



INDIAN INSTITUTE
OF TECHNOLOGY
PALAKKAD

Indian Institute of Technology Palakkad

भारतीयप्रौद्योगिकीसंस्थानपालक्काड

STORES & PURCHASE SECTION

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Tender No. TENDER/2023-24/PRJ_032

Date of Publication: 28-08-2023

Date/Time of Closing: 18-09-2023 15:00 hours

Indian Institute of Technology Palakkad Invites Global Tender under Two-bid system for the:

**SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF
MOTION CAPTURE SYSTEM EQUIPMENT AND ACCESSORIES**

Conforming to the specifications as in BoQ Technical.

Tender Documents may be downloaded from the e-Wizard Portal <https://mhrd.euniwizarde.com/>. Aspiring Bidders who have not enrolled / registered in e-Wizard should enroll / register before participating through the website <https://mhrd.euniwizarde.com/>. Bidders are advised to go through instructions provided at “**Procedure for Submission of E-tender**”. [Special Instructions to the Contractors/Bidders for the e-submission of the bids online through this e-Wizard Portal”].

Bidders can access tender documents on the website. For searching in the site, kindly go to Live Tenders option, Click “Advance Search” and select Department as ‘IIT Palakkad’. Thereafter, Click on “Search” button to view all IIT Palakkad tenders. Select the appropriate tender and fill them with all relevant information and submit the completed tender document online on the website <https://mhrd.euniwizarde.com/> as per the timeline below.

No manual bids will be accepted. All tender documents including Techno-Commercial, Technical and Financial bids should be submitted in the e-Wizard portal.

S. No.	Events	Date and Time
1	Publication of the Tender Document	28-08-2023
2	Date of Pre-Bid Meeting	05-09-2023, 10:30 hours
3	Last Date/Time for submission of ONLINE Bids	18-09-2023, 15:00 hours
4	Opening of Technical Bids	18-09-2023, 15:15 hours

Note:

1. The bidder should be a Class-I / Class-II Local Supplier meeting the requirement as per the Order No. P-45021/2/2017-PP (BE-II) issued by the Public Procurement Section, DPHT, Ministry of Commerce and Industry, GOI dated 16-09-2020.

2. Bidders other than Class-I / Class-II Local Suppliers, who may participate in this tender, may be doing so at their own risk. Such bids would not be considered and rejected outright

Pre-Bid Meeting:

- Online Pre-Bid meeting will be held on **05-09-2023 at 10:30 AM** to clear the doubts of intending bidders. The details of the meeting will be intimated through ONLINE Portal. Bidders, who are unable to attend the Pre-Bid meeting, may send their queries for the same, latest by **04-09-2023, 17:00 hours** to purchase@iitpkd.ac.in
- Queries received after the Pre-Bid Meeting shall not be considered. Addendum/ Corrigendum/ Clarifications to the queries will be uploaded, paused the Pre-Bid meeting in the online portal, which shall be the part of the tender document.

TERMS AND CONDITIONS

<p align="center">1</p>	<p align="center">GENERAL</p>	<p>(a) The responsibility of submission of the bids on or before the last date shall rest with the tenderer. The institute will hold no responsibility for the non-receipt of the bids or the bids received after the date/time specified. Any bid received by IITPKD after the bid submission deadline prescribed by IITPKD, shall be rejected and returned unopened to the Bidder.</p> <p>(b) Canvassing or offer of an advantage or any other inducement by any person with a view to influencing acceptance of a bid is an offence under the Laws of India. Such action will result in the rejection of bid, in addition to other punitive measures.</p> <p>(c) Each bidder shall submit only one bid, either by himself or as a partner in a joint venture or as a member of the consortium. If a bidder or if any of the partners in a joint venture or any one of the members of the consortium participate in more than one bid, the bids (of both the individual and the partnership/consortium/joint venture) are liable to be rejected.</p> <p>(d) The bidder shall bear all costs associated with the preparation and submission of his bid and IITPKD shall in no case be responsible or liable for those costs, regardless of the conduct or outcome of the tender process.</p> <p>(e) IITPKD will respond to any request for clarification or modification of the Tender Document that are received up to TWO DAYS prior to the deadline for submission of bids prescribed by IITPKD. For this purpose, the prospective bidder(s) requiring clarification in the Tender Document shall notify IITPKD through the ONLINE Portal ONLY. Any such clarification, together with all the details on which the clarification had been sought, will be published in the ONLINE Portal ONLY. Deviations, if any, observed by the Institute in the submitted bids, from the Terms and Conditions of the Tender Document will not be accepted by the Institute.</p> <p>(f) Except for any such clarification by the Institute, which is expressly stated to be an addendum to the tender document issued by the Registrar, IIT Palakkad, no written or oral communication, presentation or explanation by any other employee of any of the Sections/Departments of the Institute, shall be taken to bind or fetter the Institute.</p> <p>(g) The bidder is expected to examine all instructions, forms, terms and conditions in the Tender Document. In the event of discovery of any missing pages, the bidder shall inform the same to the Section/ Department concerned. Failure to furnish the information required by the Tender Document or submission of a tender not substantially responsive to the Tender Document in every respect will be at the bidder's risk and may result in rejection of the bid.</p> <p>(h) The bidder shall not make or cause to be made any alteration, erasure or obliteration to the text of the Tender Document.</p> <p>(i) The Supplier shall not, without the prior written consent of the IITPKD, assign to any third party, the Contract or any part thereof.</p>
<p align="center">2</p>	<p align="center">COMPOSITION OF THE TENDER DOCUMENT</p>	<p>(a) The Tender Document comprises of:</p> <p>Instruction to the bidders including terms and conditions</p> <ol style="list-style-type: none"> 1. Technical Specifications (Annexure-I) 2. Undertaking by the Bidder (Annexure-II) 3. Fall Clause Notice Certificate (Annexure-III) 4. Annexure regarding Blacklisting/Debarment (Annexure-IV) 5. Self Declaration – MII Order (Annexure-V)

