



**REQUEST FOR PROPOSAL (RFP)**

UCO Bank, Mumbai Zone invites sealed Request for Proposal (RFP) for empanelment of vendors for Supply, Installation, Testing & Commissioning (as and when required) and Comprehensive Annual Maintenance Contract (CAMC) of 4/8/16/32 channels XVRs/ DVRs/NVRs (CCTV System), Biometric access control system and Digital Fire cum Burglar Alarm system in the Branches/ Currency Chest/ATMs/Offices under UCO Bank, Mumbai Zone.

| RFP Details                                         | Schedule                                                                                                                                                                                                                                                                                                                                               |
|-----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Tender Reference no.</b>                         | ZO/MUM/SEC/2026-27/SS, Dated: 17/09/2026                                                                                                                                                                                                                                                                                                               |
| <b>Work contain:</b>                                | Empanelment of vendor for Supply, Installation, testing & commissioning (as and when required) and comprehensive Annual Maintenance Contract of 4/8/16/32 channels NVRs/ XVRs/ DVRs (CCTV System), Biometric access control system and Digital Fire cum Burglar Alarm system in the Branches/ Currency Chest/ ATMs/Offices under UCO Bank, Mumbai Zone |
| <b>Date of issue of RFP</b>                         | 17.09.2026                                                                                                                                                                                                                                                                                                                                             |
| <b>Tender Fee</b>                                   | Rs. 1000/- (In the form of DD: Non-returnable)                                                                                                                                                                                                                                                                                                         |
| <b>Date of commencement of sale of RFP document</b> | 19.09.2026                                                                                                                                                                                                                                                                                                                                             |
| <b>Pre Bid Meeting:</b>                             | Zonal Office dated 25.09.2026 at 1200 hrs                                                                                                                                                                                                                                                                                                              |
| <b>Last Date &amp; Time for Submission of bid :</b> | 09.10.2026, up to 1400 hours at UCO Bank, Zonal office, Security Department, UCO Bank Building 1st floor D.N. Road, Fort Mumbai-400001.                                                                                                                                                                                                                |
| <b>Date &amp; Time of Opening of technical bid:</b> | 09.10.2026, after 1500 hours at UCO Bank, Zonal office, Security Department, UCO Bank Building 1st floor D.N. Road, Fort Mumbai-400001.                                                                                                                                                                                                                |
| <b>Validity of RFP:</b>                             | 90 (Ninety) days from the date of opening.                                                                                                                                                                                                                                                                                                             |
| <b>Address of Communication:</b>                    | Zonal Office, Mumbai, UCO Bank Building 1st floor D.N.Road, Fort Mumbai-400001.                                                                                                                                                                                                                                                                        |
| <b>Contact Number:</b>                              | 9490004780                                                                                                                                                                                                                                                                                                                                             |
| <b>E-mail:</b>                                      | <a href="mailto:zomumbai.sec@uco.bank.in">zomumbai.sec@uco.bank.in</a>                                                                                                                                                                                                                                                                                 |
| <b>Bids (RFP) to be submitted</b>                   | Zonal Office, Mumbai, UCO Bank Building 1st floor D.N.Road, Fort Mumbai-400001.                                                                                                                                                                                                                                                                        |

**Note:** In case the specified date of submission and opening of Bids is declared a holiday in Mumbai, the RFPs will be received till the specified time on next working day.

Bids will be opened in presence of the vendors' authorized representative(s) who choose to attend the RFP opening process. One authorized representatives of the Vendor will only be allowed at the time of opening of the RFPs.

Any bid received by the Bank after the deadline/time of bid submission will be rejected and will not be opened.



General Terms & Conditions

Empanelment of vendor for supply, install, testing & commissioning (as and when required) and Comprehensive Annual Maintenance Contract (CAMC) of 4/8/16/32 channels NVRs/ XVRs/ DVRs (CCTV System), Biometric access control system and Digital Fire cum Burglar Alarm system in the Branches/ Currency Chest/ ATMs and Offices under UCO Bank, Mumbai Zone.

Applications are invited from reputed Agencies / Companies / Firms for empanelment for Supply, Installation, Testing & Commissioning (as & when required) and Comprehensive Annual Maintenance contract of CCTVs, Biometric access control system & Digital Fire cum Burglar Alarm Systems in the existing Branches/ Zonal Office building/Currency Chests under UCO Bank Mumbai Zone.

**(1) Status of availability of Security equipment:**

(I) **CCTV System:** -Our Branches/ Offices have DVRs/ XVRs/ NVRs based analogue/ digital CCTV system of 4/ 8/ 16/32 Channels, CCTV Systems are provided with various types of Dome/Bullets/IP cameras with IR/HD feature, fixed or varifocal lens.

(II) **Digital Fire cum Burglar Alarm system:** Our Branches/ offices have either fire cum burglar integrated alarm system or separate fire alarm and burglar alarm system. Alarm systems are provided with various types of sensors.

(III) **Biometric access control system:** Our Currency Chests and some offices having Biometric access control system.

**(2) Scope of work:**

(I) **For CCTV System:** - Comprehensive Maintenance of the available CCTV Systems. Re-installation of equipment in case of shifting/ furnishing of Branch premises. Supply, install of new system in new opened Branches. Make compatible and Configuration of IP Address in DVRs/ XVRs/NVRs in our branches/offices for remote viewing of CCTV.

(II) **For Alarm system:** Maintenance of the available digital based Fire cum Burglar Alarm system under CAMC, repair/ replacement of faulty parts. Re-installation of equipment in case of shifting/ furnishing of Branch premises and supply, install of new system in new opened Branches.

(III) **For Biometric Access Control System:** Maintenance of the available Biometric access control system under AMC, repair/ replacement of faulty parts. Re-installation of equipment in case of shifting/ furnishing of Branch premises and supply, install of new system in Branches on need base.

**(3) Period of Empanelment:** Vendor(s) will be empanelled for a period of 3 years from the date of empanelment and it would be reviewed on annual basis on the basis of performance. Bank can extend the period of empanelment beyond initial three years on year to year basis up to 05 years. Bank can terminate the empanelment of one and all vendors at any point of time without assigning any reason whatsoever.

**(4) Procedure of empanelment:**

(I) One bidder can apply for empanelment for one or more Security item(s). The bidder shall clearly specify the security item(s), i.e. CCTV System, Digital Fire cum Burglar Alarm System and Biometric Access Control System, for which empanelment is sought.

(II) One bidder can be empanelled for one or more security item(s), subject to fulfillment of the eligibility and technical requirements for the respective item(s).

(III) Bidder need to submit the proofs to validate their experience (copies of work order/ contract & performance certificates of the work done) in the respective field i.e. CCTV, Biometric access control system & Digital Fire cum Burglar Alarm system for which the empanelment is sought.

(IV) After assessment of eligibility bids, bank may confirm the authenticity of the work orders/ contract, performance certificate from their client(s) and bank will also confirm the local address of the bidder through own sources, only after the said confirmations the eligibility bid would be adjudged as valid.

(V) Bidder(s) found eligible on the basis of evaluation of their eligibility criteria, confirmation of work/ performance/ local address and will be summoned to demonstrate their products for the next stage of assessment for empanelment.



(VI) Only those eligible bidder(s) will be considered for empanelment who's offered products met the requisite specification for the selected of security equipment.

**(5) Eligibility criteria for bidders:**

Only those Companies/firms/agencies that fulfill the eligibility criteria with valid document as mentioned in- 'Annexure-I' of this advertisement will be considered for next stage of assessment for empanelment.

**(6) Availability of Tender documents & tender fee: -**

Tender documents are available on Bank's website [www.uco.bank.in](http://www.uco.bank.in) and at our Zonal Office till last date of submission of the bids i.e. 08/10/2026. Bidder required to deposit the non-refundable Tender fee amounting Rs. 1000/- (Rupees Thousand only) in the form of Demand Draft (DD) in favor of UCO Bank Zonal Office, Mumbai, payable at Mumbai. Requisite DD should be submitted with bid.

**Note: -** Bidder registered as MSME with NSIC are exempted from payment of tender fee of Rs. 1000/-, bidder seeking exemption is required to submit the proof to establish their eligibility for the same.

**(7) Pre-Bid meeting:**

Pre-bid meeting is scheduled to be held at our Zonal Office Mumbai on **24/09/2026 at 12.00 hrs.** Interested bidder can submit their queries/ clarifications, suggestion to our Tender committee on schedule date and time. As a resultant of pre-bid meeting any addendum/ corrigendum in bids terms & conditions if warranted would be reflected on Bank's website ([www.uco.bank.in](http://www.uco.bank.in)) after a day from pre-bid meeting i.e. from 25/09/2026, no paper notification would be made for addendum/ corrigendum in bid document. Interested bidders are advised to go through Bank's website after schedule date for any modification in bid document.

**(8) Submission of bids:**

Applications are to be submitted to the undersigned in a sealed envelope super scribing "**Bids for Empanelment of Vendor for Comprehensive Annual Maintenance Contract (CAMC) and Supply, Installation, Testing, Commissioning of CCTV , Alarm system and Biometric Access Control - Mumbai Zone, UCO Bank**" with bidders contact details (complete address, E-mail & Phone nos.). Bids should be submitted at our address on or before **09.10.2026 up to 1400 hrs.**

**(9) Opening of Bid(s):**

Sealed bid would be opened at our Zonal Office, Mumbai on **09.10.2026 after 1500 hrs.** Bank reserves the right to reject any/all bids without assigning any reason thereto, meanwhile major reasons leading to rejection of bid are specified herein below. Bidders can witness the tender opening process through their authorized only one representative on schedule date & time, it is not mandatory for bidder to present at the time of opening of bids. We are not bound to hold the process of opening of tender due to absence of representative of any or all of the bidders at the time of opening of bids. Bids received after scheduled date & time would not be considered for opening & evaluation, sealed bid(s) along with tender fee (if deposited) would be returned to sender's address shown on outer envelope.

**(10) Evaluation of Bids:**

(I) Bids received on or before the last date would be evaluated on the basis of the eligibility criteria as per Annexure-I and the checklist in Appendix-III. Documentary proofs, local address, executed work/performance and other eligibility requirements shall be verified by the Bank.

(II) Documentary proofs in respect of, each eligibility criteria would be evaluated, confirmation of local address, executed work/ performance would be ascertained by Bank. Only after that the bid would be considered for the next stage of empanelment for the field/ security item in which it fulfills the eligibility conditions.

(III) In the next stage of assessment for empanelment the eligible bidders would be invited for demonstration of their product, in case the offered products found suitable as per criteria fixed by bank, then only the candidature of the bidder is approved for empanelment.

**(11) Rejection of bids:**



**Bank can reject the bids in following cases:**

- (I) Late receipt bids, received in open envelope, received through e-mail.
- (II) Bids not having proper documentary proofs establishing eligibility of bidder.
- (III) Bids not provided with requisite tender fee.
- (IV) Copies of work order/ contract submitted in proof of experience are not supported by Performance certificate from client.
- (V) Work/ services of the bidder found unsatisfactory on confirmation from their client.
- (VI) Confirmation of local address (**in Mumbai**) not ascertained.
- (VII) Product offered not meets the required specification as evaluated during demonstration.
- (VIII) Bank can reject any or all of the bids without mentioning any reason.

**(12) Termination of empanelment or work contract:**

The Bank reserve its right to terminate Empanelment and the maintenance & supply, install contract at any time after giving due notice of **one month** without assigning any reason. The contractor will not be entitled to claim any cost and compensation against such termination. However, while terminating the contract, if any payment is due to the contractor for maintenance/ work already performed up to satisfaction in terms of the contract, these would be paid to it/ him as per the contract terms after joint verification of bank and vendor.

**(13) The Bidder's Indemnity and Assurance:**

- (I) The Bidder should comply with all legal requirements and obtain such licenses, approvals and consents, if any prescribed/required under any law/ rules/regulations, and keep them valid.
- (II) The Bank will not be liable to pay any remuneration or compensation to the Bidder or any of the personnel (including its owner(s), Director(s), Partner(s), Employee(s) and any representative(s) engaged by the Bidder in relation to the service except the total cost of the security system as per agreement and CAMC charges as per agreement.
- (III) The Bidder to indemnify against all losses, liability or obligation arising out of its conduct or that of any of the personnel including its owner(s), director(s), partner(s), employee(s) and representative(s) in connection with the work to be offered to selected vendor.

**(14) Other Terms & conditions:**

- (I) For any queries, bidder may contact us on working days between 10.00 A.M. to 05.00 P.M. on 9490004780.
- (II) Bank is not responsible for any typographical mistake in the RFP documents, late receipt bid or damage of bid in transit.
- (III) Tender is valid up to three (3) months from the date of publication.
- (IV) Any dispute arising in this matter will be settled in the jurisdiction of Mumbai (Maharashtra).

**(15) Black listing:** Bidder must not be blacklisted for any of their services/ products in any organization in previous ten (10) years. Undertaking signed by authorized dignitary in this regard must be submitted.

**(16) Details of Annexure & Appendices related to RFP bids attached along with:**

- (I) **Annexure-I:** Eligibility criteria for bidder for empanelment for supply, install, testing & commissioning and Annual Maintenance Contract of security equipment (CCTV, Biometric access control system and Digital Fire cum Burglar Alarm system) in the Branches/ Currency Chest, ATMs and Offices.
- (II) **Appendix-I:** Authority letter to be submitted by bidder in case bidder is **OEM/ Distributer**.
- (III) **Appendix-II:** Manufacturer Authorization Form (**MAF**) to be submitted in case bidder is not OEM/ Distributer.
- (IV) **Appendix-III:** Checklist for bidders for submitting eligibility bid in compliance of terms of Annexure-I.
- (V) **Appendix-IV:** Certificate of performance obtained from client(s) in respect of the work order/ contract executed.
- (VI) **Appendix-V:** Format of application to be submitted by interested bidder for empanelment in respect of this notification.
- (VII) **Appendix-VI:** Format of General Information.



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- (VIII) **Appendix-VII:** On Format of Financial, Registration for taxation and Other Statutory requirements.
- (IX) **Appendix- VIII:** Technical Specification of Alarm System.
- (X) **Appendix- IX:** Technical Specification of CCTV
- (XI) **Appendix – X:** Technical Specification of Biometric Access Control System.

Sd/-  
GM & Zonal Head  
Zonal Office, Mumbai



ANNEXURE- I

**ELIGIBILITY CRITERIA OF BIDDER FOR EMPANELMENT FOR SUPPLY, INSTALLATION, TESTING, COMMISSIONING & COMPREHENSIVE ANNUAL MAINTENANCE (CAMC) OF SECURITY EQUIPMENT (CCTV, BIOMETRIC ACCESS CONTROL SYSTEM & DIGITAL FIRE CUM BURGLAR ALARM SYSTEM) IN THE BRANCHES/CURRENCY CHEST/ATMs AND OFFICES UNDER UCO BANK, MUMBAI ZONE.**

**A) Experience in execution of required work and performance certification by client(s):**

Reputed Bidder should have experience in executing the similar work for which empanelment is sought as under at the Public sector Banks/ RBI/PSU in last 10 years as on date of issue of tender i.e. 17/09/2026.

- 1) Bidder must have experience of the supplying, installation, commissioning & Annual maintenance of CCTVs, Biometric access control system and Digital Fire cum Burglar Alarm systems equipment along with CCTVs Health Monitoring in at least four Banks within immediate past five (5) years and should be presently continuing with at least Two Public Sector Banks (PSBs) in Maharashtra.
- 2) Bidder must have at least 10 years satisfactory experience in commissioning and maintenance of CCTV system equipment including Health Check as on 17/09/2026.

Documentary proofs for the above like Compressive Annual Maintenance Contract(s)/ work order(s) and performance certificate(s) of the each allotted work/ contract issued by respective client Public Sector Banks/ RBI/PSU must be provided with bid to establish the eligibility of Bidder. Bid without minimum required work order/ contract and their performance certificates as above would be treated as ineligible. Work order/ contract not supported by its performance certificate would be treated as NULL.

