

Standard Bidding Document

Deployment of IP PABX System and OFC along with CCTV Cameras and
Attendance Management System at Karachi
(Goods)

National

Single Stage-One Envelope



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REQUEST FOR BIDS

PROCUREMENT OF GOODS

1. The **National Telecom Corporation (Development South Directorate, NTC Karachi)** has reserved Funds for the procurement planned for FY **2026-27**. The **National Telecom Corporation (Development South Directorate, NTC Karachi)** intends to apply part of the proceeds of this Fund to cover eligible payments under the contract for the "**Deployment of IP PABX System and OFC along with CCTV Cameras and Attendance Management System at Karachi**" with the reference of "**P144501**"
2. The **National Telecom Corporation (Development South Directorate, NTC Karachi)** invites sealed Bids from eligible Bidders for procurement of goods described in the bidding documents on **EPADS v2.0**.
3. **Single Stage-One Envelope** will be used by adopting **Least Cost Based Selection (LCBS)** Technique for the subject procurement, in line with the Public Procurement Rules, 2004 and any Regulations, Regulatory Guides, Procurement Guidelines or Instructions issued by the Authority from time to time.
4. All Bids must be accompanied by a Bid Security amounting described in Bid Security Section in Bidding Document in the form of **Pay Order, Call at Deposit** or all bids must be accompanied by bid securing declaration in the format specified in the Bidding documents
5. E-Bidding documents, containing detailed terms & conditions, specifications and requirements etc. are available on **e-Pak Acquisition and Disposal System (EPADS)** at **<https://epads.gov.pk/opportunities/federal/procurements/144501>** for all the interested bidders registered on **EPADS v2.0**. Bidders are required to get themselves registered on **EPADS v2.0** to participate in Bidding process.
6. The e-bids, prepared in accordance with the instructions in the e-Bidding Documents, must be submitted through **EPADS v2.0** on or before **Monday, October 19, 2026 11:00 AM**. E-bids will be opened using **EPADS v2.0** on the same day at **Monday, October 19, 2026 11:30 AM**. 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>

In terms of Rule 48 of Public Procurement Rules, 2004 Grievance Redressal Committee (GRC) is notified for the subject procurement and notification copy is available on the procuring agency's website and on Authority's website at (www.ppra.org.pk).

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Instructions to Bidders

A. Introduction

1.Scope of Bids

1.1 The Procuring Agency (PA), as indicated in the **Bids Data Sheet (BDS)** invites Bids **through EPADS v2.0** for the provision of Goods for as specified in the BDS and **in Section V - Evaluation Criteria, Specifications & Schedule of Requirements**. The name, identification, and number of items/deliverables are provided in the **BDS**. The successful Bidders will be expected to provide the goods within the specified period and timeline(s) as stated in the **BDS**.

2. Source of Funds

2.1 Source of funds is referred in Clause-1 of Invitation for Bids.

3. Eligible Bidders

3.1 A Bidder may be natural person, company or firm or public or semi-public agency of Pakistan or any foreign country, or any combination of them with a formal existing agreement (on Judicial Papers) in the form of a joint venture, consortium, or association. In the case of a joint venture, consortium, or association, all members shall be jointly and severally liable for the execution of the Contract in accordance with the terms and conditions of the Contract. The joint venture, consortium, or association shall nominate a Lead Member as nominated in the BDS, who shall have the authority to conduct all business for and on behalf of any and all the members of the joint venture, consortium, or association during the Bidding process, and in case of award of contract, during the execution of the contract.

3.2 Verifiable copy of the agreement that forms a joint venture, consortium or association shall be required to be submitted as part of the Bid.

3.3 The appointment of Lead Member in the joint venture, consortium, or association shall be confirmed by submission of a valid Power of Attorney to the Procuring Agency.

3.4 Any bid submitted by the joint venture, consortium or association shall indicate the part of proposed contract to be performed by each party and each party shall be evaluated (or post qualified if required) with respect to its contribution only, and the responsibilities of each party shall not be substantially altered without prior written approval of the Procuring Agency and in line with

any instructions issued by the Authority.

(The limit on the number of members of JV or Consortium or Association may be prescribed in BDS, in accordance with the guidelines issued by the PPRA).

3.5 The invitation for Bids is open to all prospective suppliers, manufacturers, or authorized agents / dealers subject to any provisions of incorporation or licensing by the respective national incorporating agency or statutory body established for that particular trade or business. Procuring agencies shall specify the registration/licensing requirements for the foreign bidders keeping in view the requirement of that business.

3.6 A Bidder shall not have a conflict of interest. All Bidders found to have a conflict of interest shall be disqualified. A Bidder may be considered to have a conflict of interest with one or more parties in this Bidding process, if they:

1. are associated or have been associated in the past, directly or indirectly with a firm or any of its affiliates which have been engaged by the Procuring Agency to provide consulting services for the preparation of the design, specifications and other documents to be used for the procurement of the Goods to be purchased under this Invitation for Bids.
2. have controlling shareholders in common; or
3. receive or have received any direct or indirect subsidy from any of them; or
4. have the same legal representative for purposes of this Bid; or
5. have a relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the Bids of another Bidder, or influence the decisions of the Procuring Agency regarding this Bidding process; or
6. Submit more than one Bid in this Bidding process.

3.7 A Bidder may be ineligible if –

1. he is declared bankrupt or, in the case of company or firm, insolvent;
2. payments in favor of the Bidder is suspended in accordance with the judgment of a court of law other than a judgment declaring bankruptcy and resulting (in accordance with the national laws) in the total or partial loss of the right to administer and dispose of its property;

3. the Bidder is convicted, by a final judgment, of any offence involving professional conduct;

4. the Bidder is blacklisted locally or by international organizations and hence debarred due to involvement in corrupt and fraudulent practices, or performance failure or due to breach of Bid securing declaration.

3.8 As and when required, bidders shall provide to the Procuring Agency evidence of their eligibility, proof of compliance with the necessary legal requirements to carry out the contract effectively.

3.9 Bidders shall submit Bids relating to the nature, conditions and modalities of sub-contracting wherever the sub-contracting of any elements of the contract amounting to more than ten (10) percent of the Bid price is envisaged.

4. Eligible Goods and Related Services

4.1 All goods and related services to be supplied under the contract shall have their origin in eligible source countries, and all expenditures made under the contract will be limited to such goods and services. For purpose of this Bid, ineligible countries are the countries declared ineligible by the Federal Government.

5. One Bid per Bidder

5.1 A bidder shall submit only one Bid, in the same bidding process, either individually as a Bidder or as a member in a joint venture or any similar arrangement.

5.2 The Bidder shall not engage a subcontractor for any portion of the contract if the value of such subcontracting exceeds thirty percent (30%) of the total contract amount.

6. Cost of Bidding

6.1 Any cost incurred by the bidder relating to the preparation and submission of its Bid shall be borne by the bidder, and the Procuring Agency shall in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

B. Bidding Documents

7. Contents of Bidding Document

7.1 The Goods required, Bidding procedures, and terms and conditions of the contract are prescribed in the Bidding Documents. In addition to the Invitation for Bids, the Bidding documents which should be read in conjunction with any addenda issued in accordance with **ITB 9.1** include:

Section I -Invitation to Bids

Section II Instructions to Bidders (ITB)

Section III Bid Data Sheet (BDS)

Section IV Evaluation Criteria, Specifications, Schedule of Requirements

Section V Bid Forms

Section VI General Conditions of Contract (GCC)

Section VII Special Conditions of Contract (SCC)

Section VIII Contract Forms

7.2 The Bidder is expected to examine all instructions, forms, terms and specifications in the Bidding documents. Failure to furnish all the information required in the Bidding documents through **EPADS v2.0** will be at the Bidder's risk and may result in the rejection of his Bids.

8. Clarification of Bidding documents

8.1 A prospective Bidder requiring any clarification of the Bidding documents may notify the Procuring Agency through **EPADS v2.0**.

8.2 The Procuring Agency will within three (3) working days after receiving the request for clarification, respond to any request for clarification through **EPADS v2.0** provided that such request is received not later than three (03) days prior to the deadline for the submission of Bids as prescribed in **ITB 22**

8.3 Copies of the Procuring Agency's response will be forwarded to all identified Prospective Bidders through **EPADS v2.0**, including a description of the inquiry, but without identifying its source.

8.4 Should the Procuring Agency deem it necessary to amend the Bidding document as a result of a clarification, it shall do so following the procedure under **ITB 9**.

8.5 If indicated **in the BDS**, the Bidder's designated representative is invited at the Bidder's cost to attend a pre-Bid meeting at the place, date and time mentioned **in the BDS**. During this pre-Bid meeting, prospective Bidders may request clarification of the schedule of requirement, the Evaluation Criteria or any other aspects of the Bidding document.

8.6 Minutes of the pre-Bid meeting, if applicable, including the text of the questions asked by Bidders, including those during the meeting (without identifying the source) and the responses given, together with any responses prepared after the meeting will be uploaded on **EPADS v2.0**. Any modification to the Bidding documents that may become necessary as a result of the pre-Bid meeting shall be made by the Procuring Agency exclusively through the use of an Addendum pursuant to **ITB 9**. Non-attendance at the pre-Bid meeting will not be a cause for disqualification of a Bidder.

9. Amendment of Bidding documents

9.1 Before the deadline for submission of Bids, the Procuring Agency for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder or Pre-Bid meeting may modify the Bidding documents by issuing addenda through **EPADS v2.0**.

9.2 The Procuring Agency shall promptly publish the addendum through **EPADS v2.0**.

9.3 Any addendum issued including the notice of any extension of the deadline shall also be communicated through EPADS v2.0 to all the bidders who have already submitted their bids. Such bidders shall have the right to withdraw their already submitted bid and re-submit the revised bid prior to the original or extended bid submission deadline.

9.4 To give prospective Bidders reasonable time in which to take an addendum/corrigendum into account in preparing their Bids, the Procuring Agency may, at its discretion, extend the deadline for the submission of Bids through **EPADS v2.0**:

Provided that the Procuring Agency shall extend the deadline for submission of Bids, if such an addendum is issued within last three (03) days of the Bids submission deadline.

C. Preparation of Bids

10. Language of Bid

10.1 The Bid prepared by the bidder, as well as all correspondence and documents relating to the Bids exchanged by the Bidder and the Procuring Agency shall be written in the English language unless otherwise specified in the BDS. Supporting documents and printed literature furnished by the Bidder may be in another language provided they are accompanied by an accurate translation of the relevant pages in the English language unless otherwise specified in the **BDS**, in which case, for purposes of interpretation of the Bidder, the translation shall govern.

11. Documents and samples Constituting the Bid

11.1 The Bid prepared by the Bidder shall constitute the documents required in the **BDS**.

Details of sample(s) where applicable and requested in the BDS.

1. Documentary evidence established in accordance with ITB that the Bidder is eligible and/or qualified for the subject bidding process;
2. Documentary evidence establish that the Bidder has been authorized by the manufacturer to deliver the goods into Pakistan, where required and where the supplier is not the manufacturer of those goods;
3. Documentary evidence establish that the goods and related services to be supplied by the Bidder are eligible goods and services, and conform to the Bidding Documents;
4. Bid security or Bid Securing Declaration furnished in accordance with **ITB 18**.

12. Documents Establishing Eligibility of the Goods and Conformity to Bidding documents

12.1 To establish the conformity of the bidder to the Bidding document, the Bidder shall furnish as part of its Bids the documentary evidence that Goods provided conform to the technical specifications and standards.

13. Documents Establishing Eligibility and Qualification of the Bidder

13.1 The Bidder shall furnish, as part of its Bid, all those documents establishing the Bidder's eligibility to participate in the Bidding process and/or its qualification to perform the contract if its Bid is accepted.

14. Form of Bids

14.1 The Bidder shall fill the Form of Bid furnished in the Bidding documents. The Bids Form must be completed without any alterations to its format and no substitute shall be accepted.

15. Bids Prices

15.1 The Bids Prices quoted by the Bidder in the Form of Bid and in the Price Schedules shall conform to the requirements specified below or exclusively mentioned hereafter in the Bidding documents.

15.2 All items in the Schedule of Requirement must be listed and priced separately in the Price Schedule(s). If a Price Schedule shows items listed but not priced and neither explicitly denied, their prices shall be construed to be included in the prices of other items.

15.3 Items not listed in the Price Schedule shall be assumed not to be included in the Bid, and provided that the Bid is still substantially responsive in their absence or due to their nominal nature, the corresponding average price of the respective item(s) of the remaining substantially responsive Bidder(s) shall be construed to be the price of those missing item(s).

15.4 The Bid price to be quoted in the Form of Bid in accordance with **ITB 14.1** shall be the total price of the Bid.

15.5 The Bidder shall indicate on the appropriate Price Schedule, the unit prices (where applicable) and total Bid price of the Goods it proposes to provide under the contract.

15.6 Prices quoted by the Bidder shall be fixed during the Bidder's performance of the contract and not subject to variation on any account. A Bid submitted with an adjustable price will be treated as non-responsive and shall be rejected.

16. Bids Currencies

16.1 Prices shall be quoted in Pakistani Rupees unless otherwise specified in the BDS in accordance with Rule 30 (2) of the Public Procurement Rules, 2004.

17. Bids Validity Period

17.1 Bids shall remain valid for the period specified in the **BDS** after the Bid submission deadline prescribed by the Procuring Agency. A Bid valid for a shorter period shall be rejected by the Procuring Agency as non-responsive. The period of Bid validity will be determined from the complementary Bid securing instrument, i.e. the expiry period of Bid Security or Bids Securing Declaration as the case may be.

17.2 The procuring agency shall ordinarily be under an obligation to process and evaluate the bid and to issue letter of award within the stipulated bid validity period.

17.3 Under exceptional circumstances, prior to the expiration of the initial Bid validity period, the Procuring Agency may request the Bidders' consent to an extension of the period of validity of their Bids only once through **EPADS v2.0**, for the period not more than the period of initial bid validity. The Bid Security provided under **ITB 18** shall also be suitably extended. A Bidder may refuse the request without forfeiting its Bid security or causing to be executed its Bid Securing Declaration. A Bidder agreeing to the request will not be required nor permitted to modify its Bid, but will be required to extend the validity of its Bid Security or Bid Securing Declaration for the period of the extension.

18. Bid Security or Bid Securing Declaration

18.1 The Bidder shall furnish as part of its Bid, a Bid Security in accordance with Rule 25 of the Public Procurement Rules, 2004.

18.2 The original Bid Security shall be enclosed within the sealed envelope and to be submitted physically before closing time for submission of bids. Whereas, scanned copy of bid security shall be uploaded electronically through EPADS v2.0 before closing hours for submission of bids.

18.3 The Bidder who failed to submit the original Bids security before the submission deadline shall be disqualified straightaway.

18.4 The Bid Security or Bid Securing Declaration is required to protect the Procuring Agency against the risk of Bidder's conduct which would warrant the security's forfeiture, pursuant to **ITB 18.7**.

18.5 The Bid Security shall be denominated in the local currency, and it shall be a Bank Draft in the name of the Procuring Agency and valid for twenty-eight (28) days beyond the end of the validity of the Bid. This shall also apply if the period

for Bids/Bid Validity is extended. In either case, the form must include the complete name of the Bidder.

18.6 The Bid Security shall be payable promptly upon written demand by the Procuring Agency in case any of the conditions listed in **ITB 18** are invoked.

18.7 Unsuccessful Bidders' Bid Security will be discharged or returned as promptly as possible, however in no case later than thirty (30) days after the expiration of the period of Bids Validity prescribed by the Procuring Agency pursuant to **ITB 17**. The Procuring Agency shall make no claim to the amount of the Bid Security, and shall promptly return the Bid Security document, after whichever of the following that occurs earliest:

- a. the expiry of the Bid Security;
- b. the entry into force of a procurement contract and the provision of a Performance Guarantee, for the performance of the contract if such a guarantee, is required by the Bid documents;
- c. the rejection by the Procuring Agency of all Bids;
- d. the withdrawal of the Bids prior to the deadline for the submission of Bids, unless the Bids documents stipulate that no such withdrawal is permitted.

18.8 The successful Bidder's Bids Security will be discharged upon the Bidder signing the contract, or furnishing the Performance Guarantee.

18.9 The Bid Security may be forfeited or the Bid Securing Declaration executed:

- a. if a Bidder:
- b. withdraws its Bid during the period of Bid Validity as specified by the Procuring Agency, and referred by the Bidder on the Form of Bids except as provided for in **ITB 17.2**; or
- c. does not accept the correction of errors; or
- d. in the case of a successful Bidder, if the Bidder fails:
- e. to sign the contract; or
- f. to furnish Performance Guarantee.

19. Withdrawal, Substitution, and Modification of Bid

19.1 Before Bid submission deadline, any Bidder may withdraw, substitute, or modify its Bid after it has been submitted through EPADS v2.0. Bids requested to be withdrawn, shall be returned unopened to the Bidders through **EPADS v2.0**.

20. Format and Signing of Bid

20.1 The Bidder shall prepare and submit Bids with due diligence after carefully reading all the terms and condition **before bid submission deadline** through EPADS v2.0.

D. Submission of Bids

21. Submission of Bids through EPADS v2.0

21.1 The Technical and Financial Bids if required to submitted, shall be submitted on **EPADS v2.0**.

22. Deadline for Submission of Bids

22.1 Bids shall be received by the Procuring Agency through **EPADS v2.0** before bid submission deadline.

22.2 The Procuring Agency may, under exceptional circumstances, extend the deadline for the submission of Bids, after recording reasons in writing and in an equal opportunity manner.

In such case, all rights and obligations of the Procuring Agency and the Bidders that were previously governed by the original deadline shall thereafter be subject to the revised deadline.

E. Opening and Evaluation of Bids

23. Opening of Bids

23.1 The Bid Evaluation Committee of the Procuring Agency shall open all Bids through the EPADS v2.0, on the date and time specified in the Bid Data Sheet (BDS).

23.2 The Bid Evaluation Committee **shall generate minutes through EPADS v2.0 containing brief details of bid opening process.** The record of the Bid opening shall include, as a minimum: the name of the Bidder, the Bid price if applicable, and the presence or absence of a Bid Security or Bid Securing Declaration.

23.3 The procuring agency shall live broadcast the opening of bids on national media or on their website or digital channels, if the volume of procurement exceeds five hundred million rupees in case of goods and services and one thousand million rupees in case of works.

23.4 In case the date of opening of bid has been declared as public holiday or the procuring agency fail to open bid due to any EPADS v2.0 related issues, the submission and opening of bids shall be shifted to the next working day on the same time.

23.5 In case of Single Stage One Envelope Procedure, the Bidders names, the Bid prices, the total amount of each Bid and, the presence or absence of Bid Security, Bid Securing Declaration and such other details as the Procuring Agency may consider appropriate, will be announced by the Bid Evaluation Committee.

24. Clarification of Bids

24.1 To assist in the examination, evaluation and comparison of Bids of the Bidders, the Procuring Agency may, ask any Bidder for a clarification of its Bid including breakdown of prices.

24.2 The request for clarification and the response shall be sought through EPADS v2.0 **before three days prior to the deadline for submission of bids.** No change in the prices or substance of the Bids shall be sought, offered, or permitted.

24.3 The alteration or modification in the BIDS which in any way affect the following parameters will be considered as a change in the substance of a Bids:

1. evaluation & qualification criteria;
2. required scope of work or specifications;
3. all securities requirements;
4. tax requirements;

5. terms and conditions of Bidding documents.

6. change in the ranking of the Bidder

24.4 From the time of Bids opening to the time of Contract award if any Bidder wishes to contact the Procuring Agency on any matter related to the Bids it should do so through **EPADS v2.0**.

25. Preliminary Examination of Bids

25.1 Prior to the detailed evaluation of Bids, the Procuring Agency will determine whether each Bid:

1. meets the eligibility criteria defined in **ITB 3**;
2. has been prepared as per the format and contents defined by the Procuring Agency in the Bidding documents;
3. is accompanied by the required securities; and
4. is substantially responsive to the requirements of the Bidding documents.

25.2 The Procuring Agency's determination of a Bid's responsiveness will be based on the contents of the Bid itself.

25.3 A substantially responsive Bid is one which conforms to all the terms, conditions, and specifications of the Bidding documents, without material deviation or reservation. A material deviation or reservation is one that: -

1. affects in any substantial way the scope, quality, or performance of the Goods;
2. limits in any substantial way, inconsistent with the Bidding documents, the Procuring Agency's rights or the Bidders obligations under the Contract; or
3. if rectified, would affect unfairly the competitive position of other Bidders presenting substantially responsive Bids.

25.3 If a Bids is not substantially responsive, it will be rejected by the Procuring Agency and may not subsequently be evaluated for complete technical responsiveness.

26. Examination of Terms and Conditions; Technical Evaluation

26.1 The Procuring Agency shall examine the Bids to confirm that all terms and conditions specified in the **GCC** and the **SCC** have been accepted by the Bidder without any material deviation or reservation.

26.2 The Procuring Agency shall evaluate the technical aspects of the Bids submitted, to confirm that all requirements specified in Schedule of Requirements and Technical Specifications of the Bidding documents have been met without material deviation or reservation.

26.3 If after the examination of the terms and conditions and the technical evaluation, the Procuring Agency determines that the Bid is not substantially responsive in accordance with **ITB 25.2**, it shall reject the Bid.

27. Correction of Errors

27.1 Bids determined to be substantially responsive will be checked for any arithmetic errors. Errors will be corrected as follows: -

1. if there is a discrepancy between unit prices and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail, and the total price shall be corrected, unless in the opinion of the Procuring Agency there is an obvious misplacement of the decimal point in the unit price, in which the total price as quoted shall govern and the unit price shall be corrected;
2. if there is an error in a total corresponding to the addition or subtraction of sub-totals, the sub-totals shall prevail and the total shall be corrected; and
3. where there is a discrepancy between the amounts in figures and in words, the amount in words will govern.
4. Where there is discrepancy between grand total of price schedule and amount mentioned on the Form of Bids, the amount referred in Price Schedule shall be treated as correct subject to elimination of other errors.

