



CYBER SECURITY FOR DIGITAL PAKISTAN / NCERT

(NATIONAL CYBER EMERGENCY RESPONSE TEAM)

PROCUREMENT OF
SOFTWARE & HARDWARE FOR
DIGITAL FORENSICS AND SCREENING LABS

GOVERNMENT OF PAKISTAN
CYBER SECURITY FOR DIGITAL PAKISTAN/nCERT
(NATIONAL CYBER EMERGENCY RESPONSE TEAM)

INVITATION TO BIDS

1. Cyber Security for Digital Pakistan /nCERT invites bids for “**Procurement of Software & Hardware for Digital Forensics and Screening Labs**” for which electronic bids are invited under Single Stage-Two Envelope bidding procedure through **e-PADS Version 2.0** from the firms/ companies registered with Income Tax, Sales Tax Departments, which are on FBR’s Active Taxpayer’s List (ATL) and pre-qualified by MoIT&T.
2. The prospective service providers are required to submit their electronic bids including technical and financial proposals along with the Bid Security instrument amounting to Rupees 1 million/- (Rupees one million Only) submitted in favor of Project Director, CSDP/NCERT (FTN/NTN: 9012000-7) through PPRA e-PADS Version 2.0.
3. **E-Bidding documents**, containing detailed terms & conditions, specifications and requirements etc. are available on e-Pak Acquisition and Disposal System (EPADS) at <https://vendors.epads.gov.pk/>.
4. Bidder(s) are required to get themselves registered on **EPADS v2.0** on or before **April 01st, 2026 1400 hrs.** E-bids will be opened using **EPADS v2.0** on the same day at **April 01st, 2026 1430 hrs.** Manual submission of Bids shall not be entertained. Those vendors who have not yet registered on the new version of **EPADS v2.0**, may register themselves on <https://vendors.epads.gov.pk/>. A tutorial to explain the registration process is available at <https://www.youtube.com/watch?v=MNW6T38v7tc>
5. Original Bid security instrument **MUST** be submitted to the undersigned before closing hours of the bid submission time otherwise respective bid will not be opened.
6. Bidding documents can be accessed from the website of National Computer Emergency Response Team (<https://pkcert.gov.pk/>) as well as on PPRA website.
7. Bids will be opened on the same day i.e., **01st April, 2026 at 1430 hours** in the presence of representatives of the bidders.
8. As per PPRA Rules 33(1), 2004, National Computer Emergency Response Team (nCERT) has the right to reject any or all bids/ proposals at any time prior to the acceptance of a bid/proposal.

Project Director
Cyber Security for Digital Pakistan/nCERT
L- Block Pak Secretariat, Islamabad
Ph No. 051-9203421-22
Email: bid@pkcert.gov.pk
Website: (<https://pkcert.gov.pk/>)

1. BACKGROUND

“Cyber Security for Digital Pakistan”, is a PSDP project sponsored by Ministry of Information and Technology (MoITT) and executed by National Telecommunication & Information Technology Security Board (NTISB). The project “Cyber security for Digital Pakistan” is a pre-requisite for the Digital Pakistan initiative addressing current National cyber security gaps and concerns. This project will provide cyber security and digital initiative support to all public/private/defense sector organizations/institutes at national level. In pursuance, Project Director is looking to procure Digital Forensics Software and Hardware for PKCERT HQ’s Office at Block-L Pakistan Secretariat Islamabad. Objective of the procurement is to:

- a) Serve as a center of excellence for facilitating digital forensic investigations in support of incident response; and
- b) Combat cyber incidents in Pakistan through cooperation in investigation, knowledge sharing, professional training, and provision of digital forensics and screening facilities, thereby enabling a more cooperative and collaborative workforce functioning as a unified entity.

2. CLARIFICATION OF THE BIDDING DOCUMENT

- a) The bidders may seek further information or clarification regarding the Bidding Document within **seven (7) calendar days** of the issuance/publication of the Invitation to Bids. Such clarifications and responses shall be shared with all prospective bidders, where required, and shall also be communicated at the pre-bid meeting to be held at Block-L, Pakistan Secretariat, Islamabad, on **17 March 2026 at 1100 hours**.
- b) Bidders shall note that, during the period from the issuance of the Bidding Document until further notice by the Client, all queries shall be communicated only through the designated Primary Contact and in writing, including by e-mail and letter.
- c) Any request for clarification, interpretation, or additional information relating to the bidding process or the required item(s) shall only be entertained up to the issuance/uploading of the pre-bid meeting minutes by the Client. No queries, clarifications, interpretations, or requests for explanation shall be entertained thereafter.

3. GENERAL INFORMATION AND INSTRUCTIONS FOR BIDDERS

- a) Bidders having presence in Pakistan independently or through a joint venture, consortium, authorized agent, or dealer, and possessing valid NTN and GST registration, while being on the Active Taxpayers List of the FBR, are invited to participate.
- b) The bidding shall be conducted through an open, competitive, and transparent process in accordance with the Public Procurement Regulatory Authority Ordinance, 2002, and the rules, regulations, and guidelines made thereunder.

- c) Bids must be submitted online through e-Pak Acquisition & Disposal System (EPADS) by closing date. Manual bids will not be accepted.
- d) The prospective bidders shall submit their electronic bids, including Technical Proposals and Financial Proposals, through the prescribed e-procurement portal, along with the required scanned copy of the Bid Security. The original Bid Security instrument, in the amount of **PKR 1 million (Rupees One Million only)**, in favor of “**Project Director - Cyber Security for Digital Pakistan**”, shall be submitted in hard form at the designated office on or before the bid submission deadline.
- e) Bidders may bid on an item-wise basis through the **Single Stage - Two Envelope Procedure** under Rule 36(b) of the Public Procurement Rules, 2004.
- f) The Client reserves the right to award the contract for all items or selected items to one or more successful bidders. The Client reserves the right, at its sole discretion, to increase or decrease the quantity of any item(s) proposed for procurement, at any stage of the procurement process, without thereby incurring any liability to any bidder. The Client reserves the right to cancel, withdraw, omit, or reject any or all item(s) included in this RFP, in whole or in part, at any time prior to award, without prior notice and without assigning any reason.
- g) Issuance of any Purchase Order(s) pursuant to this RFP shall be strictly subject to the availability and release of requisite funds by the competent authority.
- h) The submission and evaluation of bids shall be carried out under the Single Stage - Two Envelope Procedure under Rule 36(b) of the Public Procurement Rules, 2004. The Technical Proposals shall be opened by the Technical Evaluation Committee at the notified venue and time in the presence of the bidders’ representatives who may choose to attend.
- i) The date for opening the Technical/Financial Proposals may be changed, rescheduled, or deferred by the Client, as deemed necessary, subject to completion of the technical evaluation process and resolution of any related queries, objections, or clarifications.
- j) The bidder’s name shall appear on the Active Taxpayers List (ATL) of the FBR for Income Tax and Sales Tax, or on the ATL of the relevant Provincial Revenue Authority for Sales Tax, as applicable, on the date of bid submission and continuously throughout the contract period, in compliance with the Eligible Bidders (Tax Compliance) Regulations, 2015.
- k) Bids shall be submitted in the English language only.
- l) All prices shall be quoted in Pakistani Rupees (PKR) in the Financial Proposal and shall be inclusive of all applicable taxes, duties, levies, and charges, including GST, where applicable. The amount shall be stated both in figures and in words.
- m) The quoted rates shall remain valid for **one hundred eighty (180) calendar days** from the date of opening of the Technical Proposals.
- n) Each bidder shall nominate a focal person to act as the primary Point of Contact (PoC) for all correspondence with the Client.

- o) Bidders may submit proposals for individual items or for multiple items, and technical evaluation shall be carried out on an item-wise basis. The Client shall not entertain incomplete, partial, conditional, or ambiguous bids.
- p) The bidders shall bear all costs and expenses associated with the preparation and submission of their bids, and the Client shall in no case be responsible or liable for such costs or expenses, including visit, transportation, or carriage expenses.
- q) The successful bidder shall be responsible for payment of any duties, taxes, levies, and other charges imposed by the Government of Pakistan during the period of supply, delivery, installation, commissioning, and support, unless otherwise provided by law.
- r) Taxes shall be deducted from payments at the rates prescribed under the tax laws of Pakistan.
- s) Bidders shall clearly indicate the delivery timelines for the proposed goods. Unless otherwise approved by the Client, the expected delivery timelines shall be: **Four (4) to six (6) weeks** for inland items; and **Eight (8) to twelve (12) weeks** for imported items, from the date of issuance of the Purchase Order or signing of the contract, as applicable.
- t) All hardware and software shall be supplied through verifiable, legitimate, and authorized distribution or sales channels.
- u) Only those documents which are specifically required in original hard form under this RFP, including the original Bid Security instrument, shall be submitted physically. No separate hardcopy bid submission shall be required unless expressly stated in the bidding documents.
- v) The following standardized forms and annexures shall form part of the RFP and shall be duly completed and submitted by all bidders:
 - i. Bid Submission Form;
 - ii. Bidder Information Form;
 - iii. Price Schedule;
 - iv. OEM Authorization Form, where applicable;
 - v. Compliance Matrix; and
 - vi. Affidavit / Undertaking Form.
- w) Each bidder shall submit a complete **Compliance Matrix** clearly showing compliance with all technical, commercial, licensing, warranty, support, training, and other requirements specified in the RFP.

4. BIDDER'S INFORMATION

- a. Bidders shall submit of following documents /information with relevant authorities:

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Company information	<ol style="list-style-type: none"> 1. Valid Incorporation certificate from Securities and Exchange Commission of Pakistan (SECP)/ Registration with Government of Pakistan. 2. Valid NTN and STN Certificates
<u>Address</u>	
Telephone No	
Fax No	
Primary contact person Name, phone, email:	

5. PRICES

- a. The bidder shall quote its rates clearly in Pakistani Rupees (PKR), inclusive of all applicable taxes, duties, levies, and charges, in the Financial Proposal, both in figures and in words.
- b. The quoted rates shall remain valid for one hundred eighty (180) calendar days from the date of opening of the Technical Proposals.

6. AFFIDAVIT

- a. The bidder shall submit an undertaking on non-judicial stamp paper to the effect that the bidder itself, including its sister concerns, subsidiaries, affiliated entities, or associated companies, has not been blacklisted by any Government, Semi-Government, autonomous body, regulatory authority, or private institution.

7. THE CLIENT'S RIGHTS

- a. The Client reserves the right, at its sole discretion, to increase or decrease the quantity of any item(s) proposed for procurement, at any stage of the procurement process, without thereby incurring any liability to any bidder.
- b. The Client reserves the right to cancel, withdraw, omit, or reject any or all item(s) included in this RFP, in whole or in part, at any time prior to award, without prior notice and without assigning any reason.
- c. Issuance of any Purchase Order(s) pursuant to this RFP shall be strictly subject to the availability and release of requisite funds by the competent authority.
- d. The opening date of the Technical/Financial Proposal(s) may be changed, rescheduled, or deferred by the Client, as deemed necessary, subject to completion of the technical evaluation process and resolution of any related queries, objections, or clarifications.
- e. Bidders may submit proposals on an item-wise basis or for standalone unit(s), where applicable. The Client reserves the right to evaluate, compare, and award the item(s) either individually, partially, or collectively, in a manner deemed most advantageous, considering technical responsiveness, cost-effectiveness, and the

- overall project requirements.
- f. All timelines, schedules, submission dates, and other deadlines prescribed under this RFP shall be binding upon the bidders and must be complied with strictly. Failure to adhere to such timelines may result in disqualification or rejection of the proposal, as applicable.
 - g. Any request for clarification, interpretation, or additional information relating to the bidding process or the required item(s) shall only be entertained up to the issuance and uploading of the pre-bid meeting minutes by the Client. No queries, clarifications, interpretations, or requests for explanation shall be entertained thereafter.

8. SCOPE OF WORK

- a. For **Digital Forensics and Screening Software**, the technical specifications along with the marking criteria for technical evaluation are set forth in **Tables 2 to 14**, and the evaluation criteria is provided in **Section 10**.
- b. For Digital Forensics and Screening Hardware, the technical specifications are set forth in Tables 15 to 36, and the evaluation criteria is provided in Section 11.

9. BASIS OF EVALUATION AND AWARD

- a. Procurement of **Software (Tables 2 to 14)** shall be carried out on an item-wise basis under the **Most Advantageous Bid / combined technical and financial score** method.
- b. Procurement of **Hardware (Tables 15 to 36)** shall be carried out on an item-wise basis on the **Least Evaluated Bid / lowest evaluated cost** basis, from among the bids found technically responsive and technically qualified.
 - i. For Software items, the following formula shall apply:

Technical Score = Marks obtained in technical evaluation (*i.e. out of 70 marks*)

$$\text{Weighted Financial Score} = 30 \times \frac{\text{Lowest quoted bid}}{\text{Current bidder's quoted bid}}$$

Final Score (Software) = Technical Score + Weighted Financial Score

- c. For Hardware items, no combined technical-financial scoring formula shall apply. The contract shall be awarded to the **lowest evaluated bidder** among those bidders whose bids are technically responsive and technically qualified for the relevant item.

$$\text{Final Score (Hardware)} = 100 \times \frac{\text{Lowest quoted bid}}{\text{Current bidder's quoted bid}}$$

- d. The award of work shall be communicated through an **Award Letter**. Within **fifteen (15) days** of receipt of the Award Letter, the successful **OEM/Firm** shall sign and return the duplicate copy thereof in token of acceptance. In the event that the duly signed copy of the Award Letter is not received within the stipulated period, **PKCERT** may, unless it agrees to extend the time for submission, cancel the Award Letter issued to such bidder.
- e. In the event that **two or more bidders obtain equal combined scores**, constituting the highest score for any item, the contract shall be awarded to the bidder having the **higher Technical Score**.

- f. In the event of refusal or failure by the successful bidder to sign the contract, the Client may award the contract to the **Next Most Advantageous Bidder**, i.e., the bidder obtaining the **second-highest combined Technical and Financial Score**, subject to fulfillment of all applicable requirements.

Note: The **Combined Score** formula shall apply only to **Software** under **Section 10**. Procurement of **Hardware** under **Section 11** shall be made on the basis of **Least Cost Selection**, item-wise, from among the **technically compliant and technically qualified bidders**.

<u>Table No 1: MANDATORY REQUIREMENTS FOR ELIGIBILITY TO ENTER THE TECHNICAL & FINANCIAL EVALUATION PHASE</u>		
Sr. #.	Requirement/ Document to be attached	Compliance? Yes/ No
1.	The bidder shall provide valid Sales Tax Registration and Income Tax Registration documents.	
2.	The bidder shall be an Active Taxpayer on the Federal Board of Revenue (FBR) Active Taxpayers List .	
3.	The bidder shall upload a scanned copy of the Bid Security on e-PADS and shall ensure submission of the original Bid Security instrument, in the form of a Bank Draft or Pay Order , in favor of “Project Director – Cyber Security for Digital Pakistan” at the NCERT Office on or before the bid submission deadline. Failure to submit the original Bid Security instrument by the prescribed deadline shall render the bid liable to rejection.	
4.	The bidder shall submit an Affidavit on non-judicial stamp paper that the firm is not black listed by Government of Pakistan .	
5.	The Bidder or OEM shall have an established office in Pakistan, or shall have an authorized local partner/distributor with a sales and service support center in any one of the major cities of Pakistan.	
6.	The following documents/evidence shall be attached in support of the technical proposal: <ul style="list-style-type: none"> a) Copies of NTN registration and registration with the Income Tax and Sales Tax authorities; b) Experience certificates; c) Authorized Partner Certificate / OEM Certificate, where applicable. 	
7.	The bidder shall demonstrate sound financial standing sufficient to meet its contractual obligations. For this purpose, the bidder shall provide duly audited bank/financial statements for the last three (3) years .	
8.	The vendor shall possess valid security clearance from the relevant authority. Any bid submitted without documentary proof of such clearance shall be treated as non-responsive .	
9.	The vendor shall ensure that all supplied hardware and software are free from	

	bugs, vulnerabilities, backdoors, malware, or any other malicious components. A valid security clearance certificate or bug-free certificate issued by NTISB shall be provided. Notwithstanding such certification, full responsibility in this regard shall remain with the vendor.	
10.	For proposed hardware items, the vendor shall submit a verified MAL certificate, where applicable. Failure to furnish the same, where required, may render the bid non-responsive.	

10. EVALUATION CRITERIA OF DIGITAL FORENSIC & SCREENING SOFTWARE

- a. Technical Proposals shall be opened and evaluated by the Technical Evaluation Committee in accordance with the criteria prescribed in **Table 1 and Tables 2 to 14**.
- b. Only those bids which satisfy the mandatory requirements specified in **Table 1** shall qualify for detailed technical evaluation.
- c. Technical Proposals shall carry **70% weightage**, whereas Financial Proposals shall carry **30% weightage** in the final evaluation.
- d. Proposals obtaining at least **70% marks**, i.e., **49 marks out of 70**, in the technical evaluation shall be eligible for participation in the opening of the Financial Proposals.
- e. Technical scoring shall be carried out on a total of **70 marks**; the distribution whereof is provided in **Tables 2 to 14**.
- f. The score obtained out of 70 shall constitute the **Technical Score** for the purpose of final evaluation.
- g. The Weighted Financial Score and the Final Score shall be calculated for software as follows:

$$\text{Weighted Financial Score} = 30 \times \frac{\text{Lowest financial bid}}{\text{Financial bid under consideration}}$$

The final score for software shall be calculated as follows:

$$\text{Final Score (Software)} = \text{Technical Score} + \text{Weighted Financial Score}$$

- h. The Technical Evaluation Report shall be announced in accordance with **Rule 35 of the Public Procurement Rules, 2004**. The technically qualified bidders shall be notified in advance and invited for the opening of their Financial Proposals. The Financial Proposals shall be opened at the time, date, and venue communicated by the Client, in the presence of the bidders or their duly authorized representatives, should they choose to attend.
- i. Financial Proposals shall be opened and evaluated by the Procurement Committee of NCERT.
- j. The bidder shall quote its rates clearly against each item in the Financial Proposal,

inclusive of all applicable taxes, duties, levies, and other charges, both in figures and in words.

- k. Evaluation of the Financial Proposals shall be conducted in accordance with the applicable rules in force. The price evaluation shall include all duties, taxes, and other related expenses.
- l. In case of any discrepancy between the price quoted in words and the price quoted in figures, the actual quoted cost of all items shall be calculated and aggregated by the competent purchase committee and shall be treated as the total bid price inclusive of all applicable taxes.
 - (i) In case of any discrepancy between the unit price and the total price, the **unit price** shall prevail.
 - (ii) If a bidder does not accept the corrected bid amount, its bid shall be rejected and its Bid Security shall be forfeited .
- (iii) The Client shall not be responsible for any erroneous calculation of taxes by the bidder, and all differences arising therefrom shall be fully borne by the successful bidder. However, any subsequent changes in the rates or structure of applicable taxes imposed by the Government of Pakistan during the evaluation or execution period shall be applicable in accordance with law.

