



# SURVEY OF PAKISTAN Rawalpindi

## INVITATION TO BID

Survey of Pakistan, a National Surveying & Mapping Agency invites sealed bids under the Project titled “Cadastral Mapping” under **Single Stage-Two Envelop procedure** from the Original manufacturers / authorized distributors / suppliers / contractors etc., registered with Income Tax & Sales Tax Departments for supply of following items:

Sr. #	Equipment	Qty	Closing Date
1.	Digital Tablets	30	<b>22-02-2021</b>
2.	Photogrammetric Work Station	5	
3.	Computers	70	
4.	Laptop	10	

2). Bidding documents, containing detailed terms and conditions, technical specifications, method of procurement, procedure for submission of bids, bid security, bid validity, opening of bid, evaluation criteria, performance guarantee etc., are available for the interested bidders at website of Public Procurement Regulatory Authority, which can be downloaded.

3). The bids, prepared in accordance with the instructions in the bidding documents, must reach at Survey of Pakistan, Faizabad, Rawalpindi duly addressed to the Chairman Purchase Committee on or before **22-02-2021 at 12:00 hrs.** Bids will be opened on the same day at **12:30 hrs.** This advertisement/Bidding Document available on PPRA’s website at [www.ppra.org.pk](http://www.ppra.org.pk) and Survey of Pakistan website [www.sop.gov.pk](http://www.sop.gov.pk).

(Muhammad Tanvir)  
Director  
Directorate of Photogrammetry  
Chairman Purchase Committee  
051-9290217

## TERMS & CONDITIONS

1. Applications on prescribed form (attached) along with technical specifications (compliance sheet) and contract, which can be downloaded from the website of PPRA, should reach the Chairman Purchase Committee, Director of Photogrammetry, Survey of Pakistan, Faizabad, Rawalpindi by registered post/courier latest by 10:30 hours on 20-01-2021. These will be opened at 11:00 hours on the same day in the presence of bidders or their authorized representatives.
2. The method of procurement is **single stage – two envelopes** as per PPRA's Rule-36(b).
3. The Bidders will send their Proposals in two sealed envelopes, marked as "FINANCIAL PROPOSAL" & "TECHNICAL PROPOSAL" in bold and legible letters to avoid confusion. Initially, only envelopes marked as **Technical Proposal** shall be opened and envelopes marked as Financial Proposal shall be retained in the custody of Chairman Purchase Committee. After the **evaluation & recommendations by the concerned Technical Evaluation Committee**, Financial Proposals of only technically qualified bids will be opened. The Financial Proposals of bids found technically non-responsive shall be returned un-opened to the respective bidders.
4. 2% earnest money in shape of pay order/bank draft in the name of Chairman Purchase Committee, Director of Photogrammetry, Survey of Pakistan, Faizabad, Rawalpindi should be enclosed in the envelope containing Financial Bid. However, the certificate for attachment be indicated in technical bid, otherwise, the same will be rejected at the opening stage of technical bids.
5. Bidder will provide compliance sheet of each item of the equipment against specifications. Bidder response should be explicit for each component. Any ambiguous and implicit words in quotations (such as yes, ok, offered, available, provided, etc. ) will be treated as 'non-responsive'.
6. Bidder shall not submit any document after due date except in response to any clarification sought by Project Director and in response to clarifications no change shall be made.
7. The firm/supplier interested in more than one item may furnish separate tender for each item.
8. Procuring agency may reject any or all bids subject to the relevant provisions of PPRA Rules-33.
9. **Quantity of items can be increased or decreased.**
10. Only registered suppliers who are on Active Tax Payers List (ATL) of FBR are eligible to supply goods. The supplier should attach a proof that he is on ATL of FBR Data Base.

11. In Financial Proposal, the prices should be inclusive of all leviable taxes. The bidders should also provide the detail price analysis of the items/accessories in their Financial Proposal alongwith net quoted unit rate with GST and without GST showing complete pen picture of their quoted prices. Prices should be mentioned both in words & figures. In case of difference the amount given in words will be accepted.
12. Bids will be valid for 120 days from the date of opening of bid.
13. Display of the items/equipment & Software must be in English Version.
14. The bidders have to give demo of their offered model during Technical Evaluation.
15. Successful bidder(s) will be required to execute agreement governing the terms & conditions of the contract.
16. The successful bidder shall be liable to give full/justifiable training of their approved model.
17. **Liquidation Damages:** The firm has to pay liquidation damages for the period of delays in supply of deliverables upto rate of 2% of the contract price per month or part of a month exceeding the original delivery period subject to the provision that total liquidation damages thus levied will not exceed 10% of the total contract price.
18. **Performance Guarantee:** The bidder shall provide to Survey of Pakistan (SoP), a Performance Guarantee issued by A-Plus Pakistani Scheduled Bank, having a value of 10% of the contract price and which is valid for 12 months beyond the expected date of delivery of the items/equipments. SoP shall confirm the authenticity / genuineness of the Bank Guarantee from the concerned Bank. Performance Guarantee shall be submitted just after successful submission of deliverables and after obtaining Acceptance letter from SoP. 10% performance guarantee will remain held with SoP and be released on expiry of Support Period.
  - a. Bank Guarantee furnished against this contract is un-conditional and en-cashable at the will of the firm. Firm will undertake not to hinder/restrain its encashment through court, extra judicial or any other way( including administrative process)
  - b. If the firm fails to produce the Bank Guarantee within specifies period, SoP reserves the right of cancelling the contract at the risk and expense of the firm. In the event of un-satisfactory performance or of any breach of terms of the contract, the bank guarantee shall be forfeited to the govt at the discretion of the firm.
19. **Confidentiality:** The firm shall not, during the process of execution or after expiration of this contract, disclose any proprietary or data without the prior written consent of SoP.
20. **Force Majeure:** Both the parties shall not be held responsible for any delay occurring in the Project due to event of Force Majeure such as acts of God, War, Civil commotion, Strike, Lockouts, Act of Foreign Govt and its agencies and disturbance directly affecting the parties over the events or circumstances

