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|  Adding Value through IT | Electronics Corporation of Tamil Nadu Limited |
| | <p>Tender for Supply, Installation and Commissioning of Security Gadgets at Government Museum, Chennai.</p> <p>Tender No.ELCOT/EG/612/Museum/Security Gadgets/2020-21</p> |
| | <p>Tender Document</p> <p>Electronics Corporation of Tamil Nadu Limited No.692, MHU Complex, 2nd Floor, Anna Salai Nandanam, Chennai 600 035. Phone:+91 44-66401400 (30 Lines), Fax: +91 44 24330612</p> |

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| Acronyms and Definitions | |
|---------------------------------|--|
| AMC | Annual Maintenance Contract |
| CCTV | Closed Circuit Television |
| CST | Central Sales Tax |
| DSC | Digital Signature Certificate |
| DVR | Digital Video Recorder |
| EMD | Earnest Money Deposit |
| GST | Goods and Services Tax |
| HDD | Hard Disk Drive |
| ISO | International Organisation for Standardisation |
| LD | Liquidated Damage |
| LOA | Letter of Acceptance |
| NVR | Network Video Recorder |
| OEM | Original Equipment Manufacturer |
| SD | Security Deposit |
| SMCS | Security Management Control System |
| SNR | Site Not Ready |
| SPOC | Single Point of Contact |

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|-------------------------|
| Know Your Rights |
|-------------------------|

1. ALL TENDERS WILL BE OPENED ONLY IN THE PRESENCE OF THE BIDDERS.
2. THE BIDDERS HAVE A RIGHT TO INSIST ON PROCESSING OF TECHNICAL BIDS IN THE BIDDERS PRESENCE ONLY.
3. PRICE BID OPENING AND PRICE COMPARISON WILL BE DONE ONLY IN THE PRESENCE OF THE BIDDERS.
4. VENDORS / BIDDERS ARE ELIGIBLE FOR A VENDOR SIGNED COPY OF THE PRICE BID COMPARISON STATEMENT ON THE SPOT.
5. PLEASE INSIST ON YOUR RIGHTS AND AVAIL THE SAME.

MANAGING DIRECTOR
ELCOT

Important Notice

This Tender procedure is governed by “The Tamil Nadu Transparency in Tenders Act 1998 and The Tamil Nadu Transparency in Tenders Rules 2000” as amended from time to time.

In case of any conflict between the terms and conditions in the tender document and the Tamil Nadu Transparency in Tenders Act 1998 and The Tamil Nadu Transparency in Tenders Rules 2000, the ACT and Rules shall prevail.

Letter of Undertaking

To
The Managing Director
Electronics Corporation of Tamil Nadu Limited
692 Anna Salai, Nandanam
Chennai-600035

Sir,

Sub: Undertaking for participating in ELCOT's Tender - Reg.

Ref: **Tender No. ELCOT/EG/612/Museum/Security Gadgets/2020-21**

I/We ----- have gone through the Terms and Conditions, Scope of Work and Specification and will abide by them as laid down (Tender Documents, Technical bid and Price Bid)

I/We ----- hereby confirm that our Company has not been blacklisted by any State Government/ Central Government/ Public Sector Undertakings during the last three years. We also hereby confirm that our EMD/SD was not forfeited by any State Government / Central Government / Public Sector Undertakings during the last three years due to our non-performance, non-compliance with the tender conditions etc.

I/We ----- hereby declare that all the particulars furnished by us in this Tender are true to the best of my/our knowledge and we understand and accept that if at any stage, the information furnished is found to be incorrect or false, we are liable for disqualification from this tender and also are liable for any penal action that may arise due to the above.

I/We ----- certify that no refurbished components are used in the manufacturing and supply of tendered items. The licences for the operating systems and other software to be installed under this contract are certified as genuine and valid.

I/We ----- certify that we are liable and responsible for any disputes arising out of Intellectual Property Rights.

In case of violation of any of the conditions above, I/We ----- understand that I/ We are liable to be blacklisted by ELCOT for a period of three years.

Yours faithfully

For _____

Name, Signature

Designation

Seal

Note:

- 1) Declaration in the company's letter head should be submitted as per format given above.
- 2) If the bidding firm has been blacklisted by any State Government/ Central Government/ Public Sector Undertakings earlier, then the details should be provided.

1. Preamble

The Government Museum, Chennai, started in the year 1851 AD is the second oldest museum in India. It is situated in the heart of the city with six individual buildings – three heritage buildings and three modern buildings, housing 54 galleries that deal with subjects like Arts, Archaeology, Numismatics, Anthropology, Geology, Botany, Zoology and Children's Museum. It is spread over 16.25 acres of land. Besides, Education Section, Design and Display Section and a Chemical Conservation Section cater to the needs of the public. The world famous South Indian Bronze icons, Amaravati limestone sculptures, Adhichanallur megalithic collections, coins of India, a Skeleton of a Blue whale, Ravi Varma paintings etc., are renowned collections of the Government Museum, Chennai. There are inter-active displays and a 3D theatre in the Children's Museum; a life size animated model of Tyrannosaurus rex and a model of Pterodactylus – an extinct flying reptile in the Geology Gallery apart from a Museo'Bus are the recent additions and added attractions of the Government Museum, Chennai.

Short Titles used in the Tender Document:

- 1) **Bidder:** Bidder means the party who makes a formal offer in pursuance of the tender floated.
- 2) **Successful Bidder:** Successful Bidder means the Bidder who becomes successful through the tender process.
- 3) **Day:** A day means a calendar day.
- 4) **Service Centre:** Service Centre means the centre or place, wherein the Bidder, inter alia undertakes and performs the service activities relating to the tendered items indicated in the tender and shall include a Direct service centre or Authorised dealer or Franchisee service centre of the bidder/OEM.
- 5) **Life Cycle Cost:** Life Cycle Cost under this tender/contract means the total cost to be incurred by the Purchaser towards the purchase of tendered items and also charges to be incurred by the Purchaser towards maintenance of **Security Gadgets** for the whole period including Standard warranty period of 3 years and CAMC period of 4th & 5th year or any extended period mutually agreed by the Successful Bidder and the Purchaser.
- 6) **Purchaser:** Purchaser means the end-user for whom the procurement is indented through the tender.

2. e-Tender Schedule

| | |
|---|--|
| 1. Tender inviting Authority, Designation and Address | The Managing Director ELCOT II Floor MHU Complex 692 Anna Salai, Nandanam, Chennai-600035. e-mail: swg@elcot.in and info@elcot.in URL: www.elcot.in |
| 2. A) Name of the Work | Supply, Installation and Commissioning of Security Gadgets at Government Museum, Chennai. |
| B) Tender reference | ELCOT/EG/612/Museum Security Gadgets/2020-21 |
| C) Installation | Government Museum, Chennai. |
| 3. Tender documents available place | Tender documents can be freely downloaded from https://tntenders.gov.in till closing date and time of the Tender. The tender document fee is waived for downloading the Tender. |
| 4. Tender Fee Charges | For every Tender submitted through Tender fee charge of Rs.10,000/- (Rupees Ten Thousand only) should be paid electronically through NEFT/RTGS to the account of ELCOT Account Number:6681528770 Indian Bank, Nandanam branch, Chennai-35. IFSC Code:IDIB000N078. |
| 5. Earnest Money Deposit (EMD) | Rs.2,50,000/- (Rupees Two Lakh and Fifty Thousand Only) should be paid electronically through NEFT/RTGS to the account of ELCOT Account Number:6681528770 Indian Bank, Nandanam branch, Chennai-35. IFSC Code:IDIB000N078. |
| 6. Tender submission | Two Part Tender comprising of Technical Bid and Price Bid should be submitted electronically through e-Tender Portal https://tntenders.gov.in |
| 7. Bid signing | Bidders should possess valid Class 3 - Signing and Encryption Digital Signature Certificates for signing the Bids. |
| 8. Help manuals for e-Tender | Bidders may download the help documents and user manuals from https://tntenders.gov.in |
| 9. Date and Place of e-Portal Training and Pre-Bid Meeting | 19/02/2021 @ 03.00 PM at the address mentioned in Column (1) above. |
| 10. Due Date, Time and Place of submission of Tender | 25/02/2021 @ 03.00 PM at the address mentioned in Column (6) above. |
| 11. Date, Time and Place of opening of the Technical Bids | 25/02/2021 @ 04.00 PM at the address mentioned in Column (7) above. |

Tender Ref: ELCOT/EG/612/Museum/Security Gadgets/2020-21

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| 12. Date, Time and Place of opening of Price Bids | Will be intimated only to the Technically Qualified Bidders. |
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3. General Instructions

3.1 General

- a) The Bidders are requested to examine the instructions, terms and conditions and specifications given in the Tender. Failure to furnish all required information in every aspect will be at the Bidder's risk and may result in the rejection of bid.
- b) It will be imperative for each Bidder(s) to familiarise itself with the prevailing legal situations for the execution of contract. ELCOT shall not entertain any request for clarification from the Bidder regarding such legal aspects of submission of the Bids.
- c) It will be the responsibility of the Bidder that all factors have been investigated and considered while submitting the Bids and no claim whatsoever including those of financial adjustments to the contract awarded under this tender will be entertained by ELCOT. Neither any time schedule nor financial adjustments arising thereof shall be permitted on account of failure by the Bidder to appraise themselves.
- d) The Bidder shall be deemed to have satisfied itself fully before Bidding as to the correctness and sufficiency of its Bids for the contract and price quoted in the Bid to cover all obligations under this Tender.
- e) It must be clearly understood that the Terms and Conditions and specifications are intended to be strictly enforced. No escalation of cost in the Tender by the Bidder will be permitted throughout the period of Agreement or throughout the period of completion of contract whichever is later on account of any reasons whatsoever.
- f) The Bidder shall make all arrangements as part of the contract to supply, install, commissioning and train the beneficiaries at various locations at their own cost and transport.
- g) The Bidder should be fully and completely responsible to ELCOT and Government Museum, Chennai for all the deliveries and deliverables.
- h) Any bidder who is blacklisted in ELCOT will not be eligible to bid for Tenders in ELCOT, as per the conditions of blacklisting.
- i) In case show cause notice has been issued by ELCOT for poor performance, then ELCOT reserves the right to disqualify the bid submitted by such Bidder.

3.2 Clarifications in the Tender

- a) A prospective Bidder requiring any clarification in the Tender may notify ELCOT by letter or by Fax or by e-mail to swg@elcot.in with a copy to info@elcot.in. ELCOT encourage paper free e-mail communication.

- b) The responses to the clarifications will be notified in the websites by means of Corrigendum to the Tender Document. It would be advantageous to commence e-mail contact with swg@elcot.in to register your e-mail id.

3.3 Amendments to the Tender

- a) Before closing of the Tender, clarifications and amendments if any will be notified in the websites mentioned in the Tender Schedule. The Bidders periodically check for the amendments or corrigendum or information in the websites till the closing date of this Tender. ELCOT will not make any individual communication and will be in no way of responsible for any ignorance pleaded by the Bidders.
- b) No clarifications would be offered by ELCOT within 48 hours prior to the due date and time for opening of the Tender.
- c) Before the closing of the Tender, ELCOT may amend the Tender document as per requirements or wherever ELCOT feels that such amendments are absolutely necessary.
- d) Amendments also may be given in response to the queries by the prospective Bidders.
- e) Such amendments will be notified in the websites mentioned in the Tender schedule.
- f) ELCOT at its discretion may or may not extend the due date and time for the submission of bids on account of amendments.
- g) ELCOT is not responsible for any misinterpretation of the provisions of this tender document on account of the Bidders failure to update the Bid documents on changes announced through the website.

3.4 Language of the Bid

The bid prepared by the Bidder as well as all correspondence and documents relating to the bid shall be in English only. The supporting documents and printed literature furnished by the bidder may be in another language provided they are accompanied by an accurate translation in English duly notarised, in which case, for all purposes of the bid, the translation shall govern. Bids received without such translation copy are liable to be rejected.

3.5 Bid Currency

Price should be quoted in Indian Rupees (INR) only and Payment shall be made in Indian Rupees only.

3.6 Contacting Tender Inviting Authority

a) Bidders shall not make attempts to establish unsolicited and unauthorised contact with the Tender Inviting Authority or Tender Scrutiny Committee after opening of the Tender and prior to the notification of the Award and any attempt by any Bidder to bring to bear extraneous pressures on the Tender Scrutiny Committee shall be sufficient reason to disqualify the Bidder.

b) Notwithstanding anything mentioned above, the Tender Inviting Authority or the Tender Scrutiny Committee may seek bonafide clarifications from Bidders relating to the tenders submitted by them during the evaluation of tenders.

3.7 Force Majeure

Neither the Purchaser / ELCOT nor the Successful Bidder shall be liable to the other for any delay or failure in the performance of their respective obligations due to causes or contingencies beyond their reasonable control such as:

- Natural phenomena including but not limited to earthquakes, floods and epidemics.
- Acts of any Government authority domestic or foreign including but not limited to war declared or undeclared, priorities and quarantine restrictions.
- Accidents or disruptions including, but not limited to fire, explosions, breakdown of essential machinery or equipment, power and water shortages.
- In such claim of Force Majeure clause, the bidder should submit the written claim, explaining the cause within 7 days of such occurrence and should be accepted by ELCOT/ Purchaser.

3.8 Dispute and Jurisdiction

“Any dispute or difference, whatsoever, arising between the parties to this contract arising out of or in relation to the terms of this contract shall be resolved by the parties mutually by acting in good faith towards fulfilling the contract and

for this purpose the parties mutually agree to furnish or exchange all relevant documents, information and any other material within their special knowledge and thereby conclude their discussions between them / their representatives or officers within a period of time as may be mutually agreed to say the time of commencement of the move to resolve the dispute.

