes shall be settled in the courts of Hyderabad/Sangareddy only

22. The Director, IIT Hyd reserves the right to accept the offer in full or in parts or reject summarily or partly and also reserves the right to cancel the tender at any stage without assigning reasons



ANNEXURE A

## **TECHNICAL SPECIFICATIOS**

Specifications of Integrated Multi Axis Torque and Thrust Sensor

• Charges must include delivery, on-site installation, demonstration and technical support for one year from the date of delivery.

Quantity	2
Application	Measurement of Thrust and torque of a
	propeller
Rated Force (Fz)	Max 230 N
Rated torque (Mz)	Max 6 N-m
Nonlinearity	±0.25% of RO
Hysteresis	±0.25% of RO
Non-repeatability	±0.05% of RO
Rated Output (RO)	Up to 2 mV/V nom
Excitation (VDC or VAC)	18 V max
Bridge Resistance	350 Ohm
Insulation Resistance	≥500 MΩ 50 VDC
Connection	#28 AWG, 4 conductors, braided shielded PVC
	cable, 10 ft [3 m] long
Weight (approximate	Up to 200 g
Safe Overload	150% of RO (50–150 lb)
IP Rating	IP40
Operating Temperature	-42 to 93°C
Compensated Temperature	15 to 72°C
Temperature Shift Zero	±0.005% of RO/°F
Temperature Shift Span	±0.005% of Load/°F
Calibration Test Excitation	10 VDC
Calibration (standard)	5-pt Compression, CW
Natural Frequency (Hz) (Fz only)	2100

Specifications for Universal Data Acquisition Systems (16 channels) (Quantity=1)

- The DAQ system should be compatible with the above sensor.
- Charges must include delivery, on-site installation, demonstration and technical support for one year from the date of delivery.

Sr.No	Parameter	Technical Details	
A. Anal	og inputs		
1	Number of channels	8	
2	Inputs	Voltage, full bridge	
3	ADC type	24-bit sigma-delta with anti-aliasing filter	
4	Sampling rate	Simultaneous 200 kS/sec/channel	