where both the parties have no control. In such an event both parties will inform each other within 15 days of the happening and within the same timeframe about the discontinuation of such circumstances / happening in writing.

21. The bidder shall be responsible for provision of all accessories to make the items operational.
22. Every page of the original proposal documents should be signed and stamped by the bidder and proposal to be submitted in binded form otherwise bid will not be accepted.
23. Any firm, which furnishes wrong information, will be liable for legal proceeding. Any contract awarded in such case when find out, will be cancelled.
24. The bidder/lead should not be blacklisted by any of its clients. An affidavit to this affect must be submitted by the bidder.
25. The bidder/lead should not be blacklisted by any of its clients. An affidavit to this affect must be submitted by the bidder
26. **Litigation:** In case any dispute, only court of law at Rawalpindi have jurisdiction to decide the matter.
27. For more information, please contact Mr. Muhammad Asghar, at telephone No. 051-9290227.

### **EVALUATION CRITERIA**

1. **Technical Evaluation:** Technical Evaluation Reports of the Technical Proposals will be made as per tender specifications without the reference to the price as per PPRA Rule 36 (b)(v). The Technical proposal evaluation committee will evaluate the technical proposals and qualifications.
  - i. Evaluation Criteria for Technical Evaluation of Equipment's (Digital Tablets, Photogrammetric Workstations, Computers and Laptop).
    - 100% Compliance of each sub-item of Tender Specifications as mentioned in Form-A will be required.
    - If the firm qualifies 100% compliance on the basis of Form-A (attached with tender document), the firm has to demonstrate the performance to evaluate OEM/ Authorized Agent Experience of the firm, Availability of after sale services/workshop and Brand performance.
    - On the basis of form-B (attached), the bidder obtaining 70 or more marks will be technically qualified.
  - ii. ***Performa A & B for technical evaluation of each item are attached.***

## 2. Evaluation of Financial Proposals / Bids

- a. Only the Financial Proposals of those bidders will be opened publicly who's Technical Proposals and qualifications have been recommended by the Technical Evaluation Committee of the department as per PPRA Rule. For financial evaluation, the total cost indicated in the Financial Proposal will be considered.
- b. The Purchase Committee will determine whether the Financial Proposals are complete. The cost indicated in the Financial Proposal shall be deemed as final and reflecting the total cost of the equipment. Omissions, if any, in costing any item shall not entitle the firm to be compensated and the liability to fulfill its obligations within the total quoted price shall be that of the Vendor. The lowest Financial Proposal will be considered as the most advantageous bid.
- c. According to PPRA Rule 38-A, the bidder may offer un-conditional discount, in percentage of their quoted price or bids, before opening of the financial proposal. The discount bid price shall be considered as original bid for evaluation being an integral part of the bid. No offer of discount shall be considered after the bids are opened. The bidder will offer discount in term of percentage of financial bid in writing on Firm letterhead. **The bidder may not forget to bring Firm letterhead on the day and time of opening of Financial Bid.**
- d.

### **RESPONSIBILITY AGAINST DAMAGES/OWNERSHIP OF EQUIPMENT**

The bidder shall be responsible for whole/any damage caused to the item(s)/equipment by accident / improper handling / loading, un-loading, before handed over to / taking charge by SoP. The bidder shall replace the same.

### **PAYMENT:**

- i. Payment shall not be made in advance and against partial deliveries.
- ii. The bidder shall provide necessary and supporting documents alongwith invoice.
- iii. The bidder shall submit an application for payment to the Project Director Survey of Pakistan Rawalpindi. The application shall be accompanied by such invoices, receipt or other documentary evidences as SoP require, state the amount claimed and particulars of items supplied/equipment up to the date of application for payment.
- iv. SoP shall get verified the details of items delivered. Payment shall be made on complete delivery of items/services after issuance of satisfactory certificate by concerned technical committee/Project Director.
- v. SoP shall make payment for items supplied/services provided to the bidder as per Govt. policy in Pak Rupees through crossed Cheque.

