

**E-TENDER FOR SUPPLY,  
INSTALLATION, TESTING & COMMISSIONING  
OF**

**IP BASED CCTV SURVEILLANCE SYSTEM**

**DEPARTMENT OF SOCIAL WELFARE,  
CHANDIGARH ADMINISTRATION**



**Tender No. SPIC/2017/39099/A**

**Date. 17/11/2017**

***Society for Promotion of Information Technology in Chandigarh***

***(Under the aegis of Department of Information Technology, Chandigarh Administration)***

***EDC BUILDING, PLOT NO : 20 , CHANDIGARH IT PARK***

***CHANDIGARH 160101***

***Telefax : 0172-2970450,2970451***

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*Tender Document for supply, installation & commissioning of IP Based CCTV Surveillance System, Department of Social Welfare, Chandigarh Administration*

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## SECTION I

### INVITATION FOR BIDS

1. This invitation of Bids is for empanelment of System Integrators for Supply, installation & Commissioning of IP based CCTV Camera & related equipment at **Snehalaya-Maloya, Aashiana Sector:15 & Nari Niketan Sector:26** for CCTV Surveillance System with the objective of interconnecting CCTV - IT Infrastructure to harness the benefit of latest developments of Information Technology.
2. This Tender document can also be downloaded from e-tendering website of Chandigarh Administration - <https://etenders.chd.nic.in> and the non-refundable Tender fee of **Rs.2000/- in the form of bank draft in favour of 'Society for Promotion of IT in Chandigarh (SPIC)' payable at Chandigarh**, must be paid in the form mentioned above at the time of submission of bid. Interested bidders can also download the tender document from SPIC's website <http://www.spicindia.com>.
3. Tenderers are advised to study the Tender Document carefully. Submission of Tender shall be deemed to have been done after careful study and examination of the Tender Document with full understanding of its implications.
4. Sealed offers prepared in accordance with the procedure described in Clause 1 of Section II should be submitted to the **Chief Executive Officer, Society for Promotion of IT in Chandigarh (SPIC), EDC Building, Plot No: 20, RGCTP, Chandigarh-160101**.
5. The Tenderer must be a company registered under the Indian Companies Act, 1956.
6. The Tender comprises of two bid systems - the Technical Bid and Price Bid. The Tenderer has to submit a Bid Security /**Earnest Money Deposit (EMD) of Rs. 75,000/- in the form of bank draft/ Bank Guarantee in favour of 'Society for Promotion of IT in Chandigarh (SPIC)' payable at Chandigarh along with the Technical Bid**.
7. Period for completion of work: It has been targeted that the work of CCTV installation covering supply, installation, Testing and commissioning should be completed within time frame mentioned in the notification of award.
8. The bidders would have to quote the prices in Indian Rupees only covering the total scope of work.
9. The purchaser reserves the right of accepting and/or rejecting any/all Tenders without assigning any reasons thereof.
10. Key Dates etc. :
  - A. Name of the Purchaser: Department of Social Welfare through SPIC.
  - B. Location where the work of CCTV Installation would take place:  
**Snehalaya-Maloya, Aashiana Sector:15 & Nari Niketan Sector:26**
  - C. Addressee and Address at which Bids are to be submitted:

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**Chief Executive Officer SPIC,  
Society for Promotion of IT in Chandigarh (SPIC),  
EDC Building, Plot No: 20 ; RGCTP; Chandigarh-160101.**

- D. Last date for sale of Tender document: **30/11/2017.**
- E. Latest time and date for receipt of Bids: On or before **30/11/2017 up to 12:00 PM.**
- F. Place, Time and Date of opening of Technical Bids: **30/11/2017 at 12:30 PM.**

**Society for Promotion of IT in Chandigarh (SPIC),  
EDC Building, Plot No: 20 ; RGCTP; Chandigarh-160101**

The date, time and venue for opening Price bids will be intimated separately to those successful in technical bids.

- G. Bid Validity: 180 days from the date of opening of the Technical Bids.
- H. Validity of the Price Validity:

Validity of the Amount specified in the price bid should be valid for One year from the date of opening of the price BID. Additional Works in the form of similar CCTV Surveillance System in other departments may also be assigned to the selected vendor in the same terms & conditions and in the same price within one year.

Note: The Purchaser shall not be responsible for non-receipt/ non-delivery of the Bid document due to any reason whatsoever.

## **SECTION II**

### **INSTRUCTIONS TO TENDERERS**

#### **1. Procedure for Submission of Bids**

- 1.1 It is proposed to have a Two Cover System for this tender.
  - a) Technical Bid cum Qualification Bid in one cover.
  - b) Price Bid in one cover.
- 1.2 Sealed Tenders in 'two part' are being invited from reputed vendors for supply, installation & commissioning of IP based CCTV Surveillance System in the form of e-Tender as well as sealed hard copy of the same tender for the following job from reputed organizations having sufficient experience and credentials for successful supply, installation and commissioning of IP based CCTV and peripherals preferably in government / quasi-government organizations. Vendor should be capable of supplying, Installation & Commissioning of the CCTV and required LAN infrastructure under this tender.
- 1.3 e-Tender to be submitted electronically through the e-tendering site of Chandigarh administration (<https://etenders.chd.nic.in>). e-tender to be uploaded in two parts – 1. Technical cum Qualification Bid and 2. Financial Bid.
- 1.4 Physical copy of Technical Bid of the Tender should be covered in a separate sealed cover super scribing the wordings "Technical Bid". Please Note that Prices Should Not be indicated in the Technical Bid.
- 1.5 Physical copy of Price Bid of the Tender should be covered in a separate sealed cover super scribing the wordings "Price Bid".
- 1.6 Both the Technical Bid cover and Price Bid Cover, prepared as above, along with Tender Fee & EMD are to be kept in a single sealed cover super scribed with Tender Number, Due Date, Item and the wordings "DO NOT OPEN BEFORE\_\_\_".
- 1.7 The cover thus prepared should also indicate clearly the name and address of the tenderer, to enable the Bid to be returned unopened in case it is declared "Late".
- 1.8 A letter, in a separate sealed cover, enclosing Bid security and describing the pre-qualifying technical competence and experience of the Tenderer and also certifying the period of validity of Bids for 180 days from the date of opening of the Technical Bids, should also be submitted with the Bid (Refer Clause 7.1(c) and Clause 20).

#### **2. Cost of Tender**

- 2.1 The Tenderer shall bear all costs associated with the preparation and submission of its bid, including cost of presentation for the purposes of clarification of the bid, if so desired by the Purchaser and the Purchaser, will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the Tendering process.

#### **3. Contents of the Tender Document**

- 3.1 The broad specifications of the Scope of Work, Tender procedures and contract terms are prescribed in this Tender Document comprising of:

- (a) Section-I - Invitation for Bids
  - (b) Section II - Instructions to Tenderers;
  - (c) Section III - General Conditions of Contract;
  - (d) Section IV - Technical Specification
  - (e) Section V – Bid Schedules
  - (f) Appendices, sketch and Checklist
- 3.2 The Tenderer is expected to examine all instructions, forms, terms and requirements in the Tender Document. Failure to furnish all information required by the Tender Document or submission of a bid not substantially responsive to the Tender Document in every respect will be at the Tenderer's risk and may result in the rejection of the bid.

#### **4. Clarification of Tender Document**

- 4.1 A prospective Tenderer requiring any clarification on the Tender Document may notify the Purchaser in writing at the Purchaser's mailing address or through e-mail indicated in Clause 9(c) of Section I. The Purchaser will respond in writing or through e-mail, to any request for clarification of the Tender Document, received not later than 4 days prior to the last date for the receipt of bids prescribed by the Purchaser. Written copies of the Purchaser's response (including an explanation of the query but without identifying the source of inquiry) will be posted on SPIC's website.

#### **5. Amendment of Tender Document**

- 5.1 At any time prior to the last date for receipt of bids, the Purchaser, may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Tenderer, modify the Tender Document by an amendment.
- 5.2 The amendment will be notified/ published in e-tendering site & SPIC's website only.
- 5.3. In order to afford prospective Tenderers reasonable time in which to take the amendment into account in preparing their bids, the Purchaser may, at its discretion, extend the last date for the receipt of Bids if required.

#### **6. Language of Bids**

- 6.1 The Bids prepared by the Tenderer and documents relating to the bids exchanged by the Tenderer and the Purchaser, shall be written in the English language, provided that any printed literature furnished by the Tenderer may be written in another language so long as the same is accompanied by an English translation in which case, for purposes of interpretation of the bid, the English translation shall govern.

## **7. Documents Comprising the Bids**

7.1 The bids prepared by the Tenderer shall comprise of the following components:

Technical Bid comprising of the followings:

- a. Bid Particulars
- b. Bid Letter
- c. Detailed technical Proposal
- d. Vendor Profile
- e. Pre-qualifying Technical Competence such as proven experience in providing Similar Services for determining pre-qualification conditions and Bid Security.

Price Bid comprising of the following:

- a. Bid Letter
- b. Price Schedule

## **8. Bid Prices**

8.1 The bidders would have to quote the prices in Indian Rupees only for the total scope of work.

## **9. Firm Prices**

9.1 Prices quoted must be firm and final and shall remain constant throughout the period of the contract and shall not be subject to any upward modifications, whatsoever.

## **10. Discount**

10.1 The Tenderers are advised not to indicate any separate discount. Discount, if any, should be merged with the quoted prices. Discount of any type, indicated separately, will not be taken into account for evaluation purpose. However, in the event of such an offer, without considering discount, is found to be the lowest, the Purchaser shall avail such discount at the time of award of contract.

## **11. Tenderer**

11.1 The "Tenderer" as used in the tender documents shall mean the one who has submitted the Tender. The Tenderer may be either the Principal or his duly Authorized Representative, in which case he/she shall submit a certificate of authority.

## **12. Bid Security**

- 12.1 Pursuant to Clause 7.1(c) of Section II the Tenderer shall furnish, as part of its bid, a bid security of the amount mentioned in Clause 6 of Section I.
- 12.2 The bid security is required to protect the Purchaser against the risk of Tenderer's conduct that would warrant the security's forfeiture, pursuant to Clause 12.8.
- 12.3 The bid security shall be denominated in Indian Rupees, and shall be in the form of a bank guarantee issued by a Nationalized / Scheduled Bank, in the proforma provided at Appendix A in the Tender Document and shall be valid for 45 days beyond the

validity of the Bid.

- 12.4 Any bid not secured in accordance with Clauses 12.1 and 12.3 will be rejected by the Purchaser as non-responsive.
- 12.5 Unsuccessful Tenderer's bid security will be discharged/ returned as promptly as possible but not later than 30 days after the expiration of the period of bid validity prescribed by the Purchaser, pursuant to Clause 13.
- 12.6 The successful Tenderer's bid security will be discharged upon the Tenderer executing the Contract, pursuant to Clause 35 and furnishing the performance security, pursuant to Clause 36.
- 12.7 No interest will be payable by the Purchaser on the amount of the Bid Security.
- 12.8 The bid security may be forfeited:
  - (a) if a Tenderer withdraws its bid during the period of bid validity specified by the Tenderer in the Bid; or
  - (b) in the case of a successful Tenderer, if the Tenderer fails:
    - (i) to sign the Contract in accordance with Clause 35; or
    - (ii) to furnish performance security in accordance with Clause 36.

### **13. Period of Validity of Bids**

- 13.1 Bids shall remain valid for 180 days after the date of opening of Technical Bids prescribed by the Purchaser. The Purchaser may reject a bid with shorter period validity.
- 13.2 In exceptional circumstances, the Purchaser may solicit the Tenderer's consent to an extension of the period of validity. The request and the responses thereto shall be made in writing (or by fax). The validity of bid security provided under Clause 12 shall also be suitably extended. A Tenderer may refuse the request without forfeiting its bid security. A Tenderer accepting the request will not be required nor permitted to modify its bid.

### **14. Format and Signing of Bid**

- 14.1 The Tenderer shall prepare two copies of the Bid (One for uploading on the e-Tendering Site and Physical copy of the same to be submitted at the above mentioned Bid submission place), as appropriate in accordance with Clause 1. In the event of any discrepancy between them, the original e-Tendering copy shall govern.
- 14.2 The all copies of the bid shall be typed or written in indelible ink and shall be signed by the Tenderer or a person or persons duly authorized to bind the Tenderer to the Contract in pursuant to Clause 11. The letter of authorization shall be indicated by Company Letterhead accompanying the bid. All pages of the bid, except for un-amended printed literature, shall be initialed by the person or persons signing the bid.
- 14.3 The bid shall contain no interlineations, erasures or overwriting except as necessary to correct errors made by the Tenderer in which case such corrections shall be initialed by the person or persons signing the bid.

### **15. Revelation of Prices**

- 15.1 Prices in any form or by any reason before opening the Price Bid should not be revealed, failing which the offer shall be liable to be rejected. If price change is envisaged due to any clarification, supplementary Bid in a separate sealed cover shall be accepted prior to price bid opening with prior written permission of the Purchaser.



## **16. Terms and Conditions of Tendering Firms**

- 16.1 Printed terms and conditions of the tenderers will not be considered as forming part of their tenders. In case terms and conditions of the contract applicable to this Invitation of Tender are not acceptable to any Tenderer, he should clearly specify deviation in its tender. However no deviation in technical specification would be allowed.
- 16.2 Similarly in case the Services being offered has deviations from the specifications laid down in Section V, the tenderer shall describe in what respects and to what extent the Services being offered differ/deviate from the specifications, even though the deviations may not be very material. Tenderer must state categorically whether or not his offer conforms to tender specifications and indicate deviations, if any.