27.2 The amount stated in the Bid will, be adjusted by the Procuring Agency in accordance with the above procedure for the correction of errors and, with the concurrence of the Bidder, shall be considered as binding upon the Bidder. If the Bidder does not accept the corrected amount, its Bid will then be rejected, and the Bid Security may be forfeited or the Bids Securing Declaration may be executed.

28. Conversion to Single Currency

28.1 To facilitate evaluation and comparison, the Procuring Agency will convert all Bids prices expressed in the amounts in various currencies in which the Bids prices are payable. For the purposes of comparison of bids quoted in different currencies, the price shall be converted into a single currency specified in the bidding documents. The rate of exchange shall be the selling rate prevailing on the date of opening of financial bids specified in the bidding documents, in accordance with weighted average customer exchange rates list issued by the State Bank of Pakistan on that day.

29. Evaluation of Bids

29.1 The Bids, quotations, or proposals shall be evaluated by the respective evaluation committees as per evaluation criteria described in the Bidding Documents in accordance with Rule 29 and 30 of the Public Procurement Rules, 2004.

1. Least Cost Based Selection (LCBS)

After meeting the requirements of eligibility, qualification and substantial responsiveness, the bid in compliance with all the mandatory (technical) specifications/requirements and/or requisite quality threshold (if any), and having lowest evaluated cost (or financial proposal) shall be considered Successful Bid.

2. Quality and Cost Based Selection (QCBS)

In such combination, there shall be some specific weightage of both the technical features and financial aspects of the proposal. The financial marks shall be awarded on the basis of inverse proportion calculations. The successful bid shall be declared, on the basis of combined evaluation.

3. Quality Based Selection (QBS)

After meeting the requirements of eligibility, qualification and substantial responsiveness the bid in compliance with all the mandatory (technical) specifications/requirements and attaining highest marks in the Technical Evaluation considering all other qualitative and/or quantitative parameters (or point rated criteria) for technical proposal(s) such as working methodology, implementation plan, resource allocation, additional functionalities, risk management approach, knowledge transfer techniques, post implementation methodology etc. shall be treated as highest ranked bid. Later on, the financial proposal of highest ranked bidder shall be opened, however, in case of failure to proceed further with such a bidder, the procuring agency may resort to second

highest bidder and so on.

29.2 In case of tie of bids, the bidders shall be provided an opportunity to offer their best and final monetary offer through EPADS v2.0. However, in no case the rates shall be higher than the original financial bids.

30. Domestic Preference

30.1 The procuring agency shall evaluate and compare bids, allow for preference to domestic bidders, while competing with the international bidders in accordance with the policies of Federal Government.

The percentage of preference, to be accorded shall be clearly mentioned in the bidding documents under the bid evaluation criteria.

31. Determination of Successful Bid

31.1 Selection technique will be adopted for determining the Successful Bid in accordance with the criteria referred in the BDS or prescribed in the separate section titled as Evaluation Criteria.

31.2 In case where the Procuring Agency adopts the Cost Based Evaluation Technique and, the Bid with the lowest evaluated price from amongst those which are eligible, compliant and substantially responsive shall be the Successful Bid.

31.3 The Procuring Agency may adopt the Quality & Cost Based Selection Technique due to the following two reasons:

1. Where the Procuring Agency knows about the main features, usage and output of the products; however not clear about the complete features, technical specifications and functionalities of the goods to be procured and requires the bidders to submit their proposals defining those features, specifications and functionalities; or
2. Where the Procuring Agency, in addition to the mandatory requirements and mandatory technical specifications, requires parameters specified in Evaluation Criteria to be evaluated while determining the quality of the goods.

31.4 In such cases, the Procuring Agency may allocate certain weightage to these factors as a part of Evaluation Criteria, and may determine the ranking of the bidders on the basis of combined evaluation in accordance with provisions of Rule 2(1)(h) of the Public Procurement Rules, 2004.

32. Abnormally Low Financial Bids

32.1 Where the Bid price is considered to be abnormally low, the Procuring Agency shall perform price analysis either during determination of Successful Bids or as a part of the post-qualification process.

32.2 The Procuring Agency may reject an Abnormally low financial bids.

32.3 In order to identify the Abnormally Low Bids (ALB) following approaches can be considered to minimize the scope of subjectivity:

1. Comparing the Bids price with the cost estimate;
2. Comparing the Bids price with the Bids offered by other Bidders submitting substantially responsive Bids; and
3. Comparing the Bids price with prices paid in similar contracts in the recent past either government- or development partner-funded.

32.4 The Procuring Agency will determine to its satisfaction whether the Bidder that is selected as having submitted the successful bid is qualified to perform the contract satisfactorily.

32.5 The determination will take into account the Bidder's financial, technical, and production capabilities. It will be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, as well as such other information as the Procuring Agency deems necessary and appropriate. Factors not included in these Bidding documents shall not be used in the evaluation of the Bidders' qualifications.

32.6 Procuring Agency may seek "Certificate for Independent Price Determination" from the Bidder and the results of reference checks may be used in determining an award of contract.

Explanation: The Certificate shall be furnished by the Bidder. The Bidder shall certify that the price is determined keeping in view of all the essential aspects such as raw material, its processing, value addition, optimization of resources due to economy of scale, transportation, insurance and margin of profit etc.

32.7 An affirmative determination will be a prerequisite for award of the contract to the Bidder. A negative determination will result in rejection of the Bidder's Bids, in which event the Procuring Agency will proceed to the next ranked Bidder to make a similar determination of that Bidder's capabilities to

perform satisfactorily.

F. Award of Contract

33. Criteria of Award

33.1 The Procuring Agency will award the Contract to the Bidder whose Bids has been determined to be substantially responsive to the Bidding documents and who has been declared as Most Advantageous Bidder.

34. Negotiations

34.1 The procuring agency shall not engage in negotiations with respect to scope and price with the bidder except when the procuring agency conducts a procurement using direct **or negotiated** contracting or a request for proposals with evaluation based on quality alone.

34.2 The procuring agency may negotiate with the most advantageous bid with a view to streamline the work or task execution, at the time of contract finalization on methodology, work plan, staffing, finalizing payment arrangements, delivery arrangements, minor amendments to the special conditions of the contract.

35. Procuring Agency Right to reject all bids

35.1 The Procuring Agency reserves the right to reject all bids or proposals at any time prior to the issuance of the Letter of Award, without incurring any liability, in accordance with Rule 33 of the Public Procurement Rules, 2004.

36. Procuring Agency's Right to Vary Quantities at the Time of Award

36.1 The Procuring Agency reserves the right at the time of contract award to increase or decrease the **quantity of** Goods originally specified in these Bidding documents provided this does not exceed **by** 15%, without any change in unit price or other terms and conditions of the Bids and Bidding documents.

37. Notification of Award

37.1 Prior to the award of contract, the procuring agency shall announce and publish the result of bid evaluation on **EPADS v2.0** in accordance with Rule 35

of the Public Procurement Rules, 2004.

37.2 The Bidder whose Bids has been accepted will be notified of the award by the Procuring Agency prior to expiration of the Bids/Bid Validity period. The Letter of Award will state the sum that the Procuring Agency will pay the successful Bidder in consideration for the delivery of Goods as prescribed by the Contract (hereinafter and in the Contract called the "Contract Price).

37.3 The Letter of award will constitute the formation of the Contract, subject to the Bidder furnishing the Performance Guarantee and signing of the contract.

38. Signing of Contract

38.1 Promptly after issuance of Letter of award, Procuring Agency shall send the successful Bidder the draft Contract, incorporating all terms and conditions as agreed by the parties to the contract.

38.2 Immediately after the Redressal of grievance by the GRC (if any), mandatory standstill period in accordance with Rule 35 of the Public Procurement Rules, 2004 and **after fulfillment of all condition's precedent** of the Contract Form, the successful Bidder and the Procuring Agency shall sign the Contract.

39. Corrupt & Fraudulent Practices

39.1 Procuring Agencies (including beneficiaries of Government funded projects and procurement) as well as Bidders/Contractors under Government financed contracts, observe the highest standard of ethics during the procurement and execution of such contracts, and will avoid to engage in any corrupt and fraudulent practices.

F. Grievance Redressal & Complaint Review Mechanism

40. Constitution of Grievance Redressal

40.1 The Grievance Redressal Committee shall address the grievance, if any submitted by any party, including the bidder, in accordance with Rule 48 of the Public Procurement Rules, 2004 to be read with Redressal of Grievances Regulations, 2021.

40.2 In case if any party or the bidder is not satisfied with the decision of the GRC or if it fails to decide within ten days, the bidder or the party may file an appeal before the Appellate Committee of the Authority in accordance with Rule 48 of the Public Procurement Rules, 2004 to be read with Redressal of Grievances Regulations, 2021.

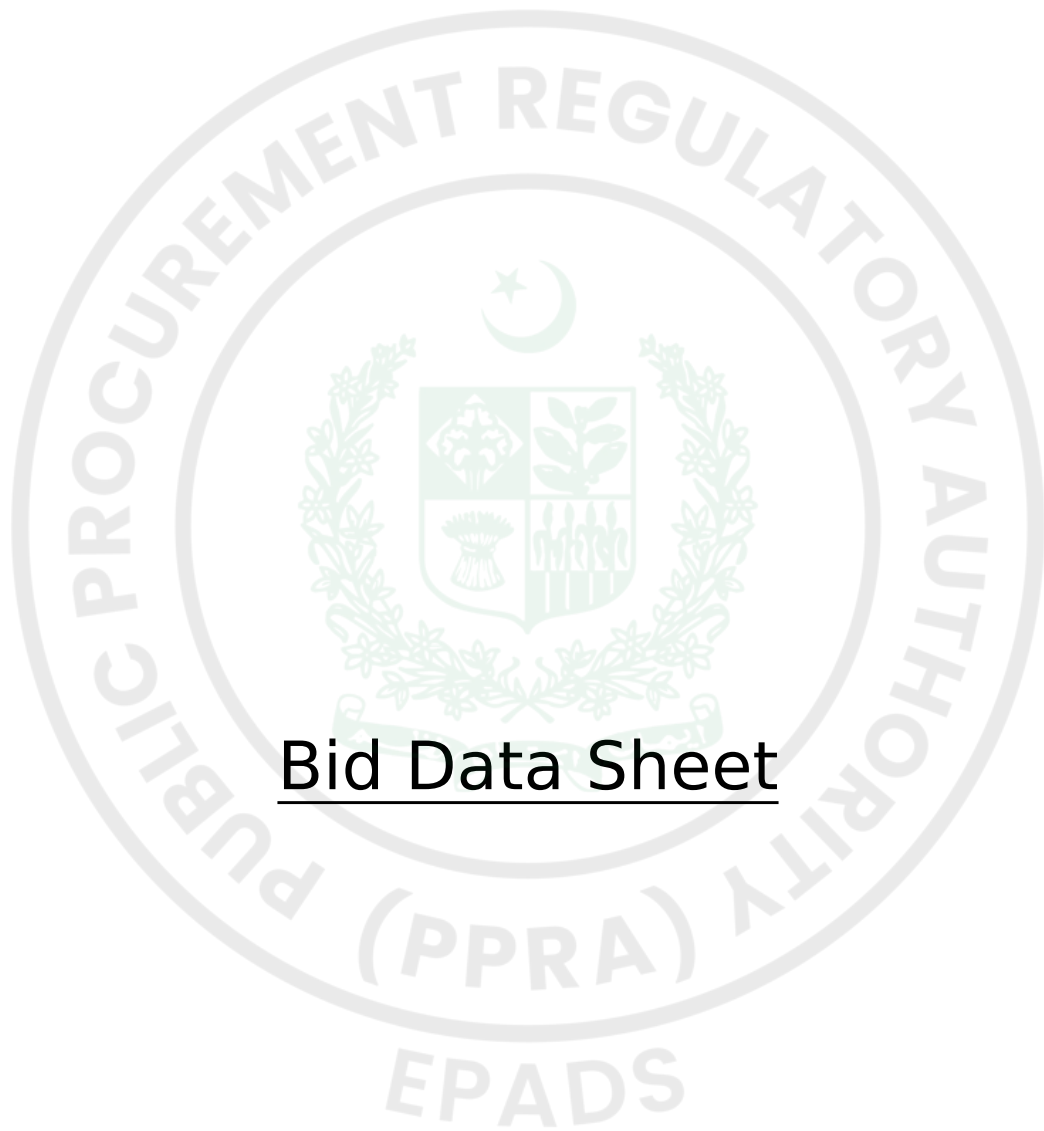
G. Mechanism of Blacklisting

41. Mechanism of Blacklisting

41.1 The Procuring Agency shall initiate blacklisting proceedings against any bidder, supplier, or contractor in accordance with the Mechanism for Blacklisting Regulations, 2024, read with Rule 19 of the Public Procurement Rules, 2004.

41.2 The blacklisted/debarred bidder may file the review petition before the Authority in accordance with Rule 19 of the Public Procurement Rules, 2004 to be read with Procedure of filing and disposal of Review Petitions Regulations, 2021.





Bid Data Sheet

Bids Data Sheet (BDS)

The following specific data for the procurement of Goods to be procured shall complement, supplement, or amend the provisions in the Instructions to Bidders (ITB). Whenever there is a conflict, the provisions herein shall prevail over those in ITB.

BDS Clause Number

ITB Number

Amendments of, and Supplements to, Clauses in the Instruction to Bidders

A. Introduction

BDS Clause Number 1

ITB Number 1.1

Name of Procuring Agency: **National Telecom Corporation (Development South Directorate, NTC Karachi)**

The subject of procurement is: **Deployment of IP PABX System and OFC along with CCTV Cameras and Attendance Management System at Karachi**

Expected commencement date: **Thursday, November 26, 2026**

BDS Clause Number 2

ITB Number 2.1

Financial year for the operations of the Procuring Agency: **2026-27**

Name and identification number of the Contract: **P144501**

BDS Clause Number 3

ITB Clause Number 3.1

JV/Consortium or Association Allowed: **No**

Number of JV/Consortium Members: **Nil**

see section of eligibility criteria.

B. Bidding Documents

BDS Clause Number 4

ITB Number 8.1

The Bidders may seek clarifications through **EPADS v2.0** : Clarification Date: Friday, October 16, 2026

C. Preparation of Bids

BDS Clause Number 5

ITB Number 10.1

The Language of all correspondences and documents related to the Bids shall be in: **English**

List of documents required along with the bid:

1. Company Profile; Registered with FBR & SRB; Active Taxpayer Status; valid PEC certificate; Experience of last 3 years; certificate of never blacklisted.

BDS Clause Number 6

ITB Number 11.1

Items/Lots and threre related documents:

See section items and Lots

BDS Clause Number 7

ITB Number 12.1

Items / Lots Specifications:

see section of items specifications.

BDS Clause Number 8

ITB Number 15.6

The price shall be **Fixed**.

BDS Clause Number 9

ITB Number 16.1

Currency of the Bids shall be : **PKR**

BDS Clause Number 10

ITB Number 17.1

The Bids/Bid Validity period shall be: **120 Days**

BDS Clause Number 11

ITB Number 18.1

The amount of Bid Security shall be as defined in Bid Security Section for items and lots given in **BDS 6**

The Bid Security shall be in the form of: **Pay Order, Call at Deposit**

D. Submission of Bids

BDS Clause Number 12

ITB Number 20.1

Bid shall be submitted online on EPADS v2.0 whereas hard copy of the bid security should be submitted to the following;

Director Development South, NTC Regional HQs, Near Wireless Gate, Main Shahrah-e-Faisal, Karachi before bid submission deadline.

Bids that are not submitted on EPADS v2.0 shall be disqualified.

The deadline for Bids submission is: **Monday, October 19, 2026 11:00 AM**

E. Opening and Evaluation of Bids

BDS Clause Number 13

ITB Number 23.1

The Bids opening shall take place on **EPADS v2.0**.

Day : **Monday**

Date: **Monday, October 19, 2026**

Time : **11:30 AM**

BDS Clause Number 14

ITB Number 31.1

Selection technique adopted will be: **Least Cost Based Selection (LCBS)**
see Evaluation Criteria

F. Review of Procurement Decisions

BDS Clause Number 15

ITB Number 41.1

Grievence against this procurement shall be submitted online on EPADS v2.0.

Arbitrator shall be appointed by mutual consent of the both parties.



Eligibility Criteria

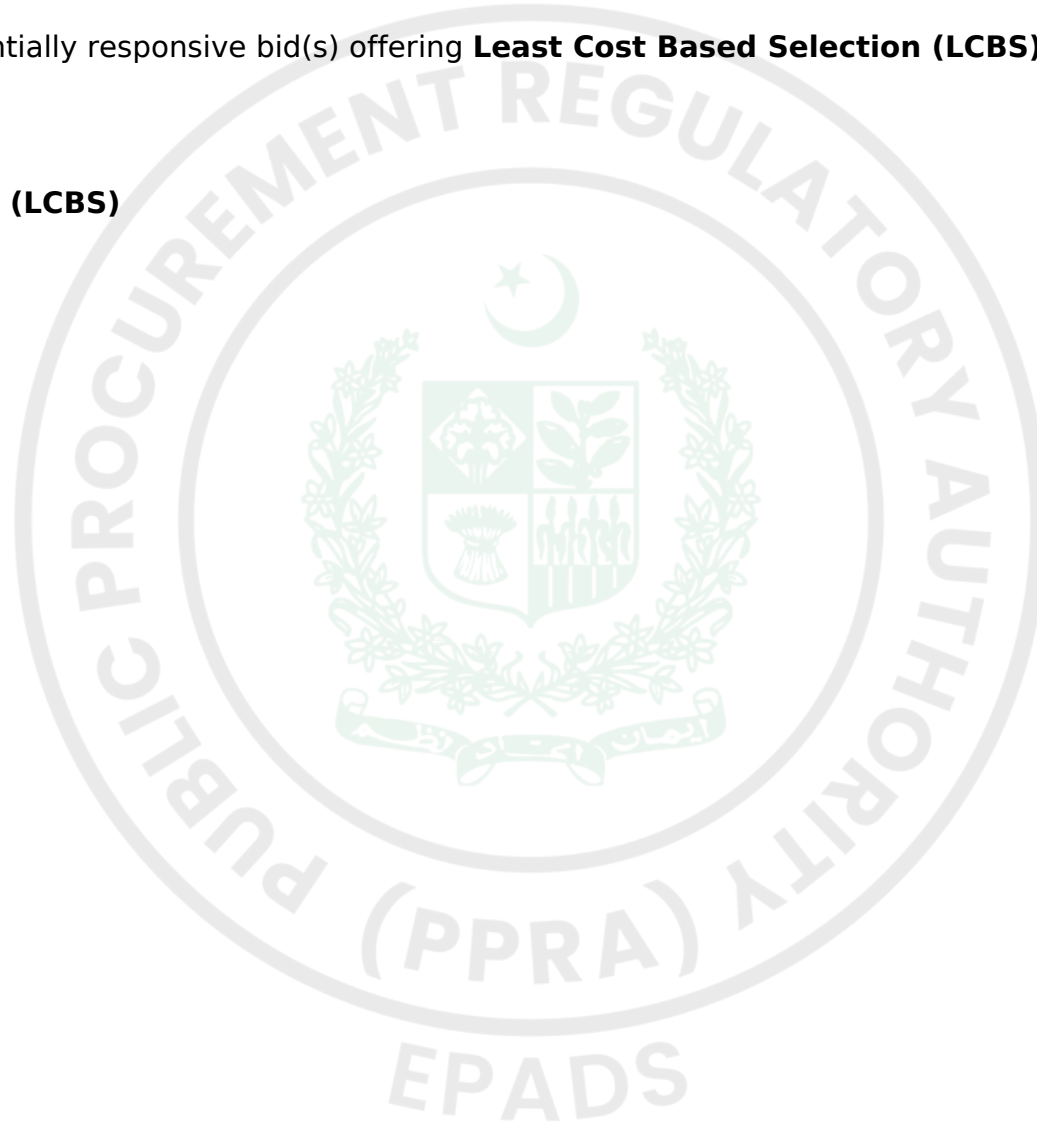
Bidder's Type	Required Registration
Individual / Individual Consultant	NADRA CITIZENSHIP (CNIC/NICOP)
Sole Proprietorship	FBR (NTN)
Partnership Firm	FBR (GSTN)
Company (Private Limited)	PEC
Company (Public Limited)	

Eligibility Criteria	Document
Registration with PEC in category EE02, EE07 and EE08	Yes
Active Taxpayer at FBR & SRB	Yes
Having at least 03 years' experience in the Telecommunication Projects and minimum 01 similar work experience	Yes
The firm must have PKR 05 M turnover per annum and record/ Tax Return of last three years be provided	Yes
Never been black listed	Yes
Having established office in Pakistan	Yes

Evaluation Criteria

Eligible bidder(s) with substantially responsive bid(s) offering **Least Cost Based Selection (LCBS)** shall be consider for the award of contract(s).