- vi. All payment shall be subject to any and all taxes, duties and levies applicable under the laws of Pakistan for the whole period starting from issuance of Supply Order till delivery of the items/services.

**SUPPLY PERIOD:**

- i. The firm will provide items within a period of two months of the tender.
- ii. The most advantageous bidding firm/vendor shall be responsible to deliver goods/services within due time as given in Supply Order/Tender document.

**AGREEMENT DEED**

After receiving work order/supply order the firm has to sign a formal agreement deed on a stamp paper of appropriate value as per attached sample.

**CONTRACT AGREEMENT**

GOVERNMENT OF PAKISTAN  
(MINISTRY OF DEFENCE)  
**SURVEY OF PAKISTAN**  
RAWALPINDI

**Contract No. /15-G-4/( )/St, dated: - -2021**  
Refers Supplier's Tender No.

An agreement made the \_\_\_\_\_ day of ----- Two Thousand Twenty between the President of Pakistan (herein after called the "PURCHASER" on the one part and M/s. -----, "SUPPLIER" on the other part.

Whereby it is agreed that the Purchaser shall purchase and the Supplier shall sell the stores as described in the schedule given hereunder at the price mentioned therein already transmitted through letter of intent subject to the special conditions as follow:

## SUPPLY SCHEDULE

Description of Stores	Qty/ (Units)	Bill in name of	Rate per unit (Rs.)	Total Cost (Rs.)	Delivery Date
		Project Director, Survey of Pakistan Rawalpindi			On or before
<b>Total:</b>					

WARNING: Any information about the sale/purchase of the stores under this contract shall not be communicated to any person, other than the manufacturer of the stores or to any press or agency not authorized by the Surveyor General of Pakistan/Ministry of Defence to receive it. The breach of the undertaking shall be punishable under the Official Secrets Act, 1923

### CONTRACT CONDITIONS/CLAUSES:

- 1). **Name of consignee:** Project Director, Survey of Pakistan Rawalpindi.
- 2). **Cost Dubitable to Head:** A0900-Physical Assets.
- 3). **Supplier's Name and Address:** M/s.
- 4). **Supplier's NTN No.**
- 5). **Supplier's Sales Tax Reg. No:**
- 6). **Date of Delivery:**
- 7). **Maker's Name & Brand:**
- 8). **Dispatch Instructions:**

The stores will be dispatched to the consignee under firm's own arrangements. No part supply will be allowed in any case. Each item will be packed/marked as per relevant paper's particulars governing the supply of store/standard/trade marking worthy of transportation by Rail/Road/Air within Pakistan so as to ensure their safe arrival at ultimate destination without any loss or damaging.
- 9). **Packing & Marking Instructions:**
- 10). **Inspection:**
  - a) Inspection Authority: Technical Evaluation Committees (TECs)
  - b) Inspection Officer: Chairman Technical Evaluation Committees
  - c) Place of Inspection: Consignee's Premises
  - d) The Inspecting Officer will be informed 02 working days in advance about the time for inspection

- 11). **Checking of Stores at Consignee's End:** All stores will be checked at consignee's premises in the presence of supplier's representatives. If, for the reasons of economy or other the supplier decides not to nominate his representative for such checking, then advance written notice to this effect will be given by the supplier to the **Project Director, Survey of Pakistan Rawalpindi** under intimation to **CPC** prior to or immediately on delivering stores. In such an event, the supplier will clearly under take the decision of consignee with regard to quantities and description of a consignment, which will be taken as final and if any discrepancy found will according be made up by the supplier.
- 12). **Terms of Payment:**
- a) 100% payment of value of the stores supplied will be paid to M/s. -----  
-----, through Cheque by submission of bills duly supported by the **NOC** from concerned **TEC**
- b) Bill will be furnished to the Project Director, SoP, Rawalpindi, which will subsequently be submitted to AGPR, Islamabad by the consignee.
- 13). **Taxes & Duties:**
- a) **Duties & Taxes Applicable:** The prices quoted are inclusive of all kinds of duties and taxes. The purchaser shall not be liable for reimbursement of duties and taxes on the contracted goods other than those given in the quoted rates. The payment of element of taxes and duties, which are included in quoted rates, will be made to the supplier only after production of duly authenticated documentary proof of its payment to the respective department. In case fresh taxes and duties are levied by the government after opening of the tender will signing of the contract and during the currency of the contract 9i.e. within the original delivery period) or if the existing rates of taxes are increased after opening of the tender and during the currency of the contract, liability shall be of the purchaser and the same shall be reimbursed by the AGPR, Islamabad to the supplier at actual, on production of documentary proof of his payment duly authenticated. In case of any subsequent decrease in existing or future duty or taxes by the Govt. after opening of tender and during the currency of the contract the liability shall be of the supplier and the supplier shall reimburse the same to AGPR, Islamabad under intimation to purchaser.
- b) For release of payment, the supplier would be required to furnish the following documents to **Project Director**.
- i Proof of registration with Sales Tax Department (Copy of Registration Certificate).
- ii Sales Tax Invoice in original showing description/quantity/value of good and current amount of Sales Tax leviable thereon.
- 14). **Bank Guarantee Clause:**
- a) To ensure timely and correct supply of stores and smooth execution of warrantee conditions the firm will furnish a bank guarantee/draft from a