Note (Applicable on all Table No: 2 to 14)

1. A minimum **two (2)-year license** shall be provided for each software item, whether on a **perpetual basis, subscription basis, or both, where applicable**, inclusive of all updates and support services.
2. The vendor shall be responsible for the installation of the software and for ensuring and verifying its complete functionality, including confirmation of the validity of the license.
3. Bids shall include a clear, complete, and comprehensive section on licensing terms, explicitly specifying the number of authorized users, license validity period, applicable training requirements, and any other relevant terms, conditions, or restrictions. Any vague, ambiguous, or imprecise licensing provision may be deemed non-responsive and may lead to disqualification.
4. Provision of OEM-specific product training shall be a mandatory requirement for eligibility for technical evaluation. Such training shall be delivered either directly by the Original Equipment Manufacturer (OEM), which shall be preferred, or through an OEM-authorized or OEM-certified partner, trainer, or instructor, as specified in the relevant section or table of this document.
5. Bidders shall submit verifiable documentary evidence of such **OEM authorization or Certification**, including but not limited to an OEM authorization letter, certificate, or equivalent document, along with their bids. Failure to furnish acceptable documentary proof shall render the bid **non-responsive** and shall result in disqualification from technical evaluation.

<u>Table No 2: Portable Imaging Device / Write Blocker / Duplicator Kit (Qty = 1)</u>		
TECHNICAL SPECIFICATIONS		Score
a.	Bidder's Experience: Bidder's relevant experience, including deployments in Pakistan and/or internationally.	5
b.	Presentation / Demonstration / POC: A representative of the bidder shall deliver a comprehensive presentation of the quoted solution , including its architecture, key features, modules, capabilities, constraints, limitations, and licensing terms and conditions. Additional features/modules quoted by the vendor may be considered for extra technical merit. This shall also include a Demonstration / Proof of Concept (POC), preferably onsite, or remotely if required.	15
c.	The kit should have the blocker devices for the storage media having the interface of SATA, IDE, Firewire USB2, USB3, e-SATA, Micro-SATA, Combine SATA, and ZIF, PCIe/NVMe, USB-C / Thunderbolt and SAS (Serial Attached SCSI) along with their respective connecting cables	15
d.	Should support various operating systems <ul style="list-style-type: none"> i. Windows, Linux, Unix, Sun Solaris, Macintosh, Apple iOS. Capable to acquire/clone data from one-to-one, two-to-two destinations media. ii. Support different forensics image formats i.e. dd, EnCase, FTK, AFF, and Apple disk images 	15
e.	Should have the facility to Disk-to-Disk duplication with a facility of compression. Preview and acquire full disk, targeted data, support Image formats of AD1, E01, RAW, or SMART.	10
f.	<u>Mandatory Requirement</u> 1) Training Plan for this Item: The bidder shall provide a comprehensive training plan specifically for the proposed item, comprising at minimum: (i) training delivered either directly by the Original Equipment Manufacturer (OEM), whether on premises or online (preferred), or by an OEM-authorized/certified partner or instructor; online third-party/non-OEM training shall be treated as a non-preferred option and, where allowed by the technical requirements for this item, shall be accorded a lower technical score during evaluation; (ii) provision of item-specific training materials, including, as applicable, digital content, videos, hardcopy manuals, and standard operating procedures (SOPs); and (iii) issuance of staff certifications or formal proof of successful completion of the training for all designated personnel who will operate or administer this item. 2) Local Support: (i) 24-month dedicated technical support by OEM; (ii) Dedicated technical support by vendor: on-call assistance, virtual sessions (as required), dedicated support contact, remote investigation assistance, troubleshooting support;	10
Total		70

<u>Table No 3: Cryptanalysis/ Password cracking Solution (like Passware kit Ultimate or equivalent) (Qty = 1)</u>		
TECHNICAL SPECIFICATIONS		Score
a.	Bidder's Experience: Bidder's relevant experience, including deployments in Pakistan and/or internationally.	5
b.	Presentation / Demonstration / POC: A representative of the bidder shall deliver a comprehensive presentation of the quoted solution , including its architecture, key features, modules, capabilities, constraints, limitations, and licensing terms and conditions. Additional features/modules quoted by the vendor may be considered for extra technical merit. This shall also include a Demonstration / Proof of Concept (POC), preferably onsite,	15

	or remotely if required.	
c.	Should detect and decrypt Password from Windows, Android. Recovery of passcodes for Apple and Android devices. Extraction of data from locked or encrypted mobile devices.	8
d.	Recover passwords from all MS Office files (i.e. MS word, MS excel files) for all versions, PDF, Zip, RAR, and more. Full Disk Decryption: Decrypts or recovers passwords for various encryption types, including BitLocker, FileVault2, and VeraCrypt. Reset passwords for Local and Domain Windows Administrators, recover encryption keys from HDD protected with BitLocker, including BitLockerToGo.	8
e.	i. User can provide own password dictionary and partial known password. Capable of recovering Mac User Login passwords and FileVault2 keys from computer and support Distributed and Cloud Computing password recovery on both Windows and Linux platforms. ii. Include Special password recovery attacks such as: Rainbow Tables, Decryptum, SureZip, ZipPlaintext, support Password modifiers (case changes, reversed words,etc.)	8
f.	i. Should recover passwords from a memory dump / image or a standalone SAM file, recover passwords for email, websites, and network connections from standalone registry files. ii. Should have Search Index Examiner to retrieve electronic evidence from a Windows Desktop Search Database, able to decrypt passwords for Facebook, Google, and other websites from live memory images or hibernation files.	8
g.	GPU Acceleration & Distributed Computing: Accelerated password recovery using multiple computers, GPUs, and Rainbow Tables. Live Memory Analysis: Acquires and analyzes live memory images to extract encryption keys and passwords.	8
h.	<u>Mandatory Requirement</u> 1) Training Plan for this Item: The bidder shall provide a comprehensive training plan specifically for the proposed item, comprising at minimum: (i) training delivered either directly by the Original Equipment Manufacturer (OEM), whether on premises or online (preferred), or by an OEM-authorized/certified partner or instructor; online third-party/non-OEM training shall be treated as a non-preferred option and, where allowed by the technical requirements for this item, shall be accorded a lower technical score during evaluation; (ii) provision of item-specific training materials, including, as applicable, digital content, videos, hardcopy manuals, and standard operating procedures (SOPs); and (iii) issuance of staff certifications or formal proof of successful completion of the training for all designated personnel who will operate or administer this item. 2) Local Support: (i) 24-month dedicated technical support by OEM; (ii) Dedicated technical support by vendor: on-call assistance, virtual sessions (as required), dedicated support contact, remote investigation assistance, troubleshooting support;	10
	Total	70

Table No 4: Mobile Forensics Software (such as Cellebrite UFED with Cellebrite Inseyyets / Oxygen / XRY / MOBILedit / MD NEXT/ MD RED bundle (MD Plug) or equivalent) (Qty =

1)

TECHNICAL SPECIFICATIONS		Score
a.	Bidder's Experience: Bidder's relevant experience, including deployments in Pakistan and/or internationally.	5
b.	Presentation / Demonstration / POC: A representative of the bidder shall deliver a comprehensive presentation of the quoted solution , including its architecture, key features,	15

	modules, capabilities, constraints, limitations, and licensing terms and conditions. Additional features/modules quoted by the vendor may be considered for extra technical merit. This shall also include a Demonstration / Proof of Concept (POC), preferably onsite, or remotely if required.	
c.	Core Mobile Forensics Capability: The proposed Mobile Forensics solution shall include industry-recognized tools such as Cellebrite UFED together with Cellebrite Inseyets , or equivalent, to enable advanced extraction, analysis, and intelligence generation from mobile devices. The solution should have the ability to capture, extract, process, decode, review, and analyze artifacts from a variety of sources, including smartphones (iOS and Android), cloud data, GPS devices, IoT devices, smartwatches, home devices, and drones. Data acquisition techniques should include multiple supported methods, such as rooting, jailbreaking, ADB backup, application downgrading, and chip-off / chip dump techniques, wherever applicable, to ensure extraction from a wide range of Apple iOS and Android devices and versions.	15
d.	Chipset and Application / Cloud Support: The solution should support a broad range of Chinese and U.S. chipsets, including but not limited to MediaTek, Spreadtrum, and Qualcomm. The solution should also support recovery, parsing, backup analysis, and/or cloud processing of data from social media and communication platforms, including services such as Instagram, Facebook, X (Twitter), LinkedIn, Snapchat, TikTok, Amazon Alexa, Gmail, Google Drive, iCloud, DJI Go, Fitbit, and smartwatch ecosystems.	13
e.	Reporting, Localization, and Updates: The solution should provide options for generating investigative and forensic reports in multiple formats, including HTML, CSV, TXT, RTF, Excel, and PDF. The solution should also include regular software and signature/parser updates to maintain compatibility with newly released devices, applications, and operating system versions.	12
f.	<u>Mandatory Requirement</u> 1) Training Plan for this Item: The bidder shall provide a comprehensive training plan specifically for the proposed item, comprising at minimum: (i) training delivered either directly by the Original Equipment Manufacturer (OEM), whether on premises or online (preferred), or by an OEM-authorized/certified partner or instructor; online third-party/non-OEM training shall be treated as a non-preferred option and, where allowed by the technical requirements for this item, shall be accorded a lower technical score during evaluation; (ii) provision of item-specific training materials, including, as applicable, digital content, videos, hardcopy manuals, and standard operating procedures (SOPs); and (iii) issuance of staff certifications or formal proof of successful completion of the training for all designated personnel who will operate or administer this item. 2) Local Support: (i) 24-month dedicated technical support by OEM; (ii) Dedicated technical support by vendor: on-call assistance, virtual sessions (as required), dedicated support contact, remote investigation assistance, troubleshooting support;	10
	Total	70

Table No 5: Cloud Forensics / DB Forensics / Cloud Applications Forensics/ (Like Magnet, AXIOM Cyber or equivalent) (Qty = 1)

TECHNICAL SPECIFICATIONS		Score
a.	Bidder's Experience: Bidder's relevant experience, including deployments in Pakistan and/or internationally.	5
b.	Presentation / Demonstration / POC: A representative of the bidder shall deliver a comprehensive presentation of the quoted solution , including its architecture, key features, modules, capabilities, constraints, limitations, and licensing terms and conditions. Additional	15

	features/modules quoted by the vendor may be considered for extra technical merit. This shall also include a Demonstration / Proof of Concept (POC), preferably onsite, or remotely if required.	
c.	Cloud application acquisition and recovery support — ability to collect/recover data from major cloud platforms and apps such as Google services, Facebook, Instagram, WhatsApp, X/Twitter, etc.	10
d.	Database forensics capability — ability to parse, extract, reconstruct, and analyze databases such as SQLite, app databases, logs, deleted records, timestamps, and related metadata	10
e.	Cloud credential / token / session artifact support — support for using recovered credentials, tokens, session artifacts, or imports from tools like UFED, Oxygen, Magnet Axiom	10
f.	Artifact parsing and analysis depth — chats, files, account data, logs, timeline reconstruction, user activity correlation, metadata analysis	6
g.	Reporting and export options — reports in HTML, CSV, TXT, RTF, Excel, PDF; filtering, bookmarking, evidence presentation. Software updates and compatibility — regular updates for new cloud apps, schema changes, and evolving app versions	4
h.	<p><u>Mandatory Requirement</u></p> <p>1) Training Plan for this Item: The bidder shall provide a comprehensive training plan specifically for the proposed item, comprising at minimum: (i) training delivered either directly by the Original Equipment Manufacturer (OEM), whether on premises or online (preferred), or by an OEM-authorized/certified partner or instructor; online third-party/non-OEM training shall be treated as a non-preferred option and, where allowed by the technical requirements for this item, shall be accorded a lower technical score during evaluation; (ii) provision of item-specific training materials, including, as applicable, digital content, videos, hardcopy manuals, and standard operating procedures (SOPs); and (iii) issuance of staff certifications or formal proof of successful completion of the training for all designated personnel who will operate or administer this item.</p> <p>2) Local Support: (i) 24-month dedicated technical support by OEM; (ii) Dedicated technical support by vendor: on-call assistance, virtual sessions (as required), dedicated support contact, remote investigation assistance, troubleshooting support;</p>	10
Total		70

Table No 6: DATA RECOVERY & ANALYSIS of Hard Drive/ USB/ SD Cards or similar products (Exterro FTK, EnCase or equivalent) (Qty = 1)

TECHNICAL SPECIFICATIONS		Score
a.	Bidder's Experience: Bidder's relevant experience, including deployments in Pakistan and/or internationally.	5
b.	Presentation / Demonstration / POC: A representative of the bidder shall deliver a comprehensive presentation of the quoted solution , including its architecture, key features, modules, capabilities, constraints, limitations, and licensing terms and conditions. Additional features/modules quoted by the vendor may be considered for extra technical merit. This shall also include a Demonstration / Proof of Concept (POC), preferably onsite, or remotely if required.	15
c.	Data Recovery and File Carving Capability The proposed solution shall support recovery, extraction, and file carving of data from hard disk drives (HDDs), USB flash drives, and SD	10

	cards. The solution shall be capable of recovering deleted, lost, formatted, or corrupted data, including recovery from damaged or corrupted partition structures.	
d.	Supported Platforms, File Systems, and Analysis Capability The proposed solution shall support recovery and analysis from storage media and/or network-attached computers running Windows, macOS, Linux, and other UNIX-based operating systems. The solution shall support commonly used file systems including exFAT, FAT/FAT32, NTFS, NTFS5, HFS, HFS+, HFSX, and APFS. The solution shall support identification and recovery of files based on known file signatures/file types. The quoted solution shall include EnCase or equivalent recognized forensic-grade data recovery and analysis capability.	10
e.	RAID Recovery Support The proposed solution shall support data recovery and reconstruction from RAID volumes, including at minimum RAID 4, RAID 5, and RAID 6, as well as custom RAID layouts where applicable.	10
f.	Forensic Imaging, Integrity Verification, and Chain of Custody Capability The proposed solution shall support forensic imaging/acquisition of hard drives, USB flash drives, and SD cards in a forensically sound manner without altering original evidence. The solution shall support generation and verification of hash values (such as MD5, SHA-1, and SHA-256) for integrity validation before and after acquisition/analysis. The solution shall also support audit logs, case documentation, and reporting features to help maintain chain of custody and evidentiary integrity.	10
g.	<u>Mandatory Requirement</u> 1) Training Plan for this Item: The bidder shall provide a comprehensive training plan specifically for the proposed item, comprising at minimum: (i) training delivered either directly by the Original Equipment Manufacturer (OEM), whether on premises or online (preferred), or by an OEM-authorized/certified partner or instructor; online third-party/non-OEM training shall be treated as a non-preferred option and, where allowed by the technical requirements for this item, shall be accorded a lower technical score during evaluation; (ii) provision of item-specific training materials, including, as applicable, digital content, videos, hardcopy manuals, and standard operating procedures (SOPs); and (iii) issuance of staff certifications or formal proof of successful completion of the training for all designated personnel who will operate or administer this item. 2) Local Support: (i) 24-month dedicated technical support by OEM; (ii) Dedicated technical support by vendor: on-call assistance, virtual sessions (as required), dedicated support contact, remote investigation assistance, troubleshooting support;	10
	Total	70

Table No 7: ADVANCED DIGITAL EVIDENCE EXAMINATION & ANALYSIS (Data Analysis) (Qty = 1)

TECHNICAL SPECIFICATIONS
<ul style="list-style-type: none"> • Digital Evidence Examination Suite: The solution shall provide a comprehensive digital forensic examination and investigation platform for analysis of digital evidence. • Multi-Operating System and File System Support: The solution shall support analysis of evidence originating from Windows, macOS, Linux, and other common file systems and operating environments.

- **Acquisition Capabilities:** The solution shall support **physical and logical acquisition** of digital evidence, where applicable.
- **Artifact Extraction and Analysis :** The solution shall support **advanced artifact extraction** from multiple evidence sources, including user activity, system activity, application data, and other relevant forensic artifacts.
- **Timeline Analysis and Visualization:** The solution shall provide **timeline creation, correlation, filtering, and visualization** for reconstruction of user and system activity.
- **Email and Communication Analysis:** The solution shall support examination and analysis of **emails, message stores, chat data, and other communication records.**
- **Cloud Data Analysis:** The solution shall support collection, parsing, and analysis of **cloud-based data sources**, subject to lawful access and platform compatibility.
- **Mobile Device Data Analysis:** The solution shall support examination and analysis of data extracted from **mobile devices and associated backups**, where applicable.
- **Encrypted Data / Communication Support:** The solution shall support analysis of **encrypted data, encrypted communications, and protected evidence sources**, including available decryption or decoding support where lawfully permissible.
- **Metadata Extraction and Analysis:** The solution shall support identification, extraction, and analysis of **file, media, communication, and system metadata.**
- **Search, Indexing, and Filtering:** The solution shall provide **fast indexing, keyword searching, filtering, and evidence correlation** capabilities for efficient review of large datasets.
- **Reporting and Export:** The solution shall support **report generation and export in multiple formats**, including formats suitable for legal, investigative, and management use.
- **Case Management and Investigation Support:** The solution shall include **case organization, bookmarking, tagging, notes, and evidence management** features to support structured investigations.
- **Integrated Investigation Tools:** The solution shall provide integrated or compatible tools for handling **multiple investigation types**, including computer, mobile, communication, and cloud-based evidence analysis.
- **Interoperability:** The solution shall support **integration or interoperability with other forensic platforms and evidence sources**, where applicable.