5   Input type   Differential     B. Courter/Digital inputs   6   Number of channels   8 counters/24 digital inputs     6   Modes   Counting, waveform timing, encoder, tacho, gear tooth sensor     8   Counter time base   102.4 MHz     9   Max.Bandwidth   10 MHz     10   Time base Accuracy   Typical: 5 ppm, Max: 20 ppm     11   Counter resolution   32-bit     12   Input Compatibility, Level   TTL/CMOS (Low: <0.8 V, High >2 V)     13   Input protection   30 V continuous     C. Voltage range   ±10mV to ±10V     16   DC accuracy   0.05% of value +1 mV     17   Sensor supply   12V     18   Excitation voltage   ±5V     19   CMRR@50Hz   85d8     20   Overvoltage protection   ±70 V input protection     21   Input impedance   20 Mega Ohms differential     22   CMV   ±13V     23   Signal to noise:   0.1 Ks/s to 51.2 ks/s     10.1 ks/s to 50.2 ks/s   100 dB     10.2 ks/s to 200 ks/s   75 dB     23   Interface type   CAN 2.0B, up to 1 MBit/sec     24   Number of ports   2     25   Interface type   CAN 2.0B, up to	[ _		Differential
6     Number of channels     8 counters/24 digital inputs       7     Modes     Counting, waveform timing, encoder, tacho, gear tooth sensor       8     Counter time base     102.4 MHz       9     Max.Bandwidth     10 MHz       10     Time base Accuracy     Typical: 5 ppm, Max: 20 ppm       11     Counter resolution     32-bit       12     Input Compatibility, Level     TTL/CMOS (Low: <0.8 V, High >2 V)       13     Input impedance     100 kilo ohms       14     Input protection     ±30 V continuous       C. Voltage range     ±10mV to ±10V       16     DC accuracy     0.05% of value +1 mV       17     Sensor supply     12V       18     Excitation voltage     ±5V       19     CMR@50Hz     85dB       20     Overvoltage protection     ±70 V input protection       21     Input impedance     20 Mega Ohms differential       22     CMV     ±13V       23     Signal to noise:     0.1 kS/s to 51.2 kS/s       0.1 kS/s to 51.2 kS/s     105 dB       51.2 kS/s to 102.4 kS/s     100 dB       12.2 kS/s to 200 kS/s     75 dB <td></td> <td></td> <td>Differential</td>			Differential
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11Counter resolution32-bit12Input Compatibility, LevelTTL/CMOS (Low: <0.8 V, High >2 V)13Input impedance100 kilo ohms14Input protection±30 V continuousC. Voltage ranges15Voltage range±10mV to ±10V16DC accuracy0.05% of value +I mV17Sensor supply12V18Excitation voltage±5V19CMRR@50Hz85dB20Overvoltage protection±70 V input protection21Input impedance20 Mega Ohms differential22CMV±13V23Signal to noise: 0.1 kS/s to 51.2 kS/s105 dB51.2 ks/s to 102.4 kS/s100 dB102.4 kS/s to 200 kS/s75 dB24Number of ports225Interface typeCAN 2.08, up to I MBit/sec26Special applicationsCCP, OBDII, JI939, CAN output27Galvanic isolationIsolatedE.Interfaces100 m (Master/Slave), 200 m (IRIG)28USBUSB-B mini, USB 2.0 interface29SynchronisationSync port available for cascading more channels30Max. Sync-cable length100 m (Master/Slave), 200 m (IRIG)E.Environmental, Physical and Power31Operating Temperature31Operating TemperatureMax. 60 °C down to -20 °C32Storage Temperature-40 to 85 °C	9	Max.Bandwidth	10 MHz