## **17. Site Conditions**

- 17.1 **It will be imperative on each tenderer to fully acquaint themselves with the site conditions and factors that would have any effect on the performance of the CCTV/ contract and / or the cost.**

## **18. Conditions for Pre-Qualification of Tenderers**

- 18.1 Pursuant to Clause 7.1(c) of Section II, the Tenderer should clearly indicate, giving explicit documentary evidence along with the letter of pre-qualification, in respect of the Services offered, the following:
  - i. Bid Security of the prescribed amount and validity pursuant to Clause 12.
  - ii. Domain Experience: The Tenderer should be in the business of supply, installation & commissioning of CCTV and related LANs for at least three years maintenance. The Tenderer should have proven experience of successfully completing at least two projects with total value of each project being at least Rs. 15 lakhs during last two financial years preferably in Punjab, Haryana or Chandigarh region. Out of these two projects, one project should have been done with similar components quoted in the offer in any Govt./Quasi Govt. org.. Proof of satisfactory completion along with scope of these works to be submitted with the bid.
  - iii. Technical Support Facility: The Tenderer should have technical support office in the Chandigarh/Mohali/Panchkula region. Details & proof of service facilities for Technical Support on services, maintenance and availability of hardware components and manpower be attached.
  - iv. Company Turnover: The Tenderer should have a minimum turnover of Rs.5 crores (Rupees five crore only) in each of the last two years on account of supply, installation and commissioning of Networks/related business. Relevant proof in the form of audited annual report or balance sheet duly certified by Chartered Accountant certifying the turn over in the field of Networking should be submitted.
  - v. The Tenderer must be a company registered under the Indian Companies Act, 1956 (Attach Memorandum of Association or Articles of Association along with commencement of business certificate) and should have Sales Tax registration.
  - vi. The Tenderer should be authorized partner/distributor or have Authorization

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from concerned Original Equipment Manufacturers (OEMs) for supply and support for all active and passive components quoted for at least five years (Authorization Certificates to be attached).

- vii. The Bidder MUST NOT have been banned by any Government Agencies / Govt. Department / Quasi Govt. Dept / PSU / Board / Council or similar organization. The Bidder MUST give a declaration that they have not been banned by any such organization. If any Government Agencies / Govt. Department / Quasi Govt. Dept / PSU / Board / Council or similar organization has banned the Bidder, this fact must be clearly stated.

## **19. Sealing and Marking of Bids**

- 19.1 The Tenderers shall seal and mark the Bid strictly in accordance with Clause 1.
- 19.2 If the outer cover of the bid is not sealed and marked as required by Clause 1, the Purchaser will assume no responsibility for the bid's misplacement or premature opening.

## **20. Last Date for Receipt of Bids**

- 20.1 Bids must be received by the Purchaser at the address specified under Clause 9(c) of Section I not later than the time and date specified in Clause 9(e) of Section I. In the event of the specified date for the receipt of Bids being declared a holiday for the Purchaser, the Bids will be received up-to the appointed time on the next working day.
- 20.2 The Purchaser may, at its discretion, extend the last date for the receipt of bids by amending the Tender Document in accordance with Clause 5, in which case all rights and obligations of the Purchaser and Tenderers previously subject to the last date will thereafter be subject to the last date as extended.

## **21. Late Bids**

- 21.1 Any bid received by the Purchaser after the appointed time on the last date for receipt of bids prescribed by the Purchaser, pursuant to Clause 9 Section I, will be rejected and/or returned unopened to the Tenderer.

## **22. Modification and Withdrawal of Bids**

- 22.1 The Tenderer may withdraw its bid after the bid's submission, provided that written notice of the modification or withdrawal is received by the Purchaser prior to the last date prescribed for receipt of bids.
- 22.2 The Tenderer's modification or withdrawal notice shall be prepared, sealed, marked and dispatched in accordance with the provisions.
- 22.3 A withdrawal notice may also be sent by telex or cable or fax but followed by a signed confirmation copy, post marked not later than the last date for receipt of bids.
- 22.4 No bid may be modified subsequent to the last date for receipt of bids.
- 22.5 No bid may be withdrawn in the interval between the last date for receipt of bids and the expiry of the bid validity period specified by the Tenderer in the Bid. Withdrawal of a bid during this interval may result in the Tenderer's forfeiture of its bid security.

## **23. Address for Correspondence**

- 23.1 The Tenderer shall designate the official mailing address, place and fax number to which all correspondence shall be sent by the Purchaser.

**24. Opening of Bids by Purchaser**

- 24.1 On the basis of information given in the letter of pre-qualification, as mentioned at Clause 20, Tenderers will be pre-qualified.
- 24.2 Price Bids of only pre-qualified tenderers will be opened.
- 24.3 The Purchaser will open the Bids, in the presence of the representatives of the Tenderers who choose to attend, at the time and date, as mentioned in Section I of this Document.
- 24.4 The Tenderers' names, modifications, bid withdrawals and the presence or absence of the requisite Bid Security and such other details as the Purchaser, at its discretion, may consider appropriate will be announced at the bid opening.

**25. Clarifications**

- 25.1 When deemed necessary, the Purchaser may seek clarifications on any aspect from the tenderer. However, that would not entitle the Tenderer to change or cause any change in the substance of the tender submitted or price quoted.

**26. Preliminary Examination**

- 26.1 The Purchaser will examine the bids to determine whether they are complete, whether any computational errors have been made, whether required bid security has been furnished, whether the documents have been properly signed, and whether the bids are generally in order.
- 26.2 Arithmetical errors will be rectified on the following basis. If there is a discrepancy between the unit price 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. If the Tenderer does not accept the correction of the errors, its bid will be rejected. If there is a discrepancy between words and figures, the amount in words will prevail.
- 26.3 A bid determined as not substantially responsive will be rejected by the Purchaser and may not subsequently be made responsive by the Tenderer by correction of the non-conformity.
- 26.4 The Purchaser may waive any minor informality or non-conformity or irregularity in a bid which does not constitute a material deviation, provided such waiver does not prejudice or affect the relative ranking of any Tenderer.

**27. Contacting the Purchaser**

- 27.1 No Tenderer shall contact the Purchaser on any matter relating to its bid, from the time of the bid opening to the time the Contract is awarded.
- 27.2 Any effort by a Tenderer to influence the Purchaser's bid evaluation, bid comparison or contract award decisions may result in the rejection of the Tenderer's bid.

**28. Evaluation Criteria**

- 28.1 Bids will be evaluated on, including but not limited to the content of technical experience, managerial competence, proposed scope of the proposal and cost. The selection may be made without discussion and/or price negotiation. Therefore, the proposal should be submitted complete and on the most favorable terms.
- 28.2 Only successful Tenderers of technical bid would be considered for evaluation of Price

bid.

## **29. Award Criteria**

- 29.1 The Purchaser will award the Contract to the successful Tenderer whose bid has been determined to be substantially responsive and has been determined as the lowest evaluated Price bid, provided further that the Tenderer is determined to be qualified to perform the Contract satisfactorily. The Purchaser shall however not bind itself to accept the lowest or any bid and reserves the right to accept any bid, wholly or in part.

## **30. Purchaser's Right to Vary Scope of Contract**

- 30.1 The Purchaser may at any time, by a written order given to the Vendor pursuant to Clause 12 of Section III, make changes within the general scope of the Contract.
- 30.2 If any such change causes an increase or decrease in the cost of, or the time required for, the Vendor's performance of any part of the work under the Contract, whether changed or not changed by the order, an equitable adjustment shall be made in the Contract Price or delivery schedule, or both, and the Contract shall accordingly be amended. Any claims by the Vendor for adjustment under this Clause must be asserted within thirty(30) days from the date of the Vendor's receipt of the Purchaser's changed order.

## **31. Purchaser's Right to Accept Any Bid and to Reject Any or All Bids**

- 31.1 The Purchaser reserves the right to accept any bid, and to annul the Tender process and reject all bids at any time prior to award of Contract, without thereby incurring any liability to the affected Tenderer or Tenderers or any obligation to inform the affected Tenderer or Tenderers of the grounds for the Purchaser's action.
- 31.2 Tenders that are not accompanied with Earnest Money Deposit (EMD)/Bid Security and Tender fees shall be rejected outright

## **32. Notification of Award**

- 32.1 Prior to the expiration of the period of bid validity, the Purchaser will notify the successful Tenderer in writing by registered letter or by cable or telex or fax, to be confirmed in writing by registered letter, that its bid has been accepted.
- 32.2 The notification of award will constitute the formation of the Contract.
- 32.3 Upon the successful Tenderer's furnishing of performance security pursuant to Clause 36, the Purchaser will promptly notify each unsuccessful Tenderer and will discharge its bid security, pursuant to Clause 12.

## **33. Signing of Contract**

- 33.1 At the same time as the Purchaser notifies the successful Tenderer that its bid has been accepted, the Purchaser will send the Tenderer the Contract Form provided in the Tender Document, incorporating all agreements between the parties.
- 33.2 Within 7 days of receipt of the Contract Form, the successful Tenderer shall sign and date the Contract and return it to the Purchaser.

## **34. Performance Security**

- 34.1 Within 7 days of the receipt of notification of award from the Purchaser, the successful

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Tenderer shall furnish the performance security in accordance with the Conditions of Contract, in the Contract Performance Guarantee Bond prescribed at Appendix.

- 34.2 Failure of the successful Tenderer to comply with the requirement of Clause 33 or Clause 34 shall constitute sufficient grounds for the annulment of the award and forfeiture of the bid security.

### **SECTION III**

#### **GENERAL CONDITIONS OF CONTRACT**

##### **1. Definitions**

1.1 In this Contract, the following terms shall be interpreted as indicated:

- (a) "The Client" or "The Purchaser" means the Departments of Social Welfare, Chandigarh Administration, through the Society for Promotion of IT in Chandigarh (SPIC).
- (b) "Purchase Officer" means the officer signing the acceptance of tender and includes any officer who has authority to execute the relevant contract on behalf of the Client.
- (c) The "Contract" means the agreement entered into between the Client and the Contractor as recorded in the Contract Form signed by the Client and the Contractor, including all attachments and annexes thereto and all documents incorporated by reference therein.
- (d) The "Contractor " or "Vendor" means the firm or the company selected through tendering process and shall be deemed to include the Contractor's successors, representatives (approved by the Client), heirs, executors, administrators and permitted assigns, as the case may be, unless excluded by the terms of the contract.
- (f) "The Contract Price" means the price payable to the Contractor under the Contract for the full and proper performance of its contractual obligations;
- (g) "Service" means services to be provided by the Contractor as per the requirements specified in Section IV of this document and any other incidental services, such as setting up of necessary infrastructure, implementation, provision of technical assistance, training and other such obligations of the Contractor covered under the Contract;
- (h) "Acceptance of Tender" means the letter/telex/e-mail/ fax or any memorandum communicating to the Tenderer the acceptance of his tender and includes an advance acceptance of his tender.

## **2. Application**

- 2.1 These General Conditions shall apply to the extent that provisions in other parts of the Contract do not supersede them.

## **3. Standards of Performance**

- 3.1 The Contractor shall perform the Services and carry out its obligations under the Contract with due diligence, efficiency and economy, in accordance with generally accepted techniques and practices used in the industry and with professional engineering and consulting standards recognized by international professional bodies and shall observe sound management, engineering practices. It shall employ prudent technical and engineering practices. It shall employ advanced technology and safe and effective equipment, machinery, material and methods. The Contractor shall always act, in respect of any matter relating to this Contract, as faithful advisors to the Client and shall, at all times, support and safeguard the Client's legitimate interests in any dealings with Third Parties.

## **4. Use of Contract Documents and Information**

- 4.1 The Contractor shall not, without the Client's prior written consent, disclose the Contract, or any provision thereof, or any specification, plan, drawing, pattern, sample or information furnished by or on behalf of the Client in connection therewith, to any person other than a person employed by the Contractor in the Performance of the Contract. Disclosure to any such employed person shall be made in confidence and shall extend only so far, as may be necessary for purposes of such performance.
- 4.2 The Contractor shall not, without the Client's prior written consent, make use of any document or information except for purposes of performing the Contract.
- 4.3 Any document, other than the Contract itself, shall remain the property of the Client and shall be returned (in all copies) to the Client on completion of the Contractor's performance under the Contract, if so required by the Client.

## **5. Performance Guarantee**

- 5.1 Within 7 days after the receipt of notification of award of the Contract from the Client, the successful Tenderer shall furnish Performance Guarantee to the Client, which shall be equal to 10% of the value of the Contract and shall be in the form of a Guarantee Bond from a Nationalized / Scheduled Bank in the Proforma given at Appendix.
- 5.2 The validity of the Performance guarantee submitted should be for a period of Three years Sixty days from the date of receipt of notification of award from the client.
- 5.3 The performance guarantee shall be deemed to govern the following guarantees from the successful tenderer, in addition to other provisions of the guarantee:
- The hardware/Software supplied under the contract shall be free from all defects/bugs and upon written notice from the client, the successful Tenderer shall fully remedy, free of expense to the client, all such defects/bugs as developed under the normal use of the said hardware/software.
  - To fulfill the conditions of work contract/purchase order.
  - The performance guarantee is intended to secure the performance of the entire system. However, it is not to be construed as limiting the damages stipulated in any other clauses.
  - The SLA for the maintenance support for Three years.

## **6. Inspections and Tests**

- 6.1 The Purchaser or its representative shall have the right to inspect and/or to test the Goods to confirm their conformity to the Contract specifications at no extra cost to the Purchaser. The Purchaser shall notify the Supplier in writing in a timely manner of the identity of any representatives retained for these purposes.
- 6.2 The inspections and tests may be conducted on the premises of the Supplier or, at point of delivery and/or at the Goods final destination. If conducted on the premises of the Supplier, all reasonable facilities and assistance, including access to drawings and production data – shall be furnished to the inspectors at no charge to the Purchaser. The testing/ inspection shall be done at the site at the time of delivery of the equipment against any physical damage on delivery.
- 6.3 Should any inspected or tested Goods fail to conform to the specifications, the Purchaser may reject the goods and the Supplier shall either replace the rejected Goods or make alterations necessary to meet specification requirements free of cost to the Purchaser.
- 6.4 The Purchaser's right to inspect, test and, where necessary, reject the Goods after the Goods' arrival at Project Site shall in no way be limited or waived by reason of the Goods having previously been inspected, tested and passed by the Purchaser or its representative prior to the Goods shipment.
- 6.5 Nothing in Clause 6 shall in any way release the Supplier from any warranty or other obligations under this Contract.
- 6.6 It will be the responsibility of the Tenderer to submit the system test procedure for conducting the post installation site acceptance testing. The procedure submitted by the Tenderer should be drafted in line with the standard practices followed in the industry and should be in accordance with the test procedure and practices specified by the OEM. The draft of Acceptance Testing Procedure should be submitted to the Purchaser for approval at least 15 days before the schedule site acceptance date. The acceptance test procedure on approval by the purchaser shall become the document for acceptance of the equipment after installation at the site.