3	DOCUMENTS COMPRISING THE BID	<p>(a) The Technical, Techno-commercial and Commercial Bids (Cover One) and Commercial Bid (Cover Two) shall be submitted ONLINE through the e-Wizard Portal.</p> <p>(b) Bids submitted in any mode other than ONLINE will be rejected outright.</p> <p>(c) Documents establishing the conformity of the terms and conditions of the Tender Document shall be provided along with the bid. The offer/bids should be sent only for a system or that is available in the market and supplied to a number of customers. A list of customers in India and abroad with details must accompany the quotations. Quotations for a prototype machine will not be accepted.</p> <p>(d) Original catalogue (not any photocopy) of the quoted model duly signed by the principals must accompany the quotation in the Technical bid. No prices should ever be included in the Technical bid.</p> <p>(e) Compliance or Confirmation report with reference to the specifications and other terms and conditions should also be obtained from the principal.</p> <p>(f) Information related to the agency/bidder such as photocopies of the Registration/PAN/GST/TIN shall be furnished.</p> <p>(g) The technical bid should consist of all technical details along with commercial terms and conditions. No prices should be included in the technical bid. Mentioning of Prices in the Technical Bid shall lead to <u>DISQUALIFICATION</u>.</p> <p>(h) Bidders who are bidding for this tender,</p> <ol style="list-style-type: none"> 1) Should have implemented at least TWO ORDERS of Motion Capture System Equipment and Accessories during previous five financial years (2018-19, 2019-20, 2020-2021, 2021-22, 2022-23) from Centrally Funded Technical Institutes (IITs, NITs, IISc, IISER), DRDO, ISRO, CSIR labs or Government Firms in India. Copies of the most recent purchase orders and user certificates of successful implementation must be included. Copies of financial statements or evidence of turnover must be furnished. 2) Should have an Average Annual Turnover of Rs 3,80,00,000/- (RUPEES THREE CRORE EIGHTY LAKH ONLY) during the last THREE financial years (2020-21, 2021-22, 2022-23). The bidder shall enclose the audited statements of the indicated financial years, which should have been certified by a Chartered Accountant or a Competent Authority. 3) Should submit Digitally signed Tender Document in Cover One.
4	EARNEST MONEY DEPOSIT (EMD)	<p>(a) The bidder shall furnish EMD of Rs. 3,80,000/- (Rupees Three Lakh Eighty Thousand Only) through online payment gateway in the E-Wizard.</p> <p>(b) Bids not accompanied by EMD shall be DISQUALIFIED.</p>

5	PERFORMANCE SECURITY	<p>(a) The performance security shall be submitted within FIFTEEN DAYS of receipt of the material by the IITPKD. The successful bidder shall furnish the Performance Security equal to 5% of the order / contract value (excluding the value of annual maintenance charges). The Performance Security shall be valid all along the warranty period and shall extend up to SIXTY DAYS after the date of completion of warranty period. It shall be ensured by the successful bidder that the validity of the Performance Security submitted is extended depending on the date of commencement of the Warranty.</p> <p>(b) The performance security shall be a bank guarantee (in the format as provided) issued by the Indian Scheduled bank (including e-Bank Guarantee) acceptable to the IITPKD or a Demand Draft favoring, INDIAN INSTITUTE OF TECHNOLOGY PALAKKAD payable at PALAKKAD.</p> <p>(c) The performance security shall automatically become null and void once all the obligations of the Supplier under the Contract have been fulfilled, including, but not limited to, any obligations during the Warranty Period and any extensions to the period. The performance security shall be returned to the Supplier not later than fifteen (15) days after its expiration.</p> <p>(d) Failure of the successful Bidder to comply with the requirements shall constitute enough grounds for the annulment of the award and forfeiture of the EMD, in which event the IITPKD may make the award to the next lowest evaluated bid submitted by a qualified Bidder or call for new bids.</p>
6	BID PRICES AND CURRENCY	<p>(a) Prices must be quoted separately for each equipment/item identified.</p> <p>(b) Price quoted for equipment/items shall include all the costs associated with packing, local transportation from the point of clearance to IITPKD, insurance, loading, unloading and associated delivery charges. The delivery shall be on DOOR DELIVERY basis to the institute including its installation, commissioning, integration and validation. It is the sole responsibility of the supplier to ensure that the equipment is delivered on DDP mode to IIT Palakkad. An undertaking to this effect as in Annexure-II.</p> <p>(c) Prices quoted by the bidder shall be fixed during the validity of the bid.</p> <p>(d) Prices of the equipment/items shall be quoted in Indian Rupees (INR) / Foreign Currency.</p>
7	LETTER OF CREDIT	<p>(a) Upon the successful Bidder's furnishing of the copy of the Purchase Order duly signed on each page and the Performance Security, for the equipment ordered in foreign currency, IITPKD will open a letter of credit (LC) in a convenient Nationalized Bank in India. For opening of LC necessary information shall be provided by the supplier or its authorized agents.</p> <p>(b) In case the successful bidder is a foreign company and wishes to submit Performance Security in the form of Bank Guarantee, the Bank Guarantee should be routed through the Beneficiary Bank to the end user bank. Otherwise, the Indian Agent of the foreign vendor shall submit a Bank Guarantee from a Nationalized Bank of India. The following documents shall be submitted in case of an Indian agent submitting the Performance Security on behalf of his principal:</p> <ul style="list-style-type: none"> • Foreign principal's proforma invoice indicating the commission payable to the Indian agent and nature of after-sales service to be rendered by the Indian agent. • Copy of the agency agreement with the foreign principal and the precise relationship between them and their mutual interest in the business. <p>(c) For imported equipment, a Letter of Credit (LC) shall be opened for 100% CIP price on receipt of the acknowledgment of the purchase order.</p>