“In case, the parties failed to resolve the disputes amicably within the time frame agreed and in the manner stated supra, the aggrieved party shall approach the Court in Chennai City alone to the exclusion of all other courts to adjudicate the unresolved dispute”.

4. Eligibility Criteria

The Bidders should have the following Eligibility for participating in the Tender. The Bidders should enclose documentary evidence for fulfilling the Eligibility in the Technical Bid. If a bidder fails to enclose the documentary proof for eligibility, their bid will be summarily rejected.

4.1 Eligibility

| S.No. | Eligibility Conditions | Documentary Proof to be submitted |
|-------|---|--|
| 1 | The Bidder should be a Company registered in India under the Companies Act 1956 / Partnership Firm / Sole Proprietorship Firm and existing for the past 3 years as on 31.12.2020. | The Bidder shall provide the Certificate of Incorporation for Registered Companies/ Partnership Deed for Partnership Firms / GST and VAT Registration Certificate for Sole Proprietorship Firms. |
| 2 | OEM shall be a Company registered in India under the Companies Act 1956 and existing for the past 3 years as on 31.12.2020. | OEM shall provide the Certificate of Incorporation. |
| 3 | Bidder should have 3 years of existence in the business of SMCS as on 31.12.2020. | Copy of Purchase Order issued in the name of Bidder dated prior to 31.12.2017 and Copy of Completion / Performance Certificate for the above Purchase Order should be submitted. |
| 4 | Bidder should have an Average Annual Turnover of atleast Rs.5 (Five) Crores or above in the last three successive Audited Financial Years (2017-2018, 2018-2019 & 2019-2020) | Copies of the Audited Annual Reports containing the Balance sheets / Profit and Loss account for the last 3 Audited Financial years (2017-2018, 2018-2019 & 2019-2020) along with the Provisional Certificate for the year 2019-20 shall have to be submitted. |
| 5 | Bidder shall have executed, one Single work order for implementation of Security Systems for a value of at least Rs.40 Lakhs or above for any Government Departments / Organizations / Public Sector Undertakings in Tamil Nadu in the last 3 years as on 31/12/2020. | Relevant copies of Purchase Orders obtained in the name of the bidder and copy of completion/ performance certificate obtained from the Purchasers should be submitted. |

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| 6 | The bidder / OEM shall have atleast one service centre in each region (North, East, South and West). The service centres may be run by the OEM or by the Franchisee or by the authorized dealers / distributors. | In case of OEM/ Bidder's Own Service Centre, the copies of the land-line telephone bills (month before the due date)/ valid rental agreement/any legal proof shall be submitted as a proof for availability of the service centres. In case of OEM's / Bidder's Franchisee Service centre / Authorised distributors / dealers, the copy of the valid agreement entered between the Franchisee / Authorised distributors / dealers and the OEM / Bidder shall be submitted. |
| 7 | OEM should have ISO 9001, ISO 14001, ISO 27001 and CMMI Level 5 Certificate. | Should submit photo copy of valid ISO 9001, ISO 14001, ISO 27001 and CMMI Level 5 compliance Certificate. |
| 8 | Bidder should have tied-up with an Original Equipment Manufacturer (OEM) for the supply and support services of the proposed Security Gadgets. | a) Letter of authorization from the OEM for the supply and support services of the proposed Security Gadgets should be submitted. Photocopy of the Evaluation Assurance Level (EAL) / UL, CE, FCC, RoHS, REACH and BIS Certificates should be submitted. b) Quoted Camera models should be listed in ONVIF Portal. |
| 9 | The bidder should have office in Chennai. | Copies of the land-line telephone bills for the month before the due date / valid rental agreement/ any valid legal proof should be submitted as a proof for availability of the office in Chennai. |
| 10 | The OEM / Bidder shall have their own Website. | The URL of the Website Name and Copy of Home Page Print out of the OEM / Bidder shall be submitted. |
| 11 | The Bidder shall be an OEM or their authorised distributors or dealers. | a) For OEM's copy of the manufacturing License should be submitted. (or) b) For Authorised distributors or dealers, Manufacturer's authorisation letter should be submitted. |

5. Bid Preparation and Submission

5.1 Tender Procedure

- a) ELCOT facilitated an e-Tender portal <https://tntenders.gov.in>. The prospective Bidders should register themselves in the e-Tender Portal and submit the Bids electronically through the e-Tender portal. The paper based physical Tender submission is not permitted.
- b) The e-Tender training will be held on the date and time as mentioned in the Tender Schedule. The Bidders are requested to download the e-Tender help manual and user manuals from the Portal for reference.
- c) It is mandatory for the Bidders to possess a valid Class 3 Digital Signature Certificate (DSC) in the name of the tender submitting authority to complete the e-Tender Bid process as per the provisions of Government of India IT Act 2000 with latest amendments.
- d) The format of the contents of Technical Bid and Price Bid will be available in the tender site. The registered Bidders can log into the e-Tender system and download the tender documents/ corrigendums as applicable and go through them carefully. Then the bidders can get ready for uploading of the relevant documents as required for the technical bid as indicated before submitting the bid. Similarly the bidder has to download the Bill of Quantity (BOQ), the price bid form in xls format, fill up the relevant portions only in offline and then upload the final one against the price bid portion before submitting the bid.
- e) The contents of the Technical Bid with supporting documents and the Price Bid should be uploaded and submitted online using the Digital Signature Certificates within due date and time indicated. The supporting documents should be scanned and uploaded in the e-Tender system.

5.2 Cost of Bidding

The Bidders should bear all costs associated with the preparation and submission of Bids. ELCOT will in no way be responsible or liable for these charges/costs incurred regardless of the conduct or outcome of the bidding process.

5.3 Tender Document Fee

The Tender Documents can be downloaded free of cost from the website

mentioned in the Tender Schedule. The Tender document fee is waived for such downloaded documents.

5.4 Earnest Money Deposit (EMD)

- a) An EMD amount as specified in the Tender Schedule should be paid through NEFT/RTGS in offline mode as per the details mentioned in S.No.5 of the Tender schedule. In the case of EMD charges paid in advance by the bidder, but due to some reasons, the bids could not be uploaded/ submitted, the EMD charges paid earlier will be refunded by applying through a Letter of request to ELCOT with necessary proofs.
- b) The EMD of the unsuccessful Bidders will be returned at the expense of the Bidders within a reasonable time consistent with the rules and regulations in this behalf. The EMD amount held by ELCOT till it is refunded to the unsuccessful Bidders will not earn any interest thereof.
- c) The EMD amount of the Successful Bidder can be converted as part of the Security Deposit (SD) for successful execution of the work and will be returned only after the successful fulfilment of the Contract.
- d) The EMD amount will be forfeited by ELCOT, if the Bidder withdraws the bid during the period of its validity specified in the tender or if the Successful Bidder fails to sign the contract or the Successful bidder fails to remit Security Deposit within the respective due dates.

5.5 Tender Fee Charges

For each and every Bid submitted, a non-refundable Tender fee charges as mentioned in the Tender Schedule should be paid through NEFT/RTGS in offline mode as per the details mentioned in S.No.4 of the Tender schedule. In the case of Tender Fee charges paid in advance by the bidder, but due to some reasons, the bids could not be uploaded/ submitted, the Tender fee charges paid earlier will not be refunded.

5.6 Updation of payment details

- a) The payment particulars should be entered in the e-Tender Portal. In the e-tender portal, the bidder should select the payment type as NEFT/RTGS payments and then enter UTR.No and other details as asked.
- b) The necessary payment receipt copies paid through RTGS/NEFT should be

submitted to ELCOT through a covering letter indicating the tender reference no, before the due date and time of opening of the tender.

- c) At the time of opening of Technical Bids, the payment committed in the Bid should be factual and should match with the details of the physically submitted payment receipts.
- d) Even though the payment particulars are entered in the Tender portal, and if the Bidder fails to submit the payment receipts, their bid is liable for rejection. If any of the information committed in the e-Tender Bid, does not match with physically submitted payment receipt, ELCOT reserves the right to reject the bid summarily.

5.7 Letter of Authorisation

A letter of Authorisation from the Board of Directors / appropriate authority authorising the Tender submitting authority or a Power of Attorney shall be submitted in the Technical bid, otherwise the Bids will be summarily rejected.

5.8 Two Part Bidding

Bidders should examine all Instructions, Terms and Conditions and Technical specifications given in the Tender document. Failure to furnish information required by the Bid or submission of a Bid not substantially responsive in every aspect will be at the Bidders risk and may result in rejection of Bids. Bidders should strictly submit the Bid as specified in the Tender, failing which the bids will be considered as non-responsive and will be rejected.

5.8.1 Technical Bid Form

- a) The content format of the Technical Bid will be presented in the tender site and the bidder has to upload the relevant documents in the format, as asked in the tender against each item. The Bidder has to verify each uploaded document and then sign the same using the Digital Signature Certificate (DSC) before final submission.
- b) The Technical Bid Format should not be changed or altered or tampered. If the Bid format is found to be tampered, the Bids will be summarily rejected.
- c) The Technical Bid documents uploaded should not contain any Price indications strictly; otherwise the Bids will be summarily rejected.
- d) The bidders should submit the details of make and model of the items offered against the tender requirement as per the compliance sheet given in the Annexure – A1.5 Hardware Compliance.

5.8.2 Price Bid Form

- a) The Price Bid Form called Bill of Quantity (BOQ) will be in spreadsheet format. The original BOQ should be downloaded from the tender site, filled in at the appropriate places indicated in offline and then it has to be uploaded with the same name against the price bid option. The BOQ has to be verified and then signed using the DSC before final submission.
- b) The Price Bid Form should not be changed or altered or tampered otherwise the bids are liable for rejection.
- c) The Price Bid Form should not contain any conditional offers or variation clauses, otherwise the Bids will be summarily rejected.
- d) The Prices quoted shall be in INDIAN RUPEES (INR) only.
- e) The cost quoted by the Bidder shall include cost and expenses on all counts viz., cost of equipment, materials, tools, techniques, methodologies, manpower, supervision, administration, overheads, travel, lodging, boarding, in-station & outstation expenses, etc., and any other cost involved in the supply.
- f) The cost quoted by the Bidder shall be kept firm for a period specified in the Tender from the date of opening of the tender. The Bidder should keep the Price firm during the period of Contract including during the period of extension of time if any. Escalation of cost will not be permitted during the said periods or during any period while providing services whether extended or not for reasons other than increase of duties / taxes payable to the Governments in India within the stipulated delivery period. The Bidders should particularly take note of this factor before submitting the Bids.
- g) The Prices finalised after negotiations should be kept valid during the Rate Contract period and no escalation in the final price will be entertained including reasons due to Foreign Exchange fluctuations.
- h) Exchange Rate fluctuations (Foreign Currency Rate Exchange) cannot be cited as reason for delay or dishonour of Purchase Order.

5.9 Bid closing date and time

The Bids should be submitted not later than the date and time specified in the Tender Schedule or Corrigendum if published. The e-Tender portal will automatically lock the date and time exactly on the date and time. Even if the Bid submission is in half way through during the closing date and time, submission would not be possible. Hence the Bidders should be cautious to submit the Bids well in advance to avoid disappointments.

5.10 Withdrawal of bids

Bidders can withdraw their bids submitted earlier, in case they do not want to participate in this tender, before the bid closing date and time. Bidders should note that once withdrawn, bid cannot be submitted again for this tender.

5.11 Resubmission of bids

Bidders can resubmit the bids at any point of time either in technical bid or in price bid or both, before the bid submission end date and time and only the last content updated successfully will be available for bid opening, at the scheduled date and time.

5.12 Bid Acknowledgment

The etender system will issue a bid acknowledgement receipt which is the final proof for the successful bid submission from the bidder side.

6. Tender opening and Evaluation

6.1 Technical Bid Opening

The Technical Bid will be opened on the date and time as specified in the Tender schedule in the presence of those Bidders, who choose to be present against production of an authorisation letter from the Bidding authority. A maximum of two representatives for each Bidder would be allowed to attend the Tender opening.

6.2 Tender Validity

The offer submitted by the Bidders should be valid for a minimum period of 180 days from the date of opening of the Tender. The Rate Contract will be valid for One year from the date of signing of the contract or agreement / date of release of the first Purchase order, whichever is later. However ELCOT reserves the right to extend or short close the Tender validity period if situation warrants to benefit the Government.

6.3 Initial Scrutiny

Initial Bid scrutiny will be conducted and incomplete details as given below will be treated as non-responsive.

If Tenders are;

- not submitted in two parts as specified in the Tender
- received without the Letter of Authorisation
- received without EMD amount and e-Portal charges.
- found with suppression of information or incomplete information
- furnished with subjective and conditional offers.
- submitted without supporting documents in compliance to the Eligibility Criteria and Evaluation Criteria
- non-compliance of any of the clauses stipulated in the Tender
- lesser validity period

All responsive Bids will be considered for further evaluation.

The decision of ELCOT will be final in this regard.

6.4 Clarifications by ELCOT

When deemed necessary, ELCOT may seek bonafide clarifications on any aspect from the Bidder. However, that would not entitle the Bidder to change or cause any change in the substance of the Bid or price quoted. During the course of Technical Bid evaluation, ELCOT may seek additional information or historical documents for verification to facilitate decision making. In case the Bidder failed to comply with the requirements of ELCOT as stated above, such Bids may at the discretion of ELCOT, shall be rejected as technically non-responsive.