12Input Compatibility, LevelTTL/CMOS (Low: <0.8 V, High >2 V)13Input impedance100 kilo ohms14Input protection $\pm 30$ V continuousC. Voltage range15Voltage range $\pm 10mV$ to $\pm 10V$ 16DC accuracy0.05% of value +I mV17Sensor supply12V18Excitation voltage $\pm 5V$ 19CMRR@50Hz85dB20Overvoltage protection $\pm 70$ V input protection21Input impedance20 Mega Ohms differential22CMV $\pm 13V$ 23Signal to noise: 0.1 kS/s to 51.2 kS/s105 dB51.2 ks/s to 102.4 kS/s100 dB102.4 kS/s to 200 kS/s75 dBD.CAN specifications24Number of ports225Interface typeCAN 2.08, up to I MBit/sec26Special applicationsCCP, OBDII, J1939, CAN output27Galvanic isolationIsolatedE.Interface28USBUSB-B mini, USB 2.0 interface29SynchronisationSync port available for cascading more channels30Max. Sync-cable length100 m (Master/Slave), 200 m (IRIG)E.Environ31Operating TemperatureMax. 60 °C down to -20 °C32Storage Temperature-40 to 85 °C	10	Time base Accuracy	Typical: 5 ppm, Max: 20 ppm
13Input impedance100 kilo ohms14Input protection±30 V continuous14Input protection±30 V continuous15Voltage range±10mV to ±10V16DC accuracy0.05% of value +I mV17Sensor supply12V18Excitation voltage±5V19CMRR@50Hz85dB20Overvoltage protection±70 V input protection21Input impedance20 Mega Ohms differential22CMV±13V23Signal to noise: 0.1 kS/s to 51.2 kS/s105 dB0.1 kS/s to 51.2 kS/s100 dB102.4 kS/s to 200 kS/s75 dBD. CAN specifications24Number of ports225Interface typeCAN 2.0B, up to I MBit/sec26Special applicationsCCP, OBDII, JI939, CAN output27Galvanic isolationIsolatedEInterface typeUSB-B mini, USB 2.0 interface29SynchronisationSync port available for cascading more channels30Max. Sync-cable length100 m (Master/Slave), 200 m (IRIG)E. Enviromental, Physical and Power31Operating TemperatureMax. 60 °C down to -20 °C32Storage Temperature-40 to 85 °C	11	Counter resolution	32-bit
14Input protection±30 V continuousC. Voltage ranges±10mV to ±10V15Voltage range±10mV to ±10V16DC accuracy0.05% of value +I mV17Sensor supply12V18Excitation voltage±5V19CMRR@50Hz85dB20Overvoltage protection±70 V input protection21Input impedance20 Mega Ohms differential22CMV±13V23Signal to noise: 0.1 kS/s to 51.2 kS/s105 dB51.2 ks/s to 102.4 kS/s100 dB102.4 kS/s to 200 kS/s75 dBD. CAN specifications24Number of ports225Interface typeCAN 2.0B, up to I MBit/sec26Special applicationsCCP, OBDII, JI939, CAN output27Galvanic isolationIsolatedE. InterfaceUSB USB-B mini, USB 2.0 interface29SynchronisationSync port available for cascading more channels30Max. Sync-cable length100 m (Master/Slave), 200 m (IRIG)E. Envirumental, Physical and Power-40 to 85 °C	12	Input Compatibility, Level	TTL/CMOS (Low: <0.8 V, High >2 V)
C. Voltage ranges15Voltage range±10mV to ±10V16DC accuracy0.05% of value +l mV17Sensor supply12V18Excitation voltage±5V19CMRR@50Hz85dB20Overvoltage protection±70 V input protection21Input impedance20 Mega Ohms differential22CMV±13V23Signal to noise: 0.1 kS/s to 51.2 kS/s105 dB102.4 kS/s to 102.4 kS/s100 dB102.4 kS/s to 200 kS/s75 dBD. CAN specifications24Number of ports225Interface typeCAN 2.0B, up to I MBit/sec26Special applicationsCCP, OBDII, JI939, CAN output27Galvanic isolationIsolatedE.Interfaces28USBUSB-B mini, USB 2.0 interface29SynchronisationSync port available for cascading more channels30Max. Sync-cable length100 m (Master/Slave), 200 m (IRIG)E.Envirumental, Physical and Power31Operating TemperatureMax. 60 °C down to -20 °C32Storage Temperature-40 to 85 °C	13	Input impedance	100 kilo ohms
15Voltage range±10mV to ±10V16DC accuracy0.05% of value +I mV17Sensor supply12V18Excitation voltage±5V19CMRR@50Hz85dB20Overvoltage protection±70 V input protection21Input impedance20 Mega Ohms differential22CMV±13V23Signal to noise: 0.1 kS/s to 51.2 kS/s105 dB102.4 kS/s to 102.4 kS/s100 dB102.4 kS/s to 200 kS/s75 dBZCAN zuerifications24Number of ports25Interface type26Special applicationsCCP, OBDII, J1939, CAN output27Galvanic isolationIsolatedEInterfaces28USBUSB-B mini, USB 2.0 interface29SynchronisationSync port available for cascading more channels30Max. Sync-cable length100 m (Master/Slave), 200 m (IRIG)E. Envir-mental, Physical and Power31Operating TemperatureMax. 60 °C down to -20 °C32Storage Temperature-40 to 85 °C	14	Input protection	±30 V continuous
