

**GOVERNMENT OF INDIA  
DEPARTMENT OF SPACE  
VIKRAM SARABHAI SPACE CENTRE (VSSC)  
THIRUVANANTHAPURAM**

**Tender for High speed camera kit with accessories**

**Bids to be submitted online**

**Tender No.: VSSC/PURCHASE UNIT-IV (MVIT)/VS202100317201 dated 08-09-2021**

## **A. Tender Details**

Tender No : **VSSC/PURCHASE UNIT-IV (MVIT)/VS202100317201**

Tender Date : **08-09-2021**

Tender Classification: **GOODS**

Purchase Entity : **PURCHASE UNIT-IV (MVIT)**

Centre : **VIKRAM SARABHAI SPACE CENTRE (VSSC)**

### **Procurement of High speed camera kit with accessories**

Terms and conditions as per Annexure attached.

#### **A.1 Tender Schedule**

Bid Submission Start Date : **08-09-2021 11:00**

Bid Clarification Due Date : **14-09-2021 11:00**

Bid Submission Due Date : **07-10-2021 11:12**

Bid Opening Date : **08-10-2021 11:13**

Price Bid Opening Date : **15-10-2021 11:13**

## **B. Tender Attachments**

NA

### **Instructions To Vendors**

#### **1. PROFORMA FOR INSTRUCTIONS TO TENDERERS AND TERMS & CONDITIONS OF TENDER where the indent value is Rs. 2.00 lakhs & above for indigenous stores items**

1. Preference will be given to those tenders offering supplies from ready stocks and on the basis of FOR destination/delivery at site.

#### **2. REJECTED STORES:**

Rejected stores will remain at destination at the Contractor's risk and responsibility. If instructions for their disposal are not received from the Contractor within a period of 14 days from the date of receipt of the advice of rejection, the purchaser or his representative has, at his discretion, the right to scrap or sell or consign the rejected stores to Contractor's address at the Contractor's entire risk and expense, freight being payable by the Contractor at actuals.

3. The term 'Stores' shall mean what the Contractor agrees to supply under the Contract as specified in the Purchase Order including erection of plants & machinery and subsequent testing, should such a condition is included in the Purchase Order.

4. SECURITY DEPOSIT: Wherever, the Purchase Order value is Rs. 5.00 Lakhs or more, on acceptance of the tender, the Contractor shall, at the option of the Purchaser and within the period specified by him, deposit with him, in cash or in any other form as the Purchaser may determine, security deposit not exceeding ten percent of the value of the Contract as the Purchaser shall specify. If the Contractor is called upon by the Purchaser to deposit, 'Security' and the Contractor fails to provide the security within the period specified, such failure shall constitute a breach of the Contract, and the Purchaser shall be entitled to make other arrangements for the re-purchase of the stores Contracted at the risk of the Contractor in terms of Sub-Clause (ii) and (iii) of clause regarding Delivery. (b) hereof and/or to recover from the Contractor, damages arising from such cancellation.

5. Sales Tax and/or other duties/levies legally leviable and intended to be claimed should be mentioned in the price bid template. If nothing is mentioned, then it will be presumed that the rate quoted is inclusive of all taxes/duties.

#### **6. TERMS & CONDITIONS OF TENDER**

7. TEST CERTIFICATE: Wherever required, test certificates should be sent along with the despatch

documents.

8. The Purchaser reserves the right to place order on the successful tenderer for additional quantity up to 25% of the quantity offered by them at the rates quoted.

9. The authority of the person signing the tender, if called for, should be produced.

10. The purchaser shall be under no obligation to accept the lowest or any tender and reserves the right of acceptance of the whole or any part of the tender or portions of the quantity offered and the tenderers shall supply the same at the rates quoted.

11. (a) All available technical literature, catalogues and other data in support of the specifications and details of the items should be furnished along with the offer.