6.5 Tender Evaluation

6.5.1 Suppression of facts and misleading information

- a. During the Bid evaluation, if any suppression or misrepresentation or any of its kind, is brought to the notice of ELCOT, then ELCOT shall have the right to reject the Bid and if after selection, ELCOT would terminate the contract, as the case may be, will be without any compensation to the Bidder and the EMD / SD, as the case may be, shall be forfeited.
- b. Bidders should note that any figures in the proof documents submitted by the Bidders for proving their eligibility is found suppressed or erased, ELCOT shall have the right to seek the correct facts and figures or reject such Bids.
- c. It is up to the Bidders to submit the full copies of the proof documents to meet out the criteria. Otherwise, ELCOT at its discretion may or may not consider such documents.
- d. The Tender calls for full copies of documents to prove the Bidder's experience and capacity to undertake the project.

6.5.2 Technical Bid Evaluation

- a) A Technical Committee will examine the Technical Bids against the Eligibility Criteria and Evaluation Criteria given in the Tender document. The evaluation will be conducted based on the support documents submitted by the Bidders. The documents which did not meet the eligibility criteria will be rejected and further evaluation will not be carried out for such bidders. The eligible Bidders alone will be considered for further evaluation.

- b) The sample submitted will be evaluated for the tendered specification as given in the Scope of work to select the technically qualified bidder.
- c) The bidders have to submit their samples as per the terms specified in "10.1 Sample Submission Clause". Bids without submission of samples are liable to be rejected. Sample Submission Form should be submitted by the bidder as per Appendix -3.
- d) For those Bidders who have already worked or working with ELCOT, their previous performance in ELCOT would be the mandatory criteria for selection. If any unsatisfactory performances of those Bidders are found, their Bids will be straight away rejected.

The Unsatisfactory performance is defined as

- 1. Non responsiveness after getting the LOA or Purchase order
- 2. Delay in supply, installation of the ordered items etc.
- 3. Lack of communication about the delay in deliveries, Installation etc.
- 4. Poor warranty and CAMC period support.
- 5. Delay in providing services citing reasons of OEM's support issues.

6.5.3 Price Bid Evaluation

- a) The Price Bids of the Technically Qualified Bidders alone will be opened and evaluated. The Price Bid should include all expenses towards this Tender. The Price Bids will be opened in the presence of the Bidders at ELCOT. The Bidders or their authorised representatives will be allowed to take part in the Price Bid Opening.
- b) Price Bid evaluation will be done as per the Tamil Nadu Transparency in Tender Rules 2000 with latest amendments.
- c) As this is a Rate Contract, the following method of price evaluation will be adopted.
 - The Price Bid Evaluation shall include State Goods and Services Tax, Central Goods and Services Tax, Integrated Goods and Services Tax, and all central duties such as Customs Duty as part of the price. The GST rates quoted should comply with the statutory guidelines and will be paid as applicable at the time of billing.
 - In evaluation of the price of an imported item, the price shall be determined inclusive of the Customs duty.
 - **The bidder should quote for the line items and add-on items. Partial bid is NOT allowed.**

- The prices will be evaluated as follows and the decision of ELCOT will be the final.

The total cost excluding applicable Local Taxes and including all other duties and charges (Such as Customs Duty, Installation Charges etc., as per the guidelines stated above) of overall items (line item and Add on items) will be taken for Price Bid evaluation. **Bidder who becomes L1, in overall total (Line item and Add on items) will be called as L1 bidder. However, the L1 bidder has to match the lowest rate/quote of any individual item, wherever they have not become L1. Though the 4th and 5th year Comprehensive Annual Maintenance Charges (CAMC) are not included in the price bid evaluation, the L1 Bidder has to match the lowest CAMC Charges for the 4th and 5th year quoted by other Bidders.**

Note: Comprehensive Annual Maintenance cost quoted should not exceed 10% for each year.

d) The L1 bidder will be negotiated to reduce the overall L1 price and the Technically Qualified Bidders (L2, L3 etc) will be negotiated to match the negotiated overall L1 Price. If more than one Bidder matches the L1 Price, then order will be placed more than one Bidder, who matches the L1 Price. However, L1 Bidder will be given preference. The decision of ELCOT will be the final.

e) It is purely ELCOT's discretion to ask the willingness of L2, L3 etc to match the L1 price and they cannot claim as their right. The decision of ELCOT will be the final.

f) All the Bidders, who are selected after the Price Bid evaluation will be called as Successful Bidders. The negotiation and arriving of the L1 rates, L1 bidder and matching of L1 rates etc will be completed within 30 days from the date of opening of price bid.

g) If any of the item/s is/are unmatchable by either L1 or other technically qualified bidders, then the issue will be addressed to the **Tender Scrutiny Committee** to offer its recommendations and the decision of the Tender Scrutiny Committee is the final.

h) ELCOT reserves the right to cancel the tender and retender to invite the competitive offers / quotes after a thorough analysis of the tender specification terms and conditions.

i) The Successful Bidder should not sell the Tendered items to any other Purchaser at price which is lower than the final negotiated price offered to ELCOT. If it is found that it has been sold at lower rate, then that lower price will be fixed by ELCOT for that item in future and also for the already supplied quantities under this tender.

The successful bidder should supply the ordered items only as per the approved specification and as per the OEM's Manufacturers Authorization Form (MAF) conditions, until otherwise approved by ELCOT for change (improvement) in specification. If found otherwise or violating condition, penal action will be initiated against the erring bidder or OEM including blacklisting of them.

6.6 Negotiations

Negotiations will be conducted with all the Successful Bidders for improvement in the further reduction in price and advancement of delivery schedule.

6.7 Award of Contract

- a) Total quantity will be apportioned among the L1 Bidder and other Bidders who have agreed to match L1 rate, as per the provisions of Tamil Nadu Transparency in Tenders Act, 1998 and the Tamil Nadu Transparency in Tenders Rules, 2000 and Terms and Conditions of the Tender. In general L1 bidder will be given preference for supply. If the Purchaser / Customer desires specific make, then orders will be issued as per the discretion of the department.
- b) No dispute can be raised by any Bidder whose Bid has been rejected and no claims will be entertained or paid on this account.

6.8 ELCOT reserves the right to:

- 6.8.1 Negotiate with the Bidder whose offer is the lowest evaluated price for further reduction of prices.
- 6.8.2 Insist on quality / specification of materials to be supplied.
- 6.8.3 Modify, reduce or increase the quantity requirements to an extent of the tendered quantity as per the provisions of Tamil Nadu Transparency in Tenders Act 1998 and Tamil Nadu Transparency in Tenders Rules, 2000.
- 6.8.4 Change the list of areas of supply locations from time to time based upon the requirement of the purchaser.
- 6.8.5 Ask other qualified Bidders to match the L1 price as this is a rate contract tender. If delivery performance of the Bidder is not as per the Schedule or not as per the tender terms and conditions, then ELCOT reserves the right to reallocate the quantity to other Bidder(s).
- 6.8.6 ELCOT reserves its right to inspect the bidder's factory before or after placement of Orders and based on the inspection, ELCOT reserves its right to

modify the quantity ordered.

- 6.8.7 ELCOT reserves its right to withhold any amount for the deficiency in the service aspect of the ordered items supplied to the Purchasers anytime during the contract period.

7. Execution of Work

7.1 Acceptance of Tender and Withdrawals

The final acceptance of the tender is entirely vested with ELCOT who reserves the right to accept or reject, any or all of the tenders in full or in parts without assigning any reason whatsoever. The Tender Accepting Authority may also reject all the tenders for reasons such as change in Scope, Specification, lack of anticipated financial resources, court orders, calamities or any other unforeseen circumstances. After acceptance of the Tender by ELCOT, the Successful Bidder shall have no right to withdraw their tender or claim higher price.

7.2 Letter of Acceptance (LOA)

After acceptance of the Tender by ELCOT, a Letter of Acceptance (LOA) will be issued to the Successful Bidder(s) by ELCOT. Under this rate contract, ELCOT has the right to issue LOA to more than one bidder.

7.3 Payment of Security Deposit (SD)

The successful Bidder will be required to remit a Security Deposit (SD) equivalent to five percent of the value of the order, inclusive of EMD by way of Demand Draft payable at Chennai or in the form of unconditional irrevocable Bank Guarantee from scheduled banks (except Yes bank) valid for a period of 15 months from the date of issue of letter of acceptance and confirmation from ELCOT. The SD shall be paid within 10 days from the date of letter of acceptance (LOA) issued by ELCOT. The SD furnished by the Successful Bidder in respect of the tender will be returned to them after successful fulfilment of contract i.e only after successful completion of the Purchase Orders issued under this contract. The Security Deposit held by ELCOT till it is refunded to the Successful Bidder will not earn any interest thereof.

The Security Deposit will be forfeited if the Successful Bidder withdraws the Bid during the period of Bid validity specified in the Tender or if the Bidder fails to sign the contract or the bidder fails to supply/ deliver the items as per purchase / work order within the stipulated delivery / time schedule.

7.4 Execution of Contract

- a) The Successful Bidder should execute a Contract in the INR 100 non-judicial Stamp Paper bought in Tamil Nadu only in the name of the Bidder within one

week from the date of Letter of Acceptance issued by ELCOT with such changes /modifications as may be indicated by ELCOT at the time of execution on receipt of confirmation from ELCOT.

- b) The Successful Bidder shall not assign or make over the contract, the benefit or burden thereof to any other person or persons or body corporate for the execution of the contract or any part thereof without the prior written consent of ELCOT. ELCOT reserves its right to cancel the purchase order either in part or full, if this condition is violated. If the Successful Bidder fails to execute the agreement, the SD of the Successful Bidder will be forfeited and their offer/bid will be held as non-responsive.
- c) The expenses incidental to the execution of the agreement should be borne by the Successful Bidder.
- d) The conditions stipulated in the agreement should be strictly adhered to and violation of any of the conditions will entail termination of the contract without prejudice to the rights of ELCOT and ELCOT also have the right to recover any consequential losses from the Successful Bidder.

7.5 Release of Purchase Order

After execution of the Contract and payment of Security Deposit, "Firm Purchase Order" for the supply of Tendered items will be issued to the Successful Bidder by ELCOT. The supply and payment will be based on the Purchase Order(s) issued from time to time. However in certain specific cases, the supply of items shall be based on LOA or any specific instructions by letter or email or fax etc. for which regularisation purchase / work order will be issued to regularise the transactions.

7.6 Refund of EMD

The EMD amount paid by the Successful Bidder(s) will be adjusted towards Security Deposit payable by them. If the Successful Bidder submits Security Deposit for the stipulated value in full by way of Bank Guarantee, the EMD will be refunded.

7.7 Release of Security Deposit

The Security Deposit will be refunded to the Successful Bidder on completion of entire supply subject to satisfaction of ELCOT. Such completion would be arrived at when the entire quantity is supplied by the Bidder as per the Contract Agreement and as per the LOA or order including Purchase Order(s) issued by ELCOT from time to time.

7.8 Forfeiture of EMD and Security Deposit

- a) If the successful Bidder fails to act according to the tender conditions or backs out, after the tender has been accepted, the EMD will be forfeited by ELCOT.
- b) If the Successful Bidder fails to remit the SD, the EMD remitted by them will be forfeited by ELCOT and the tender will be held void. If the successful bidder fails to sign the contract within the stipulated time, then the SD remitted will be forfeited and the tender will be held void.
- c) If the Successful Bidder fails to act up on to the tender conditions or backs out from the contract, the SD mentioned above will also be forfeited by ELCOT.

7.9 Termination of Contract

7.9.1 Termination for default

- a) ELCOT may without prejudice to any other remedy for breach of contract, by written notice of default with a notice period of 7 days, sent to the Successful Bidder, terminate the contract in whole or part, (i) if the Successful Bidder fails to deliver any or all of the goods within the time period(s) specified in the Contract, or fails to supply the items as per the Delivery Schedule or within any extension thereof granted by ELCOT; or (ii) if the Successful Bidder fails to perform any of the obligation(s) under the contract; or (iii) if the Successful Bidder, in the judgement of ELCOT, has engaged in fraudulent and corrupt practices in competing for or in executing the Contract or (iv) supplies the items inferior to the ordered / accepted specifications ; or (v) not procured and supplied the item from the OEM from whom the MAF was obtained and not submitted as per tender conditions unless and otherwise taking written approval from ELCOT for alternate OEM source.

- b) In the event ELCOT terminates the Contract in whole or in part, ELCOT may procure, upon terms and in such manner as it deems appropriate, the goods and services similar to those and delivered and the Successful Bidder shall be liable to ELCOT for any additional costs for such similar goods. However, the Successful Bidder shall continue the performance of the contract to the extent not terminated.

7.9.2 Termination for Insolvency

ELCOT may at any time terminate the Contract by giving written notice with a notice period of 7 days to the Successful Bidder, if the Successful Bidder becomes bankrupt or otherwise insolvent. In this event, termination will be without compensation to the Successful Bidder, provided that such termination will not prejudice or affect any right of action or remedy that has accrued or will accrue thereafter to ELCOT.

7.9.3 Termination for Convenience

ELCOT may, by written notice, with a notice period of seven days sent to the Successful Bidder, may terminate the Contract, in whole or in part, at any time for its convenience. The notice of termination shall specify that termination is for ELCOT's convenience, the extent to which performance of work under the Contract is terminated, and the date upon which such termination becomes effective. On termination, the successful Bidder is not entitled to any compensation whatsoever.

7.10 Execution of Work Order

The Successful Bidder should nominate and intimate ELCOT, an Account Manager for Single Point of Contact (SPOC), who should be responsible for effective delivery of work complying with all the terms and conditions. The Successful Bidder should ensure that the Account Manager fully familiarises with the Tender Conditions, Scope of Work and deliverables.