		<p>However, 80% of the LC amount only shall be released on proof of the shipment of the consignment with necessary documents to be provided in detail at the time of placing of the purchase order. Balance 20% of the LC amount shall be released upon the receipt of a performance security of 5% of the total value of the purchase order and installation, commissioning, integration, validation and installation report/certification jointly given by the end user and the supplier.</p> <p>Any costs associated with the amendments made in the LC as per the request made by the Supplier s should be borne by the supplier.</p> <p>Any fluctuation in rates / rate conversions arising due to the amendment requests made by the supplier shall be on the supplier and not on the institute.</p>
8	PERIOD OF VALIDITY OF BIDS	<p>(d) Bids shall remain valid for a period of 180 DAYS after the date of the deadline for submission of bids prescribed by IITPKD.</p> <p>(e) If the deadline is extended due to unforeseen circumstances, the bid validity shall be deemed to have extended accordingly.</p>
9	TIME FOR SUPPLY, INSTALLATION, COMMISSIONING AND VALIDATION OF THE EQUIPMENTS/ITEMS	<p>(a) The Supplier shall supply the equipment/items within the period specified in the tender document i.e. within 8 WEEKS of signing the purchase order or within the period mutually agreed between IITPKD and supplier. All the equipment and accessories should be delivered at IIT Palakkad Technology IHub Foundation, V Square, Kanjikode, Palakkad, Kerala.</p> <p>(b) The Supplier shall thereafter proceed with the installation, commissioning, integration and validation and demonstrate operational acceptance of the equipment/items within the period specified. The equipment/items shall be installed and commissioned by the successful bidder within 20 to 25 days from the date of its receipt.</p> <p>(c) The tenderer should indicate clearly the time required for delivery of the item. In case there is any deviation in the delivery schedule, liquidated damages clause will be enforced or penalty for the delayed supply period will be levied.</p> <p>(d) In the event of failure of supply of the item/equipment/items within the stipulated delivery schedule, IITPKD has all the right to purchase the item/equipment/items from other sources on the total risk of the Supplier under the risk purchase clause.</p>
10	PRODUCT UPGRADES	The Supplier shall continue to support and maintain the version/model of the Equipment supplied by upgrading the software and the hardware as and when amendments are carried out in the existing version or the product is upgraded. Whereas upgrades to the software shall be supplied free of cost, the Supplier may charge for upgrade in hardware provided it is of major nature. An upgraded higher version of the instrument and software related with the instrument shall be supplied.
11	PENALTIES	If the Supplier fails to complete any of the activities in accordance with the time specified for it, or any extension of time granted by IITPKD, Liquidated Damages Clause shall be invoked.
12	UP-TIME GUARANTEE/ DOWNTIME PENALTY CLAUSE	<p>(a) The Supplier should provide up-time guarantee of 95% [24 (hours) X 7 (days) X 365 (days)] basis during the warranty period.</p> <p>(b) The Supplier should provide up-time guarantee of 95% (24 hours/day basis) both during warranty. If downtime exceeds the 5% limit, extension of the warranty period will be twice the excess down time period.</p>
13	LIQUIDATED DAMAGES	If a firm accepts an order and fails to execute the order, in full or part, as per the terms and conditions stipulated therein, it will be open to the Institute to recover liquidated damages from the firm at the rate of 1% of the value of the undelivered goods per month or part thereof, subject to a maximum of 5% of the value of the undelivered goods. It will also be open to the Institute alternatively, to arrange procurement of the required stores from any source, at the risk and