16DC accuracy0.05% of value +1 mV17Sensor supply12V18Excitation voltage±5V19CMRR@50Hz85dB20Overvoltage protection±70 V input protection21Input impedance20 Mega Ohms differential22CMV±13V23Signal to noise: 0.1 kS/s to 51.2 kS/s105 dB51.2 ks/s to 102.4 kS/s100 dB102.4 kS/s to 200 kS/s75 dBD. CAN specifications24Number of ports225Interface typeCAN 2.0B, up to 1 MBit/sec26Special applicationsCCP, OBDII, JI939, CAN output27Galvanic isolationIsolatedE.Interface28USBUSB-B mini, USB 2.0 interface29SynchronisationSync port available for cascading more channels30Max. Sync-cable length100 m (Master/Slave), 200 m (IRIG)E.Envirumental, Physical and Power31Operating TemperatureMax. 60 °C down to -20 °C32Storage Temperature-40 to 85 °C	C. Volt	tage ranges	
17Sensor supply12V18Excitation voltage±5V19CMR@50Hz85dB20Overvoltage protection±70 V input protection21Input impedance20 Mega Ohms differential22CMV±13V23Signal to noise: 0.1 kS/s to 51.2 kS/s105 dB51.2 ks/s to 102.4 kS/s100 dB102.4 kS/s to 200 kS/s75 dBD. CAN specifications24Number of ports225Interface typeCAN 2.0B, up to I MBit/sec26Special applicationsCCP, OBDII, JI939, CAN output27Galvanic isolationIsolatedE. InterfaceSync port available for cascading more channels30Max. Sync-cable length100 m (Master/Slave), 200 m (IRIG)51Operating TemperatureMax. 60 °C down to -20 °C32Storage Temperature-40 to 85 °C	15	Voltage range	±10mV to ±10V
18Excitation voltage±5V19CMR@50Hz85dB20Overvoltage protection±70 V input protection21Input impedance20 Mega Ohms differential22CMV±13V23Signal to noise: 0.1 kS/s to 51.2 kS/s105 dB51.2 ks/s to 102.4 kS/s100 dB102.4 kS/s to 200 kS/s75 dBD. CAN specifications24Number of ports225Interface typeCAN 2.0B, up to I MBit/sec26Special applicationsCCP, OBDII, JI939, CAN output27Galvanic isolationIsolatedE. Interface28USBUSB-B mini, USB 2.0 interface29SynchronisationSync port available for cascading more channels30Max. Sync-cable length100 m (Master/Slave), 200 m (IRIG)E. Envirmental, Physical and Power31Operating TemperatureMax. 60 °C down to -20 °C32Storage Temperature-40 to 85 °C	16	DC accuracy	0.05% of value +l mV
19CMRR@50Hz85dB20Overvoltage protection±70 V input protection21Input impedance20 Mega Ohms differential22CMV±13V23Signal to noise: 0.1 kS/s to 51.2 kS/s105 dB51.2 ks/s to 102.4 kS/s100 dB102.4 kS/s to 200 kS/s75 dBD. CAN specifications24Number of ports225Interface typeCAN 2.0B, up to I MBit/sec26Special applicationsCCP, OBDII, JI939, CAN output27Galvanic isolationIsolatedE. Interface28USBUSB-B mini, USB 2.0 interface29SynchronisationSync port available for cascading more channels30Max. Sync-cable length100 m (Master/Slave), 200 m (IRIG)E. Enviromental, Physical and Power31Operating TemperatureMax. 60 °C down to -20 °C32Storage Temperature-40 to 85 °C	17	Sensor supply	12V
20Overvoltage protection±70 V input protection21Input impedance20 Mega Ohms differential22CMV±13V23Signal to noise: 0.1 kS/s to 51.2 kS/s105 dB51.2 ks/s to 102.4 kS/s100 dB102.4 kS/s to 200 kS/s75 dBD. CAN specifications24Number of ports225Interface typeCAN 2.0B, up to I MBit/sec26Special applicationsCCP, OBDII, JI939, CAN output27Galvanic isolationIsolatedE. Interface type28USBUSB-B mini, USB 2.0 interface29SynchronisationSync port available for cascading more channels30Max. Sync-cable length100 m (Master/Slave), 200 m (IRIG)E. Enviromental, Physical and Power31Operating TemperatureMax. 60 °C down to -20 °C32Storage Temperature-40 to 85 °C	18	Excitation voltage	±5V