7.11 Assigning of Tender whole or in part

The successful Bidder shall not assign or make over the contract, the benefit or burden thereof to any other person or persons or body corporate. The Bidder should not under-let or sublet to any person(s) or body corporate for the execution of the contract or any part thereof without the written consent of ELCOT.

7.12 Liquidated Damages (LD)

Liquidated damage will be levied at the rate of 0.25% per day on the un-delivered portion of the material, if the delivery has not been completed in full within the stipulated period. The delivery period will effect from the next date of receipt of Purchaser Order. If the Successful Bidder fails to supply even after the lapse of one month after the stipulated date of delivery, then the orders/contracts are liable for cancellation and the EMD/ Security Deposit will be forfeited in addition to ELCOT reserving the right to blacklist the successful bidders for a period of three years from participating in ELCOT's tenders. This alone will not relieve the Bidder and the difference in cost of the items purchased through other technically qualified Bidders or any other alternative sources will be recovered from the successful Bidder.

7.13 Penalty for Non-Fulfilment of Tender

A Penalty will be levied at 5% of the total value of the Purchase Order, for non-fulfilment or non-observance of any of the conditions stipulated in the Agreement, Terms and Conditions and Work Order / contract.

7.14 Other Conditions

- a) The final decision would be based on the technical capacity and pricing of the Bidder.
- b) ELCOT reserves the right to reject any or all the tenders without assigning any reason, to relax or waive any of the conditions stipulated in the terms and conditions of tender as deemed necessary in the best interest of ELCOT for good and sufficient reasons.
- c) ELCOT reserves the right to extend this contract rates towards supply and provide relevant services to any other Government Departments/ PSUs/ units etc. The successful bidder should not raise any dispute related with the supply of the Security Gadgets under any of the scheme adopted by ELCOT. Non co-operation by the bidder may lead to termination of the contract and ELCOT reserves the right to black list the successful bidder for a period of 3 years from participating ELCOT or any other Government Tenders.

7.15 Dispute and Jurisdiction

“Any dispute or difference, whatsoever, arising between the parties to this contract arising out of or in relation to the terms of this contract shall be resolved by the parties mutually by acting in good faith towards fulfilling the contract and for this purpose the parties mutually agree to furnish or exchange all relevant documents, information and any other material within their special knowledge and thereby conclude their discussions between them / their representatives or officers within a period of time as may be mutually agreed to say the time of commencement of the move to resolve the dispute.

“In case, the parties failed to resolve the disputes amicably within the time frame agreed and in the manner stated supra, the aggrieved party shall approach the Court in Chennai City alone to the exclusion of all other courts to adjudicate the unresolved dispute”.

8. Scope of Work

8.1 General

Government Museum, Chennai is a multi-purpose State Government Museum located in Egmore, which is the heart of the city, spreading to an area of 16.25 acres of land. It comprises of Six independent buildings and is organised into separate sections such as Archaeology, Anthropology, Numismatics, Botany, Zoology, Geology, Children's Museum and Contemporary Art Gallery.

The General scope of work is to Supply, Installation and Commissioning of Security Management Control System which covers, CCTV System, Fire Alarm System, Public Address System and Control room infrastructure and UPS.

1. Supply, Installation and Commissioning of the ordered items should be completed within the timeline at Government Museum, Chennai.
2. No incompatible or refurbished items shall be supplied.
3. It is the responsibility of the Successful Bidder to provide Warranty and CAMC Services.

8.2 High Level Requirements

1. Supply, Installation and commissioning of the Security Gadgets & its related cabling in outdoor and vital areas in the respective galleries at Museum.
2. Necessary civil and electrical work to be carried out in consultation with Museum Authorities.
3. Impart basic training and operational requirements to the Museum officials in Chennai.
4. Installation of cameras and control system equipments at the galleries and in the control room mentioned with related wiring and installation of the required Management Control Software.
5. Necessary civil and electrical works should be carried out by the bidder by obtaining proper prior permission from Museum Authorities in advance.
6. The cabling work should also include restoring the trench, and any other civil works to its original condition.
7. Integrate the CCTV Access Control for the control room, Intrusion Monitoring and related security hardware installed at the galleries.
8. Configure Control panels and Management Control System Server in the control room.

9. Conducting test and trial run.

8.3 Bill of Material (BOM) for SMCS

The details of the hardware items required in Govt. Museum, Chennai is given below.

8.3.1 CCTV System:

| # | Item Code | Item Description | Qty | UOM |
|----|-----------|--|-------|------|
| 1 | P-001 | Supply and Installation of 4MP IP Bullet Camera with motorised zoom | 16 | Nos |
| 2 | P-002 | Supply and Installation of 4MP IP Bullet Camera with WDR | 268 | Nos |
| 3 | P-003 | Supply and Installation of 4MP IP Bullet Camera with Video analytics | 24 | Nos |
| 4 | P-004 | Supply and Installation of 4MP IP Dome Camera with Audio | 30 | Nos |
| 5 | P-005 | Supply and Installation of 2MP IP Bullet Camera with Automatic Number Plate Recognition (ANPR) | 6 | Nos |
| 6 | P-006 | Supply and Installation of 32 Channel Network video recorder with 4 SATA Interfaces | 12 | Nos |
| 7 | P-007 | Supply and Installation of 6TB Hard Disk Drive | 48 | Nos |
| 8 | P-008 | Supply and Installation of 16 Port gigabit L2 Managed PoE Switch with 2 nos of SFP Slot & SFP Modules fully loaded with all accessories. | 15 | Nos |
| 9 | P-009 | Supply and Installation of 24 Port gigabit L2 Managed PoE Switch with 2 nos of SFP Slot & SFP Modules fully loaded with all accessories. | 11 | Nos |
| 10 | P-010 | Supply, Installation and Splicing of 12 port Light guide Interconnect Unit (LIU) fully populated with modules/ adapters. | 16 | Nos |
| 11 | P-011 | Supply and Installation of SC-LC Cables, Connectors etc. | 32 | Nos |
| 12 | P-012 | Supply and Installation of 4U Rack with Accessories, connectors etc. | 4 | Nos |
| 13 | P-013 | Supply and Installation of 6U Rack with Accessories, connectors etc. | 11 | Nos |
| 14 | P-014 | Supply and Installation of 9U Rack with Accessories, connectors etc. | 3 | Nos |
| 15 | P-015 | Supply and Laying of Cat-6 UTP 4 pair FRPVC Cable in existing conduit/pipe on surface/recess/concealed, with connectors, termination etc. | 27755 | Mtrs |
| 16 | P-016 | Supply and Laying of Optic Fibre Communication Outdoor cable (6 core, SMF) in existing pipe on surface/ recess/ concealed, with connectors/ adaptors, termination etc. | 4500 | Mtrs |
| 17 | P-017 | Supply and Laying of 3 core 2.5 Sqmm Flexible power cable in existing conduit/pipe on surface/recess/ concealed including all accessories, termination, etc. | 1947 | Mtrs |

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| | | | | |
|----|-------|--|-------|------|
| 18 | P-018 | Supply and Laying of 3 Core 4 Sqmm Armoured power cable in existing conduit/pipe on surface/recess/ concealed including all accessories, termination, etc. | 1896 | Mtrs |
| 19 | P-019 | Supply and Laying of 25 mm dia, PVC Conduit (ISI Marked) with all bends, Tees & other accessories. | 21925 | Mtrs |
| 20 | P-020 | Supply and Laying of 32 mm inner dia HDPE pipe (PN-6) with all accessories on surface/recess/ concealed. | 4500 | Mtrs |
| 21 | P-021 | Supply and Laying of 50 mm dia GI Pipe (Class B) with all accessories on surface/recess/ concealed. | 150 | Mtrs |
| 22 | P-022 | Excavation in Soft/ Hard Soil with the required depth up to 50 cm & Backfilling. | 1000 | Mtrs |
| 23 | P-023 | Road Cutting with the required depth up to 25 cm & Backfilling. | 150 | Mtrs |
| 24 | P-024 | Supply and Installation of 3 Mtrs Camera GI Pole | 42 | Nos |
| 25 | P-025 | Supply and Installation of Single Pole 10Amps MCB | 9 | Nos |
| 26 | P-026 | Supply and Installation of Single Pole 16Amps MCB | 9 | Nos |
| 27 | P-027 | Supply and Installation of Double Pole 32Amps MCB | 4 | Nos |

8.3.2. Fire Alarm System

| # | Item Code | Item Description | Qty | UOM |
|----|-----------|--|-------|------|
| 1 | P-028 | Supply and Installation of 4 LOOP Addressable Panel | 7 | Nos |
| 2 | P-029 | Supply and Installation of Multi sensor | 236 | Nos |
| 3 | P-030 | Supply and Installation of Manual Call Point | 19 | Nos |
| 4 | P-031 | Supply and Installation of Sounder Cum Strobe | 20 | Nos |
| 5 | P-032 | Supply and Installation of Isolator Module | 30 | Nos |
| 6 | P-033 | Supply and Installation of Control Module | 20 | Nos |
| 7 | P-034 | Supply and Installation of Loop card | 8 | Nos |
| 8 | P-035 | Supply and Installation of TCP/IP Card | 7 | Nos |
| 9 | P-036 | Supply and Installation of Centralized Monitoring Software | 1 | No |
| 10 | P-037 | Supply and Installation of GSM Module | 7 | Nos |
| 11 | P-038 | Supply and Installation of Addressable Panel Battery | 36 | Nos |
| 12 | P-039 | Supply and Laying of 2 core 1.5 Sqmm armoured cable | 11850 | Mtrs |

8.3.3 Public Address System

| # | Item Code | Item Description | Qty | UOM |
|---|-----------|---|-----|-----|
| 1 | P-040 | Supply and Installation of Controller | 1 | No |
| 2 | P-041 | Supply and Installation of Call station | 1 | No |
| 3 | P-042 | Supply and Installation of Zone Expander | 1 | No |
| 4 | P-043 | Supply and Installation of Extension Keypad | 1 | No |

| | | | | |
|----|-------|---|------|------|
| 5 | P-044 | Supply and Installation of Digital Amplifier | 1 | No |
| 6 | P-045 | Supply and Installation of Wall mount speaker | 45 | Nos |
| 7 | P-046 | Supply and Installation of Intrusion Panel | 10 | Nos |
| 8 | P-047 | Supply and Installation of 4 Wire Magnetic Contact | 40 | Nos |
| 9 | P-048 | Supply and Installation of Beam Sensor | 21 | Nos |
| 10 | P-049 | Supply and Installation of GSM Dialer | 12 | Nos |
| 11 | P-050 | Supply and Installation of Hooter | 31 | Nos |
| 12 | P-051 | Supply and Laying of 2 core 1.5 Sqmm flexible cable | 3120 | Mtrs |
| 13 | P-052 | Supply and Laying of 6 core 1 Sqmm flexible cable | 1500 | Mtrs |

8.3.4 Control Room Infrastructure and UPS System.

| # | Item Code | Item Description | Qty | UOM |
|----|-----------|---|-----|-----|
| 1 | P-053 | Supply and Installation of 20 KVA Online UPS with 5 Hours Battery backup and necessary Rack, link and Terminals, etc. | 2 | Nos |
| 2 | P-054 | Supply and Installation of 10 KVA Online UPS with 5 Hours Battery backup and necessary Rack, link and Terminals, etc. | 2 | Nos |
| 3 | P-055 | Supply and Installation of 1.5 Ton Inverter split AC with 5KVA stabilizer | 3 | Nos |
| 4 | P-056 | Renovation of Control room as per site requirements | 1 | LS |
| 5 | P-057 | Construction of new UPS room as per site requirement | 1 | LS |
| 6 | P-058 | Renovation of BMS Operator living room as per site requirements | 1 | LS |
| 7 | P-059 | Electrical Work at Control Room, UPS Room and BMS Operator living room | 1 | LS |
| 8 | P-060 | Supply and Installation of Conventional 2 Zone Fire Alarm Panel | 1 | No |
| 9 | P-061 | Supply and Installation of Conventional Smoke Detector | 6 | Nos |
| 10 | P-062 | Supply and Installation of Conventional Manual Call Point | 1 | No |
| 11 | P-063 | Supply and Installation of Conventional Sounder | 2 | No |
| 12 | P-064 | Supply and Installation of Biometric Device | 1 | No |
| 13 | P-065 | Supply and Installation of Exit Reader | 1 | No |
| 14 | P-066 | Supply and Installation of EM Lock | 1 | No |
| 15 | P-067 | Supply and Installation of 43" Display, to be connected with NVR for camera viewing, complete with wall/ ceiling/ floor mounting arrangement. | 11 | Nos |
| 16 | P-068 | Supply and Installation of 55" Display, to be connected with NVR for camera viewing, complete with wall/ ceiling/ floor mounting arrangement. | 1 | No |
| 17 | P-069 | Supply and Installation of 75" Display, to be connected with NVR for camera viewing, complete with wall/ ceiling/ floor mounting arrangement. | 1 | No |

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| | | | | |
|----|-------|--|------|------|
| 18 | P-070 | Supply and Installation of Desktop computer. | 3 | Nos |
| 19 | P-071 | Supply and Installation of 42U Rack with Accessories, connectors etc. as per specifications. | 3 | Nos |
| 20 | P-072 | Supply and Laying of Single core 10 Sqmm flexible cable | 100 | Mtrs |
| 21 | P-073 | Supply and Laying of 3 core 16 Sqmm armoured cable | 2150 | Mtrs |
| 22 | P-074 | Supply and Installation of Double Pole 40 Amps MCB | 2 | Nos |
| 23 | P-075 | Supply and Installation of Double Pole 63 Amps MCB | 4 | Nos |
| 24 | P-076 | Supply and Installation of Four Pole 63 Amps MCB | 2 | Nos |

The cabling meant for CCTV shall be of CAT-6 network cable Armoured which shall be ISI certified. The cabling from Cameras to NVR has to be suitably clamped / Under Ground. The network and power cabling required for the above installation and commissioning may also be done by the bidder.