EVALUATION CRITERIA		Score
a.	Bidder's Experience: Bidder's relevant experience, including deployments in Pakistan and/or internationally.	5
b.	Presentation / Demonstration / POC: A representative of the bidder shall deliver a comprehensive presentation of the quoted solution , including its architecture, key features, modules, capabilities, constraints, limitations, and licensing terms and conditions. Additional features/modules quoted by the vendor may be considered for extra technical merit. This shall also include a Demonstration / Proof of Concept (POC), preferably onsite, or remotely if required.	15
c.	Multi-OS Support, Acquisition, and Artifact Extraction Capabilities The proposed solution shall support forensic examination and analysis of evidence originating from Windows, macOS, Linux, and other common operating systems and file systems. The solution shall support physical and logical acquisition, where applicable, and shall provide advanced extraction and analysis of forensic artifacts including user activity, system activity, application data, logs, and other relevant evidence sources.	10
d.	Timeline Analysis, Visualization, and Encrypted Data / Communication Support The proposed solution shall provide timeline creation, event correlation, filtering, and visualization features for reconstruction of user and system activity. The solution shall also support examination and analysis of encrypted data, encrypted communications, and	10

	protected evidence sources, including available decryption, decoding, or interpretation support where lawfully permissible.	
e.	Email, Communication, Cloud, and Metadata Analysis Features The proposed solution shall support examination and analysis of emails, message stores, chat data, and other communication records. The solution shall also support collection, parsing, and analysis of cloud-based data sources, subject to lawful access and platform compatibility, along with extraction and analysis of file, media, communication, and system metadata.	10
f.	Search, Reporting, Case Management, and Interoperability Features The proposed solution shall provide fast indexing, keyword searching, filtering, and evidence correlation capabilities for efficient review of large datasets. The solution shall support reporting and export in multiple formats suitable for legal, investigative, and management purposes. The solution shall also include case organization, bookmarking, tagging, notes, and evidence management features, and shall support integration or interoperability with other forensic platforms and evidence sources, where applicable.	10
g.	<u>Mandatory Requirement</u> 1) Training Plan for this Item: The bidder shall provide a comprehensive training plan specifically for the proposed item, comprising at minimum: (i) training delivered either directly by the Original Equipment Manufacturer (OEM), whether on-premises or online (preferred), or by an OEM-authorized/certified partner or instructor; online third-party/non-OEM training shall be treated as a non-preferred option and, where allowed by the technical requirements for this item, shall be accorded a lower technical score during evaluation; (ii) provision of item-specific training materials, including, as applicable, digital content, videos, hardcopy manuals, and standard operating procedures (SOPs); and (iii) issuance of staff certifications or formal proof of successful completion of the training for all designated personnel who will operate or administer this item. 2) Local Support: (i) 24-month dedicated technical support by OEM; (ii) Dedicated technical support by vendor: on-call assistance, virtual sessions (as required), dedicated support contact, remote investigation assistance, troubleshooting support;	10
Total		70

Table No 8: macOS based Forensic Suite (like RECONLAB, MacQuisition or equivalent) (Qty = 1)

TECHNICAL SPECIFICATIONS		Score
a.	Bidder's Experience: Bidder's relevant experience, including deployments in Pakistan and/or internationally.	5
b.	Presentation / Demonstration / POC: A representative of the bidder shall deliver a comprehensive presentation of the quoted solution , including its architecture, key features, modules, capabilities, constraints, limitations, and licensing terms and conditions. Additional features/modules quoted by the vendor may be considered for extra technical merit. This shall also include a Demonstration / Proof of Concept (POC), preferably onsite, or remotely if required.	15

c.	Native macOS Forensic Suite with Multi-Platform Artifact Support The proposed solution shall be a full forensic suite designed natively on macOS. The solution shall support parsing, examination, and recovery of a wide range of forensic artifacts from Windows, macOS/iOS including Apple Extended Metadata, Android OS, Google Takeout data, SQLite databases, Hex data, and Windows Registry artifacts. The solution shall support extraction and analysis of maximum available artifacts relevant to forensic examination and investigation.	10
d.	RAM Analysis Support for Windows and macOS the proposed solution shall support memory (RAM) analysis for both Windows and macOS systems. The solution shall be capable of examining volatile memory artifacts to assist in identification of running processes, network connections, logged-in users, malware indicators, system activity, and other relevant live evidence.	10
e.	Advanced Reporting, Sorting, and Filtering Capabilities The proposed solution shall provide advanced reporting with an integrated built-in editor, enabling investigators to review, edit, and finalize forensic reports within the application. The solution shall support chronological organization of bookmarked, tagged, or selected evidence items and provide advanced sort and filter options based on automated results, metadata, and Apple Extended Metadata for efficient evidence review.	10
f.	Case Management, Bookmarking, and Evidence Review Features The proposed solution shall support case management and structured evidence review features including bookmarking, tagging, notes, categorization, and organization of artifacts within individual cases. The solution shall enable investigators to efficiently correlate, review, and manage evidence items during forensic examination and reporting.	10
g.	Mandatory Requirement 1) Training Plan for this Item: The bidder shall provide a comprehensive training plan specifically for the proposed item, comprising at minimum: (i) training delivered either directly by the Original Equipment Manufacturer (OEM), whether on-premises or online (preferred), or by an OEM-authorized/certified partner or instructor; online third-party/non-OEM training shall be treated as a non-preferred option and, where allowed by the technical requirements for this item, shall be accorded a lower technical score during evaluation; (ii) provision of item-specific training materials, including, as applicable, digital content, videos, hardcopy manuals, and standard operating procedures (SOPs); and (iii) issuance of staff certifications or formal proof of successful completion of the training for all designated personnel who will operate or administer this item. 2) Local Support: (i) 24-month dedicated technical support by OEM; (ii) Dedicated technical support by vendor: on-call assistance, virtual sessions (as required), dedicated support contact, remote investigation assistance, troubleshooting support;	10
Total		70

<u>Table No 9: Data recovery from damaged HDD / SSD / USB and SD card (like PC3000 portable, salvation data or equivalent) (Qty = 1)</u>		
TECHNICAL SPECIFICATIONS		Score
a.	Bidder's Experience: Bidder's relevant experience, including deployments in Pakistan and/or internationally.	5
b.	Presentation / Demonstration / POC: A representative of the bidder shall deliver a comprehensive presentation of the quoted solution , including its architecture, key features,	15

	modules, capabilities, constraints, limitations, and licensing terms and conditions. Additional features/modules quoted by the vendor may be considered for extra technical merit. This shall also include a Demonstration / Proof of Concept (POC), preferably onsite, or remotely if required.	
c.	Support for Logical Data Recovery from Multiple Storage Media and Interfaces The proposed solution shall support logical data recovery from damaged or corrupted HDDs, SSDs, USB flash drives, and SD cards. The solution shall support a wide range of storage interfaces and adapters, including M.2 PCIe NVMe/AHCI SSD, M.2 SATA SSD, PCIe NVMe/AHCI adapter for Apple MacBook SSD, MacBook Pro A1406/A1408 adapter, PCIe x16 SSD adapter, SSD PCIe U.2 adapter, SSD PCIe NVMe/AHCI + Intel Optane adapter, and CFexpress adapter or equivalent.	10
d.	Recovery from Logically Damaged Media and File Systems The proposed solution shall be capable of recovering data from logically damaged media, including cases involving partition corruption, deleted files, formatted volumes, damaged file systems, and other logical data loss scenarios. The solution shall support identification, extraction, and reconstruction of accessible data from such storage media without reliance on physical repair processes.	10
e.	RAID Data Recovery Capability The proposed solution shall support data recovery from damaged RAID arrays and logically degraded RAID volumes. The solution shall support analysis and reconstruction of RAID configurations, where applicable, to facilitate recovery of data from RAID-based storage systems.	10
f.	File System Analysis, Imaging, and Recovery Verification Features The proposed solution shall support analysis of common file systems and provide features for disk imaging, sector-level access, and verification of recovered data. The solution shall support integrity checking, preview of recoverable data, and validation of recovery results to assist investigators or operators in confirming successful recovery outcomes.	10
g.	<u>Mandatory Requirement</u> 1) Training Plan for this Item: The bidder shall provide a comprehensive training plan specifically for the proposed item, comprising at minimum: (i) training delivered either directly by the Original Equipment Manufacturer (OEM), whether on-premises or online (preferred), or by an OEM-authorized/certified partner or instructor; online third-party/non-OEM training shall be treated as a non-preferred option and, where allowed by the technical requirements for this item, shall be accorded a lower technical score during evaluation; (ii) provision of item-specific training materials, including, as applicable, digital content, videos, hardcopy manuals, and standard operating procedures (SOPs); and (iii) issuance of staff certifications or formal proof of successful completion of the training for all designated personnel who will operate or administer this item. 2) Local Support: (i) 24-month dedicated technical support by OEM; (ii) Dedicated technical support by vendor: on-call assistance, virtual sessions (as required), dedicated support contact, remote investigation assistance, troubleshooting support;	10
	Total	70

Table No 10: MEMORY FORENSICS (Volatile Memory Analysis) (Qty = 1)

TECHNICAL SPECIFICATIONS
<ul style="list-style-type: none"> • Multi-OS support: Windows (7/8/10/11/Server), Linux (Ubuntu, CentOS, Debian, Kali), macOS (10.x-14.x), Android (4.x-14.x), iOS, and embedded systems • Memory acquisition formats: RAW, ELF Core dumps, Microsoft crash dumps (.dmp), hibernation

	<p>files (hiberfil.sys), VMware snapshots, Hyper-V saves</p> <ul style="list-style-type: none"> • Advanced artifact extraction: Process enumeration, DLL/module analysis, network connections, registry hives, command history, credentials, encryption keys • Malware detection capabilities: Process injection, code hollowing, reflective DLL loading, API hooking, inline hooking, kernel rootkits, UEFI threats • Automated threat intelligence integration with YARA rules, VirusTotal, and custom IOC databases • Memory structure parsing and reconstruction for forensic timeline analysis • Live memory acquisition with minimal system footprint (kernel-level acquisition drivers) • Volatility framework integration for extensible plugin architecture • Machine learning-based anomaly detection for advanced persistent threats (APTs) • Kernel object analysis: drivers, SSDT hooks, IRP handlers, filter drivers • Distributed processing capabilities for large-scale memory analysis (10GB+ dumps) • Cross-platform analysis: analyze Windows memory on Linux/macOS workstations • Encrypted memory support: FileVault 2, BitLocker, LUKS decryption • Cloud memory forensics: AWS EC2, Azure VM, GCP instance memory capture • Reporting and visualization: timeline views, process trees, network graphs, exportable reports (PDF, HTML, JSON, XML) • API integration for automated workflows and SIEM/SOAR platforms • Chain of custody tracking and evidence integrity verification (hash validation) • Multi-threading and GPU acceleration for faster processing 	
EVALUATION CRITERIA		Score
a.	Bidder's Experience: Bidder's relevant experience, including deployments in Pakistan and/or internationally.	5
b.	Presentation / Demonstration / POC: A representative of the bidder shall deliver a comprehensive presentation of the quoted solution , including its architecture, key features, modules, capabilities, constraints, limitations, and licensing terms and conditions. Additional features/modules quoted by the vendor may be considered for extra technical merit. This shall also include a Demonstration / Proof of Concept (POC), preferably onsite, or remotely if required.	15
c.	Comprehensive support for Windows (7/8/10/11/Server 2012-2022), Linux distributions (Ubuntu, CentOS, Debian, Kali, RedHat), macOS (10.12-14.x Sonoma), Android (4.x-14.x), iOS (12.x-17.x), and emerging platforms. Support for virtual machines (VMware, Hyper-V, VirtualBox, KVM) and cloud instances (AWS, Azure, GCP).	5
d.	Live memory acquisition with kernel-level drivers for Windows, Linux, macOS. Support for multiple acquisition formats: RAW, ELF, Microsoft crash dumps, hibernation files, VMware memory snapshots. Minimal footprint during acquisition. Remote memory acquisition capability for enterprise investigations.	7
e.	Detection of advanced threats: process injection (Create Remote Thread, APC, Atom Bombing), code hollowing, reflective DLL loading, API hooking (inline, IAT, SSDT), kernel rootkits, UEFI/bootkit threats, fileless malware. Integration with YARA rules, Virus Total API, and custom threat intelligence feeds. Machine learning-based anomaly detection.	7
f.	Multi-threaded processing with GPU acceleration support. Ability to process large memory dumps (16GB-256GB) efficiently. Distributed processing architecture for enterprise-scale investigations. Processing speed benchmarks: 8GB dump analyzed within 15-30 minutes on mid-range workstation. Parallel case processing capabilities.	7

g.	Comprehensive artifact extraction: process listing with PID/PPID trees, loaded DLLs and modules, network connections (TCP/UDP/raw sockets), open files and handles, registry hives (SAM, SYSTEM, SOFTWARE, SECURITY), command-line history (bash, PowerShell, cmd), clipboard contents, encryption keys (BitLocker, LUKS, TrueCrypt), cached credentials (LSA secrets, Kerberos tickets, NTLM hashes), browser artifacts, Shimcache, Amcache, Prefetch. Support for memory-based timeline reconstruction.	7
h.	Plugin architecture for custom analysis modules. API integration with SIEM (Splunk, QRadar, ArcSight), SOAR platforms, and case management systems. Export capabilities: CSV, JSON, XML, PDF, HTML. Integration with third-party forensic tools (Autopsy, EnCase, FTK, X-Ways). Command-line interface for automation and scripting (Python, PowerShell). Support for custom YARA rules and threat intelligence feeds.	7
i.	<p><u>Mandatory Requirement</u></p> <p>1) Training Plan for this Item: The bidder shall provide a comprehensive training plan specifically for the proposed item, comprising at minimum: (i) training delivered either directly by the Original Equipment Manufacturer (OEM), whether on-premises or online (preferred), or by an OEM-authorized/certified partner or instructor; online third-party/non-OEM training shall be treated as a non-preferred option and, where allowed by the technical requirements for this item, shall be accorded a lower technical score during evaluation; (ii) provision of item-specific training materials, including, as applicable, digital content, videos, hardcopy manuals, and standard operating procedures (SOPs); and (iii) issuance of staff certifications or formal proof of successful completion of the training for all designated personnel who will operate or administer this item.</p> <p>2) Local Support: (i) 24-month dedicated technical support by OEM; (ii) Dedicated technical support by vendor: on-call assistance, virtual sessions (as required), dedicated support contact, remote investigation assistance, troubleshooting support;</p>	10
Total		70

Table No 11: IoT & FIRMWARE FORENSICS TOOLS (Qty = 1)

TECHNICAL SPECIFICATIONS
<ul style="list-style-type: none"> • Firmware acquisition from multiple sources: vendor downloads, OTA updates, SPI/UART/JTAG extraction, device backups, companion apps • Automated firmware unpacking and filesystem extraction: SquashFS, JFFS2, CramFS, YAFFS, UBIFS, ext2/3/4, custom proprietary formats • Binary analysis and reverse engineering: ARM, MIPS, x86, PowerPC, RISC-V architecture support • Software Bill of Materials (SBOM) generation with component identification and version tracking • CVE vulnerability scanning against 100,000+ known vulnerabilities in embedded software, libraries, and open-source components • Binary hardening assessment: Stack Canaries, ASLR, NX/DEP, RELRO, PIE, SafeSEH, Control Flow Guard • Security vulnerability detection: hardcoded credentials, private keys, certificates, API tokens, backdoor accounts, weak cryptography • Cryptographic analysis: certificate expiration, weak algorithms (MD5, SHA1, DES, 3DES), self-signed certificates, insecure random number generation • Configuration file analysis: default passwords, insecure settings, exposed services, debug interfaces • Hardware interface detection and exploitation: UART console access, JTAG debugging, SPI flash dumping, I2C communication

	<ul style="list-style-type: none"> • Runtime firmware emulation with QEMU for dynamic analysis and vulnerability testing • IoT protocol analysis: MQTT, CoAP, Zigbee, Z-Wave, BLE, LoRaWAN, Thread, Matter, Modbus TCP/RTU • Network traffic analysis for IoT devices: packet capture, protocol dissection, privacy assessment, data exfiltration detection • Device fingerprinting and behavioral profiling: device identification, communication patterns, cloud endpoint mapping • Supply chain security assessment: third-party component analysis, license compliance, known vulnerable libraries • Compliance checking: OWASP IoT Top 10, NIST Cybersecurity Framework, IEC 62443, FDA premarket guidance • Automated report generation with remediation recommendations • API integration for CI/CD pipeline and DevSecOps workflows • Cloud-based and on-premise deployment options 	
EVALUATION CRITERIA		Score
a.	Bidder's Experience: Bidder's relevant experience, including deployments in Pakistan and/or internationally.	5
b.	Presentation / Demonstration / POC: A representative of the bidder shall deliver a comprehensive presentation of the quoted solution , including its architecture, key features, modules, capabilities, constraints, limitations, and licensing terms and conditions. Additional features/modules quoted by the vendor may be considered for extra technical merit. This shall also include a Demonstration / Proof of Concept (POC), preferably onsite, or remotely if required.	15
c.	Support for firmware acquisition from vendor websites, OTA update servers, direct memory dumping (SPI, UART, JTAG), device backup files, and companion mobile apps. Automated firmware extraction from compressed archives, encrypted containers, and proprietary formats. Support for multiple filesystem types: SquashFS, JFFS2, CramFS, YAFFS, UBIFS, ext2/3/4, custom formats.	8
d.	Multi-architecture binary analysis: ARM (32/64-bit), MIPS (little/big endian), x86/x64, PowerPC, RISC-V, AVR. Automated disassembly and decompilation. Static analysis for vulnerability identification. Binary comparison and diffing capabilities. Reverse engineering tools integration (Ghidra, IDA Pro, Radare2).	8
e.	Comprehensive Software Bill of Materials (SBOM) generation with component identification, version tracking, and license information. CVE vulnerability scanning against 90,000+ known vulnerabilities in embedded Linux, BusyBox, OpenSSL, libraries, and open-source components. Automated severity scoring (CVSS v3.1). Patch availability checking. Compliance with SBOM standards (SPDX, Cyclone DX).	8
f.	Binary hardening analysis: Stack Canaries, ASLR, NX/DEP, RELRO, PIE, Control Flow Guard. Hardcoded credential detection (passwords, API keys, tokens, SSH keys). Private key and certificate identification. Weak cryptography detection (MD5, SHA1, DES, RC4, weak RSA keys). Backdoor and suspicious function identification. Configuration file security analysis. Default password detection. Debug interface identification.	8
g.	UART console identification and access. JTAG debugging interface support. SPI flash memory dumping. I2C and SPI protocol analysis. PCB investigation guidance. IoT protocol analysis: MQTT, CoAP, Zigbee, Z-Wave, BLE, LoRaWAN, Thread, Matter. Network traffic capture and analysis. Privacy assessment and data exfiltration detection.	8
h.	<u>Mandatory Requirement</u>	10

	<p>1) Training Plan for this Item: The bidder shall provide a comprehensive training plan specifically for the proposed item, comprising at minimum: (i) training delivered either directly by the Original Equipment Manufacturer (OEM), whether on premises or online (preferred), or by an OEM-authorized/certified partner or instructor; online third-party/non-OEM training shall be treated as a non-preferred option and, where allowed by the technical requirements for this item, shall be accorded a lower technical score during evaluation; (ii) provision of item-specific training materials, including, as applicable, digital content, videos, hardcopy manuals, and standard operating procedures (SOPs); and (iii) issuance of staff certifications or formal proof of successful completion of the training for all designated personnel who will operate or administer this item.</p> <p>2) Local Support: (i) 24-month dedicated technical support by OEM; (ii) Dedicated technical support by vendor: on-call assistance, virtual sessions (as required), dedicated support contact, remote investigation assistance, troubleshooting support;</p>	
Total		70