21Input impedance20 Mega Ohms differential22CMV±13V23Signal to noise: 0.1 kS/s to 51.2 kS/s105 dB51.2 ks/s to 102.4 kS/s100 dB102.4 kS/s to 200 kS/s75 dBD. CAN specifications24Number of ports225Interface typeCAN 2.0B, up to I MBit/sec26Special applicationsCCP, OBDII, JI939, CAN output27Galvanic isolationIsolatedE. Interface type28USBUSB-B mini, USB 2.0 interface29SynchronisationSync port available for cascading more channels30Max. Sync-cable length100 m (Master/Slave), 200 m (IRIG)E. Enviromental, Physical and Power31Operating TemperatureMax. 60 °C down to -20 °C32Storage Temperature-40 to 85 °C	19	CMRR@50Hz	85dB
22CMV±13V23Signal to noise: 0.1 kS/s to 51.2 kS/s105 dB51.2 ks/s to 102.4 kS/s100 dB51.2 ks/s to 200 kS/s75 dBD. CAN specifications24Number of ports225Interface typeCAN 2.0B, up to I MBit/sec26Special applicationsCCP, OBDII, JI939, CAN output27Galvanic isolationIsolatedE. Interface type28USBUSB-B mini, USB 2.0 interface29SynchronisationSync port available for cascading more channels30Max. Sync-cable length100 m (Master/Slave), 200 m (IRIG)31Operating TemperatureMax. 60 °C down to -20 °C32Storage Temperature-40 to 85 °C	20	Overvoltage protection	±70 V input protection
23Signal to noise: 0.1 kS/s to 51.2 kS/s105 dB51.2 ks/s to 102.4 kS/s100 dB102.4 kS/s to 200 kS/s75 dBD. CAN specifications24Number of ports225Interface typeCAN 2.0B, up to I MBit/sec26Special applicationsCCP, OBDII, JI939, CAN output27Galvanic isolationIsolatedE. Interface28USBUSB-B mini, USB 2.0 interface29SynchronisationSync port available for cascading more channels30Max. Sync-cable length100 m (Master/Slave), 200 m (IRIG)31Operating TemperatureMax. 60 °C down to -20 °C32Storage Temperature-40 to 85 °C	21	Input impedance	20 Mega Ohms differential
0.1kS/s to 51.2 kS/s105 dB51.2 ks/s to 102.4 kS/s100 dB102.4 kS/s to 200 kS/s75 dBD. CAN specifications24Number of ports25Interface type26Special applications27Galvanic isolation28USB29Synchronisation30Max. Sync-cable length30Max. Sync-cable length31Operating Temperature32Storage Temperature32Storage Temperature34Storage Temperature	22	CMV	±13V
51.2 ks/s to 102.4 kS/s 102.4 kS/s to 200 kS/s100 dB 75 dBD. CAN >perifications224Number of ports225Interface typeCAN 2.0B, up to I MBit/sec26Special applicationsCCP, OBDII, JI939, CAN output27Galvanic isolationIsolatedE. Interface28USBUSB-B mini, USB 2.0 interface29SynchronisationSync port available for cascading more channels30Max. Sync-cable length100 m (Master/Slave), 200 m (IRIG)E. Envirwental, Physical and Power31Operating TemperatureMax. 60 °C down to -20 °C32Storage Temperature-40 to 85 °C	23	Signal to noise:	
102.4 kS/s to 200 kS/s75 dBD. CAN specifications224Number of ports225Interface typeCAN 2.0B, up to I MBit/sec26Special applicationsCCP, OBDII, JI939, CAN output27Galvanic isolationIsolatedE. Interface s28USBUSB-B mini, USB 2.0 interface29SynchronisationSync port available for cascading more channels30Max. Sync-cable length100 m (Master/Slave), 200 m (IRIG)E. Envirwental, Physical and Power31Operating TemperatureMax. 60 °C down to -20 °C32Storage Temperature-40 to 85 °C		0.1 kS/s to 51.2 kS/s	105 dB
D. CAN specifications24Number of ports225Interface typeCAN 2.0B, up to I MBit/sec26Special applicationsCCP, OBDII, JI939, CAN output27Galvanic isolationIsolatedE. Interface summer sum		51.2 ks/s to 102.4 kS/s	100 dB