## **7. Warranty**

- 7.1 The Tenderer warrants that the Goods supplied under this Contract are new, unused, of the most recent or current models and that they incorporate all recent improvements in design and materials unless provided otherwise in the Contract. This warranty shall remain valid for a period of a minimum 36 months after the Goods or any portion thereof as the case may be, have been delivered, commissioned and accepted at the final destination indicated in the Contract.
- 7.2 The Tenderer shall post a well qualified, and experienced Service Engineer full time at the site at his own expense and get the defects/bugs removed in the system as detected by the Purchaser during the period of warranty.
- 7.3 The Purchaser shall promptly notify the Tenderer in writing of any claims arising under this warranty.
- 7.4 Upon receipt of such notice, the Tenderer shall, within 48 hours and with all reasonable speed, repair or replace the defective Goods or parts thereof, without cost to the Purchaser.
- 7.5 If the Supplier, having been notified, fails to remedy the defect(s) within the period specified in 7.4 above, the Purchaser may proceed to take such remedial action as may be necessary, at the Tenderer's risk and expense and without prejudice to any other rights which the Purchaser may have against the Supplier under the Contract.



## **8. Documentation**

8.1 The Tenderer shall supply the following documents at the time of Acceptance Test:

- Complete set of Technical/Operation and Maintenance Manual
- An inventory of items delivered.
- Rack wise inventory
- Node & connectivity details
- Switch installation Report
- UTP/OFC Wiring diagram
- Certification details for UTP & OFC connections.

## **9. Project Schedule & Monitoring**

9.1 The Tenderer shall plan various activities and submit the execution schedule and bar chart along with signing of the contract. The execution schedule should clearly indicate all activities and the time required for completion of each activity taking the total project time as mentioned above. Parallel and dependent activities for each activity need to be specified in the schedule. This will form the basis for Monitoring of execution of the project and any delay/slippage from the schedule will be reviewed by both parties in review meetings from time to time and remedial measures decided to complete the project as per the schedule.

## **10. Training**

10.1 The Tenderer shall provide necessary training to the persons authorized by the client for using/maintaining the Networking facility. Training for 10 man-days (2 persons 5 days) shall be included.

## **11. Currency of Payment**

11.1 Payment shall be made in Indian Rupees only.

## **12. Change Orders**

12.1 The Client may at any time, by a written order given to the Contractor pursuant to Clause 32 of Section II, make changes within the general scope of the Contract.

12.2 If any such change causes an increase or decrease in the cost of, or the time required for, the Vendor's performance of any part of the work under the Contract, whether changed or not changed by the order, an equitable adjustment shall be made in the Contract Price or delivery schedule, or both, and the Contract shall accordingly be amended. Any claims by the Contractor for adjustment under this Clause must be asserted within thirty(30) days from the date of the Vendor's receipt of the Purchaser's changed order.

## **13. Contract Amendments**

13.1 No variation in or modification of the terms of the Contract shall be made except by written amendment signed by both the parties i.e. the Contractor and the Client.

## **14. Assignment**

14.1 The Tenderer shall not assign or sub contract, in whole or in part, its obligations to perform under the Contract.

**15. Terms of Payment**

15.1 The payment to the vendor shall be made as under:

- 80% of the total Bill Amount (without project management & support charges for 3 Years) would be released on successful completion of the installation & testing process.
- 20% (without project management & support charges for 3 Years) of the total Bill Amount would be released after completion of 1-month service.
- Project management & support charges for 3 Years would be equally divided into 3 parts and one part would be release on completion of the a Year.

15.2 No Advance payment will be made.

15.3 Payment will be made only after submission of following documents by the Tenderer:

- Delivery Challan.
- Installation Report duly signed.
- Testing certificate.

15.4 No amount would accrue to the Contractor in failure to furnish Performance Security.

**16. Delays in the Contractor's Performance**

16.1 An unexcused delay by the Contractor in the performance of its Contract obligations shall render the Contractor liable to any or all of the following sanctions:

- (i) Forfeiture of its performance security;
- (ii) Imposition of Liquidated Damages
- (iii) Termination of the Contract for default.

16.2 If at any time during performance of the Contract, the Contractor should encounter conditions impeding timely completion of the services under the contract and performance of the services, the Contractor shall promptly notify the Client in writing of the fact of the delay, its likely duration and its cause(s). As soon as practicable, after receipt of the Vendor's notice, the Client shall evaluate the situation and may at its discretion extend the Vendor's time for performance, in which case the extension shall be ratified by the parties by amendment of the Contract.

16.3 Liquidated Damages : Subject to clause 16. if the Tenderer fails to complete the project within the time period specified in the contract, the purchaser shall without prejudice to its other remedies under the contract, deduct from the contract price, as liquidated damages, a sum equivalent to the 0.5% per week (seven days) or part there of the contract price of unperformed services for each week(seven days) or part thereof of delay subject to maximum deduction of 10% of the contract price. Once the maximum is reached, the purchaser may consider termination of the contract pursuant to clause 17.

**17. Termination for Default**

17.1 The Client may, without prejudice to any other remedy for breach of contract, by written notice of default sent to the Contractor, terminate the Contract in whole or in part if:

- (a) the Contractor fails to deliver any or all of the obligations within the time period(s) specified in the Contract, or any extension thereof granted by the Client pursuant to Clause 16; or

(b) the Contractor fails to perform any other obligation(s) under the contract.

## **18. Force Majeure**

- 18.1 Notwithstanding the provisions of Clauses 16 and 17, the Contractor shall not be liable for forfeiture of its performance security, or termination for default, if and to the extent that, its delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.
- 18.2 For Purposes of this Clause, "Force Majeure" means an event beyond the control of the Contractor and not involving the Contractor and not involving the Vendor's fault or negligence and not foreseeable. Such events may include, but are not restricted to, acts of the Client either in its sovereign or contractual capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions and freight embargoes.
- 18.3 If a force Majeure situation arises, the Contractor shall promptly notify the Client in writing of such conditions and the cause thereof. Unless otherwise directed by the Client in writing, the Contractor shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all prevention by the Force Majeure event.

## **19. Termination for Insolvency**

- 19.1 The Client may at any time terminate the Contract by giving written notice to the Contractor, without compensation to the Contractor, if the Contractor becomes bankrupt or otherwise insolvent, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to the Client.

## **20. Arbitration**

- 20.1 The Client and the Contractor shall make every effort to resolve amicably by direct informal negotiations, any disagreement or disputes, arising between them under or in connection with the Contract.
- 20.2 If, after Thirty(30) days from the commencement of such direct informal negotiations, the Client and the Contractor have been unable to resolve amicably a Contract dispute, either party may require that the dispute be referred for resolution to the formal mechanism specified in Clauses 20.3 and 20.4.
- 20.3 In the event of such arbitrator to whom the matter is originally referred to vacates his office on resignation or otherwise or refuses to do works or neglecting his work or being unable to act as arbitrator for any reason whatsoever, the Finance Secretary, Chandigarh Administration or any other person appointed by him or Chief Executive Officer, SPIC, shall appoint another person to act as arbitrator in the place of outgoing arbitrator and the person so appointed shall be entitled to proceed further with the reference from the stage at which it was left by the predecessor. The vendor will have no objection in any such appointment that arbitrator so appointed is employee of Department/SPIC.
- 20.4 The Arbitration & Conciliation Act 1996, the rules there under and any statutory modification or re-enactments thereof, shall apply to the arbitration proceedings.
- 20.5 The venue of arbitration shall be Chandigarh.
- 20.6 The Client may terminate this contract, by giving a written notice of termination of minimum 30 days, to the Contractor, if the Contractor fails to comply with any decision reached consequent upon arbitration proceedings pursuant to Clause 20.

## **21. Governing Language.**

21.1 The Agreement shall be written in English language. All correspondence and other documents pertaining to the Contract which are exchanged by the parties shall be written in English language.

**22. Applicable Law**

22.1 The contract shall be interpreted in accordance with the Indian laws.

**23. Notices**

23.1 Any notice by one party to the other pursuant to the Contract shall be sent in writing or by e-mail or by telex and confirmed in writing to the address specified for that purpose in the contract.

23.2 A notice shall be effective when delivered or on the notice's effective date, whichever is later.

**24. Taxes**

24.1 The successful Tenderer shall be entirely responsible for all taxes, duties, octroi, license fees, demurrage charges etc., in respect of this contract and provisions of Income tax Act regarding deduction of tax at source shall apply.

**SECTION-IV**

**TECHNICAL SPECIFICATION**

**1. INTENT OF SPECIFICATION**

The scope of work in this tender covers implementation of IP CCTV based surveillance system in the proposed sites:

- 1. Snehalaya Maloya,**
- 2. Aashiana Sector:15**
- 3. Nari Niketan Sector:26.**

**2. SCOPE OF WORK**

- 2.1 The scope covers design/development of a suitable architecture/layout of the proposed IP Surveillance System & related networking of Camera, preparation of bill of materials, pre-despatch inspection / testing, packing and forwarding, transportation, insurance and carrying out further activities at sites viz. unloading, storage, (space to be provided by the owner) further handling, erection, testing and commissioning including successful completion of acceptance tests and any other services specified.
- 2.2 The proposed IP Surveillance System consists Outdoor & indoor day & night IP Based Full HD (High definition) cameras which will be connected through UTP and OFC (Optical Fiber Cable) as back-bone of the network, Industrial grade POE Switches, Main Centrally located Surveillance Room at each location with NVR with Video Management Software. The System is designed that it should work in 24x7 environments. All the cameras should use POE (Power Over Ethernet) functionality to avoid the conventional power cabling using UPS Systems at each site.
- 2.3 The cameras should have the capability to stream at 30 FPS (Frames per Second) with full HD(High Definition) resolution. The Video Recording Servers (NVR) shall be provided with required Video management software and it should ensure that once recorded, the video cannot be altered or tampered; ensuring that the audit trail is intact for evidential purposes. The proposed Video Surveillance system includes tracking movements/ verification and recognition, through high quality images, of persons and objects including vehicles. The recordings of the scene of the Jurisdiction shall be helpful in case of enquires etc. in establishing the truth.
- 2.4 This invitation of bids is for Design IP Surveillance System, Supply & Installation thereof of IP Cameras, required active & passive networking components to establish IP Surveillance System (with seamless integration of existing Local Area Network) and its maintenance and management for 1 year and also followed by and CAMC (Comprehensive Annual Maintenance Charges) for the period of 2 Years.
- 2.5 As the project involves distributed sites and installations will be done at multiple sites.
- 2.6 Detailed Bill of material included in this tender is given at Clause 4.0. However, purchaser reserves the right for quantity variation due to increase/decrease in requirements. The bidder shall also provide all required equipment which may not be specifically stated herein but are required to meet the intent of ensuring completeness, maintainability and reliability of the total system covered under this specification,

including integration and interoperability with the existing network.

- 2.7 Successful Bidder has to provide detail Project execution plan with timelines. Implementation of project should be completed within 1 month from the date of award of contract.
- 2.8 The methodology of conducting & cabling an installation work, to be adopted, has to ensure minimum damage to the existing finish and no loss to the aesthetic beauty of the Place. Any damage to the existing flooring / walls etc. shall be made good by the bidder. It is advised that bidder should visit all sites before submitting the bid to get apprised about the site conditions.
- 2.9 Design, Supply and Installation on turnkey basis, Conduct feasibility and submit feasibility report with technical bid, LOS (Line of Site) detail etc. Bidder should provide technical expert/Network Engineer on call basis for one-year warranty as well as in two-years CAMC period. This is a Turnkey project vendor must incorporate all costs involved in the handing over complete solution of IP Surveillance.

2.10 Scope of Work shall also include:

- A. Powering on equipment after ensuring correctness of terminations interfaces and power supply and making the system ready for testing and commissioning.
  - B. Testing of Camera positioning & LAN Cables after laying, terminations and ferruling at both the ends. All testing tools and instruments shall be brought by the bidder and taken back after the testing. Cabling work shall also be got certified from OEM.
  - C. Configuration of the equipment as per the requirements of department including Network segmentation and Network Monitoring, View of Camera.
  - D. Field testing and commissioning of system, including integration with existing Network for viewing of IP camera.
  - E. Site acceptance tests to establish satisfactory performance of the equipment's as per specs.
  - F. Assistance for familiarization and operation of the installed system & services for 1 month after acceptance of system.
  - G. Training to Owner's personnel as stipulated at clause 10, Section-III.
  - H. Onsite Maintenance support for all Hardware/software delivered for (1 Year Warranty period + 2 Years CAMC period) three years.
- 2.11 In case, the quantity of laying cables or fixing wall mount sockets etc. exceeds or is less than the quantity in bid price schedule, the payment for the executed quantity shall be paid on pro-rata basis, for the actual quantities for which the installation is carried out through the Bidder on Certification by Site Engineer.

### **3 General Technical Requirements**

- 3.1 All active LAN components such as switches, wireless equipment's offered shall be of the same Make/manufacturer and shall be covered under same back-up guarantee from the same OEM, to ensure full compatibility, inter-working and interoperability.

- 3.2 All IP Cameras (Bullet & Dome) Cameras should be shall be of the same Make/manufacturer and shall be covered under same back-up guarantee from the same OEM.
- 3.3 Equipment furnished shall be complete in every respect with all mountings, fittings, fixtures and standard accessories normally provided with such equipment's and/or needed for erection, completion and safe operation of the equipment's as required by applicable codes though they may not have been specifically detailed in the technical specification, unless included in the list of exclusions. All similar standard components/parts of similar standard equipment's provided, shall be interchangeable with one another.
- 3.4 The methodology of cabling an installation work, to be adopted, has to ensure minimum damage to the existing finish and no loss to the aesthetic beauty of the floors. Any damage to the existing flooring/ walls/paint etc. shall be made good by the Contractor. It is advised that tenderer should visit site before submitting the tender to get apprised about the site conditions.
- 3.5 The Bidder shall be responsible for providing all materials, equipment's, and services, specified or otherwise, which are required to fulfill the intent of ensuring operability, maintainability, and reliability of the complete equipment covered under this specification within his quoted price. This work shall be in compliance with all applicable standards, statutory regulations and safety requirements in force of the date of award of this contract.
- 3.6 The bidder shall also be responsible for deputing qualified personnel for installation, testing, commissioning and other services under his scope of work as per this specification. All required tools and tackles for completing the scope of work as per the specification is also the responsibility of the bidder.
- 3.7 The bidders proposal shall not include the list of tools (such as; crimping tool, Krone punch tool) and accessories that shall be furnished with the equipment. These are to be clearly brought out with itemized price in the bid. However the prices of these special tools and tackles shall be included in the lump sum Project Management cost not as a separate bid price.
- 3.8 The Bidder shall furnish one complete sets of system and equipment instruction manuals and detailed installation operating and maintenance documentation along with the CDs for the same. Manuals shall describe system operation, shall include detailed system and components description and shall cover the installation, operation, care and maintenance of all system components including diagnostics. Complete parts lists including detailed instructions for ordering shall be furnished. Complete documentation for operating, system software, application programs, software selectable functions, shall be provided. After installation "as built" drawings shall be provided by the bidder indicating the cable routes, termination & termination details, actual configuration & parameters, etc.
- 3.9 The exact siting of equipment's (Cameras) and cable routing shall be determined by the contractor in consultation with department. The contractor shall prepare his proposed cable routing diagram and estimate the quantities for cable, conduit and channels.