schedule bank for an amount of 5% of the total value of the contracted stores amounting to **Rs. -----** to **CPC**. After completion of warrantee period i.e. 01 years from the date of signing of NOC by **PC** the supplier will request the **CPC** through **Project Director** for the withdrawal of bank guarantee/draft. The bank draft will be encased/deposited in SoP's bank account. The bank draft shall be produced by the supplier within 07 days from the date of issue of letter of intent/signing of contract deed and shall remain in force till completion of the warrantee period beyond the date of inspection.

- b) If the supplier fails to produce the bank guarantee/draft within the specified period, the Project Director reserves the right of canceling the contract at the risk and expense of the supplier. In the event of un-satisfactory performance or of any breach of terms of the contract, the bank guarantee/draft shall be forfeited to the government at the discretion of the purchaser. On satisfactory performance of the contract the bank guarantee/draft will be returned to the supplier by CPC, on receipt of clearance from the Consignee.

- Bank guarantee/draft furnished against this contract is un-conditional and en-cashable at the will of purchaser. Supplier undertakes not to hinder/restrain its encashment through court, extra judicial or any other way (including administrative process).
- c)

15). **Supplier Warranty/Guarantee:**

- a) The supplier shall furnish warranty for the stores under supply against defects in material workmanship, and satisfactory performance for one year with parts and one year free service. The stores will be of the highest grade and consistent with general expectable standard for the stores of type ordered in full conformity with governing specifications and performance of stores with the liability of replacing defective/unacceptable part free of cost within **07 days** by the supplier on receiving the discrepancy report, failing which the purchaser shall have the right to purchase the stores (against the stores declared defective) at the suppliers risk and expense. The supplier also undertakes to make good the deficiency in supply, if any.
- b) Supplier's warranty shall be provided to the consignee along with the store.

- 16). **Inspection after Expiry of Delivery Period:** Unless informed and directed to the contrary during the currency of the contract, the Inspection Officer will continue the inspection of the stores at firm's risk even after expiry of delivery period. Such acceptance will not prejudice the purchaser's right to cancel the contract or to extend the delivery period with or without liquidated damages.

- 17). **Failure and Termination:** Should the supplier fail to deliver the stores within stipulated period of supply, on the expiry; the purchaser shall be entitled at his option to take either of the following actions:

- a) To cancel the contract or purchase from elsewhere the stores not delivered, at risk and expense of the supplier and without notice to him. The supplier shall also be liable to any loss which purchaser sustains on this account but shall not be entitled to any gain of repurchase.
  - b) To make the supplier pay liquidation damages for the period of delays in supply up to the rate of **2%** of the contract value un-supplied stores per month or part of a month for the period exceeding the original delivery period subject to the provision that total liquidation damages thus levied will not exceed **10%** of the total contract value.
  - c) If contract of the firm is cancelled at 'Risk and Expense' then the latest equivalent of their cancelled stores will be purchased at 'Risk and Expense' of the concerned firm if the cancelled type/category is not available in the market. Similarly an item of contract on FOR (indigenous) basis may be produced at risk and expenses of the firm on FOR (Imported) basis and vice-versa in the interest of the state.
- 18). **Force Majeure:** Force Majeure shall mean any event, act or other circumstances, not being an event, act or circumstance, under the control of the purchaser or of the supplier. Non-availability of raw material from the manufacturer of stores, or of export permit for the export of the contracted stores from the country of its origin, shall not constitute Force Majeure.
- 19). **Special Instructions:**  
**Warranty/Guarantee:**
- a) The supplier has to provide warranty/guarantee of the stores supplied for a period of 01 year standard warrantee including repair, servicing and replacement of parts from the date of issuance of NOC by the **CPC** The supplier shall replace the defective stores free of cost. Warranty/Guarantee Certificate with regards to all items being supplied would be provided to the consignee along-with the stores.
  - b) Trade mark of all items should be quoted clearly. On receipt, if any stores are found to be otherwise it will be changed/ replaced free of cost.
  - c) The Supplier will be strictly bound to supply the contracted stores as per tendered specifications, and fulfill all responsibilities in this regard.
- 20). **Litigation:** In case of any dispute, only court of jurisdiction at Rawalpindi shall have the jurisdiction to decide the matter.

**SIGNATURES**

**PURCHASER**

Designation	Chairman Purchase Committee
Name	
Signature	
For and on behalf of the President of Islamic Republic of Pakistan.	