Least Cost Based Selection (LCBS)



Items/Lots

Lot Title : Deployment of IP PABX System and OFC along with CCTV Cameras and Attendance Management System at Karachi

Bid Security : 1000000 PKR

Item	UNSPSC	Delivery Schedule	Quantity	Warranty
Total Cost for Deployment of IP PABX System Along with Structured Cabling at CAA Headquarters, Karachi (Total Amount as per BoQ Annex-A1)	Premise branch exchange PBX systems	Address: PCAA HQ Karachi Schedule: 90 Days Quantity: 1/Qty	1 / Qty	1 Years
Total Cost for Installation of IP CCTV Cameras at Kala-Chapra CAA Karachi (Total Amount as per BoQ Annex-A2)	Closed circuit television CCTV system	Address: PCAA Kala Chapra Karachi Schedule: 90 Days Quantity: 1/Qty	1 / Qty	1 Years
Total Cost for Installation of IP CCTV Cameras at CAA Mess Karachi (Total amount as per BoQ Annex-A3)	Closed circuit television CCTV system	Address: PCAA Mess, Karachi Schedule: 90 Days Quantity: 1/Qty	1 / Qty	1 Years
Total Cost for Installation of IP CCTV Cameras at CAA HQs Karachi (Total amount as per BoQ Annex-A4)	Closed circuit television CCTV system	Address: PCAA HQ Karachi Schedule: 90 Days Quantity: 1/Qty	1 / Qty	1 Years

Item	UNSPSC	Delivery Schedule	Quantity	Warranty
Total Cost for Centralized Attendance Management System System (CAMS) For Karachi Sites (Total amount as per BOQ Annex-A5)	Fingerprint time attendance and access control machine	Address: PCAA HQ Karachi Schedule: 90 Days Quantity: 1/Qty	1 / Qty	1 Years



Related Services of Goods:

No



Items/Lot Specification

Lot Title : Deployment of IP PABX System and OFC along with CCTV Cameras and Attendance Management System at Karachi

Item: Total Cost for Deployment of IP PABX System Along with Structured Cabling at CAA Headquarters, Karachi (Total Amount as per BoQ Annex-A1)

UNSPSC: Premise branch exchange PBX systems

Specifications / Requirements:

As per Technical Specification in Annex-B & BoQ Annex-A1

Item: Total Cost for Installation of IP CCTV Cameras at Kala-Chapra CAA Karachi (Total Amount as per BoQ Annex-A2)

UNSPSC: Closed circuit television CCTV system

Specifications / Requirements:

As per Technical Specification in Annex-B & BoQ Annex-A2

Item: Total Cost for Installation of IP CCTV Cameras at CAA Mess Karachi (Total amount as per BoQ Annex-A3)

UNSPSC: Closed circuit television CCTV system

Specifications / Requirements:

As per Technical Specification in Annex-B & BoQ Annex-A3

Item: Total Cost for Installation of IP CCTV Cameras at CAA HQs Karachi (Total amount as per BoQ Annex-A4)

UNSPSC: Closed circuit television CCTV system

Specifications / Requirements:

As per Technical Specification in Annex-B & BoQ Annex-A4

Item: Total Cost for Centralized Attendance Management System System (CAMS) For Karachi Sites (Total amount as per BOQ Annex-A5)

UNSPSC: Fingerprint time attendance and access control machine

Specifications / Requirements:

As per Technical Specification in Annex-B & BoQ Annex-A5

Price Schedule

For Individual Items

#	Item Title	Quantity	Unit Price (PKR)	Total Price (PKR)	Delivery Location	Delivery Period / Year	Country of Origin
1							
2							

For Lots

#	Lot Title	Total Lot Price (PKR)	Country of Origin
1	[Lot 1 Title]		





General Conditions of Contract

A. General

1. Definitions

1.1 Unless the context otherwise requires, the following terms whenever used in this Contract shall have the same meaning and shall be interpreted as indicated

- a. "Applicable Law" means the laws and any other instruments having the force of law in the Government's Country, or in such other country as may be specified in the Special Conditions of the Contract (SC), as they may be issued and in force from time to time;
- b. "Procuring Agency" means:-
 - a. any Ministry, Division, Department or any Office of the Government;
 - b. any authority, corporation, body or organization established by or under a Law or which is owned or controlled by the Government;
- c. "The Contract" means an agreement enforceable by law;
- d. "The Contract Price" means the price payable to the Bidder under the Contract for the full and proper performance of its contractual obligations;
- e. "Ancillary Services" means those services ancillary to the provision of Goods, such as transportation and insurance, and any other incidental services, such as installation, commissioning, provision of technical assistance, training, and other such obligations of the Bidder covered under the Contract;
- f. "GCC" means the General Conditions of Contract contained in this section;
- g. "SCC" means the Special Conditions of Contract by which the GCC may be amended or supplemented;
- h. "Day" means calendar day unless indicated otherwise.
- i. "Effective Date" means the date on which this Contract comes into force and effect.
- j. "The Bidder" means the individual or corporate body whose Bids to provide the Goods has been accepted by the Procuring Agency;
- k. "The Project Site," where applicable, means the place or places named in Bids Data Sheet and technical Specifications;
- l. "Government" means the Government of Pakistan;
- m. "Subcontractor" means any entity to which the Bidder subcontracts any part of the Goods.
- n. "Service" means any object of procurement other than goods or works;
- o. "Party" means the Procuring Agency or the Bidder, as the case may be, and "Parties" means both of them;
- p. "Foreign Currency" means any currency other than the currency of the country of the Procuring Agency;

q. "Completion Date" means the date of completion of the contract by the Bidder as certified by the Procuring Agency;

r. "In Writing" means communicated in written form with proof of receipt;

s. "Local Currency" means the currency of Pakistan;

2. Application and Interpretation

2.1 These General Conditions shall apply to the extent that they are not superseded by provisions of other parts of the Contract.

2.2 In interpreting these Conditions of Contract headings and marginal notes are used for convenience only and shall not affect their interpretations unless specifically stated; references to singular include the plural and vice versa; and masculine include the feminine. Words have their ordinary meaning under the language of the Contract unless specifically defined.

3. Applicable Law

3.1 The contract shall be governed and interpreted in accordance with the laws of Pakistan, unless otherwise specified in SCC.

4. Governing Language

4.1 The Contract as well as all correspondence and documents relating to the Contract exchanged between the Bidder and the Procuring Agency, shall be written in the **English language** unless otherwise stated in the **SCC**. Supporting documents and printed literature that are part of the Contract may be in another language provided these are accompanied by an accurate translation of the relevant passages in English, in which case, for purposes of interpretation of the Contract, this translation shall govern.

5. Notices

5.1 Any notice, request, or consent made pursuant to this Contract shall be in writing and shall be deemed to have been made when delivered in person to an authorized representative of the Party to whom the communication is addressed, or when sent by registered mail, telex, telegram, or facsimile to such Party at the address specified in the **SCC**.

6. Delivery/Location

6.1 The Goods shall be delivered to such locations as the Procuring Agency may approve and as specified in **SCC**.

7. Authorized Representatives / Authority of Member in charge

7.1 Any action required or permitted to be taken, and any document required or permitted to be executed, under this Contract by the Procuring Agency or the Bidder may be taken or executed by the officials specified in the **SCC**.

B. Commencement, Completion, Modification, and Termination of Contract

8. Effectiveness of Contract

8.1 This Contract shall come into effect on the date the Contract is signed by both parties and such other later date as may be stated in the **SCC**.

9. Commencement of Services

9.1 The Bidder shall confirm availability of Key Experts and begin carrying out the Services not later than the number of days after the Effective Date specified in the SCC.

10. Program

10.1 Before commencement of the Services, the Bidder shall submit to the Procuring Agency for approval a Program showing the general methods, arrangements, order and timing for all activities. The Services shall be carried out in accordance with the approved Program as updated.

11. Starting Date/Expiration Date

11.1 The Bidder shall start carrying out the Services Five (05) days after the date the Contract becomes effective, or at such other date as may be specified in the SCC.

11.2 Unless terminated earlier pursuant to Clause **GCC 15** hereof, this Contract shall expire at the end of such time period after the Effective Date as specified in the SCC.

12. Entire Agreement

12.1 This Contract contains all covenants, stipulations and provisions agreed by the Parties. No agent or representative of either Party has authority to make, and the Parties shall not be bound by or be liable for, any statement, representation, promise or agreement not set forth herein.

13. Modification

13.1 Any modification or variation of the terms and conditions of this Contract, including any modification or variation of the scope of the Services, may only be made by written agreement between the Parties. However, each Party shall give due consideration to any Bids for modification or variation made by the other Party.

13.2 In cases of any modifications or variations, the prior written consent of the Procuring Agency is required.

14. Force Majeure

14.1 Definition

For the purposes of this Contract, “Force Majeure” means an event which is beyond the reasonable control of a Party and which makes a Party’s performance of its obligations under the Contract impossible or so impractical as to be considered impossible under the circumstances.

14.2 No Breach of Contract

The failure of a Party to fulfill any of its obligations under the contract shall not be considered to be a breach of, or default under, this Contract in so far as such inability arises from an event of Force Majeure, provided that the Party affected by such an event (a) has taken all reasonable precautions, due care and reasonable alternative measures in order to carry out the terms and conditions of this Contract, and (b) has informed the other Party as soon as possible about the occurrence of such an event.

14.3 Extension of Time

Any period within which a Party shall, pursuant to this Contract, complete any action or task, shall be extended for a period equal to the time during which such Party was unable to perform such action as a result

of Force Majeure.

14.4 Payments

During the period of their inability to perform the Services as a result of an event of Force Majeure, the Bidder shall be entitled to continue to be paid under the terms of this Contract, as well as to be reimbursed for additional costs reasonably and necessarily incurred by them during such period for the purposes of the Services and in reactivating the Service after the end of such period.

15. Termination

15.1 By the Procuring Agency

The Procuring Agency may terminate this Contract in case of the occurrence of any of the events specified in paragraphs (a) through (e) of this Clause. In such an occurrence the Procuring Agency shall give at least thirty (30) calendar days' written notice of termination to the Bidder in case of the events referred to in (a) through (d); at least sixty (60) calendar days' written notice in case of the event referred to in (e);

- a. If the Bidder fails to remedy a failure in the performance of its obligations hereunder, as specified in a notice of suspension;
- b. If the Bidder becomes (or, if the Bidder consists of more than one entity, if any of its members becomes) insolvent or bankrupt or enter into any agreements with their creditors for relief of debt or take advantage of any law for the benefit of debtors or go into liquidation or receivership whether compulsory or voluntary;
- c. If the Bidder fails to comply with any final decision reached as a result of arbitration proceedings;
- d. If, as the result of Force Majeure, the Bidder is unable to perform a material portion of the Services for a period of not less than sixty (60) calendar days;
- e. If the Procuring Agency, in its sole discretion and for any reason whatsoever, decides to terminate this Contract;

15.2 By the Bidder

The Bidder may terminate this Contract, by not less than thirty (30) calendar days' written notice to the Procuring Agency, in case of the occurrence of any of the events specified in paragraphs (a) through (d) of this Clause.

- a. If the Procuring Agency fails to pay any money due to the Bidder pursuant to this Contract and not subject to dispute within forty-five (45) calendar days after receiving written notice from the Bidder that such payment is overdue.
- b. If, as the result of Force Majeure, the Bidder is unable to perform a material portion of the Services for a period of not less than sixty (60) calendar days.
- c. If the Procuring Agency fails to comply with any final decision reached as a result of arbitration.
- d. If the Procuring Agency is in material breach of its obligations pursuant to this Contract and has not remedied the same within forty-five (45) days (or such longer period as the Bidder may have subsequently approved in writing) following the receipt by the Procuring Agency of the Bidder's notice specifying such breach.

C. Obligations of the Bidder

16. General

16.1 Standard of Performance

1. The Bidder shall deliver the product and carry out the Services with all due diligence, efficiency and economy, in accordance with generally accepted professional standards and practices, and shall observe sound management practices, and employ appropriate technology and safe and effective equipment, machinery, materials and methods. The Bidder shall always act, in respect of any matter relating to this Contract or to the Services, as a faithful adviser to the Procuring Agency, and shall at all times support and safeguard the Procuring Agency's legitimate interests in any dealings with the third parties.

16.2 Law Applicable to Goods

The Bidder shall deliver the goods in accordance with the Contract and in accordance with the Law of Pakistan and shall take all practicable steps to ensure that any of its Experts and Sub-Bidders, comply with the Applicable Law.

17. Conflict of Interests

17.1 Bidder Not to Benefit from Commissions and Discounts.

The remuneration of the Bidder shall constitute the Bidder's sole remuneration in connection with this Contract or the Services, and the Bidder shall not accept for their own benefit any trade commission, discount, or similar payment in connection with activities pursuant to this Contract or to the Services or in the discharge of their obligations under the Contract, and the Bidder shall use their best efforts to ensure that the Personnel, any Subcontractors, and agents of either of them similarly shall not receive any such additional remuneration.

17.2 Bidder and Affiliates Not to be Otherwise Interested in Project

The Bidder agree that, during the term of this Contract and after its termination, the Bidder and its affiliates, as well as any Subcontractor and any of its affiliates, shall be disqualified from providing Goods for any project resulting from or closely related to the Services.

17.3 Prohibition of Conflicting Activities

Neither the Bidder nor its Subcontractors nor the Personnel shall engage, either directly or indirectly, in any of the following activities:

- a. during the term of this Contract, any business or professional activities in the Government's country which would conflict with the activities assigned to them under this Contract;
- b. during the term of this Contract, neither the Bidder nor their Subcontractors shall hire public employees in active duty or on any type of leave, to perform any activity under this Contract;

18. Confidentiality

18.1 Except with the prior written consent of the Procuring Agency, the Bidder and the Experts shall not at any time communicate to any person or entity any confidential information acquired in the course of the contract.

19. Insurance to be Taken Out by the Bidder

19.1 The Bidder(a) shall take out and maintain, and shall cause any Subcontractors to take out and maintain, at its (or the Subcontractors', as the case may be) own cost but on terms and conditions approved by the Procuring Agency, insurance against the risks, loss or damage, and for the coverage, as shall be specified in the SCC; and (b) at the Procuring Agency's request, shall provide evidence to the Procuring Agency showing that such insurance has been taken out and maintained and that the current premiums have been paid.

20. Bidder's Actions Requiring Procuring Agency's Prior Approval

20.1 The Bidder shall obtain the Procuring Agency's prior approval in writing before taking any of the following actions:

- (a) appointing such members of the Personnel not provided by the Bidder;
- (b) changing the Program of activities; and
- (c) any other action that may be specified in the SCC.

21. Reporting Obligations

21.1 The Bidder shall submit to the Procuring Agency the reports and documents in the numbers, and within the periods as prescribed by the Procuring Agency.

22. Liquidated Damages

22.1 If the Supplier fails to deliver any or all of the Goods or to perform the Services within the period(s) specified in the Contract, the Procuring Agency shall, without prejudice to its other remedies under the Contract, deduct from the Contract Price, as liquidated damages, a sum equivalent to the percentage specified in SCC of the delivered price of the delayed Goods or unperformed Services for each week or part thereof of delay until actual delivery or performance, up to a maximum deduction of the performance security (or guarantee) specified in SCC. Once the said maximum is reached, the Procuring Agency may consider termination of the Contract pursuant to **GCC Clause 15**.

22.2 Correction for Over-payment

If the Intended Completion Date is extended after liquidated damages have been paid, the Procuring Agency shall correct any overpayment of liquidated damages by the Bidder by adjusting the next payment certificate. The Bidder shall be paid interest on the overpayment, calculated from the date of payment to the date of repayment, at the rates specified in SCC.

22.3 Lack of performance penalty

If the Bidder has not corrected a Defect within the time specified in the Procuring Agency's notice, a penalty for Lack of performance will be paid by the Bidder. The amount to be paid will be calculated as a percentage of the cost of having the Defect corrected, assessed as specified in the SCC.

23. Performance Guarantee

23.1 Within Seven (07) days from the issuance of acceptance letter from the Procuring Agency, the successful Bidder shall furnish the Performance Guarantee in shape of ----- at the discretion of the PA in the amount **specified in SCC**. In case the amount of Bids security is equal or greater than

23.2 The proceeds of the Performance Guarantee shall be payable to the Procuring agency as compensation for any loss resulting from the Supplier's failure to complete its obligations under the Contract.

23.3 The Performance Guarantee shall be denominated in the currency of the Contract, or in a freely convertible currency acceptable to the Procuring agency and shall be in the acceptable form as specified in SCC.

23.4 The Performance Guarantee will be discharged by the Procuring agency and returned to the Supplier not later than thirty (30) days following the date of completion of the Supplier's performance obligations under the Contract, including any warranty obligations, unless otherwise **specified in SCC**.

24. Fraud and Corruption

24.1 The Procuring Agency requires the Supplier to disclose any commissions or fees that may have been paid or are to be paid to agents or any other party with respect to the Bidding process or execution of the Contract. The information disclosed must include at least the name and address of the agent or other party, the amount and currency, and the purpose of the commission, gratuity or fee.

25. Sustainable Procurement

25.1 The Bidder shall conform to the sustainable procurement contractual provisions, if and as specified in the SCC.

D. Bidder's Personnel

26. Description of Personnel

26.1 The titles, agreed job descriptions, minimum qualifications, and estimated periods of engagement in the carrying out of the Services of the Bidder's Key Personnel. The Key Personnel listed by title as well as by name are hereby approved by the Procuring Agency.

27. Removal and/or Replacement of Personnel

27.1 Except as the Procuring Agency may otherwise agree, no changes shall be made in the Key Personnel. If, for any reason beyond the reasonable control of the Bidder, it becomes necessary to replace any of the Key Personnel, the Bidder shall provide as a replacement a person of equivalent or better qualifications.

27.2 If the Procuring Agency finds that any of the Personnel have (i) committed serious misconduct or have been charged with having committed a criminal action, or (ii) have reasonable cause to be dissatisfied with the performance of any of the Personnel, then the Bidder shall, at the Procuring Agency's written request specifying the grounds thereof, provide as a replacement a person with qualifications and experience acceptable to the Procuring Agency.

27.3 The Bidder shall have no claim for additional costs arising out of or incidental to any removal and/or replacement of Personnel.

E. Obligations of the Procuring Agency

28. Assistance and Exemptions

28.1 The Procuring Agency shall use its best efforts to ensure that the Government shall provide the Bidder such assistance and exemptions as specified in the SCC.

29. Change in the Applicable Law

29.1 If, after the date of this Contract, there is any change in the Applicable Law with respect to taxes and duties which increases or decreases the cost of the related Services rendered by the Bidder, then the remuneration and reimbursable expenses otherwise payable to the Bidder under this Contract shall be increased or decreased accordingly by agreement between the Parties, and corresponding adjustments shall be made to the amounts referred in the SCC.

30. Services and Facilities

30.1 The Procuring Agency shall make available to the Bidder and the Experts, for the purposes of the Services and free of any charge, the services, facilities and property described , at the times and in the manner specified in the SCC or terms of reference.

30.2 In case that such services, facilities and property shall not be made available to the Bidder, the Parties shall agree on (i) any time extension that it may be appropriate to grant to the Bidder for the performance of the Services, (ii) the manner in which the Bidder shall procure any such services, facilities and property from other sources, and (iii) the additional payments, if any, to be made to the Bidder as a result thereof.

F. Payments to the Bidder

31. Contract Price

31.1 The price payable shall be in Pakistani Rupees unless otherwise specified in the SCC. Prices charged by the Supplier for Goods delivered under the Contract shall not vary from the prices quoted by the Supplier in its Bid.

32. Terms and Conditions of Payment

32.1 Payments will be made to the Bidder according to the payment schedule stated in the SCC and as per actual invoice submitted by the Bidder.

32.2 Unless otherwise stated in the SCC, the advance payment shall be made against the provision by the Bidder of a bank guarantee for the same amount, and shall be valid for the period stated in the SCC. Any other payment shall be made after the conditions listed in the SCC for such payment have been met, and the Bidder have submitted an invoice to the Procuring Agency specifying the amount due.

33. Currency of Payment

33.1 Any payment under this Contract shall be made in the currency(ies) specified in the SCC.

G. Quality Control

34. Identifying Defects

34.1 The principle and modalities of Inspection of the Goods by the Procuring Agency shall be as indicated in the SCC. The Procuring Agency shall check the Bidder's performance and notify him of any Defects that are found. Such checking shall not affect the Bidder's responsibilities. The Procuring Agency may instruct the Bidder to search for a Defect and to uncover and test any service that the Procuring Agency considers may have a Defect. Defect Liability Period is as defined in the SCC.

35. Correction of Defects, and

Lack of Performance Penalty

35.1 The Procuring Agency shall give notice to the Bidder of any Defects before the end of the Contract. The Defects liability period shall be extended for as long as Defects remain to be corrected.

35.2 Every time notice a Defect is given, the Bidder shall correct the notified Defect within the length of time specified by the Procuring Agency's notice.

35.3 If the Bidder has not corrected a Defect within the time specified in the Procuring Agency's notice, the Procuring Agency will assess the cost of having the Defect corrected, the Bidder will pay this amount, and a Penalty for Lack of Performance.

36. Taxes and Duties

36.1 A Supplier shall be entirely responsible for all taxes, duties, fees, etc., incurred until delivery of the contracted Goods to the Procuring Agency.

H. Settlement of Disputes

37. Alternate Dispute Resolution

37.1 The disputes between the parties to the contract may be settled in accordance with Public Procurement Rules, 2004.

37.2 The procuring agency shall refer the matter to the Chief Justice Islamabad High Court or Managing Director PPRA or the Secretary Ministry of Law & Justice for appointment of Arbitrator.

37.3 The fee for the Arbitrator shall be specified in Pak Rupees as determined by the appointing authority which shall be borne and shared equally by the contracting parties.



Special Conditions of Contract

SECTION VIII. SPECIAL CONDITIONS OF CONTRACT

The following Special Conditions of Contract shall supplement the General Conditions of Contract. Whenever there is a conflict, the provisions herein shall prevail over those in the Conditions of Contract. The corresponding clause number of the GCC is indicated in parentheses.

Number of GC Clause

Amendments of, and Supplements to, Clauses in the General Conditions of Contract

Number of GC Clause 1

Definitions

The Procuring Agency is: National Telecom Corporation (Development South Directorate, NTC Karachi), Director Development South Director Development South, NTC Regional HQs, Near Wireless Gate, Main Shahrah-e-Faisal, Karachi

The Supplier is:

The title of the subject procurement is: Deployment of IP PABX System and OFC along with CCTV Cameras and Attendance Management System at Karachi

Number of GC Clause 3

Applicable/Governing Law:

The Contract shall be interpreted in accordance with the laws of Islamic Republic of Pakistan

Number of GC Clause 4

Language:

The language of the Contract, all correspondence and communications to be given, and all other documentation to be prepared and supplied under the Contract shall be in **English**.

Number of GC Clause 5

Notices:

The addresses for the notices are:

Procuring Agency:

National Telecom Corporation (Development South Directorate, NTC Karachi), Director Development South Director Development South, NTC Regional HQs, Near Wireless Gate, Main Shahrah-e-Faisal, Karachi
+92-302-855-0862
atta.malik@ntc.org.pk

Contractor/ Bidder:

[Name, address and telephone number].