- 3.10 The Bidder shall perform the Services and carry out their obligations with all due diligence, efficiency, and economy, in accordance with generally accepted professional techniques and practices, and shall observe sound management practices, and employ appropriate advance technology and safe methods. The Bidders shall always act, in respect of any matter relating to this Contract or to the Services, as faithful advisers to the Client and shall at all times support and safeguard the Client's legitimate interests in any dealings with Sub-bidders or third parties.
- 3.11 The Bidder shall furnish complete, well-fabricated and reliably operating and secure systems as described in this document. Design and selection of equipment and software shall be consistent with the requirements of long term trouble free operation with highest degree of reliability and maintainability. All equipment shall be constructed to operate safely without undue heating, vibration, wear, corrosion, electromagnetic interference or similar problems and all software shall be proven, tested and reliable.
- 3.12 All interconnecting cables required to connect the communication equipment shall be furnished. All cables shall be fully assembled connector pre-terminated and factory tested as part of overall system checkout. Cables shall be neatly & properly tied up and dressed using appropriate cable hangers and Velcro bands. All the cables, connectors, sockets, panel's etc. shall be labeled for identification purpose.
- 3.13 All equipment, accessories and cables supplied under this contract shall be in accordance with the latest applicable recommendations, regulations and standards of:
- CCITT/ITU
  - ANSI
  - IEC
  - IEEE
  - IETF
  - EIA/TIA 568 Standards
  - International Electro-technical Commission (IEC)
  - Cable (OFC and Cat 6) and cable accessories (OFC and Cat6) UL Listed and verified
  - **OEM of IP Camera should have ONVIF, UL, MTBF, and EN Certificates.**

For parameters not covered under the above codes, internationally acceptable standards shall be accepted. The bidder shall furnish a complete list of all standards and codes under which his equipment is designed, manufactured and assembled along with the bids.

- 3.14 The equipment's to be supplied shall operate without any deviation in quality or degradation of system performance and all the parameters detailed in these specifications shall be guaranteed over the following environmental conditions.
- |                       |                          |
|-----------------------|--------------------------|
| Operating Temperature | : 0° C to 45° C.         |
| Humidity              | : 95% RH(non condensing) |
- 3.15 Reliable over voltage and over current protection circuits shall be provided in the equipment power supply units. The equipment power supply units shall be self-



***Tender Document for supply, installation & commissioning of IP Based CCTV Surveillance System, Department of Social Welfare, Chandigarh Administration***

protecting and also protect connected equipment's against interference, noise, voltage dips and surges & impulses that may be present in the mains power supply sources. Equipment shall be guaranteed for operation over the following AC power range to be made available by the owner: 240 V AC +/-10%, 50 Hz +/- 5%

The owner shall provide suitable AC power at a single power point at each of the locations and distribution of this power to the various equipment's shall be responsibility of the bidder for which necessary distribution board, cable etc. shall be provided by the bidder.

**Tender Document for supply, installation & commissioning of IP Based CCTV Surveillance System, Department of Social Welfare, Chandigarh Administration**

**1. List of Equipment /Services**

Bill of material included is given below:

<b>S. No.</b>	<b>Item Description</b>	<b>Qty.</b>	<b>UoM</b>
1	2 MP IR DOME CAMERA	28	Nos
2	2 MP IR BULLET CAMERA	92	Nos
3	8 CH NVR with 6 TB STORAGE	1	Nos
4	24 CH NVR with 12 TB STORAGE	3	Nos
5	64 CH NVR with 24 TB STORAGE	1	Box
6	43" LED TV for Display of Cameras	3	Nos
7	24 Port 10/100/1000 Mbps PoE Switch	8	Nos
8	Fiber Transceiver Multimode	6	Nos
9	9U Wall Mount Rack with Accessories	8	Nos
10	Cat6 UTP Cable, 305 Meter	20	Box
11	Cat6 24 Port Patch Panel - Unloaded	8	Nos
12	Cat6 Information Outlet Jack for Patch Panel	128	Nos
13	Cat6 Information Outlet Jack for Camera	120	Nos
14	Face Plate Single Port	120	Nos
15	Surface Mount Box	120	Nos
16	Cat6 UTP Patch Cord -1 Meter	240	Nos
17	6 Core Multimode Fiber Cable	350	Meter
18	12 Port LIU loaded with Adapter	3	Nos
19	SC Pigtail MM Simplex - 1 Meter	36	Nos
20	SC-LC Patch Cord MM Duplex - 1 Meter	6	Nos
21	1" PVC Conduit	2200	Meter
22	1.5" PVC Conduit	1000	Meter
23	HDPE Pipe	300	Meter
<b>SERVICES</b>			
24	Laying of UTP Cable	6100	Meter
25	Laying of PVC Pipe	3200	Meter
26	Fixing & Termination of I/O at Jack Panel	120	Nos
27	Fixing & Termination of I/O at Camera Side	120	Nos
28	Laying of Fiber Cable	350	Meter
29	Laying of HDPE Pipe	300	Meter
30	Digging & Refilling of Hard Soil	50	Meter
31	Digging & Refilling of Soft Soil	250	Meter
32	Fixing of Rack	8	Nos
33	Fixing of Camera	120	Nos

## **2. Specifications of Components**

### **5.1 NETWORK VIDEO RECORDER (24 CHANNEL)**

#### **HARDWARE**

- The equipment shall be electronic type
- The device shall be designed, developed and manufactured in India
- The Device should be capable of cascading with (1 Master + 19 Slave) the other same number of channel NVR/HVR or even with the lesser number too.
- With the Cascading feature device should be capable of acting as a Master device and should be able to View/Playback/Configure other connected slave devices camera from the Local View (via HDMI/VGA/CVBS)
- The device should work either in Standalone or Network Mode
- The system should employ High Performance Embedded Microprocessor
- The system should support up to 24 video channels or should be capable of connecting 24 IP cameras as video inputs
- NVR system should support up to 2 HDMI and 1 VGA video output
- The system should be capable of storing data on 2 SATA hard disks with a minimum internal capacity of 12TB for NVR (6TB/SATA)
- NVR should have RAID 0 and RAID 1 Support
- Should support storage on 2 network drives (NAS) (16TB Each) with CIFS and NFS format
- The NVR System shall have 1 channel audio input via RCA port
- NVR system should have 1 channel audio output via RCA port
- NVR shall have 8 sensor/alarm inputs and 4 sensor/alarm outputs
- The system shall have built-in 4xUSB2.0 ports
- NVR should support 3G connectivity via a USB based 3G dongle
- The system should be capable of integrating with IP camera of any brand which support ONVIF 2.0 & above
- The system should be capable of integrating with third party access control system, fire alarm system, sensors and relay devices
- The integration with Access Control should be possible using Ethernet
- Remote NVR should be viewed from local view
- IR Remote Control should be available with the system
- Maximum 12VDC@5A for 24 Channel should be the required power input
- Operating Temperature should vary between -10°C to +50°C
- Humidity: 5% to 95% RH Non-Condensing
- NVR should be 19" Rack Mountable
- Single Unit Weight should not exceed 2.03Kg (without HDD)

#### **SOFTWARE SPECIFICATIONS**

- The device should be capable of recording at the rate of 1080P for 6 Channel, 720P for 9 Channel and D1 for 24 Channels @ 25fps
- Device should support throughput of 144Mbps(48Mbps downlink & 96 Mbps Uplink)
- Device Should Have Auto configuration Function which connects all the camera connected in the LAN to the devices one by one Automatically of manufacturer's brand only
- Device must have inbuilt storage calculator which shows how much day we will be able to record
- Device must be capable of taking Snap shot action with integrated Biometric Access control and time attendance system

- Device must have inbuilt AVI converter which convert native format in to AVI format.
- The system should support PAL (704x576) and NTSC (704x480) video standards
- The system should work on compression standard H.264, MPEG 4 and Motion JPEG
- The system should work on latest audio compression standards which is G.711, G.726, AAC and PCM

## **RECORDING**

- NVR should be capable of Pre-Recording up to 30 Sec
- NVR should be capable of Post-Recording for 10-300 Sec
- The system should have various recording modes such as: Manual Recording, Continuous Recording, Scheduled Recording, Motion Recording and Alarm Recording
- Device must be capable of Recording Camera Wise as per the priority of Camera
- Device must be capable of Recording on Local drive or Network Drive Directly
- Device must have inbuilt capability to record in Native and AVI File format
- The system should be able to take a Snapshot in JPEG format
- Device must support adaptive recording feature which automatically adjusts frame parameters based on motion in scene to save storage on recording

## **DISPLAY AND MONITORING**

- It should support Cascading of multiple NVRs for local viewing
- Split: 2x2, 3x3, 4x4, 5+1, 7+1, 4+3, 8+2, 12+1 and full screen
- Single or Sequential display
- Resolution: 800x600, 1024x768, 1280x1024, 1280x960, 1920x1080
- Privacy Masking: Yes
- Digital Zoom during live view
- Snapshot during monitoring
- OSD: Channel Number and Name, Status, Video Loss, Motion Detection, Recording, View Tamper, Blocked View and Disabled Channel (As per camera support)
- User Defined Layout Styles
- User Selectable Display Sequence

## **PLAYBACK AND SEARCH**

- Synchronous Playback of up to 4 Channels
- Timeline based Search from Local as well as Web Client
- Color Coded indication per Event to Simplify Search
- The device should have facility of Live or Remote Playback
- System should allow local playback, AVI conversion and remote download
- Various Search Modes like: Date and Time, Channel, Recording Type should be available in the system
- The system should support Digital Zoom on Playback
- Various Playback Modes like: Fast Reverse, Fast Forward, Slow Forward, Previous Video, Next Video, Different Speed Control should be supported by the system

## **BACKUP**

- Device must be capable of taking Backup Camera wise as per the priority
- Manual Backup over USB, NAS/FTP
- One Touch Auto Backup from the device
- Complete details about USB like total size, free size and backup status should be provided
- Scheduled Backup over USB/FTP and SMB
- Scheduling should be every 6 hours, 12 hours, 24 hours or weekly
- Backup fail Event to inform User that Schedule Backup is Stopped for any reason
- The system should be capable of Camera Wise Backup Retention

## **EVENTS AND ACTIONS**

- Trigger Events: Motion Detection, System Alarm Detection, Storage Alert, Disk Volume Full, Disk Error, Network Disconnection, Video Loss and Tampering of View
- Pop-up event for Recording Stop event due to any reason.
- Device must be capable of capturing the Image action guided by the Biometric access control or time attendance system.
- Actions: Recording on Selected Channel, Upload Images on FTP Server, Email Notification, TCP Notification, Recall PTZ Preset Position, Turn On/Off Alarm Outputs, Buzzer Notification, SMS Notification
- Should support SMS using network with services like SMS Gateway center, SMS Lane, Business SMS and Bulk SMS
- Should be capable of capturing Snap Shots for a configurable time interval and should upload on FTP/NAS & Email

## **REMOTE FUNCTION**

- The NVR device shall perform remote operations like: Monitor, Playback, System Setting, File Download, Log Information, Upgrade the system

## **NETWORK OPTIONS**

- It should support 3G Connectivity
- It should have its own free DNS Server
- Network Supported Protocols with device shall be: TCP/IP, DHCP, PPPOE, DDNS, DNS, FTP, SMTP, NTP, RTP, RTSP, HTTP and CIFS
- Communication Interface shall be 2xRJ45 Gigabit Ethernet

## **SYSTEM**

- NVR system should have Linux based Operating System (OS) with intuitive GUI and web-based interface.
- 10,000 Events Log
- 3 User Access Levels (Default): Admin, viewer and Operator
- Access Rights like live view, playback, should be camera wise
- Embedded Web Server
- Up to 10 Concurrent Login Session
- Up to 120 Programmable Users
- In order to continuously monitor the status of various system parameters, NVR should be capable of doing a health check of the entire system in real time. Should verify the following functions: Motion detection, type of recording, HDD status, Schedule backup, alarm etc.