**SUPPLIER**

Name	
Designation	
Signature	

**PRESCRIBED APPLICATION FORM FOR TENDERING OF PROCUREMENT OF EQUIPMENT**

(To be printed on firm/supplier's letter head duly signed by the authorized representative)

The Chairman Purchase Committee,  
Director of Photogrammetry,  
Survey of Pakistan, Faizabad,  
Rawalpindi

In response to press advertisement dated: - -2021 appeared in the daily  
..... we M/s.  
..... have downloaded Tender Documents  
consisting of Contract Proforma for Tendering under Purchase of stores including the  
detail and specifications from PPRA's website.

We have gone through all the terms and conditions contained in above mentioned documents and those, which are the part of tender.

We fully agree to abide by the terms and conditions contained in the said documents and therefore hereby submit Technical as well as Financial Proposals for the following:


**AUTHORISED SIGNATURE  
NAME & SEAL OF FIRM/SUPPLIER**

## TECHNICAL SPECIFICATIONS FOR DIGITAL TABLETs

SI #	Description of Peripherals	Specifications	Compliance
1.	<b>Brand</b>	GETAC / Panasonic /Sony /Samsung/Dell/HP	
2.	<b>Processor</b>	Intel® Core™ i7-8565U Processor 1.8GHz Max. 4.6GHz with Intel® Turbo Boost Technology 8MB Intel® Smart Cache	
3.	<b>Operating System</b>	Windows latest version	
4.	<b>Sound</b>	2 x Rear-Facing Speakers, Dolby® Atmos™, Micro USB / Audio Jack	
5.	<b>Memory</b>	<b>RAM:</b> 8 GB or more.	
		<b>Internal Storage:</b> 512 GB, SSD	
		<b>Card Slot:</b> UHS-II or above	
6.	<b>Battery</b>	<b>Type:</b> Min Li-ion 7000 mAh or above, Embedded, <b>Standby Time:</b> Up to 117 Days <b>Usage Time:</b> Up to 10 Hours	
7.	<b>Power Device</b>	Normal Voltage AC 120/230 v Frequency Required 50/60 Hz	
8.	<b>Display</b>	11.6" IPS TFT LCD FHD (1920 x 1080) 800nits Lumi Bond® display with Getac sunlight readable technology Capacitive multi-touch screen	
9.	<b>SIM</b>	<b>Type:</b> Micro Sim Card (LTE SKU only)	
		<b>Slots:</b> Single	
10.	<b>Communications</b>	Intel Gigabit Ethernet controllers	
11.	<b>4G Network</b>	<b>PRC:</b> B1/3/40/41	
		<b>ROW:</b> B1/3/7/8/20	
12.	<b>4 &amp; 3G Network</b>	<b>UMTS:</b> B1/2/5/8	
13.	<b>2G Network</b>	<b>GSM :</b> B2/3/5/8	
14.	<b>WLAN</b>	2.4 GHz 802.11 b/g/n	
15.	<b>Bluetooth®</b>	Bluetooth® 4.0	
16.	<b>NFC</b>	yes	
17.	<b>FM Receiver</b>	Standard	
18.	<b>GPS Support</b>	Max Satellite connectivity for maximum accuracy	
19.	<b>3.5 mm Audio Jack</b>	Standard	
20.	<b>Integrated Camera</b>	<b>Rear:</b> 13 MP full HD 1080p60fps Auto-focus	
		<b>Front:</b> 5 MP Fixed-focus	
21.	<b>Sensors</b>	G-Sensor	
		Vibration	

22.	<b>Accessories</b>	Pen, Extra battery for Power backup, Car charger, Cover, screen protector	
23.	<b>Protection</b>	Shock and water proof	
24.	<b>Warranty</b>	03 years on site comprehensive	
25.	<b>Dealership</b>	Authorized Dealership Gold / Higher with manufactural authorization letter	

**Note:** Faulty Hard drives will not be return during warranty period.

**TECHNICAL SPECIFICATIONS PHOTOGRAMMETRIC WORKSTATION**  
**(Photogrammetric Data Processing)**

SI #	Functions / Peripherals	Specifications	Compliance
1.	Brand	HP/DELL/Lenovo /IBM or equivalent	
2.	Processor	2xIntel® Xeon® E5-2687W v3 (14C, 3.1 GHz, Turbo, HT, 25M, 160 W)	
3.	Memory	64 GB 2133 MHz DDR4 RDIMM ECC	
4.	Storage Option	2x500 GB SAS (10 rpm) support hardware RAID 0, 1, 5, 10.	
5.	Graphics	NVIDIA Graphic Quadro card > 4GB chipset compatible (Latest version)	
6.	Network Adapter	1G Ethernet card	
7.	Optical drive	DVD ROM	
8.	Keyboard	USB Traditional Keyboard Black English (EU)	
9.	Mouse	USB Calliope Mouse Black	
10.	Viewing System (method for stereo viewing)	Compatible with graphic card option (Polarized stereo image alternating technology stereoscopic 3D enabling collaborative workflows that dramatically speed up time to insight).	
11.	Supported HW	Must support of required Input and output ports compatibility with other required hardware such as 3D mouse, Key Board, Heat sink fans etc.	
12.	Communications	Intel Gigabit Ethernet controllers with Intel Remote Wake UP, PXE and Jumbo frames support	
13.	Ports	5 slots (5 full length, 1 half length). Two PCIe x16 Gen 3, one PCIe x 16 Gen 3 wired x8 (half length).	
		2 SATA 6Gb/s (for optical drive(s), Rear:3 USB 2.0,3 USB 3.0, 2 PS2,2 RJ45,	
		1 Serial, one PCIe x4 Gen 2; one PCIe x1 Gen 2, one 32bit/33MHz	
14.	Power Supply &	Pakistan compatible	

	cables		
15.	Warranty	01 year on site comprehensive	
16.	Dealership	Authorized Dealership Gold / Higher with manufactural authorization letter	
17.	Operating System	Windows 10 Pro for Workstations 64 English	