The Contractor/ Bidder's Representative(s)

[Name, address, telephone number and e-mail address]

Number of GC Clause 7.1

The Authorized Representatives are:

For the Procuring Agency:

National Telecom Corporation (Development South Directorate, NTC Karachi), Director Development South
Director Development South, NTC Regional HQs, Near Wireless Gate, Main Shahrah-e-Faisal, Karachi
+92-302-855-0862
atta.malik@ntc.org.pk

For the Bidder:

Name:

Designation:

Address:

Number of GC Clause 8

Effectiveness of the contract

Number of GC Clause 9

Commencement of Contract:

Number of GC Clause 11.2

Expiration of Contract:

Number of GC Clause 15

Termination

In the event of termination of the contract due to any reason as already defined in the General Conditions of Contract, the Bidder shall be responsible for providing to the Authority the Goods till the time of alternate arrangements.

Number of GC Clause 17

Conflict of Interest:

The Procuring Agency reserves the right to determine on a case-by-case basis whether the Bidder should be disqualified from providing goods or services due to a conflict of a nature described in Clause GCC 17.

Number of GC Clause 22

Liquidated Damages

If the Bidder fails to provide services as required under the contract or in case of any data loss/data breach or any incident compromising the data security or other such failures related to any services, the Bidder shall pay to the Procuring Agency as Liquidated Damages at a rate of **0.50%** to **10.00%** of the Contract value, in accordance with the extent of performance failure & the cost of investigating such incidents as judged by the

Authority.

Number of GC Clause 23

Performance Guarantee:

The amount of performance guarantee shall be **10.00%** of the contract price in acceptable form of **Pay Order, Call at Deposit, Bank Guarantee**

Number of GC Clause 32

Payment terms:

Payment will be made to the Bidder against the procured Goods and services according to the actual invoice or running bills submitted by the Bidder against the services provided within the time given in the conditions of the contract.

Number of GC Clause 33

Currency of Payment:

All the payment to be released to the contractor/Bidder shall be in Pakistani Rupees.

Number of GC Clause 34

Identifying Defects:

The Authority reserves the right at any time to inspect the premises of the provider to inspect the goods and monitor the goods being provided.

Inspections & Tests Requirements

For being Brand New, bearing relevant reference numbers of the equipment (Certificate from supplier)

For the Country of Origin as quoted by the Supplier (Certificate from manufacturer)

For successful operation at site after complete installation, testing and commissioning of the equipment (Installation, Testing and Commissioning Report by Procurement Committee / Inspection Team)

Delivery & Documents

Copies of the Supplier's invoice showing Goods' description, quantity, unit price, and total amount;

Certificate of Origin.

Number of GC Clause 37

Following is the guidance for Dispute Resolution

i. If any dispute of any kind whatsoever shall arise between the Authority and the Bidder in connection with or arising out of the Contract, including without prejudice to the generality of foregoing, any question regarding its existence, validity, termination and the execution of the Contract – whether during developing phase or after their completion and whether before or after the termination, abandonment or breach of the Contract – the parties shall seek to resolve any such dispute or difference by mutual diligent negotiations in good faith within 14 (fourteen) days following a notice sent by one Party to the other Party in this regard.

ii. At future of negotiation the dispute shall be resolved through mediation and mediator shall be appointed with the mutual consent of the both parties.

iii. At the event of failure of mediation to resolve the dispute relating to this contract such dispute shall finally be resolved through binding Arbitration by sole arbitrator in accordance with Arbitration Act 1940. The arbitrator shall be appointed by mutual consent of the both parties. The Arbitration shall take place in Islamabad, Pakistan and proceedings will be conducted in English language.

iv. The cost of the mediation and arbitration shall be shared by the parties in equal proportion however the both parties shall bear their own costs and lawyer's fees regarding their own participation in the mediation and arbitration. However, the Arbitrator may make an award of costs upon the conclusion of the arbitration making any party to the dispute liable to pay the costs of another party to the dispute.

v. Arbitration proceedings as mentioned in the above clause regarding resolution of disputes may be commenced prior to, during or after completion of the contract.

Notwithstanding any reference to the arbitration herein, the parties shall continue to perform their respective obligations under the Contract unless they otherwise agree that the Authority shall pay the Bidder any monies due to the Bidder.

Rules of procedure for arbitration proceedings:

Any dispute between the Authority and a Bidder who is a national of the Islamic Republic of Pakistan arising in connection with the present Contract shall be referred to adjudication or arbitration in accordance with the laws of the Islamic Republic of Pakistan including Arbitration Act 1940, however above provision shall prevail in referring the case to the Arbitrator.

Place of Arbitration and Award:

The arbitration shall be conducted in English language and place of arbitration shall be at Islamabad. The award of the arbitrator shall be final and shall be binding on the parties.



Bid Securing Declaration

Form 9: Bid Securing Declaration

Date: *[insert date (as day, month and year)]*

Bid No.: **P144501**

To: **National Telecom Corporation (Development South Directorate, NTC Karachi), Director Development South Director Development South, NTC Regional HQs, Near Wireless Gate, Main Shahrah-e-Faisal, Karachi**

We, the undersigned, declare that:

We understand that, according to your conditions, Bids must be supported by a Bid Securing Declaration.

We accept that we will be blacklisted and henceforth cross debarred for participating in respective category of public procurement proceedings for a period of (not more than) six months, if fail to abide with a bid securing declaration, however without indulging in corrupt and fraudulent practices, if we are in breach of our obligation(s) under the Bid conditions, because we:

1. have withdrawn or modified our Bid during the period of Bid Validity specified in the Form of Bid;
2. Disagreement to arithmetical correction made to the Bid price; or
3. having been notified of the acceptance of our Bid by the Procuring Agency during the period of Bid Validity, (i) failure to sign the contract if required by Procuring Agency to do so or (ii) fail or refuse to furnish the Performance Security or to comply with any other condition precedent to signing the contract specified in the Bidding Documents.

We understand this Bid Securing Declaration shall expire if we are not the successful

Bidder, upon the earlier of (i) our receipt of your notification to us of the name of the successful Bidder; or (ii) twenty-eight (28) days after the expiration of our Bid.



Contract Form

SECTION IX: CONTRACT FORMS

THIS AGREEMENT made the ____ day of _____ 20____ between **National Telecom Corporation (Development South Directorate, NTC Karachi), Director Development South Director Development South, NTC Regional HQs, Near Wireless Gate, Main Shahrah-e-Faisal, Karachi**

(hereinafter called “the Procuring Agency”) of the one part and [name of Bidder] of [city and country of Bidder] (hereinafter called “the Bidder”) of the other part:

WHEREAS the Procuring Agency invited Bids for provision of goods, viz., **Deployment of IP PABX System and OFC along with CCTV Cameras and Attendance Management System at Karachi (P144501)** and has accepted a Bids by the Bidder for the provision of Goods in the sum of [contract price in words and figures] (hereinafter called “the Contract Price”).

NOW THIS CONTRACT WITNESSETH AS FOLLOWS:

1. In this Contract words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract referred to.

2. The following documents shall be deemed to form and be read and construed as part of this Contract, In the event of any ambiguity or conflict between the Contract Documents listed below, the order of precedence shall be the order in which the Contract Documents are listed below:-

1. This form of Contract;
2. the Form of Bids and the Price Schedule submitted by the Bidder;
3. the Schedule of Requirements;
4. the Technical Specifications;
5. the Special Conditions of Contract;
6. the General Conditions of the Contract;
7. the Procuring Agency’s Letter of Acceptance; and
8. [add here: any other documents]

3. In consideration of the payments to be made by the Procuring Agency to the Bidder as hereinafter mentioned, the Bidder hereby covenants with the Procuring Agency to provide the Goods related services and to remedy defects therein in conformity in all respects with the provisions of the Contract.

4. The Procuring Agency hereby covenants to pay the Bidder in consideration of the provision of Goods and the remedying of defects therein, the Contract Price or such other sum as may become payable under the

provisions of the contract at the times and in the manner prescribed by the contract.

IN WITNESS whereof the parties hereto have caused this Contract to be executed in accordance with their respective laws the day and year first above written.

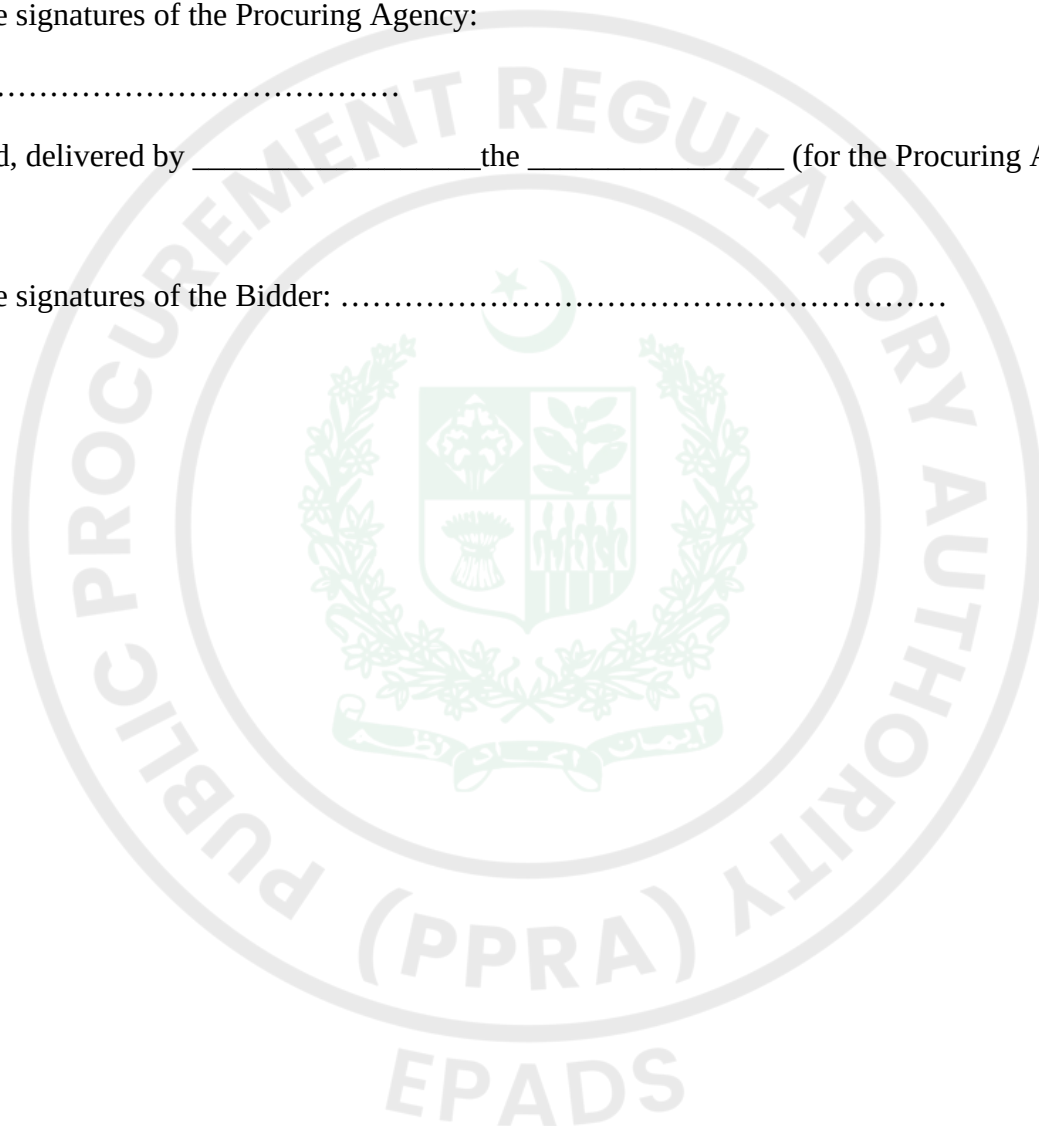
Signed, sealed, delivered by _____ the _____ (for the Procuring Agency)

Witness to the signatures of the Procuring Agency:

.....

Signed, sealed, delivered by _____ the _____ (for the Procuring Agency)

Witness to the signatures of the Bidder:





Integrity Pact

Integrity Pact

DECLARATION OF FEES, COMMISSION AND BROKERAGE ETC. PAYABLE BY THE SUPPLIERS OF GOODS, SERVICES & WORKS IN CONTRACTS WORTH RS.10.00 MILLION OR MORE

Contract

Number: Contract

Value: Contract Title:

Dated:

[Name of Supplier] hereby declares that it has not obtained or induced the procurement of any contract, right, interest, privilege or other obligation or benefit from Government of Pakistan or any administrative subdivision or agency thereof or any other entity owned or controlled by it (GoP) through any corrupt business practice.

Without limiting the generality of the foregoing [Name of Supplier] represents and warrants that it has fully declared the brokerage, commission, fee etc. paid or payable to anyone and not given or agreed to give and shall not give or agree to give to anyone within or outside Pakistan either directly or indirectly through any natural or juridical person, including its affiliate, agent, associate, broker, consultant, director, promoter, shareholder, sponsor or subsidiary, any commission, gratification, bribe, finder's fee or kickback, whether described as consultations fee or otherwise, with the object of obtaining or inducing the procurement of a contract, right, interest, privilege or other obligation or benefit in whatsoever form from GoP, except that which has been expressly declared pursuant hereto.

[Name of Supplier] certifies that it has made and will make full disclosure of all agreements and arrangements with all persons in respect of or related to the transaction with GoP and has not taken any action or will not take any action to circumvent the above declaration, representative or warranty.

[Name of Supplier] accepts full responsibility and strict liability for making and false declaration, not making full disclosure, misrepresenting fact or taking any action likely to defeat the purpose of this declaration, representation and warranty. It agrees that any contract, right interest, privilege or other obligation or benefit obtained or procured as aforesaid shall, without prejudice to any other right and remedies available to GoP under any law, contract or other instrument, be voidable at the option of GoP.

Notwithstanding any rights and remedies exercised by GoP in this regard, [Name of Supplier] agrees to indemnify GoP for any loss or damage incurred by it on account of its corrupt business practices and further pay compensation to GoP in an amount equivalent to ten times the sum of any commission, gratification, bribe, finder's fee or kickback given by [Name of Supplier] as aforesaid for the purpose of obtaining or inducing the procurement of any contract, right, interest, privilege or other obligation or benefit in whatsoever form from GoP.



Performance Guarantee Form

Performance Guarantee Form

To: **National Telecom Corporation (Development South Directorate, NTC Karachi), Director Development South Director Development South, NTC Regional HQs, Near Wireless Gate, Main Shahrah-e-Faisal, Karachi**

WHEREAS *[name of Bidder]* (hereinafter called “the Bidder”) has undertaken, in pursuance of Contract No. *[reference number of the contract]* dated *[insert date]* for provision of Goods (hereinafter called “the Contract”).

AND WHEREAS it has been stipulated by you in the said Contract that the Bidder shall furnish you with a Bank Guarantee by a reputable bank for the sum specified therein as security for compliance with the Bidder’s performance obligations in accordance with the Contract.

AND WHEREAS we have agreed to give the Bidders guarantee:

THEREFORE, WE hereby affirm that we are Guarantors and responsible to you, on behalf of the Bidder, up to a total of *[amount of the guarantee in words and figures]*, and we undertake to pay you, upon your first written demand declaring the Bidder to be in default under the Contract and without cavil or argument, any sum or sums within the limits of *[amount of guarantee]* as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

This guarantee is valid until the: *[insert date]*

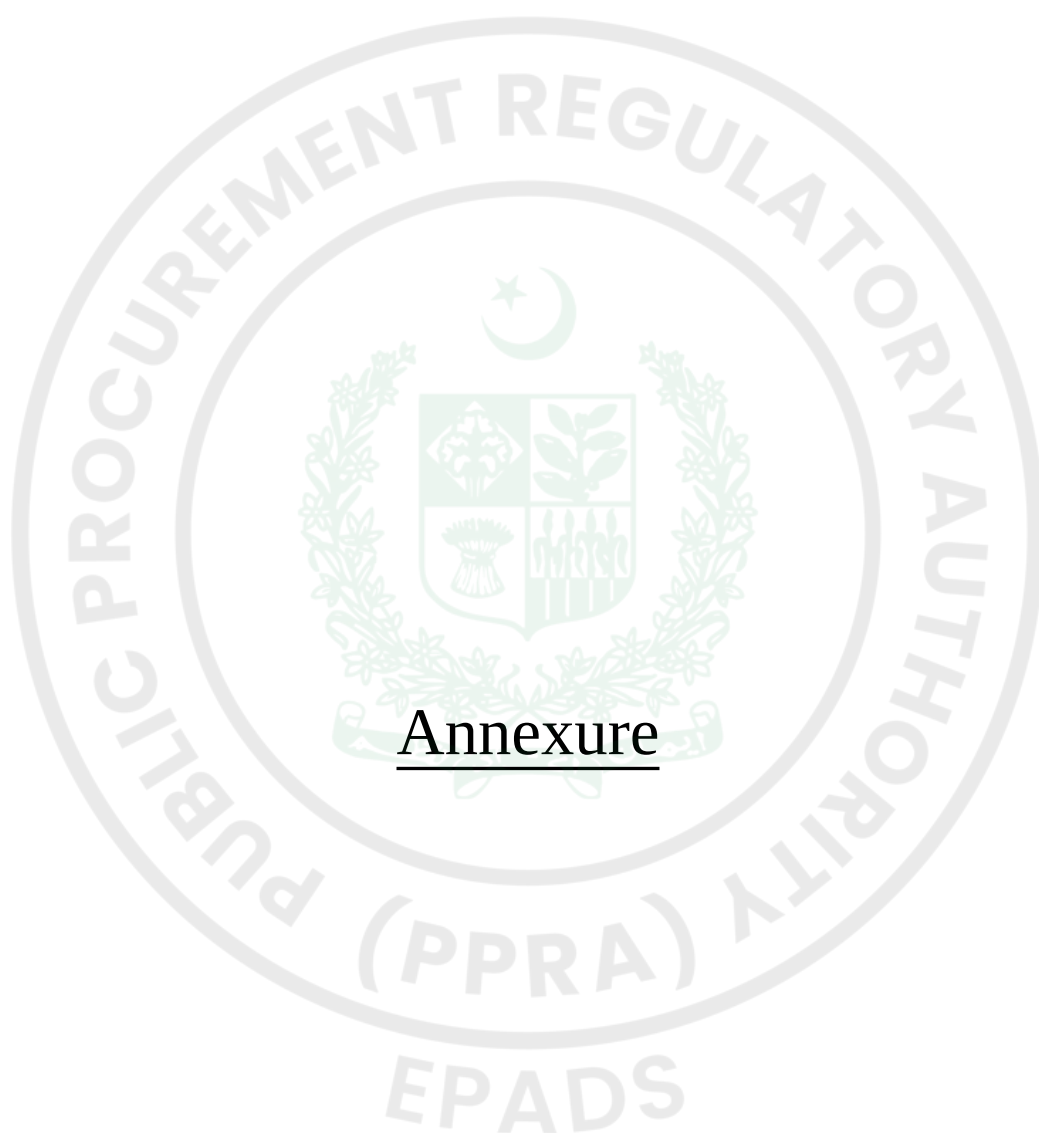
Signature and seal of the Guarantors

[name of bank or financial institution]

[address]

[date]





Annexure

Bill of Quantity-Annex-A, A1 to A5

Must be duly filled and submitted.

Financial Submission (Vendor)

Document Required

See Form Under Additional Forms and Documents: **Bill of Quantity-Annex-A, A1 to A5** (page number: 68)

Technical Specification-Annex-B

Must be duly filled and submitted.