## **OTHER FEATURES**

- NVR system should be capable of exporting files in Native and .avi file format to FTP and USB.
- The system should manage storage on FIFO basis
- NVR should provide a Storage Calculator to show available storage capacity
- NVR device should perform all Pentaplex functions (i.e. live recording, monitoring, playback, backup and remote access ) simultaneously
- The NVR should support UPnP feature
- IP Address filtering should be done to enhance security
- Dual Stream option should be available for simultaneous recording and transmission of video on the network depending on the bandwidth. (Camera Support required)
- The system should support Day Light Saving Time (DST)

## **CENTRALIZED MANAGEMENT SOFTWARE (CMS)**

- CMS should be provided by the vendor free of cost with the NVR system
- CMS should provide seamless management of video and audio across multiple NVRs

- CMS should be simple to install, easy to configure and intuitive to use
- CMS should allow centralized monitoring and controlling of multiple recording devices from one place
- CMS should be able to command and control software application
- CMS should be capable to remotely configure NVR and individual camera
- CMS should be able to monitor, record and playback from the NVR
- CMS shall simultaneously view 36 video channels
- CMS shall be able to provide audio, video and visual alerts on detection of any predefined event
- CMS shall have feature of intelligent E-map which can support JPEG format
- CMS shall have feature of converting Native file to AVI file format
- Multiple cameras of different NVRs shall be grouped using CMS
- CMS should be capable of local storage, recording and playback

#### **MOBILE VIEWER**

- Mobile Viewer should be provided by the vendor free of cost with the NVR system
- The mobile viewer should be able to display single channel live
- The mobile viewer should have 2×2 layout for display
- The mobile viewer should have digital zoom option
- The mobile viewer should be able to remotely playback the recorded data
- The mobile viewer should be able to remotely control PTZ cameras
- The mobile viewer software should support up to 50 NVRs
- Software should have feature to configure camera as favorite channel
- Mobile Viewer application should function on Android and IOS based phones
- Mobile Viewer application should support calling from Mobile App feature where a mobile number/extension\* number can be added per camera in the device and the user can directly call a concerned person by just one click on camera view from mobile
- Extension Number can be added in mobile calling only if IP-PBX belongs to Brand

#### **WEB CLIENT**

- NVR system should have inbuilt web based command and control application designed for use of enterprise, remote and network applications
- The system should be able to remotely access live and stored videos using the web
- The system should be capable of remotely accessing, search, browse, display and transfer stored video to a remotely connected workstation
- The NVR web client should be able to receive notifications for events such as alarm, motion detection and video loss
- Web Client should be capable of performing all pentaplex functions (i.e. live recording, monitoring, playback, backup and remote access) simultaneously
- Web client should be capable of doing playback of all 4 channels simultaneously
- Web Client should be capable of managing and monitoring cameras from another NVR
- User login and access privilege should be defined for the web client

#### **CERTIFICATIONS**

- Device should be CE and FCC certified

### **5.2 NETWORK VIDEO RECORDER (64 CHANNEL)**

#### **HARDWARE**

- The equipment shall be electronic type
- The device shall be designed, developed and manufactured in India

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- The Device should be capable of cascading with (1 Master + 19 Slave) the other same number of channel NVR/HVR or even with the lesser number too.
- With the Cascading feature device should be capable of acting as a Master device and should be able to View/Playback/Configure other connected slave devices camera from the Local View(via HDMI/VGA/CVBS)
- The device should work either in Standalone or Network Mode
- The system should employ High Performance Embedded Microprocessor
- The system should support up to 64 video channels or should be capable of connecting 24 IP cameras as video inputs
- NVR system should support up to 1 HDMI and 1 VGA video output
- The system should be capable of storing data on 4 SATA hard disks with a minimum internal capacity of 24TB for NVR(6TB/SATA)
- NVR should have RAID 0 and RAID 1 Support
- Should support storage on 2 network drives(NAS) (16TB Each)with CIFS and NFS format
- NVR shall have 4 sensor/alarm inputs and 2 sensor/alarm outputs
- The system shall have built-in 4xUSB2.0 ports
- NVR should support 3G connectivity via a USB based 3G dongle
- The system should be capable of integrating with IP camera of any brand which support ONVIF 2.0 & above
- The system should be capable of integrating with third party access control system, fire alarm system, sensors and relay devices
- The integration with Access Control should be possible using Ethernet
- IR Remote Control should be available with the system
- System should work on 100-240VAC at 60Hz for 64 Channel should be the required power input
- Operating Temperature should vary between 0°C to +50°C
- Humidity: 0% to 90% RH Non-Condensing

**SOFTWARE SPECIFICATIONS**

- The device should be capable of recording at the rate of 720P for 4 Channel @2Mbps
- Device should support throughput of 256Mbps(128Mbps downlink & 128 Mbps Uplink)
- Device Should Have Auto configuration Function which connects all the camera connected in the LAN to the devices one by one Automatically of manufacturer's brand only
- Device must have inbuilt storage calculator which shows how much day we will be able to record
- Device must be capable of taking Snap shot action with integrated Biometric Access control and time attendance system
- Device must have inbuilt AVI converter which convert native format in to AVI format.
- The system should support PAL (704x576) and NTSC (704x480) video standards
- The system should work on compression standard H.264, MPEG 4 and Motion JPEG
- The system should work on latest audio compression standards which is G.711, G.726, AAC and PCM

**RECORDING**

- NVR should be capable of Pre-Recording up to 30 Sec
- NVR should be capable of Post-Recording for 10-300 Sec
- The system should have various recording modes such as: Manual Recording, Continuous Recording, Scheduled Recording, Motion Recording and Alarm Recording
- Device must be capable of Recording Camera Wise as per the priority of Camera
- Device must be capable of Recording on Local drive or Network Drive Directly
- Device must have inbuilt capability to record in Native and AVI File format
- The system should be able to take a Snapshot in JPEG format

- Device must support adaptive recording feature which automatically adjusts frame parameters based on motion in scene to save storage on recording

#### **DISPLAY AND MONITORING**

- It should support Cascading of multiple NVRs for local viewing
- Split: 1x1, 2x2, 3x3, 4x4, 5+1, 7+1, 4+3, 8+2, 12+1 and full screen
- Single or Sequential display
- Resolution: 800x600, 1024x768, 1280x1024, 1280x960, 1920x1080
- Privacy Masking: Yes
- Digital Zoom during live view
- Snapshot during monitoring
- OSD: Channel Number and Name, Status, Video Loss, Motion Detection, Recording, View Tamper, Blocked View and Disabled Channel (As per camera support)
- User Defined Layout Styles
- User Selectable Display Sequence

#### **PLAYBACK AND SEARCH**

- Synchronous Playback of upto 4 Channels
- Timeline based Search from Local as well as Web Client
- Color Coded indication per Event to Simplify Search
- The device should have facility of Live or Remote Playback
- System should allow local playback, AVI conversion and remote download
- Various Search Modes like: Date and Time, Channel, Recording Type should be available in the system
- The system should support Digital Zoom on Playback
- Various Playback Modes like: Fast Reverse, Fast Forward, Slow Forward, Previous Video, Next Video, Different Speed Control should be supported by the system

#### **BACKUP**

- Device must be capable of taking Backup Camera wise as per the priority
- Manual Backup over USB, NAS/FTP
- One Touch Auto Backup from the device
- Complete details about USB like total size, free size and backup status should be provided
- Scheduled Backup over USB/FTP and SMB
- Scheduling should be every 6 hours, 12 hours, 24 hours or weekly
- Backup fail Event to inform User that Schedule Backup is Stopped for any reason
- The system should be capable of Camera Wise Backup Retention

#### **EVENTS AND ACTIONS**

- Trigger Events: Motion Detection, System Alarm Detection, Storage Alert, Disk Volume Full, Disk Error, Network Disconnection, Video Loss and Tampering of View
- Pop-up event for Recording Stop event due to any reason.
- Device must be capable of capturing the Image action guided by the Biometric access control or time attendance system.
- Actions: Recording on Selected Channel, Upload Images on FTP Server, Email Notification, TCP Notification, Recall PTZ Preset Position, Turn On/Off Alarm Outputs, Buzzer Notification, SMS Notification
- Should support SMS using network with services like SMS Gateway centre, SMS Lane, Business SMS and Bulk SMS
- Should be capable of capturing Snap Shots for a configurable time interval and should upload on FTP/NAS & Email

#### **REMOTE FUNCTION**

- The NVR device shall perform remote operations like: Monitor, Playback, System Setting, File Download, Log Information, Upgrade the system



## **NETWORK OPTIONS**

- It should support 3G Connectivity
- It should have its own free DNS Server
- Network Supported Protocols with device shall be: TCP/IP, DHCP, PPPOE, DDNS, DNS, FTP, SMTP, NTP, RTP, RTSP, HTTP and CIFS
- Communication Interface shall be 2xRJ45 Gigabit Ethernet
- SYSTEM
- NVR system should have Linux based Operating System (OS) with intuitive GUI and web-based interface.
- 10,000 Events Log
- 3 User Access Levels (Default): Admin, viewer and Operator
- Access Rights like live view, playback, should be camerawise
- Embedded Web Server
- Up to 10 Concurrent Login Session
- Up to 120 Programmable Users
- In order to continuously monitor the status of various system parameters, NVR should be capable of doing a health check of the entire system in realtime. Should verify the following functions: Motion detection, type of recording, HDD status, Schedule backup, alarm etc.

## **OTHER FEATURES**

- NVR system should be capable of exporting files in Native and .avi file format to FTP and USB.
- The system should manage storage on FIFO basis
- NVR should provide a Storage Calculator to show available storage capacity
- NVR device should perform all Pentaplex functions (i.e. live recording, monitoring, playback, backup and remote access ) simultaneously
- The NVR should support UPnP feature
- IP Address filtering should be done to enhance security
- Dual Stream option should be available for simultaneous recording and transmission of video on the network depending on the bandwidth. (Camera Support required)
- The system should support Day Light Saving Time (DST)

## **CENTRALIZED MANAGEMENT SOFTWARE (CMS)**

- CMS should be provided by the vendor free of cost with the NVR system
- CMS should provide seamless management of video and audio across multiple NVRs
- CMS should be simple to install, easy to configure and intuitive to use
- CMS should allow centralized monitoring and controlling of multiple recording devices from one place
- CMS should be able to command and control software application
- CMS should be capable to remotely configure NVR and individual camera
- CMS should be able to monitor, record and playback from the NVR
- CMS shall simultaneously view 36 video channels
- CMS shall be able to provide audio, video and visual alerts on detection of any predefined event
- CMS shall have feature of intelligent E-map which can support JPEG format
- CMS shall have feature of converting Native file to AVI file format
- Multiple cameras of different NVRs shall be grouped using CMS
- CMS should be capable of local storage, recording and playback

## **MOBILE VIEWER**

- Mobile Viewer should be provided by the vendor free of cost with the NVR system
- The mobile viewer should be able to display single channel live
- The mobile viewer should have 2x2 layout for display

- The mobile viewer should have digital zoom option
- The mobile viewer should be able to remotely playback the recorded data
- The mobile viewer should be able to remotely control PTZ cameras
- The mobile viewer software should support up to 50 NVRs
- Software should have feature to configure camera as favorite channel
- Mobile Viewer application should function on Android and IOS based phones
- Mobile Viewer application should support calling from Mobile App feature where a mobile number/extension\* number can be added per camera in the device and the user can directly call a concerned person by just one click on camera view from mobile
- Extension Number can be added in mobile calling only if IP-PBX belongs to Brand
- WEB CLIENT
- NVR system should have inbuilt web based command and control application designed for use of enterprise, remote and network applications
- The system should be able to remotely access live and stored videos using the web
- The system should be capable of remotely accessing, search, browse, display and transfer stored video to a remotely connected workstation
- The NVR web client should be able to receive notifications for events such as alarm, motion detection and video loss
- Web client shall simultaneously view 64 video channels
- Web Client should be capable of performing all pentaplex functions (i.e. live recording, monitoring, playback, backup and remote access ) simultaneously
- Web client should be capable of doing playback of all 4 channels simultaneously
- Web Client should be capable of managing and monitoring cameras from another NVR
- User login and access privilege should be defined for the web client

#### **CERTIFICATIONS**

- Device should be CE and FCC certified

### **5.3 NETWORK VIDEO RECORDER (8 CHANNEL)**

#### **HARDWARE**

- The equipment shall be electronic type
- The device shall be plug and play system
- The device should be Designed, Developed and Manufactured in India
- The Device should be capable of cascading with(1 Master + 19 Slave) the other same number of channel NVR/HVR or even with the lesser number too.
- With the Cascading feature device should be capable of acting as a Master device and should be able to View/Playback/Configure other connected slave devices camera from the Local View(via HDMI/VGA/CVBS)
- The device should work either in Standalone or Network Mode
- The system should employ High Performance Embedded Microprocessor
- The system should support up to 8 IP Channels with inbuilt license.
- NVR system should support 1 HDMI, 1 VGA.
- The system should be capable of storing data on SATA hard disk with a maximum internal capacity of 6TB for 8 channel NVR
- NVR should have RAID 0 and RAID 1 Support
- Should support storage on 2 network drives(NAS) (16TB Each)with CIFS and NFS format
- The system shall have built-in 2xUSB2.0 ports
- NVR should support 3G connectivity via a USB based 3G dongle

- The system Must be capable of integrating at Data Base level with Biometric access control system and other sensors.
- The system should be capable of integrating with IP camera of any brand which support ONVIF 2.0 & above
- IR Remote Control should be available with the system
- Remote NVR should be viewed from local view
- Operating Temperature should vary between -10°C to +50°C
- Humidity: 5% to 95% RH Non-Condensing
- Single Unit Weight should not exceed 2.03Kg (without HDD)

#### **SOFTWARE SPECIFICATIONS**

- The device should be capable of recording at the rate of 1080P for 2 Channel, 720P for 4 Channel and D1 for 8 Channels in real-time
- Device should support throughput of 48Mbps(16Mbps downlink & 32Mbps Uplink)
- Device must have inbuilt storage calculator which shows how much day we will be able to record
- Device Should Have Auto configuration Function which connects all the camera connected in the LAN to the devices one by one Automatically of manufacturer's brand only
- Device must be capable of taking Snap shot action with integrated Biometric Access control and time attendance system
- Device must have inbuilt AVI converter which convert native format in to AVI format.
- The system should support PAL (704x576) and NTSC (704x480) video standards
- The system should work on compression standard H.264, MPEG 4 and Motion JPEG
- The system should work on latest audio compression standards which is G.711, G.726, AAC and PCM

#### **RECORDING**

- NVR should be capable of Pre-Recording up to 30 Sec
- NVR should be capable of Post-Recording for 10-300 Sec
- NVR should support Camera wise Recording Retention
- The system should have various recording modes such as: Manual Recording , Continuous Recording , Scheduled Recording, Motion Recording and Alarm Recording
- Device must be capable of Recording Camera Wise as per the priority of Camera
- Device must be capable of Recording on Local drive or Network Drive Directly.
- Device must have inbuilt capability to record in Native and AVI File format
- The system should be able to take a Snapshot in JPEG format
- Device must support adaptive recording feature which automatically adjusts frame parameters based on motion in scene to save storage on recording

#### **DISPLAY AND MONITORING**

- Split: 1x1, 2x2, 3x3, 4x4, 5+1, 7+1, 4+3, 8+2, 12+1,1@+12,1+9,4+9,2+12 and full screen
- Single or Sequential display
- Resolution: 800x600, 1024x768, 1280x1024, 1280x960, 1920x1080
- Privacy Masking: Yes
- Digital Zoom during live view
- Freeze View
- It should support Cascading of Multiple NVRs
- Snapshot during monitoring
- User Defined Layout Styles
- User Selectable Display Sequence

#### **PLAYBACK AND SEARCH**

- Synchronous playback of up to 4 channels

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- Timeline based Search from Local as well as Web Client
- The device should have facility of Live or Remote Playback
- System should allow local playback, AVI conversion and remote download
- Various Search Modes like: Date and Time, Channel, Recording Type should be available in the system
- The system should support Digital Zoom on Playback
- Various Playback Modes like: Fast Reverse, Fast Forward, Slow Forward, Previous Video, Next Video, Different Speed Control should be supported by the system

**BACKUP**

- Device must be capable of taking Backup Camera wise as per the priority
- Manual Backup over USB, NAS/FTP
- Complete details about USB like total size, free size and backup status should be provided
- Scheduled Backup over USB, NAS/FTP
- Scheduling should be every 6 hours, 12 hours, 24 hours or weekly
- Backup fail Event to inform User that Schedule Backup is Stopped for any reason
- The system should be capable of Camera Wise Backup Retention

**EVENTS AND ACTIONS**

- Trigger Events: Motion Detection, System Alarm Detection, Storage Alert, Disk Volume Full, Disk Error, Network Disconnection, Video Loss and Tampering of View
- Pop-up event for recording stop due to any reason.
- Device must be capable of capturing the Image action guided by the Biometric access control or time attendance system.
- Actions: Recording on Selected Channel, Upload Images on FTP Server, Email Notification, TCP Notification, Recall PTZ Preset Position, Turn On/Off Alarm Outputs, Buzzer Notification, SMS Notification
- Should support SMS using network with services like SMS Gateway center, SMS Lane, Business SMS and Bulk SMS
- Should be capable of capturing Snap Shots for a configurable time interval and should upload on FTP/NAS & Email

**REMOTE FUNCTION**

- The NVR device shall perform remote operations like: Monitor, PTZ Control, Playback, System Setting, File Download, Log Information, Upgrade the system

**NETWORK OPTIONS**

- It should support 3G Connectivity
- It should have its own free DNS Server
- Network Supported Protocols with device shall be: TCP/IP, DHCP, PPPOE, DDNS, DNS, FTP, SMTP, NTP, RTP, RTSP, HTTP and CIFS
- Communication Interface shall be RJ45 10/100Mbps Adaptive Ethernet Interface

**SYSTEM**

- NVR system should have Linux based Operating System (OS) with intuitive GUI and web-based interface.
- 10,000 Events Log
- 3 User Access Levels (Default): Admin, viewer and Operator
- Access Rights like live view, playback, PTZ control should be camera wise
- Embedded Web Server
- Up to 10 Concurrent Login Session
- Up to 120 Programmable Users
- In order to continuously monitor the status of various system parameters, NVR should be capable of doing a health check of the entire system in real-time. Should verify the

following functions: Motion detection, type of recording, HDD status, Schedule backup, alarm etc.