## MONITOR

SI #	Functions	Specifications	Compliance
1	Brand	ASUS/View Sonic/equal lent	
2	Display units	02x5 screens	
3	Size	Minimum 27" HDMi (stereo viewing NVIDIA Quadro 3D Vision compatible)	
4	Refresh rate	120Hz or more	

### Aerial Triangulation licences

Sl. #	Specification/Requirement	Compliance
1.	Support for semi and fully automatic AT without or with POS data (GNSS+ INS integration)	
2.	Provide Image support for digital images with 24 bit or higher (8 bit or higher on each band) uncompressed tiled TIF images with full set of internal overviews.	
3.	The program must be able to calculate shift and drift parameters on the GNSS-data	
4.	The program must be able to correct for earth curvature and atmospheric refraction.	
5.	The program must accommodate tilt, crab and relief in photography to some extent.	
6.	The program must be able to calculate lever arm offsets and bore sight misalignment on the INS/IMU.	
7.	Support for camera self-calibrating parameters	
8.	Support for semi and fully automatic error detection and rectification.	
9.	Supports the coordinate and Datum conversion and customization.	
10.	The program must be able to measure control and check points in the images from signalized known points on the ground.	
11.	The program must be able to export to the project format of the photogrammetric module.	



## Modules for Photogrammetric Products and Mapping licences

Sl. #	Specifications/Requirement	Compliance
1.	Photogrammetric software to be able to do 3D-mapping by itself or have integration with other packages like AutoCAD and ArcGIS. Offer must include complete package.	
2.	Support image for 24 bit or higher (8 bit or higher on each band) uncompressed tiled TIF images with full set of internal sequential overviews.	
3.	The software must be able to zoom up to at least 5 times enlargement.	
4.	Must be able to produce line maps from stereo satellite images level 2A (geo-referenced from the satellite image supplier).	
5.	Must be able to carry out additional geo-referencing by use of extra Ground Control Points.	
6.	Support 3D-LED high resolution monitors.	
7.	3D-Mouse that can be used for 3D-mapping	
8.	Supports for coordinate and Datum conversion and customization.	
9.	The software must be able to change the displayed stereo images to get better visibility e.g., dark shadows or low contrast areas. This correction must not introduce any change in the original image on hard drive.	
10.	Must support user defined parameters required for creating line maps.	
11.	Support super imposition of third party vector data for editing with image source.	
12.	Must support these formats: shp, mxd, dxf/dwg, , MIF/MID	
13.	Support all images from either sensor mentioned under specification 2.1 above.	

## Digital Orthophoto Production software license

Sl. #	Specifications/Requirement	Compliance
1.	Full support for fully automated, generation and editing of Digital Ortho photo.	
2.	Ortho photo software must support to import files of oriented images and DEM from other sources.	
3.	Must support user defined pixel size for Ortho-rectification.	
4.	The tiling, of the ortho photo must follow regular pattern of a defined width, height and position.	
5.	The program must be able to do some color equalization over the whole project in order that ortho photo becomes more homogeneous.	
6.	The software must be able to zoom up to at least 5 times enlargement for further analysis.	
7.	Provide support for various re-sampling algorithms, for example nearest neighbor, bilinear, cubic convolution, B-spline, etc.	
8.	Support all images from sensors as mentioned under specification 2.1 above.	
9.	Must be able to export metadata, as for example seam lines, to at	

	least one of these formats: shp, mxd, dxf/dwg, , MIF/MID	
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### LiDAR Data and DTM Software licenses

SI#	Specification/Requirement	Compliance
1.	Must at least support point cloud these formats: LAS and xyz text. When reading LAS-files form LIDAR the software must be able to read selected classes and given LIDAR pulse return.	
2.	Full support for Point cloud data editing (LAS-format) and should be equally supportive to edit color point clouds.	
3.	The program must be able to make a Digital Terrain Model (DTM) and Contour lines.	
4.	Can support automatic extraction of points with a given class.	
5.	The software must be able to export DEM to at least these formats: ASCII, GEOTIFF, LAS and xyz grid	
6.	The software must be able to export contour lines to at least one of these formats: shp, mxd, dxf/dwg, MIF/MID	
7.	Must support user defined parameters for DEM/DTM generation to achieve high accuracy.	
8.	The software must be able to zoom up to some extent for further analysis.	