(b) Samples, if called for, should be submitted free of all charges by the tenderer and the Purchaser shall not be responsible for any loss or damage thereof due to any reason whatsoever. In the event of nonacceptance of tender, the tenderer will have to remove the samples at his own expense. <br>

(c) Approximate net and gross weight of the items offered shall be indicated in your offer. If dimensional details are available the same should also be indicated in your offer. <br>(d)

Specifications: Stores offered should strictly confirm to our specifications. Deviations, if any, should be clearly indicated by the tenderer in his quotation. The tenderer should also indicate the Make/Type number of the stores offered and provide catalogues, technical literature and samples, wherever necessary, along with the quotations. Test Certificates, wherever necessary, should be forwarded along with supplies. Wherever options have been called for in our specifications, the tenderer should address all such options. Wherever specifically mentioned by us, the tenderer could suggest changes to specifications with appropriate response for the same.

12. The tenderer should supply along with his tender, the name of his bankers as well as the latest Income-Tax clearance certificate duly countersigned by the Income-Tax Officer of the Circle concerned under the seal of his office, if required by the Purchaser.

13. The term Contractor shall mean, the person, firm or company with whom or with which the order for the supply of Stores is placed and shall be deemed to include the Contractor's successors, representative, heirs, executors and administrators unless excluded by the Contract.

14. The term Purchaser shall mean the President of India or his successors or assigns.

15. (a) All available technical literature, catalogues and other data in support of the specifications and details of the items should be furnished along with the offer. <br>

(b) Samples, if called for, should be submitted free of all charges by the tenderer and the Purchaser shall not be responsible for any loss or damage thereof due to any reason whatsoever. In the event of nonacceptance of tender, the tenderer will have to remove the samples at his own expense.

(c) Approximate net and gross weight of the items offered shall be indicated in your offer. If dimensional details are available the same should also be indicated in your offer.

(d) Specifications: Stores offered should strictly confirm to our specifications. Deviations, if any, should be clearly indicated by the tenderer in his quotation. The tenderer should also indicate the Make/Type number of the stores offered and provide catalogues, technical literature and samples, wherever necessary, along with the quotations. Test Certificates, wherever necessary, should be forwarded along with supplies. Wherever options have been called for in our specifications, the tenderer should address all such options. Wherever specifically mentioned by us, the tenderer could suggest changes to specifications with appropriate response for the same.

#### 16. ACCEPTANCE OF STORES:

(a) The stores shall be tendered by the Contractor for inspection at such places as may be specified by the purchaser at the Contractor's own risk, expense and cost.

(b) It is expressly agreed that the acceptance of the stores Contracted for, is subject to final approval by the purchaser, whose decision shall be final.

(c) If, in the opinion of the purchaser, all or any of the stores do not meet the performance or quality requirements specified in the Purchase Order, they may be either rejected or accepted at a price to be fixed by the purchaser and his decision as to rejection and the prices to be fixed shall be final and binding on the Contractor.

(d) If the whole or any part of the stores supplied are rejected in accordance with Clause No. (c) above, the purchaser shall be at liberty, with or without notice to the Contractor, to purchase in the open market at the expense of the Contractor stores meeting the necessary performance and quality Contracted for in place of those rejected, provided that either the purchase, or the agreement to purchase, from another supplier is made within six months from the date of rejection of the stores as aforesaid.

17. As a Government of India Department, this office is exempted from payment of Octroi and similar local levies. Tenderers shall ensure that necessary Exemption Certificates are obtained by them from the Purchase Officer concerned to avoid any payment of such levies.

18. DESPATCH: The Contractor is responsible for obtaining a clear receipt from the Transport Authorities specifying the goods despatched. The consignment should be despatched with clear Railway Receipt/Lorry Receipt. If sent in any other mode, it shall be at the risk of the Contractor. Purchaser will take no responsibility for short deliveries or wrong supply of goods when the same are booked on 'said to contain' basis. Purchaser shall pay for only such stores as are actually received by them in accordance with the Contract.

#### 19. GUARANTEE & REPLACEMENT:

(a) The Contractor shall guarantee that the stores supplied shall comply fully with the specifications laid down, for material, workmanship and performance.