#### **OTHER FEATURES**

- NVR system should be capable of exporting files in Native and AVI file format to FTP and USB.
- NVR should provide a Storage Calculator to show available storage capacity
- The system should manage storage on FIFO basis
- NVR should Hide Run Time and Show OSD and Alarm/Buzzer with Text Indication
- NVR device should perform all Pentaplex functions (i.e. live recording, monitoring, playback, backup and remote access ) simultaneously
- IP and MAC Address filtering should be done to enhance security
- System admin should be capable of programming PTZ Tour
- Dual Stream option should be available for simultaneous recording and transmission of video on the network depending on the bandwidth. (Camera Support required)
- The system should support Pelco P and Pelco D Protocol for PTZ control
- The system should be capable of PIP zoom from live and playback
- The system should support Day Light Saving Time (DST)

#### **CENTRALIZED MANAGEMENT SOFTWARE (CMS)**

- CMS should be provided by the vendor free of cost with the NVR system
- CMS should provide seamless management of video and audio across multiple NVRs
- CMS should be simple to install, easy to configure and intuitive to use
- CMS should allow centralized monitoring and controlling of multiple recording devices from one place
- CMS should be able to command and control software application
- CMS should be capable to remotely configure NVR and individual camera
- CMS should be able to monitor, record and playback from the NVR
- CMS shall simultaneously view 36 video channels
- CMS shall be able to provide audio, video and visual alerts on detection of any predefined event
- CMS shall have feature of intelligent E-map which can support JPEG format
- CMS shall have feature of converting Native file to AVI file format
- Multiple cameras of different NVRs shall be grouped using CMS
- CMS should be capable of local storage, recording and playback

#### **MOBILE VIEWER**

- Mobile Viewer should be provided by the vendor free of cost with the NVR system
- The Mobile Viewer should be able to display 1 to 4 channel live
- The Mobile Viewer should have 2x2 layout for display
- The Mobile Viewer should have digital zoom option
- The Mobile Viewer should be able to remotely control PTZ cameras
- The Mobile Viewer software should support up to 50 NVRs
- Software should have feature to configure camera as favorite channel
- Mobile Viewer application should function on Android and IOS based phones
- Mobile Viewer application should support calling from Mobile App feature where a mobile number/extension\* number can be added per camera in the device and the user can directly call a concerned person by just one click on camera view from mobile
- Extension Number can be added in mobile calling only if IP-PBX belongs to Brand

#### **WEB CLIENT**

- NVR system should have inbuilt web based command and control application designed for use of enterprise, remote and network applications

- The system should be able to remotely access live and stored videos using the web
- The system should be capable of remotely accessing, search, browse, display and transfer stored video to a remotely connected workstation
- The NVR web client should be able to receive notifications for events such as alarm, motion detection and video loss
- Web Client should be capable of performing all pentaplex functions (i.e. live recording, monitoring, playback, backup and remote access) simultaneously
- Web Client should be capable of managing and monitoring cameras from another NVR
- User login and access privilege should be defined for the web client

#### **CERTIFICATIONS**

- Device should be CE and FCC certified

### **5.4 24 PORT POE SWITCH**

#### **Model**

- 10BASE-T/100BASE-TX/1000BASE-T: 24 Port POE
- 1000BASE-X SFP Ports : 4

#### **Switch Category**

- Gigabit Managed Switches

#### **Performance**

- Switching Capacity: 56 Gbps
- Max. Packet Forwarding Rate: 41 Mpps
- MAC Address Table: 16K and 1.5 MB Packet Buffer.
- Static MAC Entries : 256 entries

#### **Physical Features**

- 19" Rack mount, 1U Height
- Operating Temperature: -5 to 50 °C (23 to 122 °F)
- Power Supply: Internal AC Power Supply,
- Power Saving (Green)

#### **Layer 2 Features**

- Spanning Tree (STP) 802.1d
- Rapid Spanning Tree (RSTP) 802.1w
- Loopback Detection
- Link Aggregation LACP 802.3ad: Up to 14 groups/8 ports per Group
- Port Mirroring : One-to-One / Many-to-One
- Jumbo Frame: 9K Bytes
- Multicast Filtering

#### **Layer 2 Multicast Features**

- Internet Group Management Protocol (IGMP) Snooping : v1 / v2
- IGMP Snooping Groups : 256

#### **Virtual LAN (VLAN) Features**

- Tagged VLAN 802.1Q, 256 Static VLANs
- Auto Voice & Surveillance VLAN
- Asymmetric VLAN

#### **Quality of Service (QoS) Features**

- No. of Queues : 4 Queues per port
- Traffic Prioritization 802.1p
- Strict Priority
- Weighted Round Robin (WRR)

- CoS based on Switch Port
- CoS based on 802.1p Priority
- CoS based on Differentiated Services Code Point (DSCP)
- Bandwidth Control: Port-based (Ingress/Egress, min granularity 10/100/1000 is 64 Kbps)

### **Access Control List (ACL) Features**

Access Control List based on:

- 802.1p priority
- VLAN
- MAC address • Ether type
- IP address
- DSCP
- Protocol type
- TCP/UDP port number
- IPv6 Traffic Class

Max. ACL Profiles / Rules: 50 / 768

### **Security Features**

- Secure Sockets Layer (SSL) : v1 / v2 / v3
- Port Security: Max. 64 MAC Addresses per Port
- Broadcast/Multicast/Unicast Storm Control
- DHCP Server Screening
- ARP Spoofing Prevention
- In case of ARP Broadcast Storm, Virus Attacks switch should have ability to protect Control and Management Plane.
- Support 1 IP Interface & IPv6 Neighbor Discovery (ND)
- Switch should be able to identify unwanted traffic to CPU, prioritized and throttled from interrupting the smooth operation of the switch.

### **Certifications**

- FCC Class A, CE Class A, IC Class A, VCCI Class A, C-Tick

## **5.5 43" LED DISPLAY**

<b>Display</b>	Screen Size	43-Inch
	Aspect Ratio	16;9
	Backlight Scanning	100Hz
	Resolution	1920 x 1080 Pixels
	Viewing Angle	178° / 178°
<b>Terminal</b>	Video IN	RCA x 1
	AUDIO IN (L/R)	RCA Pin Type x 2
	HDMI IN	HDMI 1.4 x 3
	USB Input	USB 2.0 x 2
	RS232C	Yes
	HDMI CEC	Yes
	VGA IN	Yes
	PC AUDIO IN	Yes (1) (Share with AC)
<b>General</b>	Power Requirements	AC 110~240V, 50/60Hz
	Rated Power Consumption	74W
	Stand by condition	<0.5W
	Built-in-Speaker	Yes
	VESA Mount	Yes
	Operating Environment	Operating Temperature: 0°C to 40°C

		Operating Humidity: 20% to 80%
		Temperature: 15°C to 60°C
	Storage Environment	Humidity: 20% to 90% (noncondensation)
	Safety Regulations	IS 13252:2010

## 5.6 2 MP BULLET CAMERA

### Physical Profile

- The Camera should be of 2MP Bullet Type with Fixed Lens of 3.6 mm (FOV 90°) and M12 Mounting
- The image sensor used in the Camera should SONY - CMOS 2MP Active Pixel Progressive Scan, Back Illuminated Image sensor(EXMOR Technology - STARVIS Series) Size: 1/2.8"
- The shutter time of the Camera should be 1/12500s to 1/25s
- The minimum illumination provided should be 0.08 Lux @ F2.0 @ 1/25s for Color Image and 0 Lux with IR LED on for B/W Image
- The Camera should have SNR of minimum 45dB@5lux
- The Camera should have the property of True WDR (Wide Dynamic Range) with 120 db rating
- The Camera should provide 3D DNR (Digital Noise Reduction)

### Compression Standards

- The video compression of the Camera should be H.265/H.264/MJPEG
- The bit rate of the Camera should be 512 Kbps ~ 4 Mbps
- The camera should be capable of providing 4 streams

### Image

- The Maximum Image Resolution of the Camera should be 1920\*1080 @ 30fps
- The Camera should have configurable frame rate upto 30 frames
- The Camera lens should have no. of Active Pixels should be 1937x1097 (2.12M Pixels)
- The Camera lens should have no. of effective Pixels should be 1945x1097 (2.13M Pixels)
- The Camera lens should have total no. of Pixels should be 1945x1109 (2.16M Pixels)
- The Cameras should have image settings like Rotate mode, Saturation, Brightness, Contrast adjustable by client software or web browser
- The Camera should have support of ROI, BLC, E-PTZ, Digital Zoom and Edge Recording Function support

### Storage and Bandwidth Optimization

- The Camera should record at lower bit-rate during non-activity period
- The Camera should provide multiple resolutions based on its importance to save network bandwidth

### Video Analytics

- The Cameras should have Motion detection, View Tampering alarm, Trip wire, Line Crossing, Directional Motion

### Alerts

- The Camera should generate alarm trigger on Motion Detection, Network Disconnect, IP Address Conflict, Storage Full, Storage Error, Video Tamper, Trip Wire, Zone Intrusion

### Network

- The Camera should be capable of storage in NAS



- The Camera should be interoperable with ONVIF S Profile
- The Camera should support TCP/IP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, RTSP, RTCP, PPPoE, NTP, UPnP, SMTP, SNMP, IGMP, 802.1X, QoS, .

#### **Interface**

- The communication interface of the Camera should be 1 RJ45 10/100Mbps Ethernet
- The Camera should have a 128GB SD card support

#### **General**

- There should be minimum 4 IR Array LEDs in the Camera
- The distance covered by the Camera should be minimum 20m
- The power source used in the Camera should be DC12V/2A (+/-10%)
- The Camera should have PoE(802.3af)
- Maximum power consumption should be 7W
- The Camera should have IP66, CE, FCC.
- The maximum weight of the Camera should be 920gms
- The dimensions of the Camera should be 320(L)x84.5(H)x92.5(W)mm

### **5.7 2 MP DOME CAMERA**

#### **Physical Profile**

- The Camera should be of 2MP Dome Type with Fixed Lens of 3.6 mm (FOV 90°) and M12 Mounting
- The image sensor used in the Camera should SONY - CMOS 2MP Active Pixel Progressive Scan, Back Illuminated Image sensor (EXMOR Technology - STARVIS Series) Size: 1/2.8"
- The shutter time of the Camera should be 1/12500s to 1/25s
- The minimum illumination provided should be 0.08 Lux @ F2.0 @ 1/25s for Color Image and 0 Lux with IR LED on for B/W Image
- The Camera should have SNR of minimum 48dB@5lux
- The Camera should have the property of True WDR (Wide Dynamic Range) with 120 db rating
- The camera should provide 3D DNR (Digital Noise Reduction)

#### **Compression Standards**

- The video compression of the camera should be H.265/H.264/MJPEG
- The bit rate of the camera should be 512 Kbps ~ 4 Mbps
- The camera should be capable of providing 4 streams

#### **Image**

- The Maximum Image Resolution of the Camera should be 1920\*1080 @ 30fps
- The camera should have configurable frame rate upto 30 frames
- The Camera should have GOP ratio from 1-100
- The cameras should have image settings like Rotate mode, Saturation, Brightness, Contrast adjustable by client software or web browser
- The cameras should have Motion detection, View Tampering alarm, Trip wire, Line Crossing, Directional Motion, Zone intrusion, and Object Intrusion.
- The Camera should have support of ROI, BLC, E-PTZ, Digital Zoom and Edge Recording, smart stream(Max. 3 windows)Function support

#### **Storage and Bandwidth Optimization**

- The Camera should record at lower bit-rate during non-activity period

- The Camera should provide multiple resolutions based on its importance to save network bandwidth

#### **Video Analytics**

- The Cameras should have Motion detection, View Tampering alarm, Trip wire, Line Crossing, Directional Motion

#### **Alerts**

- The camera should generate alarm trigger on Motion detection, Network disconnect, IP address conflict, Storage full, Storage error, Video Tamper, Trip wire, Zone intrusion

#### **Network**

- The camera should be capable of storage in NAS
- The camera should be interoperable with ONVIF, PSIA, CGI, ISAPI
- The camera should support TCP/IP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, RTSP, RTCP, PPPoE, NTP, UPnP, SMTP, SNMP, IGMP, 802.1X, QoS, IPv6, Bonjour
- The camera should be ONVIF S compliant

#### **Security**

- The camera should have Watermark and User Authentication for Security

#### **Interface**

- The communication interface of the camera should be 1 RJ45 10/100Mbps Ethernet
- The camera should have a 128GB SD card support

#### **General**

- There should be minimum 30 - Through-hole LEDs with Wave Length 850nm
- The distance covered by the camera should be 30m
- The power source used in the camera should be DC12V/2A (+/-10%)
- The camera should have PoE(802.3af)
- Maximum power consumption should be 7W
- The camera should have IP66, CE, FCC, IK10
- The maximum weight of the camera should be 1400gms
- The dimensions of the camera should be 158mm(D), 134mm(H)

## **5.5 Cabling and Accessories**

### **A. UTP Cabling System**

The Bidder shall be required to offer a Category-6 Structured Cabling System using Cables, connectors and Components complying to EIA/TIA 568-C.2, EIA/TIA TSB-36, EIA/TIA TSB-40A and SP-2840A standards and specifications for Category-6. All Cables, cabling accessories Connectors and Components are required to be UL (Underwriters Laboratory) verified for Cat-6. Bidders shall provide necessary protective components in case of outside cabling for protection of equipment against lightning etc.