## TECHNICAL SPECIFICATIONS FOR COMPUTER (BRANDED)

SI #	Functions / Peripherals	Specifications	Compliance
1.	Brand	HP/DELL/Lenovo/IBM etc.	
2.	Processor	Intel Core i7 / i9 10 <sup>th</sup> Generation 2.4 Ghz or above	
3.	Chipset	Compatible with processor and other specifications	
4.	Memory	64GB, DDR4-3200, Dual Channel Capable with four DIMM slots upgradable to 128GB	
5.	Storage Option	256GB NVME SSD & 1TB 7200rpm SATA Hard Disk Drive or more	
6.	Graphics	4GB Graphics (NVIDIA Quadro or equivalent )	
7.	Keyboard	USB Keyboard	
8.	Mouse	USB Optical Mouse.	
9.	Communications	Gigabit Ethernet controllers	
10.	Ports	3 slots (2 full length, 1 half length). 02 PCIe x16 Gen 3, one PCIe x 16 Gen 3 wired x8 (half length). Rear:4 USB 3.0, 1 RJ45, or more	
11.	Casing	Branded Tower / Mini Tower type with trolley	
12.	Warranty	03 years on site comprehensive	
13.	Dealership	Authorized Dealership Gold / Higher with manufactural authorization letter	
14.	Operating System	Windows 10 Pro (64bit) English	

**Note:** Faulty Hard drives will not be return during warranty period.

## MONITOR

SI #	Functions	Specifications	Compliance
1	Brand	ASUS / View Sonic or equivalent	
2	Size	27" HDMi	

## TECHNICAL SPECIFICATIONS FOR LAPTOP

SI #	Peripherals	Specifications	Compliance
1	Brand	DELL/HP/Lenovo/IBM or equivalent	
2	Processor	Core i7/i9 10th Gen Intel 1.80GHz up to 4.90GHz with Turbo Boost, 4 Cores, 8MB Cache or above all	
3	Memory	8GB DDR4 2666MHz SODIMM single slot	
4	Graphic Card	Integrated Graphics	
5	Hard Drive	512GB SSD or higher	
6	Display	14" FHD (1920x1080), IPS, 250nits, Anti-glare, No Touch	
7	connectivity	Wi-Fi and Bluetooth	
8	Ports	USB, USB type C, Audio in out, LAN 01Gbps, SD card Reader, DVI, VGA, etc.	
9	Sensors	Fingerprint Reader	
	Web Cam	HD resolution	
10	Battery	Lithium Internal Battery	
11	Warranty	03 years on site comprehensive	
12	Accessories	Laptop Bag, Charger (Branded)	
13	Dealership	Authorized Dealership Gold / Higher with manufactural authorization letter	
14	Operating System	Windows 10 Professional English	

**Note:** Faulty Hard drives will not be return during warranty period.

## TECHNICAL EVALUATION GRADING CRITERIA FOR IT Equipment

<b>SPECIFICATIONS OF PHOTOGRAMMETRIC WORKSTATION (Photogrammetric Data Processing)</b>					
<b>Sl. No.</b>	<b>Functions / Peripherals</b>	<b>Tender Specifications</b>			
1	Processor	2xIntel® Xeon® E5-2687W v3 (14C, 3.1 GHz, Turbo, HT, 25M, 160 W)			
2	Memory	64 GB 2133 MHz DDR4 RDIMM ECC			
3	Storage Option	2x500 GB SAS (10 rpm) support hardware RAID 0, 1, 5, 10.			
4	Graphics	NVIDIA Graphic Quadro card > 4GB chipset compatible (Latest version)			
5	Network Adapter	1G Ethernet card			
6	Optical drive	DVD ROM			
7	Keyboard	USB Traditional Keyboard Black English (EU)			
8	Mouse	USB Calliope Mouse Black			
9	Viewing System (method for stereo viewing)	Compatible with graphic card option (Polarized stereo image alternating technology stereoscopic 3D enabling collaborative workflows that dramatically speed up time to insight).			
10	Supported HW	Must support of required Input and output ports compatibility with other required hardware such as 3D mouse, Key Board, Heat sink fans etc.			
11	Communications	Intel Gigabit Ethernet controllers with Intel Remote Wake UP, PXE and Jumbo frames support			
12	Ports	5 slots (5 full length, 1 half length). Two PCIe x16 Gen 3, one PCIe x 16 Gen 3 wired x8 (half length). 2 SATA 6Gb/s (for optical drive(s), Rear:3 USB 2.0,3 USB 3.0, 2 PS2,2 RJ45, 1 Serial, one PCIe x4 Gen 2; one PCIe x1 Gen 2, one 32bit/33MHz			
13	Power Supply & cables	Pakistan compatible			
14	Warranty	01 year on site comprehensive			
15	Dealership	Authorized Dealership Gold / Higher with manufactural authorization letter			
16	Operating System	Windows 10 Pro for Workstations 64 English			