Technical Submission (Vendor)

Document Required

See Form Under Additional Forms and Documents: **Technical Specification-Annex-B** (page number: 75)

Declaration of Beneficial Owner Information- Annex-C

Must be provided on affidavit

Technical Submission (Vendor)

Document Required

See Form Under Additional Forms and Documents: **Declaration of Beneficial Owner Information- Annex-C** (page number: 102)



Procurement Forms

Past Experience and Completed Contracts

Having experience of at least 01x Similar nature of project, and experience of Telecommunication Industry in last 3 x years

See Form Under Additional Forms and Documents: **Past Experience and Completed Contracts** (page number: 103)

Historical Contract Non-Performance, and Pending Litigation and Litigation History

Affidavit of Never been black listed, no ongoing disputes and no history of litigation

See Form Under Additional Forms and Documents: **Historical Contract Non-Performance, and Pending Litigation and Litigation History** (page number: 104)

Average Annual Turnover

The firm must have PKR 05 M turnover per annum and record/ Tax Return of last three years be provided

See Form Under Additional Forms and Documents: **Average Annual Turnover** (page number: 106)





Additional Forms and Documents

BoQ-Cost Summary

Deployment of IP PABX System and OFC along with CCTV Cameras and Attendance Management System

Store

Sr No.	Item	A/U	Qty	Grand Total with Taxes (PKR)
1	Total Cost for Deployment of IP PABX System Along with Structured Cabling at CAA Headquarters, Karachi (Total Amount as per BoQ Annex-A1)	No	1	
2	Total Cost for Installation of IP CCTV Cameras at Kala-Chapra CAA Karachi (Total Amount as per BoQ Annex-A2)	No	1	
3	Total Cost for Installation of IP CCTV Cameras at CAA Mess Karachi (Total amount as per BoQ Annex-A3)	No	1	
4	Total Cost for Installation of IP CCTV Cameras at CAA HQs Karachi (Total amount as per BoQ Annex-A4)	No	1	
5	Total Cost for Centralized Attendance Management System System (CAMS) For Karachi Sites (Total amount as per BOQ Annex-A5)	No	1	
Grand Total				

Amount in Rupees:

BILL OF QUANTITIES**Deployment of IP PABX System Along with Structured Cabling at CAA Headquarters, Karachi****Store**

Sr No.	Item	A/U	Qty	Unit Price with Taxes (PKR)	Total Price (PKR)
1	IP PBX (Supports 3000 IP Users)	No.	1		
2	16-Port FXO Gateway	No.	1		
3	Executive IP Phones (Steno)	No.	10		
4	Normal IP Phones Sets	No.	48		
5	Managed 24-Port Gigabit PoE Switch	No.	5		
6	24-Port Patch Panel	No.	5		
7	42U Network Rack with Accessories	No.	1		
8	6U Rack	No.	4		
9	PDU	No.	5		
10	SFP	Pair	5		
11	Optical Patch Cord SC-SC 3 Meter	No.	10		
12	Ethernet Patch Cord 5 Meter	No.	53		
13	Optical Fiber Cable 12 Core	Meter	350		
14	ODF	No.	5		
15	CAT-6 Cable (305m Box)	No.	15		
16	Channel Patti 25x25	Ft.	600		
17	Channel Patti 25x16	Ft.	200		
18	RJ45 Connectors, Faceplates, Patch Cords & Accessories	No.	53		
19	1 KVA UPS	No.	4		
20	3 KVA Smart UPS	No.	1		
Total (Store)					

Services

Sr No.	Item	A/U	Qty	Unit Price with taxes (PKR)	Total Price (PKR)
1	Laying/Fixing of Optical Fiber Cable	Meter	350		
2	Laying/Fixing of CAT-6 Cable	Meter	3300		
3	Fixing of Channel Patti	Ft.	600		
4	Splicing of Optical Fiber Cable	No.	60		
5	Installation of IO Face Plates along with Accessories	No.	53		
6	Installation, Configuration, Testing & Commissioning	Job	1		
Total (Services)					
Total (Stores+Services) with all taxes					

Amount in Rupees: _____

BILL OF QUANTITIES

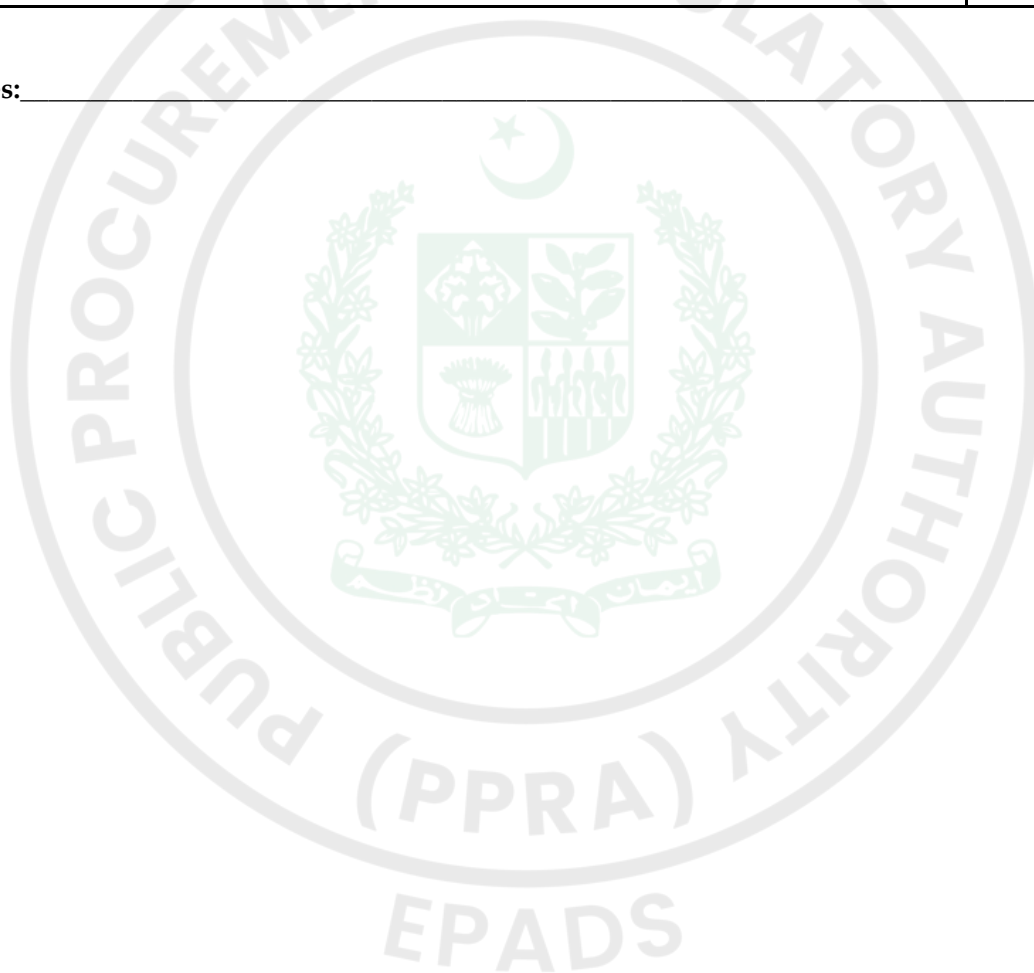
INSTALLATION OF IP CCTV CAMERAS AT KALA-CHAPRA CAA KARACHI

Store

Sr No.	Item	A/U	Qty	Unit Price with Taxes (PKR)	Total Price (PKR)
1	4MP Bullet IP PoE Camera with complete mounting kits	No	7		
2	4MP Dome IP PoE Camera with complete mounting kits	No	5		
3	4MP Bullet IP PoE Camera with complete mounting kits	No	10		
4	4MP Dome IP PoE Camera with complete mounting kits	No	20		
5	4MP Bullet IP PoE Camera with complete mounting kits	No	2		
6	4MP Dome IP PoE Camera with complete mounting kits	No	4		
7	4MP Bullet IP PoE Camera with complete mounting kits	No	4		
8	4MP Dome IP PoE Camera with complete mounting kits	No	6		
9	4MP Bullet IP PoE Camera with complete mounting kits	No	2		
10	4MP Dome IP PoE Camera with complete mounting kits	No	4		
11	4MP Bullet IP PoE Camera with complete mounting kits Guard Room GATE IN /OUT	No	6		
12	32-Channel 4K NVR with all accessories	No	1		
13	64-Channel 4K NVR with all accessories	No	1		
14	10TB Surveillance HDD (Seagate SkyHawk 24/7)	No	5		
15	Cat-6 Pure Copper Cable (305 Meter)	Roll	10		
16	PVC Channel Patti / Cable Duct /Pipe 1 inch	Ft.	1,300		
17	Managed 8-Port PoE Switch with SFP port	No.	4		
18	Managed 16 Port PoE Switch with SFP port	No.	2		
19	Managed 24 Port PoE Switch with SFP port	No.	2		
20	Rack 6 U	No.	5		
21	Rack 27 U	No.	1		
22	1 KVA UPS (Load-shedding backup)	No.	5		
23	3 KVA Smart UPS	No.	1		
24	PDU	No.	6		
25	SFP	Pair	6		
26	12 Core Optical Fiber Cable	Meter	450		
27	75 inch LCD (Samsung or equivalent)	No.	1		
28	12 Core ODF	No.	5		
29	Fiber Patch Cords	No.	4		
30	RJ45 Connector	No.	100		
31	HDMI KVM Extender	No.	2		
32	Wireless Mouse	No.	2		
Total (Store)					

Sr No.	Item	A/U	Qty	Unit Price with Taxes (PKR)	Total Price (PKR)
1	Installation of CCTV Cameras	No	70		
2	Fixing of Racks	No	6		
3	Installation and Configuration of Switches	No	8		
4	ODF Splicing	No	60		
5	UTP Cat-6 Laying	R/Meter	2,715		
6	Optical Fiber Laying	R/Meter	450		
7	Fixing of PVC Channel Patti / Cable Duct / Pipe	R/Ft.	1,300		
8	Installtion of NVR + Configuration +Testing & Commision of all Equipment	Job	1		
Total (Services)					
Grand Total (Stores+Services) with all taxes					

Amount in Rupees: _____



BILL OF QUANTITIES

INSTALLATION OF IP CCTV CAMERAS AT CAA MESS, KARACHI

Store

Sr No.	Item	A/U	Qty	Unit Price with Taxes (PKR)	Total Price (PKR)
1	4MP Bullet IP PoE Camera with complete mounting kits	No	6		
2	4MP Dome IP PoE Camera with complete mounting kits	No	13		
3	32-Channel 4K PoE NVR with all accessories	No	1		
4	10TB Surveillance SSD (Seagate SkyHawk 24/7)	No	2		
5	Cat 6 Pure Copper Cable (305 Meter)	Roll	9		
6	PVC Channel Patti / Cable Duct	Ft	850		
7	Managed 8-Port PoE Switch with SFP port	No	1		
8	Managed 24 Port PoE Switch with SFP port	No	1		
9	Rack 6 U	No	2		
10	1 KVA UPS	No	2		
11	SFP	Pair	1		
12	12 Core Fiber	Meter	150		
13	75 inch LCD (Samsung or equivalent)	No	1		
14	12 Core ODF	No	2		
15	Fiber Patch Cords	No	4		
16	RJ45 Connector	No	100		
17	PDU	No	2		
Total (Store)					

Services

Sr No.	Item	A/U	Qty	Unit Price with Taxes (PKR)	Total Price (PKR)
1	Installation of CCTV Cameras	No	19		
2	Fixing of Racks	No	2		
3	Installation and Configuration of Switches	No	2		
4	ODF Splicing	No	24		
5	UTP Cat-6 Laying	R/Meter	1,800		
6	Optical Fiber Laying	R/Meter	150		
7	Fixing of PVC Channel Patti / Cable Duct / Pipe	R/Ft	850		
8	Installation of NVR + Configuration + Testing & Commission of all Equipment	Job	1		
Total (Services)					
Grand Total (Stores+Services) with all taxes					

Amount in Rupees: _____

BILL OF QUANTITIES

INSTALLATION OF IP CCTV CAMERAS AT CAA HQ KARACHI

Store

Sr No.	Item	A/U	Qty	Unit Price with Taxes (PKR)	Total Price (PKR)
1	4MP Bullet IP PoE Camera	No	5		
2	4MP Dome IP PoE Camera	No	26		
3	64-Channel 4K PoE NVR with all accessories	No	1		
4	Rack 9U	No	2		
5	10TB Surveillance SSD (Seagate or equivalent)	No	2		
6	Cat-6 Pure Copper Cable (305 Meter)	Roll	10		
7	PVC Channel Patti / Cable Duct	ft	1,300		
8	Managed 24-Port PoE Switch	No	2		
9	12 Core Fiber	Meter	250		
10	1 KVA UPS	No	2		
11	12 Core ODF	No	2		
12	75 inch LCD (Samsung or equivalent)	No	1		
13	Fiber Patch Cord	No	4		
14	SFP	Pair	2		
15	RJ45 Connectors	No	100		
16	PDU	No	2		
Total (Store)					

Services

Sr No.	Item	A/U	Qty	Unit Price with Taxes (PKR)	Total Price (PKR)
1	Installation of CCTV Cameras	No	31		
2	Fixing of Racks	No	2		
3	Installation and Configuration of Switches	No	2		
4	ODF Splicing	No	24		
5	UTP Cat-6 Laying	R/Meter	2,720		
6	Optical Fiber Laying	R/Meter	250		
7	Fixing of Racks PVC Channel Patti / Cable Duct / Pipe	R/Meter	1,300		
8	Installtion of NVR + Configuration +Testing & Commision of all Equipment	Job	1		
Total (Services)					
Grand Total (Stores+Services) with all taxes					

Amount in Rupees: _____

BILL OF QUANTITIES

CENTRALIZED ATTENDANCE MANAGEMENT SYSTEM (CAMS) FOR KARACHI SITES

Store

S. No.	Description	A/U	Qty	Unit Price with taxes (PKR)	Total Price (PKR)
A. Equipment					
1	Multi-biometric time attendance and access control terminal (ZKTeco uFace950 or Equivalent)	No	11		
2	Server along with Microsoft Windows Server 2022 Standard (16-Core) license	No	1		
3	Server Rack 42U	No	1		
B. Software					
4	Attendance Machine Software license	No	1		
Total (A+B)					
C. Network Equipment					
5	8 Port Managed Switch with 2 SFP Ports	No	11		
6	24 Port Aggregation Managed Switch	No	1		
7	Cat6 Patch Cords	No	20		
8	Cat 6 Pure Copper Cable (305 Meter)	No	8		
9	Optical Fiber Cable 12 Core	No	1,000		
10	ODF 12 Core	No	6		
11	Optical Patch Cords	No	22		
Total (C)					
D. Power & Backup					
12	3 KVA Smart UPS	No	1		
13	2TB Backup SSD (Seagate or equivalent)	No	1		
Total (D)					
E. Integration & Services					
14	HRMS Integration (API/Middleware Development)	Job	1		
15	Installation, testing and Commissioning of Network	Job	1		
16	Instllation of ODF	No	6		
17	Splicing of Fiber Core	No	72		
18	Fixing of OFC and Cat-06 Cable	No	2,915		
Total (E)					
Grand Total (A to E)					

Amount in Rupees: _____



TECHNICAL SPECIFICATION COMPLIANCE STATEMENT

Technical Specifications							
IP PBX							
Bidder's Name:							
Bidder's Quoted Brand / Model:							
Country of Manufacture:							
S.No	Feature / Description	Minimum Requirement	Marks	Bidder Statement			Bidder Quoted Features
				FC	PC	NC	
1 General / System Capacity							
1.1	Switch Type	IP PBX (IP-based Private Branch Exchange) supporting SIP protocol; audio UC & collaboration platform	M				
1.2	Maximum SIP User Extensions	Minimum 3,000 SIP user extensions	M				
1.3	Concurrent Calls	Minimum 450 concurrent calls (G.711); minimum 300 concurrent SRTP-encrypted calls	M				
1.4	Analog FXS Ports (Extensions)	Minimum 16 analog telephone ports (FXS, RJ11) with lifeline capability during power outage	M				
1.5	Analog FXO Ports (PSTN Lines)	Minimum 16 PSTN line ports (FXO, RJ11) with lifeline capability during power outage	M				
2 Network & Interfaces							
2.1	Network Ports	3 x self-adaptive Gigabit Ethernet ports (10/100/1000 Mbps); supports switched, routed, or dual mode	M				
2.2	PoE+ Support	Integrated PoE+ on network ports	M				
2.3	NAT Router	Built-in NAT router; supports router mode and switch mode	M				
2.4	USB Ports	Minimum 2 x USB 3.0 ports for storage / backup	M				
2.5	SD Card Slot	1 x SD card slot	M				
2.6	VPN Support	OpenVPN® support for secure remote connectivity	M				
2.7	Network Protocols	TCP/UDP/IP, RTP/RTCP, DNS, DDNS, DHCP, NTP, TFTP, SSH, HTTP/HTTPS, PPPoE, STUN, SRTP, TLS, LDAP, IPv6	M				
3 Voice & Codec Support							
3.1	Voice Codecs	Opus (Full-Band), G.711 A-law/U-law, G.722, G.722.1, G.722.1C, G.723.1, G.726-32, G.729A/B, iLBC, GSM	M				
3.2	Fax Support	T.38 fax over IP (FoIP)	M				
3.3	Echo Cancellation	Carrier-grade LEC with NLP; 128ms tail-length line echo cancellation	M				
3.4	Jitter Buffer	Dynamic jitter buffer; FEC 2.0; jitter resilience up to 50% audio packet loss	M				
3.5	DTMF Methods	In-band audio, RFC 4733, and SIP INFO	M				
3.6	QoS	Layer 2 QoS (802.1Q, 802.1p) and Layer 3 QoS (ToS, DiffServ, MPLS)	M				
3.7	Modem Support	Modem detection with auto-switch to G.711	M				
4 Conferencing & Collaboration							
4.1	Audio Conference Rooms	Minimum 9 simultaneous audio conference/meeting rooms	M				
4.2	Conference Parties	Minimum 150 simultaneous conference participants across all rooms	M				
4.3	Instant Messaging (IM)	Built-in IM platform for internal user messaging	M				
4.4	Web Meetings	Built-in audio web meetings platform accessible from desktop, web browser, and mobile	M				
4.5	Wave App	Free Wave App for desktop (Windows/Mac), web (Chrome/Firefox), and mobile (Android/iOS) for voice, IM, and meetings	M				
5 Telephony Features							
5.1	IVR / Auto Attendant	Multi-level IVR (up to 5 layers) in multiple languages with customizable prompts	M				
5.2	Call Features	Call park, forward, transfer, waiting, caller ID, record, history, DND, DISA, ring group, ring simultaneously, paging/intercom	M				

5.3	Call Queuing / ACD	Configurable call queues with ACD based on agent skills, availability, and workload; in-queue announcements	M				
5.4	Voicemail	Per-extension voicemail; voicemail-to-email notification; fax-to-email	M				
5.5	Additional Features	BLF, SCA, speed dial, call back, dial by name, emergency call, call follow-me, blacklist/whitelist, time schedules, PIN groups	M				
5.6	Caller ID Standards	Bellcore/Telcordia, ETSI-FSK, ETSI-DTMF, SIN 227-BT, NTT	M				
5.7	Polarity Reversal / Wink	Supported with enable/disable option on call establishment and termination	M				
6 Provisioning & Management							
6.1	Web GUI	Browser-based HTTPS management interface; no proprietary software required	M				
6.2	Auto-Provisioning	Zero-touch auto-provisioning of SIP endpoints via ZeroConfig (DHCP Option 66, multicast SIP SUBSCRIBE, mDNS)	M				
6.3	Mass Provisioning	AES-encrypted XML configuration file for mass provisioning	M				
6.4	Cloud Management	Compatible with GDMS (Grandstream Device Management System) or equivalent cloud management platform for zero-touch provisioning, monitoring, and firmware upgrades	M				
6.5	API Integration	Full REST API available for third-party CRM and PMS platform integration	M				
6.6	Multi-language GUI	Web UI in minimum English; IVR/voice prompts customizable in multiple languages	M				
6.7	High Availability	Hot Standby High-Availability (HA) and local dual deployment support	M				
7 Security							
7.1	Media Encryption	SRTP for voice media encryption	M				
7.2	Signalling Encryption	TLS encryption for SIP signalling	M				
7.3	Management Security	HTTPS and SSH for encrypted management access	M				
7.4	Network Access Control	IEEE 802.1X port-based access control	M				
7.5	Device Security	Secure boot, unique device certificate, and randomized default password	M				
7.6	Firewall	Automated NAT firewall traversal for secure remote connections (UCM RemoteConnect or equivalent)	M				
8 Power & Environmental							
8.1	Power Supply	Dual / redundant DC 12V power input; universal AC adapter 100–240V, 50/60Hz	M				
8.2	Operating Temperature	0°C to 45°C (32°F to 113°F)	M				
8.3	Humidity	10% to 90% relative humidity (non-condensing)	M				
9 Standards & Compliance							
9.1	SIP Standard	RFC 3261 compliant; based on Asterisk v16 or equivalent open-source telephony platform	M				
9.2	Protocol Standards	RFC 3262, 3263, 3264, 3515, 3311, 4028, 4733, 4566, 3711, 5245, 5389, 5766, 6347, 6455, 3550	M				
9.3	Warranty	Minimum 1-year warranty	M				

EPADS

TECHNICAL SPECIFICATIONS							
Executive IP Phone (Steno)							
Bidder's Name:							
Bidder's Quoted Brand / Model:							
Manufacturing Country (Made & Assembled in):							
S.No	Feature / Description	Specification	Marks	Bidder Statement			Bidder Quoted Feature
				FC	PC	NC	
1	SIP Lines & Accounts	Minimum 6 SIP accounts; minimum 12 line keys / line appearances Supports simultaneous registration on multiple SIP servers	M				
2	Display	Minimum 4.3-inch color TFT LCD; minimum 480×272 pixel resolution Backlit display; supports on-screen call management	M				
3	Audio Quality	Full HD audio on handset and full-duplex speakerphone Supported codecs: G.711 (A/U-law), G.722 (HD), G.729A/B, G.726, Opus Acoustic echo cancellation; background noise suppression	M				
4	Programmable Keys & BLF	Minimum 48 programmable speed-dial / BLF (Busy Lamp Field) keys (on-screen or physical) Minimum 5 XML-programmable soft keys Support for expansion modules (sidecar) for additional BLF keys	M				
5	Network Interface	Dual Gigabit Ethernet ports (10/100/1000 Mbps) — one for network, one for PC passthrough Integrated PoE (IEEE 802.3af/at); external power adapter as alternative	M				
6	Conferencing	Minimum 5-way on-device audio conferencing Supports call hold, transfer (attended & blind), call waiting, 3-way bridge	M				
7	Call Features	Call park, call pickup, call forward, DND (Do Not Disturb), call recording Voicemail with MWI (Message Waiting Indicator) LDAP, XML phonebook; call history log (minimum 500 entries)	M				
8	Headset Support	RJ9 headset port; EHS (Electronic Hook Switch) support for wireless headsets Compatible with Plantronics / EPOS / Jabra EHS-capable headsets	M				
9	Security & Protocols	SIP RFC 3261 compliant; TLS for SIP signalling; SRTP for media encryption HTTPS / SSH management; 802.1X port-based authentication Auto-provisioning via TR-069, TFTP, HTTP/HTTPS, encrypted XML	M				
10	Power & Physical	PoE powered (IEEE 802.3af minimum); optional 5V DC adapter included Desktop form factor with adjustable tilt stand; optional wall-mount Operating Temp: 0°C to 40°C Humidity: 10–90% non-condensing	M				
11	Compatibility & Warranty	Compatible with standard SIP PBX platforms (Asterisk, 3CX, FreePBX, UCM series) Zero-touch auto-provisioning with compatible IP PBX CE / FCC or equivalent certification Minimum 1-year warranty	M				