24Number of ports225Interface typeCAN 2.0B, up to I MBit/sec26Special applicationsCCP, OBDII, JI939, CAN output27Galvanic isolationIsolatedE. Interfaces28USBUSB-B mini, USB 2.0 interface29SynchronisationSync port available for cascading more channels30Max. Sync-cable length100 m (Master/Slave), 200 m (IRIG)E. Environmental, Physical and Power31Operating TemperatureMax. 60 °C down to -20 °C32Storage Temperature-40 to 85 °C		102.4 kS/s to 200 kS/s	75 dB
25Interface typeCAN 2.0B, up to I MBit/sec26Special applicationsCCP, OBDII, JI939, CAN output27Galvanic isolationIsolatedE. Interfaces28USBUSB-B mini, USB 2.0 interface29SynchronisationSync port available for cascading more channels30Max. Sync-cable length100 m (Master/Slave), 200 m (IRIG)E. Environmental, Physical and Power31Operating TemperatureMax. 60 °C down to -20 °C32Storage Temperature-40 to 85 °C	D. CAI	N specifications	i
26Special applicationsCCP, OBDII, JI939, CAN output27Galvanic isolationIsolated27Galvanic isolationUSBatedE. Interfaces28USBUSB-B mini, USB 2.0 interface29SynchronisationSync port available for cascading more channels30Max. Sync-cable length100 m (Master/Slave), 200 m (IRIG)E. Environmental, Physical and Power31Operating TemperatureMax. 60 °C down to -20 °C32Storage Temperature-40 to 85 °C	24	Number of ports	2
27Galvanic isolationIsolated27Galvanic isolationIsolated <i>E. Interfaces</i> 28USBUSB-B mini, USB 2.0 interface29SynchronisationSync port available for cascading more channels30Max. Sync-cable length100 m (Master/Slave), 200 m (IRIG) <i>E. Environmental, Physical and Power</i> 3131Operating TemperatureMax. 60 °C down to -20 °C32Storage Temperature-40 to 85 °C	25	Interface type	CAN 2.0B, up to I MBit/sec
E. Interfaces28USBUSB-B mini, USB 2.0 interface29SynchronisationSync port available for cascading more channels30Max. Sync-cable length100 m (Master/Slave), 200 m (IRIG)E. Environmental, Physical and Power31Operating TemperatureMax. 60 °C down to -20 °C32Storage Temperature-40 to 85 °C	26	Special applications	CCP, OBDII, JI939, CAN output
28USBUSB-B mini, USB 2.0 interface29SynchronisationSync port available for cascading more channels30Max. Sync-cable length100 m (Master/Slave), 200 m (IRIG) <i>E. Environmental, Physical and Power</i> Max. 60 °C down to -20 °C31Operating TemperatureMax. 60 °C down to -20 °C32Storage Temperature-40 to 85 °C	27	Galvanic isolation	Isolated
29SynchronisationSync port available for cascading more channels30Max. Sync-cable length100 m (Master/Slave), 200 m (IRIG) <i>E. Environmental, Physical and Power</i> Max. 60 °C down to -20 °C31Operating TemperatureMax. 60 °C down to -20 °C32Storage Temperature-40 to 85 °C	E. Inte	erfaces	
30Max. Sync-cable length100 m (Master/Slave), 200 m (IRIG)E. Environmental, Physical and Power31Operating TemperatureMax. 60 °C down to -20 °C32Storage Temperature-40 to 85 °C	28	USB	USB-B mini, USB 2.0 interface
E. Environmental, Physical and Power31Operating TemperatureMax. 60 °C down to -20 °C32Storage Temperature-40 to 85 °C	29	Synchronisation	Sync port available for cascading more channels
31Operating TemperatureMax. 60 °C down to -20 °C32Storage Temperature-40 to 85 °C	30	Max. Sync-cable length	100 m (Master/Slave), 200 m (IRIG)
32 Storage Temperature -40 to 85 °C	E. Env	ironmental, Physical and Power	· · · ·
	31	Operating Temperature	Max. 60 °C down to -20 °C
33 IP rating IP50	32	Storage Temperature	-40 to 85 °C
	33	IP rating	IP50