The specification of all the above BOM is given under the Clause No.9: Specification of SMCS.

9. Specification of SMCS

Important Note: The bidders can offer reputed products of SMCS. The components should be of latest model/specification/generation and equivalent can be offered without compromising the specification.

9.1 CCTV System Specification

P001:4MP IP Bullet Camera with motorised zoom

| Description | Details |
|-------------------------|---|
| Sensor | 1/2.3", progressive scan, 4.0megapixel, CMOS |
| Lens | 2.7~13.5mm, AF automatic focusing and motorized zoom lens |
| Angle of View(H) | 94.0° ~ 27° |
| Shutter | Auto/Manual, 1/30s~1/1000000 s |
| Minimum Illumination | Colour: 0.001 Lux (F1.4, AGC ON), 0 Lux with IR on |
| Day/Night | IR-cut filter with auto switch (ICR) |
| Digital noise reduction | 2D/3D DNR |
| S/N | >52dB |
| IR Range | Up to 50m (164 ft) IR range |
| Defog | Digital Defog |
| WDR | 120dB |
| Video Compression | Smart 265,H.265+, H.264,MJPEG |
| Frame Rate | Main Stream:4MP (2592×1520): Max. 30 fps, 3MP (2048×1520): Max. 30 fps; 2MP (1920×1080): Max. 30 fps Sub Stream: 2MP (1920×1080): Max. 30 fps; Third Stream:D1 (720×576): Max. 30 fps |
| 9:16 Corridor Mode | Supported |
| Image and Video Config | HLC, BLC, OSD(8), Privacy Mask(8), ROI(8), Motion Detection(4) |
| VCA | Intrusion, cross line, Motion detection, Face Detection, Audio Detection, Object Left Behind, Missing Object, People Counting, Defocus ,Scene Change, video tampering detection, scene change detection, face detection, face capture, crowd density detection, heat map, human/vehicle counting, human tracking. |
| General Function | Watermark, IP Address Filtering, Tampering Alarm, Alarm input, Alarm output, Access Policy, ARP Protection, RTSP Authentication, User Authentication. |
| Audio Compression | G.711 |
| Two-way audio | Supported |
| Edge Storage | Micro SD, upto 128 GB |
| Network Storage | ANR |
| Network Protocols | IPv4, IGMP, ICMP, ARP, TCP, UDP, DHCP, PPPoE, RTP, RTSP, RTCP, DNS, DDNS, NTP, FTP, UPnP, HTTP, HTTPS, SMTP, 802.1x, SNMP, QoS, Bonjour |
| Compatible Integration | ONVIF(Profile S, Profile G), API |

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| | |
|------------------------|---|
| Audio I/O | Audio cable Input: impedance 35 k Ω ; amplitude 2 V [p-p], Output: impedance 600 Ω ; amplitude 2 V [p-p] |
| Alarm I/O | 1/1 |
| Network | 1 RJ45 10M/100M Base-TX Ethernet |
| Power | 12 V DC \pm 25%, PoE (IEEE802.3 af),Power consumption: Max 9W |
| Working Environment | -35°C ~ +60°C (-31°F ~ 140°F), Humidity:10%~95% RH(non-condensing) |
| Ingress Protection | IP67 |
| Vandal Resistant | IK10 |
| Product Certifications | CE,FCC,UL,RoHS, REACH and BIS Certificates |
| OEM Certifications | CMMI 5, ISO 9001, 14001, 27001 |

P002: 4MP IP Bullet Camera with WDR

| Description | Details |
|-------------------------|---|
| Sensor | 1/2.7", progressive scan, 4.0megapixel, CMOS |
| Lens | 3.6mm Fixed Lens |
| Angle of View(H) | 89° |
| Shutter | Auto/Manual, 1/25s~1/100000 s |
| Minimum Illumination | Colour: 0.011 Lux (F1.6, AGC ON), 0 Lux with IR on |
| Day/Night | IR-cut filter with auto switch (ICR) |
| Digital noise reduction | 2D/3D DNR |
| S/N | >52dB |
| IR Range | Up to 30m (98 ft) IR range |
| Defog | Digital Defog |
| WDR | Digital WDR |
| Video Compression | Smart 265,H.265, H.264,MJPEG |
| Frame Rate | Main Stream: 4MP (2560 x1440), Max 20fps 3MP (2304 x 1296),,2MP (1920×1080): Max. 30 fps; Sub Stream: 2MP (1920×1080): Max. 30 fps; Third Stream:D1 (720×576): Max. 30 fps |
| 9:16 Corridor Mode | Supported |
| Image and Video Config | HLC, BLC, OSD(8), Privacy Mask(8), ROI(8), Motion Detection(4) |
| General Function | Watermark, IP Address Filtering, Tampering Alarm, Alarm input, Alarm output, Access Policy, ARP Protection, RTSP Authentication, User Authentication |
| Network Protocols | UDP,IPv4, IPv6 UDP, DHCP, NTP, RTSP, PPPoE DDNS SMTP,802.1x, UPnP, HTTPs, Qos |
| Compatible Integration | ONVIF |
| Network | 1 RJ45 10M/100M Base-TX Ethernet |
| Power | 12 V DC \pm 25%, PoE (IEEE802.3 af),Power consumption: Max 9W |

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| | |
|------------------------|---|
| Working Environment | -20°C ~ +55°C (-4°F ~ 131°F), Humidity:10%~95% RH(non-condensing) |
| Ingress Protection | IP67 |
| Product Certifications | CE,FCC,UL, RoHS, REACH and BIS Certificates |
| OEM Certifications | CMMI 5, ISO 9001, 14001, 27001 |

P003: 4MP IP Bullet Camera with Video Analytics

| Description | Details |
|-------------------------|--|
| Sensor | 1/3", progressive scan, 4.0megapixel, CMOS |
| Lens | 3.6mm Fixed Lens |
| Angle of View(H) | 89° |
| Shutter | Auto/Manual, 1/25s~1/100000 s |
| Minimum Illumination | Colour: 0.011 Lux (F1.6, AGC ON), 0 Lux with IR on |
| Day/Night | IR-cut filter with auto switch (ICR) |
| Digital noise reduction | 2D/3D DNR |
| S/N | >52dB |
| IR Range | Up to 30m (98 ft) IR range |
| Defog | Digital Defog |
| WDR | Digital WDR |
| Video Compression | Smart 265,H.265, H.264,MJPEG |
| Frame Rate | Main Stream: 4MP (2592 x1520), Max 30fps 3MP (2304 x 1296),,2MP (1920×1080): Max. 30 fps; Sub Stream: 2MP (1920×1080): Max. 30 fps; Third Stream:D1 (720×576): Max. 30 fps |
| 9:16 Corridor Mode | Supported |
| Image and Video Config | HLC, BLC, OSD(8), Privacy Mask(8), ROI(8), Motion Detection(4) |
| Intelligent analytics | Object abandoned/missing detection, region entrance/exiting/intrusion detection(human/vehicle classification), line crossing detection(human/vehicle classification), video tampering detection, scene change , Face Recognition |
| General Function | Watermark, IP Address Filtering, Tampering Alarm, Alarm input, Alarm output, Access Policy, ARP Protection, RTSP Authentication, User Authentication |
| Network Protocols | UDP,IPv4, IPv6 UDP, DHCP, NTP, RTSP, PPPoE DDNS SMTP,802.1x, UPnP, HTTPs, Qos |
| Audio | 1 CH Audio Input |
| Compatible Integration | ONVIF |
| Network | 1 RJ45 10M/100M Base-TX Ethernet |
| Power | 12 V DC±25%, PoE (IEEE802.3 af),Power consumption: Max 9W |
| Working Environment | -20°C ~ +55°C (-4°F ~ 131°F), Humidity:10%~95% RH(non-condensing) |
| Ingress Protection | IP67 |
| Product Certifications | CE,FCC,UL, RoHS, REACH and BIS Certificates |
| OEM Certifications | CMMI 5, ISO 9001, 14001, 27001 |

P004: 4MP IP Dome Camera with Audio

| Description | Details |
|----------------------------|--|
| Sensor | 1 / 2.7" Progressive Scan CMOS Sensor |
| Lens | 2.8mm @F2.0, (fixed lens) |
| Angle of View(H) | 54.9° |
| Shutter | 1/25s~ 1 /100000s |
| Minimum Illumination | 0.011 lux @F1.2, AGC ON; 0 lux with IR |
| Day/Night | IR-cut filter with auto switch (ICR) |
| Digital noise reduction | 3D DNR |
| IR Range | Up to 30m (98 ft) IR range |
| WDR | Digital WDR |
| Video Compression | H.265 / H.264 |
| Resolution | 4MP (2560 x1440),3MP (2304 x 1296), 1080P (1920x1080), 720P (1280x720), D1, CIF, 480x240 |
| H.265 Compression Standard | Main Profile @Leve4.1 High Tier |
| Image Settings | ROI, Saturation, Brightness, Chroma, Contrast Wide Dynamics, Sharpen, NR, etc. adjustable through Client Software or Web browser |
| Audio Compression | G711A / U |
| Audio | MIC IN x 1(Built- in MIC) |
| Network Protocols | IPv6, UDP, DHCP, NTP, RTSP, PPPoE ,DDNS SMTP,802.1x, UPnP, HTTPs, Qos |
| Smart Analysis | Region intrusion detection, object removal detection, abnormal video detection and line crossing detection |
| Smart Alarm | Motion Alarm |
| Network | RJ45 |
| Power | DC 12V (PoE power supply optional) |
| Working Environment | -20°C ~ 55°C (-4°F~131°F) Humidity |
| Ingress Protection | IP67 |
| Product Certifications | CE,FCC,UL, RoHS, REACH and BIS Certificates |
| OEM Certifications | CMMI 5, ISO 9001, 14001, 27001 |

P005: 2MP IP Bullet Camera with Automatic Number Plate Recognition (ANPR)

| Description | Details |
|-------------------------|---|
| Sensor | 1 / 2.8" Progressive Scan CMOS Sensor |
| Lens | 7~22mm @ F1.6, Motorized |
| Angle of View(H) | 44°-17.6° |
| Shutter | 1/25s~ 1 /100000s |
| Minimum Illumination | Color:0.002 Lux@F1.2AGC ON; 0 Lux with IR |
| Day/Night | ICR |
| Digital noise reduction | 3D DNR |
| Defog | Supported |
| IR Distance | 100 m |
| Wide Dynamic Range | 120dB |
| Snapshot | Overview and cutout of plate for picture |
| Video Compression | Smart H.265/H.265+/H.265/H.264/MJPEG |

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| | |
|------------------------|--|
| Resolution | 1080P(1920×1080) 720P(1280×720),D1,CIF,480x240 |
| White List | 10000 |
| Image Settings | ROI, Saturation, Brightness, Chroma, Contrast Wide Dynamics, Sharpen, NR, etc. adjustable through Client Software or Web browser |
| Capture Speed Range | 0~50km/h |
| Intelligent Analysis | Region intrusion detection, abnormal video detection, line crossing detection , License Plate recognition |
| Network Protocols | UDP,IPV4,IPV6,DHCP,NTP,RTSP,PPPoE,DDNS SMTP,FTP,SNMP,802.1x,UPnP,HTTPS,Qos |
| Audio | 1 Ch audio input: 1 Ch audio output |
| Compatible Integration | ONVIF |
| Network | RJ45 |
| Power | DC12/ PoE |
| Working Environment | -30°C ~ 60°C (-22°F~140°F),Humidity: less than 95% (non-condensing) |
| Ingress Protection | IP67 |
| Product Certifications | CE,FCC,UL, RoHS, REACH and BIS Certificates |
| OEM Certifications | CMMI 5, ISO 9001, 14001, 27001 |

P006: 32 Channel Network video recorder

| Description | Details |
|--------------------------|--|
| IP Video Input | 32-ch |
| Two-way Audio Input | 1-ch, RCA |
| Network Access Bandwidth | 320Mbps |
| Protocols | P2P, UPnP, NTP, DHCP, PPPoE,SSL,TLS,SNMP,HTTPS |
| HDMI/VGA Output | VGA: 1920x1080p /60Hz, 1920x1080p /50Hz, 1600x1200 /60Hz, 1280x1024 /60Hz, 1280x720 /60Hz, 1024x768 /60Hz HDMI1: 4K (3840x2160) /60Hz, 4K (3840x2160) /30Hz, 1920x1080p /60Hz, 1920x1080p /50Hz, 1600x1200 /60Hz, 1280x1024 /60Hz, 1280x720 /60Hz, 1024x768 /60Hz |
| Recording Resolution | 8MP/6MP/5MP/4MP/3MP/1080p/960p/720p/D1/2CIF/CIF |
| Audio Output | 1-ch, RCA |
| Synchronous Playback | 16-ch |
| Corridor Mode Screen | 3/4/5/7/9/10/12/16/32 |
| Decoding format | Smart 265, H.265, H.264 |
| Live view/ Playback | 8MP/6MP/5MP/4MP/3MP/1080p/960p/720p/D1/2CIF/CIF |
| SATA | 4 SATA interfaces |
| Capacity | up to 8TB for each HDD |
| Network Interface | 1 RJ45 10M/100M/1000M self-adaptive Ethernet Interfaces |
| USB Interface | Front panel: 2 x USB2.0 Rear panel: 1 x USB3.0 |
| Alarm In | 8-ch |
| Alarm Out | 4-ch |