### **B. Category-6 UTP CABLES**

All Cables supplied by the bidder shall have to be laid as per the requirement of the Owner. It will be the total responsibility of the bidder to erect and lay the ordered cables in PVC conduits/PVC channels within building and in MS Pipes outside the building wherever required or as per the requirements of the Owner. The PVC conduits shall be ISI approved.

The twisted pair cable level 6 type offered by the bidder shall be of solid copper, unshielded twisted pair type with gauge of 24 AWG and impedance of 100 ohms for 100 meters length. The offered cable should meet standards/specifications defined by EIA/TIA-568-C.2, ISO/IEC 11801(2002) and CENELEC EN50173-1 (2002) or latest. The physical and electrical specifications are as listed below:-

### **C. UTP Cabling System**

Type	Unshielded twisted pair cabling system, TIA / EIA 568-C.2 addendum Category 6 Cabling system
Networks Supported	10 / 100/1000 Ethernet, 155 Mbps ATM, 1000 Mbps IEEE 802.3ab Ethernet, and Cat 6 Gigabit Ethernet
TIA / EIA 568-C.2	ETL Verified
IEEE 802.3ab	Zero-bit Error, ETL verified
Warranty	25-year systems warranty; Warranty to cover Bandwidth of the specified and installed cabling system, and the installation costs
Performance characteristics	Attenuation, Pair-to-pair and PS NEXT, ELFEXT and PSELFEXT, Return Loss, ACR and PS ACR for 4- connector channel
Site Certification	Site certification to be done by DCCE certified installer for 25 years and certificate to be issued.

### **D. UTP Cable**

Type	Unshielded Twisted Pair, Category 6, TIA / EIA 568- C.2
Material:	
Conductors	23 AWG solid bare copper
Insulation	Polyethylene
Separator	Cross-member fluted member
Jacket	Sheath Fire retardant PVC Compound (FRPVC) Flame Rating : 60 deg. C As per UL 1685 CM/CMR
Approvals	UL tested for TIA/EIA-568 C.2 , 3P, ETL verified to Cat 6,Zero Bit Error verified by ETL.
Operating temperature	-20 Deg. C to +60 Deg. C
Frequency tested up to	600 MHz minimum
Packing	Box of 305 meters
Delay Skew	35ns / 100m MAX.
Impedance	100 Ohms + / - 6 ohms, 1 to 300 MHz.
Performance characteristics	Attenuation, Pair-to-pair and PS NEXT, ELFEXT and PSELFEXT, Return Loss, ACR and PS ACR
Attenuation	22.8dB/100m at 250MHz 29.4dB/100m at 400MHz 39dB/100m at 600MHz

### **E. Jack Panel and Jacks**

The Bidder shall provide & configure Jack Panel adhering to International design & quality standards. Configuration shall be so structured so as to provide desired number of user ports (as specified in Bill of Quantities). Cat-6 Patch Cords for patching active connections through Patch Panel shall be offered by the bidder.

Jack Panel shall be 19" Rack mountable.

#### **F. UTP Jacks**

Type	PCB based, Unshielded Twisted Pair, Category 6, TIA / EIA 568-C.2
Durability	
Modular Jack	750 mating cycles
Wire terminal	200 termination cycles
Accessories	Strain relief and bend-limiting boot for cable
	Integrated hinged dust cover using collapsible angular shuttered technology.
Materials	Spring Contact: 50m" goldover 100m" nickel ROHS compliant
Housing	Poly-phenylene oxide, 94V-0 rated
Wiring blocks	Polycarbonate, 94V-0 rated
Jack contacts	Phosphorous bronze, plated with 1.27micro-meter thick gold
Approvals	UL listed
Performance Characteristics	Attenuation, NEXT, PS NEXT, FEXT and Return Loss

#### **G.UTP Jack Panels**

Type	24-port, Modular, PCB based, Unshielded Twisted Pair, Category 6, TIA / EIA 568-C.2
Ports	24, upgradeable to intelligent jack panel
Port arrangement	Keystone type. Ports must be individually replaceable
Category	Category 6
Circuit Identification Scheme	Icons on each of 24-ports
Port Identification	9mm or 12mm Labels on each of 24-ports (to be included in supply)
Height	1 U (1.75 inches)
Durability	
Modular Jack	750 mating cycles
Wire terminal (110 block)	200 termination cycles
Accessories	Strain relief and bend limiting boot for cable
Materials	
Housing	Polyphenylene oxide, 94V-0 rated
Wiring blocks	Polycarbonate, 94V-0 rated
Jack contacts	Phosphorous bronze, plated with 1.27micro-meter thick

	gold
Panel	Black, powder coated steel
Approvals	UL listed ETL and 3P
Termination Pattern	TIA / EIA 568 A and B;
Performance Characteristics	Attenuation, NEXT, PS NEXT, FEXT and Return Loss

## **H. Information Outlets (I/O) and Patch Cords**

### **I. Information Outlets**

Surface Mount Face Plate & Box with CAT6 Work Area Data I/O Outlet (RJ45) adhering to EIA/TIA-568-C.2, ISO/IEC 11801(2002) and CENELEC EN50173-1 (2002) specifications or latest. The outlets may preferably have a spring loaded dust covers.

Type	1-port, White surface box
Material	ABS / UL 94 V-0
No. of ports	One/Two
	High Impact Plastic Body ABS FR Grade 86 x 86 mm Flush mountable or surface mountable with a back mount frame

### **J. Patch Cords**

Type	Unshielded Twisted Pair, Category 6, TIA / EIA 568-C.2
Conductor	24 AWG 7 / 32, stranded copper
Length	2-meter for workstation and 1 Meter for Jackpanel/ equipment
Plug Protection	Matching colored snag-less, elastomer polyolefin boot
Warranty	25-year component warranty
Category	Category 6
Housing	Clear polycarbonate
Terminals	Phosphor Bronze, 50 micron gold plating over selected area and gold flash over remainder, over 100 micron nickel under plate
Load bar	PBT polyester
Jacket	PVC
Insulation	Flame Retardant Polyethylene

## **5.6 Racks**

Bidder shall include 19" wall/Floor mounted Rack of 12U & 9U with key lockable doors (for security reasons ) for housing the jack panels and Switch stack. Racks shall include power distribution arrangement, fan tray with fans, earthing kit, mounting accessories. 12U Wall Mount Rack with Accessories (Cable Manager = 2, PDU 5 Socket 5 Amp = 1, Mounting Hardware (set of 10 cage nuts) = 2, 2 Fans Top Mount). 9U Wall Mount Rack with Accessories (Cable Manager = 1, PDU 3 Socket 5 Amp = 1, Mounting Hardware (set of 10 cage nuts) = 1, 2 Fans Top Mount).

### **5.7 Multimode Optical Fibre Cable**

- i) The Optical Fibre Cable shall 6/8 Core fiber Cable as specified in schedule of quantities. Each fibre shall be with color coded buffer. The Cable shall be Graded Index Multi-Mode Fibre.
- ii) The Cable shall comply with FDDI, EIA/TIA, IEEE 802 standards and should be UL listed.
- iii) Fibre Cables supplied by the bidder shall have to be laid as per the requirement of the Owner.

### **5.8 Fiber Cable Components:**

All cable interfaces and connectors required shall be included as a part of the contract. This shall include fixing of LIU, SC/T Connectorisation of all cores of fiber, Testing and Certification of Connectors & cables and components. Any other requirements to make the circuits operational shall be complied with and shall constitute the part of above items. No Separate cost will be considered.

### **5.9 Specifications of SC Connector**

Connector Type Provide a field installable Multimode connector to terminate fiber cables from cable to cable , cable to equipment and equipment to equipment, Utilize a PC Polishing on the tip to provide high yield during installation, Meet EIA and IEC standards for repeatability.

### **5.10 LIU**

- Have sufficient slots accommodate SC adapters individually
- Should have fiber management provision onside
- Panel cover should be slide out for easy maintenance

**All CCTV IP Cameras must be from same OEM, LAN Active Components must be from same OEM, All passive components must be from same OEM and all wireless components must be from same OEM. All Active, Passive & Wireless components must be compatible for inter-working and inter-operability.**

## 6. Service Level Agreement

The purpose of this Service Level Agreement (hereinafter referred to as SLA) is to clearly define the levels of service to be provided by the selected vendor to the department under the inclusive support as mentioned in this tender. SLA defines the terms of selected vendors responsibility in ensuring the timely delivery of deliverables and correctness of the same based on the agreed Performance Indicators as detailed in the agreement. The Vendor has to comply with all Service Level Agreement (SLA) defined below to ensure adherence to the project timelines, Quality and availability of services.

### 6.1 Service Levels during Maintenance Support

The Bidder should provide the required maintenance support to the Department. The Bidder should enter into a Service Level Agreement (SLA) with Department/SPIC and should adhere to the following service levels and accept the penalties as specified for non-compliance:

	SEVERITY		
	PROBLEM DESCRIPTION	RESOLUTION TIME	PENALTY FOR NON-COMPLIANCE
<b>Severity 1</b>	The problem identified is making unavailable the entire system or any modules thereof, hence stoppage of entire or part of operations.	Bidder must provide a resolution within 4 (four) hours from the time of reporting the problem.	1 % of the Performance Guarantee Security per hour beyond 4 hours
<b>Severity 2</b>	The problem identified is affecting the business causing undue delays or malfunctioning of any functionality.	Bidder must provide resolution in 3 (three) calendar days.	0.5 % of the Performance Guarantee Security per day beyond 3 days
<b>Severity 3</b>	The problem identified is not affecting the business but an irritant.	Bidder must provide a solution within 1 calendar week.	0.1 % of the Performance Guarantee Security per week beyond 1 week

The categorization of Severity is at SPIC's/Department's discretion and Bidder must provide the service as agreed in the service contract.

**6.2 System Availability:** The Bidder must ensure system availability during the warranty period as per the following requirements and accept the penalties as specified for non-compliance:

SYSTEM	REQUIRED AVAILABILITY (COMPUTED QUARTERLY)	PENALTY FOR NONCOMPLIANCE
CCTV Camera	99 %	@1 % of the Performance Guarantee Security per %age point below 99 %
Other Items supplied by the Bidder	98 %	@0.1 % of the Performance Guarantee Security per %age point below 98 %

- I. Systems / sub-systems for which the availability is 99 % shall not be down for more than 4 hours in a month, non-compliance of which will attract a monthly penalty of 1 % of the Performance Guarantee Security.
- II. Systems / sub-systems for which the availability is 98 % shall not be down for more than 16 hours in a month, non-compliance of which will attract a monthly penalty of 0.5 % of the Performance Guarantee Security

**SECTION-V**

**BID SCHEDULES**

Annexe 5.1.1  
(Technical Bid)

**BID PARTICULARS**

1. Name of the Tenderer -----
2. Full Address of the Tenderer -----
3. Name of the actual signatory -----
4. Tenderer's proposal number and date -----
5. Name & address of the officer to whom all references shall be made regarding  
this tender:  
Name -----  
Address-----  
Telephone -----Mobile-----  
Fax No. ----- e-mail -----

Witness :

Tenderer :

Signature -----

Signature -----

Name -----

Name -----

Address -----

Designation -----

Company -----

Date -----

Date -----

Company Seal



**Technical Bid Letter**

To,  
The Chief Executive Officer  
Entrepreneur Development Centre (EDC) Building, Plot No: 20,  
Rajiv Gandhi Chandigarh Technology Park (RGCTP), Chandigarh 160101

Ref : Tender No:

Sir,

We declare that:

1. We are an established Contractor in the area of supply and installation of CCTV Surveillance System on turnkey basis.
2. We hereby offer to provide the material and services in line with tender document at the prices and rates mentioned in the Price Bid.
3. We do hereby undertake, that, in the event of acceptance of our bid, the Services shall be provided as stipulated in the Tender document and that we shall perform all the incidental services.
4. We enclose herewith the complete Technical Bid as required by you. This includes:
  - Bid Particulars (Annexe 5.1.1)
  - Bid Letter (Annexe 5.1.2)
  - Proposed Methodology (Annexe 5.1.3)
  - Vendor Profile (Annexe 5.1.4)
5. We agree to abide by our offer for a period of 180 days from the date fixed for opening of the Technical Bids.
6. We have carefully read and understood the terms and conditions of the tender and the conditions of the contract applicable to the tender and we do hereby undertake to provide services as per these terms and conditions. We also understand that no deviations from the Technical Specifications are allowed under this tender.
7. Certified that the tenderer is a company constituted under the Companies Act, 1956 and the person signing the tender is the constituted attorney.
8. Bid Security (Earnest Money) for an amount equal to Rs. 75,000 (Rupees Seventy Five Thousand only) is enclosed in the Cover containing the letter for Pre-qualifying Requirements in the form specified in Clause 12 of Section II.
9. We do hereby undertake, that, until a formal contract is prepared and executed, this bid, together with your written acceptance thereof and placement of letter of intent awarding the contract, shall constitute a binding contract between us.