<u>Table No 12: AI FORENSICS & DEEPFAKE DETECTION TOOLS (Qty = 1)</u>
TECHNICAL SPECIFICATIONS
<ul style="list-style-type: none"> • Multi-modal deepfake detection: video (face swap, face reenactment, synthetic faces), audio (voice cloning, speech synthesis), images (GAN-generated, diffusion models), text (LLM-generated content) • Advanced detection algorithms: convolutional neural networks (CNNs), recurrent neural networks (RNNs), transformer-based models, ensemble learning • Video analysis capabilities: facial landmark inconsistency detection, blinking pattern analysis, lip-sync verification, temporal coherence analysis, compression artifact detection • Audio deepfake detection: phonetic inconsistency analysis, spectral artifact detection, prosody analysis, speaker embedding verification, voice biometric comparison • Image forensics: GAN fingerprint detection, diffusion model artifacts, pixel-level manipulation detection, EXIF metadata analysis, compression signature analysis • Facial recognition and verification: identity matching, face morphing detection, presentation attack detection (PAD) • Real-time and batch processing: live stream analysis, API-based real-time detection, bulk file processing • Confidence scoring and probability assessment: per-frame analysis, overall authenticity score, manipulation likelihood heatmaps • Visual evidence presentation: manipulation localization, side-by-side comparison, temporal anomaly highlighting, forensic markers overlay • Metadata and file structure analysis: creation timestamp verification, editing software fingerprints, hidden metadata extraction • Forensic-grade reporting: chain of custody, tamper-evident documentation, court-admissible evidence packaging, expert witness support • Machine learning model transparency: explainable AI (XAI) features, decision rationale documentation, confidence interval reporting • Adversarial robustness: resistance to anti-forensic techniques, adversarial example detection, model hardening • Multi-language support: text analysis in 100+ languages, global deployment capability • Integration capabilities: API for third-party applications, SDK for custom development, SIEM/SOAR

	<p>integration, case management system connectivity</p> <ul style="list-style-type: none"> • Threat intelligence integration: known deepfake campaign tracking, actor attribution, IOC correlation • Cloud and on-premise deployment: SaaS platform, private cloud, air-gapped systems • Data privacy and security: zero data persistence options, GDPR/CCPA compliance, end-to-end encryption, SOC 2 Type II certification • Performance benchmarks: 95%+ detection accuracy, <2% false positive rate, real-time processing capability • Continuous model updates: monthly detection algorithm improvements, new deepfake technique coverage, emerging threat adaptation 	
EVALUATION CRITERIA		Score
a.	Bidder's Experience: Bidder's relevant experience, including deployments in Pakistan and/or internationally.	5
b.	Presentation / Demonstration / POC: A representative of the bidder shall deliver a comprehensive presentation of the quoted solution , including its architecture, key features, modules, capabilities, constraints, limitations, and licensing terms and conditions. Additional features/modules quoted by the vendor may be considered for extra technical merit. This shall also include a Demonstration / Proof of Concept (POC), preferably onsite, or remotely if required.	15
c.	Comprehensive detection across multiple modalities: video deepfakes (face swap, face reenactment, full synthesis), audio deepfakes (voice cloning, TTS-generated speech), AI-generated images (GAN, diffusion models like DALL-E/Stable Diffusion/Midjourney), AI-generated text (ChatGPT, GPT-4, Claude, LLaMA). Support for various deepfake techniques: FaceSwap, DeepFaceLab, Wav2Lip, RVC, ElevenLabs cloning, and emerging methods.	8
d.	Minimum 95% detection accuracy across video, audio, and image modalities. False positive rate <2%. Real-time processing capability: 1080p video at 30fps, audio analysis in <5 seconds per minute. Batch processing: 1000+ files per hour. Performance validation through third-party testing (NIST, academic institutions). Benchmark results on standard datasets (FaceForensics++, DFDC, ASVspoof).	8
e.	Per-frame and temporal analysis with confidence scoring. Manipulation localization with heatmaps and visual overlays. Temporal inconsistency detection across video sequences. Metadata and file structure forensics. Compression artifact analysis. Creation timeline reconstruction. Visual evidence presentation tools for court proceedings. Exportable forensic reports with technical details and lay-person summaries. Chain of custody documentation. Tamper-evident evidence packaging.	8
f.	Facial landmark inconsistency detection. Blinking pattern and micro-expression analysis. Lip-sync verification and audio-visual coherence checking. Spectral analysis for audio deepfakes. Voice biometric verification. EXIF and metadata extraction. Hidden data detection (steganography). Adversarial attack detection. Anti-forensic technique identification. Explainable AI features for decision transparency.	8
g.	RESTful API for real-time detection and batch processing. SDK for custom application development. Integration with SIEM platforms (Splunk, QRadar), SOAR tools, and case management systems. Support for cloud deployment (AWS, Azure, GCP), on-premise installation, and air-gapped environments. Docker containerization. Scalable architecture for enterprise deployment. Multi-tenancy support with RBAC.	8

h.	<p><u>Mandatory Requirement</u></p> <p>1) Training Plan for this Item: The bidder shall provide a comprehensive training plan specifically for the proposed item, comprising at minimum: (i) training delivered either directly by the Original Equipment Manufacturer (OEM), whether on premises or online (preferred), or by an OEM-authorized/certified partner or instructor; online third-party/non-OEM training shall be treated as a non-preferred option and, where allowed by the technical requirements for this item, shall be accorded a lower technical score during evaluation; (ii) provision of item-specific training materials, including, as applicable, digital content, videos, hardcopy manuals, and standard operating procedures (SOPs); and (iii) issuance of staff certifications or formal proof of successful completion of the training for all designated personnel who will operate or administer this item.</p> <p>2) Local Support: (i) 24-month dedicated technical support by OEM; (ii) Dedicated technical support by vendor: on-call assistance, virtual sessions (as required), dedicated support contact, remote investigation assistance, troubleshooting support;</p>	10
Total		70

<u>Table No 13: Mobile Application Security Testing (MAST) (Qty = 1)</u>		
Technical Specifications		Score
a.	Bidder's Experience: Bidder's relevant experience, including deployments in Pakistan and/or internationally.	5
b.	Presentation / Demonstration / POC: A representative of the bidder shall deliver a comprehensive presentation of the quoted solution , including its architecture, key features, modules, capabilities, constraints, limitations, and licensing terms and conditions. Additional features/modules quoted by the vendor may be considered for extra technical merit. This shall also include a Demonstration / Proof of Concept (POC), preferably onsite, or remotely if required.	15
c.	Emulate iOS/Android devices at the kernel level for accurate runtime analysis. Support for both static (SAST) and dynamic (DAST) analysis. Ability to test native, hybrid, and web mobile applications	10
d.	Generate detailed security assessment reports, highlighting vulnerabilities, evidence, and remediation steps. Automated reports aligned with standards like OWASP Mobile Application Security Testing Guide (MASTG), CWE, and CVE. Detailed findings with impact analysis and remediation guidance to support compliance efforts	10
e.	On-Premise deployment and allows tailored security checks to meet specific organizational needs.	10
f.	Process tracing for dynamic analysis. One-click jailbreak/root access for comprehensive testing scenarios. Network traffic interception and SSL/TLS stripping capabilities.	10
g.	<p><u>Mandatory Requirement</u></p> <p>1) Training Plan for this Item: The bidder shall provide a comprehensive training plan specifically for the proposed item, comprising at minimum: (i) training delivered either directly by the Original Equipment Manufacturer (OEM), whether on premises or online (preferred), or by an OEM-authorized/certified partner or instructor; online third-party/non-OEM training shall be treated as a non-preferred option and, where allowed by the technical requirements for this item, shall be accorded a lower technical score during evaluation; (ii) provision of item-specific training materials, including, as</p>	10

	applicable, digital content, videos, hardcopy manuals, and standard operating procedures (SOPs); and (iii) issuance of staff certifications or formal proof of successful completion of the training for all designated personnel who will operate or administer this item.	
	2) Local Support: (i) 24-month dedicated technical support by OEM; (ii) Dedicated technical support by vendor: on-call assistance, virtual sessions (as required), dedicated support contact, remote investigation assistance, troubleshooting support;	
	Total	70

Table No 14: Fuzz Testing (Qty = 1)

Technical Specifications		Score
a.	Bidder's Experience: Bidder's relevant experience, including deployments in Pakistan and/or internationally.	5
b.	Presentation / Demonstration / POC: A representative of the bidder shall deliver a comprehensive presentation of the quoted solution , including its architecture, key features, modules, capabilities, constraints, limitations, and licensing terms and conditions. Additional features/modules quoted by the vendor may be considered for extra technical merit. This shall also include a Demonstration / Proof of Concept (POC), preferably onsite, or remotely if required.	15
c.	Automated Input Generation (Random) Automatically generates inputs to test and find hidden bugs without requiring access to source code, making it suitable for testing third-party applications and systems	10
d.	Enables fuzz testing across a variety of common network protocol like HTTPs, FTP. TCP etc. supports custom and proprietary protocols through its 'Auto Learning' feature. Allows long-running fuzzing campaigns for deeper vulnerability discovery	5
e.	Tests APIs by sending randomized or malformed requests to detect vulnerabilities. (REST, SOAP, GraphQL)	10
f.	Identifies application crashes and logs details for debugging and analysis. Detects critical memory-related vulnerabilities in applications Memory Leak, Buffer Overflow, Use-After-Free Detection	10
g.	Comprehensive logs and reports that provide insights into discovered vulnerabilities, including steps to reproduce and suggested fixes.	5
h.	<u>Mandatory Requirement</u> 1) Training Plan for this Item: The bidder shall provide a comprehensive training plan specifically for the proposed item, comprising at minimum: (i) training delivered either directly by the Original Equipment Manufacturer (OEM), whether on premises or online (preferred), or by an OEM-authorized/certified partner or instructor; online third-party/non-OEM training shall be treated as a non-preferred option and, where allowed by the technical requirements for this item, shall be accorded a lower technical score during evaluation; (ii) provision of item-specific training materials, including, as applicable, digital content, videos, hardcopy manuals, and standard operating procedures (SOPs); and (iii) issuance of staff certifications or formal proof of successful completion of the training for all designated personnel who will operate or administer this item. 2) Local Support: (i) 24-month dedicated technical support by OEM; (ii) Dedicated technical support by vendor: on-call assistance, virtual sessions (as required), dedicated	10

	support contact, remote investigation assistance, troubleshooting support;	
	Total	70

11. EVALUATION CRITERIA OF DIGITAL FORENSIC AND SCREENING HARDWARE

- a. Bidders should have been in IT business, sales and after sales support/maintenance provisioning for at least three years.
- b. All equipment should have one year's comprehensive onsite warranty including parts.
- c. Bidders or partners/ affiliate should be a company/ firm having operational office in Pakistan.
- d. Bidders should have registration with Income Tax, Sales Tax and FBR's Active Taxpayer's List (ATL).
- e. The following documents/ evidence should be attached in support of the technical proposal evaluation as per the above criteria:
 - a. Copies of NTN registration with Income Tax, Sales Tax departments
 - b. Experience Certificate
 - c. Authorized partner/ OEM Certificate where applicable
 - d. Detailed product specification.
- f. Detailed technical evaluation will be done for firms who qualify the preliminary evaluation mentioned above.
- g. In detailed technical evaluation the evaluation and award committee will verify the compliance with specification, item-wise, mentioned in Table 15 to 36. below. Any bid containing less specification of any item will be rejected in respect to that item.
- h. Financial Proposals of the technically qualified firms will be opened before the representatives who wish to attend the tender opening. Financial Proposals will be opened only for those vendors only who qualify (meet the specifications) in technical and detailed technical evaluation.
- i. Bidder having lowest financial bid will be awarded with the contract. After acceptance of technical and financial bid, an award letter shall be issued. Within 15 days of receipt of award letter, the successful OEM/ Firm will sign and return the duplicate copy of the award letter in acknowledgement thereof. In the event the copy of the award letter duly signed by firm is not received by the stipulated date, PKCERT may, unless it consents to extension of time for submission thereof, cancel the award letter issued to it.
- j. **OEM Warranty:** The vendor shall provide an official OEM hardware warranty for a minimum period of one years from the date of delivery against all hardware items.
- k. **Local Support and OEM Coordination:** The vendor shall ensure a minimum of two (2) years of comprehensive local support, including hardware warranty services, faulty hardware replacement, and active coordination with the OEM for issue resolution unless otherwise mentioned.
- l. A **Service Level Agreement (SLA)** may be executed at the time of contract, unless the Client specifies otherwise; accordingly, all financial proposals shall include an optional Service Level Agreement cost/component, if required at the time of contract. The final price shall be inclusive of the SLA cost and all applicable taxes as per law.

Note (Applicable on all Table No: 15 to 36) (applicable to all hardware items)

- All products shall be genuine, brand new, and unused
- All products shall be sourced through the manufacturer / principal / authorized distributor / authorized partner channel
- All Products shall be of commercial-grade quality suitable for continuous official and office use
- All components and accessories required for complete and functional operation shall be included in the quoted supply.
- All products shall be from an established manufacturer with proven support and after-sales service availability in Pakistan.

Table No 15

Forensics Workstation (Qty: 04)
(System with specs mentioned below or equivalent)

- 1. Mainboard / Platform:** Workstation-class motherboard based on Intel W790 chipset, with **OEM-supported socket/package compatible with Intel Xeon W-3500 / W-2500 series processors**, or equivalent, with minimum 8 DIMM slots, support for DDR5 ECC RDIMM, PCIe Gen 5.0, minimum 3 × M.2 NVMe slots, minimum 2 × Slim SAS / U.2-capable ports, and provision for dual 10GbE plus 1 × 1GbE management port, either onboard or via add-in NIC.
- 2. Processor:** Intel Xeon w7-3565X or equivalent, minimum **32 cores / 64 threads**, base clock **2.5 GHz** or higher, turbo frequency **up to 4.8 GHz** or higher.
- 3. Memory:** Minimum **256GB DDR5 ECC RDIMM**, expandable to **1TB or higher**.
- 4. Graphics:** Professional GPU with minimum **24GB ECC VRAM**, suitable for forensic visualization, AI-assisted analysis, and multi-display use; e.g., **RTX PRO 6000 Blackwell** or equivalent.
- 5. Storage:**
 - **1 x 2TB NVMe SSD Gen 5** for OS / applications
 - **1 x 4TB NVMe SSD Gen 5** for case database / active evidence
 - **2 x enterprise HDDs of 20TB or higher each** for evidence / archive storage
- 6. Networking:** Minimum **2 x 10GbE ports** and **1 x 1GbE dedicated management port**.
- 7. Chassis / Power:** Full-tower workstation chassis with high-airflow cooling, support for multiple full-length PCIe cards, and minimum **1200W, 80 PLUS Platinum** power supply.
- 8. Minimum 32-inch 4K LED monitor** with IPS panel and **USB-C / hub** functionality, including all accessories for connectivity.
- 9. Forensic Bridge:** Integrated **forensic write-blocking bridge**, such as **OpenText / Tableau T356789iu Forensic Universal Bridge**, or equivalent.
- 10. Cable / Adapter Set:** Complete compatible forensic cable and adapter set for common interfaces, including **PCIe, SATA, IDE, LIF, and ZIF**, or equivalent.
- 11. General:** The offered system shall be supplied as a **fully integrated, complete, and ready-to-use forensic workstation solution**, including all required accessories, cables, adapters, and components for immediate operational deployment.
 - **Forensic-Bridge:** Tableau T356789iu Forensic Universal Bridge USB3, Imaging Shelf.
 - **Cable Set:** TC2-8-R2, TC4-8-R2, TC6-8, TC7-9-9 PCIe Adapter Set: TDA7-1, TDA7-2, TDA7-3, TDA7-4, TDA7-7, TCPCIE-4, SATA&IDE Adapter Set: TC6-2, TDA3-1, TDA3-2, TDA3-3, TDA3-LIF, two LIF cables, TDA5-18, TDA5-25, TDA5-ZIF, TC20- BNDL

Mandatory Requirement

- The bidder / vendor shall provide an official OEM warranty of minimum one (1) year from the date of delivery for all supplied hardware items, unless otherwise specified in the bidding document.

- The bidder / vendor shall ensure minimum two (2) years local support services, including repair, replacement, servicing, warranty claim facilitation, faulty hardware replacement, and necessary coordination with the principal / OEM / authorized partner for timely resolution of issues, unless otherwise mentioned.
- Repair, replacement, and servicing support for the supplied hardware shall be provided in accordance with the applicable warranty, support terms, and service response commitments defined in the contract and/or Service Level Agreement.
- If required by the Client, a Service Level Agreement may be executed at the time of contract award; therefore, the financial proposal shall clearly include an optional SLA cost/component.
- The quoted price shall be deemed inclusive of all applicable taxes and the SLA cost/component, wherever applicable under the final contract.

Table No 16	
Forensics Laptops (Qty: 04)	
<i>(System with specs mentioned below or equivalent)</i>	
Processor:	<ul style="list-style-type: none"> • Intel® Core™ Ultra 9 Processor 386H or equivalent • Minimum 8-core CPU • 2.7+ GHz base frequency, 5.0+ GHz turbo
Memory:	<ul style="list-style-type: none"> • 64GB DDR5 RAM • Dual-channel for performance
Storage:	<ul style="list-style-type: none"> • 1TB M.2 NVMe SSD Gen 5 (OS) • 1TB SSD Gen 5 (Evidence/Data) • Hardware encryption support
Display:	<ul style="list-style-type: none"> • 14–16-inch QHD+ (2560x1600) minimum • 100% sRGB color accuracy • USB-C with Thunderbolt 4 support
Graphics:	<ul style="list-style-type: none"> • NVIDIA RTX 5070 or above • 8GB+ dedicated
Battery:	<ul style="list-style-type: none"> • 60+ Wh capacity • Fast charging capability
Ports & Connectivity:	<ul style="list-style-type: none"> • USB-C Thunderbolt 4 (minimum 2x) • USB 3.2 Type-A (minimum 2x) • HDMI 2.1 • SD Card Reader • 3.5mm audio jack • Gigabit Ethernet (RJ-45 native or via OEM-supported adapter / dock) and optional 4G / 5G cellular connectivity
Accessories:	<ul style="list-style-type: none"> • OEM Laptop Bag/Backpack: Original OEM-branded or OEM-supplied padded laptop bag/backpack including a laptop sized sleeve, compatible with 14–16-inch laptops, with separate compartments for power adapter and accessories and black/brown/grey in color; quantity: <i>(One</i>

(1) bag per laptop)

Features(preferred):

- Lightweight (<2kg for portability)
- Aluminum chassis for durability
- Secure boot capabilities
- Hardware security module support

Pre-Installed OS & Software:

- Operating system (**licensed**): Windows 11 Pro 64-bit
- Productivity suite (**licensed**): Microsoft Office Full Suite (Word, Excel, PowerPoint, Outlook, and others) unless otherwise specified in the RFP or contract.

Hardware Write Blocking:

Laptop ULTRAKIT (v5) – Set of forensic hardware write blockers (Ultra Block USB3.0 to IDE/SATA, Ultra Block PCIe, and Ultra Block USB3.0) including interface cables, SATA III to m.2 and mSATA adapter, PCIe m.2 SSD adapter and two power supplies in a watertight/airtight

Case - Forensic Media Card Reader – Read- Only and Read/Write switchable (Packaged in Laptop Ultra Kit v5)

Mandatory Requirement

- The bidder / vendor shall provide an official OEM warranty of minimum one (1) year from the date of delivery for all supplied hardware items, unless otherwise specified in the bidding document.
- The bidder / vendor shall ensure minimum two (2) years local support services, including repair, replacement, servicing, warranty claim facilitation, faulty hardware replacement, and necessary coordination with the principal / OEM / authorized partner for timely resolution of issues, unless otherwise mentioned.
- Repair, replacement, and servicing support for the supplied hardware shall be provided in accordance with the applicable warranty, support terms, and service response commitments defined in the contract and/or Service Level Agreement.
- If required by the Client, a Service Level Agreement may be executed at the time of contract award; therefore, the financial proposal shall clearly include an optional SLA cost/component.
- The quoted price shall be deemed inclusive of all applicable taxes and the SLA cost/component, wherever applicable under the final contract.