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| | |
|------------------------|--|
| Power Supply | 100~240V AC. ATX Power Supply Power Consumption: ≤ 30W(without HDD) |
| Working Environment | -10°C ~ + 55°C (+14°F ~ +131°F), Humidity ≤ 90% RH(non-condensing) |
| Product Certifications | CE,FCC,UL, RoHS, REACH and BIS Certificates |
| OEM Certifications | CMMI 5, ISO 9001, 14001, 27001 |

P007: 6TB Hard Disk Drive

| Description | Details |
|---------------------------------------|------------------------|
| Formatted capacity | 6TB |
| Form factor | 3.5-inch |
| Interface | SATA 6Gb/s |
| Cameras Supported | Upto 64 |
| Max Sustained Transfer Rate OD (MB/s) | 180MB/s |
| Cache (MB) | 256 |
| Load/unload cycles | ≥ 600,000 |
| Non-recoverable Read Errors Rate | <1 in 10 ¹⁵ |
| Power-On Hours per year | ≥ 8760 |
| RoHS compliant | Yes |
| Average Operating Power (W) | 5.0 (approximately) |
| Standby Mode/Sleep Mode, Typical (W) | 0.25 (approximately) |
| Operating Temperature (°C) | 0 to 70 |

P008: 16 Port gigabit L2 Managed PoE Switch

| Description | Details |
|------------------|--|
| Network standard | IEEE 802.31 IEEE 802.3u IEEE 802.3 IEEE 802.3ab IEEE 802.3af IEEE 802.3a1 |
| Port | 16 10/100/1000Mbps RJ45 Port 2 gigabit SFP, 1 Console |
| PoE | 10/100/1000Mbps RJ45 port support PoE+ Max 180W, Single port max 46W |
| LEDs | 18 Link/Act LEDS, 16 POE LEDs, 1 SYS LED, 1 Power LED |
| Performance | Forwarding mode store and forward, Bandwidth:36Gbps, Packet forwarding rate:23.8Mpps, 8K MAC address table |

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| | |
|--------------------|---|
| Protocol Standard | IEEE 802.3 Ethernet Media Access-Control (MAC) Protocol, IEEE 802.31.10BASE-T Ethernet, IEEE 802.3u:100BASE-TX Fast Ethernet, IEEE 802.3ab.1000BASE-T Gigabit Ethernet, IEEE 802.3z:1000BASE-X Gigabit Ethernet (Fiber), IEEE 802.3ad: Standard method for performing Link aggregation, IEEE 802.3x flow control, IEEE 802.1p.LAN layer 2 Qos/Cos protocol for traffic priority(multicast filtering), IEEE 802.1g. VLAN, IEEE 802.1d:STP Spanning tree, IEEE 802.1s1MSTP Spanning tree, IEEE 802.1wRSTP Spanning tree, IEEE 802.3af, IEEE 802.3at |
| DHCP | Support DHCP Snooping |
| VLAN | Support 4K VLAN, Support 802.1Q VLAN MAC VLAN, IP VLAN Voice VLAN, Port Based VLAN, port Isolation |
| MAC address table | Comply the IEEE 802.1d Standard Support static, dynamic, filter address table |
| POE Protocols | Support POE Management function, Support POE Energy saving mode, Support Port security, port isolation Support CPU Protection |
| Safety | Password protection, Support based on the port number, IP Address, MAC Address Restrictions on user address, Support HTTPS, SSL V3, TLS V1, SSH V1/V2, Support IP- MAC – PORT Ternary binding, Support ARP Protection, IP Source protection, DoS Protection, Support DHCP Snooping, DHCP Attack protection, Support 802.1X Certified, AAA |
| PoE Management | Support PoE Power limit, Support PoE chip status view, Support setting PoE Port Priority, Support setting PoE Power supply time period |
| Security | Storm Control based on packets and bytes Port Security, Loop Detection, IEEE 802.1x Authentication, AAA |
| Quality of Service | Support 8 port Queue, Support port priority, 802.1p priority, DSCP priority, Support SP, RR, WRR, MLD,IGMP WFQ priority, scheduling algorithm, Snooping, DHCP server |
| Spanning Tree | Support STP (IEEE 802.1d), RSTP (IEEE 802.1w) And MSTP(IEEE802.1s) protocol, Support loop protection, root bridge protection, TC protection, BPDU Guard, BPDU Forwarding, STP trap |
| Multicast | Support IGMP v1/v2 snooping, Support fast leave mechanism, Support multicast VLAN, Supports multicast filtering, packet statistics, and unknown multicast discards |
| Link Aggregation | Support static aggregation, Support dynamic aggregation, Support IP, MAC and hybrid load balancing modes, Supports up to 32 aggregation groups |
| IPv6 | Supports IPv6 Ping, IPv6 Tracert, IPv6 Telnet, Support IPv6 SSH, IPv6 SSL |
| ACL & Vlan Table | Shall support 1K ACL Table & 4K Vlan Table Support Standard and extended ACL Table |
| LACP | 8 groups / 8 ports Mac Load balancing Support |

| | |
|----------------------------|--|
| Management and Maintenance | Support WEB network management (HTTP, HTTPS, SSL V3), Support CLI (Telnet, SSH V1/V2, local serial port), Support SNMP V1/V2/V3, TFTP SSL, Public & Private MIB interface Ping, Trace Route, Radius, Authentication, Single/Multiple Port Mirror, LLDP/LLDP MED, Support, RMON, SNMP Trap, Support ARP protection, IP source protection, DoS protection, Support system log, grading warning, Support Ping, Tracert deduction, cable detection |
| Lightning Protection | 6KV |
| Input | 100-240V AC, Built- in power |
| Operating Temperature | 0°C~45°C |
| Product Certification | CE, FCC, RoHS |
| OEM Certification | CMMI 5, ISO 9001, 14001, 27001 |

P009: 24 Port gigabit L2 Managed PoE Switch

| Description | Details |
|--------------------|--|
| Network standard | IEEE 802.3i IEEE 802.3u IEEE802.3x IEEE 802.3ab IEEE 802.3af IEEE 802.3at |
| Port | 24 10/100/1000Mbps RJ45 Port 2 gigabit SFP, 1 Console |
| PoE | 24 10/100/1000Mbps RJ45 port support PoE+ Max 250w, Single port max 46w |
| LEDs | 26 Link/Act, 24 PoE, 1 Sys LED, 1 Power LED |
| Performance | Forwarding mode: store and forward, Bandwidth: 52Gbps Packet forwarding rate: 38.688 Mpps, 8K MAC address table |
| Protocol Standard | IEEE 802.3, 802.3i, 802.3u, 802.3ab, 802.3z, 802.3ad, 802.3x 802.1p, 802.1q, 802.1d:STP, 802.1s:MSTP |
| DHCP | Support DHCP (video priority) |
| VLAN | Support 802.1Q VLAN, MAC VLAN, IP VLAN, Voice VLAN, Portbased VLAN |
| MAC address table | Comply the IEEE 802.1d standard support MAC address learning and aging automatically support static, dynamic, filter address table |
| POE Protocols | Support POE Management function Support POE Energy saving mode |
| Safety | Support HTTPS, SSL V3, TLS V1, SSH V1/V2 |
| PoE Management | Support PoE Power limit, Support PoE Chip Status View, Support setting PoE Port Priority |
| Security | Storm Control based on packets and bytes Port Security, Loop Detection, IEEE 802.1x Authentication, AAA |
| Quality of Service | Support 8 port queue, Support port priority, 802.1p priority,DSCP priority, Support SP, RR, WRR,MLD WFQ Priority Scheduling algority |

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| | |
|----------------------------|--|
| Spanning Tree | Support STP(IEEE 802.1d), RSTP(IEEE802.1w) and MSTP(IEEE8021s) Support loop protection, root bridge protection, TC protection, BPDU Guard, BPDU Forwarding, STP Trap, DHCP server |
| Multicast | Support IGMP v1/v2 Snooping, Support fast leave mechanism Support multicast VLAN, Supports multicast filtering, packet statistics, and unknown multicast discards. |
| Storm Suppression | Support multicast suppression, support broadcast suppression |
| Link Aggregation | Support static aggregation, support dynamic aggregation, Support IP, MAC, and hybrid load balancing modes, up to 32 |
| IPv6 | Support IPv6 ping, IPv6 Tracert, IPv6 Telnet |
| ACL & Vlan Table | Shall support 1K ACL Table & 4K Vlan Table Support Standard and extended ACL Table |
| LACP | 8 groups / 8 ports Mac Load balancing Support |
| Management and Maintenance | Support WEB network management(HTTP, HTTPS, SSL V3) Support CLI(telnet, SSH V1/V2, local serial port) Support SNMP V1/V2/V3, SNMP Trap Support LLDP, RMON, Storm Control based on packets and bytes Port Security, Loop Detection, IEEE 802.1x Authentication, AAA Support ARP Protection, IP Source, DoS Protection Support CPU monitoring, memory monitoring Support System log,grading warning Support Ping, Tracert detection, Cable Detection |
| Lightning Protection | 6KV |
| Input | 100-240V/50-60Hz, Built-in power Supply |
| Operating Temperature | 0°C~45°C |
| Product Certification | CE, FCC, RoHS |
| OEM Certification | CMMI 5, ISO 9001, 14001, 27001 |

P010: 12 port Light guide Interconnect Unit (LIU)

| Description | Details |
|---|---|
| Fiber Patch Panel (12 port) – Rack mountable | |
| Type | 19" Easy Front Access (EFA) Sliding Module Rack Mount type. |
| Material | Cold rolled carbon sheet steel with electrostatic spraying |
| Size | 1U=12/24 port |
| Environment Temperature | Relative: 40 °C to +80 °C |
| Intensity | ≤15kv(DC) /1min.no spark-over and no flying arc |
| Fibre Bending Radius | ≥40 mm |
| Clamps | Cable clamps on the inner surface for fixing cables. |
| Splice tray type | Fixed type Splice tray |
| Lock | Lockable front panel using push button |
| Easy Front Access | Sliding patch panel for easy rework and maintenance. |
| Insulation Resistance | 2*10M ohm/500V (DC) |

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| | |
|--|---|
| Standard Compliance | TSE: EN 61587-1, Equipment - Tests for IEC 60917 and IEC 60297, Climatic and Environment: EN 61587-1/4.2, IEC60068-2-1, IEC60068-2-2, IEC60068-2-30, Earth Bond: EN61587-1/6.2, RoHS |
| Fiber Coupler/Adaptor (Single mode) | |
| Type | SC Single Mode, Simplex/Duplex |
| Sleeves | Phosphor Bronze |
| Adaptor Material | High Impart flame retardant thermoplastic UL94-V0 |
| Capillarydiameter tolerance | 126 ± 0.5 µm (SM) |
| Operating Temperature | -40 °C to +75 °C |
| Storage Temperature | -40 °C to +85 °C |
| Mating durability | > 500 Mating Cycles |
| Vibration-Mated Pair | 10-55 Hz, 1.5 mm P to P < 0.2 dB change |
| Insert. Loss/Adaptor | Single Fibre: 0.2 dB Max. (0.15 dB typ.) |
| Pull strength | ≥ 98 N |
| Standard Compliance | Temperature Cycling (61300-2-18), Damp Heat (61300-2-19), Vibration-Mated Pair (61300-2-1), Mating Durability (61300-2-2) |
| Fiber Pigtail (Single Mode) | |
| Type | SC Single mode, 1.5 meter |
| Fiber Type | Single Mode OS2 |
| Tight buffered | 900µm |
| Jacket | Low Smoke Zero Halogen (LSZH) |
| Crush Load | 800 N |
| Impact | 0.2 Nm |
| Bend Radius | 50mm (min) |
| Operating Temperature | 10°c to +70°c |
| Max attenuation | <=0.34 dB per km@1310 nm, <= 0.24 dB per km@ 1550nm |
| Insertion Loss | ≤0.3 dB |
| Standard Compliance | ISO/IEC 11801, EN50173 -1, ANSI TIA/EIA 568B |

P011: SC-LC Patch Cable

| Description | Details |
|---|--|
| Type | SC-LC Duplex type, 2 meter |
| Fiber Type | Single mode, OS2 |
| Jacket | Low Smoke Zero Halogen (LSZH) |
| Durability | 500 cycles (0.2 dB max increase), 1000mate/demate cycles |
| Operating Temp | -20 °C to +70°C |
| Ferrule Concentricity | < 1µm, Other Ferrule Concentricity < 1µm |
| Strength of Coupling Mechanism (FOTP-185) | 33 N at 0° for 5 sec |
| Cable Retention (FOTP-6) | 50 N at 0° for 5 sec |
| Twist (FOTP-36) | 15 N at 0° 5 turns, 10 cycles |
| Flex (FOTP-1) | 0.5 Kg at 25 cm, +90° to -90°, 100 cycles |
| Max attenuation | <=0.34 dB per km@1310 nm, <= 0.24 dB per km@ 1550nm |
| Insert. Loss/Adaptor | Single Fibre: 0.2dB Max. (0.15dB typ.) |

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| | |
|---------------------|--|
| Return Loss | ≥ 45 dB |
| Pull strength | ≥ 98 N |
| Standard Compliance | Telcordia (formerly Bellcore) GR-326-CORE, IEC 874-1, ANSI/TIA-568-C.3, ISO/IEC 11801 2nd Ed., CENELEC, EN 50173, RoHS |