**B) Certification of performance by client(s) Public Sector Banks/ RBI/PSU:**

- 1) Each work order/ contract submitted as warranted above must be supported by performance certificate(s) as per **Appendix- IV** of this tender document. Performance certificate should be duly filled on letter head of the clients, signed by the officials dealing in procurement/ maintenance of Physical /electronic Security equipment (**preferably Security Officer**).
- 2) Bank can confirm the genuineness of the performance certificate issued by client at its own sources. In case the authenticity of performance certificate or work order/ contract found uncertain, the tender of the bidder would be rejected.
- 3) Performance certificate issued by client would be taken as the proof of the nature of work done, nos. of Branches/ Offices/ sites covered & period of contract, quality of equipment installed, and level of after sale services & relationship with the client as far as terms of contract is concerned.

**C) Minimum standard for eligibility for bidder as confirm from performance certificate by clients should likewise:**

- 1) Purpose, nature of work executed, no. of Branches/ Offices/ Sites covered should be in the lines of Para A of this Annexure.
- 2) Equipment installed should be as per specification provided by clients.
- 3) Average time taken in defect rectification should be less than Two (2) days & time taken in new installation should be less than Seven (7) days.
- 4) Quality of work executed, capability, technical proficiency, financial soundness, mobilization of manpower of firm, quality of product installed should not be unsatisfactory.
- 5) Instances of imposition of penalty should be less than three in the period of contract.
- 6) Bidder should not be indulged in arbitration/ court case with the client.
- 7) Provide list of client and their contact details to ascertain the genuineness of quality of services bidder have rendered. In case work/ services of bidder found unsatisfactory in any of the work/ contract, their bids would be treated ineligible.
- 8) Bidder should have minimum 10 years of experience as on 17/09/2026 in Annual maintenance and supply, install, testing, commissioning of security equipment (CCTV, Biometric access control system & Digital Fire cum Burglar Alarm System).



**D) Certification by Original Equipment Manufacturer (OEM):**

- 1) Bidder should be the authorized equipment manufacturer/ assembler or have authorization from OEM for consistent supply/ servicing of spare / equipment for next 5 years.
- 2) In case bidder is the Original Equipment Manufacturer (OEM), bidder have to provide certificate (as per Appendix-I) about manufacturing of product, genuineness of the products and after sale services & supply of accessories.
- 3) In case bidder is not the OEM, the bidder will have to essentially mention the name of the Original equipment manufacturer (OEM) whose product is to be supplied and the country of origin of the product along with technical specifications. Bidder will also to have certificate in respect of country of origin of products. Product offered should be manufactured in India. Bidder has to submit a certificate from the Original Equipment Manufacturer (OEM) that they are the authorized agents for the sale, supply and service of their product and manufacturer undertakes to support the after sales service of the product. Bidder should provide Manufacturer Authorization Form (MAF) duly signed by the OEM in the name of bidder (Appendix- II).
- 4) All new installed products will stand for onsite comprehensive warranty against all defects in warranty period. During the warranty period the Bidder shall have to provide quarterly preventive service and shall have to attend to all breakdown calls within 24 hours and 48 hours for remote area Branches.
- 5) Bidder have ability to provide security equipment of similar or higher technical specifications fixed by Bank. The products offered should be manufactured in India.

**E) Registration, Establishment & Service network:**

- (1) As the major part of work involves 24X7 maintenance of the existing Security Systems at our branches, the Bidder should have a Local Office/ Registered Office/ Services centre in Mumbai for minimum period of the last 10 years. Hence, provide proof of local address, which is subjected to confirmation through our sources.
- (2) Ability to commence services within 10 days from the date of placement of order.
- (3) Ability to undertake the work of all Branches/Currency Chest/ ATMs and Offices throughout in the Mumbai Zone.
- (4) Bidder should have a Certificate of Registration with Registrar of Companies or Registrar of Firms or have a letter of proprietorship.
- (5) Bidder should provide the latest Income Tax Assessment Order and PAN/ TAN Number.
- (6) Bidder should have GST Registration.

**F) Financial soundness and stability:**

- (1) Bidder should have positive net worth provide the **Audited account and Balance Sheet of last 3 Years.**
- (2) Bidder should have total Annual turnover equal or more than the estimated cost work i.e. **50 lacs** for last three years. **Provide proof for the same of last three years.**
- (3) Bidder should provide name and address of Banker with **'Solvency Certificate not older than one year from the date of notification,** of value not less than estimated cost of work i.e. **Rs.50 lacs.**
- (4) **Documentary Proofs:** Duly signed by authorized signatory of bidder establishing above required eligibility should be provided with bid. For assistance bidders are advised to go through the checklist (Appendix- III) for submission of documents in compliance of eligibility. Bid submitted without proper documentary proofs establishing their eligibility is treated as ineligible.

Sd/-  
GM & Zonal Head  
Zonal Office, Mumbai



Appendix - I

(To be submitted by OEM/ Distributer, in case bidder is OEM)

Ref. no. ....

Date: .....

**Zonal Manager,  
UCO Bank,  
Zonal Office, Mumbai.**

Dear Sir,

Subject: .....  
RFP notification no.: .....

We, ..... who are established and reputable manufactures/distributor of ..... having factories/ Office at ..... do hereby certify that all the components / parts / assembly / software used in the CCTV system, Biometric Access Control system and Digital Fire cum Burglar Alarm System etc. are original with new components / parts / assembly / software and that no refurbished / duplicate / second hand components / parts / assembly / software are used or would be used.

We hereby extend our full guarantee and warranty as per terms and conditions of the RFP and services, offered against this invitation by us. We also confirm that back to back spare & skill arrangement has been made with for providing support services to UCO Bank in respect of proposed contract under this RFP.

Yours faithfully,

Authorized Signatories  
(Name & Designation)  
Date:

For and on behalf of M/s .....  
(Name of manufactures)

Note: This letter of authority should be on the letter head of OEM/ Distributor and should be signed by a competent authority of the agency.

Date:

Place:



Appendix-II

Manufacturer's Authorization Form (MAF)  
(To be taken from OEM in case bidder is not OEM)

Ref. no. ....

Date: .....

Zonal Manager,  
UCO Bank,  
Zonal Office, Mumbai

Dear Sir,

Subject: .....

RFP notification no. ....

We \_\_\_\_\_ who are established and reputable manufactures of \_\_\_\_\_ having factories at \_\_\_\_\_ and \_\_\_\_\_ do hereby authorize M/s \_\_\_\_\_ (Name and address of Vendor /Dealer) to offer their quotation, negotiate and conclude the contract with you against the above invitation for RFP offer.

We hereby extend our full guarantee and warranty as per terms and conditions of the RFP and the contract for the equipment and services offered against this invitation for RFP offer by the above firm and confirm that back to back Spare & Skill Arrangement has been made with M/s \_\_\_\_\_ for providing support services to UCO Bank in respect of proposed contract under this RFP.

Yours faithfully,

Authorized Signatories  
(Name & Designation)  
Date:

For and on behalf of M/s .....  
(Name of manufactures)

**Note:**

1. This letter of authority should be on the letterhead of the manufacturing concern and should be signed by a competent person of the manufacturer.
2. Such MAF for all items offered for which the vendor is not an OEM, should be attached.

Date:

Place:



Appendix- III

**CHECKLIST FOR BIDDERS FOR SUBMITTING ELIGIBILITY BID IN COMPLIANCE OF TERMS OF ANNEXURE-I**

| Sl. No. | Documentary proofs establishing eligibility of bidder                                                                           | Provided (Yes/ No) |
|---------|---------------------------------------------------------------------------------------------------------------------------------|--------------------|
| 1       | Duly filled Application format (Appendix- V)                                                                                    |                    |
| 2       | List of clients with contact details.                                                                                           |                    |
| 3       | Certification from OEM (Appendix- I)                                                                                            |                    |
| 4       | Authorization from OEM for consistent supply of spare/services. (Appendix- II)                                                  |                    |
| 5       | Certificate of Registration with Registrar of Companies or Registrar of Firms or have a letter of proprietorship as applicable. |                    |
| 6       | Copies of last three years ITR.                                                                                                 |                    |
| 7       | PAN/ TAN Registration.                                                                                                          |                    |
| 8       | Copies of Audited account balance Sheet of preceding 3 years.                                                                   |                    |
| 10      | Copies of last three years account statement/ GST returns.                                                                      |                    |
| 11      | Solvency Certificate from Bank not older than 01 year from date of Tender notification.                                         |                    |
| 12      | Copy of GST Registration.                                                                                                       |                    |
| 13      | Proof of payment of Tender fee/ DD Nos. & date:                                                                                 |                    |
| 14      | Any other document bidder likes to submit to prove its eligibility.                                                             |                    |
| 15      | Proof of local address in Mumbai, MH                                                                                            |                    |
| 16      | Registration under Shops and Establishment act.                                                                                 |                    |

(Authorized Signatory)

M/s .....

Yours faithfully,

Name:

Seal of the firm:

Date:



Appendix-IV

**CERTIFICATE OF PERFORMANCE**

(To be obtained from client (s) on their letter head in respect of each of the work order/ contract)

• **Name and Address of Client:**

• **Name of the vendor:**

| Sl. No | PERFORMANCE EVALUATION                                                                                                   | RESPONSE TO BE FILLED BY CLIENT                    |                                       |                |
|--------|--------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|---------------------------------------|----------------|
| 1      | Work executed by above vendor is related to (please tick mark on appropriate item)                                       | CCTV System/ Digital Fire cum Burglar Alarm system |                                       |                |
| 2      | Nature of work                                                                                                           | New supply & Installation                          | Comprehensive / non comprehensive AMC |                |
| 3      | Please mention reference Letter no. /Work order/ Contract no.                                                            |                                                    |                                       |                |
| 4      | Period of contract/ Actual Period of Services rendered.                                                                  |                                                    |                                       |                |
| 5      | In how many locations/ Branches/ Offices work executed/ AMC provided.                                                    |                                                    |                                       |                |
| 6      | PARAMETERS                                                                                                               | TICK THE APPROPRIATE                               |                                       |                |
| A      | Whether the equipment installed matches with the specifications offered by the client. (Yes/ No)                         | Yes                                                | No                                    |                |
| B      | Average time taken by the vendor in defect rectification after reporting of defect (in number of days).                  | Less than 2                                        | 2 to 5                                | More than 5    |
| C      | Average time taken for installation of new equipment (in number of days).                                                | Less than 7                                        | 8 to 15                               | More than 15   |
| D      | Quality of Work                                                                                                          | Good                                               | Satisfactory                          | Unsatisfactory |
| E      | Capabilities of the vendor                                                                                               | Good                                               | Satisfactory                          | Unsatisfactory |
| F      | Technical Proficiency                                                                                                    | Good                                               | Satisfactory                          | Unsatisfactory |
| G      | Financial Soundness                                                                                                      | Good                                               | Satisfactory                          | Unsatisfactory |
| H      | Mobilization of Manpower                                                                                                 | Good                                               | Satisfactory                          | Unsatisfactory |
| I      | Quality of products installed                                                                                            | Good                                               | Satisfactory                          | Unsatisfactory |
| 7      | If any penalty imposed on vendor (Yes/ No)                                                                               | Yes                                                | No                                    |                |
| 8      | If 'Yes' at above, then mention the nos. of instance(s) of imposition of penalty during the currency of contract / work. | Less than 3                                        | Three                                 | More than 3    |
| 9      | Did the vendor go for Arbitration/ court case in case of any dispute in connection with the referred contract?           | Yes                                                | No                                    |                |

Any other point worth mentioning for evaluation of performance of the vendor.

Provide separate performance certificate against each work order/ contract submitted with eligibility bid, without submission of above duly filled format respective work order would not be considered for evaluation of eligibility of vendor.

Bank can confirm the legitimacy of this performance certificate from issuing office through own sources.

**Signature of Reporting Officer with Office Seal**

**Details of Officer**

**Name:**

**Designation:**

**Contact No and E-mail Address:**

Reporting Officer should be In-charge looking after electronics/physical security measures of the institution, preferably the Security Officer.



Appendix- V

**FORMAT FOR APPLICATION  
(On Bidder's Letterhead)**

Ref. no. ....

Date .....

To,  
The Zonal Manager  
UCO Bank  
Zonal Office, Mumbai.

Sub: Application for empanelment for Supply, Installation, Testing, Commissioning & Comprehensive Annual Maintenance of electronic Security equipment (CCTV, Biometric Access Control system & Digital Fire cum Burglar Alarm system) in Branches /Offices under UCO Bank Mumbai Zone.

Sir,

In reference to your RFP inviting bids for empanelment of agencies for Supply, Installation, Testing, Commissioning and Comprehensive Annual Maintenance of electronic security equipment (CCTV, Biometric Access Control System and Digital Fire cum Burglar Alarm System, as applicable) in the Branches/Offices under your Zone, we wish to submit that:

1. We have carefully examined all the contents incorporated in this RFP Document and we have accepted all the terms & conditions of the RFP.
2. We are herewith applying for empanelment for supply, Install, testing commissioning & Comprehensive Annual maintenance of CCTVs, Biometric Access Control system & Digital Fire cum Burglar Alarm System.
3. We are herewith submitting the documentary proofs confirming our eligibility for empanelment for supply, Install, testing commissioning & Comprehensive Annual maintenance of CCTVs, Biometric Access Control System and Digital Fire cum Burglar Alarm System.
4. We undertake to demonstrate our products as per requisition by the Bank.
5. We have paid the non-refundable tender fee amounting **Rs.1000/-** (Thousand only) in Bank's specified submitting DD no. \_\_\_\_\_ of requisite amount along with this bid or seeking exemption on account of \_\_\_\_\_ and proof of exemption is submitted.
6. We understand that no EMD is required at the empanelment stage under this RFP. In case we are empanelled, we shall participate in subsequent financial bids/RFQs invited by the Bank for the relevant security item(s), and shall furnish EMD/performance security, if applicable, as specified in the respective financial bid/RFQ/work order.
7. **We confirm that we have not been disqualified/ blacklisted by any of our clients, Govt. Dept. / RBI/Bank/PSU for supply, install or Annual maintenance of the concerned security equipment(s) and any of our services/ products. Bank can reject our bid/ empanelment at any stage in case above confirmation is found false or unsatisfactory performance report received from any of our client.**
8. We certify that our agency/ firm / company is not owned or controlled by any director or serving officer/ employee of UCO Bank or their relatives the same meaning as assigned under section-6 of the company act 1956.