		expense of the firm, accepted and failed to execute the order according to stipulations agreed upon. This will also entail the removal of the defaulters' name from the approved/registered list of Suppliers.
14	EFFECT OF FORCE MAJEURE	<p>(a) If the Supplier is prevented, hindered, or delayed from or in performing any of its obligations under the Contract by an event of Force Majeure, then it shall notify the IITPKD in writing of the occurrence of such event and the circumstances of the event of Force Majeure within FIFTEEN DAYS after the occurrence of such event.</p> <p>(b) The Supplier, when affected by the event of Force Majeure shall use reasonable efforts to mitigate the effect of the event of Force Majeure upon its performance of the Contract and to fulfill its obligations under the Contract, but without prejudice to IITPKD's right to terminate the Contract.</p> <p>(c) No delay or non-performance by the Supplier caused by the occurrence of any event of Force Majeure shall:</p> <ol style="list-style-type: none"> i. Constitute a default or breach of the Contract; ii. Give rise to any claim for damages or additional cost or expense occasioned by the delay or non-performance. <p>(d) If the performance of the Contract is substantially prevented, hindered, or delayed for a single period of more than THIRTY DAYS or an aggregate period of more than SIXTY DAYS on account of one or more events of Force Majeure, the IITPKD shall have the right to terminate the Contract by giving a notice to the Supplier.</p>
15	EXTENSION OF TIME LIMITS FOR SUPPLY AND MAKING OPERATIONAL, THE EQUIPMENT	<p>(a) The time limit for supply, installation & commissioning, integration & validation shall be extended if the supply is delayed or impeded in the performance of any of its obligations under the Contract by reason of any of the following:</p> <ol style="list-style-type: none"> i. Any occurrence of Force Majeure; ii. Any other matter specifically mentioned in the Contract; <p>(b) By such period as shall be fair and reasonable in all the circumstances and as shall fairly reflect the delay or impediment sustained by the Supplier.</p>
16	GOVERNING LAW AND SETTLEMENT OF DISPUTES IEMs DETAILS:	<p>(a) The Contract shall be governed by and interpreted in accordance with the laws of India.</p> <p>(b) Any complaints related to this tender should be reported to the Independent External Monitors (IEMs) through email. Details of the IEMs are as follows:</p> <ol style="list-style-type: none"> 1. Shri. Ashok Kumar Poddar Noida-201301(U.P), Email:- ashokpoddar62@gmail.com 2. Shri G Venugopal Reddy Hyderabad-500084, Email:-venu1960@gmail.com <p>(c) the Integrity Pact is deemed as part of the contract in order to ensure that the parties are bound by the recommendation of the IEMs, in case any complaint relating to the contract, is found substantiated.</p> <p>(d) Any dispute or claim arising out of/relating to this Contract of the breach, termination or the invalidity thereof, shall be settled by IEMs/ the Hon'ble Courts of Justice at Palakkad.</p> <p>(e) The page number should be marked in all pages serially (including all supporting documents enclosed with the tender document) and the declaration for the same shall be submitted by the bidder as in Annexure-II.</p> <p>(f) IITPKD reserves the right to accept or reject any or all the tenders in part or whole or may cancel the tender at its sole discretion without assigning any reason whatsoever. No further correspondence in this regard will be entertained.</p>

AWARD OF CONTRACT

1	AWARD CRITERIA	<p>1. IITPKD will award the Contract to the Bidder whose bid has been determined to be substantially responsive and as per the Order No. P-45021/2/2017-PP(BE-II) dated 16-09-2020 from Department for Promotion of Industry and Internal Trade (Public Procurement Section), Ministry of Commerce and Industry, Govt. of India.</p> <p>2. The bidder should be a Class-I / Class-II Local Supplier meeting the requirement of minimum 20% Local Content in line with the Public Procurement (Preference to Make in India) Order 2017 No. P-45021/2/2017-PP(BE-II) dated 16-09-2020.</p> <p>3. The Institute reserves the right to buy different items/quantities from different bidders considering price of individual/group of equipment/items or any other factors as decided by the Committee.</p>
2	AWARD OF PURCHASE ORDER	<p>1. Prior to the expiration of the period of bid validity, IITPKD will issue the Letter of Intent / Purchase Order to the successful Bidder in writing.</p> <p>2. Any amendment(s) in the Purchase Order will be permitted within SEVEN DAYS of its issuance. No amendments will be permitted beyond this period.</p> <p>3. The Purchase Order will constitute the foundation of the Contract.</p>
3	CONTRACT AGREEMENT	<p>1. Within SEVEN DAYS of receipt of the Purchase Order, the successful Bidder shall sign and date its copy on each page and return it to the Purchaser.</p> <p>2. Copy of Purchase Order duly signed and dated by the successful Bidder on each page shall constitute the Contract Agreement.</p>
4	CONTRACT DOCUMENTS / AMENDMENT TO CONTRACT	<p>1. All documents forming part of the Contract (and all parts of these documents) are intended to be correlative, complementary and mutually explanatory. The Contract shall be read as a whole.</p> <p>2. The order of precedence of the Contract documents shall be as follows:</p> <ul style="list-style-type: none">(i) Contract Agreement/Purchase Order(ii) All Forms/Annexures(iii) equipment/items and their requirement(iv) Supplier's Bid(v) Tender Document <p>3. No amendment or other variation of the Contract shall be effective unless it is in writing, is dated, expressly refers to the Contract and is signed by a duly authorized representative of each party to the Contract.</p>

REGISTRAR

Name of the Item :	Motion Capture System Equipment and Accessories
Quantity:	1
Warranty Period:	2 years

Technical Specification

A)	HARDWARE – INFRARED 3D CAMERAS – 12 pcs.
1.	Motion capture system should consist of 12 optical infrared (IR) motion capture cameras.
2.	Cameras Sensor and Resolution: CMOS type with resolution of at least 12 megapixels.
3.	Camera capture frame rate: at full resolution and full field of view: 300 fps or more.
4.	Camera frame rate in High-speed mode in full field of view: 1040 fps or more.
5.	Camera Max frame rate in reduced FOV: 10 000 fps or more
6.	All infrared cameras should feature a real-time on-board marker data processing that calculates the center point of markers and outputs 2D coordinates in real time.
7.	The system should support both active and passive markers.
8.	The system allows carrying out outdoor measurements under the direct sunlight.
9.	A dedicated hardware filter should be provided to filter out excess IR from sunlight in outdoor use.
10.	The system should have software active filtering to filter out noise from extra reflections.
11.	Camera should be completely noiseless to avoid any disturbance to the measurement subjects.
12.	All infrared cameras should be equipped with remotely controlled motorized optics for convenience of adjustments during outdoor use to adjust focus, aperture and zoom.
13.	All infrared cameras should have high grade corrosion resistant die-cast aluminum housing with anti-theft lock.
14.	All infrared camera strobes should contain high-powered surface mounted Invisible infrared light (24 NIR high power LEDs @ 850 nm).
15.	All infrared cameras should operate in the 100% invisible infrared wavelength range.
16.	All infrared cameras should operate with the electronic frame shutter.
17.	Each infrared camera should be equipped with a Built-in high contrast OLED display showing number of visible markers in real time and LED indicator ring used for indicating camera status.
18.	All infrared cameras should feature live video streaming mode to facilitate convenient and fast positioning of the cameras during initial setup as well as during further measurement volume adjustments.
19.	The software should have dedicated outdoor real-time data software filtering functionality easily activated by a single click.
20.	Maximum camera latency: 4ms or less.
21.	Individual IR cameras should weigh less than 2kg.