34	Humidity	5 to 95 % RH non-condensing at 50 °C
35	Shock & Vibration	Vibration sweep sinus (EN 60068-2-6:2008)
		Vibration random (EN 60721-3-2: 1997 - Class
		2M2)
		Shock {EN 60068-2-27:2009)
		MIL-STD-8100
36	Weight	Less than 1 kg (approx. 0.72kg)
37	Power supply	9-36V DC
38	Power consumption	Typ. 6 W, Max. 18 W
F.	Data acquisition software	

#### For any technical query related to enquiry you may to contact

Dr. Mahesh MS, Dept of Mechanical & Aerospace Engineering Email: mahesh@mae.iith.ac.in For Commercial query

Mr. Suresh Nair - Assistant Registrar Email : ar.purchase@iith.ac.in

Mr. Jagadeesh B – Deputy Registrar Email : dr.snp@iith.ac.in

With CC: office.stores@iith.ac.in



#### ANNEXURE – B

1	2	3	4	5	6
S. N.	Name of specifications/part / Accessories of tender enquiry As per Annexure A of the Tender Document.	Specifications of quoted Model/ Item	Compliance Whether "YES" Or "NO"	Deviation, if any, to be indicated in unambiguous terms	Whether the compliance / deviation is clearly mentioned in technical leaflet/ literature
1					
2					
3					
n					

## FORMAT OF COMPLIANCE STATEMENT OF SPECIFICATIONS



ANNEXURE - C

## BILL OF MATERIALS

Name of the Bidder \_\_\_\_\_

Tender No.\_\_\_\_\_

Sr.No	Item Description	Country of Origin	Qty
1			
2			
3			
n			



ANNEXURE – D

# CERTIFICATE ON COMPANY LETTERHEAD

#### CERTIFICATE BY BIDDER- DPIIT REGISTRATION

" I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I certify that this bidder is not from such a country or, / if from such a county, has been registered with the Competent Authority (copy of the Registration Certificate enclosed) . I hereby certify that his bidder fulfils all requirements in this regard and is eligible to be considered.

Signature with Date and Stamp Of the Bidder



ANNEXURE – E

## Declaration for Local Content (To be given on Company Letter Head - For tender value below Rs.10 Crores) (To be given by Statutory Auditor/Cost Auditor/Cost Accountant/CA for tender value above Rs.10 Crores)

Date: \_\_\_\_\_

To, The Director, Indian Institute of Technology Hyderabad, Kandi, Sangareddy 502285

Sub: Declaration of Local content

Tender Reference No: \_\_\_\_\_\_

Name of Tender /	/ Work: -	
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1. Country of Origin of Goods being offered: \_\_\_\_\_\_

2. We hereby declare that items offered has \_\_\_\_\_% local content.

3. Details of location at which local value addition will be made / made: (Complete address to be mentioned) \_\_\_\_\_\_

*"Local Content"* means the amount of value added in India which shall, be the total value of the item being offered minus the value of the imported content in the item (including all customs duties) as a proportion of the total value, in percent.

"\*False declaration will be in breach of Code of Integrity under Rule 175(1)(i)(h) of the General Financial Rules for which a bidder or its successors can be debarred for up to two years as per Rule 151 (iii) of the General Financial Rules along with such other actions as may be permissible under law."

Yours Faithfully, (Signature of the Bidder, with Official Seal)



ANNEXURE - F

DIDDED	INFORMATION FORM	Л
BIDDEK	INFORMATION FORM	1

Company Name	:
Registration Number	:
Registered Address	:
Name of Partners /Direct	or:
City	:
Postal Code	:
Company's Establishmen	t Year :
Company's Nature of Bus	iness :
Company's Legal Status	1) Limited Company
(tick on appropriate option	on ) 2) Undertaking
	3) Joint Venture
	4) Partnership
	5) Others (In case of Others please specify)
Company Category	1) Micro Unit as per MSME
	2) Small Unit as per MSME
	3) Medium Unit as per MSME
	4) Ancillary Unit
	5) SSI
	6) Others (In case of Others please specify)



#### **CONTACT DETAILS**

Contact Name	:
Email Id :	
Designation	:
Phone No	:()

Mobile No :\_\_\_\_\_

#### **BANK DETAILS**

Name of Beneficiary	:	

Name of Bank	:

IFSC NO. (Bank)	:	
-----------------	---	--

Branch Address and Branch Code:	

**Other Details** 

Vendor's PAN No. \_\_\_\_\_

Vendor's GST \_\_\_\_\_