For and on behalf of \_\_\_\_\_

(With seal)

Signature \_\_\_\_\_

Name \_\_\_\_\_

Designation \_\_\_\_\_



**GENERAL INFORMATION: (SHEET TO BE ENCLOSED)**

| Sl. No. | ITEM                                                                                                                                                                                                                                                                                                                                                     | PARTICULARS | REMARKS        |
|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|----------------|
| 1.      | Name of the Company/ Firm/ Organization                                                                                                                                                                                                                                                                                                                  |             |                |
| 2.      | Year of Establishment and Incorporation                                                                                                                                                                                                                                                                                                                  |             |                |
| 3.      | Status of the firm whether Company/ Partnership/ Firm/ proprietary etc. :-                                                                                                                                                                                                                                                                               |             |                |
| a)      | Registered under the Companies Act, 1956. If so mention registration number and date.                                                                                                                                                                                                                                                                    |             |                |
| b)      | Registered under the Societies Registration Act, 1860. If so mention registration number and date.                                                                                                                                                                                                                                                       |             |                |
| c)      | Registered under the Indian Trust Act, 1882. If so mention registration number and date.                                                                                                                                                                                                                                                                 |             |                |
| d)      | Sole proprietorship firms whose proprietor is a resident in India as per the Income Tax Act, 1961. If so mention registration number and date.                                                                                                                                                                                                           |             |                |
| e)      | Partnership firm registered in India. If so mention registration number and date.                                                                                                                                                                                                                                                                        |             |                |
| 4.      | Nature of Business.                                                                                                                                                                                                                                                                                                                                      |             |                |
| 5.      | Address of Registered Office with PIN Code:                                                                                                                                                                                                                                                                                                              |             |                |
| 6.      | Local Address:-                                                                                                                                                                                                                                                                                                                                          |             |                |
| 7.      | Address of Manufacturing Unit / R&D Site:-                                                                                                                                                                                                                                                                                                               |             |                |
| 8.      | Name of Directors/ Partners/Members etc.:<br>A)<br>B)<br>C)                                                                                                                                                                                                                                                                                              |             |                |
| 9.      | Name of contact person(s):                                                                                                                                                                                                                                                                                                                               |             |                |
| a)      | Mobile Numbers (s):                                                                                                                                                                                                                                                                                                                                      |             |                |
| b)      | Land Line:                                                                                                                                                                                                                                                                                                                                               |             |                |
| 10.     | Name of person(s) authorized to conduct business along with Mobile, Tele, Fax and E-mail details:                                                                                                                                                                                                                                                        |             |                |
| 11.     | Website (if any):                                                                                                                                                                                                                                                                                                                                        |             |                |
| 12.     | E-mail Address:                                                                                                                                                                                                                                                                                                                                          |             |                |
| 13.     | a) Has your company/firm been ever blacklisted in past 10 years. Give details if Yes.                                                                                                                                                                                                                                                                    |             |                |
| 14.     | b) If No, a 'Notarized Certificate' be submitted stating that the company/firm or its owner or any sister concern have not been so blacklisted by any institution of the Central or State Govt, PSU/PSBs in the past ten years on any grounds/any of our services/ products whatsoever. Any subsidiary company (Write Yes / No) Give all details if yes. |             |                |
| 15.     | Furnish the Names of three responsible persons /Officer who will be in a position to certify about the quality as well as past performance of your organization.                                                                                                                                                                                         |             |                |
| Sl. No. | Name                                                                                                                                                                                                                                                                                                                                                     | Address     | Contact Number |
| 1.      |                                                                                                                                                                                                                                                                                                                                                          |             |                |
| 2.      |                                                                                                                                                                                                                                                                                                                                                          |             |                |
| 3.      |                                                                                                                                                                                                                                                                                                                                                          |             |                |

Yours faithfully,  
Name:  
Designation: Proprietor



Appendix- VII

PART-II: FINANCIAL, REGISTRATION FOR TAXATION AND OTHER STATUTORY REQUIREMENTS

| Sl. No. | ITEM                                                                                                                                                                                    | PARTICULARS                     |                                        | REMARKS |
|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|----------------------------------------|---------|
| 1.      | Whether registered for the following and having necessary certificates/Authority?<br>If so, mention registration number and date.<br>Enclose relevant certificate/Application Documents |                                 |                                        |         |
| a.      | Income Tax PAN                                                                                                                                                                          |                                 |                                        |         |
| b.      | GSTN (GST Registration No.)                                                                                                                                                             |                                 |                                        |         |
| c.      | ESIC                                                                                                                                                                                    |                                 |                                        |         |
| d.      | EPF                                                                                                                                                                                     |                                 |                                        |         |
| 2.      | <b>Furnish copies of audited Balance Sheet and Profit &amp; Loss Account (Audited) for the last 3 financial years:<br/>(Enclose audited copies)</b>                                     | <b>Turnover<br/>(INR Lacs.)</b> | <b>Profit After<br/>Tax(INR Lacs.)</b> |         |
|         | a) FY 2023-24 Turnover and Profit after Tax                                                                                                                                             | Rs.                             | Rs.                                    |         |
|         | b) FY 2024-25 Turnover and Profit after Tax                                                                                                                                             | Rs.                             | Rs.                                    |         |
|         | c) FY 2025-26 Turnover and Profit after Tax                                                                                                                                             | Rs.                             | Rs.                                    |         |

Yours faithfully,

Proprietor For

Name:

Seal of the firm:

Place:

Date:



Appendix – VIII

**TO BE SUBMITTED ALONGWITH THE TECHNICAL BID**

**(Please mark Yes / No should be marked against each aspect of Alarm system)**

Basic Technical Specification & compliance for Bidder

| Sl         | Technical Specification Compliance for Fire and Electronic Intruder Alarm System(Component and Description of Specification)                                          | Compliance Yes/No |
|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
|            | <b><u>CONTROL PANEL</u></b>                                                                                                                                           |                   |
| 1          | LCD based minimum 12+1 fully programmable zone control panel with built in GSM speech dialer with automatic arming and disarming with remote access through telephone |                   |
| 2          | Microcontroller based                                                                                                                                                 |                   |
| 3          | Minimum 12+1 zones                                                                                                                                                    |                   |
| 4          | Inbuilt GSM based speech and SMS dial up                                                                                                                              |                   |
| 5          | Minimum 12 zones programmable as delay, immediate, panic or fire                                                                                                      |                   |
| 6          | One tamper zone                                                                                                                                                       |                   |
| 7          | Separate remote key pad with 12X4 LCD display or more                                                                                                                 |                   |
| 8          | Separate zone for fire detection and provision for connection of fire alarm system                                                                                    |                   |
| 9          | Separate main control station for connection terminals and power supply units                                                                                         |                   |
| 10         | Automatic arming and disarming facility                                                                                                                               |                   |
| 11         | Can be operated through mobile and telephone line                                                                                                                     |                   |
| 12         | Electrical devices can also be switched on or off through remote key pad                                                                                              |                   |
| 13         | Built in battery backup                                                                                                                                               |                   |
| 14         | Zone omitting facility                                                                                                                                                |                   |
| 15         | Silent arming and night mode arming                                                                                                                                   |                   |
| 16         | Intrusion lock with time and date                                                                                                                                     |                   |
| 17         | Power failure indication                                                                                                                                              |                   |
| 18         | Blown fuse indication on LCD display on LED blinking on panel                                                                                                         |                   |
| 19         | Multiple sounder output                                                                                                                                               |                   |
| 20         | Distinct interrupted sounder output for fire alarm                                                                                                                    |                   |
| 21         | Battery strength display with audio indication in case of low battery                                                                                                 |                   |
| 22         | GSM signal strength display                                                                                                                                           |                   |
| 23         | Walk test mode                                                                                                                                                        |                   |
| 24         | Individual zone status is indicated in display                                                                                                                        |                   |
| 25         | Independent entry delay time 2 to 240 sec                                                                                                                             |                   |
| 26         | Independent exit delay time 2 to 240 sec                                                                                                                              |                   |
| 27         | Sounder time 2 to 20 minutes and multiple sounder outputs                                                                                                             |                   |
| 28         | Speaker wire cut detection for all sensors and hooters and speakers                                                                                                   |                   |
| 29         | Support combination of hooters and speakers                                                                                                                           |                   |
| 30         | Battery backup for 36 hours                                                                                                                                           |                   |
| 31         | Automatic switch off to battery in case of AC power failure                                                                                                           |                   |
| 32         | Automatic battery charging once the AC power is restored                                                                                                              |                   |
| 33         | ERTL certified.                                                                                                                                                       |                   |
| <b>Sl.</b> | <b><u>SMOKE SENSOR &amp; HEAT SENSOR</u></b>                                                                                                                          |                   |
| 1          | Automatic Drift compensation                                                                                                                                          |                   |
| 2          | Dust tolerant chamber provides optimum detection performance and minimal nuisance alarm between maintenance visit                                                     |                   |
| 3          | Multifunction handheld remote programming and test tool                                                                                                               |                   |
| 4          | Sensitivity remotely programmable                                                                                                                                     |                   |
| 5          | Digital addressing capability                                                                                                                                         |                   |
| 6          | Remotely implemented advance maintenance features                                                                                                                     |                   |
|            | Read and write last maintenance date                                                                                                                                  |                   |



|               |                                                                                                                      |  |
|---------------|----------------------------------------------------------------------------------------------------------------------|--|
|               | Read chamber contamination level                                                                                     |  |
|               | Read thermal element value alarm test                                                                                |  |
| 7             | Selectable blink/no blink LED option via hand held tool                                                              |  |
| 8             | Photoelectric multi-criteria photo-thermal with 58 degree C and 78 degree C fixed and rate of raise thermal detector |  |
| 9             | 8 to 30 VDC operating range enable operation in both fire and security system                                        |  |
| 10            | -30 to +70 degree C operating temperature range                                                                      |  |
| 11            | Multi-functional alarm – normal bio color LED indicator                                                              |  |
| 12            | EN 54 certified                                                                                                      |  |
| 13            | Make -                                                                                                               |  |
| <b>Sl.</b>    | <b>AUTOMATIC TELEPHONE DIALER &amp; BUILT IN VOICE &amp; SMS GSM DIALER</b>                                          |  |
| 1             | GSM speech & SMS dialer                                                                                              |  |
| 2             | Microcontroller base                                                                                                 |  |
| 3             | 2 speech / voice messages                                                                                            |  |
| 4             | Separate intrusion & fire messages                                                                                   |  |
| 5             | Minimum 10 programmable phone numbers upto 12 digits for intrusion and fire message                                  |  |
| 6             | 20 sec recording time for each message                                                                               |  |
| 7             | Alarm SMS with alarm type, zone number with time and date information                                                |  |
| 8             | System status SMS for arm and disarm                                                                                 |  |
| 9             | Power status SMS for AC power on and off, low battery                                                                |  |
| 10            | User editable name and address for alarm SMS                                                                         |  |
| 11            | Message playback, telephone no. editing facility, long volatile memory                                               |  |
| 12            | Retention of programmed data in case of power failure                                                                |  |
| 13            | Highest priority for condition dialing and silent alarming                                                           |  |
| <b>SL.</b>    | <b>ELECTRICAL</b>                                                                                                    |  |
| 1             | Quiescent current: 30 mA Max.                                                                                        |  |
| 2             | Quiescent current with backlit LCD: 90 mA Max.                                                                       |  |
| 3             | MAIN CONTROL STATION WITH ONE REMOTE KEY PAD                                                                         |  |
| 4             | Quiescent current: 300 mA                                                                                            |  |
| 5             | Quiescent current with backlit LCD: 360 mA                                                                           |  |
| 6             | Current with dialing: 530 mA Max.                                                                                    |  |
| 7             | Maximum sounder 1 current output : 1A                                                                                |  |
| 8             | Maximum sounder 2 current output : 1A                                                                                |  |
| 9             | Remote key pads : Up to three                                                                                        |  |
| 10            | Non-volatile Memory : Programming and Log                                                                            |  |
| 11            | Zone response time : <500ms                                                                                          |  |
| 12            | Zone Loop Resistance : <5k ohm for NORMALLY CLOSED                                                                   |  |
| 13            | Mains supply Voltage : 220+10%-15% 50Hz                                                                              |  |
| 14            | Total current Output: 2A at 220V AC or 4A at 220V AC                                                                 |  |
| 15            | Battery Voltage : 12V DC                                                                                             |  |
| 16            | Battery type : SMF Rechargeable                                                                                      |  |
| 17            | Battery Recharge Voltage: 13.8V +/-0.2V DC                                                                           |  |
| 18            | ENVIRONMENTAL                                                                                                        |  |
| 19            | Operating Temperature: 0C to 45C                                                                                     |  |
| 20            | Storage Temperature: -20C to 60C                                                                                     |  |
| 21            | Maximum humidity: 95% non-condensing                                                                                 |  |
| <b>SI No.</b> | <b>MAGNETIC CONTACT SENSOR</b>                                                                                       |  |
| 1             | Operating Gap: 15MM min                                                                                              |  |
| 2             | Contact Rating: 10W, 12/24VDC, 0.5A                                                                                  |  |
| 3             | Contact O/P : Normally Closed                                                                                        |  |
| 4             | 4 wire temper loop                                                                                                   |  |
| <b>SI No.</b> | <b>PIR SENSOR</b>                                                                                                    |  |
| 1             | Dual Element Pyroelectric sensor                                                                                     |  |
| 2             | Latest Technology Digital Signal Processor (DSP)                                                                     |  |



|        |                                                                       |  |
|--------|-----------------------------------------------------------------------|--|
| 3      | Pet Immunity up to 25 kg.                                             |  |
| 4      | Detection Range 15m                                                   |  |
| 5      | Detection angle 110°                                                  |  |
| 6      | Sealed optics                                                         |  |
| 7      | Excellent RFI and EMI Immunity                                        |  |
| 8      | Selectable Pulse Count                                                |  |
| 9      | Walk Test                                                             |  |
| 10     | Detection range: 15m, 110°                                            |  |
| 11     | RFI Immunity: Ave. 20V/m (10-1000MHz)                                 |  |
| 12     | Power Supply: 9 ~ 16V DC, 12V Typical                                 |  |
| 13     | Current Consumption: 20mA, 12V DC                                     |  |
| 14     | Alarm Output: NC/NO 30V DC, 0.2A max.                                 |  |
| 15     | Alarm Duration: 2 seconds                                             |  |
| 16     | Pulse Count: Single/Double                                            |  |
| 17     | Tamper Switch: Cover Open activation                                  |  |
| 18     | Operating Temperature: 0° to 50° Celsius                              |  |
| 19     | Walk Test LED: Red, can disable                                       |  |
| 20     | Temperature: Automatic using                                          |  |
| 21     | Compensation: NTC thermostat                                          |  |
| 22     | Detection Speed: 0.3 to 1 m/s                                         |  |
| 23     | Reverse Polarity Protection: Through Diode                            |  |
| SI No. | <b>PANIC SWITCH</b>                                                   |  |
| 1      | Automatic reset (no key required)                                     |  |
| 2      | Micro switch technology                                               |  |
| 3      | In-built tamper switch                                                |  |
| 4      | Contact O/P: NORMALLY CLOSED                                          |  |
| 5      | Technology: micro-switch with roller                                  |  |
| 6      | Tamper Switch: installed                                              |  |
| SI No. | <b>HOOTER/ SOUNDER</b>                                                |  |
| 1      | High power 120 db                                                     |  |
| 2      | 4 wired (with tamper loop)                                            |  |
| 3      | Low current consumption                                               |  |
| 4      | Available in 12V DC and 24V DC                                        |  |
| 5      | Available in multiple tones                                           |  |
| 6      | Weatherproof housing                                                  |  |
| SI No  | <b>Cable-Power</b>                                                    |  |
| 1      | 2 Core power cable                                                    |  |
| 2      | Type - 2Core 1sq.mmeach                                               |  |
| 3      | Acceptable Quality - ISI Marked (IS-694,1990).                        |  |
| 4      | Make - Finolex/ Incab/ Polycab or equivalent                          |  |
| 5      | PVC Insulated                                                         |  |
| 6      | <b>PVC Conduits for cabling.</b>                                      |  |
| 7      | Specifications - IS-9537-1983; Internal Dia 20 "+, -, " 1mm, Wall     |  |
| 8      | Thickness- 4.2-5 mm                                                   |  |
| 9      | Acceptable Quality ISI Marked. Make - Precision/ Prince or equivalent |  |
| 10     | Grade Medium                                                          |  |