22.	No of the cameras should be expandable to more cameras when needed with no limitation of adding hubs.
23.	The hardware and software should be capable of simultaneously tracking at least 4 to 5 aerial robots simultaneously in 6 DOF and streaming 6 DOF data in real time to 3rd party software.
24.	The minimum detectable displacement of the tracked object at the distance of 10 m should be less than 0.05mm.
B)	HARDWARE – HIGH-SPEED VIDEO CAMERAS – 1 No.
1.	Video cameras should operate as standalone video cameras for as an integral part of the motion capture system for marker-based application.
2.	The video camera system should also be able to be utilize as a marker less system for future by adding more video cameras and Marker less software.
3.	Should be able to expand up to 16 video cameras for marker less application in future.
4.	All integrated high-speed video cameras should have at least 2-megalixel resolution @ more than 80fps and be able to stream video data to the main PC in real time.
5.	3D data/video overlay: high-speed video cameras should allow calibration as a part of the motion capture system, in order to align the 3D data with the video image and thus produce a 3D data overlay on top of the streaming video image.
C)	HARDWARE – CAMERA SYSTEM CONNECTIVITY & CAMERA CABLING
1.	Entire Camera System including high-speed video cameras should be designed in a minimalistic, convenient manner, while ensuring seamless synchronization, supply of power and transfer of data.
2.	Camera system communications with PC should be preferably designed in a daisy chain fashion in order to minimize the length of the cables (Max 10m) and make unnecessary use of bulky external switches or connection hubs.
3.	The data transfer and communication from the 1st 3D tracking device to the host computer should be done through a single Ethernet cable, thus allowing easy and time effective system installation and relocation.
4.	The system should include 1 full sets of cables (1 set for permanent use in the main laboratory (Main Lab),
D)	HARDWARE – DATA PROCESSING AND SYNCHRONIZATION
1.	The same system should be able to integrate with external equipment, such as force plates, EMG, Instrumented Treadmills, eye trackers etc. in future to widen up our research capabilities.
2.	The whole set of 3D, force plate, EMG data and instrumented treadmill data shall be populated on a suitable high-performance computing system (Main Lab desktop PC), Desktop PC should be supplied with the system.
3.	A dedicated Sync device should be provided with camera systems to allow synchronization with external devices such as force plates, EMG systems, analog acquisition boards, time code generators, among others or with any other 3 rd party hardware.
4.	The sync device should have opto-isolated inputs for triggering the start of measurements as well as synchronizing with external inputs in the form of periodic TTL signals, SMPTE signals or video signals.
E)	HARDWARE – CAMERA MOUNTING
1.	Each camera body shall be equipped with a quick release for Manfrotto and Arca Swiss tripod heads and also be compatible to mount on any other standard Ball Head tripod head (12 Nos) for IR camera and (1 Nos) for video cameras.

2.	13 Nos of Supper clamps compatible with three-way tripod heads, screws and mountable to concrete walls (Main Lab)
F)	HARDWARE – ACCESSORIES
1.	The system should include a sufficient number of carry cases for all 12 infrared cameras, cabling and marker accessories for the convenience of the Mobile Lab.
2.	The system should include at least markers of the following sizes: <ul style="list-style-type: none"> ● Passive Marker - Spherical with plastic base Ø12-13 mm, 50 pc ● Passive Marker - Spherical with plastic base Ø8-10 mm, 50 pc ● Passive Marker - Tape for markers, wide 4.6m x 25mm, 50 pc ● Passive Marker - Spherical with plastic base Ø16mm, 50 pc ● 5 nos. Active deck for Crazy flies.
3.	The system should include one Active marker-based Calibration kit, including a Active marker carbon fiber wand, suited with an aluminum carry case and a charger. The active marker L-frame should be equipped with water level, level adjustment screws and extendable force plate alignment plates. The system should also include one passive marker-based calibration kit.
G)	SOFTWARE - 3D DATA ACQUISITION SOFTWARE
1.	Data acquisition software should come with an unlimited number of departmental licenses that can be installed on multiple workstations enabling multiple PC operators to carry out simultaneous data processing or with at least 5 licenses/dongles.
2.	Data acquisition software should provide means for quick and intuitive hardware setup, calibration, even with some obstacles partially obstructing camera view.
3.	Data acquisition software should feature individual camera settings control and calibration of entire system, including the integrated high-speed video cameras.
4.	Data acquisition software should allow 2D, 3D, 6DOF data real-time streaming, capture, and storage.
5.	Data acquisition software should have batch capture function allowing the user to capture a set of measurements in a trouble-free automated way.
6.	Data acquisition software should provide user-friendly and flexible means for both manual and automatic labelling of markers. The automatic labeling should be applicable both in real-time and in post-processing modes.
7.	Markers' automatic labeling template should be flexible and generic enough to identify any thinkable movement of human or animal body.
8.	Markers' automatic labeling template should be able to merge data from multiple subjects to ensure scalability and enable its use for different subjects wearing identical marker setups.
9.	Data acquisition software should allow one-click switching between 2D marker mode and a video mode for each infrared camera in the system.
10.	Data acquisition software should allow simultaneous 3D or 6DOF data visualization both in real-time and post-processing mode.
11.	The Data acquisition software should allow real -time data into MATLAB, LabVIEW applications using plugins. SDK's should be available for other software's like ROS, Python, C# etc.
12.	Data acquisition software should be capable of re-processing, gap-filling, and filtering of the collected data.
13.	Data acquisition software should synchronize with external equipment by means of TTL.
14.	Data acquisition software should display synchronized data from all integrated devices in real time.