Table No 17

**LED Monitors (Qty: 08)
(Specifications mentioned below or equivalent)**

- **Display:** Minimum 32-inch 4K UHD LED monitor (3840 × 2160) with IPS panel, anti-glare surface, wide viewing angles (178°/178° minimum), and minimum 60Hz refresh rate.
- **Brightness & Color:** Minimum 350 nits' brightness, 1000:1 contrast ratio, minimum 99% sRGB Color gamut, support for 1.07 billion colours (8-bit + FRC or true 10-bit), factory calibrated for professional use preferred.
- **Connectivity & Hub:** Minimum 1 × USB-C with DisplayPort Alt Mode, video/data support, and minimum 90W power delivery; minimum 1 × HDMI 2.1 or higher; minimum 1 × DisplayPort 1.4; minimum 3 × USB downstream ports / hub functionality; minimum 1 × USB upstream port; audio out / headphone out preferred; Ethernet / RJ-45 through monitor dock preferred.
- **Ergonomics:** Height adjustment, tilt, swivel, VESA mount compatibility, and pivot functionality preferred.

- **Accessories:** Power cable, USB-C cable, HDMI cable, DisplayPort cable, USB upstream cable (if required for hub operation), and all necessary accessories for complete connectivity and operation.
- **Features (preferred):** Low blue light / flicker-free technology, thin bezel design, OEM-supplied stand and accessories, on-screen display controls for brightness, Color, and input source, and energy-efficient operation.
- **Certification & Compliance:** CE / FCC or equivalent certified, Energy Star / TCO / EPEAT preferred, with OEM warranty support.

Mandatory Requirement

- The bidder / vendor shall provide an official OEM warranty of minimum one (1) year from the date of delivery for all supplied hardware items, unless otherwise specified in the bidding document.
- The bidder / vendor shall ensure minimum two (2) years local support services, including repair, replacement, servicing, warranty claim facilitation, faulty hardware replacement, and necessary coordination with the principal / OEM / authorized partner for timely resolution of issues, unless otherwise mentioned.
- Repair, replacement, and servicing support for the supplied hardware shall be provided in accordance with the applicable warranty, support terms, and service response commitments defined in the contract and/or Service Level Agreement.
- If required by the Client, a Service Level Agreement may be executed at the time of contract award; therefore, the financial proposal shall clearly include an optional SLA cost/component.
- The quoted price shall be deemed inclusive of all applicable taxes and the SLA cost/component, wherever applicable under the final contract.

Table No 18

**FORENSIC SERVER (Supporting Infrastructure) (Qty=2)
(System with specs mentioned below or equivalent)**

The vendor shall be fully responsible for the installation, configuration, architectural layout design, and testing of the hardware. This includes ensuring successful deployment and operational readiness of all supplied equipment.

Technical Specifications

1. Processor & Architecture:

- 64-core processing capability (**Intel Xeon 6** family series or 5th Gen AMD EPYC 9005 family equivalent)
- Support for parallel processing and multi-threaded operations
- Base frequency minimum 2.3 GHz base, 3.9 GHz max turbo
- Hyper-Threading/SMT enabled for 64 logical processors
- Intel VT-x or AMD-V virtualization technology support
- Advanced vector extensions (AVX-512) for AI/ML workload acceleration

2. GPU Configuration (Critical for AI Detection):

- Required: **2x NVIDIA RTX 6000 Ada Generation (48GB ECC VRAM each) or equivalent enterprise GPU**
- Minimum Specifications:
 - NVIDIA CUDA Compute Capability 7.5 or higher
 - Tensor Core support for deep learning acceleration
 - PCIe 4.0 x16 interface per GPU (minimum 2 slots required)
 - NVLink bridge support (optional, for GPU-to-GPU communication)
 - VMware vGPU support for virtualized GPU sharing

- **300W maximum board power per card** with adequate cooling
 - CUDA 12.x compatible drivers
- Purpose: Real-time deepfake detection, 4K video processing, AI model inference, parallel analysis

3. Memory:

- 256GB DDR5 ECC RAM (expandable to 512GB)
- RDIMM configuration for reliability
- DDR5 up to 6400 MT/s
- 16x DIMM slots minimum for expansion flexibility
- Memory error correction and detection
- Optimized for AI workloads: in-memory model caching, large batch processing

4. Storage Architecture:

- Hot Tier (High-Speed Active Storage):
 - 2TB NVMe SSD PCIe 4.0 (minimum)
 - U.2 or M.2 form factor, enterprise-grade (min. 2 DWPD)
 - Purpose: Active analysis queue, ML models, temporary processing files, operating system, VMware datastores
- Cold Tier (Archive/Evidence Storage):
 - 40TB HDD Enterprise SATA (7200 RPM or higher)
 - Hot-swappable drive bays
 - Purpose: Evidence archive, historical cases, backup ML models, long-term retention
- RAID Configuration:
 - Hardware RAID controller with 2GB+ cache (battery-backed)
 - Support for RAID 0, 1, 5, 6, 10, 50, 60
 - Recommended: RAID 10 for NVMe (performance + redundancy), RAID 6 for HDD (capacity + dual parity)
- Expansion:
 - Minimum 4 or more additional hot-swap drive bays for future growth
 - Support for NVMe expansion cards
- Automated Tiering: Intelligent data movement between hot and cold storage based on access patterns

5. Network:

- Dual 10GbE network interfaces (copper or SFP+)
 - Intel or Broadcom chipset
 - Purpose: High-speed file transfers, API traffic, distributed analysis
- Redundant network capability: Active-passive or active-active failover
- VLAN support: 802.1Q tagging for evidence isolation and network segmentation
- Additional Network Options:
 - 1GbE management port for out-of-band management
 - Optional: 25GbE or 40GbE for future scalability

6. Power & Cooling:

- Redundant power supplies (N+1 configuration):
 - Minimum 2000W per PSU (total 4000W capacity)
 - 80 PLUS Platinum or Titanium efficiency
 - Hot-swappable capability
 - Sufficient capacity for dual GPU configuration (600-800W additional)
- Enterprise-grade cooling:
 - Redundant hot-swappable fans (N+1)
 - GPU-specific thermal management with dedicated cooling zones
 - Temperature monitoring with SNMP alerts

- Acoustic optimization for lab environment

7. System Features:

- Remote Management:
 - IPMI 2.0 or Dell iDRAC/HPE iLO/Lenovo XClarity
 - Out-of-band management for troubleshooting
 - Virtual KVM capability
 - Remote firmware updates

8. Virtualization Environment (Mandatory):

- VMware vSphere Deployment:
 - VMware ESXi 7.x or 8.x Enterprise Plus (installed and configured)
 - GPU passthrough enabled (DirectPath I/O for NVIDIA GPUs)
 - vMotion capability for live VM migration
 - Distributed Resource Scheduler (DRS) for load balancing
 - High Availability (HA) configuration support
 - vSAN ready (if shared storage required)
- NVIDIA vGPU Licensing:
 - vGPU software for GPU virtualization (optional, for shared GPU across VMs)
 - GRID driver installation for VMware
- Configuration Requirement:
 - Server must be delivered fully operational with VMware installed and configured
 - Ready for immediate VM deployment without additional setup
 - Minimum 2 VMs pre-configured: Management VM + AI Analysis VM

9. Compliance & Certifications:

- Server manufacturer certification (Dell, HPE, Lenovo, Supermicro, or equivalent)
- ISO 9001 quality management
- Energy efficiency: ENERGY STAR, 80 PLUS Platinum/Titanium PSU
- Safety: UL, CE, FCC compliance
- VMware Hardware Compatibility List (HCL) certified
- NVIDIA GPU compatibility certification

10. On-Premise Deployment & VMware Integration:

- VMware ESXi 7.x/8.x certified with GPU passthrough (DirectPath I/O) and vGPU support
- Full containerization support (Docker/Kubernetes) for microservices on virtualized environment

Mandatory Requirement

- The bidder / vendor shall provide an official OEM warranty of minimum one (1) year from the date of delivery for all supplied hardware items, unless otherwise specified in the bidding document.
- The bidder / vendor shall ensure minimum two (2) years local support services, including repair, replacement, servicing, warranty claim facilitation, faulty hardware replacement, and necessary coordination with the principal / OEM / authorized partner for timely resolution of issues, unless otherwise mentioned.
- Repair, replacement, and servicing support for the supplied hardware shall be provided in accordance with the applicable warranty, support terms, and service response commitments defined in the contract and/or Service Level Agreement.
- If required by the Client, a Service Level Agreement may be executed at the time of contract award; therefore, the financial proposal shall clearly include an optional SLA cost/component.
- The quoted price shall be deemed inclusive of all applicable taxes and the SLA cost/component, wherever applicable under the final contract.

Table No 19

Password Cracking System (Qty: 01)
(System with specs mentioned below or equivalent)

*The vendor shall be fully responsible for the **installation, configuration, architectural layout design, and testing** of the hardware. This includes ensuring successful deployment and operational readiness of all supplied equipment.*

1. Processor & Architecture:

- Minimum **64 physical cores / 128 threads** server-class processing capability
- Processor family shall be **Intel Xeon 6 with P-cores** or **AMD EPYC 9005 series** or equivalent current-generation enterprise server CPU
- Base frequency minimum **2.2 GHz** and maximum turbo / boost frequency **3.8 GHz or higher**
- Support for parallel processing and multi-threaded operations
- SMT / Hyper-Threading enabled
- Support for hardware virtualization: **Intel VT-x / VT-d** or **AMD-V / AMD-Vi**
- Support for **AVX-512** or equivalent vector acceleration for AI / analytics / password processing workloads.
- Support for **PCIe Gen 5** and **DDR5 ECC server memory**
- Current equivalent examples may include **Intel Xeon 6760P (64C/128T)** or **AMD EPYC 9555 / 9575F (64C/128T)** or equivalent.

2. GPU Configuration (Critical for AI Detection):

- Required: **2 × NVIDIA RTX 6000 Ada Generation (48GB ECC VRAM each)** or equivalent current enterprise GPU
- Alternative enterprise accelerators with equivalent or better AI / CUDA / inference performance may be accepted
- Minimum Specifications:
 - NVIDIA CUDA support with current-generation enterprise driver stack
 - Tensor Core support for deep learning acceleration
 - **48 GB ECC graphics memory per GPU** minimum
 - **PCIe Gen 4 x16 or higher** interface per GPU
 - Support for GPU passthrough and enterprise virtual GPU use where supported by OEM / hypervisor / licensing
 - Maximum board power approximately **300 W per card** or as per OEM design, with adequate cooling
 - Support for current **CUDA 12.x or later** compatible drivers
 - Purpose: real-time deepfake detection, 4K video processing, AI model inference, parallel analysis

3. Memory:

- Minimum **256GB DDR5 ECC RDIMM RAM**, expandable to **512GB or higher**
Support for **RDIMM** configuration for reliability
- Memory speed support of **5600 MT/s or higher**; **6400 MT/s** support preferred where platform-supported
- Minimum **16 DIMM slots** for expansion flexibility in 2-socket systems, or equivalent OEM-supported expansion architecture
- Memory error correction and detection
- Optimized for AI workloads including in-memory model caching and large batch processing

4. Storage Architecture:

- Hot Tier (High-Speed Active Storage):

- 4TB NVMe SSD Gen 5
- U.2 or M.2 form factor, enterprise-grade (min. 2 DWPD)
- Purpose: Active analysis queue, ML models, temporary processing files, operating system, VMware datastores
- Expansion:
 - Minimum 4 or more additional hot-swap drive bays for future growth
 - Support for NVMe Gen 5 expansion cards
- Automated Tiering: Intelligent data movement between hot and cold storage based on access patterns

5. Network:

- Dual **10GbE** network interfaces, copper or SFP+
- Intel, Broadcom, NVIDIA / Mellanox, or equivalent enterprise chipset
- Purpose: high-speed file transfers, API traffic, and distributed analysis
- Redundant network capability: active-passive or active-active failover, subject to platform support
- VLAN support: **802.1Q tagging** for evidence isolation and network segmentation
- Additional Network Options:
 - Minimum **1GbE dedicated management port** for out-of-band management
 - Optional: **25GbE** for future scalability

6. Power & Cooling:

- Redundant power supplies in **N+1 configuration**
- Minimum PSU sizing sufficient for dual enterprise GPUs, high-core-count CPU platform, storage, and expansion
- For this class, **2 × 1600W to 2 × 2000W** redundant PSUs may be accepted, subject to OEM design validation
- Minimum **80 PLUS Platinum** efficiency; Titanium may be offered
- Hot-swappable capability
- Enterprise-grade cooling:
 - Redundant hot-swappable fans
 - GPU-specific thermal management with dedicated cooling zones or directed airflow
 - System temperature monitoring and alerting support through OEM management tools

7. System Features:

- **Remote Management:**
 - Integrated remote management such as **IPMI 2.0 / Dell iDRAC / HPE iLO / Lenovo XClarity / equivalent**
 - Out-of-band management for troubleshooting
 - Virtual KVM / remote console capability
 - Remote firmware and BIOS updates
 - System health monitoring, logging, and alerting support

8. Virtualization Environment (Mandatory):

- **VMware vSphere Deployment:**
 - **VMware ESXi 8.x preferred; ESXi 7.x or 8.x acceptable** subject to full hardware and GPU support
 - GPU passthrough enabled for NVIDIA GPUs
 - vMotion, DRS, and HA support where compatible with the selected deployment architecture and licensing
 - vSAN ready, if shared storage is required
- **NVIDIA vGPU Licensing:**
 - vGPU software for GPU virtualization may be offered where shared GPU access across VMs is required

- NVIDIA enterprise / vGPU driver installation for VMware environment, where applicable
- **Configuration Requirement:**
 - Server shall be delivered fully operational with VMware installed and configured, if VMware licensing is included in the scope
 - Ready for immediate VM deployment without additional setup
 - Minimum **2 VMs pre-configured:** Management VM and AI Analysis VM

9. Compliance & Certifications:

- Server manufacturer certification / OEM support from **Dell, HPE, Lenovo or equivalent**
- ISO 9001 quality management or equivalent manufacturer quality certification
- Energy efficiency: **80 PLUS Platinum / Titanium PSU**
- Safety / EMC: **UL, CE, FCC**, or equivalent compliance
- VMware Hardware Compatibility support for proposed server platform where VMware is offered
- NVIDIA enterprise GPU compatibility and supported driver stack

10. On-Premise Deployment & VMware Integration:

- VMware ESXi **7.x / 8.x** certified / supported with GPU passthrough and, where licensed, vGPU support
- Full containerization support (Docker/Kubernetes) for microservices on virtualized environment
- Air-gapped operation: Fully functional without internet; locally stored ML models on 4TB NVMe

11. Adapter Set: TDA7-1, TDA7-2, TDA7-3, TDA7-4, TDA7-7, TCPCIE-4 SATA&IDE TC6-2, TDA3-1, TDA3-2, TDA3-3, TDA3-LIF, two LIF cables, TDA5-18, TDA5-25, TDA5-ZIF, TC20- BNDL

Mandatory Requirement

- The bidder / vendor shall provide an official OEM warranty of minimum one (1) year from the date of delivery for all supplied hardware items, unless otherwise specified in the bidding document.
- The bidder / vendor shall ensure minimum two (2) years local support services, including repair, replacement, servicing, warranty claim facilitation, faulty hardware replacement, and necessary coordination with the principal / OEM / authorized partner for timely resolution of issues, unless otherwise mentioned.
- Repair, replacement, and servicing support for the supplied hardware shall be provided in accordance with the applicable warranty, support terms, and service response commitments defined in the contract and/or Service Level Agreement.
- If required by the Client, a Service Level Agreement may be executed at the time of contract award; therefore, the financial proposal shall clearly include an optional SLA cost/component.
- The quoted price shall be deemed inclusive of all applicable taxes and the SLA cost/component, wherever applicable under the final contract.

Table No 20

NAS Storage System (Qty: 01)

(System with specs mentioned below or equivalent)

*The vendor shall be fully responsible for the **installation, configuration, architectural layout design, and testing** of the hardware. This includes ensuring successful deployment and operational readiness of all supplied equipment*

- Enterprise-grade **NAS storage system**, rack-mountable, with support for file sharing and centralized storage management, suitable for high-capacity evidence, archive, and forensic data storage.
- Minimum **500 TB usable storage** at the time of delivery, expandable to **minimum 1 PB** through

additional expansion shelves / enclosures, without replacement of the base system.

- Storage shall be based on **enterprise NL-SAS disks** (Nearline SAS), suitable for 24/7 operation, high-capacity archival storage, and RAID-based redundancy.
- The system shall include **2 x storage / RAID controllers** operating in redundant mode for high availability.
- The system shall support **RAID 5** at minimum, with built-in **data protection features** such as hot spare support, snapshot capability, cache protection, and disk failure tolerance.
- The system shall provide enterprise security and protection features, including user and access control, data integrity protection, snapshot / backup support, and secure management functions.
- The system shall include a **dual-port 10GbE SFP+ adapter** minimum for high-speed storage access and data transfer.
- The system shall support capacity expansion through vendor-supported expansion units / JBOD shelves. Expansion architecture shall allow future growth to at least **1 PB** total usable capacity.

The vendor shall be fully responsible for:

- Installation and rack integration
 - Configuration and initial setup
 - Architectural layout / storage design
 - RAID creation and storage pool configuration
 - Network integration and testing
 - Handover of a fully operational and production-ready system
- The offered NAS shall be supplied as a **complete, fully integrated, and operational solution**, including all required controllers, disks, rails, power supplies, transceivers/modules if applicable, cables, licenses, and accessories necessary for immediate use.

Mandatory Requirement

- The bidder / vendor shall provide an official OEM warranty of minimum one (1) year from the date of delivery for all supplied hardware items, unless otherwise specified in the bidding document.
- The bidder / vendor shall ensure minimum two (2) years local support services, including repair, replacement, servicing, warranty claim facilitation, faulty hardware replacement, and necessary coordination with the principal / OEM / authorized partner for timely resolution of issues, unless otherwise mentioned.
- Repair, replacement, and servicing support for the supplied hardware shall be provided in accordance with the applicable warranty, support terms, and service response commitments defined in the contract and/or Service Level Agreement.
- If required by the Client, a Service Level Agreement may be executed at the time of contract award; therefore, the financial proposal shall clearly include an optional SLA cost/component.
- The quoted price shall be deemed inclusive of all applicable taxes and the SLA cost/component, wherever applicable under the final contract.