TECHNICAL SPECIFICATIONS							
Normal IP Phone Set							
Bidder's Name:							
Bidder's Quoted Brand / Model:							
Manufacturing Country (Made & Assembled in):							
S.No	Feature / Description	Specification	Marks	Bidder Statement			Bidder Quoted Feature
				FC	PC	NC	
1	SIP Lines & Accounts	Minimum 3 SIP accounts; minimum 4 line keys Supports simultaneous registration on multiple SIP servers	M				
2	Display	Minimum 2.4-inch color LCD; minimum 320×240 pixel resolution with backlight Clear on-screen call status and caller ID display	M				
3	Audio Quality	HD audio on handset and full-duplex speakerphone Supported codecs: G.711 (A/U-law), G.722 (HD), G.729A/B Acoustic echo cancellation; background noise suppression	M				
4	Programmable Keys & BLF	Minimum 8 programmable BLF / speed-dial keys (dual-color LED) Minimum 4 XML-programmable soft keys	M				
5	Network Interface	Dual Gigabit Ethernet ports (10/100/1000 Mbps) — one for network, one for PC passthrough Integrated PoE (IEEE 802.3af); external power adapter as alternative	M				
6	Conferencing	Minimum 4-way on-device audio conferencing Supports call hold, transfer (attended & blind), call waiting	M				
7	Call Features	Call forward, DND (Do Not Disturb), call waiting, call pickup Voicemail with MWI (Message Waiting Indicator) Local phonebook (minimum 300 entries); call history log	M				
8	Headset Support	RJ9 headset port for wired headset connectivity EHS headset support preferred	M				
9	Security & Protocols	SIP RFC 3261 compliant; TLS for SIP signalling; SRTP for media encryption Auto-provisioning via TR-069, TFTP, HTTP/HTTPS, encrypted XML 802.1X port-based network access control	M				
10	Power & Physical	PoE powered (IEEE 802.3af); optional 5V DC adapter included Desktop form factor with adjustable tilt stand; optional wall-mount Operating Temp: 0°C to 40°C Humidity: 10–90% non-condensing	M				
11	Compatibility & Warranty	Compatible with standard SIP PBX platforms (Asterisk, 3CX, FreePBX, UCM series) Zero-touch auto-provisioning with compatible IP PBX CE / FCC or equivalent certification Minimum 1-year warranty	M				

TECHNICAL SPECIFICATIONS						
24-Port Layer 3 Aggregation Switch						
Bidder's Name:						
Bidder's Quoted Brand / Model:						
Manufacturing Country (Made & Assembled in):						
S.No	Feature / Description	Specification	Marks	Bidder Statement		
				FC	PC	NC
1	Ports & Interfaces	24 × 100/1000BASE-X SFP ports (fiber-based) 1 × Console port (RJ45) 1 × Ethernet management port (10/100 Mbps) 1 × USB port (config/upgrade) Front card slot (optional): 2-port or 4-port GE / 10GE SFP+ expansion	M			
2	Performance & Switching	Switching Type: Layer 3 (routing supported) Routing: Static routing; RIP / OSPF / BGP (license dependent) Traffic Analysis: NetStream / equivalent supported	M			
3	Hardware Specifications	RAM: Minimum 512 MB Flash Memory: Minimum 64 MB Cooling: Built-in fans with directional (left-to-right) airflow	M			
4	Power Supply	Dual modular PSU (AC/DC supported); 1+1 redundancy Max Power Consumption: ~80.7 W	M			
5	Environmental	Operating Temperature: -5°C to +55°C Humidity: 5–95% non-condensing MTBF: Up to ~36 years (configuration dependent)	M			
6	Software Features	VLAN (802.1Q), QinQ ACL (advanced traffic filtering) QoS (traffic prioritization) IPv4 / IPv6 support VPN support Port security & DHCP snooping Link aggregation (Eth-Trunk / LACP)	M			
7	High Availability & Stacking	Stacking: Supported via 10GE ports (software dependent) High Availability: Dual PSU; carrier-grade reliability (>99.999%)	M			
8	Certifications & Warranty	CE / FCC Class A or equivalent national certification RoHS compliant Minimum 1-year warranty	M			

TECHNICAL SPECIFICATIONS							
8-Port Gigabit Managed Switch with 2 SFP Ports							
Bidder's Name:							
Bidder's Quoted Brand / Model:							
Country of Manufacture:							
S.No	Feature / Description	Minimum Specification	Marks	Bidder Statement			Bidder Quoted Features
				FC	PC	NC	
1 PORTS & INTERFACES							
1.1	Switch Type	Layer 2 managed Gigabit Ethernet switch (Layer 2+ with static routing acceptable)	M				
1.2	Copper Ports	8 × 10/100/1000 Mbps RJ45 ports; full duplex, auto-negotiation, auto MDI / MDI-X	M				
1.3	Fibre Ports	2 × 1000BASE-X SFP slots, dedicated (usable simultaneously with all 8 RJ45 ports); SFP transceivers to be supplied only if listed in the BoQ	M				
1.4	Console Port	1 × RJ45 / USB console port for CLI access	M				
2 SWITCHING PERFORMANCE							
2.1	Switching Capacity	Not less than 20 Gbps; wire-speed, non-blocking	M				
2.2	Packet Forwarding Rate	Not less than 14.88 Mpps	M				
2.3	MAC Address Table	Not less than 8K entries	M				
2.4	Jumbo Frames	Not less than 9 KB	M				
2.5	Forwarding Mode	Store-and-forward; IEEE 802.3x flow control	M				
3 LAYER 2 FEATURES							
3.1	VLAN	IEEE 802.1Q VLAN, 4K VLAN IDs with not less than 256 active VLANs; port-based and tagged VLANs	M				
3.2	Spanning Tree	STP, RSTP and MSTP (IEEE 802.1D / 802.1w / 802.1s)	M				
3.3	Link Aggregation	IEEE 802.3ad LACP and static trunking, not less than 4 groups	M				
3.4	Multicast	IGMP snooping v1 / v2 / v3	M				
3.5	QoS	IEEE 802.1p CoS and DSCP classification; not less than 4 priority queues; strict-priority and weighted scheduling; port rate limiting	M				
3.6	Network Protection	Storm control (broadcast / multicast / unicast), loop detection, LLDP, port mirroring	M				
4 SECURITY							
4.1	Access Control	IEEE 802.1X port authentication; Layer 2 – Layer 4 ACLs; port security (MAC limiting)	M				
4.2	DHCP Protection	DHCP snooping	M				
4.3	Secure Management	SSH, HTTPS and SNMP v3; RADIUS and / or TACACS+ authentication; multi-level user privileges	M				
5 MANAGEMENT							
5.1	Interfaces	CLI (SSH), web GUI (HTTPS) and SNMP v1 / v2c / v3	M				
5.2	Monitoring	RMON, syslog, port statistics, cable diagnostics	M				
5.3	Time / Network Services	NTP / SNTP; DHCP client	M				
5.4	Configuration / Firmware	Configuration backup and restore; dual firmware image; firmware updates provided free of charge during the warranty period	M				
6 POWER & ENVIRONMENT							
6.1	Power Input	AC 100–240 V, 50/60 Hz; bidder to state maximum power consumption	M				
6.2	Operating Temperature	0 °C to 45 °C or wider	M				
6.3	Humidity	10% – 90% RH, non-condensing	M				
6.4	Mounting	Metal housing; 19-inch rack-mountable (1U) with rack-mount kit included, also suitable for desktop use; bidder to state dimensions and weight	M				
7 STANDARDS & WARRANTY							
7.1	Network Standards	IEEE 802.3, 802.3u, 802.3ab, 802.3z, 802.3x, 802.3ad, 802.1Q, 802.1p, 802.1D / w / s, 802.1X, 802.1AB	M				
7.2	Safety / EMC	CE (EN 55032, EN 62368-1), FCC Part 15 Class A / B, or equivalent national certification	M				
7.3	Environmental	RoHS compliant	M				
7.4	Warranty & Support	Minimum 1-year warranty	M				

TECHNICAL SPECIFICATIONS							
4MP Bullet IP PoE Camera							
Bidder's Name:							
Bidder's Quoted Brand / Model:							
Country of Manufacture:							
S.No	Feature / Description	Minimum Specification	Marks	Bidder Statement			Bidder Quoted Features
				FC	PC	NC	
1 IMAGE SENSOR & VIDEO							
1.1	Image Sensor	1/3-inch progressive-scan CMOS sensor or larger	M				
1.2	Effective Resolution	Minimum 4 megapixels; native output of at least 2560 × 1440	M				
1.3	Frame Rate	Minimum 20 fps at 4MP; 25/30 fps preferred	M				
1.4	Image Settings	Configurable brightness, contrast, saturation, sharpness, exposure, white balance and backlight compensation	M				
1.5	Wide Dynamic Range	Digital WDR or true WDR; true WDR of at least 120 dB preferred for high-contrast scenes	M				
2 LENS & FIELD OF VIEW							
2.1	Lens Type	Fixed focal length lens, 2.8 mm or 4 mm; bidder to state offered focal length	M				
2.2	Field of View	Horizontal field of view suitable for the installation; bidder to state exact angle	M				
2.3	Day/Night	Automatic IR-cut filter with true day/night switching	M				
2.4	Minimum Illumination	0.01 lux or better in color mode; IR-assisted monochrome operation in low/no light	M				
3 VIDEO & IMAGE PROCESSING							
3.1	Video Compression	H.265 and H.264; dual-stream or multi-stream support	M				
3.2	Bit Rate Control	Configurable constant and variable bit rate	M				
3.3	Image Enhancements	3D digital noise reduction, digital wide dynamic range and backlight compensation	M				
3.4	Privacy & OSD	Configurable privacy masking and on-screen date/time or camera name	M				
3.5	Motion Detection	Configurable motion detection with event notification/recording trigger	M				
4 ILLUMINATION & ENVIRONMENT							
4.1	Night Vision	Integrated infrared illumination with minimum 30 m stated IR distance, or better as required by site	M				
4.2	IR Control	Automatic IR switching and intensity control to reduce image overexposure	M				
4.3	Ingress Protection	Minimum IP67 for outdoor/exposed installation; indoor-only units to be at least IP54	M				
4.4	Operating Temperature	At least -10°C to +50°C operating range, or wider	M				
4.5	Humidity	Up to 95% RH, non-condensing, or better	M				
5 NETWORK & INTEROPERABILITY							
5.1	Network Interface	10/100 Mbps Ethernet RJ45 interface	M				
5.2	Power over Ethernet	IEEE 802.3af PoE support	M				
5.3	Network Protocols	IPv4, TCP/IP, UDP, HTTP/HTTPS, DHCP, DNS, NTP, RTSP and RTP	M				
5.4	Interoperability	ONVIF Profile S and/or Profile T support; compatible with proposed NVR/VMS	M				
5.5	Remote Access	Browser- or client-based live view, configuration and playback through authorized network access	M				
5.6	Cybersecurity	Unique credentials or forced password change, HTTPS support, user-role access and firmware update facility	M				
6 AUDIO & EVENT FUNCTIONS							
6.1	Audio	Not mandatory for standard cameras; if audio is offered, built-in microphone or audio interface details to be stated	M				
6.2	Event Functions	Motion/event detection and alarm/event recording trigger	M				
6.3	Storage	Edge microSD storage is optional; if provided, supported capacity to be stated	M				

7 FORM FACTOR & ACCESSORIES							
7.1	Camera Type	Bullet IP camera	M				
7.2	Mounting	Suitable for wall, ceiling or pole mounting as applicable to camera form factor	M				
7.3	Mounting Accessories	Complete compatible mounting kit, junction box/adaptor and fixing hardware included	M				
7.4	Housing	Outdoor-suitable corrosion-resistant housing; dome model to have impact-resistant cover where specified	M				
7.5	Finish	Manufacturer's standard finish; camera and accessories suitable for the installation environment	M				
8 POWER, COMPLIANCE & WARRANTY							
8.1	Certifications	CE, FCC, UKCA or equivalent recognized safety/EMC compliance; evidence to be provided on request	M				
8.2	Warranty	Minimum 1-year warranty covering camera and supplied accessories	M				



TECHNICAL SPECIFICATIONS							
4MP Dome IP PoE Camera							
Bidder's Name:							
Bidder's Quoted Brand / Model:							
Country of Manufacture:							
S.No	Feature / Description	Minimum Specification	Marks	Bidder Statement			Bidder Quoted Features
				FC	PC	NC	
1 IMAGE SENSOR & VIDEO							
1.1	Image Sensor	1/3-inch progressive-scan CMOS sensor or larger	M				
1.2	Effective Resolution	Minimum 4 megapixels; native output of at least 2560 × 1440	M				
1.3	Frame Rate	Minimum 20 fps at 4MP; 25/30 fps preferred	M				
1.4	Image Settings	Configurable brightness, contrast, saturation, sharpness, exposure, white balance and backlight compensation	M				
1.5	Wide Dynamic Range	Digital WDR or true WDR; true WDR of at least 120 dB preferred for high-contrast scenes	M				
2 LENS & FIELD OF VIEW							
2.1	Lens Type	Fixed focal length lens, 2.8 mm or 4 mm; bidder to state offered focal length	M				
2.2	Field of View	Horizontal field of view suitable for the installation; bidder to state exact angle	M				
2.3	Day/Night	Automatic IR-cut filter with true day/night switching	M				
2.4	Minimum Illumination	0.01 lux or better in color mode; IR-assisted monochrome operation in low/no light	M				
3 VIDEO & IMAGE PROCESSING							
3.1	Video Compression	H.265 and H.264; dual-stream or multi-stream support	M				
3.2	Bit Rate Control	Configurable constant and variable bit rate	M				
3.3	Image Enhancements	3D digital noise reduction, digital wide dynamic range and backlight compensation	M				
3.4	Privacy & OSD	Configurable privacy masking and on-screen date/time or camera name	M				
3.5	Motion Detection	Configurable motion detection with event notification/recording trigger	M				
4 ILLUMINATION & ENVIRONMENT							
4.1	Night Vision	Integrated infrared illumination with minimum 30 m stated IR distance, or better as required by site	M				
4.2	IR Control	Automatic IR switching and intensity control to reduce image overexposure	M				
4.3	Ingress Protection	Minimum IP67 for outdoor/exposed installation; indoor-only units to be at least IP54	M				
4.4	Operating Temperature	At least -10°C to +50°C operating range, or wider	M				
4.5	Humidity	Up to 95% RH, non-condensing, or better	M				
5 NETWORK & INTEROPERABILITY							
5.1	Network Interface	10/100 Mbps Ethernet RJ45 interface	M				
5.2	Power over Ethernet	IEEE 802.3af PoE support;	M				
5.3	Network Protocols	IPv4, TCP/IP, UDP, HTTP/HTTPS, DHCP, DNS, NTP, RTSP and RTP	M				
5.4	Interoperability	ONVIF Profile S and/or Profile T support; compatible with proposed NVR/VMS	M				
5.5	Remote Access	Browser- or client-based live view, configuration and playback through authorized network access	M				
5.6	Cybersecurity	Unique credentials or forced password change, HTTPS support, user-role access and firmware update facility	M				
6 AUDIO & EVENT FUNCTIONS							
6.1	Audio	Not mandatory for standard cameras; if audio is offered, built-in microphone or audio interface details to be stated	M				
6.2	Event Functions	Motion/event detection and alarm/event recording trigger	M				
6.3	Storage	Edge microSD storage is optional; if provided, supported capacity to be stated	M				

7 FORM FACTOR & ACCESSORIES							
7.1	Camera Type	Dome IP camera	M				
7.2	Mounting	Suitable for wall, ceiling or pole mounting as applicable to camera form factor	M				
7.3	Mounting Accessories	Complete compatible mounting kit, junction box/adaptor and fixing hardware included	M				
7.4	Housing	Outdoor-suitable corrosion-resistant housing; dome model to have impact-resistant cover where specified	M				
7.5	Finish	Manufacturer's standard finish; camera and accessories suitable for the installation environment	M				
8 POWER, COMPLIANCE & WARRANTY							
8.3	Certifications	CE, FCC, UKCA or equivalent recognized safety/EMC compliance; evidence to be provided on request	M				
8.5	Warranty	Minimum 1-year warranty covering camera and supplied accessories	M				



TECHNICAL SPECIFICATIONS							
32-Channel 4K Network Video Recorder (NVR) with AI Video Analytics							
Bidder's Name:							
Bidder's Quoted Brand / Model:							
Country of Manufacture:							
S.No	Feature / Description	Minimum Specification	Marks	Bidder Statement			Bidder Quoted Features
				FC	PC	NC	
1 SYSTEM & VIDEO INPUT							
1.1	System Type	Standalone embedded NVR on embedded real-time operating system (no PC / Windows dependency)	M				
1.2	IP Camera Channels	32 IP camera channels, all pre-licensed (no additional channel licence required)	M				
1.3	Incoming Bandwidth	Not less than 256 Mbps	M				
1.4	Outgoing Bandwidth	Not less than 256 Mbps	M				
1.5	Recording Resolution	Up to 12 MP per channel (including 4K / 8 MP)	M				
1.6	Video Compression	H.265 and H.264, with smart / enhanced bitrate-saving codec (H.265+ / H.264+ or equivalent)	M				
1.7	Camera Protocols	ONVIF Profile S, G and T conformant; RTSP support for third-party IP cameras; automatic camera discovery and plug-and-play addition	M				
2 DISPLAY, DECODING & PLAYBACK							
2.1	HDMI Output	1 × HDMI, up to 4K (3840 × 2160) @ 30 Hz	M				
2.2	VGA Output	1 × VGA, up to 1920 × 1080 @ 60 Hz	M				
2.3	Decoding Capacity	Not less than 2-ch @ 12 MP, or 3-ch @ 8 MP, or 6-ch @ 4 MP, or 12-ch @ 1080p (30 fps)	M				
2.4	Synchronous Playback	Not less than 16 channels	M				
2.5	Audio	1 × audio output (RCA); 1 × audio input for two-way audio (RCA)	M				
2.6	Live View / Playback	Multi-view live display; instant playback; search by time / event / tag; digital zoom; clip export	M				
3 STORAGE & RECORDING							
3.1	HDD Bays	4 × SATA III bays for 3.5" surveillance HDDs; each bay supporting HDDs of not less than 10 TB capacity	M				
3.2	HDD Compatibility	Compatible with surveillance-grade 10 TB CMR SATA HDDs; supplied without HDDs unless stated otherwise in the BoQ	M				
3.3	Recording Modes	Continuous, scheduled, motion, alarm and event-triggered recording; pre-record and post-record; dual-stream (main / sub) recording	M				
3.4	Storage Management	HDD group / quota management; overwrite on full; S.M.A.R.T. monitoring with HDD error / full / absent alarms	M				
3.5	Backup / Export	Export of video clips and snapshots to USB storage device and via network client	M				
4 INTELLIGENT VIDEO ANALYTICS							
4.1	Motion Detection	Motion detection on all 32 channels	M				
4.2	Human / Vehicle Recognition	NVR-based human and vehicle classification for false-alarm reduction on not less than 2 channels (up to 4 MP)	M				
4.3	Perimeter Protection	Line-crossing and intrusion detection on not less than 2 channels, with alarm linkage (buzzer, e-mail, alarm output, push notification)	M				
4.4	Facial Analytics	Face detection on not less than 1 channel; face-picture comparison against a face library on not less than 4 channels	M				
4.5	Smart Search	Smart search / playback by region and by human or vehicle event; accepts analytics events from AI-enabled ONVIF cameras	M				
5 NETWORK & INTERFACES							
5.1	Network Interface	1 × RJ45 self-adaptive 10/100/1000 Mbps Ethernet port	M				
5.2	USB Ports	Not less than 2 USB ports, including at least 1 × USB 3.0 (mouse, USB backup, firmware upgrade)	M				
5.3	Alarm I/O	Not less than 16 alarm inputs and 4 alarm outputs	M				
5.4	Network Protocols	IPv4 / IPv6, TCP/IP, HTTP / HTTPS, DHCP, DNS / DDNS, NTP, SMTP, UPnP, RTSP	M				
5.5	Remote Access	Web browser access (HTTPS); free PC client software and free iOS / Android mobile app; no per-channel or per-user licence fee	M				

S.No	Feature / Description	Minimum Specification	Marks	Bidder Statement			Bidder Quoted Features
				FC	PC	NC	
5.6	Integration	ONVIF compliance and open SDK / API for third-party VMS integration	M				
6 SECURITY							
6.1	User Management	Multi-level user accounts with role-based permissions; mandatory strong admin password set at first start-up (no default password)	M				
6.2	Network Security	HTTPS / TLS encrypted access; encrypted video stream transmission; IEEE 802.1X port-based access control; IP / MAC address filtering	M				
6.3	Logging	Operation, alarm, exception and information logs; searchable and exportable	M				
6.4	Firmware	Firmware upgrade via USB / web / client software; firmware updates provided free of charge during the warranty period	M				
7 POWER & ENVIRONMENT							
7.1	Power Input	Internal power supply; AC 100–240 V, 50/60 Hz; bidder to state power consumption (excluding HDDs)	M				
7.2	Operating Temperature	0 °C to 45 °C or wider	M				
7.3	Humidity	10% – 90% RH, non-condensing	M				
8 STANDARDS & WARRANTY							
8.1	Safety / EMC	CE (EN 55032, EN 62368-1), FCC Part 15 Class A / B, or equivalent national certification	M				
8.2	Environmental	RoHS compliant	M				
8.3	Warranty & Support	Minimum 1-year warranty	M				