(b) For a period of twelve months after the acceptance of the stores, if any defects are discovered

therein or any defects therein found to have developed under proper use, arising from faulty stores design or workmanship, the Contractor shall remedy such defects at his own cost provided he is called upon to do so within a period of 14 months from the date of acceptance thereof by the purchaser who shall state in writing in what respect the stores or any part thereof are faulty.

(c) If, in the opinion of the purchaser, it becomes necessary to replace or renew any defective stores such replacement or renewal shall be made by the Contractor free of all costs to the purchaser, provided the notice informing the Contractor of the defect is given by the purchaser in this regard within the said period of 14 months from the date of acceptance thereof.

(d) Should the Contractor fail to rectify the defects, the purchaser shall have the right to reject or repair or replace at the cost of the Contractor the whole or any portion of the defective stores.

(e) The decision of the Purchaser notwithstanding any prior approval or acceptance or inspection thereof on behalf of the Purchaser, as to whether or not the Stores supplied by the Contractor are defective or any defect has developed within the said period of 12 months or any other period or as to whether the nature of defects requires renewal or replacement, shall be final, conclusive and binding on the Contractor.

(f) To fulfill guarantee conditions outlined in (a) to (e) above, the Contractor shall, at the option of the Purchaser, furnish a Bank Guarantee (as prescribed by the Purchaser)

**20. PACKING FORWARDING & INSURANCE:** The Contractor will be held responsible for the stores being sufficiently and properly packed for transport by rail, road, sea or air to withstand transit hazards and ensure safe arrival at the destination. The packing and marking of packages shall be done by and at the expense of the Contractor. The purchaser will not pay separately for transit insurance, all risks in transit being exclusively of the Contractor and the Purchaser shall pay only for such stores as are actually received in good condition in accordance with the Contract.

**21. PRICES:** Tender offering firm prices will be preferred. Where a price variation clause is insisted upon by a tenderer, quotation with a reasonable ceiling should be submitted. Such offers should invariably be supported by the base price taken into account at the time of tendering and also the formula for any such variation/s.

22. a) Your offer should be valid for 90 days from the date of opening of the tender.

b) Prices are required to be quoted according to the units indicated in the annexed tender form. When quotations are given in terms of units other than those specified in the tender form, relationship between the two sets of units must be furnished.

23. d) The term 'Purchase Order' shall mean the communication signed on behalf of the Purchaser by an Officer duly authorised intimating the acceptance on behalf of the Purchaser on the terms and conditions mentioned or referred to in the said communication accepting the tender or offer of the Contractor for supply of stores or plant, machinery or equipment or part thereof.

2. Terms and conditions as per Annexure attached.

EMD @ 2 to 5 percent applicable for un-registered vendors.

Offers submitted without accepting our Tender conditions especially LD PBG Warranty and SD clauses shall be summarily rejected. GST as applicable will be paid extra. All Tax invoices shall invariably bear their GST Registration No and the applicable GST rates, in the absence of which the invoices shall not be processed for payment. Since Vikram Sarabhai Space Center, Department of Space being a public funded Research Institution we are eligible for concessional rate of 5 percent IGST as per Government of India, Ministry of Finance Notification No.47.2017 dated.14.11.2017. Necessary Certificate will be issued by us.

For registering into PFMS you may please mention your Bank details such as IFSC code Account number also submit a copy of personalized cheque leaf or NEFT mandate form duly endorsed by the Bank along with quotation. If you had already submitted these details no need to submit again but please inform the same.

Please furnish the following

- a. Copy of valid manufacturing license of the agency certificate
- b. copy of latest filed tax returns
- c. Details of registration number, PAN Card, GST, TIN, NSIC, MSME registration etc.
- d. The addresses registered site works, workshop, etc.
- e. Sub contracting details with address if permissible.

3. Special Terms and condition: -

- 1) Foreign vendors are not allowed to quote against this Tender.
- 2) Only Class I and Class II Local suppliers as per Make in India Policy are eligible to participate in the bid subject to production of an undertaking regarding the following: -
  - A) The percentage of local content should be specifically mentioned in the offer, without which it shall be summarily rejected.
  - B) Preference will be given to Class I Local supplier and in their absence, Class II Local Supplier will be considered.