P012: 4U Rack

| Description | Details |
|--|--|
| Racks for NVRs with fans, spike suppressors, terminations and cable managers | 4U (550 x 145 x 500) with Cable Manager, PDU, and Fan (For NVR & POE switch) Material must be of standard make & quality. |
| Standard | ISI or Equivalent, |
| Installation Type | Indoor |
| Type | Wall mounting rack – Rigid frame that can be fixed to the wall, |
| General | 19"Adjustable rails in the front and rear, Front section with glass door and lock, Top and bottom cable entry facility, Hardware Screw pocket included |

P013: 6U Rack

| Description | Details |
|--|--|
| Racks for NVRs with fans, spike suppressors, terminations and cable managers | 6U (550 x 320 x 500) with Cable Manager, PDU, and Fan (For NVR & POE switch) Material must be of standard make & quality. |
| Standard | ISI or Equivalent, |
| Installation Type | Indoor |
| Type | Wall mounting rack – Rigid frame that can be fixed to the wall, |
| General | 19"Adjustable rails in the front and rear, Front section with glass door and lock, Top and bottom cable entry facility, Hardware Screw pocket included |

P014: 9U Rack

| Description | Details |
|--|--|
| Racks for NVRs with fans, spike suppressors, terminations and cable managers | 9U (550 x 430 x 500) with Cable Manager, PDU, and Fan (For NVR & POE switch) Material must be of standard make & quality. |
| Standard | ISI or Equivalent, |
| Installation Type | Indoor |
| Type | Wall mounting rack – Rigid frame that can be fixed to the wall, |
| General | 19"Adjustable rails in the front and rear, Front section with glass door and lock, Top and bottom cable entry facility, Hardware Screw pocket included |

P015: Cat-6 UTP 4 pair FRPVC Cable

| Description | Details |
|-----------------------------|---|
| Type | Unshielded Twisted Pair, Category 6, TIA / EIA 568-C.2 & ISO/IEC 11801 |
| Conductors | 23 AWG solid bare copper |
| Insulation | High Density Polyethylene |
| Jacket | FRPVC |
| Pair Separator | Cross-member (+) fluted Spline |
| Operating temperature | -10 °C to +65 °C |
| Frequency | Tested up to Minimum 250 MHz |
| Packing Box | 305 Meters/Box |
| Cable Outer Diameter | 6.3 +/- 0.4 mm |
| Delay Skew | 35 ns/100m max. |
| Bend Radius | 53.6 mm |
| Impedance, Frequency range | 100 Ohms + / - 15 ohms, 1 to 250 MHz |
| Fire Rating | IEC 60332-1, IEC 60754, IEC 61034 |
| Mutual Capacitance | 5.6 nF MAX /100 Mtr |
| Conductor Resistance | 73 Ohms Max / KM nominal |
| Propagation Delay Skew | 35 ns/100 Mtrs. MAX |
| Max. Tensile strength | 110N |
| Performance characteristics | Performance characteristics to be provided along with bid Attenuation, Pair-to-pair and PS NEXT, ELFEXT and PSELFEXT, Return Loss, ACR and PS ACR |
| Standard Compliance | ANSI/TIA-568 C.2 category 6, ISO/IEC-11801, Class E/ IEC 61156-5: category 6 |
| Application | IEEE 802.af and IEEE 802.3at for PoE |
| Certification | UL , ETL |

P016: Single Mode 6 Core OFC

| Description | Details |
|-----------------------|---|
| Type | 6 core OS2 (9/125 micron) Single mode, Loose Tube with Jelly compound, two steel wires strength, Steel tape armour, outdoor optical Fiber cable |
| Outer Jacket | HDPE (High Density Polyethylene) |
| Strength Members, | Two steel wires |
| Armouring | Corrugated Steel tape armouring |
| Loose Tube Diameter | 2.3mm |
| Cable Outer Diameter | 8.5mm |
| Tensile Load/100mm | 2000N |
| Crush Load/100mm | 1000N |
| Max attenuation | <=0.34 dB per km@1310 nm, <= 0.24 dB per km@ 1550nm |
| Operating temperature | - 20°C to 60°C |
| Storage temperature | -40°C to 85°C. |
| Standard Compliance | ITU-T G.652.D Fiber, ISO/IEC 11801, ISO/IEC24702, ANSI/TIA/EIA 568C.3, IEEE 802.3z Gigabit Ethernet, ROHS compliant Directive 2002/95/EC |
| Application | Both indoor and outdoor |

P017: 3 core 2.5 Sqmm Flexible power cable

| Description | Details |
|--------------------|------------------------------|
| Type | PVC insulated Flexible cable |
| Core | 3 |
| Sqmm | 2.5 |
| Category | PVC sheathed |
| Conductor material | Copper |
| Conductor Type | Multi Stranded |

P018: 3 Core 4 Sqmm Armoured power cable

| Description | Details |
|--------------------|------------------------------|
| Type | Armoured PVC insulated cable |
| Core | 3 |
| Sqmm | 4 |
| Category | FRLS |
| Conductor material | Copper |
| Conductor Type | Multi Stranded |

P019: PVC Conduit

| Description | Details |
|----------------|---------|
| Standards | ISI |
| Size/ Diameter | 25 mm |
| Material | PVC |
| Length | 3 meter |
| Shape | Round |

P020: HDPE Pipe

| Description | Details |
|---------------------------|-----------------|
| Pressure Rating/ PN Class | PN 6 |
| Size/ Diameter | Inner Dia 32 mm |
| Material | Hdpe |
| Material Grade | PE 63 |
| Color | Black |
| Surface Finishing | Smooth |
| Section Shape | Round |

P021: GI Pipe

| Description | Details |
|-------------------|------------------------------|
| Standards | ISI marked GI pipe (Class B) |
| Size/ Diameter | 50 mm |
| Material | GI |
| Surface Treatment | Galvanized |
| Section Shape | Round |

P022: Soft/Hard Soil digging with Backfilling

| Description |
|--|
| Excavation in Soft/Hard Soil with the required depth up to 50 cm & Backfilling as per industry standards with sand cushioning and Brick protection |

P023: Road cutting with Backfilling

| Description |
|--|
| Road Cutting with the required depth up to 25 cm and Backfilling shall be done as per industry standards and making good as per finish with cement & concrete. |

P024: GI Pole

| Description | Details |
|----------------------------|--|
| Pole details | Free standing round type, Tapered structure. |
| Type | Class B |
| Height of pole | 3Mtrs. |
| Thickness | 3mm |
| Base plate | 180 x 180 x 10mm |
| Foundation Bolt | M16x600mm |
| Metal protection treatment | Hot Dip galvanized confirming to BSEN ISO 1461 [65 micron thickness] |

P025: Single Pole 10Amps MCB

| Description | Details |
|------------------------------------|---|
| Current Rating | 10A |
| Number of Poles | Single-Pole (SP) |
| Electro Thermal Characteristic | B, C and D curve |
| Breaking Capacity | 10 kA |
| Rated Voltage | 240 / 415 V AC |
| Current Limitation Class | 3 |
| Frequency | 50 to 60 Hz |
| Rated Impulse Voltage | 4 kV |
| Minimum Operating Voltage | 24 V AC |
| Degree of Protection | IP 20 |
| Termination | Dual termination on both the sides (Cable and Busbar) |
| Applied Connection Torque | 6 N m |
| Permissible Ambient Temp. | - 5° C to + 55° C |
| Calibration Temperature | 30° C |
| Mechanical Life (operating cycles) | >100,000 |
| Mounting | Snap fixing on standard profile 35 X 7.5mm DIN-Rail as per EN 50022 |

P026: Single Pole 16Amps MCB

| Description | Details |
|------------------------------------|---|
| Current Rating | 16A |
| Number of Poles | Single-Pole (SP) |
| Electro Thermal Characteristic | B, C and D curve |
| Breaking Capacity | 10 kA |
| Rated Voltage | 240 / 415 V AC |
| Current Limitation Class | 3 |
| Frequency | 50 to 60 Hz |
| Rated Impulse Voltage | 4 kV |
| Minimum Operating Voltage | 24 V AC |
| Degree of Protection | IP 20 |
| Termination | Dual termination on both the sides (Cable and Busbar) |
| Applied Connection Torque | 6 N m |
| Permissible Ambient Temp. | - 5° C to + 55° C |
| Calibration Temperature | 30° C |
| Mechanical Life (operating cycles) | >100,000 |
| Mounting | Snap fixing on standard profile 35 X 7.5mm DIN-Rail as per EN 50022 |

P027: Double Pole 32Amps MCB

| Description | Details |
|------------------------------------|---|
| Current Rating | 32A |
| Number of Poles | Double-Pole (DP) |
| Electro Thermal Characteristic | B, C and D curve |
| Breaking Capacity | 10 kA |
| Rated Voltage | 240 / 415 V AC |
| Current Limitation Class | 3 |
| Frequency | 50 to 60 Hz |
| Rated Impulse Voltage | 4 kV |
| Minimum Operating Voltage | 24 V AC |
| Degree of Protection | IP 20 |
| Termination | Dual termination on both the sides (Cable and Busbar) |
| Applied Connection Torque | 6 N m |
| Permissible Ambient Temp. | - 5° C to + 55° C |
| Calibration Temperature | 30° C |
| Mechanical Life (operating cycles) | >100,000 |
| Mounting | Snap fixing on standard profile 35 X 7.5mm DIN-Rail as per EN 50022 |

9.2 Fire Alarm Specification**P028: 4 LOOP Addressable Panel**

| Description | Details |
|------------------------|---|
| Code Conformance | Class-A Style 5, 6 or 7 wiring and Class-B Style 4 type of wiring as per NFPA-72 |
| Processor | M3 32 bit, capability for Day & Night mode or Higher |
| Number of Loops | 2 loops expandable to 4 loops |
| Capacity | ≥ 254 devices per loop |
| Authentication | Three Level Password Protection |
| No. of users | 3 users or more by authenticated |
| Programmability | Through capacitive Touch Keypad, USB 2.0 Interface for easy configuration facility via PC/Laptop |
| Display | Minimum 160 Characters LCD in which the LCD clearly indicates the location of fire, Fault & Supervisory |
| Event Logging | ≥ 1000 events with a time and date stamp. |
| Connectivity | Ethernet, GSM module |
| Power Supply | 110V - 230V ± 10% single phase, 50 Hz SMPS supply |
| Battery | 24 VDC sealed maintenance free type conforming to latest NFPA specification. Backup: 24 hours |
| Product Certifications | UL |

P029: Multi sensor

| Description | Details |
|------------------------|--|
| Code Conformances | NFPA Standards for Enhanced Smoke Sensors |
| Detection | Smoke and Thermal |
| Smoke Detection | light scattering type using a pulsed internal LED light source and a photocell sensor |
| Thermal Detection | Utilize high sensitivity, high speed thermistors optimized to measure small changes in temperature and rate of change |
| Warning | All types of smouldering and thermal fires |
| Sensitivity | 3 levels of sensitivity settings. sensitivity settings based on day/night mode or with schedules based on the programming |
| Controls with FACP | The smoke and thermal elements must report independently to the control panel and must be software interlinked to enable intelligent high level decision making. |
| Detector wiring | Should be polarity free |
| Powering | Loop powered |
| Operating range | Temperature: -10°C to + 37.8°C b. Humidity: 0% to 93% RH (without condensation) |
| Product Certifications | UL |

P030: Manual Call Point

| Description | Details |
|-------------|---|
| Standards | Pull station of approved make with minimum 1 N.O. + 1 N.C contacts. |

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| | |
|------------------------|--|
| Enclosure | whole assembly of Pull station shall again be enclosed in an external die cast iron enclosure with all side covered included from the front side |
| Cover | completely protection dust, damp, weather and vermin proof |
| Reset | Local |
| Color | Red |
| Powering | Loop powered |
| Installation | The complete unit shall be suitable for wall / column mounting with necessary surface / recess mounting accessories as required. |
| Product Certifications | CE |

P031: Sounder Cum Strobe

| Description | Details |
|------------------------|---|
| Alarm Sound | 100 ± 10 dB @ 1m |
| Current | ≤ 100 mA |
| Tone Type | Ambulance, Fire truck, Police Car Sound |
| Input Voltage | 24V DC |
| Relative Humidity | ≤ 95% |
| Operating Temperature | -10 to 50 C |
| Flashes/min | 60 times. |
| Product Certifications | CE,RoHS |

P032: Isolator Module

| Description | Details |
|-------------------------------|------------------------|
| Nominal Supply Voltage(V) | 24VDC |
| Quiescent Current at 24V(Ic) | 30 A |
| Operating Temperature | 10 C to 49 C |
| Leakage Current at 24V(I) | 2 mA when isolating |
| Isolating Voltage (Vco) | <14V |
| Maximum on resistance(Zc) | 0.02Ohm |
| Max Curent (through loop)(I) | 1A continuous, 3A Peak |

P033: Control Module

| Description | Details |
|---------------------------|--|
| Product Certifications | CE,UL |
| Operating Voltage | 24 VDC Nominal |
| Current Draw | 2 mA Max.(Latched) |
| End of Line Resistor | 47K Ohms |
| Loop Impedance | 40 Ohms |
| Max. Output Current Drive | 1 Amps.(Supervised) |
| Relative Humidity | 93 ± 2% RH (non-condensing) at 32 ±2° C / 90 ±3° F |

P034: Loop card

| Description | Details |
|-------------------------|--|
| No. of Devices per loop | 254 |
| Loop resistance | 40 (Max.). |
| Loop capacitance | 0.6 μ f (Max.). |
| Loop Current | 300mA (Max.). |
| Operating Voltage | 24VDC |
| Operating Temperature | 0 - 49° C / 32-120° F |
| Relative Humidity | 93 \pm 2% RH (non-condensing) at 32 \pm 2° C / 90 \pm 3° F |