| SI No  | 2 / 4 ZONE FIRE ALARM PANEL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Compliance<br>Yes/No |
|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| 1      | Good quality design and with latest technology for fire alarm control panels. This Micro processor based conventional Fire Alarm Control panel, is designed to be used for Commercial bank's building. The model should be a user friendly 4 or more zone standalone control panel with inbuilt USB and optional Ethernet & GSM module.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                      |
| 2      | Panel Features:<br>a) As per IS -15908: 2011 Standard.<br>b) Switched Mode Power Supply.<br>c) Modular Construction, Serviceable.<br>d) Battery polarity & deep discharge protection.<br>e) 16 X 2 Dot Matrix LCD Display.<br>f) Event log with Real Time Clock (150 events).<br>g) Standby battery backup with built in charging.<br>h) Fire / Fault status in unambiguous colored LED indication.<br>i) System ON, Mains ON & Standby ON status indication.<br>j) Low Battery visual warning with audible tone.<br>k) Relay output for actuators, for Fire and Fault.<br>l) Zone wise one man Walk Test Facility.<br>m) Zone wise test cum evacuate facility.<br>n) Zone wise Isolation facility with loop voltage cut off.<br>o) USB Interface for PC Connectivity.<br>p) Compatible to all type of Conventional Detectors.<br>q) Optional Ethernet and GSM (SMS) facility.<br>r) Includes centralized monitoring facility through Ethernet port. |                      |
| SI.    | SMOKESENSOR & HEAT SENSOR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Compliance<br>Yes/No |
| 1      | Automatic Drift compensation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                      |
| 2      | Dust tolerant chamber provides optimum detection performance and minimal nuisance alarm between maintenance visit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                      |
| 3      | Multi function handheld remote programming and test tool                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                      |
| 4      | Sensitivity remotely programmable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                      |
| 5      | Digital addressing capability                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                      |
| 6      | Remotely implemented advance maintenance features                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                      |
|        | Read and write last maintenance date                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                      |
|        | Read chamber contamination level                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                      |
|        | Read thermal element value alarm test                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |
| 7      | Selectable blink / no blink LED option via hand held tool                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                      |
| 8      | Photo electric multi- criteria photo-thermal with 58 degree C and 78 degree C fixed and rate of raise thermal detector                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |
| 9      | 8 to 30 V DC operating range enable operation in both fire and security system                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                      |
| 10     | -30 to +70 degree C operating temperature range                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                      |
| 11     | Multi-functional alarm-normal bio color LED indicator                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |
| 12     | EN 54 certified                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                      |
| 13     | Make-                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |
| SI No. | MANUAL CALL POINT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Compliance<br>Yes/No |
| 1      | Make as per BIS - As per IS 2189-2008. with hammer and chain                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                      |
| 2      | Material of body - M.S., Powder coated with approved P.O red                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                      |



|              |                                                                                                |                              |
|--------------|------------------------------------------------------------------------------------------------|------------------------------|
| 3            | Material of fragile Element - Glass of 2mm thickness                                           |                              |
| 4            | Contact making Breaking - Breaking for alarm                                                   |                              |
|              |                                                                                                |                              |
| <b>SI No</b> | <b>Electronic Hooter /Sounder with Flasher</b>                                                 | <b>Compliance<br/>Yes/No</b> |
| 1            | As per IS 2189-2008.                                                                           |                              |
| 2            | Watt/ capacity - 6 Watts (Dual tone) of Min 65 db output                                       |                              |
| 3            | Type of sound emitted - Intermittent / Dual                                                    |                              |
|              |                                                                                                |                              |
| <b>SI No</b> | <b>Response Indicator</b>                                                                      | <b>Compliance<br/>Yes/No</b> |
| 1            | As per IS 2189-2008 or equivalent as per prevalent Trade and practice, acceptable to the Bank. |                              |
| 2            | Type of indicator lamps - LED                                                                  |                              |
| 3            | Material of the body - Fabricated from either spun aluminum or molded PVC or MS 16 SWG         |                              |
|              |                                                                                                |                              |
| <b>SI No</b> | <b>Armoured Cable</b>                                                                          | <b>Compliance<br/>Yes/No</b> |
| 1            | 2core 1.5 sq mm armored cable                                                                  |                              |
| 2            | Armored & PVC Sheathed Cables Conforming to IS: 1554 (Part -I) 1976 or latest                  |                              |
| 3            | Fire Retardant Low Smoke                                                                       |                              |
| 4            | Make: Finolex/ Polycab/ RR Cable/ Havells Or Eq.                                               |                              |
| 5            | For MS Conduit Pipe - Size 25mm (IS9537)                                                       |                              |
| 6            | 2. PVC Pipe (ISI Mark) - Size 25mm                                                             |                              |



| SL No. | Additional and latest features will be preferred in Alarm Panel and sensors                                          |
|--------|----------------------------------------------------------------------------------------------------------------------|
| 1      | In-built TCP/IP CMS connectivity module capable of providing LAN / Cellular 5G or latest Connectivity;               |
| 2      | Compatibility with wireless devices,                                                                                 |
| 3      | On board PSTN Communicator with at least 8 programmable Mobile numbers & Zone wise prerecorded voice call /messaging |
| 4      | Free Health Monitoring System and status                                                                             |
| 5      | GSM/GPRS Module supporting all communication modules such as TCP/IP/4G/5G/Wi-Fi                                      |
| 6      | ARM & DISARMING- External keypad, mobile app, SMS, software                                                          |
| 7      | Easily upgradeable, wired to wireless, IP, GSM. Does not need to change the panels                                   |
| 8      | Arm & DISARMING- by only whitelisted mobile numbers                                                                  |

**OEM Criteria**

|   |                                                                                                                                                                              |
|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Made in India products are preferred- BIS & UL mandatory, as per Bank's Purchase Procurement Policy                                                                          |
| 2 | OEM should have a registered office in India and local service center in India                                                                                               |
| 3 | Product quoted should be UL, CE, FCC, BIS certified and product wise certificate to be provided by OEM and FIPS certified, Cyber essential and GDPR document to be provided. |
| 4 | Organization needs to be ISO 9001, 27001, 14001, 45001 certified for environment and cyber security reasons.                                                                 |
| 5 | OEM needs to have local service team with local branch and service center so that bank can call anytime OEM for audit - OEM service center details required.                 |
| 6 | Product quoted should be able to integrate existing hardware with the bank.                                                                                                  |
| 7 | As per Bank's Purchase Procurement Policy preference will be given to Make- in- India products.                                                                              |
| 8 | OEM to provide local audit support anytime in region without any additional cost.                                                                                            |



Appendix - IX

**TO BE SUBMITTED ALONGWITH THE TECHNICAL BID**

**(Please mark Yes / No should be marked against each aspect of CCTV system)**

**eXtended Video Recorder (XVR)-4, 8, 16, 32 CH**

This product shall be manufactured by a firm whose quality system is in compliance with the ISO-9001

Products quoted should be of international repute & from any of Top global OEM as per latest IHS report.

All systems and components must be in compliance with BIS/FCC/CE/UL/RoHS requirements.

The Offered Cameras, Recorder, VMS, Analytic shall be from the same OEM to ensure seamless integration & better support. However keeping in mind the future scalability, the offered VMS & Cameras should be ONVIF S compliant.

| S.N | Parameter                         | Specification                                                                                                                                                                                                                                                | Compliances |
|-----|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| 1   | Compatibility                     | Analog cameras (mandatory), AHD, CVI, TVI (minimum one out of the three other than itself)                                                                                                                                                                   |             |
| 2   | Main Processor / Operating System | Embedded                                                                                                                                                                                                                                                     |             |
| 3   | System Resources                  | Pentaplex function: recording, playback, live view, backup, remote access over IP network                                                                                                                                                                    |             |
| 4   | Recorder Control Options          | Video Front panel, Virtual Keyboard (Both RS485 and IP), IP Network, USB mouse                                                                                                                                                                               |             |
| 5   | Analog / HD Camera Input          | Minimum 4/8/16 Video channel; BNC                                                                                                                                                                                                                            |             |
| 6   | IP Camera Input                   | 04 Ch. HD + 2 IP Ch.<br>(Total 6 IP Channel each upto 6 MP)<br>08 Ch. HD + 4 IP Ch.<br>(Total 12 IP Channel each upto 6 MP)<br>16 Ch. HD + 8 IP Ch.<br>(Total 24 IP Channel each upto 6 MP)<br>32 Ch. HD + 16 IP Ch.<br>(Total 48 IP Channel each upto 6 MP) |             |
| 7   | Recorder Video Output             | Minimum 1 VGA, 1 HDMI                                                                                                                                                                                                                                        |             |
| 8   | Recorder Audio Input              | Minimum 1 audio channel, BNC or RCA                                                                                                                                                                                                                          |             |
| 9   | Recorder Audio Output             | Minimum 1 audio channel, BNC or RCA                                                                                                                                                                                                                          |             |
| 10  | Recorder Bidirectional Talk       | 1 channel RCA                                                                                                                                                                                                                                                |             |
| 11  | Display Screen Mode               | 1,4,8,9,16,32 ALL (Window) as per recorder channels                                                                                                                                                                                                          |             |
| 12  | Camera Scheduling                 | Supported (Continuous/Motion/Event based)                                                                                                                                                                                                                    |             |
| 13  | On Screen Display                 | Date, Time, Camera Title, Video loss alert, motion detection alert, recording, camera lock alert, camera tampering, camera masking.                                                                                                                          |             |
| 14  | Video/Audio Compression           | H.265/H.264/G.711 respectively (One Channel) or higher                                                                                                                                                                                                       |             |
| 15  | Image Resolution                  | 4 MP/1080p/720p/VGA/WD1/4CIF/CIF or better with selectable fps.                                                                                                                                                                                              |             |
| 16  | Encoding Stream                   | 4 MP lite/3 MP@15 fps; 1080p lite/720p lite/VGA/WD1/4CIF/CIF@25 fps (P)/30 fps (N) in all channels with selectable fps                                                                                                                                       |             |
| 17  | Video Encoding Bit Rate           | Analog video: 32~2048Kb/s or higher, IP video: 32~4096Kb/s or higher                                                                                                                                                                                         |             |
| 18  | Image Quality                     | 6 levels (VBR/ CBR)                                                                                                                                                                                                                                          |             |
| 19  | Recording Mode                    | Manual, Schedule, Regular, Motion detection, Camera                                                                                                                                                                                                          |             |



|    |                           |                                                                                                                                                                                                                                                                                                                |  |
|----|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
|    |                           | blank, Video loss. Stop Recording                                                                                                                                                                                                                                                                              |  |
| 20 | Recording Priority        | Manual; Alarm; Motion Detection & Regular                                                                                                                                                                                                                                                                      |  |
| 21 | Recording Interval        | Prerecord: 1sec to 30 sec., Post-record: 10sec ~ 5 minutes                                                                                                                                                                                                                                                     |  |
| 22 | Alarm Input               | Supported Minimum 4                                                                                                                                                                                                                                                                                            |  |
| 23 | Relay Output              | Supported Maximum 1                                                                                                                                                                                                                                                                                            |  |
| 24 | Water Marking             | Supported                                                                                                                                                                                                                                                                                                      |  |
| 25 | Playback Channel          | Synchronous Playback 1,2,4 (for 4ch recorder); 1,2,4,8 (for 8ch recorder); 1,2,4,16 (for 16ch recorder)                                                                                                                                                                                                        |  |
| 26 | Recorded Data Search Mode | Video Time & Date, Exact search (with Date, Hour, Minute / Second accuracy), Motion Detection, Alarm                                                                                                                                                                                                           |  |
| 27 | Video Intelligence        | Deep learning-based motion detection, perimeter protection (line crossing and intrusion detection), OR facial recognition.[Face picture comparison, face picture search (1-ch face picture comparison alarm for HD analog camera)]. Face comparison/recognition should support in either 4ch/8ch/16ch recorder |  |
| 28 | Playback Options          | Play, Digital zoom (any size), Pause, Rewind, Slow motion, shift to Next file, shift to Previous file, one click Previous camera, one click Next camera, Full screen mode, Replay, Backup selection, Fast forward, Shuffling                                                                                   |  |
| 29 | Operation Over Network    | Monitor, Playback, File download, Log information, System setting,                                                                                                                                                                                                                                             |  |
| 30 | Hard Drive Storage Option | For 4 Channel – 2 SATA ,<br>8 Channel – 4 SATA ,<br>16 Channel – 8 SATA.<br>32 Channel - 8 SATA<br>Should support up to 10 TB per SATA port                                                                                                                                                                    |  |
| 31 | USB Interface             | Minimum 2 Ports                                                                                                                                                                                                                                                                                                |  |
| 32 | Power Supply              | 12 VDC /AC 100~240 V, 50/60 Hz                                                                                                                                                                                                                                                                                 |  |
| 33 | Working Environment       | All Indoor weather conditions                                                                                                                                                                                                                                                                                  |  |
| 34 | Duplex type               | Recorder should be able to playback recoded footage without having to stop recording                                                                                                                                                                                                                           |  |
| 35 | Certificate               | UL/BIS,CE,FCC                                                                                                                                                                                                                                                                                                  |  |
| 36 | HDD quality               | Surveillance Hard Disk: Sea Gate/Western Digital/Sky Hawk( 2 TB / 4 TB/6 TB/8TB)                                                                                                                                                                                                                               |  |
| 37 | Network interfaces        | 2 RJ-45 10/100/1000 Mbps self-adaptive Ethernet interfaces                                                                                                                                                                                                                                                     |  |



**HD DVR 4 CH 2 SATA/ 8 CH 4 SATA**

| S. No. | Features                         | Description                                                                                                                                                                                                                  | Compliance (Yes/No) |
|--------|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| 1      | Compatibility                    | Analog cameras (mandatory), AHD, CVI, TVI (minimum one out of the three other than itself)                                                                                                                                   |                     |
| 2      | Main Processor/ Operating System | Embedded                                                                                                                                                                                                                     |                     |
| 3      | System Resources                 | Pentaplex function : recording, playback, live view, backup, remote access over IP network                                                                                                                                   |                     |
| 4      | Recorder Control Options         | Video Front panel, IR Based remote control, Keyboard (Both RS 485 and IP), IP Network, USB mouse                                                                                                                             |                     |
| 5      | Analog/ HD Camera Input          | Minimum 4 BNC                                                                                                                                                                                                                |                     |
| 6      | IP Camera Input                  | 8CH DVR: 08 CH HD + 4 IP Ch (Total 12 IP Ch each upto 6 MP)                                                                                                                                                                  |                     |
| 7      | Recorder Video Output            | Minimum 1VGA, 1HDMI                                                                                                                                                                                                          |                     |
| 8      | Recorder Audio Input             | Minimum 1 audio channel, BNC or RCA                                                                                                                                                                                          |                     |
| 9      | Recorder Audio Output            | Minimum 1 audio channel, BNC or RCA                                                                                                                                                                                          |                     |
| 10     | Recorder Bi directional Talk     | 1 channel Input, BNC, 1 channel Output, BNC or RCA                                                                                                                                                                           |                     |
| 11     | Display Screen Mode              | 1,4,8,9,16,32 ALL (Window)                                                                                                                                                                                                   |                     |
| 12     | Camera Scheduling                | Supported (Continuous/ Motion/ Event based)                                                                                                                                                                                  |                     |
| 13     | On Screen Display                | Date, Time, Camera Title, Video loss alert, motion detection alert, recording, camera lock alert, camera tampering, camera masking.                                                                                          |                     |
| 14     | Video/Audio Compression          | H.265/ H.264/ G.711 respectively (One Channel) or higher                                                                                                                                                                     |                     |
| 15     | Image Resolution                 | 1080p @ 25 fps, 1080p @ 30 fps, 720p @ 25 fps, 720p @ 30 fps;                                                                                                                                                                |                     |
| 16     | Encoding Stream                  | For 1080p stream access: 1080p/ 720p @ 15 fps; VGA/ WD1/ 4CIF/ CIF @ 25 fps (P)/ 30 fps (N)<br>For 720p stream access: 720p/ VGA/ WD1/ 4CIF/ CIF @ 25fps (P)/ 30 fps (N)                                                     |                     |
| 17     | Video Encoding Bit Rate          | Analog video: 32 ~ 2048 Kb/s or higher, IP video: 32 ~ 4096 Kb/s or higher                                                                                                                                                   |                     |
| 18     | Image Quality                    | 6 levels (VBR/ CBR)                                                                                                                                                                                                          |                     |
| 19     | Recording Mode                   | Manual, Schedule, Regular, Motion detection, Camera blank, Video loss, Stop Recording                                                                                                                                        |                     |
| 20     | Recording Priority               | Manual; Alarm; Motion Detection & Regular                                                                                                                                                                                    |                     |
| 21     | Recording Interval               | Prerecord: 1 sec to 30 sec., Post-record: 10 sec ~ 5 minutes                                                                                                                                                                 |                     |
| 22     | Alarm Input                      | Supported Minimum 4/ 8                                                                                                                                                                                                       |                     |
| 23     | Relay Output                     | Supported                                                                                                                                                                                                                    |                     |
| 24     | Water Marking                    | Supported                                                                                                                                                                                                                    |                     |
| 25     | Playback Channel                 | Synchronous Playback 1, 2, 4, 16                                                                                                                                                                                             |                     |
| 26     | Recorded Data Search Mode        | Video Time & Date, Exact search (with Date, Hour, Minute and Second accuracy), Motion Detection, Alarm                                                                                                                       |                     |
| 27     | Playback Options                 | Play, Digital zoom (any size), Pause, Rewind, Slow motion, shift to Next file, shift to Previous file, one click Previous camera, one click Next camera, Full screen mode, Replay, Backup selection, Fast forward, Shuffling |                     |
| 28     | Operation Over Network           | Monitor, Playback, File download, Log information, System setting.                                                                                                                                                           |                     |
| 29     | Hard Drive Storage Option        | For 4 Channel- 2 SATA or better<br>For 8 Channel- 4 SATA or better<br>Should support up to 10 TB per SATA port                                                                                                               |                     |
| 30     | USB Interface                    | Minimum 2 Ports and at least 1 should be USB 3.0                                                                                                                                                                             |                     |
| 31     | Power Supply                     | AC 100 ~ 240 V, 50/ 60 Hz                                                                                                                                                                                                    |                     |
| 32     | Working Environment              | All Indoor weather conditions                                                                                                                                                                                                |                     |
| 33     | Duplex type                      | Recorder should be able to playback recoded footage without having to stop recording                                                                                                                                         |                     |
| 34     | Certificate                      | UL, CE, FCC & BIS                                                                                                                                                                                                            |                     |
| 35     | HDD quality                      | Surveillance Hard Disk: Sky Hawk/ Western Digital                                                                                                                                                                            |                     |
| 36     | Network interfaces               | 2 RJ-45 10/100/1000 Mbps self-adaptive Ethernet interfaces                                                                                                                                                                   |                     |