4. This is a TWO- PART tender. Techno- Commercial bid (Technical bid in e- procurement) and Price bid (Commercial bid in e procurement) shall be submitted separately. Techno- commercial (Technical bid) part with any price indication will be summarily rejected.

## C. Bid Templates

### C.1 Technical Bid - High speed camera kit with accessories

#### 1. High Speed Camera kit with accessories

##### Item specifications for High Speed Camera

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Type of camera	CMOS monochrome CAMERA	Yes / No / Explain		
2	Light Sensitivity	ISO 10000 monochrome or higher	Yes / No / Explain		
3	Minimum Shutter speed	5 $\mu$ s or better	Yes / No / Explain		
4	Maximum frame rate ( at full sensor resolution)	4000 fps at 1Mega Pixel resolution or better	Yes / No / Explain		
5	Maximum frame Rate (reduced image resolution)	600000 fps or better	Yes / No / Explain		
6	Dynamic range of ADC	monochrome: 12 bit or better	Yes / No / Explain		
7	Recording Memory capacity	32 GB or better	Yes / No / Explain		
8	Trigger	Selectable, TTL/VOLTAGE/SWITCH	Yes / No / Explain		
9	Trigger modes	Start, End, Centre, Manual, Random	Yes / No / Explain		
10	Input/ Output	Input: Trigger(TTL/Switch), Sync,Ready,Event,I RIG ; Output: Trigger,Sync,Ready, Rec,Exposure	Yes / No / Explain		
11	Camera control interface	High speed Gigabit Ethernet	Yes / No / Explain		
12	Saved Image Formats	BMP, TIFF, JPEG, PNG, RAW, RAWW, MRAW, AVI, WMV, FTIF, MOV.	Yes / No / Explain		



13	Image Data Display	Frame rate, Shutter speed, Trigger Mode, Date/Time, Status, Real time / IRIG Time, Frame, count, Resolution	Yes / No / Explain		
14	Weight	Should be compact and not more than 2 Kg	Yes / No / Explain		
15	Power	230/50 Hz AC supply with DC adapter in	Yes / No / Explain		
16	Operational Shock	50G, 10ms, 6axis or better	Yes / No / Explain		
17	Power requirements- AC	230 v Ac 50 Hz (Indian standard) with required adaptors	Yes / No / Explain		
18	DC operation	24-32 VDC with the 10m cable from camera	Yes / No / Explain		
19	Region of interest selection	Feature should be available	Yes / No / Explain		
20	Wide angle zoom lens	Focal length should be 28-75mm or superior F-stop of T-stop should be 2.8 or less Focusing ring and aperture ring should be on lens barrel. Or in other words the lens should be having provision to control the lens parameters (focus & aperture) manually. Lens with provision to control parameter both manually and remotely will be preferable. There should not be vignetting Kit lens will not be accepted due to its low resolving power and inferior image reproduction	Yes / No / Explain		

21	Tele photo zoom lens	<p>Focal length should be 100-400mm or superior  F-stop of T-stop should be 4.5 or less  Focusing ring and aperture ring should be on lens barrel. Or in other words the lens should be having provision to control the lens parameters (focus &amp; aperture) manually. Lens with provision to control parameter both manually and remotely will be preferable.  There should not be vignetting  Kit lens will not be accepted due to its low resolving power and inferior image reproduction</p>	Yes / No / Explain		
22	50mm lens	<p>Focal length should be 50mm  F-stop of T-stop should be 1.4 or less  Focusing ring and aperture ring should be on lens barrel. Or in other words the lens should be having provision to control the lens parameters (focus &amp; aperture) manually. Lens with provision to control parameter both manually and remotely will be preferable.  There should not be vignetting  Kit lens will not be accepted due to its low resolving power and inferior image reproduction</p>	Yes / No / Explain		