Table No 21	
Accessories with Functional Requirements	Qty
Screwdrivers set for PC/Laptop/HDD or similar	1
Screwdrivers set for Mobile Phone (Apple, Samsung, and others)	1
Digital Forensic Photo and Video Documentation System (DSLR-Based)	1
Storage box or container for carrying equipment	1
Torch	2
Magnifying glass	2

Evidence sealing or evidence bags	30
Tamper-proof stickers	100
Faraday bags (All sizes including Mobile, Tablet & Laptop size) For protection from 2G, 3G, 4G, 5G, Bluetooth, GPS, and WiFi, (2.5Ghz and 5Ghz)	30
Apple iPhone with USB-C Port (iPhone 15-17) (including original charger, data cable & accessories)	1
Apple iPhone with Lightning Port (iPhone 13-14) (including original charger, data cable & accessories)	1
Android Phone with MediaTek (Helio G series e.g. G98) chipset and latest android OS (including original charger, data cable & accessories)	1
Android Phone with MediaTek (MediaTek Helio P35 MT6765 SoC) chipset and latest android OS (including original charger, data cable & accessories)	1
Android Phone with Qualcomm chipset and latest android OS (including original charger, data cable & accessories)	1
Android Phone with Samsung Exynos chipset and latest android OS (including original charger, data cable & accessories)	1
Android Phone with Google Tensor chipset and latest android OS (including original charger, data cable & accessories)	1
Android Phone with Kirin chipset and latest android OS (including original charger, data cable & accessories)	1
Android Phone with UNISOC/ Spreadtrum chipset and latest android OS (including original charger, data cable & accessories)	1

Note: - Both Android and Apple phones are to be provided with complete with charger/data cable and all standard accessories

Table No 22
Faraday's Box (like Ramsey STE3000F2 Isolation Box or equivalent) Qty = 1
<ul style="list-style-type: none"> • Compatible with Forensic software tools • RF isolated 6-outlet 120VAC power strip • RF isolated 6-pole feed-through terminal block • RF isolated USB 3.x / USB-C feed-through where commercially available • 60MM Honeycomb Vents • RF tight illuminated viewing window • RF tight "hands-on" silver mesh gloves • Wide variety of I/O options • Fully isolated from Wi-Fi signal sources, Wi-Fi 6 / 6E / 7 and 6 GHz, in addition to 2.4/5 GHz <p><u>Mandatory Requirement</u></p> <ul style="list-style-type: none"> • The bidder / vendor shall provide an official OEM warranty of minimum one (1) year from the date of delivery for all supplied hardware items, unless otherwise specified in the bidding document. • The bidder / vendor shall ensure minimum two (2) years local support services, including repair, replacement, servicing, warranty claim facilitation, faulty hardware replacement, and necessary coordination with the principal / OEM / authorized partner for timely resolution of issues, unless otherwise mentioned. • Repair, replacement, and servicing support for the supplied hardware shall be provided in accordance with the applicable warranty, support terms, and service response commitments defined in the contract and/or Service Level Agreement.

- If required by the Client, a Service Level Agreement may be executed at the time of contract award; therefore, the financial proposal shall clearly include an optional SLA cost/component.
- The quoted price shall be deemed inclusive of all applicable taxes and the SLA cost/component, wherever applicable under the final contract.

Table No 23
RF Analyzer – Table Mounted (Qty: 01) (System with specs mentioned below or equivalent)
<p>Frequency ranges from 2 Hz to 50 GHz (with external harmonic mixers up to 110 GHz), Low phase noise of –137 dBc (1 Hz) at 10 kHz offset (1 GHz carrier), 5G NR / WCDMA / HSPA / HSPA+ 3GPP LTE GSM/EGPRS/EDGE Evolution/VAMOS CDMA2000® 1xEV-DO (with standard accessories)</p> <p><u>Mandatory Requirement</u></p> <ul style="list-style-type: none"> • The bidder / vendor shall provide an official OEM warranty of minimum one (1) year from the date of delivery for all supplied hardware items, unless otherwise specified in the bidding document. • The bidder / vendor shall ensure minimum two (2) years local support services, including repair, replacement, servicing, warranty claim facilitation, faulty hardware replacement, and necessary coordination with the principal / OEM / authorized partner for timely resolution of issues, unless otherwise mentioned. • Repair, replacement, and servicing support for the supplied hardware shall be provided in accordance with the applicable warranty, support terms, and service response commitments defined in the contract and/or Service Level Agreement. • If required by the Client, a Service Level Agreement may be executed at the time of contract award; therefore, the financial proposal shall clearly include an optional SLA cost/component. • The quoted price shall be deemed inclusive of all applicable taxes and the SLA cost/component, wherever applicable under the final contract.

Table No 24
iOS Computing Device (Qty: 02) (System with specs mentioned below or equivalent)
<p>M4 Pro (MacBook Pro or equivalent)</p> <ul style="list-style-type: none"> • Processor: Apple M4 Max chip with a 16-core CPU and a 40-core GPU. • Memory: 48 GB of unified RAM. • Storage: 1 TB SSD or above, configurable up to 8 TB. • Display: 16.2-inch Liquid Retina XDR display. • Accessory: Apple Magic Mouse and / or Apple Magic Trackpad, compatible with the supplied MacBook Pro, one per device or as specified by the procuring agency. <p><u>Mandatory Requirement</u></p> <ul style="list-style-type: none"> • The bidder / vendor shall provide an official OEM warranty of minimum one (1) year from the date of delivery for all supplied hardware items, unless otherwise specified in the bidding document. • The bidder / vendor shall ensure minimum two (2) years local support services, including repair, replacement, servicing, warranty claim facilitation, faulty hardware replacement, and necessary coordination with the principal / OEM / authorized partner for timely resolution of issues, unless

otherwise mentioned.

- Repair, replacement, and servicing support for the supplied hardware shall be provided in accordance with the applicable warranty, support terms, and service response commitments defined in the contract and/or Service Level Agreement.
- If required by the Client, a Service Level Agreement may be executed at the time of contract award; therefore, the financial proposal shall clearly include an optional SLA cost/component.
- The quoted price shall be deemed inclusive of all applicable taxes and the SLA cost/component, wherever applicable under the final contract.

Table No 25

Forensics Adapter Kit (Qty: 02)

Forensics Adapter Kit (TABLEAU PCIE ADAPTER BUNDLE (TKDA7-3PC-BNDL))

- TDA7-1 Tableau PCIe Card SSD Adapter
- TDA7-2 Tableau PCIe M.2 SSD Adapter
- DA7-3 Tableau PCIe Adapter for Apple SSD
- TC-PCIE-4 Tableau PCIe Adapter Cable - 4" Rugged Travel Case with Foam.

Mandatory Requirement

- The bidder / vendor shall provide an official OEM warranty of minimum one (1) year from the date of delivery for all supplied hardware items, unless otherwise specified in the bidding document.
- The bidder / vendor shall ensure minimum two (2) years local support services, including repair, replacement, servicing, warranty claim facilitation, faulty hardware replacement, and necessary coordination with the principal / OEM / authorized partner for timely resolution of issues, unless otherwise mentioned.
- Repair, replacement, and servicing support for the supplied hardware shall be provided in accordance with the applicable warranty, support terms, and service response commitments defined in the contract and/or Service Level Agreement.
- If required by the Client, a Service Level Agreement may be executed at the time of contract award; therefore, the financial proposal shall clearly include an optional SLA cost/component.
- The quoted price shall be deemed inclusive of all applicable taxes and the SLA cost/component, wherever applicable under the final contract.

Table No 26: LAPTOP (Supporting Infrastructure) (Qty=8)

TECHNICAL SPECIFICATIONS

Processor:

- Intel® Core™ Ultra 7 Processor 356H or equivalent
- Minimum 8-core CPU
- 2.5 GHz base frequency, 4.5GHz turbo or similar

Memory:

- 32GB DDR5 RAM
- Dual-channel for performance

Storage:

- 2TB M.2 NVMe SSD Gen 5

Display:

- 14–16-inch QHD+ (2560x1600)
- 100% sRGB color accuracy
- USB-C with Thunderbolt 4 support

Graphics:

- NVIDIA RTX 5060 or equivalent
- 2GB dedicated or above

Battery:

- 60+ Wh capacity
- Fast charging capability

Ports & Connectivity:

- Minimum 1 × USB-C with Thunderbolt 4 support
- USB 3.2 Type-A (minimum 2x)
- HDMI 2.1
- SD Card Reader
- 3.5mm audio jack

Accessories:

- OEM Laptop Bag/Backpack: Original OEM-branded or OEM-supplied padded laptop bag/backpack including a laptop sized sleeve, compatible with 14–16-inch laptops, with separate compartments for power adapter and accessories and black/brown/grey in color; quantity: *(One (1) bag per laptop)*

Features(preferred):

- Lightweight (<2kg for portability)
- Aluminum chassis for durability
- Secure boot capabilities
- Hardware security module support

Pre-Installed OS & Software:

- Operating system (licensed): Windows 11 Pro 64-bit
- Productivity suite (licensed): Microsoft Office (Word, Excel, PowerPoint, Outlook) unless otherwise specified in the RFP or contract.

Mandatory Requirement

- The bidder / vendor shall provide an official OEM warranty of minimum one (1) year from the date of delivery for all supplied hardware items, unless otherwise specified in the bidding document.
- The bidder / vendor shall ensure minimum two (2) years local support services, including repair, replacement, servicing, warranty claim facilitation, faulty hardware replacement, and necessary coordination with the principal / OEM / authorized partner for timely resolution of issues, unless otherwise mentioned.
- Repair, replacement, and servicing support for the supplied hardware shall be provided in accordance with the applicable warranty, support terms, and service response commitments defined in the contract and/or Service Level Agreement.
- If required by the Client, a Service Level Agreement may be executed at the time of contract award; therefore, the financial proposal shall clearly include an optional SLA cost/component.
- The quoted price shall be deemed inclusive of all applicable taxes and the SLA cost/component, wherever applicable under the final contract.

Table No 27: COLOR LASER MULTIFUNCTION PRINTER (All-in-One) (Qty=2)

TECHNICAL SPECIFICATIONS

Color Laser Multifunction Printer (Quantity = To be specified):

(Offered product shall meet, conform to, or exceed the following minimum technical specifications)

- **Type:** Office / business-class Color laser multifunction printer
- **Functions:** Print, copy, scan; fax may be built-in or optional
- **Print Technology:** Laser / Color laser
- **Print Speed:** Minimum **26 pages per minute** in both Color and black & white
- **Print Resolution:** Minimum **600 × 600 dpi** or equivalent enhanced print quality technology
- **Duty Cycle:** Minimum **40,000 pages per month**
- **Recommended Monthly Volume:** Manufacturer-rated recommended monthly print volume shall be clearly stated in the bid
- **Color System:** 4-cartridge CMYK toner system
- **Toner Yield:** Standard and high-yield toner cartridges shall be available; bidder shall clearly quote page yields in the technical offer
- **Automatic Document Feeder:** Minimum **50-sheet ADF**
- **ADF Capability:** Duplex / single-pass / automatic two-sided scanning supported, as per OEM design
- **Duplex Printing:** Automatic duplex printing as standard
- **Paper Handling:** Minimum 1 internal input tray standard
- **Input Capacity:** Minimum **250-sheet** standard input capacity
- **Media Support:** Support for A4, A5, and other common office paper sizes; mixed media support required
- **Output Capacity:** Minimum **100-sheet** output bin
- **Special Media:** Support for labels, cardstock, envelopes, and other manufacturer-supported office specialty media
- **Connectivity (Standard):** USB device, USB host, Gigabit Ethernet or Fast Ethernet
- **Wireless Connectivity:** Wireless / Wi-Fi Direct / BLE / NFC may be offered either standard or through official manufacturer support, where applicable
- **Mobile / Network Printing:** Support for Apple AirPrint, Mopria, and standard network printing protocols
- **Security:** Standard business / enterprise security features including password protection, secure configuration, firmware protection, and network security features
- **Display:** Color touchscreen / control panel display
- **Compatibility:** Compatible with current Windows, macOS, and Linux environments
- **Installation:** Plug-and-play and network deployment support for official office environment
- **Paper Rim:** 80 gm or above (2 with each printer)
- **Warranty:** Minimum 1-year manufacturer / OEM / authorized local warranty

Mandatory Requirement

- The bidder / vendor shall provide an official OEM warranty of minimum one (1) year from the date of delivery for all supplied hardware items, unless otherwise specified in the bidding document.
- The bidder / vendor shall ensure minimum two (2) years local support services, including repair, replacement, servicing, warranty claim facilitation, faulty hardware replacement, and necessary coordination with the principal / OEM / authorized partner for timely resolution of issues, unless

otherwise mentioned.

- Repair, replacement, and servicing support for the supplied hardware shall be provided in accordance with the applicable warranty, support terms, and service response commitments defined in the contract and/or Service Level Agreement.
- If required by the Client, a Service Level Agreement may be executed at the time of contract award; therefore, the financial proposal shall clearly include an optional SLA cost/component.
- The quoted price shall be deemed inclusive of all applicable taxes and the SLA cost/component, wherever applicable under the final contract.

Table No 28: 65" LED DISPLAYS (Qty=4)

TECHNICAL SPECIFICATIONS

Technical Specifications:

- **Screen Size:** 65 inches
- **Resolution:** 4K UHD (3840 × 2160) minimum
- **Panel Type:** IPS / VA / ADS or equivalent commercial-grade panel technology with minimum 178° / 178° viewing angles
- **Brightness:** 500 nits minimum
- **Contrast Ratio:** 1200:1 minimum or OEM equivalent
- **Refresh Rate:** 60 Hz minimum
- **Color Depth:** 1.07 billion colors minimum (8-bit + FRC or true 10-bit)
- **Response Time:** 8 ms or better
- **Surface Treatment:** Anti-glare / haze-treated commercial display surface
- **Orientation Support:** Landscape and portrait operation support

Connectivity:

- **HDMI:** Minimum 2 × HDMI input ports, HDMI 2.1 preferred; HDMI 2.0 or higher acceptable
- **DisplayPort:** Minimum 1 × DisplayPort input, DP 1.2 or higher
- **USB:** Minimum 2 × USB ports for media playback / peripheral connectivity
- **Ethernet:** 1 × RJ45 Gigabit Ethernet minimum
- **Wireless:** Built-in Wi-Fi 6 (802.11ax) preferred; Wi-Fi 5 (802.11ac) or higher acceptable
- **Bluetooth:** Built-in Bluetooth supports preferred
- **Audio:** Audio out / headphone out were supported by OEM design
- **Control Interfaces:** RS-232C / LAN / remote management support preferred for commercial deployment

Smart / Platform Features:

- **Built-in Smart Platform:** Commercial smart platform such as Tizen, webOS, or equivalent
- **Content Management:** Built-in content scheduling, playlist, and remote device management capability
- **Wireless Sharing:** Screen casting / wireless display sharing support such as Miracast / AirPlay / equivalent where OEM-supported
- **Application Support:** App platform / CMS integration / browser-based content playback support
- **Security:** OEM platform security / device protection features for managed deployment

Display Features:

- **Image Controls:** Brightness, contrast, colour temperature, and colour calibration controls
- **Multi-View:** Picture-in-Picture (PIP) and / or Picture-by-Picture (PBP), where supported
- **Speakers:** Integrated speakers
- **Power Management:** Low-power / sleep mode and scheduled power on / off capability
- **Commercial Use:** Suitable for continuous professional / institutional display applications

Stand & Mounting:

- **VESA Compatibility:** 400 × 400 or larger, as applicable to the offered model
- **Mounting:** Suitable for wall mount, ceiling mount, or floor stand installation, as required by site conditions
- **Wall Mount Bracket:** Included, where wall mounting is required under the scope of supply
- **Cable Management:** Integrated or supplied cable management arrangement

Accessories:

- Power cable, remote control, batteries, HDMI cable(s), mounting accessories as applicable, and all other accessories required for complete installation, connectivity, and operation

Certification & Compliance:

- CE / FCC or equivalent certified
- Energy-efficient commercial operation
- OEM warranty support through manufacturer / authorized partner

Mandatory Requirement

- The bidder / vendor shall provide an official OEM warranty of minimum one (1) year from the date of delivery for all supplied hardware items, unless otherwise specified in the bidding document.
- The bidder / vendor shall ensure minimum two (2) years local support services, including repair, replacement, servicing, warranty claim facilitation, faulty hardware replacement, and necessary coordination with the principal / OEM / authorized partner for timely resolution of issues, unless otherwise mentioned.
- Repair, replacement, and servicing support for the supplied hardware shall be provided in accordance with the applicable warranty, support terms, and service response commitments defined in the contract and/or Service Level Agreement.
- If required by the Client, a Service Level Agreement may be executed at the time of contract award; therefore, the financial proposal shall clearly include an optional SLA cost/component.
- The quoted price shall be deemed inclusive of all applicable taxes and the SLA cost/component, wherever applicable under the final contract.

Table No 29: 55" LED DISPLAYS (Qty=4)**TECHNICAL SPECIFICATIONS****Technical Specifications:**

- **Screen Size:** 55 inches
- **Resolution:** 4K UHD (3840 × 2160) minimum
- **Panel Type:** IPS / VA / ADS or equivalent commercial-grade panel technology with minimum 178° / 178° viewing angles
- **Brightness:** 500 nits minimum
- **Contrast Ratio:** 1200:1 minimum or OEM equivalent
- **Refresh Rate:** 60 Hz minimum
- **Color Depth:** 1.07 billion colors minimum (8-bit + FRC or true 10-bit)
- **Response Time:** 8 ms or better
- **Surface Treatment:** Anti-glare / haze-treated commercial display surface
- **Operation Rating:** Suitable for professional / commercial continuous operation; 24/7 support preferred
- **Orientation Support:** Landscape and portrait operation support

Connectivity:

- **HDMI:** Minimum 2 × HDMI input ports, HDMI 2.1 preferred; HDMI 2.0 or higher acceptable

- **DisplayPort:** Minimum 1 × DisplayPort input, DP 1.4 or higher
- **USB:** Minimum 2 × USB ports for media playback / peripheral connectivity
- **Ethernet:** 1 × RJ45 Gigabit Ethernet minimum
- **Wireless:** Built-in Wi-Fi 6 preferred; Wi-Fi 5 (802.11ac) or higher acceptable
- **Bluetooth:** Built-in Bluetooth support preferred
- **Audio:** Audio out / headphone out where supported by OEM design
- **Control Interfaces:** RS-232C / LAN / remote management support preferred for commercial deployment

Smart Features:

- **Built-in Smart Platform:** Commercial smart platform such as Tizen, webOS, or equivalent
- **Content Management:** Built-in content scheduling, playlist, and remote device management capability
- **Wireless Sharing:** Screen casting / wireless display sharing support such as Miracast / AirPlay / equivalent where OEM-supported
- **Application Support:** App platform / browser-based content playback / CMS integration support
- **Security:** OEM platform security / device protection features for managed deployment

Features:

- **Image Controls:** Brightness, contrast, colour temperature, and colour calibration controls
- **Multi-View:** Picture-in-Picture (PIP) and / or Picture-by-Picture (PBP), where supported
- **Speakers:** Integrated speakers
- **Power Management:** Low-power / sleep mode and scheduled power on / off capability
- **Commercial Use:** Suitable for conference rooms, control rooms, digital signage, monitoring, and institutional environments

Stand & Mounting:

- **VESA Compatibility:** 300 × 300, 400 × 400, or larger, as applicable to the offered model
- **Mounting:** Suitable for wall mount, ceiling mount, or floor stand installation, as required by site conditions
- **Wall-Mount Bracket:** Included, where wall mounting is required under the scope of supply
- **Cable Management:** Integrated or supplied cable management arrangement

Accessories:

- Power cable, remote control, batteries, HDMI cable(s), mounting accessories as applicable, and all other accessories required for complete installation, connectivity, and operation.