**HD DVR 16 CH/ 32 CH 8 SATA**

| S. No. | Features                         | Description                                                                                                                                                                                                                  | Compliance (Yes/No) |
|--------|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| 1      | Compatibility                    | Analog cameras (mandatory), AHD, CVI, TVI (minimum one out of the three other than itself)                                                                                                                                   |                     |
| 2      | Main Processor/ Operating System | Embedded                                                                                                                                                                                                                     |                     |
| 3      | System Resources                 | Pentaplex function : recording, playback, live view, backup, remote access over IP network                                                                                                                                   |                     |
| 4      | Recorder Control Options         | Video Front panel, IR Based remote control, Keyboard (Both RS 485 and IP), IP Network, USB mouse                                                                                                                             |                     |
| 5      | Analog/ HD Camera Input          | Minimum 4 BNC                                                                                                                                                                                                                |                     |
| 6      | IP Camera Input                  | 16 CH DVR: 16 CH HD + 8 IP Ch (32 CH HD + 16 IP CH: 32 CH XVR)                                                                                                                                                               |                     |
| 7      | Recorder Video Output            | Minimum 1 VGA, 1 HDMI                                                                                                                                                                                                        |                     |
| 8      | Recorder Audio Input             | Minimum 1 audio channel, BNC or RCA                                                                                                                                                                                          |                     |
| 9      | Recorder Audio Output            | Minimum 1 audio channel, BNC or RCA                                                                                                                                                                                          |                     |
| 10     | Recorder Bi directional Talk     | 1 channel Input, BNC, 1 channel Output, BNC or RCA                                                                                                                                                                           |                     |
| 11     | Display Screen Mode              | 1,4,8,9,16,32 ALL (Window)                                                                                                                                                                                                   |                     |
| 12     | Camera Scheduling                | Supported (Continuous/ Motion/ Event based)                                                                                                                                                                                  |                     |
| 13     | On Screen Display                | Date, Time, Camera Title, Video loss alert, motion detection alert, recording, camera lock alert, camera tampering, camera masking.                                                                                          |                     |
| 14     | Video/Audio Compression          | H.265/ H.264/ G.711 respectively (One Channel) or higher                                                                                                                                                                     |                     |
| 15     | Image Resolution                 | 1080p/720p/ VGA/WD1/4CIF/ CIF or better                                                                                                                                                                                      |                     |
| 16     | Encoding Stream                  | For 1080p stream access: 1080p/ 720p @ 15 fps; VGA/ WD1/ 4CIF/ CIF @ 25 fps (P)/ 30 fps (N)<br>For 720p stream access: 720p/ VGA/ WD1/ 4CIF/ CIF @ 25fps (P)/ 30 fps (N)                                                     |                     |
| 17     | Video Encoding Bit Rate          | Analog video: 32 ~ 2048 Kb/s or higher, IP video: 32 ~ 4096 Kb/s or higher                                                                                                                                                   |                     |
| 18     | Image Quality                    | 6 levels (VBR/ CBR)                                                                                                                                                                                                          |                     |
| 19     | Recording Mode                   | Manual, Schedule, Regular, Motion detection, Camera blank, Video loss, Stop Recording                                                                                                                                        |                     |
| 20     | Recording Priority               | Manual; Alarm; Motion Detection & Regular                                                                                                                                                                                    |                     |
| 21     | Recording Interval               | Prerecord: 1 sec to 30 sec., Post-record: 10 sec ~ 5 minutes                                                                                                                                                                 |                     |
| 22     | Alarm Input                      | Supported Minimum 16                                                                                                                                                                                                         |                     |
| 23     | Relay Output                     | Supported Minimum 8                                                                                                                                                                                                          |                     |
| 24     | Water Marking                    | Supported                                                                                                                                                                                                                    |                     |
| 25     | Playback Channel                 | Synchronous Playback 1, 2, 4, 16, 32                                                                                                                                                                                         |                     |
| 26     | Recorded Data Search Mode        | Video Time & Date, Exact search (with Date, Hour, Minute and Second accuracy), Motion Detection, Alarm                                                                                                                       |                     |
| 27     | Playback Options                 | Play, Digital zoom (any size), Pause, Rewind, Slow motion, shift to Next file, shift to Previous file, one click Previous camera, one click Next camera, Full screen mode, Replay, Backup selection, Fast forward, Shuffling |                     |
| 28     | Operation Over Network           | Monitor, Playback, File download, Log information, System setting,                                                                                                                                                           |                     |
| 29     | Hard Drive Storage Option        | For 16/ 32 Channel- 8 SATA, Should support up to 10 TB per SATA port                                                                                                                                                         |                     |
| 30     | USB Interface                    | Minimum 2 Ports and atleast 1 should be USB 3.0                                                                                                                                                                              |                     |
| 31     | Power Supply                     | AC100 ~ 240 V, 50/ 60 Hz                                                                                                                                                                                                     |                     |
| 32     | Working Environment              | All Indoor weather conditions                                                                                                                                                                                                |                     |
| 33     | Duplex type                      | Recorder should be able to playback recoded footage without having to stop recording                                                                                                                                         |                     |
| 34     | Certificate                      | UL, CE, FCC & BIS                                                                                                                                                                                                            |                     |
| 35     | HDD quality                      | Surveillance Hard Disk: Sky Hawk/ Western Digital                                                                                                                                                                            |                     |
| 36     | Network interfaces               | 2 RJ-45 10/100/1000 Mbps self-adaptive Ethernet interfaces                                                                                                                                                                   |                     |



**4CH ATM recorder**

This product shall be manufactured by a firm whose quality system is in compliance with the ISO-9001  
Products quoted should be of international repute & from any of Top global OEM as per latest IHS report.  
All systems and components must be in compliance with BIS/FCC/CE/UL/RoHS requirements.

The Offered Cameras, Recorder, VMS, Analytic shall be from the same OEM to ensure seamless integration & better support.  
However keeping in mind the future scalability, the offered VMS & Cameras should be ONVIF S compliant.

| 4CH ATM recorder (with Inbuild Screen) |                                           |                                                                                                                                                                                                                                                                                                         |                   |
|----------------------------------------|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| S.N                                    | Parameter                                 | Specification                                                                                                                                                                                                                                                                                           | Compliance Yes/No |
| 1                                      | Operating system                          | Embedded RTOS / Linux / Windows                                                                                                                                                                                                                                                                         |                   |
| 2                                      | Analog / HD Camera Input                  | 4 Channel recorder                                                                                                                                                                                                                                                                                      |                   |
| 3                                      | Video surveillance Hard disk              | Surveillance Grade recorder HDD                                                                                                                                                                                                                                                                         |                   |
| 4                                      | HDD Slots                                 | 2 SATA (upto 20 TB per slot )                                                                                                                                                                                                                                                                           |                   |
| 5                                      | Video Input                               | 4 Ch (Only for ATMs)                                                                                                                                                                                                                                                                                    |                   |
| 6                                      | Display speed                             | 100 fps for 4 channel (Only for ATMs) (25 fps for each channel)                                                                                                                                                                                                                                         |                   |
| 7                                      | Compression method                        | H.265 Pro+/H.265 Pro/H.265/H.264+/H.264                                                                                                                                                                                                                                                                 |                   |
| 8                                      | Display split screen (Screen mode)        | 1,4 for 4 channel                                                                                                                                                                                                                                                                                       |                   |
| 9                                      | Encoding Resolution                       | 4 MP lite@15 fps; 1080p lite/720p lite/VGA/WD1/4CIF/CIF@25 fps (P)/30 fps (N)                                                                                                                                                                                                                           |                   |
| 10                                     | Audio Input                               | 1-ch, RCA (2.0 Vp-p, 1 KΩ)                                                                                                                                                                                                                                                                              |                   |
| 11                                     | Audio Output                              | 1-ch, RCA (Linear, 1 KΩ)                                                                                                                                                                                                                                                                                |                   |
| 12                                     | Synchronous Playback                      | 4 Ch                                                                                                                                                                                                                                                                                                    |                   |
| 13                                     | IP Camera Input                           | 2 Channel IP Camera in addition to HD channels; up to 6ch at the expense of HD channels                                                                                                                                                                                                                 |                   |
| 14                                     | Independent Recording setting Per channel | Continuous, motion detection sensor activated, flexible day /time daily Schedule.                                                                                                                                                                                                                       |                   |
| 15                                     | Monitoring                                | 4 channel real time Monitoring.<br>Single mode & 2x2 Mode<br>Sequential switching mode<br>Switching out monitoring                                                                                                                                                                                      |                   |
| 16                                     | Searching / Playback                      | Date & Time based<br>1 channel searching and all channel simultaneous searching<br>Replay up to 25 fps in each channel                                                                                                                                                                                  |                   |
| 17                                     | Video Intelligence                        | Should support Motion detection, Intrusion Detection                                                                                                                                                                                                                                                    |                   |
| 18                                     | Smart ATM Features                        | 1-ch human face mode and 1-ch panel mode for analog channel<br><b>Panel Mode :</b><br>Human entrance, operation timeout, sticking scrip, and installing scanner<br><b>Human Face Mode :</b><br>Normal human face, abnormal human face, multiple human faces, wearing sunglasses, and using mobile phone |                   |
| 19                                     | Back Up facility                          | In built & provision for External portable HDD/Pen drive/through USB port. Player software to play back recorded video should automatically be loaded on to the external back up media so that it can be played back on any PC directly.                                                                |                   |
| 20                                     | User Interface                            | On screen graphic User Interface(GUI)                                                                                                                                                                                                                                                                   |                   |
| 21                                     | System recovery after power failure       | Auto Re booting                                                                                                                                                                                                                                                                                         |                   |
| 22                                     | Operation for setting and searching       | User friendly                                                                                                                                                                                                                                                                                           |                   |
| 23                                     | Multiple functionality                    | Should support pentaflex functions to perform all recorder functions at the same time, i.e., record, live view/playback, network (view remotely), administrative and backup. Client software for remote view shall be provided free of any charge if required.                                          |                   |
| 24                                     | Compatibility                             | Should support all types of cameras                                                                                                                                                                                                                                                                     |                   |
| 25                                     | Certifications                            | UL/BIS,CE,FCC                                                                                                                                                                                                                                                                                           |                   |
| 26                                     | System operation                          | Micro processor based Password operated                                                                                                                                                                                                                                                                 |                   |



**HD Fixed Dome**

This product shall be manufactured by a firm whose quality system is in compliance with the ISO-9001

Products quoted should be of international repute & from any of Top global OEM as per latest IHS report.

All systems and components must be in compliance with BIS/FCC/CE/UL/RoHS requirements.

The Offered Cameras, Recorder, VMS, Analytic shall be from the same OEM to ensure seamless integration & better support. However keeping in mind the future scalability, the offered VMS & Cameras should be ONVIF S compliant.

| S.No | Parameters              | Specification                                                                                                            | Compliance Yes/No |
|------|-------------------------|--------------------------------------------------------------------------------------------------------------------------|-------------------|
| 1    | HD Technology           | AHD, CVI, TVI, CVBS                                                                                                      |                   |
| 2    | Image Sensor            | 2MP CMOS Sensor                                                                                                          |                   |
| 3    | Signal System           | PAL                                                                                                                      |                   |
| 4    | Effective Pixels        | 1920(H)x1080(V) or better                                                                                                |                   |
| 5    | Mini. Illumination      | Color: 0.0005 Lux @ (F1.0, AGC ON), 0 Lux with white light                                                               |                   |
| 6    | Video Output            | 1080P or higher @ 25 fps                                                                                                 |                   |
| 7    | Display Resolution      | 1080P or higher @ 25 fps                                                                                                 |                   |
| 8    | Recording Resolution    | 1080P or higher @ 25 fps                                                                                                 |                   |
| 9    | Frame Rate              | 50Hz:1080p or higher @25fps                                                                                              |                   |
| 10   | SNR                     | ≥52dB (AGC OFF)                                                                                                          |                   |
| 11   | Sync System             | Internal                                                                                                                 |                   |
| 12   | White Balance           | Automatic                                                                                                                |                   |
| 13   | Day & Night             | 24/7 Color Imaging                                                                                                       |                   |
| 14   | Shutter                 | Automatic                                                                                                                |                   |
| 15   | Slow Shutter            | 16X                                                                                                                      |                   |
| 16   | Auto Gain Control (AGC) | Automatic                                                                                                                |                   |
| 17   | Noise Reduction (NR)    | 3DNR                                                                                                                     |                   |
| 18   | White Light             | Up to 20 mtr                                                                                                             |                   |
| 19   | Functions               | Brightness, Sharpness, 3D DNR, Mirror, Smart light                                                                       |                   |
| 20   | Lens                    | 3.6mm, 2.8mm                                                                                                             |                   |
| 21   | Field of view           | 2.8 mm: 119° x 101° x 54° (diagonal x horizontal x vertical) 3.6 mm: 100° x 84° x 45° (diagonal x horizontal x vertical) |                   |
| 22   | WDR                     | 130 db WDR (DWDR not acceptable)                                                                                         |                   |
| 23   | Input Voltage           | DC12V±10%                                                                                                                |                   |
| 24   | IP Rating               | IP67                                                                                                                     |                   |
| 25   | Operation Temp          | -30° to +50° C                                                                                                           |                   |
| 26   | Storage Humidity        | 90% or less                                                                                                              |                   |
| 27   | Certification           | UL/BIS, CE, FCC                                                                                                          |                   |
| 28   | Image Enhancement       | BLC, HLC Supported                                                                                                       |                   |
| 29   | Built-in Microphone     | Yes                                                                                                                      |                   |
| 30   | Material                | Metal                                                                                                                    |                   |