## TECHNICAL EVALUATION GRADING CRITERIA FOR IT Equipment

Sl. No.	SPECIFICATIONS OF COMPUTER BRANDED			
	Functions / Peripherals	Tender Specifications	Compliance	
1	Brand	HP/DELL/Lenovo/IBM etc.		
2	Processor	Intel Core i7 / i9 10 <sup>th</sup> Generation 2.4 Ghz or above		
3	Chipset	Compatible with processor and other specifications		
4	Memory	64GB, DDR4-3200, Dual Channel Capable with four DIMM slots upgradable to 128GB		
5	Storage Option	256GB NVME SSD & 1TB 7200rpm SATA Hard Disk Drive or more		
6	Graphics	4GB Graphics (NVIDIA Quadro or equivalent )		
7	Keyboard	USB Keyboard		
8	Mouse	USB Optical Mouse.		
9	Communications	Gigabit Ethernet controllers		
10	Ports	3 slots (2 full length, 1 half length). 02 PCIe x16 Gen 3, one PCIe x 16 Gen 3 wired x8 (half length). Rear:4 USB 3.0, 1 RJ45, or more		
11	Casing	Branded Tower / Mini Tower type with trolley		
12	Warranty	03 years on site comprehensive		
13	Dealership	Authorized Dealership Gold / Higher with manufactural authorization letter		
14	Operating System	Windows 10 Pro (64bit) English		

## TECHNICAL EVALUATION GRADING CRITERIA FOR IT Equipment

Sl. No.	SPECIFICATIONS OF LAPTOP				
	Functions / Peripherals	Tender Specifications	Compliance		
1	Brand	DELL/HP/Lenovo/IBM or equivalent			
2	Processor	Core i7/i9 10th Gen Intel 1.80GHz up to 4.90GHz with Turbo Boost, 4 Cores, 8MB Cache or above all			
3	Memory	8GB DDR4 2666MHz SODIMM single slot			
4	Graphic Card	Integrated Graphics			
5	Hard Drive	256GB SSD for OS & SW + 512GB SSD or higher			
6	Display	14" FHD (1920x1080), IPS, 250nits, Anti-glare, No Touch			
7	connectivity	Wi-Fi and Bluetooth			
8	Ports	USB, USB type C, Audio in out, LAN 01Gbps, SD card Reader, DVI, VGA, etc.			
9	Sensors	Fingerprint Reader			
10	Web Cam	HD resolution			
11	Battery	Lithium Internal Battery			
12	Warranty	03 years on site comprehensive			
13	Accessories	Laptop Bag, Charger			
14	Dealership	Authorized Dealership Gold / Higher with manufactural authorization letter			
15	Operating System	Windows 10 Professional English			



PROFORMA FOR TECHNICAL EVALUATION OF IT EQUIPMENT

DIGITAL TABLETs

Bidder/Firms	OEM/Authorized Agent Experience (30 Marks)			After sale services/ Workshop (30 Marks)			Brand/Performance (40 Marks)	Total (100 Marks)
	5-8 years (10 Marks)	9-12 years (20 Marks)	13-15 years (30 Marks)	Within Pakistan (10 Marks) or Outside Pakistan (5 Marks)	Qualified staff (15 Marks)	Repairing Lab (5 Marks)		Score
A								
B								
C								
D								
E								

## PROFORMA FOR TECHNICAL EVALUATION OF IT EQUIPMENT

## Photogrammetric WORKSTATION (Photogrammetric Data Processing)

Bidder/Firms	OEM/Authorized Agent Experience (30 Marks)			After sale services/ Workshop (30 Marks)			Brand/Performance (40 Marks)	Total (100 Marks)
	5-8 years (10 Marks)	9-12 years (20 Marks)	13-15 years (30 Marks)	Within Pakistan (10 Marks) or Outside Pakistan (5 Marks)	Qualified staff (15 Marks)	Repairing Lab (5 Marks)		Score
A								
B								
C								
D								
E								

PROFORMA FOR TECHNICAL EVALUATION OF IT EQUIPMENT

COMPUTER BRANDED

Bidder/Firms	OEM/Authorized Agent Experience (30 Marks)			After sale services/ Workshop (30 Marks)			Brand/Performance (40 Marks)	Total (100 Marks)
	5-8 years (10 Marks)	9-12 years (20 Marks)	13-15 years (30 Marks)	Within Pakistan (10 Marks) or Outside Pakistan (5 Marks)	Qualified staff (15 Marks)	Repairing Lab (5 Marks)		Score
A								
B								
C								
D								
E								

PROFORMA FOR TECHNICAL EVALUATION OF IT EQUIPMENT

LAPTOP

Bidder/Firms	OEM/Authorized Agent Experience (30 Marks)			After sale services/ Workshop (30 Marks)			Brand/Performance (40 Marks)	Total (100 Marks)
	5-8 years (10 Marks)	9-12 years (20 Marks)	13-15 years (30 Marks)	Within Pakistan (10 Marks) or Outside Pakistan (5 Marks)	Qualified staff (15 Marks)	Repairing Lab (5 Marks)		Score
A								
B								
C								
D								
E								