Dated this day                      of 2017

Signature                      of  
Tenderer                      Name                      &  
Designation:                      Company  
Seal

Annexe 5.1.3  
(Technical Bid)

**DETAILED TECHNICAL PROPOSAL**

(Detailed technical proposal giving clause-wise compliance to Tender Documents, Bill of Material, make, model, technical data sheets, methodology of cabling and installation work etc. to be given along with all Documentary Proof for pre-Qualification Criteria – Section II Clause No. 18 )

Dated this day        of 2017

Signature of Tenderer  
Name & Designation:  
Company Seal

### VENDOR PROFILE

1	Name of the Firm/Company	
2	Year Established	
3	Address of Office	
4	Telephone No.	
5	Fax No.	
6	E-mail Address	
7	Website	
8	Names of Govt. Deptt/Public Sector/Pvt. Sector/International clients to whom the tenderer has provided similar services to	
8.A		
8.B		
8.C		
8.D		
8.E		
9	No. of full time Tech. personnel currently on roll	
10	No. of years of Proven experience of providing similar Services in India.	
11	Infrastructure facilities in tri-city Including Manpower & Hardware etc.	
12	Annual turnover Audited Annual turnover of the company in Rs. During last two years	
12.A	Turnover 2016-2017 FY	
12.B	Turnover 2015-2016 FY	
13	List of customers in India and also international customers, as on date, to whom the Tenderer is currently providing Similar services	
14	Any accreditation / rating from an internationally reputed third party rating agency.	
15	Various Certifications (ISO Certificaton/Six Sigma/ Nasscom/DOT Registered)	

Dated this day      of 2017

Signature of Tenderer  
Name & Designation:  
Company Seal

**Price Bid Letter**

To,

The Chief Executive Officer  
Entrepreneur Development Centre (EDC) Building, Plot No: 20,  
Rajiv Gandhi Chandigarh Technology Park (RGCTP), Chandigarh 160101

Ref : Tender No:

Sir,

Having examined the Tender Document, we, the undersigned, offer to provide material and services in conformity with the Tender Document No. \_\_\_\_\_ for the sum of.....(Total bid amount in words and figures) or such other sums as may be ascertained in accordance with the Schedule of Prices attached herewith and made part of this bid.

2. We undertake, if our bid is accepted, to deliver the goods in accordance with the delivery schedule specified in the Tender Documents.
3. If our bid is accepted, we will obtain the guarantee of a bank in a sum equivalent to 10% percent of the Contract Price for the due performance of the Contract, in the form prescribed by the Purchaser.
4. We understand that you are not bound to accept the lowest or any bid you may receive.
5. We enclose herewith the Price Schedule in the prescribed form
6. We agree to abide by our offer for a period of 180 days from the date fixed for opening of the Technical Bid
7. We have carefully read and understood the terms and conditions of the tender and the conditions of the contract applicable to the tender and we do hereby undertake to provide services as per these terms and conditions without any deviations.
8. Certified that the tenderer is a company and the person signing the tender is the constituted attorney/authorized identity.
9. We do hereby undertake, that, until a formal contract is prepared and executed, this bid, together with your written acceptance thereof and placement of letter of intent awarding the contract, shall constitute a binding contract between us.

Dated this day        of 2017

Signature            of  
Tenderer Name &  
Designation:  
Company Seal

### Price Schedule

ESTIMATED BILL OF MATERIAL						
All quantities mentioned below are indicative for tendering purpose only Actual quantities would be as per site conditions & requirements						
Sr	Items Description	Qty. (A)	UoM	Unit Price (B)	GST/S.T AX on (B) (C)	TOTAL AMOUNT (E=(B+C) XA)
<b>CAMERA COMPONENTS</b>						
1	2 MP IR DOME CAMERA	28	Nos			
2	2 MP IR BULLET CAMERA	92	Nos			
<b>STORAGE COMPONENTS</b>						
3	8 CH NVR with 6 TB STORAGE	1	Nos			
4	24 CH NVR with 12 TB STORAGE	3	Nos			
5	64 CH NVR with 24 TB STORAGE	1	Nos			
<b>DISPLAY COMPONENTS</b>						
6	43" LED TV for Display of Cameras	3	Nos			
<b>LAN COMPONENTS</b>						
7	24 Port 10/100/1000 Mbps PoE Switch	8	Nos			
8	Fiber Transceiver Multimode	6	Nos			
9	9U Wall Mount Rack with Accessories	8	Nos			
10	Cat6 UTP Cable, 305 Meter	20	Box			
11	Cat6 24 Port Patch Panel - Unloaded	8	Nos			
12	Cat6 Information Outlet Jack for Patch Panel	128	Nos			
13	Cat6 Information Outlet Jack for Camera	120	Nos			
14	Face Plate Single Port	120	Nos			
15	Surface Mount Box	120	Nos			
16	Cat6 UTP Patch Cord -1 Meter	240	Nos			
17	6 Core Multimode Fiber Cable	350	Meter			
18	12 Port LIU loaded with Adapter	3	Nos			
19	SC Pigtail MM Simplex - 1 Meter	36	Nos			
20	SC-LC Patch Cord MM Duplex - 1 Meter	6	Nos			
21	1" PVC Conduit	2200	Mtr			
22	1.5" PVC Conduit	1000	Mtr			
23	HDPE Pipe	300	Mtr			

*Tender Document for supply, installation & commissioning of IP Based CCTV Surveillance System, Department of Social Welfare, Chandigarh Administration*

<b>SERVICE COMPONENTS</b>						
24	Laying of UTP Cable	6100	Mtr			
25	Laying of PVC Pipe	3200	Mtr			
26	Fixing & Termination of I/O at Jack Panel	120	Mtr			
27	Fixing & Termination of I/O at Camera Side	120	Mtr			
28	Laying of Fiber Cable	350	Mtr			
29	Laying of HDPE Pipe	300	Mtr			
30	Digging & Refilling of Hard Soil	50	Mtr			
31	Digging & Refilling of Soft Soil	250	Mtr			
32	Fixing of Rack	8	Nos			
33	Fixing of Camera	120	Nos			
53	Installation & Maintenance Charges for 1 Year /per Location	3	Nos			
<b>CAMC Rates</b>						
1	2 Year comprehensive Annual Maintenance (CAMC) Rates per Year basis	2	Nos			
<b>GRAND TOTAL (to be used to finalizing L1 BID)</b>						

All Figures in Rupees

Total Bid Price In Indian Rupees                      (In Words Rupees -----)

Note: In case of discrepancy, unit rate will prevail

Dated this day                      of 2017

Signature    of    Tenderer  
Name    &    Designation:  
Company Seal

**BID SECURITY FORM**

Whereas ----- (hereinafter called 'the Tenderer') has submitted its bid dated ----- for IP based CCTV Surveillance System in Social Welfare Department under Chandigarh Administration (hereinafter called "the Bid").

KNOW ALL MEN by these presents that WE ----- of ----- having our registered office----- (hereinafter called "the Bank") are bound unto SPIC (hereinafter called "the Purchaser") in the sum of Rs. ....../- for which payment well and truly to be made to the said Purchaser, the Bank binds itself, its successors and assigns by these presents. Sealed with the Common Seal of the said Bank this-----day of - -----2017.

THE CONDITIONS of this obligation are:

1. If the Bidder, withdraws its Bid during the period of bid validity specified by the Bidder on the Bid Form; or
2. If the Bidder, having been notified of the acceptance of its bid by the Purchaser during the period of bid validity.
  - a. fails or refuses to execute the Contract Form, if required; or
  - b. fails or refuses to furnish the Performance Security, in accordance with the instructions to Bidders;

We undertake to pay to the Purchaser up to the above amount upon receipt of its first written demand, without the Purchaser having to substantiate its demand, provided that in its demand the Purchaser will note that the amount claimed by it is due to it owing to the occurrence of one or both of the two conditions, specifying the occurred condition or conditions.

This guarantee will remain in force up to and including 45 days after the period of bid validity, and any demand in respect thereof should reach the Bank not later than the above date.

-----  
(Authorized Signatory of the Bank)

**PROFORMA OF BANK GUARANTEE FOR CONTRACT PERFORMANCE GUARANTEE BOND**

Ref: \_\_\_\_\_

Date: \_\_\_\_\_

Bank Guarantee No. \_\_\_\_\_

To

1. Against contract vide Advance Acceptance of the Tender No : -----  
--  
covering -----  
(hereinafter called the said 'contract') entered into between the SPIC, EDC Building; RGCTP, Chandigarh (hereinafter called the Client) and \_\_\_\_\_ (hereinafter called the Vendor) this is to certify that at the request of the Vendor we ----- Bank Ltd., are holding in trust in favour of the Purchaser, the amount of \_\_\_\_ (write the sum here in words) to indemnify and keep indemnified the Purchaser against any loss or damage that may be caused to or suffered by the Purchaser by reason of any breach by the Vendor of any of the terms and conditions of the said contract and/or in the performance thereof. We agree that the decision of the Purchaser, whether any breach of any of the terms and conditions of the said contract and/or in the performance thereof has been committed by the Vendor and the amount of loss or damage that has been caused or suffered by the Purchaser, shall be final and binding on us and the amount of the said loss or damage shall be paid by us forthwith on demand and without demur to the Purchaser.
2. We \_\_\_\_\_ Bank Ltd, further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for satisfactory performance and fulfillment in all respects of the said contract by the Vendor i.e till \_\_\_\_ hereinafter called the said date and that if any claim accrues or arises against us \_\_\_\_\_ Bank Ltd, by virtue of this guarantee before the said date, the same shall be enforceable against us \_\_\_\_\_ Bank Ltd, notwithstanding the fact that the same is enforced within six months after the said date, provided that notice of any such claim has been given to us \_\_\_\_\_ Bank, by the Purchaser before the said date. Payment under this letter of guarantee shall be made promptly upon our receipt of notice to that effect from the Purchaser.
3. It is fully understood that this guarantee is effective from the date of the said contract and that we \_\_\_\_\_ Bank Ltd, undertake not to revoke this guarantee during its currency without the consent in writing of the Purchaser.
4. We undertake to pay to the Purchaser any money so demanded notwithstanding any dispute or disputes raised by the Vendor in any suit or proceeding pending before any court or Tribunal relating thereto, our liability under this present bond being absolute and



***Tender Document for supply, installation & commissioning of IP Based CCTV Surveillance System, Department of Social Welfare, Chandigarh Administration***

unequivocal. The payment so made by us under this bond shall be a valid discharge of our liability for payment thereunder and the Vendor shall have no claim against us for making such payment.

5. We \_\_\_\_\_ Bank Ltd, further agree that the Purchaser shall have the fullest liberty, without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said contract or to extend time of performance by the Vendor from time to time or to postpone for any time or from time to time any of the powers exercisable by the Purchaser against the said Vendor and to forebear or enforce any of the terms and conditions relating to the said contract and we, \_\_\_\_\_ Bank Ltd., shall not be released from our liability under this guarantee by reason of any such variation or extension being granted to the said Vendor or for any forbearance by the Purchaser to the said Vendor or for any forbearance or omission on the part of the Purchaser or any other matter or thing whatsoever, which under the law relating to sureties, would, but for this provision, have the effect of so releasing us from our liability under this guarantee.
6. This guarantee will not be discharged due to the change in the constitution of the Bank or the Vendor.
7. This guarantee will be valid up to three years & sixty days from the date of issue .

Date \_\_\_\_\_

Place \_\_\_\_\_  
\_\_\_\_\_

Signature

Witness \_\_\_\_\_  
\_\_\_\_\_

Printed name

(Bank's common seal)

**CONTRACT FORM**

THIS AGREEMENT made the..... day of. ...., 2017 Between ..... (Name of purchaser) (hereinafter called "the Purchaser") of the one part and .....(Name of Supplier) of..... (hereinafter called "the Supplier") of the other part:

Whereas the purchaser is desirous that -----  
-----

(Brief Description of Goods and Services) and has accepted a bid by the Supplier for the supply of those goods and services in the sum of..... (Contract Price in Words and Figures) (hereinafter called "the Contract Price").

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. In this Agreement 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 Agreement, viz.:
  - (a) the Bid and the Price Schedule submitted by the Bidder;
  - (b) the Tender Document including the Technical Specifications and the General Conditions of Contract;
  - (c) the Purchaser's Notification of Award.
  - (d) Correspondence (.....)
3. In consideration of the payments to be made by the Purchaser to the Supplier as hereinafter mentioned, the Supplier hereby covenants with the Purchaser to provide the goods and services and to remedy defects therein in conformity in all respects with the provisions of the Contract.
4. The Purchaser hereby covenants to pay the Supplier in consideration of the provision of the goods and services 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.

Brief particulars of the goods and services which shall be supplied/ provided by the Supplier are as under:

	Brief description of goods & services	Quantity to be	Unit price	Total price	Delivery terms	Any other

TOTAL VALUE:

DELIVERY SCHEDULE:

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with their respective laws the day and year first above written. Signed, Sealed and Delivered by the said.....(For the Purchaser) in the presence of:.....

Signed, Sealed and Delivered by the said.....(For the Supplier) in the presence of:.....

### **Check list**

Please check whether following have been enclosed in the respective covers, namely, letter of Pre-qualification, Technical Bid and Price Bid:

- |           |  |                                 |
|-----------|--|---------------------------------|
| <b>A</b>  | Pre-Qualification Letter   |                                 |
| 1.        | Bid Security valid up to (date.....)   | Yes/No <input type="checkbox"/> |
| 2.        | Evidence for experience (Clause 20.1 (ii), Section II)   | Yes/No <input type="checkbox"/> |
| 3.        | Evidence of Turn over<br>(Clause 20.1 (iv) Section II)   | Yes/No <input type="checkbox"/> |
| 4.        | Technical Support facility<br>details (Clause 20.1 (iii) Section<br>II)  | Yes/No <input type="checkbox"/> |
| 5.        | MOA, AOA and commencement of Business<br>Certificate. (Clause 20.1 (v) Section II)   | Yes/No <input type="checkbox"/> |
| 6.        | Authorization certificates from<br>OEM (Clause 20.1 (vi) Section II)   |                                 |
| <b>B.</b> | <b>Technical Bid</b>   | Yes/No <input type="checkbox"/> |
| 1.        | Bid Particulars (Annexe 5.1.1)   | Yes/No <input type="checkbox"/> |
| 2.        | Technical Bid Letter (Annexe 5.1.2)  | Yes/No <input type="checkbox"/> |
| 3.        | Detailed Technical Proposal (Annexe 5.1.3)   | Yes/No <input type="checkbox"/> |
| 4.        | Vendor Profile (Annexe5.1.4)   | Yes/No <input type="checkbox"/> |
| 5.        | Pre-qualifying Technical Competence such as<br>proven experience in providing Similar Services for<br>determining pre-qualification conditions and Bid<br>Security |                                 |
| <b>C.</b> | <b>Price Bid</b>   | Yes/No <input type="checkbox"/> |
| 1.        | Price Bid letter. (Annexe5.2.1)  | Yes/No <input type="checkbox"/> |
| 2.        | Price Schedule. (Annexe5.2.2)  |                                 |