2 MP HD Fixed Bullet

| S. No. | Parameter                          | Specification                                                                                                                                                           | Compliance (Yes/No) |
|--------|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| 1.     | Camera Type                        | 2MP Fixed Lens Network Bullet Camera                                                                                                                                    |                     |
| 2.     | Image Sensor                       | 1/2.9 inch Progressive Scan CMOS or better                                                                                                                              |                     |
| 3.     | Resolution                         | Min. 1920 x 1080 or better                                                                                                                                              |                     |
| 4.     | Video Bit Rate                     | 32 Kbps to 8 Mbps                                                                                                                                                       |                     |
| 5.     | Video Compression                  | H.265/H.264                                                                                                                                                             |                     |
| 6.     | Audio Compression                  | G.711ulaw/G.711alaw/G.722.1/G.726/MP2L2/PCM/AAC-LC                                                                                                                      |                     |
| 7.     | Streaming                          | Min. Three compressed stream (Individually Configurable)                                                                                                                |                     |
| 8.     | ID/Password                        | Multi-level user ID/Password                                                                                                                                            |                     |
| 9.     | Physical Layer                     | 1 RJ45 10M/100M self-adaptive Ethernet port                                                                                                                             |                     |
| 10.    | Protocol                           | TCP/IP, Multicast DNS, HTTP, RTSP, NTP, IPv4, IPv6, UDP, QoS, SMTP, HTTPS, DDNS, UPnP                                                                                   |                     |
| 11.    | Lens Type                          | 2.8/4mm                                                                                                                                                                 |                     |
| 12.    | Iris Type                          | Fixed Type                                                                                                                                                              |                     |
| 13.    | Audio                              | Built-in Microphone                                                                                                                                                     |                     |
| 14.    | Dynamic Noise Reduction            | 3D DNR                                                                                                                                                                  |                     |
| 15.    | SNR                                | ≥ 52 dB                                                                                                                                                                 |                     |
| 16.    | Privacy Mask                       | 4 Programmable Mask                                                                                                                                                     |                     |
| 17.    | ROI                                | 1 fixed regions for main stream and sub-stream                                                                                                                          |                     |
| 18.    | Antibanding                        | Support                                                                                                                                                                 |                     |
| 19.    | Illumination                       | Colour: 0.005 Lux @ F1.6<br>B/W: 0 Lux with IR                                                                                                                          |                     |
| 20.    | Supplement Light Type              | IR, white light                                                                                                                                                         |                     |
| 21.    | Supplement Light Range             | IR: up to 30 m or better<br>White light : up to 20 m or better                                                                                                          |                     |
| 22.    | Auto Gain Control                  | Yes                                                                                                                                                                     |                     |
| 23.    | Back Light Compensation            | Yes                                                                                                                                                                     |                     |
| 24.    | High Light Compensation            | Yes                                                                                                                                                                     |                     |
| 25.    | Electronic Shutter                 | 1/3 s to 1/100,000 s                                                                                                                                                    |                     |
| 26.    | White Balance                      | Yes                                                                                                                                                                     |                     |
| 27.    | Wide Dynamic Range                 | 120dB                                                                                                                                                                   |                     |
| 28.    | Edge & Network Storage             | Built-in memory card slot, support micro SD/micro SDHC/micro SDXC card, up to 512 GB                                                                                    |                     |
| 29.    | Day and Night switch               | Day, Night, Auto, Sceaule                                                                                                                                               |                     |
| 30.    | Operating Temperature              | -30 °C to +60 °C                                                                                                                                                        |                     |
| 31.    | Housing                            | Humidity 95% or less (non-condensing)<br>IP67                                                                                                                           |                     |
| 32.    | Edge based video content Analytics | Line crossing detection, intrusion detection, Motion detection (support alarm triggering by specified target types (human and vehicle)), video tampering alarm.         |                     |
| 33.    | General Function                   | Heartbeat, mirror, password reset via email, password protection                                                                                                        |                     |
| 34.    | Security                           | Password protection, complicated password, HTTPS encryption, watermark, digest authentication for HTTP/HTTPS, WSSE and digest authentication for ONVIF, RTSP over HTTPS |                     |
| 35.    | Power Source                       | 12 VDC, PoE: 802.3at/af                                                                                                                                                 |                     |
| 36.    | Certification                      | CE/FCC/BIS-ER                                                                                                                                                           |                     |



#### HD Varifocal Dome

This product shall be manufactured by a firm whose quality system is in compliance with the ISO-9001

Products quoted should be of international repute & from any of Top global OEM as per latest IHS report.

All systems and components must be in compliance with **BIS/FCC/CE/UL/RoHS** requirements.

The Offered Cameras, Recorder, VMS, Analytic shall be from the same OEM to ensure seamless integration & better support. However keeping in mind the future scalability, the offered VMS & Cameras should be ONVIF S compliant.

| S.No | Parameters                        | Specification                                             | Compliance<br>Yes/No |
|------|-----------------------------------|-----------------------------------------------------------|----------------------|
| 1    | HD Technology                     | AHD, CVI, TVI                                             |                      |
| 2    | Image Sensor                      | 1/3" 1080P CMOS Sensor /CCD or better                     |                      |
| 3    | Signal System                     | PAL                                                       |                      |
| 4    | Effective Pixels                  | 1920(H)x1080(V) or better                                 |                      |
| 5    | Mini. Illumination                | Mini, 0.01Lux@F1.2, AGC<br>Illumination ON, 0 Lux with IR |                      |
| 6    | Video Output                      | 1080P or higher @ 25 fps                                  |                      |
| 7    | Display Resolution                | 1080P or higher @ 25 fps                                  |                      |
| 8    | Recording Resolution              | 1080P or higher @ 25 fps                                  |                      |
| 9    | Frame Rate                        | 50Hz:720p or higher @25fps                                |                      |
| 10   | SNR                               | ≥52dB(AGC OFF)                                            |                      |
| 12   | Sync System                       | Internal                                                  |                      |
| 13   | White Balance                     | Automatic                                                 |                      |
| 14   | Day & Night                       | Automatic                                                 |                      |
| 15   | Shutter                           | Automatic                                                 |                      |
| 16   | Auto Gain Control (AGC)           | Automatic                                                 |                      |
| 17   | Noise Reduction (NR)              | 3DNR                                                      |                      |
| 18   | IR Range                          | Up to 30m                                                 |                      |
| 19   | Lens                              | 2.8-12mm (varifocal)                                      |                      |
| 20   | WDR                               | 120 db WDR ( DWDR not acceptable)                         |                      |
| 21   | Input Voltage                     | DC12V±15%                                                 |                      |
| 22   | IP Rating                         | IP67 ,IK10                                                |                      |
| 23   | Ingress Protection - Vandal Proof | IK10 ( outer glass cover ) - Turret Shape not acceptable  |                      |
| 24   | Operation Temp                    | 0° to +50° C                                              |                      |
| 25   | Storage Humidity                  | 90% or less                                               |                      |
| 26   | Certification                     | UL/BIS,CE,FCC                                             |                      |



**HD varifocal Bullet**

This product shall be manufactured by a firm whose quality system is in compliance with the ISO-9001

Products quoted should be of international repute & from any of Top global OEM as per latest IHS report.

All systems and components must be in compliance with BIS/FCC/CE/UL/RoHS requirements.

The Offered Cameras, Recorder, VMS, Analytic shall be from the same OEM to ensure seamless integration & better support. However keeping in mind the future scalability, the offered VMS & Cameras should be ONVIF S compliant.

| S.No | Parameters              | Specification                                             | Compliance Yes/No |
|------|-------------------------|-----------------------------------------------------------|-------------------|
| 1    | HD Technology           | AHD, CVI, TVI                                             |                   |
| 2    | Image Sensor            | 1/3" 1080P CMOS Sensor /CCD or better                     |                   |
| 3    | Signal System           | PAL                                                       |                   |
| 4    | Effective Pixels        | 1920(H)x1080(V)) or better                                |                   |
| 5    | Mini. Illumination      | Mini. 0.01Lux@F1.2, AGC<br>Illumination ON, 0 Lux with IR |                   |
| 6    | Video Output            | 1080P or higher @ 25 fps                                  |                   |
| 7    | Display Resolution      | 1080P or higher @ 25 fps                                  |                   |
| 8    | Recording Resolution    | 1080P or higher @ 25 fps                                  |                   |
| 9    | Frame Rate              | 50Hz:720p or higher @25fps                                |                   |
| 10   | SNR                     | ≥52dB(AGC OFF)                                            |                   |
| 11   | Sync System             | Internal                                                  |                   |
| 12   | White Balance           | Automatic                                                 |                   |
| 13   | Day & Night             | Automatic                                                 |                   |
| 14   | Shutter                 | Automatic                                                 |                   |
| 15   | Auto Gain Control (AGC) | Automatic                                                 |                   |
| 16   | Noise Reduction (NR)    | 3DNR                                                      |                   |
| 17   | IR Range                | Up to 30m                                                 |                   |
| 18   | Lens                    | 2.8-12mm (verifocal)                                      |                   |
| 19   | WDR                     | 120 db WDR ( DWDR not acceptable)                         |                   |
| 20   | Input Voltage           | DC 12V±30%                                                |                   |
| 21   | IP Rating               | IP67                                                      |                   |
| 22   | Operation Temp          | 0° to +50° C                                              |                   |
| 23   | Storage Humidity        | 90% or less                                               |                   |
| 24   | Certification           | UL/BIS,CE,FCC                                             |                   |



**Pinhole Camera**

This product shall be manufactured by a firm whose quality system is in compliance with the ISO-9001

Products quoted should be of international repute & from any of Top global OEM as per latest IHS report.

All systems and components must be in compliance with BIS/FCC/CE/UL/RoHS requirements.

The Offered Cameras, Recorder, VMS, Analytic shall be from the same OEM to ensure seamless integration & better support. However keeping in mind the future scalability, the offered VMS & Cameras should be ONVIF S compliant.

| Sr No | Feature                 | specification                                                                                    | Compliance Yes/No |
|-------|-------------------------|--------------------------------------------------------------------------------------------------|-------------------|
| 1     | Image Sensor            | 1/3" CMOS /CCD                                                                                   |                   |
| 2     | Effective pixels        | 1920(H)x1080(V)                                                                                  |                   |
| 3     | Resolution              | 1920(H)x1080(V)                                                                                  |                   |
| 4     | Sync system             | Internal                                                                                         |                   |
| 5     | Min. illumination       | Color: 0.004 LuxLux/ F2.4 Black & White: 0.0004 Lux/ F2.4                                        |                   |
| 6     | S/N ratio               | 52 dB                                                                                            |                   |
| 7     | Electronic shutter      | 1/3s~1/100000s                                                                                   |                   |
| 8     | Lens                    | 3.7mm Pin Hole (2.8mm optional)                                                                  |                   |
| 9     | WDR                     | 120 db WDR ( DWDR not acceptable)                                                                |                   |
| 10    | BLC                     | On/Off ( Auto)                                                                                   |                   |
| 11    | Motion detection        | Yes                                                                                              |                   |
| 12    | White balance           | Supported                                                                                        |                   |
| 13    | AGC                     | Supported                                                                                        |                   |
| 14    | Day & Night             | Color/B/W/Auto level adjust                                                                      |                   |
| 15    | Communication Interface | 1 RJ45 10 M/100 M self-adaptive Ethernet port                                                    |                   |
| 16    | Power supply            | DC12V                                                                                            |                   |
| 17    | Power consumption       | 5 Watts max                                                                                      |                   |
| 18    | Certification           | UL/BIS,CE,FCC                                                                                    |                   |
| 19    | Perimeter Protection    | Line crossing, intrusion. Support alarm triggering by specified target types (human and vehicle) |                   |
| 20    | Built-in Microphone     | Supported                                                                                        |                   |
| 21    | Built-in Speaker        | Supported                                                                                        |                   |
| 22    | HLC                     | Supported                                                                                        |                   |
| 23    | IR Range                | Up to 10 m                                                                                       |                   |



| 4/8/16 & 32 Channel NVR |                                          |                                                                                                                                                                                                                                                                                                                                       |                     |
|-------------------------|------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| S. No.                  | Features                                 | Description                                                                                                                                                                                                                                                                                                                           | Compliance (Yes/No) |
| 1                       | Main Processor                           | Industrial Grade Processor                                                                                                                                                                                                                                                                                                            |                     |
| 2                       | Operating System                         | Embedded LINUX or equivalent                                                                                                                                                                                                                                                                                                          |                     |
| 3                       | SATA Ports                               | 2 SATA for 4 channel NVR<br>4 SATA for 8 channel NVR<br>8 SATA ports for 16 / 32 channel NVR.<br>Each SATA port should support 16TB HDD                                                                                                                                                                                               |                     |
| 4                       | Interface                                | 1VGA, 1HDMI, Web, Local GUI                                                                                                                                                                                                                                                                                                           |                     |
| 5                       | Video Output                             | VGA:1920 × 1080, 1280 × 1024, 1280 × 720<br>HDMI:3840 × 2160, 1920 × 1080, 1280 × 1024, 1280 × 720<br>2-channel VGA, 2-channel HDMI video output. Heterogeneous video source output for HDMI1 and HDMI2 Simultaneous video source output for VGA1 and HDMI1 Simultaneous video Source output for VGA2 and HDMI 2 Supports 4K display. |                     |
| 6                       | Resolution                               | 16 MP; 12 MP; 8 MP; 6 MP; 5 MP; 4 MP; 3 MP; 1080p; 960p; 720p; D1; CIF                                                                                                                                                                                                                                                                |                     |
| 7                       | Multi-screen Mode (Display Split Screen) | 1/4/8/9/16                                                                                                                                                                                                                                                                                                                            |                     |
| 8                       | Trigger Events                           | Recording, PTZ, Tour, Alarm Out, Video Push, Email, FTP, Snapshot, Buzzer and Screen Tips                                                                                                                                                                                                                                             |                     |
| 9                       | Video Detection                          | Motion Detection, MD Zones: 396 (22 X 18), Video Loss and Tampering, Scene Change Detection                                                                                                                                                                                                                                           |                     |
| 10                      | Alarm Input                              | 16 Ports                                                                                                                                                                                                                                                                                                                              |                     |
| 11                      | Alarm output                             | 4 Ports                                                                                                                                                                                                                                                                                                                               |                     |
| 12                      | Sync Playback                            | 1/4/9/16                                                                                                                                                                                                                                                                                                                              |                     |
| 13                      | Search Mode                              | Time /Date, Alarm, MD and Exact Search (accurate to second)                                                                                                                                                                                                                                                                           |                     |
| 14                      | Playback Function                        | Play, Pause, Stop, Rewind, Fast play, Slow Play, Next File, Previous File, Next Camera, Previous Camera, Full Screen, Repeat, Shuffle, Backup Selection, Digital Zoom                                                                                                                                                                 |                     |
| 15                      | Backup Mode                              | USB Device/Network/Internal SATA burner/e-SATA Device                                                                                                                                                                                                                                                                                 |                     |
| 16                      | Internal HDD                             | All SATA ports should support 16TB                                                                                                                                                                                                                                                                                                    |                     |
| 17                      | USB                                      | 3(2 USB 2.0 port, 1 USB 3.0 ports)                                                                                                                                                                                                                                                                                                    |                     |
| 18                      | RS232                                    | 1 Port, for PC Communication and keyboard                                                                                                                                                                                                                                                                                             |                     |
| 19                      | RS485                                    | 1 Port, for PTZ Control                                                                                                                                                                                                                                                                                                               |                     |
| 20                      | IP Camera Input                          | 16                                                                                                                                                                                                                                                                                                                                    |                     |
| 21                      | Audio Compression                        | G.711a; G.711u; PCM; G726                                                                                                                                                                                                                                                                                                             |                     |
| 22                      | Two-way Talk                             | 1 Channel Input, 1 Channel Output                                                                                                                                                                                                                                                                                                     |                     |
| 23                      | Compression                              | High Efficiency Video Coding (HEVC), H.265+ or more                                                                                                                                                                                                                                                                                   |                     |
| 24                      | Resolution                               | 1080P or more at 25 FPS                                                                                                                                                                                                                                                                                                               |                     |
| 25                      | Frames per Second                        | 25 FPS                                                                                                                                                                                                                                                                                                                                |                     |
| 26                      | Record Rate                              | 256 Mbps Incoming                                                                                                                                                                                                                                                                                                                     |                     |
| 27                      | Record Mode                              | Manual, Schedule (Regular, Continuous), MD, Alarm, Stop                                                                                                                                                                                                                                                                               |                     |
| 28                      | Record Interval                          | 1-120 min (default: 60 min), Pre-record: 1-30 sec, Post record: 10-300 sec                                                                                                                                                                                                                                                            |                     |
| 29                      | Interface                                | 2 RJ-45 port (10/100/1000 Mbps)                                                                                                                                                                                                                                                                                                       |                     |
| 30                      | Network Function                         | HTTP; HTTPS; TCP/IP; IPv4/IPv6; UDP; SNMP; NTP; DHCP;DNS; SMTP; UPnP; IP Filter; PPPoE; FTP; DDNS; Alarm Server; IP Search, Multicast; P2P; Auto Registration                                                                                                                                                                         |                     |
| 31                      | Interoperability                         | ONVIF (Profile T; Profile S; Profile G), CGI Conformant                                                                                                                                                                                                                                                                               |                     |
| 32                      | Certifications                           | UL/ FCC, CE and BIS approved                                                                                                                                                                                                                                                                                                          |                     |
| 33                      | Network interfaces                       | 2 RJ-45 10/100/1000 Mbps self-adaptive Ethernet interfaces                                                                                                                                                                                                                                                                            |                     |