System Necessities
<p>1. The system should be supplied with a Desktop Computer (For Fixed Lab) with following or similar or better features: -</p> <ul style="list-style-type: none"> (a) Operating System: Windows 11 Pro 64-bit (b) CPU: Intel Core i9 13900K. (c) RAM: 64GB (d) Hard Drive: SSD 2TB. (e) Secondary HD: 16TB. (f) Graphics Cards: GeForce RTX 3070 8GB or similar. (g) Motherboards: ASUS ProArt Z790-CREATOR WIFI or similar (h) Communication: Network 1 x 10 Gbit 1 x 2,5 Gbit/s Wi-Fi 802.11 a/b/g/n/ac/ax
<p>2. The bidding company (supplier) must bid for ALL THE SYSTEMS mentioned above. It is the sole responsibility of the supplier to get systems from different manufacturers/parties, integrate them and supply the integrated system. The supplier must ensure the compatibility of all the systems and individual components.</p>
<p>3. The equipment should be supplied, installed onsite with all accessories, sufficient consumables asked in the tender with 4 days of installation & training from the Engineer & expert from the manufacturer. Regular follow up training every six months during the period of extended warranty on mutually convenient dates.</p>
<p>4. It will be the sole responsibility of the vendor to prepare a cubical pipe structure to fix the cameras installation of area 11m x 6m x 4m</p>
<p>5. Service backup from the vendor with response time of 48 hours.</p>
<p>6. Hardware warranty of at least 3 years and Software upgrades and support of at least 3 years.</p>
<p>7. The supplier should successfully demonstrate both single and multiple robots in the arena by enabling ROS/python files in the motion capture tracking software.</p>
<p>8. During warranty period the supplier should provide online (if required onsite) technical support from the manufacturer and onsite local technical support from the manufacturer/ vendor.</p>
<p>9. The supplier is responsible for the compatibility of all components in a single system</p>
<p>10. Letter of quality and satisfactory performance to be furnished from other IITs/IISc/NITs (min 3 nos.) in the last 5 years using this system</p>
<p>11. Acceptance and compliance with the above specifications are required from the parent manufacturing company.</p>
<p>12. The System should have international safety standards like European CE/ US FDA</p>
<p>13. Power Supply: Should meet Indian Power standards preferably without the use of external converters</p>

UNDERTAKING BY THE BIDDER
(TO BE SUBMITTED ONLY THROUGH ONLINE MODE IN APPROPRIATE FORMAT)

We hereby accept all the Terms and Conditions of the Tender Document and strictly adhere to the same in the event of getting Purchase order. We also declare that the Technical and Financial Bids submitted by us has NO DEVIATION from the Tender Terms and Conditions.

We hereby accept that the PRICES OF THE EQUIPMENTS/ITEMS QUOTED ARE AS PER THE INCOTERMS 2022 - DDP MODE, IIT PALAKKAD AND CLAUSE NO.6 OF THE TENDER DOCUMENT.

We hereby undertake that there are _____ pages, serially numbered, in the submitted tender including the supporting documents. (Please serially number all the pages including blank page, if any).

We have submitted our principal's exclusive authorization letter which is specific for this tender No. _____ dated _____.

Note: This letter should be on the letterhead of the quoting firm and should be signed by a Competent Authority.

ANNEXURE-III

FALL CLAUSE NOTICE CERTIFICATE
(TO BE SUBMITTED ONLY THROUGH ONLINE MODE IN APPROPRIATE FORMAT)

This is to certify that we have offered the maximum possible discount to you in our Quotation No. _____ dated _____ **(Please do not reveal the prices here, which will lead to outright rejection of your bid).**

The prices charged for the Stores supplied under tender should under no event be higher than the lowest prices at which the party sells the items of identical description to any other Govt. organization/PSU's/Central Govt., /State Govt. Autonomous bodies/Central/state Universities/Central/State Educational Institutions, failing which the "FALL CLAUSE" will be applicable. The institute will look into a reasonable past period to ensure this.

In case, if the price charged by our firm is found to be more, **IIT Palakkad** will have the right to recover the excess charged amount from the subsequent/unpaid bill of the supplier.

Note: This letter of authority should be on the letterhead of the quoting firm and should be signed by a Competent Authority and having the power of attorney.

ANNEXURE-IV

UNDERTAKING REGARDING BLACKLISTING / NON – DEBARMENT

Tender No. _____

To,
M/s. Indian Institute of Technology Palakkad
Ahalia Integrated Campus, Kozhipara,
Palakkad, Kerala 678623

We hereby confirm and declare that we, M/s _____ are not blacklisted/ De-registered / debarred by any Government department/ Public Sector Undertaking/ Private Sector/ or any other agency for which we have Executed/ Undertaken the works/ Services.