Mandatory Requirement:

- The equipment shall be installed on-premises at the site designated by the Purchaser, ensuring proper operational, environmental, and security conditions.
- The LED display may be installed using a wall mount, ceiling mount, or floor stand, as appropriate, to ensure safe, secure, and optimal viewing placement in the designated location.
- The bidder / vendor shall provide an official OEM warranty of minimum one (1) year from the date of delivery for all supplied hardware items, unless otherwise specified in the bidding document.
- The bidder / vendor shall ensure minimum two (2) years local support services, including repair, replacement, servicing, warranty claim facilitation, faulty hardware replacement, and necessary coordination with the principal / OEM / authorized partner for timely resolution of issues, unless otherwise mentioned.
- Repair, replacement, and servicing support for the supplied hardware shall be provided in accordance with the applicable warranty, support terms, and service response commitments defined in the contract and/or Service Level Agreement.

- If required by the Client, a Service Level Agreement may be executed at the time of contract award; therefore, the financial proposal shall clearly include an optional SLA cost/component.
- The quoted price shall be deemed inclusive of all applicable taxes and the SLA cost/component, wherever applicable under the final contract.

Table No 30: OFFICE FURNITURE (Qty = as specified below)

TECHNICAL SPECIFICATIONS

Storage Cabinets (*Quantity = 4*):

- **Type:** Metal filing cabinets (4-drawer minimum)
- **Material:** Steel with powder coating
- **Dimensions:** 0.5m W x 0.65m D x 1.3m H (adjustable)
- **Locking Mechanism:** Keylock or combination lock
- **Fire Rating:** Optional 1-hour fire protection
- **Capacity:** Multiple cabinets for complete organization

Filing Systems (*Quantity = 4*):

- **Type:** Lateral or vertical filing cabinets
- **Drawer Quantity:** 4-5 drawers per cabinet
- **Label Organization:** Archival-quality labels
- **Partitions:** Options available for various document sizes

Additional Furniture:

- **Reception Desk with Chair:** For check-in/processing (*Quantity = 1*)
- **Evidence Processing Table:** 2m x 1m work surface (*Quantity = 2*)
- **Display Shelving:** For presentations and training
- **Conference Table:** 2.5m x 1.2m for meetings (*Quantity = 2*)
- **Lockers:** Individual evidence technician lockers (*Quantity = 4*)

Office Chairs (*Quantity = 12*):

- **Type:** Ergonomic office chairs with adjustable height and backrest
- **Base:** Five-wheel swivel base for smooth mobility
- **Adjustability:** Pneumatic seat height adjustment and tilt/recline mechanism with lock
- **Support:** Contoured back with lumbar support suitable for extended use
- **Upholstery:** Durable, easy-to-clean commercial-grade fabric or mesh in professional neutral colours (grey, black)

Standards & Specifications:

- **Ergonomics:** ANSI/BIFMA standards compliance
- **Finishes:** Commercial-grade durability
- **Mobility:** Casters/wheels on mobile items
- **Colors:** Professional neutral colors (grey, black, white)
- **Assembly:** Professional installation included

Mandatory Requirement

- The bidder / vendor shall provide an official OEM warranty of minimum one (1) year from the date of delivery for all supplied hardware items, unless otherwise specified in the bidding document.
- The bidder / vendor shall ensure minimum two (2) years local support services, including repair, replacement, servicing, warranty claim facilitation, faulty hardware replacement, and necessary coordination with the principal / OEM / authorized partner for timely resolution of issues, unless otherwise mentioned.
- Repair, replacement, and servicing support for the supplied hardware shall be provided in accordance with the applicable warranty, support terms, and service response commitments defined in the contract

and/or Service Level Agreement.

- If required by the Client, a Service Level Agreement may be executed at the time of contract award; therefore, the financial proposal shall clearly include an optional SLA cost/component.
- The quoted price shall be deemed inclusive of all applicable taxes and the SLA cost/component, wherever applicable under the final contract.

Table No 31: USB FLASH DRIVES (Qty=12(6+6))

TECHNICAL SPECIFICATIONS

USB Flash Drives – 128 GB (Quantity = 6):

(System must meet, conform to, or exceed the following minimum technical specifications)

- **Type:** High-speed portable USB flash drive
- **Capacity:** 128 GB nominal storage
- **Interface:** USB 3.2 Gen 2 or above
- **Connector:** 4 x **USB Type-C** & 2 x **USB Type-A**
- **Data Transfer:** High-speed data transfer supported through USB 3.2 Gen 2 or higher interface
- **Design:** Compact and durable design suitable for official and office use
- **Build:** Shock-resistant enclosure made of high-quality plastic or metal, with key ring / lanyard provision
- **Compatibility:** Plug-and-play support for Windows, macOS, and Linux systems
- **File System Support:** Supplied preformatted and supporting standard file systems including exFAT / FAT32 / NTFS as applicable
- **Memory Type:** Non-volatile NAND flash memory
- **Reliability:** Suitable for routine official data transfer, storage, and backup operations
- **Security:** OEM-provided password protection and/or hardware/software encryption support, where applicable
- **Certifications:** CE, FCC, RoHS, or equivalent internationally recognized certifications

USB Flash Drives – 64 GB (Quantity = 6):

(System must meet, conform to, or exceed the following minimum technical specifications)

- **Type:** High-speed portable USB flash drive
- **Capacity:** 64 GB nominal storage
- **Interface:** USB 3.2 Gen 2 or above
- **Connector:** 4 x **USB Type-C** & 2 x **USB Type-A**
- **Data Transfer:** High-speed data transfer supported through USB 3.2 Gen 2 or higher interface
- **Design:** Compact and durable design suitable for official and office use
- **Build:** Shock-resistant enclosure made of high-quality plastic or metal, with key ring / lanyard provision
- **Compatibility:** Plug-and-play support for Windows, macOS, and Linux systems
- **File System Support:** Supplied preformatted and supporting standard file systems including exFAT / FAT32 / NTFS as applicable
- **Memory Type:** Non-volatile NAND flash memory
- **Reliability:** Suitable for routine official data transfer, storage, and backup operations
- **Security:** OEM-provided password protection and/or hardware/software encryption support, where applicable
- **Certifications:** CE, FCC, RoHS, or equivalent internationally recognized certifications

Mandatory Requirement

- The bidder / vendor shall provide an official OEM warranty of minimum one (1) year from the date of

delivery for all supplied hardware items, unless otherwise specified in the bidding document.

- The bidder / vendor shall ensure minimum two (2) years local support services, including repair, replacement, servicing, warranty claim facilitation, faulty hardware replacement, and necessary coordination with the principal / OEM / authorized partner for timely resolution of issues, unless otherwise mentioned.
- Repair, replacement, and servicing support for the supplied hardware shall be provided in accordance with the applicable warranty, support terms, and service response commitments defined in the contract and/or Service Level Agreement.
- If required by the Client, a Service Level Agreement may be executed at the time of contract award; therefore, the financial proposal shall clearly include an optional SLA cost/component.
- The quoted price shall be deemed inclusive of all applicable taxes and the SLA cost/component, wherever applicable under the final contract.

Table No 32: KEYBOARD + MOUSE Dual Mode (WIRELESS & WIRED) (Qty = 12)

TECHNICAL SPECIFICATIONS

Wireless & Wired Keyboard + Mouse Combo (Quantity = 12):

(System must meet, equivalent to, or exceed the following specifications)

- **Product Type:** Dual-mode keyboard and mouse combo supporting both wireless and wired operation
- **Connectivity:** Dual-mode operation through 2.4 GHz wireless connection via USB receiver and wired USB connection
- **Keyboard Type:** Full-size keyboard with standard QWERTY layout and dedicated numeric keypad
- **Keyboard Keys:** Low-profile or soft-touch keys suitable for continuous office use
- **Keyboard Durability:** Minimum key life of 10 million keystrokes
- **Keyboard Functions:** Standard office-use keyboard with function keys
- **Mouse Type:** Optical dual-mode mouse supporting both wireless and wired operation with ergonomic design
- **Sensor Type:** Optical sensor with adjustable DPI, minimum 800–1600 DPI or higher
- **Buttons:** Minimum 3 buttons comprising left-click, right-click, and scroll wheel
- **Battery:** Rechargeable battery for wireless mode
- **Charging Interface:** USB-C or Micro-USB charging interface
- **Charging / Data Cable:** Detachable USB cable for charging and wired operation
- **Wireless Range:** Minimum 10 meters under normal office operating conditions
- **Receiver:** USB nano receiver or equivalent compact receiver
- **Build Quality:** Commercial-grade durable construction with smooth scroll wheel and reliable switches
- **Mouse Durability:** Minimum 3 million clicks
- **Keyboard Protection:** Spill-resistant design suitable for office environment
- **Mouse Pad:** One high-quality mouse pad shall be included with each set, having a non-slip rubber base and minimum dimensions of 220 × 180 mm
- **Compatibility:** Fully compatible with Windows, macOS, and Linux operating systems
- **Installation:** Plug-and-play operation without requirement for proprietary hardware for basic functionality
- **Color:** Professional neutral colours such as black, grey, or white
- **Accessories Included:** USB receiver, charging / wired cable, mouse pad, batteries where applicable, and user documentation
- **Warranty:** Minimum 1-year manufacturer / OEM / authorized local warranty
- **Certifications:** CE, FCC, RoHS, or equivalent internationally recognized certifications

Mandatory Requirement

- The bidder / vendor shall provide an official OEM warranty of minimum one (1) year from the date of delivery for all supplied hardware items, unless otherwise specified in the bidding document.
- The bidder / vendor shall ensure minimum two (2) years local support services, including repair, replacement, servicing, warranty claim facilitation, faulty hardware replacement, and necessary coordination with the principal / OEM / authorized partner for timely resolution of issues, unless otherwise mentioned.
- Repair, replacement, and servicing support for the supplied hardware shall be provided in accordance with the applicable warranty, support terms, and service response commitments defined in the contract and/or Service Level Agreement.
- If required by the Client, a Service Level Agreement may be executed at the time of contract award; therefore, the financial proposal shall clearly include an optional SLA cost/component.
- The quoted price shall be deemed inclusive of all applicable taxes and the SLA cost/component, wherever applicable under the final contract.

Table No 33: High Quality HDMI CABLES (Qty =10)

TECHNICAL SPECIFICATIONS

Quality HDMI Cable (5 Meters) (Quantity = 10):
(Offered product shall meet, conform to, or exceed the following minimum technical specifications)

- **Product Type:** High-quality HDMI cable for audio and video transmission
- **Length:** 5 meters (Qty = 4) & 1.5-2 meters (Qty = 6)
- **Version:** HDMI 2.1 or above, backward compatible with HDMI 2.0 and earlier supported standards
- **Bandwidth:** Minimum 48 Gbps data transfer capability
- **Resolution Support:** Minimum support for 4K at 120 Hz and 8K at 60 Hz
- **Connectors:** Male-to-male HDMI connectors on both ends
- **Connector Finish:** Gold-plated or equivalent corrosion-resistant connector contacts
- **Cable Construction:** High-quality braided or reinforced PVC outer jacket suitable for frequent official and office use
- **Shielding:** Triple shielding or equivalent interference protection for stable and distortion-free signal transmission
- **Signal Quality:** Cable shall support reliable transmission of high-definition digital audio and video without noticeable signal degradation over the specified length
- **Compatibility:** Fully compatible with desktops, laptops, monitors, projectors, televisions, conference room displays, and other HDMI-enabled media devices
- **Durability:** Cable shall be designed for long operational life with reinforced joints / strain relief at connector ends
- **Compliance:** Plug-and-play operation without requirement for additional drivers or proprietary accessories
- **Certifications:** HDMI Certified / Premium Certified / Ultra High Speed Certified, CE, FCC, RoHS, or equivalent internationally recognized certifications
- **Warranty:** Minimum 1-year replacement / manufacturer / OEM / authorized local warranty

Mandatory Requirement

- The bidder / vendor shall provide an official OEM warranty of minimum one (1) year from the date of delivery for all supplied hardware items, unless otherwise specified in the bidding document.
- The bidder / vendor shall ensure minimum two (2) years local support services, including repair, replacement, servicing, warranty claim facilitation, faulty hardware replacement, and necessary coordination with the principal / OEM / authorized partner for timely resolution of issues, unless otherwise mentioned.

- Repair, replacement, and servicing support for the supplied hardware shall be provided in accordance with the applicable warranty, support terms, and service response commitments defined in the contract and/or Service Level Agreement.
- If required by the Client, a Service Level Agreement may be executed at the time of contract award; therefore, the financial proposal shall clearly include an optional SLA cost/component.
- The quoted price shall be deemed inclusive of all applicable taxes and the SLA cost/component, wherever applicable under the final contract.

Table No 34: PAPER SHREDDER (Qty = 2)

TECHNICAL SPECIFICATIONS

Paper Shredder (Quantity = 2):

(Offered product shall meet, conform to, or exceed the following minimum technical specifications)

- **Type:** Heavy-duty office paper shredder suitable for continuous official use
- **Security Level:** Minimum DIN P-4 security level, cross-cut type
- **Sheet Capacity:** Minimum 20 to 30 sheets per pass
- **Shred Size:** Maximum particle size not exceeding 4 × 40 mm
- **Run Time:** Minimum continuous run time of 30 to 60 minutes
- **Bin Capacity:** Minimum 50 to 70 Liters waste bin capacity
- **Shred-able Materials:** Paper, staples, paper clips, and plastic cards; CD/DVD shredding may be supported where available
- **Entry Width:** Minimum 230 mm to 300 mm
- **Operation:** Automatic start and stop function
- **Jam Protection:** Anti-jam / jam reversal mechanism for uninterrupted operation
- **Motor Protection:** Thermal overload / overheat protection system
- **Noise Level:** Maximum 55 to 60 dB under normal operating conditions
- **Build Quality:** Commercial-grade construction suitable for continuous office and records disposal use
- **Safety Features:** Safety lock / safety cut-off / user protection mechanism during operation
- **Mobility:** Heavy-duty castors / wheels for ease of movement, where applicable
- **Power Supply:** Standard 220–240V AC, 50/60 Hz
- **Accessories:** Any and all accessories for achieving full operational functionality.
- **Warranty:** Minimum 1-year manufacturer / OEM / authorized local warranty

Mandatory Requirement

- The bidder / vendor shall provide an official OEM warranty of minimum one (1) year from the date of delivery for all supplied hardware items, unless otherwise specified in the bidding document.
- The bidder / vendor shall ensure minimum two (2) years local support services, including repair, replacement, servicing, warranty claim facilitation, faulty hardware replacement, and necessary coordination with the principal / OEM / authorized partner for timely resolution of issues, unless otherwise mentioned.
- Repair, replacement, and servicing support for the supplied hardware shall be provided in accordance with the applicable warranty, support terms, and service response commitments defined in the contract and/or Service Level Agreement.
- If required by the Client, a Service Level Agreement may be executed at the time of contract award; therefore, the financial proposal shall clearly include an optional SLA cost/component.
- The quoted price shall be deemed inclusive of all applicable taxes and the SLA cost/component, wherever applicable under the final contract.

**Table No 35: BLACK & WHITE LASER MULTIFUNCTION PRINTER (All-in-One)
(Qty=3)**

TECHNICAL SPECIFICATIONS

Black & White Laser Multifunction Printer (Quantity = To be specified):

(Offered product shall meet, conform to, or exceed the following minimum technical specifications)

- **Type:** Office / business-class monochrome laser multifunction printer
- **Functions:** Print, copy, scan; fax may be built-in or optional
- **Print Technology:** Laser / Monochrome laser
- **Print Speed:** Minimum **40 pages per minute** in black & white
- **Print Resolution:** Minimum **1200 × 1200 dpi** or equivalent enhanced print quality technology
- **Duty Cycle:** Minimum **80,000 pages per month**
- **Recommended Monthly Volume:** Manufacturer-rated recommended monthly print volume shall be clearly stated in the bid
- **Toner System:** Single black toner cartridge system
- **Toner Yield:** Standard and high-yield toner cartridges shall be available; bidder shall clearly quote page yields in the technical offer
- **Automatic Document Feeder:** Minimum **50-sheet ADF**
- **ADF Capability:** Duplex / single-pass / automatic two-sided scanning supported, as per OEM design
- **Duplex Printing:** Automatic duplex printing as standard
- **Paper Handling:** Minimum 1 internal input tray standard
- **Input Capacity:** Minimum **250-sheet** standard input capacity
- **Media Support:** Support for A4, A5, and other common office paper sizes; mixed media support required
- **Output Capacity:** Minimum **100-sheet** output bin
- **Special Media:** Support for envelopes, labels, cardstock, and other manufacturer-supported office specialty media
- **Connectivity (Standard):** Gigabit Ethernet or Fast Ethernet, USB host / device ports
- **Wireless Connectivity:** OEM-supported wireless / BLE / NFC may be offered either standard or through official manufacturer accessory
- **Mobile / Network Printing:** Support for Apple AirPrint, Mopria, and standard enterprise network printing protocols
- **Security:** Standard business / enterprise security features including password protection, secure configuration, firmware protection, user authentication, and encrypted data handling
- **Display:** Touchscreen or equivalent control panel display
- **Compatibility:** Compatible with current Windows, macOS, and Linux environments
- **Installation:** Plug-and-play and network deployment support for official office environment
- **Paper Rim:** 80 gm or above (2 with each printer)
- **Warranty:** Minimum 1-year manufacturer / OEM / authorized local warranty

Mandatory Requirement

- The bidder / vendor shall provide an official OEM warranty of minimum one (1) year from the date of delivery for all supplied hardware items, unless otherwise specified in the bidding document.
- The bidder / vendor shall ensure minimum two (2) years local support services, including repair,

replacement, servicing, warranty claim facilitation, faulty hardware replacement, and necessary coordination with the principal / OEM / authorized partner for timely resolution of issues, unless otherwise mentioned.

- Repair, replacement, and servicing support for the supplied hardware shall be provided in accordance with the applicable warranty, support terms, and service response commitments defined in the contract and/or Service Level Agreement.
- If required by the Client, a Service Level Agreement may be executed at the time of contract award; therefore, the financial proposal shall clearly include an optional SLA cost/component.
- The quoted price shall be deemed inclusive of all applicable taxes and the SLA cost/component, wherever applicable under the final contract.