TECHNICAL SPECIFICATIONS							
64-Channel 4K Network Video Recorder (NVR) with RAID Storage							
Bidder's Name:							
Bidder's Quoted Brand / Model:							
Country of Manufacture:							
S.No	Feature / Description	Minimum Specification	Marks	Bidder Statement			Bidder Quoted Features
				FC	PC	NC	
1 SYSTEM & VIDEO INPUT							
1.1	System Type	Standalone embedded NVR on embedded real-time operating system (no PC / Windows dependency)	M				
1.2	IP Camera Channels	64 IP camera channels, all pre-licensed (no additional channel licence required)	M				
1.3	Incoming Bandwidth	Not less than 320 Mbps (not less than 200 Mbps with RAID enabled)	M				
1.4	Outgoing Bandwidth	Not less than 256 Mbps (not less than 200 Mbps with RAID enabled)	M				
1.5	Recording Resolution	Up to 12 MP per channel (including 4K / 8 MP)	M				
1.6	Video Compression	H.265 and H.264 (smart / enhanced bitrate-saving codec preferred)	M				
1.7	Camera Protocols	ONVIF Profile S, G and T conformant; RTSP support for third-party IP cameras; automatic camera discovery and plug-and-play addition	M				
2 DISPLAY, DECODING & PLAYBACK							
2.1	HDMI Output	Not less than 2 × independent HDMI outputs (different sources); HDMI-1 up to 4K (3840 × 2160) @ 30 Hz	M				
2.2	VGA Output	Not less than 2 × independent VGA outputs (different sources), up to 1920 × 1080	M				
2.3	Decoding Capacity	Not less than 2-ch @ 12 MP (20 fps), or 4-ch @ 8 MP (25 fps), or 8-ch @ 4 MP (30 fps), or 16-ch @ 1080p (30 fps)	M				
2.4	Synchronous Playback	Not less than 16 channels	M				
2.5	Audio	2 × audio outputs (RCA); 1 × audio input for two-way audio (RCA)	M				
2.6	Live View / Playback	Multi-view live display; instant playback; search by time / event / tag; digital zoom; clip export	M				
3 STORAGE & RECORDING							
3.1	HDD Bays	8 × SATA III hot-swappable bays for 3.5" surveillance HDDs; each bay supporting HDDs of not less than 10 TB capacity	M				
3.2	RAID Support	Configurable RAID 0, 1, 5, 6 and 10, with N+1 hot-spare support	M				
3.3	eSATA	Not less than 1 × eSATA interface for backup / expansion	M				
3.4	HDD Compatibility	Compatible with surveillance-grade 10 TB CMR SATA HDDs; supplied without HDDs unless stated otherwise in the BoQ	M				
3.5	Recording Modes	Continuous, scheduled, motion, alarm and event-triggered recording; pre-record and post-record; dual-stream (main / sub) recording	M				
3.6	Storage Management	HDD group / quota management; overwrite on full; S.M.A.R.T. monitoring with HDD error / full / absent alarms; array status and rebuild alarms	M				
3.7	Backup / Export	Export of video clips and snapshots to USB / eSATA storage device and via network client	M				
4 INTELLIGENT VIDEO ANALYTICS							
4.1	Motion Detection	Motion detection on all 64 channels	M				
4.2	Camera VCA Events	Records, alarms on and searches smart events from IP cameras (line crossing, intrusion, region entrance / exit, face detection)	M				
4.3	Specialist Cameras	Supports ANPR (number-plate), people-counting and fisheye cameras	M				
4.4	Smart Search	Smart search of VCA events and motion within a selected region	M				
5 NETWORK & INTERFACES							
5.1	Network Interface	Not less than 2 × RJ45 self-adaptive 10/100/1000 Mbps Ethernet ports; independent multi-address (dual network segment) operation	M				

S.No	Feature / Description	Minimum Specification	Marks	Bidder Statement			Bidder Quoted Features
				FC	PC	NC	
5.2	USB Ports	Not less than 3 USB ports, including at least 1 × USB 3.0 (mouse, USB backup, firmware upgrade)	M				
5.3	Serial Ports	1 × RS-485 (PTZ control, Pelco-D / P) and 1 × RS-232	M				
5.4	Alarm I/O	Not less than 16 alarm inputs and 4 alarm outputs	M				
5.5	Network Protocols	IPv4 / IPv6, TCP/IP, HTTP / HTTPS, DHCP, DNS / DDNS, NTP, SMTP, UPnP, RTSP	M				
5.6	Remote Access	Web browser access (HTTPS); free PC client software and free iOS / Android mobile app; no per-channel or per-user licence fee	M				
5.7	Integration	ONVIF compliance and open SDK / API for third-party VMS integration	M				
6 SECURITY							
6.1	User Management	Multi-level user accounts with role-based permissions; mandatory strong admin password set at first start-up (no default password)	M				
6.2	Network Security	HTTPS / TLS encrypted access; encrypted video stream transmission; IEEE 802.1X port-based access control; IP / MAC address filtering	M				
6.3	Logging	Operation, alarm, exception and information logs; searchable and exportable	M				
6.4	Firmware	Firmware upgrade via USB / web / client software; firmware updates provided free of charge during the warranty period	M				
7 POWER & ENVIRONMENT							
7.1	Power Input	Internal power supply, AC 100–240 V, 50/60 Hz; bidder to state power consumption (excluding HDDs)	M				
7.2	Operating Temperature	0 °C to 45 °C or wider	M				
7.3	Humidity	10% – 90% RH, non-condensing	M				
7.4	Mounting / Dimensions	19-inch rack-mountable, height not exceeding 2U; rack-mount kit included; bidder to state dimensions and weight	M				
8 STANDARDS & WARRANTY							
8.1	Safety / EMC	CE (EN 55032, EN 62368-1), FCC Part 15 Class A / B, or equivalent national certification	M				
8.2	Environmental	RoHS compliant	M				
8.3	Warranty & Support	Minimum 1-year warranty	M				

TECHNICAL SPECIFICATIONS							
8-Port Gigabit Managed PoE Switch with SFP Uplink							
Bidder's Name:							
Bidder's Quoted Brand / Model:							
Country of Manufacture:							
S.No	Feature / Description	Minimum Specification	Marks	Bidder Statement			Bidder Quoted Features
				FC	PC	NC	
1 PORTS & INTERFACES							
1.1	Switch Type	Layer 2 managed Gigabit PoE+ switch (Layer 2+ with static routing acceptable) for IP video surveillance and IP devices, with CLI, web and SNMP management	M				
1.2	PoE Ports	8 × 10/100/1000 Mbps RJ45 PoE ports; full duplex, auto-negotiation, MDI / MDI-X	M				
1.3	Uplink – Copper	1 × 10/100/1000 Mbps RJ45 uplink port	M				
1.4	Uplink – Fibre	1 × 1000BASE-X SFP slot (SFP transceivers to be supplied only if listed in the BoQ)	M				
1.5	Console Port	1 × RJ45 / USB console port for CLI access	M				
2 SWITCHING PERFORMANCE							
2.1	Switching Capacity	Not less than 20 Gbps; wire-speed, non-blocking	M				
2.2	Packet Forwarding Rate	Not less than 14.88 Mpps (wire-speed)	M				
2.3	Forwarding Mode	Store-and-forward	M				
2.4	MAC Address Table	Not less than 8K entries	M				
2.5	Jumbo Frames	Not less than 9 KB	M				
2.6	Flow Control	IEEE 802.3x flow control (full duplex)	M				
3 POWER OVER ETHERNET							
3.1	PoE Standard	IEEE 802.3af and IEEE 802.3at on PoE ports 1 to 8	M				
3.2	Maximum Port Power	30 W per PoE port	M				
3.3	Total PoE Budget	Not less than 58 W	M				
3.4	PoE Management	Per-port PoE enable / disable, priority and power-limit configuration; PoE scheduling (time-based); real-time PoE power-usage display; overload and short-circuit protection	M				
3.5	PoE Watchdog	Automatically detects and restarts non-responding powered devices (IP cameras) on all PoE ports	M				
3.6	Surge Protection	6 kV surge protection on PoE ports	M				
4 LAYER 2 FEATURES							
4.1	VLAN	IEEE 802.1Q VLAN with 4K VLAN IDs and not less than 256 active VLANs; access and trunk port modes	M				
4.2	Spanning Tree	STP, RSTP and MSTP (IEEE 802.1D / 802.1w / 802.1s)	M				
4.3	Link Aggregation	IEEE 802.3ad LACP and static trunking, not less than 4 groups	M				
4.4	Multicast	IGMP snooping v1 / v2 / v3	M				
4.5	QoS	IEEE 802.1p CoS and DSCP classification; not less than 4 priority queues; strict-priority and weighted scheduling; port rate limiting	M				
4.6	Network Protection	Port isolation, storm control (broadcast / multicast / unicast), loop detection, LLDP, port mirroring	M				
5 SECURITY							
5.1	Access Control	IEEE 802.1X port authentication; Layer 2 – Layer 4 ACLs; port security (MAC limiting)	M				
5.2	DHCP Protection	DHCP snooping	M				
5.3	Secure Management	SSH, HTTPS and SNMP v3; RADIUS and / or TACACS+ authentication; multi-level user privileges	M				
6 MANAGEMENT							
6.1	Management Interfaces	CLI (SSH / console), web GUI (HTTPS) and SNMP v1 / v2c / v3; no proprietary client mandatory	M				

S.No	Feature / Description	Minimum Specification	Marks	Bidder Statement			Bidder Quoted Features
				FC	PC	NC	
6.2	Monitoring	RMON, syslog, port statistics, cable diagnostics; LED indicators for power, PoE, link / activity	M				
6.3	Central / Cloud Management	Support for central or cloud management platform with network topology view, device health monitoring and alarm push; no mandatory subscription fee	M				
6.4	Time / Network Services	NTP / SNTP; DHCP client	M				
6.5	Configuration / Firmware	Configuration backup and restore; dual firmware image; firmware updates provided free of charge during the warranty period	M				
7 POWER & ENVIRONMENT							
7.1	Power Input	AC 100–240 V, 50/60 Hz (internal supply or external adapter); bidder to state power consumption	M				
7.2	Operating Temperature	0 °C to 45 °C or wider	M				
7.3	Humidity	5% – 95% RH, non-condensing	M				
7.4	Housing / Mounting	Metal housing, fanless (silent) design; desktop and wall mountable; bidder to state dimensions and weight	M				
8 STANDARDS & WARRANTY							
8.1	Network Standards	IEEE 802.3, 802.3u, 802.3x, 802.3ab, 802.3z, 802.3ad, 802.3af, 802.3at, 802.1Q, 802.1p, 802.1D / w / s, 802.1X, 802.1AB	M				
8.2	Safety / EMC	CE (EN 55032, EN 62368-1), FCC Part 15 Class A / B, or equivalent national certification	M				
8.3	Environmental	RoHS compliant	M				
8.4	Warranty & Support	Minimum 1-year warranty	M				

TECHNICAL SPECIFICATIONS							
16-Port Gigabit Managed PoE Switch with SFP Uplink							
Bidder's Name:							
Bidder's Quoted Brand / Model:							
Country of Manufacture:							
S.No	Feature / Description	Minimum Specification	Marks	Bidder Statement			Bidder Quoted Features
				FC	PC	NC	
1 PORTS & INTERFACES							
1.1	Switch Type	Layer 2 managed Gigabit PoE+ switch (Layer 2+ with static routing acceptable) for IP video surveillance and IP devices, with CLI, web and SNMP management	M				
1.2	PoE Ports	16 × 10/100/1000 Mbps RJ45 PoE ports; full duplex, auto-negotiation, MDI / MDI-X	M				
1.3	Uplink – Copper	1 × 10/100/1000 Mbps RJ45 uplink port	M				
1.4	Uplink – Fibre	1 × 1000BASE-X SFP slot (SFP transceivers to be supplied only if listed in the BoQ)	M				
1.5	Console Port	1 × RJ45 / USB console port for CLI access	M				
2 SWITCHING PERFORMANCE							
2.1	Switching Capacity	Not less than 36 Gbps; wire-speed, non-blocking on all 18 ports	M				
2.2	Packet Forwarding Rate	Not less than 26.78 Mpps (wire-speed)	M				
2.3	Forwarding Mode	Store-and-forward	M				
2.4	MAC Address Table	Not less than 8K entries	M				
2.5	Jumbo Frames	Not less than 9 KB	M				
2.6	Flow Control	IEEE 802.3x flow control (full duplex)	M				
3 POWER OVER ETHERNET							
3.1	PoE Standard	IEEE 802.3af and IEEE 802.3at on all 16 PoE ports	M				
3.2	Maximum Port Power	30 W per PoE port	M				
3.3	Total PoE Budget	Not less than 230 W	M				
3.4	PoE Management	Per-port PoE enable / disable, priority and power-limit configuration; PoE scheduling (time-based); real-time PoE power-usage display; overload and short-circuit protection	M				
3.5	PoE Watchdog	Automatically detects and restarts non-responding powered devices (IP cameras) on all PoE ports	M				
3.6	Surge Protection	6 kV surge protection on PoE ports	M				
4 LAYER 2 FEATURES							
4.1	VLAN	IEEE 802.1Q VLAN with 4K VLAN IDs and not less than 256 active VLANs; access and trunk port modes	M				
4.2	Spanning Tree	STP, RSTP and MSTP (IEEE 802.1D / 802.1w / 802.1s)	M				
4.3	Link Aggregation	IEEE 802.3ad LACP and static trunking, not less than 4 groups	M				
4.4	Multicast	IGMP snooping v1 / v2 / v3	M				
4.5	QoS	IEEE 802.1p CoS and DSCP classification; not less than 4 priority queues; strict-priority and weighted scheduling; port rate limiting	M				
4.6	Network Protection	Port isolation, storm control (broadcast / multicast / unicast), loop detection, LLDP, port mirroring	M				
5 SECURITY							
5.1	Access Control	IEEE 802.1X port authentication; Layer 2 – Layer 4 ACLs; port security (MAC limiting)	M				
5.2	DHCP Protection	DHCP snooping	M				
5.3	Secure Management	SSH, HTTPS and SNMP v3; RADIUS and / or TACACS+ authentication; multi-level user privileges	M				
6 MANAGEMENT							
6.1	Management Interfaces	CLI (SSH / console), web GUI (HTTPS) and SNMP v1 / v2c / v3; no proprietary client mandatory	M				

S.No	Feature / Description	Minimum Specification	Marks	Bidder Statement			Bidder Quoted Features
				FC	PC	NC	
6.2	Monitoring	RMON, syslog, port statistics, cable diagnostics; LED indicators for power, PoE, link / activity	M				
6.3	Central / Cloud Management	Support for central or cloud management platform with network topology view, device health monitoring and alarm push; no mandatory subscription fee	M				
6.4	Time / Network Services	NTP / SNTP; DHCP client	M				
6.5	Configuration / Firmware	Configuration backup and restore; dual firmware image; firmware updates provided free of charge during the warranty period	M				
7 POWER & ENVIRONMENT							
7.1	Power Input	Internal power supply, AC 100–240 V, 50/60 Hz, rated for the full 230 W PoE budget; bidder to state maximum power consumption	M				
7.2	Operating Temperature	0 °C to 45 °C or wider	M				
7.3	Humidity	5% – 95% RH, non-condensing	M				
7.4	Housing / Mounting	Metal housing; 19-inch rack-mountable, 1U; rack-mount kit included; bidder to state dimensions and weight	M				
8 STANDARDS & WARRANTY							
8.1	Network Standards	IEEE 802.3, 802.3u, 802.3x, 802.3ab, 802.3z, 802.3ad, 802.3af, 802.3at, 802.1Q, 802.1p, 802.1D / w / s, 802.1X, 802.1AB	M				
8.2	Safety / EMC	CE (EN 55032, EN 62368-1), FCC Part 15 Class A / B, or equivalent national certification	M				
8.3	Environmental	RoHS compliant	M				
8.4	Warranty & Support	Minimum 1-year warranty	M				

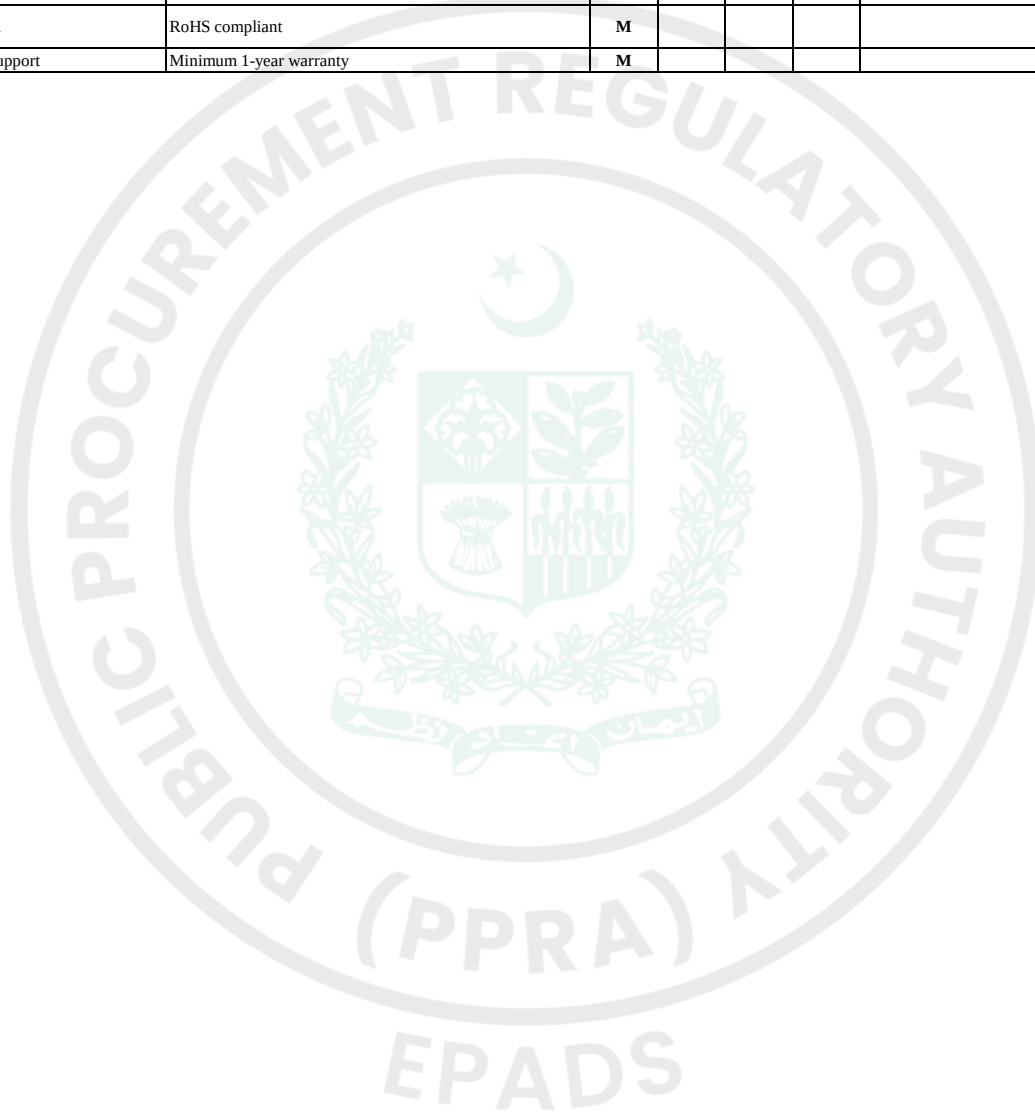
TECHNICAL SPECIFICATIONS							
24-Port Gigabit Managed PoE Switch with SFP Uplink							
Bidder's Name:							
Bidder's Quoted Brand / Model:							
Country of Manufacture:							
S.No	Feature / Description	Minimum Specification	Marks	Bidder Statement			Bidder Quoted Features
				FC	PC	NC	
1 PORTS & INTERFACES							
1.1	Switch Type	Layer 2 managed Gigabit PoE+ switch (Layer 2+ with static routing acceptable) for IP video surveillance and IP devices, with CLI, web and SNMP management	M				
1.2	PoE Ports	24 × 10/100/1000 Mbps RJ45 PoE ports; full duplex, auto-negotiation, MDI / MDI-X	M				
1.3	Uplink – Copper	1 × 10/100/1000 Mbps RJ45 uplink port	M				
1.4	Uplink – Fibre	1 × 1000BASE-X SFP slot (SFP transceivers to be supplied only if listed in the BoQ)	M				
1.5	Console Port	1 × RJ45 / USB console port for CLI access	M				
2 SWITCHING PERFORMANCE							
2.1	Switching Capacity	Not less than 52 Gbps; wire-speed, non-blocking on all 26 ports	M				
2.2	Packet Forwarding Rate	Not less than 38.69 Mpps (wire-speed)	M				
2.3	Forwarding Mode	Store-and-forward	M				
2.4	MAC Address Table	Not less than 8K entries	M				
2.5	Jumbo Frames	Not less than 9 KB	M				
2.6	Flow Control	IEEE 802.3x flow control (full duplex)	M				
3 POWER OVER ETHERNET							
3.1	PoE Standard	IEEE 802.3af and IEEE 802.3at on all 24 PoE ports	M				
3.2	Maximum Port Power	30 W per PoE port	M				
3.3	Total PoE Budget	Not less than 370 W	M				
3.4	PoE Management	Per-port PoE enable / disable, priority and power-limit configuration; PoE scheduling (time-based); real-time PoE power-usage display; overload and short-circuit protection	M				
3.5	PoE Watchdog	Automatically detects and restarts non-responding powered devices (IP cameras) on all PoE ports	M				
3.6	Surge Protection	6 kV surge protection on PoE ports	M				
4 LAYER 2 FEATURES							
4.1	VLAN	IEEE 802.1Q VLAN with 4K VLAN IDs and not less than 256 active VLANs; access and trunk port modes	M				
4.2	Spanning Tree	STP, RSTP and MSTP (IEEE 802.1D / 802.1w / 802.1s)	M				
4.3	Link Aggregation	IEEE 802.3ad LACP and static trunking, not less than 4 groups	M				
4.4	Multicast	IGMP snooping v1 / v2 / v3	M				
4.5	QoS	IEEE 802.1p CoS and DSCP classification; not less than 4 priority queues; strict-priority and weighted scheduling; port rate limiting	M				
4.6	Network Protection	Port isolation, storm control (broadcast / multicast / unicast), loop detection, LLDP, port mirroring	M				
5 SECURITY							
5.1	Access Control	IEEE 802.1X port authentication; Layer 2 – Layer 4 ACLs; port security (MAC limiting)	M				
5.2	DHCP Protection	DHCP snooping	M				
5.3	Secure Management	SSH, HTTPS and SNMP v3; RADIUS and / or TACACS+ authentication; multi-level user privileges	M				
6 MANAGEMENT							
6.1	Management Interfaces	CLI (SSH / console), web GUI (HTTPS) and SNMP v1 / v2c / v3; no proprietary client mandatory	M				

S.No	Feature / Description	Minimum Specification	Marks	Bidder Statement			Bidder Quoted Features
				FC	PC	NC	
6.2	Monitoring	RMON, syslog, port statistics, cable diagnostics; LED indicators for power, PoE, link / activity	M				
6.3	Central / Cloud Management	Support for central or cloud management platform with network topology view, device health monitoring and alarm push; no mandatory subscription fee	M				
6.4	Time / Network Services	NTP / SNTP; DHCP client	M				
6.5	Configuration / Firmware	Configuration backup and restore; dual firmware image; firmware updates provided free of charge during the warranty period	M				
7 POWER & ENVIRONMENT							
7.1	Power Input	Internal power supply, AC 100–240 V, 50/60 Hz, rated for the full 370 W PoE budget; bidder to state maximum power consumption	M				
7.2	Operating Temperature	0 °C to 45 °C or wider	M				
7.3	Humidity	5% – 95% RH, non-condensing	M				
7.4	Housing / Mounting	Metal housing; 19-inch rack-mountable, 1U; rack-mount kit included; bidder to state dimensions and weight	M				
8 STANDARDS & WARRANTY							
8.1	Network Standards	IEEE 802.3, 802.3u, 802.3x, 802.3ab, 802.3z, 802.3ad, 802.3af, 802.3at, 802.1Q, 802.1p, 802.1D / w / s, 802.1X, 802.1AB	M				
8.2	Safety / EMC	CE (EN 55032, EN 62368-1), FCC Part 15 Class A / B, or equivalent national certification	M				
8.3	Environmental	RoHS compliant	M				
8.4	Warranty & Support	Minimum 1-year warranty	M				