**Specifications: 2 MP IR Fixed Network DOME Camera (IP Camera)**

**Important** -It is to be ensured that the IP Camera is STQC Compliant as per the directives given in the Gazette Notification of Govt. of India (No. 1569 dated 09 Apr 2024 – Copy enclosed with the Tender RFP)

| SI No | Camera                                          |                                                                   |
|-------|-------------------------------------------------|-------------------------------------------------------------------|
| 1.    | Type of Camera Housing                          | Dome                                                              |
| 2.    | Camera Type                                     | IP Based                                                          |
| 3.    | Image Sensor Type                               | CMOS                                                              |
| 4.    | Image Sensor Size                               | 1/2.8"CMOS or better                                              |
| 5.    | Camera Image Sensing capacity (Picture Mode)    | 2MP or better                                                     |
| 6.    | Resolution*                                     | 1920 (H) x 1080 (V)                                               |
| 7.    | Day/Night Capable*                              | Yes                                                               |
| 8.    | IR Illumination Range (mtr)*                    | 30 mtr or better                                                  |
| 9.    | Lens Type*                                      | Fixed                                                             |
| 10.   | Focal Length (mm)*                              | 3.6 mm                                                            |
| 11.   | Iris Control*                                   | Fixed Iris                                                        |
| 12.   | Stream with frame rate                          | Main stream: 1080P (1~25/30 fps),<br>Sub Stream: D1 (1-25/30 fps) |
| 13.   | Video Compression                               | H.265 & H.264                                                     |
| 14.   | Video Streams                                   | Dual- Stream or better                                            |
| 15.   | Number of Audio Input Channel & Output          | NA                                                                |
| 16.   | Number of Alarm Digital Input & Output          | NA                                                                |
| 17.   | Pre/ Post Alarm Buffer*                         | Yes                                                               |
| 18.   | Minimum Illumination for Capturing Color Image* | 0.002 Lux @ F1.6                                                  |
| 19.   | Electronic Shutter Speed (sec)                  | 1/3s–1/100000s or better                                          |
| 20.   | WDR (Wide Dynamic Range)                        | 120 db or better                                                  |
| 21.   | SNR(Signal to Noise Ratio)                      | >55 Db or better                                                  |
| 22.   | Auto Gain Control                               | Yes                                                               |
| 23.   | Back Light Compensation*                        | Yes                                                               |
| 24.   | ONVIF Support*                                  | Profile G,S,T should be published on ONVIF website                |
| 25.   | Analytics                                       | Intrusion & Tripwire                                              |
| 26.   | Privacy Zones*                                  | 4                                                                 |
| 27.   | Max supported SD Card                           | 256 GB or better                                                  |
| 28.   | Protection & Vandal Resistant                   | IP 67& IK10                                                       |
| 29.   | Power Input*                                    | 12 V DC, POE                                                      |
| 30.   | Operating Temperature                           | -40°C to 60°C                                                     |
| 31.   | Certification*                                  | STQC, CE, FCC, RoHS, UL & BIS                                     |



**Specifications: 2 MP IR Fixed Network BULLET Camera (IP Camera)**

**Important** -It is to be ensured that the IP Camera is STQC Compliant as per the directives given in the Gazette Notification of Govt. of India (No. 1569 dated 09 Apr 2024 – Copy enclosed with the Tender RFP)

| SI No | Camera                                          |                                                                  |
|-------|-------------------------------------------------|------------------------------------------------------------------|
| 1.    | Type of Camera Housing                          | Bullet                                                           |
| 2.    | Camera Type                                     | IP Based                                                         |
| 3.    | Image Sensor Type                               | CMOS                                                             |
| 4.    | Image Sensor Size                               | 1/2.8"CMOS or better                                             |
| 5.    | Camera Image Sensing capacity (Picture Mode)    | 2MP or better                                                    |
| 6.    | Resolution*                                     | 1920 (H) x 1080 (V)                                              |
| 7.    | Day/Night Capable*                              | Yes                                                              |
| 8.    | IR illumination Range (mtr)*                    | 30 mtr or better                                                 |
| 9.    | Lens Type*                                      | Fixed                                                            |
| 10.   | Focal Length (mm)*                              | 3.6 mm                                                           |
| 11.   | Iris Control*                                   | Fixed Iris                                                       |
| 12.   | Stream with frame rate                          | Main stream: 1080P (1~25/30 fps),<br>Sub Stream: D1(1-25/30 fps) |
| 13.   | Video Compression                               | H.265 & H.264                                                    |
| 14.   | Video Streams                                   | Dual- Stream or better                                           |
| 15.   | Number of Audio Input Channel & Output          | NA                                                               |
| 16.   | Number of Alarm Digital Input & Output          | NA                                                               |
| 17.   | Pre/ Post Alarm Buffer*                         | Yes                                                              |
| 18.   | Minimum Illumination for Capturing Color Image* | 0.002 Lux @ F1.6                                                 |
| 19.   | Electronic Shutter Speed (sec)                  | 1/3s-1/100000s or better                                         |
| 20.   | WDR (Wide Dynamic Range)                        | 120 db or better                                                 |
| 21.   | SNR(Signal to Noise Ratio)                      | >55 Db or better                                                 |
| 22.   | Auto Gain Control                               | Yes                                                              |
| 23.   | Back Light Compensation*                        | Yes                                                              |
| 24.   | ONVIF Support*                                  | Profile G,S,T should be published on ONVIF website               |
| 25.   | Analytics                                       | Intrusion & Tripwire                                             |
| 26.   | Privacy Zones*                                  | 4                                                                |
| 27.   | Max supported SD Card                           | 256 GB or better                                                 |
| 28.   | Protection & Vandal Resistant                   | IP 67 & IK 10                                                    |
| 29.   | Power Input*                                    | 12 V DC, POE                                                     |
| 30.   | Operating Temperature                           | -40°Cto60°C                                                      |
| 31.   | Certification*                                  | STQC, CE, FCC, RoHS, UL & BIS                                    |

**Specifications: 4 MP IR Varifocal Network Dome Camera (IP Camera)**

**Important -It is to be ensured that the IP Camera is STQC Compliant as per the directives given in the Gazette Notification of Govt. of India (No. 1569 dated 09 Apr 2024 – Copy enclosed with the Tender RFP)**

| SI No | Camera                                          |                                                                                |
|-------|-------------------------------------------------|--------------------------------------------------------------------------------|
| 1     | Type of Camera Housing                          | Dome                                                                           |
| 2     | Camera Type                                     | IP Based                                                                       |
| 3     | Image Sensor Type                               | CMOS                                                                           |
| 4     | Image Sensor Size                               | 1/3" CMOS or better                                                            |
| 5     | Camera Image Sensing capacity (Picture Mode)    | 4 MP or better                                                                 |
| 6     | Resolution*                                     | 2560 (H) x 1440 (V)                                                            |
| 7     | Day/Night Capable*                              | Yes                                                                            |
| 8     | IR illumination Range (mtr)*                    | 30 mtr or better                                                               |
| 9     | Lens Type*                                      | Fixed                                                                          |
| 10    | Focal Length (mm)*                              | 3.6 mm                                                                         |
| 11    | Iris Control*                                   | Fixed Iris                                                                     |
| 12    | Stream with frame rate                          | Main stream: 4 MP 2560 x 1440 (1 ~ 25/30 fps),<br>Sub Stream: D1 (1-25/30 fps) |
| 13    | Video Compression                               | H.265 & H.264                                                                  |
| 14    | Video Streams                                   | Dual- Stream or better                                                         |
| 15    | Number of Audio Input Channel & Output          | NA                                                                             |
| 16    | Number of Alarm Digital Input & Output          | NA                                                                             |
| 17    | Pre/ Post Alarm Buffer*                         | Yes                                                                            |
| 18    | Minimum Illumination for Capturing Color Image* | 0.008 Lux @ F1.6                                                               |
| 19    | Electronic Shutter Speed (sec)                  | 1/3s-1/100000s or better                                                       |
| 20    | WDR (Wide Dynamic Range)                        | 120 db or better                                                               |
| 21    | SNR(Signal to Noise Ratio)                      | >55 Db or better                                                               |
| 22    | Auto Gain Control                               | Yes                                                                            |
| 23    | Back Light Compensation*                        | Yes                                                                            |
| 24    | ONVIF Support*                                  | Profile G,S,T should be published on ONVIF website                             |
| 25    | Analytics                                       | Intrusion & Tripwire                                                           |
| 26    | Privacy Zones*                                  | 4                                                                              |
| 27    | Max supported SD Card                           | 256 GB or better                                                               |
| 28    | Protection & Vandal Resistant                   | IP 67 & IK10                                                                   |
| 29    | Power Input*                                    | 12 V DC, POE                                                                   |
| 30    | Operating Temperature                           | -40°C to 60°C                                                                  |
| 31    | Certification*                                  | STQC, UL, FCC, CE, ISO certified, BIS                                          |



**Specifications: 4 MP IR Varifocal Network Bullet Camera (IP Camera)**

**Important** -It is to be ensured that the IP Camera is STQC Compliant as per the directives given in the Gazette Notification of Govt. of India (No. 1569 dated 09 Apr 2024 – Copy enclosed with the Tender RFP)

| SI No | Camera                                          |                                                                                |
|-------|-------------------------------------------------|--------------------------------------------------------------------------------|
| 1     | Type of Camera Housing                          | Bullet                                                                         |
| 2     | Camera Type                                     | IP Based                                                                       |
| 3     | Image Sensor Type                               | CMOS                                                                           |
| 4     | Image Sensor Size                               | 1/3" CMOS or better                                                            |
| 5     | Camera Image Sensing capacity (Picture Mode)    | 4 MP or better                                                                 |
| 6     | Resolution*                                     | 2560 (H) x 1440 (V)                                                            |
| 7     | Day/Night Capable*                              | Yes                                                                            |
| 8     | IR illumination Range (mtr)*                    | 60 mtr or better                                                               |
| 9     | Lens Type*                                      | Motorized                                                                      |
| 10    | Focal Length (mm)*                              | 2.7 mm ~ 13.5 mm                                                               |
| 11    | Iris Control*                                   | Fixed Iris                                                                     |
| 12    | Stream with frame rate                          | Main stream: 4 MP 2560 x 1440 (1 ~ 25/30 fps),<br>Sub Stream: D1 (1-25/30 fps) |
| 13    | Video Compression                               | H.265 & H.264                                                                  |
| 14    | Video Streams                                   | Dual- Stream or better                                                         |
| 15    | Number of Audio Input Channel & Output          | 1/1                                                                            |
| 16    | Number of Alarm Digital Input & Output          | 1/1                                                                            |
| 17    | Pre/ Post Alarm Buffer*                         | Yes                                                                            |
| 18    | Minimum Illumination for Capturing Color Image* | 0.008 Lux @ F1.6                                                               |
| 19    | Electronic Shutter Speed (sec)                  | 1/3s-1/100000s or better                                                       |
| 20    | WDR (Wide Dynamic Range)                        | 120 db or better                                                               |
| 21    | SNR(Signal to Noise Ratio)                      | >55 Db or better                                                               |
| 22    | Auto Gain Control                               | Yes                                                                            |
| 23    | Back Light Compensation*                        | Yes                                                                            |
| 24    | ONVIF Support*                                  | Profile G,S,T should be published on ONVIF website                             |
| 25    | Analytics                                       | Intrusion & Tripwire                                                           |
| 26    | Privacy Zones*                                  | 4                                                                              |
| 27    | Max supported SD Card                           | 256 GB or better                                                               |
| 28    | Protection & Vandal Resistant                   | IP 67 & IK10                                                                   |
| 29    | Power Input*                                    | 12 V DC, POE                                                                   |
| 30    | Operating Temperature                           | -30 °C to 60°C                                                                 |
| 31    | Certification*                                  | STQC, UL, FCC, CE, ISO certified, BIS                                          |



**5 PORT POE SWITCH**

|     |                        |                                                   |
|-----|------------------------|---------------------------------------------------|
| 1.  | Network Ports          | 5                                                 |
| 2.  | PoE Ports              | 4x10/100 Mbps,RJ-45 ports                         |
| 3.  | Uplink Port            | 1x10/100M Ethernet Port                           |
| 4.  | Network Standard       | IEEE802.3/802.3u/802.3x                           |
| 5.  | Packet Forwarding Rate | 0.1488 Mbps/ port                                 |
| 6.  | MAC Address Table      | 2K                                                |
| 7.  | Forwarding Mode        | Store and forward                                 |
| 8.  | PoE Power Budget       | 48 W                                              |
| 9.  | Working Mode           | Extend Off:100m,Extend On:250m,10M                |
| 10. | Power Supply           | Input: 100-260V AC, 50/60Hz built-in power supply |
| 11. | Power Consumption      | ≤5W                                               |
| 12. | ESD Protection         | Air discharge: 8KV Contact discharge: 6KV         |
| 13. | Working Temperature    | -10°C~50°C                                        |
| 14. | Working Humidity       | 10%to90% ,non-condensing                          |

**8 PORT POE SWITCH**

|    |                        |                                                              |
|----|------------------------|--------------------------------------------------------------|
| 1  | Network Ports          | 10x1000 Mbps RJ 45 ports + 2x1000 Mbps SFP ports             |
| 2  | PoE Ports              | 8x10/100 Mbps, RJ-45 ports                                   |
| 3  | Uplink Port            | 2x1000 Mbps RJ 45 ports + 2x1000 Mbps SFP ports              |
| 4  | Network Standard       | IEEE 802.3 i/ 802.3 u/ 802.3 x/ 802.3 af/ 802.3 ab/ IEEE 802 |
| 5  | Packet Forwarding Rate | 1.488 Mpps / port                                            |
| 6  | MAC Address Table      | 2K                                                           |
| 7  | Forwarding Mode        | Store and forward                                            |
| 8  | PoE Power Budget       | 96 W                                                         |
| 9  | Working Mode           | 0-100 m/1000 Mbps or Port 7-8 Max. 250m/10 Mbps              |
| 10 | Power Supply           | Input:100-240 V AC, 50/60 Hz built-in power supply           |
| 11 | Power Consumption      | ≤5W                                                          |
| 12 | ESD Protection         | Air discharge: 8 KV Contact discharge: 6 KV                  |
| 13 | Working Temperature    | -10°C~50°C                                                   |
| 14 | Working Humidity       | 10%to90% ,non-condensing                                     |