For
Company Name and Seal
Authorised Signatory

Note: This letter should be on the letterhead of the quoting firm and should be signed by a Competent Authority.

FORMAT FOR SELF-CERTIFICATION UNDER PREFERENCE TO MAKE IN INDIA
(TO BE SUBMITTED ONLY THROUGH ONLINE MODE IN APPROPRIATE FORMAT)

Format for Affidavit of Self-Certification regarding Minimum Local Content in line with “Make in India” Policy vide GoI Order no. P-45021/2/2017-PP (B.E.-II) dated 15.06.2017 (subsequently revised vide orders dated 28.05.2018, 29.05.2019 and 04.06.2020)

Date: _____

I/We _____ S/o, D/o, W/o, _____
 Resident of _____

Hereby solemnly affirm and declare as under:

That I will agree to abide by the terms and conditions of the Public Procurement (Preference to Make in India) Order, 2017 (hereinafter PPP-MII order) of Government of India issued vide Notification No:P-45021/2/2017 -BE-II dated 15/06/2017, its revision dated 28/05/2018 and any subsequent modifications/Amendments, if any and

That the local content for all inputs which constitute the said goods/services/works has been verified by me and I am responsible for the correctness of the claims made therein.

Tick (✓) and Fill the Appropriate Category	
<input type="checkbox"/>	I/We _____ [name of the manufacturer] hereby confirm in respect of quoted items(s) that Local Content is equal to or more than 50% and come under “ Class-I Local Supplier ” category.
<input type="checkbox"/>	I/We _____ [name of the manufacturer] hereby confirm in respect of quoted items(s) that Local Content is more than 20% but less than 50% and come under “ Class-II Local Supplier ” category.
<input type="checkbox"/>	I/We _____ [name of the manufacturer] hereby confirm in respect of quoted items(s) that Local Content is less than or equal to 20% come under “ Non-Local Supplier ” category.

For and on behalf of..... (Name of firm/entity)

Authorized signatory (To be duly authorized by the Board of Directors)

<Insert Name, Designation and Contact No.>

[Note: In case of procurement for a value in excess of Rs. 10 Crores, the bidders shall provide this certificate from statutory auditor or cost auditor of the company (in the case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content.]

INTEGRITY PACT

(to be submitted by the bidder on Rs. 100/- non-judicial paper)

This INTEGRITY PACT is made and executed at _____ on this day of _____ 202_____

BY AND BETWEEN

Indian Institute of Technology Palakkad (IIT Palakkad), an autonomous organization under Ministry of Education, Govt of India and incorporated under the Indian Institute of Technology Act 1961 having its campus at **Nila Campus, Kanjikode West, Palakkad – 678623, Kerala** (hereinafter referred to as “The Principal” which term or expression shall, unless excluded by or repugnant to the subject or context, mean and include its successor-in-office, administrators or permitted assignees) of the First Part;

AND

M/s. _____ a company incorporated under the Companies Act _____ through its representative/ authorized signatory _____ (Name and Designation of the Officer) vide resolution dated _____ passed by the Board of Director, having its office at _____ (hereinafter referred to as “The Bidder/Contractor” which terms or expression shall, unless excluded by or repugnant to the subject or context, mean and include its successor-in-office, administrators or permitted assignees) of the Second Part.

PREAMBLE

The Principal intends to award, under laid down organizational procedures, contract/s for _____. The Principal values full compliance with all relevant laws of the land, rules, regulations, economic use of and of fairness/transparency in its relations with its Bidder(s) and/or Contractor(s).

In order to achieve these goals, the Principal will appoint an Independent External Monitor (IEM), who will monitor the tender process and the execution of the contract for compliance with the principles mentioned above.

Section 1 – Commitments of the Principal.

1. The principal commits itself to take all measures necessary to prevent corruption and to observe the following principles: -

- a) No employee of the principal, personally or through family members, will in connection with the tender for, or the execution of a contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the personal is not legally entitled.
 - b) The principal will during the tender process treat all Bidder(s) with equity and reason. The principal will in particular, before and during the tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential/additional information through which the Bidder(s) could obtain an advantage in relation to the process or the contract execution.
 - c) The principal will exclude from the process all known prejudiced persons.
2. If the Principal obtains information on the conduct of any of its employees which is a criminal offence under the IPC/PC Act, or if there be a substantive suspicion in this regard, the Principal will inform the Chief Vigilance Officer and in addition can initiate disciplinary actions.

Section 2 – Commitments of the Bidder(s)/Contractor(s)

1. The Bidder(s)/Contractor(s) commit himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the tender process and during the contract execution.
 - a. The Bidder(s)/contractor(s) will not, directly or through any other persons or firm, offer promise or give to any of the Principal's employees involved in the tender process or the execution of the contract or to any third person any material or other benefit which he/she is not legally entitled to, in order to obtain in exchange any advantage or during the execution of the contract.
 - b. The Bidder(s)/Contractor(s) will not enter with other Bidders into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.
 - c. The Bidder(s)/Contractor(s) will not commit any offence under the relevant IPC/PC Act; further the Bidder(s)/Contractors will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or documents provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
 - d. The Bidder(s)/Contractor(s) of foreign origin shall disclose the name and address of the Agents/representatives in India, if any. Similarly, the bidder(s)/contractor(s) of Indian Nationality shall furnish the name and address of the foreign principals, if any.