Table No 36: BARCODE / LABEL PRINTER WITH HANDHELD WIRELESS BARCODE SCANNER (Qty = 2)

TECHNICAL SPECIFICATIONS

Barcode / Label Printer with Handheld Wireless Barcode Scanner (Quantity = 2):

(Offered product shall meet, conform to, or exceed the following minimum technical specifications)

- **Type:** Desktop or industrial-grade thermal barcode / label printer suitable for continuous official and forensic evidence labelling use
- **Printing Technology:** Direct thermal and / or thermal transfer printing
- **Print Resolution:** Minimum 203 dpi; higher resolution up to 300 dpi or above may be offered
- **Print Speed:** Minimum 100 mm/second or higher
- **Print Width:** Minimum 2 inches and above
- **Media Handling:** Support for continuous labels, die-cut labels, tags, and evidence labels
- **Label Sizes:** Capable of printing multiple label widths and lengths suitable for evidence bags, case files, storage media, shelves, and chain-of-custody tagging
- **Barcode Support:** Support for common 1D and 2D barcode symbologies including Code 128, Code 39, QR Code, Data Matrix, PDF417, and equivalent standard formats
- **Printing Output:** Clear, durable, smudge-resistant, and legible printing suitable for long-term record and evidence identification
- **Connectivity:** USB 2.0 or higher as standard; Ethernet and / or Wi-Fi connectivity may be provided
- **Memory:** Sufficient onboard memory and processor capacity for fast and uninterrupted label printing
- **Media Loading:** Easy-load mechanism for quick replacement of labels and ribbons, where applicable
- **Ribbon Support:** In case of thermal transfer printer, ribbon support shall be available for durable long-life labels
- **Software Compatibility:** Compatible with current Windows operating systems; support for standard label design and barcode printing software required
- **Driver Support:** OEM-supported printer drivers and utilities for configuration, calibration, and printing
- **Sensors:** Adjustable media sensors for gap, black mark, or continuous media detection
- **Construction:** Commercial-grade durable body suitable for continuous office and laboratory use
- **Use Case:** Suitable for printing evidence labels, barcode tags, case reference labels, storage media labels, asset tags, and chain-of-custody identifiers

Handheld Wireless Barcode Scanner:

- **Type:** Handheld wireless barcode scanner compatible with the offered barcode / label printer and printed barcode formats
- **Scanning Capability:** Support for both 1D and 2D barcode symbologies, including at minimum Code 128, Code 39, QR Code, Data Matrix, and PDF417
- **Compatibility:** Scanner shall be fully compatible with the barcode labels printed by the offered printer
- **Connectivity:** Wireless connectivity through 2.4 GHz wireless receiver and / or Bluetooth; USB wired connectivity may also be provided for charging and direct operation
- **Wireless Range:** Minimum 10 meters under normal office / laboratory operating conditions
- **Scanning Performance:** Fast and accurate scanning of printed barcodes from labels, tags, and evidence markings
- **Trigger Mode:** Manual trigger and auto-sensing / continuous scan mode support
- **Indicator:** Audible beep and LED indicator for successful scan confirmation
- **Battery:** Rechargeable battery suitable for extended office and laboratory use
- **Charging:** Charging cradle, docking station, or USB charging cable shall be included
- **Construction:** Durable ergonomic design suitable for routine official and forensic lab use
- **Interface Compatibility:** Compatible with Windows-based systems without requiring proprietary hardware for normal operation

Accessories Included:

- Power adapter
- Interface cable(s)
- Starter label rolls (**Quantity = 2 per printer**)
- Ribbon, where applicable
- Handheld wireless barcode scanner
- Wireless receiver / charging cradle / docking station, where applicable
- Documentation and all accessories required for complete operation
- All other accessories that may be required to achieve fully operational functionality

Warranty: Minimum 1-year manufacturer / OEM / authorized local warranty for printer and barcode scanner

Mandatory Requirement

- The bidder / vendor shall provide an official OEM warranty of minimum one (1) year from the date of delivery for all supplied hardware items, unless otherwise specified in the bidding document.
- The bidder / vendor shall ensure minimum two (2) years local support services, including repair, replacement, servicing, warranty claim facilitation, faulty hardware replacement, and necessary coordination with the principal / OEM / authorized partner for timely resolution of issues, unless otherwise mentioned.
- Repair, replacement, and servicing support for the supplied hardware shall be provided in accordance with the applicable warranty, support terms, and service response commitments defined in the contract and/or Service Level Agreement.
- If required by the Client, a Service Level Agreement may be executed at the time of contract award; therefore, the financial proposal shall clearly include an optional SLA cost/component.
- The quoted price shall be deemed inclusive of all applicable taxes and the SLA cost/component, wherever applicable under the final contract.

12. DISQUALIFICATIONS

Proposals shall be liable to rejection in case of any deviation from the instructions contained in the bidding documents, including but not limited to the following:

- a. False/ Incorrect submission of undertaking certificate.
- b. Technical bid is submitted without the required redacted copy of Bid Security.
- c. Offers are received after specified date and time.
- d. Specification and other requirements are not properly adhered to or different from those given in the bidding documents.
- e. GST and NTN certificates are not attached.
- f. Bidder is not in Active Taxpayer List (ATL) of FBR for both income tax and sales tax or any provincial revenue authority for sales tax only.
- g. Sales and Support Service Centers not in Pakistan.
- h. Quoting under rated Software i.e. noncompliance of specifications mentioned in the bidding document.

13. REDRESSAL OF GRIEVANCES BY THE PROCURING AGENCY

- a. NCERT has constituted a committee comprising of odd number of persons, with proper powers and authorizations, to address the complaints of bidder that may occur prior to the entry into force of the procurement contract.
- b. Any Redressal of grievances and settlement of disputes shall be done according to Section 48 of Public Procurement Rules, 2004.
- c. Mere fact of lodging of a complaint shall not warrant suspension of the procurement process.

14. PERFORMANCE BANK GUARANTEE (PBG)

- a. Bid security of successful bidder shall be retained till provision of Performance Bank Guarantee (PBG). Whereas, bid security of unsuccessful bidders will be returned after award of contract to successful bidder.
- b. A Performance Bank Guarantee (PBG) from a bank for an amount equal to 10% (10 PERCENT) of the bid/contract price in PAK RUPEE, shall be submitted before signing the contract for carrying out the assignment. For the purpose of Bank Guarantee, the bid/contract price will mean the total bid amount as provided in Financial Proposal.
- c. Performance Bank Guarantee (PBG) shall be submitted in shape of pay order/ bank draft in favor of “Project Director – Cyber Security for Digital Pakistan” at the time of signing of the Contract.
- d. If selected, The Contractor if not able to commission the software/solution as per contract or have provided the under rated or under quality product, support services, Performance Guarantee will be forfeited and contract will be cancelled. Further to add the following conditions shall also lead to forfeiture of Performance Guarantee and cancellation of contract:
 - (i) False/ Incorrect submission of undertaking certificate
 - (ii) If the Contractor commits a default under the Contract;

- (iii) If the Contractor fails to fulfill the obligations under the Contract;
 - (iv) If the Contractor violates any of the terms and conditions of the Contract;
 - (v) If Blacklisting procedure by the client is being initiated against the Contractor.
- e. Performance Guarantee would be retained until one (1) year after all contractual obligations have been fulfilled and would be submitted within fifteen (15) calendar days of signing the contract by the supplier or as per the demand of purchaser.

15. AWARD OF CONTRACT

- a. Work will be awarded to the bidder after technical and Financial Proposals evaluation. The bidder obtaining highest marks combining both Technical and Financial proposals will be awarded the contract.
- b. If two or more bidders obtain equal marks after combining Technical & Financial scores, which is the highest score for any item, then the contract will be awarded to the one having higher technical score.
- c. In case of refusal by successful bidder to sign contract, the client may award the contract to second financially lowest bidder in accordance with PPRA letter dated 15-02-2021 having caption ***“General Clarification Regarding Award of Contract to Second Most Advantageous Bidder”***.
- d. Supplier shall deliver the equipment, hardware, software, machinery within the 4-8 weeks after issuance of the Purchase Order (PO), and a performance insurance guarantee must be submitted within 15x days of signing the contract by the supplier or as per the demand of purchaser.
- e. The successful Firm shall be required to deposit in the form of a Bank Guarantee, a Performance Bond from the date of successful testing and acceptance, a sum equivalent to ten percent (10%) of the contract value. This Bank Guarantee shall be issued by a scheduled bank operating in Pakistan and shall be kept valid from the date of issue, until one (1) year after all contractual obligations have been fulfilled.

16. CORRUPT OR FRAUDULENT PRACTICES

- a. Definition of the terms set forth below for the purposes of this bidding document, shall be according to Public Procurement Rules, 2004.

17. PAYMENT PROCEDURE

- a. No advance payment shall be made against the supply of hardware and software mentioned in the bidding document.
- b. Payment shall be made on provision of invoice/bill as per the schedule below:

Sr. No.	Milestones	Time Period	Payment
1.	Supply of equipment / Software. Installation and Configuration	4-6 weeks for inland items from date of signing -of contract 8 - 12 weeks for the import items from date of signing of contract	40%

2.	Successful testing and acceptance	Four (04) weeks from confirmation of acceptance software	60% Subject to provision of Performance Insurance guarantee
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NON-DISCLOSURE AGREEMENT

THIS NON-DISCLOSURE AGREEMENT (“NDA”) is made and entered into at **Islamabad, Pakistan** on the __ day of -----2021

BY AND BETWEEN

National Cyber Emergency Response Team (NCERT), a statutory regulatory authority established under Prevention of Electronic Crime Act, 2016 (XL of 2016), having its Head Quarter at NCERT, Block L, Pakistan Secretariat, Islamabad (hereinafter called as the “**CLIENT**” which expression shall where the context admits, include its administrators and permitted assigns) of the One Part:

AND

(insert name of Company/Contractor) a Company incorporated under the laws of having its registered office at-----through its authorized representative Mr.....(herein after called as “the **Contractor**”) which expression shall where the context so allows include his/its successors-in-interest, executors, administrators, heirs and permitted assigns) of the **Other Part**;

(The Party of the One Part and Party of the Other Part shall hereinafter be collectively referred to as ‘Parties’ and individually as ‘Party’ as the context of this NDA requires).

WHEREAS,

1. The parties have entered into Agreement dated, (the “Agreement”) whereby, the Client may have to disclose certain nonpublic and proprietary information in result of execution and subsequent operation of the Agreement to the Contractor, which may fairly be considered to be of confidential nature including, but not limited to, methods, practices and procedures with which the Parties conduct their respective businesses, Internal working, decisions or Standard operating Procedures (SOPs) which are not Public documents, strategies in dealing with the Operators, Licensees, licensee lists, contract terms, methods of operation, software specifications, software codes, functionality, know how, financial information, entity or IT and OT sector specific security and threat intelligence information etc. the Know-How, information pertaining to its principles, pricing policy, commercial relationship, negotiations or parties’ projects, affairs, finances or any information in respect of which the parties are bound by an obligation of confidentiality to any third party.
2. The Parties are desirous to set the terms and conditions hereunder and sign this NDA.

NOW, THEREFORE THIS AGREEMENT WITNESSETH, for good and valuable consideration, it is hereby agreed between the parties as under;

1. Under this NDA, the Contractor is under an obligation to keep all such information confidential that is disclosed in the course of the Agreement and after completion of the term of the Agreement with the Client, and not to use it to the detriment of the Client or its licensees. In particular, the Contractor shall not use it for, or disclose it to, any of its new employer or client or to other direct or indirect stakeholders
2. Any unauthorized disclosure or use of the confidential information could prejudice the rights of Client and shall lead Contractor and third party, to whom it is disclosed, for remedy as per law.

3. **Definition of Confidentiality.**

In addition to the definition used in the Agreement, "Confidential Information" refers to any information which has commercial value and is either (i) technical information, including patent, copyright, trade secret and other proprietary information, techniques, sketches, drawings, models, inventions, know-how, processes, apparatus, equipment, algorithms, software programs, software source documents, and formulae related to the current, future and proposed products and functions of the Client, or (ii) non-technical information relating to Client's functions, responsibilities, operations including, without limitation, plans and strategies, finances, financial and accounting data and information, suppliers, stakeholders, purchasing data, strategical plans and any other information which is proprietary and confidential to Client.

4. **Exclusions.**

Confidential Information shall not include the following:

- a. information which is now or which hereafter becomes publicly known or available through no act or failure on the part of the Contractor;
- b. information which is actually known to the Contractor prior to the time of receipt of such Confidential Information;
- c. information which is furnished to the Contractor by a third party who has rightfully obtained the Confidential Information without restriction on disclosure;
- d. information which is independently developed by the Contractor without use of or reference to the Confidential Information of the Client that does not otherwise contravene the terms and provisions of the Agreement, and which such independent development can be established by evidence that would be acceptable to a Court of competent jurisdiction; or
- e. information which the Contractor is by law, order of a Court of competent jurisdiction, or other legal compulsion required to disclose; including but not limited to provision of information required by recognized stock exchange, regulation, governmental or regulatory body etc.
- f. information that is disclosed by the Contractor with the prior written approval of the Client.

5. Nondisclosure and Non-use Obligations.

Subject to confidentiality clause under the Agreement, the Contractor will maintain in confidence and will not disclose, disseminate or use any Confidential Information belonging to Client, whether or not in written form. The Contractor agrees that Contractor shall treat all Confidential Information of Client with at least the same degree of care as Contractor accords its own Confidential Information. Contractor further represents that the Contractor exercises at least reasonable care to protect its own Confidential Information. the Contractor agrees that Contractor shall disclose Confidential Information only to those of its employees who need to know such information and certifies that such employees have previously signed a copy of this Agreement.

Non-Disclosure of Confidential Information. The Contractor hereby agree and undertake that they shall not

- a. disclose Confidential Information *for the existence or content of any negotiations or discussions* between the Parties to any third party other than as authorized in clause 4 above; or (ii) use the Confidential Information disclosed to it by the Client for its own use or for any purpose, other than for the Purpose.
- b. Provided, however, that the Contractor may, without being required to seek prior written consent of the Client, disclose, in connection with the proposed business venture described in clause 5 above, to the extent necessary for the Purpose, Confidential Information to such of the following persons who reasonably require the same:
 - (i) employees, officers and directors of the Contractor;
 - (ii) employees, officers and directors of any Affiliate of the Contractor;
 - (iii) to any professional consultants/advisors retained by the Contractor acting for the purpose of advising the Contractor on the Purpose.
- c. The Contractor shall procure that any Confidential Information disclosed to any employee, officer or director of the Contractor or any of its Affiliates or any professional consultants/advisors retained by the Contractor shall be held strictly confidential on the same terms as set out herein.
- d. The Contractor further undertakes and agrees:
 - (i) to take all reasonable steps to protect the secrecy of Confidential Information and avoid disclosure, publication, or dissemination of the Client's Confidential Information or use of Confidential Information of the other in order to prevent it from falling into the public domain or the possession of unauthorized persons, using the same standard of care and discretion that Contractor uses to protect its own confidential information
 - (ii) to notify the Client in writing of any misuse or misappropriation of Confidential Information by any person of which it may become aware.
 - (iii) in the event it receives any lawful order by a court or government entity to disclose Confidential Information of the Client, that it shall notify the Client immediately in order to provide the Client the opportunity to seek an appropriate protective order. If the Client is unable to procure such protective order, the Contractor may disclose such Confidential Information only to the limited extent required to comply with such order;

- (iv) not to use the Confidential Information for purposes of unfair or improper competition. The Contractor shall not copy, alter, modify, reverse engineer, disassemble, or decompile any of the materials, software code or other tangible items that embody Confidential Information of the Client. The Contractor shall not copy or permit copying of Confidential Information of the other except as permitted in writing by Client.

6. Miscellaneous.

- a. **Successors and Assigns:** This Agreement shall be binding upon and for the benefit of the executing Parties, their successors and assigns, provided that Confidential Information may not be assigned without consent of the Client.
- b. **Entire Understanding:** The Agreement and NDA sets forth the entire understanding and agreement of the parties with respect to the subject matter hereof and supersedes all prior or contemporaneous oral or written representations and understandings.
- c. **No Waiver:** Any failure or delay by either Party to enforce any provision of this NDA or to exercise any right under this NDA will not be construed as a waiver of its rights.
- d. **Amendment:** This NDA may be amended or modified only in a writing signed by both Parties.
- e. **Parties Independent:** The Parties agree that each Party is an independent party/contractor and that this NDA will not be construed as a teaming agreement, joint venture, partnership or other business relationship.
- f. **Good Faith:** The Parties agree to act in good-faith in the performance of all their obligations and in exercise of all their rights, powers and privileges hereunder.
- g. **Dissociability:** Each provision of this NDA is dissociable and distinct from the others. The invalidity, illegality or unenforceability of any one or more provisions of this Agreement at anytime shall not in any way affect or impair the validity, legality and enforceability of the remaining provisions hereof.
- h. **Governing Law.** This NDA shall be governed in all respects in accordance with the laws of Pakistan and will be governed by and construed in accordance with the laws of Pakistan, without application of its conflict of law rules. The Parties agree that all legal proceedings arising from or relating to the Agreement and NDA or breach thereof will be brought and maintained exclusively in the courts of Pakistan.
7. **Survival.** This NDA shall govern all communications between the Parties. The Contractor understands that its obligations under Paragraph 5 ("Nondisclosure and Non-use Obligations") shall survive for two years after the termination or expiry of the NDA. Upon termination of any relationship between the Parties, the Contractor will promptly deliver to Client, without retaining any copies, all documents and other materials furnished to the Contractor by Client.
8. The Contractor agrees and undertakes that upon termination of the Agreement/NDA by the Client.

- a. shall return to Client all documents and property of Client, even if not marked “confidential” or “proprietary,” including but not necessarily limited to drawings, reports, manuals, correspondence, customer lists, computer programs, and all other materials and all copies thereof relating in any way to Client, or in any way obtained by the Contractor during the course of the Agreement and shall not retain copies, notes or abstracts of the foregoing.
- b. The Client may notify any future or prospective employer or third party of the existence of this Agreement/NDA.

9. Injunctive Relief.

- a. A breach of any of the promises or agreements contained herein will result in irreparable and continuing damage to Client for which there will be no adequate remedy at law, and Client shall be entitled to injunctive relief and/or a decree for specific performance and such other relief as may be proper (including monetary damages if appropriate).
- b. Removal of difficulty or conflict of clauses. In case of any difficulty which may arise as result of conflict or discrepancy or misinterpretation of clauses of NDA or Agreement or any annexures thereto, the Client, on its sole and absolute discretion remove such conflict or discrepancy or misinterpretation in a manner that may not prejudice the rights of the Client.

IN WITNESS WHEREOF, the Parties have executed this Agreement as of the dates written below.

For and on Behalf of Client	For and on behalf of Contractor
Signed by _____ Seal----- ----- Witness _____	Signed by _____ Seal _____ _____ Witness _____