TECHNICAL SPECIFICATIONS							
Multi-Biometric Face & Fingerprint Time Attendance / Access Control Terminal							
Bidder's Name:							
Bidder's Quoted Brand / Model:							
Country of Manufacture:							
S.No	Feature / Description	Minimum Specification	Marks	Bidder Statement			Bidder Quoted Features
				FC	PC	NC	
1 BIOMETRICS & DISPLAY							
1.1	Terminal Type	Standalone multi-biometric time attendance and access control terminal with face and fingerprint recognition	M				
1.2	Face Recognition	Visible-light face recognition with live-face (anti-spoofing) detection to reject photo and video attacks	M				
1.3	Fingerprint Recognition	Built-in fingerprint sensor	M				
1.4	Verification Methods	Face, fingerprint, RFID card (EM 125 kHz and / or MIFARE 13.56 MHz, as specified in the BoQ) and password / PIN	M				
1.5	Display	Not less than 4.3-inch colour touch screen	M				
2 CAPACITY & PERFORMANCE							
2.1	Face Templates	Not less than 3,000	M				
2.2	Fingerprint Templates	Not less than 4,000	M				
2.3	Card Capacity	Not less than 10,000	M				
2.4	Attendance Records	Not less than 100,000 transaction logs	M				
2.5	Verification Speed	Not more than 2 seconds per verification	M				
3 ACCESS CONTROL INTERFACES							
3.1	Door Control	Built-in electric lock relay output, door sensor input and exit button input	M				
3.2	Alarm	Alarm output and tamper alarm	M				
3.3	Wiegand	Wiegand input and output	M				
3.4	Access Rules	Time zones, user groups and holiday settings for access / attendance	M				
4 COMMUNICATION & SOFTWARE							
4.1	Network	TCP/IP over RJ45 Ethernet (10/100 Mbps or better)	M				
4.2	Serial / USB	RS-485 (RS-232 desirable) and USB host port for data export and firmware upgrade	M				
4.3	Wireless	Wi-Fi support (module supplied only if specified in the BoQ)	M				
4.4	Software	Attendance and access-control management software supplied with the terminal; no per-user or per-device licence fee; open SDK / API for third-party integration	M				
4.5	Data Export	Attendance data export in Excel / CSV format via software and USB	M				
5 SECURITY							
5.1	Data Protection	Encrypted storage of biometric templates; chip-level firmware protection	M				
5.2	Access	Password-protected administrator menu; role-based administrator rights	M				
5.3	Data Hosting	All data stored locally on the terminal / on-premises server; no mandatory cloud service	M				
6 POWER & ENVIRONMENT							
6.1	Power Input	12 V DC (maximum 3 A); power adapter included	M				
6.2	Backup Battery	Provision for optional built-in backup battery (supplied only if specified in the BoQ)	M				
6.3	Operating Temperature	0 °C to 45 °C or wider	M				
6.4	Humidity	10% – 90% RH, non-condensing	M				
6.5	Installation	Indoor wall-mount; mounting bracket and screws included	M				
7 STANDARDS & WARRANTY							
7.1	Safety / EMC	CE (EN 55032, EN 62368-1), FCC Part 15 Class A / B, or equivalent national certification	M				
7.2	Environmental	RoHS compliant	M				
7.3	Warranty & Support	Minimum 1-year warranty	M				

TECHNICAL SPECIFICATIONS							
Enterprise Rack Server							
Bidder's Name:							
Bidder's Quoted Brand / Model:							
Country of Manufacture:							
S.No	Feature / Description	Minimum Specification	Marks	Bidder Statement			Bidder Quoted Features
				FC	PC	NC	
1 CHASSIS & PLATFORM							
1.1	Form Factor	1U or 2U rack-mount, dual-socket server; sliding rail kit with cable management arm and lockable front bezel included	M				
1.2	Processors	2 × x86-64 server-class processors installed, each with not less than 12 cores and base clock not less than 2.1 GHz; platform generation launched 2019 or later	M				
1.3	Chipset / Platform	Platform supporting server-class multi-core processors with DDR4 ECC registered memory and PCIe Gen3 (or higher) expansion	M				
2 MEMORY							
2.1	Installed Memory	Not less than 256 GB DDR4 ECC registered (RDIMM), speed not less than 2666 MT/s	M				
2.2	Memory Slots	Not less than 16 DIMM slots	M				
2.3	Expandability	Expandable to not less than 512 GB	M				
2.4	Memory Protection	ECC and advanced memory error correction supported	M				
3 STORAGE							
3.1	Drive Bays	Not less than 8 front hot-plug 2.5-inch bays (SAS / SATA)	M				
3.2	Installed Drives	2 × 480 GB enterprise SSD (OS, mirrored) and 4 × 1.92 TB enterprise SSD (data), hot-plug, SAS or SATA	M				
3.3	RAID Controller	Hardware RAID controller with not less than 8 GB cache and battery / flash cache protection; RAID 0, 1, 5, 6, 10, 50, 60	M				
3.4	Boot Option	Support for dedicated mirrored boot storage (e.g. internal mirrored M.2 module) as an alternative	M				
4 NETWORK & EXPANSION							
4.1	LAN on Motherboard	Not less than 2 × 1 GbE RJ45 ports	M				
4.2	Additional Network Ports	Not less than 2 × 10 GbE SFP+ (or SFP28) ports via PCIe adapter, with SR transceivers if specified in the BoQ	M				
4.3	PCIe Slots	Not less than 2 PCIe Gen3 (or higher) slots, after installation of the required adapters	M				
4.4	I/O Ports	Front: not less than 1 × USB; rear: not less than 2 × USB, 1 × VGA / DisplayPort; 1 × dedicated management network port	M				
5 MANAGEMENT							
5.1	Remote Management	Dedicated out-of-band management controller with HTML5 web console, virtual KVM and virtual media, power control, hardware health monitoring and alerting	M				
5.2	Management Standards	IPMI 2.0 and Redfish API; SNMP v3; remote firmware update; all licences required for full remote management (including virtual console) included	M				
5.3	System Management Software	Vendor systems-management software supporting multi-server monitoring, firmware / driver update and integration with VMware vCenter and Microsoft management tools	M				
6 SECURITY							
6.1	Hardware Security	TPM 2.0; UEFI Secure Boot; silicon root of trust with cryptographically signed firmware	M				
6.2	Configuration Lock	System configuration lockdown; BIOS / management controller password protection; chassis intrusion detection	M				
6.3	Drive Encryption	Support for self-encrypting drives with local key management	M				
7 POWER, COOLING & ENVIRONMENT							
7.1	Power Supplies	2 × hot-plug redundant (1+1) power supplies, each not less than 450 W, 80 PLUS Platinum or better; AC 100–240 V, 50/60 Hz; power cords (IEC C13 – local plug) included	M				

S.No	Feature / Description	Minimum Specification	Marks	Bidder Statement			Bidder Quoted Features
				FC	PC	NC	
7.2	Cooling	Redundant (N+1) cooling fans	M				
7.3	Operating Temperature	10 °C to 35 °C continuous operation (ASHRAE A2 or better)	M				
7.4	Humidity	10% – 80% RH, non-condensing	M				
8 OPERATING SYSTEM & COMPATIBILITY							
8.1	Supported OS / Hypervisors	Certified for Microsoft Windows Server, Red Hat Enterprise Linux, SUSE Linux Enterprise Server, Ubuntu Server and VMware vSphere; bidder to confirm Hardware Compatibility List status	M				
9 STANDARDS & WARRANTY							
9.1	Safety / EMC	CE (EN 55032, EN 62368-1), FCC Part 15 Class A / B, or equivalent national certification	M				
9.2	Environmental	RoHS compliant	M				
9.3	Warranty & Support	Minimum 1-year warranty	M				



TECHNICAL SPECIFICATIONS							
10 TB Surveillance Solid State Drive (SSD)							
Bidder's Name:							
Bidder's Quoted Brand / Model:							
Country of Manufacture:							
S.No	Feature / Description	Minimum Specification	Marks	Bidder Statement			Bidder Quoted Features
				FC	PC	NC	
1 CAPACITY & TYPE							
1.1	Drive Type	Internal enterprise-class solid state drive (SSD) with 3D TLC (or higher-endurance) NAND flash, designed for 24×7 DVR / NVR recording; consumer / client-grade SSDs not acceptable	M				
1.2	Capacity	10 TB (nominal)	M				
1.3	Form Factor	2.5-inch, height not exceeding 15 mm; 3.5-inch bay mounting bracket / adapter to be supplied where required by the NVR drive tray	M				
1.4	Interface	SATA III, 6 Gb/s; backward compatible with SATA 3 Gb/s	M				
2 PERFORMANCE							
2.1	Sequential Read	Not less than 500 MB/s (128 KB)	M				
2.2	Sequential Write	Not less than 450 MB/s sustained (128 KB)	M				
2.3	Random IOPS (4 KB, QD32)	Random read not less than 50,000 IOPS; random write not less than 15,000 IOPS	M				
2.4	Interface Transfer Rate	6 Gb/s (600 MB/s) buffer-to-host	M				
3 ENDURANCE & SURVEILLANCE FEATURES							
3.1	Endurance	Not less than 1 drive write per day (DWPD) over 5 years, i.e. not less than 14,000 TBW	M				
3.2	Workload	24×7 operation (8,760 power-on hours per year) under continuous sequential-write recording workload	M				
3.3	Consistent Write Performance	Sustained write performance without throttling, to minimise dropped frames and recording gaps during continuous multi-stream writes	M				
3.4	Power-Loss Protection	Hardware power-loss data protection (e.g. capacitor-based) to safeguard in-flight data	M				
3.5	Data Protection	End-to-end data-path protection with internal NAND-level error correction / redundancy	M				
3.6	Camera / Bay Support	Suitable for NVRs with 8 or more drive bays and recording of up to 64 HD cameras	M				
3.7	NVR Compatibility	Compatible with NVR / DVR and RAID-enabled surveillance recorders; bidder to confirm compatibility (including SSD support) with the offered NVR models	M				
4 RELIABILITY							
4.1	MTBF	Not less than 2,000,000 hours	M				
4.2	Non-recoverable Read Errors	1 per 10 ¹⁷ bits read, or better	M				
4.3	Health Monitoring	S.M.A.R.T. support with SSD wear-level / remaining-life indicator and drive health management / diagnostic utility	M				
5 POWER & ENVIRONMENT							
5.1	Power	+5 V DC (and / or +12 V DC) via SATA power connector; average operating power not exceeding 6 W	M				
5.2	Operating Temperature	0 °C to 70 °C (drive temperature) or wider	M				
5.3	Humidity	5% – 95% RH, non-condensing	M				
6 STANDARDS & WARRANTY							
6.1	Compliance	RoHS compliant; CE / FCC or equivalent national certification	M				
6.2	Warranty & Support	Minimum 1-year warranty	M				

TECHNICAL SPECIFICATIONS							
3 KVA Smart UPS							
Bidder's Name:							
Bidder's Quoted Brand / Model:							
Country of Manufacture:							
S.No	Feature / Description	Minimum Specification	Marks	Bidder Statement			Bidder Quoted Features
				FC	PC	NC	
1 CAPACITY & TOPOLOGY							
1.1	UPS Type	True online double-conversion (VFI) UPS, microprocessor / DSP controlled, single-phase input and single-phase output	M				
1.2	Rated Capacity	3 KVA, with output power not less than 2.7 kW	M				
1.3	Transfer Time	Zero (0 ms) between mains and battery operation	M				
1.4	Form Factor	Tower (rack / tower convertible acceptable)	M				
2 INPUT							
2.1	Input Voltage	Single-phase, 220 / 230 / 240 V AC nominal; operating window not less than 176–276 V AC at full load (wider window at reduced load)	M				
2.2	Input Frequency	50 Hz nominal; operating range not less than 45–55 Hz	M				
2.3	Input Power Factor	Not less than 0.97 at full load	M				
2.4	Input Connection	IEC C20 inlet or hardwired terminal; input power cord with plug suitable for local supply included	M				
3 OUTPUT							
3.1	Output Voltage	Single-phase, 220 / 230 / 240 V AC (selectable); voltage regulation $\pm 2\%$ or better	M				
3.2	Output Frequency	50 Hz ± 0.1 Hz in battery mode	M				
3.3	Waveform	Pure sine wave in all operating modes	M				
3.4	Output THD	Not more than 3% on linear load and not more than 6% on non-linear load	M				
3.5	Crest Factor	3:1 or better	M				
3.6	Overload Capacity	Not less than 105% – 125% load for 1 minute; automatic transfer to bypass on higher overload	M				
3.7	Efficiency	Not less than 90% in online double-conversion mode at full load; high-efficiency (ECO) mode available	M				
3.8	Output Sockets	Not less than 4 $\times$ IEC C13 and 1 $\times$ IEC C19 outlets (or equivalent output terminal block)	M				
4 BATTERY							
4.1	Battery Type	Sealed, maintenance-free VRLA (AGM) batteries, installed inside the UPS; hot-swappable / user-replaceable	M				
4.2	Backup Time	Not less than 20 minutes at 50% load; bidder to state battery voltage, number of cells and Ah rating	M				
4.3	Recharge Time	Not more than 8 hours to 90% capacity after full discharge	M				
4.4	Battery Management	Temperature-compensated charging, deep-discharge protection and automatic periodic battery test	M				
4.5	Extended Runtime	Provision to connect external battery pack(s) for extended backup time	M				
4.6	Cold Start	Capable of starting from batteries when mains is absent	M				
5 BYPASS & PROTECTION							
5.1	Bypass	Automatic static bypass on overload, fault or over-temperature	M				
5.2	Protections	Overload, short-circuit, over / under voltage, over-temperature, battery low and deep-discharge protection	M				
5.3	Surge / Noise Filter	Input surge suppression and EMI / RFI filtering	M				
5.4	Emergency Power-Off	EPO port for remote emergency shutdown	M				
6 MONITORING & COMMUNICATION							
6.1	Display	LCD / LED display showing input and output voltage, load %, battery level / remaining runtime, mode and alarms	M				

S.No	Feature / Description	Minimum Specification	Marks	Bidder Statement			Bidder Quoted Features
				FC	PC	NC	
6.2	Alarms	Audible and visual alarms for battery mode, low battery, overload and fault	M				
6.3	Communication Ports	USB and / or RS-232 port; slot for SNMP / web management card (card supplied only if listed in the BoQ)	M				
6.4	Software	UPS monitoring and graceful-shutdown software for Windows, Linux and VMware at no extra licence cost	M				
7 ENVIRONMENT							
7.1	Operating Temperature	0 °C to 40 °C	M				
7.2	Humidity	10% – 90% RH, non-condensing	M				
7.3	Audible Noise	Not more than 55 dB(A) at 1 metre	M				
8 STANDARDS & WARRANTY							
8.1	Safety / EMC	IEC / EN 62040-1 (safety) and IEC / EN 62040-2 (EMC, Class C2 or C3); CE	M				
8.2	Environmental	RoHS compliant; manufacturer ISO 9001 certified	M				
8.3	Warranty & Support	Minimum 1-year warranty on UPS (parts and batteries)	M				

TECHNICAL SPECIFICATIONS							
UPS (1 KVA)							
Bidder's Name:							
Bidder's Quoted Brand / Model:							
Country of Manufacture:							
S.No	Feature / Description	Minimum Specification	Marks	Bidder Statement			Bidder Quoted Features
				FC	PC	NC	
1	UPS Type & Topology	Line-Interactive or Online Double Conversion; sine wave output mandatory	M				
2	Power Rating	Minimum 1000 VA / 1000 W (unity power factor or ≥ 0.9 pF);	M				
3	Input Voltage & Frequency	AC input: 170 – 280 V (wide range); 50 Hz $\pm$ 5%; single phase	M				
4	Output	220 – 240 V AC $\pm$ 5%; pure sine wave; minimum 2 $\times$ IEC C13 or local output sockets	M				
5	Battery	External sealed lead-acid (SLA/VRLA) battery; deep-cycle; maintenance-free; Backup time of battery: minimum 25-30 mins at full load	M				
6	Protection & Alarms	Overload, over-voltage, under-voltage, short circuit, over-temperature protection; audible alarms and LED indicators for mains, battery, fault status	M				
7	Compliance & Warranty	RoHS compliant; minimum 1-year warranty	M				

ANNEX-C: DECLARATION OF BENEFICIAL OWNER INFORMATION

Declaration of Ultimate Beneficial Owners Information for Public Procurement Contracts

1. Name
2. Father's Name/Spouse's Name
3. CNIC/NICOP/Passport no.
4. Nationality
5. Residential address
6. Email address
7. Date on which shareholding, control or interest acquired in the business.
8. In case of indirect shareholding, control or interest being exercised through intermediary companies, entities or other legal persons or legal arrangements in the chain of ownership or control, following additional particulars to be provided:

1	2	3	4	5	6	7	8	9	10
Name	Legal form (Company/Limited Liability Partnership/Association of Persons/Single Member Company/ Partnership Firm/ Trust/Any other individual, body corporate (to be specified))	Date of incorporation / registration	Name of registering authority	Business Address	Country	Email address	Percentage of shareholding, control or interest of BO in the legal person or legal arrangement	Percentage of shareholding, control or interest of legal person or legal arrangement in the Company	Identity of Natural Person who ultimately owns or controls the legal person or arrangement

9. Information about the Board of Directors (details shall be provided regarding number of shares in the capital of the company as set opposite respective names).

1	2	3	4	5	6	7	8
Name and surname (In Block Letters)	CNIC No. (in case of foreigner, Passport No)	Father's/ Husband's Name in full	Current Nationality	Any other Nationality (ies)	Occupation	Residential address in full or the registered/ principal office address for a subscriber other than natural person	Number of shares taken by each subscriber (in figures and words)
			Total number of shares taken (in figures and words)				

10. Any other information incidental to or relevant to Beneficial Owner(s).

Name & signature

(Person authorized to issue notice on behalf of the company)

Past Experience / Contracts

Contracts over <i>[insert amount]</i> during the last three years:				
Procuring Agency	Value	Year	Goods/Services Supplied	Country of Destination



Historical Contract Non-Performance, and Pending Litigation and Litigation History

[The following table shall be filled in for the Applicant and for each member of a Joint Venture]

Applicant's Name: *[insert full name]*

Date: *[insert day, month, year]*

Joint Venture Member Name: *[insert full name]*

IFP No. and title: *[insert IFP number and title]*

Page *[insert page number]* of *[insert total number]* pages

☐ Not debarred due to deviation from commitment of Bid Securing Declaration- ☐ Not debarred due to non-performance			
Year	Non-performed portion of contract	Contract Identification	Total Contract Amount (current value, currency, exchange rate and PKR equivalent)
<i>[insert year]</i>	<i>[insert amount and percentage]</i>	Contract Identification: <i>[indicate complete contract name/ number, and any other identification]</i> Name of Procuring Agency: <i>[insert full name]</i> Address of Procuring Agency: <i>[insert street/city/country]</i> Reason(s) for nonperformance: <i>[indicate main reason(s)]</i>	<i>[insert amount]</i>
Pending Litigation, in accordance with Section III, Qualification Criteria and Requirements			
☐ Pending litigation in accordance with Section III, Qualification Criteria and Requirements, Sub-Factor 2.3 as indicated below.			
Year of dispute	Amount in dispute (currency)	Contract Identification	Total Contract Amount (currency), US\$ PKR Equivalent (exchange rate)

<i>[insert year]</i>	<i>[insert amount]</i>	Contract Identification: [indicate complete contract name, number, and any other identification] Name of Procuring Agency: <i>[insert full name]</i> Address of Procuring Agency: <i>[insert street/city/country]</i> Matter in dispute: <i>[indicate main issues in dispute]</i> Party who initiated the dispute: <i>[indicate "Procuring Agency" or "Supplier"]</i> Status of dispute: <i>[Indicate if it is being treated by the Adjudicator, under Arbitration or being dealt with by the Judiciary]</i>	<i>[insert amount]</i>
☐ No consistent history of court/arbitral award decisions in accordance with Section III, Qualification Criteria and Requirements, Sub-Factor 2.4. ☐ Consistent history of court/arbitral award decisions in accordance with Section III, Qualification Criteria and Requirements, Sub-Factor 2.4 as indicated below.			
Year of award	Outcome as percentage of Net Worth	Contract Identification	Total Contract Amount (currency), PKR Equivalent (exchange rate)
<i>[insert year]</i>	<i>[insert percentage]</i>	Contract Identification: [indicate complete contract name, number, and any other identification] Name of Procuring Agency: <i>[insert full name]</i> Address of Procuring Agency: <i>[insert street/city/country]</i> Matter in dispute: <i>[indicate main issues in dispute]</i> Party who initiated the dispute: <i>[indicate "Procuring Agency" or "Supplier"]</i> Court/ arbitral award decision: <i>[Indicate if the award decision was against the Applicant or any member of a joint venture.]y]</i>	<i>[insert amount]</i>

Average Annual Turnover (Annual Sales Value)

[The following table shall be filled in for the Applicant and for each member of a Joint Venture]

Applicant's Name: *[insert full name]*

Date: *[insert day, month, year]*

Joint Venture Member Name: *[insert full name]*

IFP No. and title: *[insert IFP number and title]*

Page *[insert page number]* of *[insert total number]* pages

Annual Turnover Data			
Year	Amount Currency	Exchange rate* (If applicable)	PKR equivalent
<i>[indicate calendar year]</i>	<i>[insert amount and indicate currency]</i>		
		Average Annual Turnover **	

* Refer ITA for date and source of exchange rate.

** Total PKR equivalent for all years divided by the total number of years. See Section III, Qualification Criteria and Requirements, ITA.