23	135mm Macro lens	<p>Focal length should be 135mm(if 135mm is not available something close to 135mm is acceptable)  F-stop of T-stop should be 2.8 or less  Focusing ring and aperture ring should be on lens barrel. Or in other words the lens should be having provision to control the lens parameters (focus &amp; aperture) manually. Lens with provision to control parameter both manually and remotely will be preferable.  There should not be vignetting  Kit lens will not be accepted due to its low resolving power and inferior image reproduction</p>	Yes / No / Explain		
24	Tripod system with Head	<p>Tripod should have 3 way geared head  It should be capable of carrying a minimum of 15kg payload or higher  2 step/stage height extender or better  It should have a carrying cover</p>	Yes / No / Explain		
25	LED lamp	<p>Flicker free operation is mandatory  12000lumen output or better  Light head with stand, cable and all accessories to control the light</p>	Yes / No / Explain		

26	Battery with charger and mounting plate	<p>Battery with charger and suitable mounting plate for High speed imaging system</p> <p>The battery for DC operation of High speed imaging system in remote location where AC source is not there</p> <p>Li-Ion battery 26V 150W/h or better</p> <p>Provision to check the remaining charge status in battery</p>	Yes / No / Explain		
27	Motion analysis software	<p>Single user perpetual licence</p> <p>measurement of Velocity, Displacement, Acceleration in 2D plane</p> <p>provision of tracking minimum of 5 points synchronised</p> <p>playback of high speed image data</p> <p>provision for saving the analysed data in CSV format should be there</p>	Yes / No / Explain		
28	Camera and accessory carry case	<p>Roller type, watertight, hardtop camera and accessory carry case</p> <p>Customized foam insertion to house camera, accessories and 4 lenses</p>	Yes / No / Explain		
29	Camera controller	<p>Corei7 processor 6th generation or better, 16gb DDR4 RAM or better, 4GD NVIDIA graphics card or better, 500gb SSD or better</p> <p>The high speed imaging system is controlled by software.</p> <p>The laptop should meet all the software requirement</p> <p>Laptop should meet motion analysis software requirement too.</p>	Yes / No / Explain		

30	Compatible Ethernet cable	30meter length- 2nos 50meter length – 2nos	Yes / No / Explain		
----	---------------------------	---	--------------------	--	--

**Document : TERMS AND CONDITIONS**

**Document : Item specifications**

**Supporting Documents required from Vendor**

- 1. Compliance matrix (Annexure A-3)**
- 2. Agreement with product vendors on Back to Back support (Annexure A-2)**
- 3. CERTIFICATE OF UNDERTAKING FROM ORIGINAL EQUIPMENT MANUFACTURES (Annexure A-1)**
- 4. Data sheets of the camera and all accessories**

5 additional documents can be uploaded by the vendor

## C.2 Commercial Terms / Bid

Sl. No.	Description	Compliance	Vendor Terms
1	Vendor must satisfy all the conditions in Annexure2_ commercial terms n conditions.	Yes / No / Explain	
2	Delivery Period	Yes / No / Explain	
3	Liquidated Damages(L/D clause 0.5% subject to maximum 10% of the order value is applicable beyond the promised delivery schedule. )	Yes / No / Explain	
4	Delivery Term (FOR, VSSC):	Yes / No / Explain	
5	Security Deposit: In the event of placement of order, you should submit Security Deposit at 10% of the order value of the P.O. The Security Deposit shall valid for a period of 60 days beyond the date of completion and acceptance of P.O/Contract. The Security Deposit will be discharged without any interest after completion and acceptance of the Contractual obligations.	Yes / No / Explain	
6	Performance Bank Guarantee	Yes / No / Explain	
7	Quote Validity: Minimum 90 days	Yes / No / Explain	
8	Taxes and other costs, if any	Yes / No / Explain	
9	Any other terms	Yes / No / Explain	
10	Payment term	Yes / No / Explain	
11	Warranty period	Yes / No / Explain	

## C.3 Price Bid

Sl. No.	Item	Quantity	Unit Price	Currency	Total Price	Remark
1	High Speed Camera kit with accessories	1.00 Kit		-		

**Common charges (Applicable for all items)**

<b>Freight charge</b>	
<b>P&amp;F Charges</b>	