**OTHER COMPONENTS OF CCTV**

| Sr. No. | Features                         | Specifications                                                                           |
|---------|----------------------------------|------------------------------------------------------------------------------------------|
| 1.      | Hard Disk Drive (SATA II or III) | Seagate/WD                                                                               |
| 2.      |                                  | Surveillance Series (Rated for 24/7 operation).                                          |
| 3.      |                                  | 32~64 MB Cache, 3Mb ~ 6Mb per second data transfer rate, Spindle Speed 7200 RPM or more. |
| 4.      | Capacity                         | 4TB/ 6TB/ 8TB / 10TB (Tera Bytes)                                                        |
| 5.      | <b>MONITOR</b>                   | LED with TCO03 or higher certification.                                                  |
| 6.      | Screen size                      | <b>22" to 42" diagonal LED</b>                                                           |
| 7.      | Make                             | Samsung/ LG                                                                              |
| 8.      | Video                            | PAL/ NTSC color composite                                                                |
| 9.      | Resolution(Min)                  | Minimum 1920*1080/ 1368*720 Pixels @ 60~85                                               |
| 10.     |                                  | Hz Refresh Rate, True Colour (32 Bit)                                                    |
| 11.     | Power Input                      | 12/24VDC                                                                                 |
| 12.     | Viewing Angle                    | 140-degree H., 130 degree V                                                              |
| 13.     | Power consumption                | Not Exceeding 40 Watts                                                                   |
| 14.     | <b>Cable-CAT6</b>                | Armoured/ Unarmoured                                                                     |
| 15.     | Category                         | Category 6/Cat6 Cable                                                                    |
| 16.     | Mutual Capacitance               | 5.60nF/100mtrs maximum                                                                   |
| 17.     | Conductor Resistance             | 9.38 ohm /100 mtrs max at 20 deg C                                                       |
| 18.     | Impedance                        | 100+/-15ohm                                                                              |
| 19.     | Insulation                       | High Density Polyethylene                                                                |
| 20.     | Sheath                           | Fire Retardant PVC Compound (FRPVC)                                                      |
| 21.     | Standards                        | TIA/ EIA 568C.2                                                                          |
| 22.     | Packing                          | 305 Mtrs                                                                                 |
| 23.     | Sequential Marking               | Every Meter                                                                              |
| 24.     | <b>Cable-Video(RJ-6)</b>         | Unarmored                                                                                |
| 25.     | Category                         | Coaxial RG 59                                                                            |
| 26.     | Type                             | Unarmored                                                                                |
| 27.     | Capacitance                      | 53+/-30hms                                                                               |
| 28.     | DC resistance inner conductor    | 8.5 Ohms/ KM                                                                             |
| 29.     | Di-electric strength             | 10 KVA AC Mains                                                                          |
| 30.     | Dielectric material              | Polythene (PE), 7.1 mm dia                                                               |
| 31.     | Insulation resistance            | 50M Ohms/KM                                                                              |
| 32.     | Nominal Impedance                | 75Ohms                                                                                   |
| 33.     | Minimum bending radius           | 55mm                                                                                     |
| 34.     | Acceptable Quality               | Make-Finolex/ Incab/ Polycab or equivalent                                               |
| 35.     | <b>Cable-Power</b>               | Unarmored                                                                                |
| 36.     | Category                         | 2Core power cable                                                                        |
| 37.     | Type                             | 2Core 1sq.mmeach                                                                         |
| 38.     | Acceptable Quality               | ISI Marked (IS-694,1990).                                                                |
| 39.     |                                  | Make - Finolex/ Incab/ Polycab or equivalent                                             |
| 40.     | Insulation                       | PVC Insulated                                                                            |



|     |                           |                                                    |
|-----|---------------------------|----------------------------------------------------|
| 41. | PVC Conduits for cabling. |                                                    |
| 42. | Specifications            | IS-9537-1983;InternalDia20"+,-,"1 mm, Wall         |
| 43. |                           | Thickness-4.2~5mm                                  |
| 44. | Acceptable Quality        | ISI Marked. Make -Precision/ Prince or equivalent  |
| 45. | Grade                     | Medium                                             |
| 46. | 6URack-(Wall Mount)       | Dimension: 630 mm x 500 mm depth                   |
| 47. |                           | Power Strip:6                                      |
| 48. |                           | Socket power supply: 1                             |
| 49. |                           | No. Equipment MountingTray:1                       |
| 50. |                           | No Mounting screws & studs: 1pack                  |
| 51. |                           | Transparent front door with Lock                   |
| 52. |                           | Fan tray with 2Fans                                |
| 53. |                           | Provision for cable routing at the bottom of Rack. |



**3+1 Coaxial and power cable**

| <b>Coaxial Cable</b> |                   |                                             |
|----------------------|-------------------|---------------------------------------------|
| Conductor            | Material          | Bare copper                                 |
|                      | Wire Gauge        | 26AWG                                       |
|                      | Diameter          | 0.41±0.01mm                                 |
| Insulation           | Material          | FPE                                         |
|                      | Diameter          | 2.0±0.1mm                                   |
| Tape                 | Material          | Copper foil                                 |
| Braid                | Material          | Copper clad aluminum magnesium              |
|                      | Braiding Standard | 5*16*0.12mm ±0.008mm                        |
|                      | Braiding Density  | ≥80%                                        |
| Jacket               | Material          | PVC                                         |
| Impedance            |                   | 75ohms                                      |
| <b>Power Cable</b>   |                   |                                             |
| Conductor            | Material          | Bare copper                                 |
|                      | Quantity          | 3                                           |
|                      | Diameter          | 11*0.16±0.008mm                             |
| Insulation           | Material          | SR-PVC                                      |
|                      | Diameter          | 1.2±0.1mm                                   |
| Jacket               | Material          | PVC                                         |
| Make & Type          | Acceptable type   | ISI Marked (IS-694, 1990)                   |
|                      |                   | Make – Finolex, Polycab or similar quality, |

**CAT 6 Cable**

| S. No. | Parameter                     | Minimum Specifications                    |
|--------|-------------------------------|-------------------------------------------|
| 1      | Type                          | U/UTP 4Pairs cable-category 6- PVC Sheath |
| 2      | Size                          | 23 AWG                                    |
| 3      | Material                      | Solid Bare Copper                         |
| 4      | Test Standard                 | ISO/IEC11801, TIA-568-C.2                 |
| 5      | Ambient Temperature           | -20°C - 75°C                              |
| 6      | Insulation Material           | Polyethylene (HDPE)                       |
| 7      | Sheath material               | PVC Polyvinyl chloride                    |
| 8      | Tensile Strength before aging | >13.5                                     |
| 9      | Aging Period                  | 100 Deg C x 24h x 10d                     |
| 10     | Colour Chart                  | 1 White- Blue /Blue                       |
|        |                               | 2 White-Orange /Orange                    |
|        |                               | 3 White-Green /Green                      |
|        |                               | 4 White- Brown /Brown                     |



### **VMS Software Specifications**

|                                                                                                                                                                                                                                                   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| All software and licenses for end to end IP based video surveillance system                                                                                                                                                                       |
| Proposed CCTV system shall be based on Non-Proprietary open standard based integrated system with network centric functionality complied to ONVIF profile-S and management architecture, aimed at providing high-speed manual/automatic           |
| Failure of one camera shall not affect other cameras.                                                                                                                                                                                             |
| The video management system shall be an enterprise class IP enabled fully distributed solution, designed for limitless multi-site and multiple server installations requiring 24/7 surveillance with support for devices from different location. |
| The video management system shall allow a minimum 20,000 number of cameras, recording servers and clients to be connected to management server across multiple sites.                                                                             |
| Single server should connect upto. 50 ANPR cameras                                                                                                                                                                                                |
| The video management system shall include a distributed architecture, allowing clients on the host system with the user rights to view video sources belonging to multiple independent video management systems simultaneously.                   |
| The video management system shall contain a management server that shall be the central manager of the system and control recording servers, cameras, devices and users.                                                                          |
| The video management system shall incorporate a fully integrated video-sharing functionality for distributed viewing of video from any camera in the system on any computer with the viewing client.                                              |
| The video management system shall support encryption of video for export purposes.                                                                                                                                                                |
| Cameras, which shall show a minimum list of the following items. 1) Camera status (connected or disconnected)                                                                                                                                     |
| An individual camera is recording or not                                                                                                                                                                                                          |
| The name of the camera, the hardware device and the IP address of the hardware device                                                                                                                                                             |
| The recording server, the camera is connected                                                                                                                                                                                                     |
| What storage the camera is using                                                                                                                                                                                                                  |
| Live video format, for example H.264 or M-JPEG                                                                                                                                                                                                    |
| Recording video format, for example H.264 or M-JPEG                                                                                                                                                                                               |
| Viewing Client                                                                                                                                                                                                                                    |
| The viewing client shall enable operators to connect to the management server for initial authorization. Up on authorization, the viewing client shall be able to connect to the recording server(s), for access to live and record               |
| The Client operator shall be able to drag and drop a camera from a tree of available cameras or a camera sequence into any video tile for live viewing.                                                                                           |
| The viewing client shall allow the user to be able to:                                                                                                                                                                                            |
| View live video from cameras;                                                                                                                                                                                                                     |
| Playback recordings from cameras with a selection of advanced navigation controls, including an intuitive time line browser.                                                                                                                      |
| Switch between a number of views, each able to display videos from 1 up to 16 cameras from multiple servers at a time. The system shall make it possible to create views based on different layouts optimized for 4:3 and 16:9 display.           |
| Access views of cameras on any PC with a viewing client installed.                                                                                                                                                                                |
| Use multiple screens as well as floating windows for displaying different views simultaneously.                                                                                                                                                   |
| Quickly replace one or more views of cameras with other cameras.                                                                                                                                                                                  |
| View images from several cameras in sequence in a single camera position in a designated carousel position.                                                                                                                                       |
| View video from selected cameras in greater magnification and/or higher quality in a designated special view position.                                                                                                                            |
| Control PTZ cameras.                                                                                                                                                                                                                              |
| Use digital zoom on live as well as recorded video.                                                                                                                                                                                               |
| Get a quick overview of sequences with detected motion.                                                                                                                                                                                           |
| Quickly search for motion in selected areas of a video recording.                                                                                                                                                                                 |
| Maps                                                                                                                                                                                                                                              |
| The viewing client shall include a built-in map function which shall provide an intuitive overview of                                                                                                                                             |



|                                                                                                                                                                                                                                     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| the system and shall offer integrated access to all system components.                                                                                                                                                              |
| The map function shall be able to use standard graphical file formats.                                                                                                                                                              |
| It shall be possible to use any number of layered maps and to easily drag- and-drop and point-and-click icons representing cameras.                                                                                                 |
| The viewing client shall support a map function which shall support instant camera preview when moving the mouse pointer over a specific camera.                                                                                    |
| The map function shall support real-time status monitoring indication from all system components like camera, recording server, storage etc.                                                                                        |
| The map function shall support graphical at-the-glance visualization of the system status through color coding. Graphical tool illustrating health status of various equipment on a single screen, such as graphical representation |
| <b>Storage</b>                                                                                                                                                                                                                      |
| VMS should Support edge storage and central storage.                                                                                                                                                                                |
| VMS should support Central storage: Extend storage via iSCSI.                                                                                                                                                                       |
| Server disk configuration for picture storage involving face detection and recognition, alarms, and object detection                                                                                                                |
| Create record plan by time template: All day template, weekday template, weekend template and custom template                                                                                                                       |
| Back up the video by schedule from the edge storage, like EVS, NVR, DVR, etc.                                                                                                                                                       |
| Disk quota: Group the disks, and cameras can be allocated to different disk groups                                                                                                                                                  |
| <b>Vehicle Restricted List Management</b>                                                                                                                                                                                           |
| Set start time and end time for vehicle restricted list                                                                                                                                                                             |
| Arm and disarm vehicle restricted list.                                                                                                                                                                                             |
| Import and export vehicle restricted list.                                                                                                                                                                                          |
| <b>Parking Management</b>                                                                                                                                                                                                           |
| Overview of entrance and exit information: Number of parking spaces and remaining parking spaces, traffic statistics, parking turnover, parking utilization rates                                                                   |
| Support dual-camera capture for higher recognition rate.                                                                                                                                                                            |
| Edit parking-lot, includes total and available spaces, parking name etc.                                                                                                                                                            |
| Support configuration of barrier control rules, and support configuration of barrier control rules for zero-space-left cases                                                                                                        |
| VMS should support searching for vehicle records, on-site vehicles, and ANPR details                                                                                                                                                |
| VMS should support traffic Violation & search function by time, vehicle number, and traffic violation information type.                                                                                                             |
| Support querying for data of passing-by vehicles by section, time period, plate number, plate color, average speed, and type                                                                                                        |
| Supports Violation Penalty                                                                                                                                                                                                          |
| Violators can be penalized.                                                                                                                                                                                                         |
| Supports printing traffic tickets                                                                                                                                                                                                   |
| Violation records can be reviewed.                                                                                                                                                                                                  |
| Violation records can be searched for, including ANPR captured violations, and road section and traffic restriction violations.                                                                                                     |
| Gives Overview of traffic flow                                                                                                                                                                                                      |
| Supports searching for the traffic flow at intersections and road sections from specific periods.                                                                                                                                   |
| <b>Stand Alone Viewing Client</b>                                                                                                                                                                                                   |
| The standalone viewing client shall make it possible to view exported video.                                                                                                                                                        |
| The standalone viewing client shall run from an .exe file, and no installation of software shall be required in order to view exported sources.                                                                                     |
| <b>Mobile Viewing Client</b>                                                                                                                                                                                                        |
| It shall be possible to access and view cameras and views on a Smart phone or a tablet (a mobile device). Mobile Client should have live and Playback functionality. It must support android, windows, iOS platform                 |



**TO BE SUBMITTED ALONG WITH THE TECHNICAL BID**

(Please mark Yes/No should be marked against each aspect of Biometric Access Control System)

| Ser. | Features                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Compliance (Yes/No) |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| 1    | <p>Face Recognition Terminal with LCD display supporting Face mask detection with dual authentication</p> <p>Display – Min 4.3-inch LCD touch screen, faces capacity – 3000 or more, Fingerprints capacity- 3000 or more, RFID cards capacity-3000 or more Built-in Mifare card reading module. Event logs- minimum 1,50,000, 2 Mega pixel wide-angle lens with WDR feature, Duration &lt; 0.2 s/User; Face recognition accuracy rate – &gt;99%, Face recognition distance</p> <p>– variable from 0.3 to 1.5 m, IP65 Rating, Support QR code recognition, Support Face Anti spoofing, Audio prompt supported, 10 M/100 M/1000 M self-adaptive network interface; Interface for Lock output, Exit button, Door contact input &amp; Power, Stand-alone operation, ability to add person, card and fingerprint information locally and It should Transmit card and user data from or to the client software via TCP/IP protocol and saves the data on the client software which should be free for standalone device..</p> |                     |
| 2    | <p>Magnetic Locks: Technical Specification</p> <p>(a) Body: Anti-Rust Surface with Zinc Plating.</p> <p>(b) Suitable for: Wooden door, Glass door, Aluminum door, Fireproof door.</p> <p>(c) Vault Door Holding force: 600 To 1200 lbs.</p> <p>(d) Current drain: 300mA at 12VDC.</p> <p>(e) Safety mode: Power-on to lock; Power-off to open.</p> <p>(f) Type: Hanging.</p> <p>(g) Request-to-open, Auto-relock if no Action.</p> <p>(h) Relock Time Delay (RTD): Adjustable relock delay from 0.5 to 30 seconds).</p> <p>(i) Input voltage: 12VDC / 24 VDC.</p> <p>(j) Green/red LED indication for lock status</p> <p>(k) Accessories: L Bracket, U Bracket, ZL Bracket.</p> <p>(l) Certifications UL &amp; CE/ FCC.</p>                                                                                                                                                                                                                                                                                             |                     |