All the payments made to the India agent/representative have to be in Indian Rupees only.

- e. The Bidder(s)/Contractor(s) will, when presenting his bid, disclose any and all payments he has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.
 - f. The Bidder(s)/Contractor (s) who have signed the Integrity Pact shall not approach the courts while representing the matter to IEMs and shall wait for their decision on the matter.
2. The Bidder(s)/Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.

Section 3: Disqualification from tender process and exclusion from future contract

If the Bidder(s)/Contractor(s), before award or during execution has committed a transgression through a violation of Section 2 above or in any other form such as to put his reliability or credibility in question, the Principal is entitled to disqualify the Bidder(s)/Contractor(s) from the tender process or to terminate the contract, if already signed, for such reasons.

Section 4 : Compensation for Damages

1. If the Principal has disqualified the Bidder(s) from the tender process prior to the award according to Section 3, the Principal is entitled to demand and recover the damages equivalent to Earnest Money Deposit/Bid Security.
2. If the Principal has terminated the contract according to Section3, or if the Principal is entitled to terminate the contract according to Section3, The Principal shall be entitled to demand and recover from the Contractor liquidated damages of the Contract value or the amount equivalent to Performance Bank Guarantee.

Section 5 : Previous Transgression

1. The Bidder declares that no previous transgressions occurred in the last three years with any other company in any country conforming to the TII's anti-corruption approach or with any other public sector enterprise in India that could justify his exclusion from the tender process.
2. If the bidder makes incorrect statement on this subject, he can be disqualified from the tender process and appropriate action can be taken including termination of the contract, if already awarded, for such reason.

Section 6: Equal treatment of all Bidders / Contractors / Subcontractors.

1. In case of sub –contracting, the Principal Contractor shall take the responsibility of adoption of Integrity Pact by the Sub – Contractor.

2. The Principal will enter into agreements with the identical conditions as this one with all bidders and Contractors.
3. The Principal will disqualify from the tender process all bidders who do not sign this Pact or violate its provisions.

Section 7: Criminal charges against violation Bidder(s) / Contractor(s) / Sub-contractors(s).

If the Principal obtains knowledge of conduct of a Bidder(s)/ Contractor(s) which constitutes corruption, or if the Principal has substantive suspicion in this regard, the Principal will inform the same to the Chief Vigilance Officer.

Section 8 : Independent External Monitor/Monitors

1. The Principal appoints competent and credible Independent External Monitor for this Pact after approval of Central Vigilance Commission. The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.
2. The Monitor is not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. The Monitor will have access to all contract documents, whenever required. It will be obligatory for him to treat the information and documents of bidders /contractors as confidential. He reports to the Director, IIT Palakkad.
3. The Bidder(s)/Contractor(s) accepts that the Monitor has the right to access without restriction to all project documentation of the Principal including that provided by the Contractor. The Contractor will also grant the Monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his project documentation. The same is applicable to Subcontractors.
4. The Monitor is under contractual obligation to treat the information and documents of the Bidder(s)/Contractor(s)/Subcontractor(s) with confidentiality. The Monitor has also signed declarations on “Non – Disclosure of Confidential Information” and of “Absence of Conflict of Interest” In case of any conflict of interest arising at a later date, the IEM shall inform the Director, IIT Palakkad.
5. The Principal will provide to the Monitor sufficient information about all meetings among the parties related to the Project provided such meetings could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the Monitor the option to participate in such meetings.

6. As soon as the Monitor notices, or believes to notice, a violation of this agreement, he will so inform the Management of the Principal and request the Management to discontinue or take corrective action, or to take other relevant action. The monitor can in this regard submit non-binding recommendations. Beyond this, the Monitor has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action.
7. The Monitor will submit a written report to the Director, IIT Palakkad within 8 to 10 weeks from the date of reference or intimation to him by the Principal and, should the occasion arise, submit proposals for correcting problematic situations.
8. If the Monitor has reported to the Director, IIT Palakkad, a substantiated suspicion of an offence under relevant IPC/PC Act, and the Director, IIT Palakkad has not, within the reasonable time taken visible action to proceed against such offence or reported it to the Chief Vigilance Officer, the Monitor may also transmit this information directly to the Central Vigilance Commissioner.
9. The word “Monitor” word include both singular and plural.

Section 9 : Pact Duration

This pact begins when both parties have legally signed it. It expires for the Contractor 12 months after the last payment under the contract, and for all other Bidder 6 months after the contract has been awarded.

If any claim is made/lodged during this time, the same shall be binding and continue to be valid despite the lapse of this pact as specified above, unless it is discharged/determined by the Director, IIT Palakkad.

Section 10 : Other Provisions

- This agreement is subject to Indian Law. Place of performance and jurisdiction is the registered office of the Principal i.e. **Palakkad, Kerala**.
- Changes and supplements as well as termination notices need to be made in writing. Side agreements have not been made.
- If the contractor is a partnership or a consortium, this agreement must be signed by all partners or consortium members.
- Should one or several provisions of this agreement turn out to be invalid, the remainder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.
- Issues like Warranty/Guarantee etc. shall be outside the purview of the IEMs.

- In the event of any contradiction between the Integrity Pact and its Annexure, the clause in the Integrity Pact will prevail.

(For & on behalf of the Principal)

(For & on behalf of Bidder/Contractor)

(Office Seal)

(Office Seal)

Place : _____

Date : _____

Witness 1 (Name & Address):

Witness 1 (Name & Address):

Witness 2 (Name & Address):

Witness 2 (Name & Address):