P035: TCP/IP Card

| Description | Details |
|-------------------------|---|
| Operating Voltage | 24 VDC |
| Storage temperature | 0oC to 60oC. |
| Operating Temperature | 0OC to 49OC / 32 to 120OF. |
| Relative Humidity | 93 \pm 2% RH (non-condensing) at 32 \pm 2° C/96 \pm 3° F. |
| Standby current | 0.4 Amps Max. |
| Cabinet Finish | Epoxy Powder coated. |
| Communication Interface | Rj45. |
| IP Rating | Ip50. |
| Cable Entry | 3 X Ø 19mm Knockout on top of the cabinet. |

P036: Centralized Monitoring Software

| Description |
|---|
| Two way of access controls for the security purpose (i.e. USER / ADMINISTRATOR). |
| Status regarding the number of panels are shown in a single screen with location, and Fire/Fault count. |
| Event Log list can be configured for panel / device wise with real time clock. |
| Visual & sound alerts for the Fire & fault conditions. Instant Pop Up's in case fire/fault status exists. |
| Individual tones played for Fault & Fire indication. |
| Loop with device wise voice alert for the Fire condition (USER DEFINED). |
| The Panel Status or Remote notification shall be shown in the same way as the main panel front fascia for easy access to a panel. |
| Acknowledge/Silence the sounders connected in panel through CMS. |
| Reset the Panel through CMS. |
| Communication can be done through ethernet /USB. |
| The IP List is intended to view / edit the IP addresses of the configured panel. |
| The events log can be exported/printed from the CMS software. |

P037: GSM Module

| Description | Details |
|---------------------|--|
| GSM frequency | Quad Band GSM/GPRS : 850 / 900 / 1800 / 1900 MHz |
| Operating Voltage | 24 VDC |
| Storage temperature | 0oC to 60oC. |

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| | |
|--------------------------|---|
| Operating Temperature | 0oC to 49OC / 32 to 120OF. |
| Relative Humidity | 93 ± 2% RH (non-condensing) at 32 ±2° C/96 ±3° F. |
| Standby current | 0.1 Amps Max. |
| Cabinet Finish | Epoxy Powder coated |
| Communication Interface | Panel to GSM Module via Rs485. GSM Module to PC interface via Rs232. |
| IP Rating | Ip50. |
| Built in SIM card holder | Yes. Maximum of 10 mobile numbers can be configured. |
| Features | Notification includes location details, Configurable notification on all or priority basis. |

P038: Addressable Panel Battery

| Description | Details |
|-----------------|-------------------------------|
| Battery Rating | 7 AH |
| Battery Type | Sealed Maintenance Free (SMF) |
| Nominal Voltage | 12V |

P039: 2 core 1.5 Sqmm armoured cable

| Description | Details |
|--------------------|------------------------------|
| Type | Armoured PVC insulated cable |
| Core | 2 |
| Sqmm | 1.5 |
| Category | FRLS |
| Conductor material | Copper |
| Conductor Type | Multi Stranded |

9.3 Public Address System Specification**P040: Controller**

| Description | Details |
|-------------------------|-----------------------|
| Power Supply | |
| Main power supply | AC 220-240V, 50/60Hz |
| Backup power supply | AC 220-240V, 50/60Hz |
| Main power fuse | T10AH 250V |
| Rated power | 750W |
| MICROPHONE INPUT | |
| Input sensitivity | -65±3dBV |
| Input impedance | 250Ω |
| Frequency response | 90 Hz -13KHz |
| SNR | >50dB (with A-Weight) |
| AUXILIARY INPUT | |
| Channels | 2 |
| Input sensitivity | 1V (0dBV) |
| Input impedance | 10 KΩ |
| Frequency response | 85Hz-18KHz |

| | |
|------------------------------------|--|
| SNR | >77dB (with A-Weight) |
| MIC/LINE INPUT | |
| Input sensitivity | -50dBV/0dBV, selectable |
| Input impedance | 10 K Ω |
| Frequency response | 85Hz-18KHz |
| SNR | >77dB (with A-Weight) |
| Phantom power | DC 24V, switchable |
| CALL STATION INTERFACE | |
| Input signal | 2V |
| Input impedance | 20 K Ω |
| Output signal | 2V |
| Output impedance | 20 K Ω |
| Frequency response | 85Hz-18KHz |
| AUDIO OUTPUT | |
| Output channels | Channel 1, channel 2 and recording output |
| Output signal | 1V (0dBV) |
| THD | <0.5% |
| AMPLIFIER CONTROL INTERFACE | |
| Channels | 3 (channel 1, channel 2 and backup amplifier) |
| Output signal | 1.4V |
| THD | <0.5% |
| Control signal | Self-test signal, amplifier fault signal and power saving control signal |
| LOUDSPEAKER CIRCUITS | |
| Output channels | 8 (with group A and group B) |
| Max imum loudspeaker load | 500W |
| CONTACT INPUT /OUTPUT | |
| Contact inputs | 10 (monitored) |
| Contact outputs | 8 (NO, NC & COM), "fault" output, "emergency" output |
| Max . working voltage for outputs | AC 250V/DC 30V |
| Max . working current for outputs | 2.5A |
| OTHERS | |
| DC power output | 24V/1A |
| Monitoring loudspea ker | 2W/8 Ω |
| Ethernet port | 10M/100M |
| Memory capacity | 1GB |

P041: Call Station

| Description | Details |
|----------------------|---------------|
| Power supply voltage | DC 24V |
| Rated power | 10 W |
| Mic Input | |
| Input sensitivity | 5mV |
| Input impedance | 600 Ω |
| Frequency response | 100 Hz -10KHz |

| | |
|-----------------------------|------------------------------|
| SNR | >77dB, A weighted |
| THD | <0.5% |
| Optimal pickup distance | 10~20cm |
| Line Input | |
| Input signal | 1V(0dBV) |
| Input impedance | 10 K Ω |
| Frequency response | 50Hz-18KHz |
| SNR | >90dB, A weighted |
| Others | |
| Monitoring loudspeaker | 2W/8 Ω |
| OPERATING CONDITIONS | |
| Humidity | < 95%, without condensing |
| Operating temperature | -10°C~+55°C(14°F to +131°F) |
| Storage temperature | -40°C~+70°C(-40°F to +158°F) |

P042: Zone Expander

| Description | Details |
|--|---|
| Power Supply | |
| Main power supply voltage | AC 100-240V, 50/60Hz |
| Backup power supply voltage | AC 100-240V, 50/60Hz |
| Main power supply fuse | T2AL 250V |
| Rated power | 35W |
| LINE INPUT | |
| Input signal | 1V(0dBV) |
| Input impedance | 20 K Ω |
| Frequency response | 80Hz-18KHz |
| SNR | >85dB, A weighted |
| AUDIO OUTPUT | |
| Output channels | CH1, CH2 |
| Output signal | 1V (0dBV) |
| THD | <0.1% |
| POWER AMPLIFIER CONTROL INTERFACE | |
| Channel No. | 3 (CH1, CH2 and spare amplifier) |
| Output signal | 1.4V |
| THD | <0.1% |
| Control signal | Self-testing, amplifier fault and power saving control signal |
| LOUDSPEAKER CIRCUITS | |
| Output channels | 8 (with group A and group B) |
| Maximum loudspeaker load | 500W |
| CONTACT INPUT /OUTPUT | |
| Contact inputs | 8 monitored contact input ports |
| Contact outputs | 8 contact output ports (NO、NC and COM) |
| Max. working voltage for outputs | AC 250V/DC 30V |
| Max. working current for outputs | 2.5A |
| DC power output | 24V/1A |

| OPERATING CONDITIONS | |
|-----------------------|-----------------------------|
| Humidity | < 95%, without condensing |
| Operating temperature | -10°C~+55°C(14°F to +131°F) |

P043: Extension Keypad

| Description | Details |
|----------------------|--|
| Power consumption | 1W |
| Power Supply Voltage | DC 5V |
| No. of Indicators | 8 two-color LEDs |
| No. of Keys | 8 configurable keys |
| Connections | Serial data and power connection via hidden flat cable |
| Humidity | 95%, without condensation |

P044: Digital Amplifier

| Description | Details |
|---------------------------|--------------------------------------|
| Main power supply voltage | ~ 220V-240V 50/60Hz |
| Power consumption | <720W |
| Amplifier output | 70V / 100V |
| Rated output power | 500W |
| Frequency response | (50Hz to 20KHz) |
| Input impedance | 20KΩ |
| Input sensitivity(RJ-45) | 1.4V |
| Efficiency | >90% |
| Power Amplifier topology | Class D using IRS2092 and IRFB23N20D |
| SNR | >100 dB, A weighted |
| Dynamic Range | 100dB (A Weighted) |
| Humidity | < 95%, without condensing |
| Operating temperature | -10°C~+55°C(14°F to +131°F) |

P045: Wall mount Speaker

| Description | Details |
|--|-----------------|
| Max power | 15 W |
| Rated power | 10 W |
| Power taps @ 100V | 10 W / 5 W |
| Power taps @ 70V | 5 W / 2.5 W |
| Sound pressure level at 10W/1W (2kHz,1m) | 101 dB / 92 dB |
| Frequency range (-10dB) | 150 Hz - 17 kHz |
| Dispersion angle(1kHz/-6dB) | 170° |
| Rated input voltage | 100 V / 70 V |
| Rated impedance | 1kΩ / 2kΩ |
| Connector | Push terminal |

P046: Intrusion Panel

| Description | Details |
|---|-----------------------------|
| Mains supply Voltage | 220+10%-15% 50Hz |
| Total current Output | 4A at 220V AC |
| ELECTRICAL REMOTE KEY PAD | |
| Quiescent current | 30 mA Max. |
| Quiescent current with backlit LCD | 90 mA Max |
| MAIN CONTROL STATION WITH ONE REMOTE KEY PAD | |
| Quiescent current | 100 mA |
| Quiescent current with backlit LCD | 360 mA |
| Current with dialing | 530 mA Max |
| Maximum sounder 1 current output | 1A |
| Maximum sounder 2 current output | 1A |
| Zone response time | <500ms |
| Zone Loop Resistance | <5k ohm for NORMALLY CLOSED |
| GSM | |
| GSM Frequency | Dual Band 900MHz / 1800 MHZ |

P047: 4 Wire Magnetic Contact

| Description | Details |
|----------------|----------------------|
| Operating Gap | 15 MM Min |
| Contact Rating | 10 W, 12/24VDC, 0.5A |
| Contact O/P | Normally Closed |
| Magnet | Metallic |
| Body | ABS Plastic |

P048: Beam Sensor

| Description | Details |
|--|--|
| Detection method | Infrared beam interruption detection |
| Detection range | Min. 20m (70ft.) |
| Arrival range | Min. 200m (700ft.) |
| Interruption period | Selectable between 50, 100, 250, and 500m sec. |
| Power supply | 10.5 - 28V DC |
| Current consumption (transmitter + receiver) | 38mA (max.) |
| Alarm period | 2sec. (±1) nominal |
| Alarm output | N.C. 28V DC, 0.2A (max.) |
| Tamper switch | Opens when cover is removed at 28V DC, 0.2A max. |
| Operating temperature | -35°C to +60°C (-31°F to +140°F) Use the optional heating unit (HU-3) in conditions of -25°C (-13°F) or below. |

P049: GSM Dialer

| Description | Details |
|------------------------------------|-----------------------------|
| Quiescent current | 90 mA Max. |
| Quiescent current with backlit LCD | 150 mA Max |
| Current with dialing | 250 mA Max |
| Zone response time | <500ms |
| Zone Loop Resistance | <5k ohm for NORMALLY CLOSED |
| Input voltage | 12V-24V DC, 300mA |
| GSM Frequency | Dual Band 900MHz / 1800 MHZ |

P050: Hooter

| Description |
|--------------------------|
| High Power 130dB |
| 4 Wire(with Tamper Loop) |
| Low current consumption |
| Weatherproof housing |

P051: 2 core 1.5 Sqmm flexible cable

| Description | Details |
|--------------------|------------------------------|
| Type | PVC insulated Flexible cable |
| Core | 2 |
| Sqmm | 1.5 |
| Category | PVC sheathed |
| Conductor material | Copper |
| Conductor Type | Multi Stranded |

P052: 6 Core 1 Sqmm flexible cable

| Description | Details |
|--------------------|------------------------------|
| Type | PVC insulated Flexible cable |
| Core | 6 |
| Sqmm | 1 |
| Category | PVC sheathed |
| Conductor material | Copper |
| Conductor Type | Multi Stranded |

9.4 Control Room and UPS System**P053: 20 KVA Online UPS with 5 Hours Battery backup**

| Description | Details |
|---------------------|---|
| INPUT | |
| Input Voltage | |
| a. Nominal Range | 3 X 380 / 400 / 415VAC (3 Ph + N + G) |
| b. Acceptable Range | 165 - 280V (Ph - N), 285 - 485V (Ph - Ph) |
| Frequency | 40 - 70 Hz |
| Phase | Three Phase in Single Phase Out |

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| | |
|--------------------------------|---|
| Power factor | 0.8 @ Full Load |
| Communication Interface | RS232 / RS485, SNMP (Optional) |
| Indication | LCD Display |
| Noise Level | Less than 60dBA @ 1 Meter |
| OUTPUT | |
| Output Voltage Range | 208 / 220 / 230 VAC |
| Frequency (Synchronized Range) | 50 Hz +/- 1% |
| Frequency Range (Battery Mode) | 50Hz +/- 0.1Hz |
| THD (Linear Load) | < 2% |
| THD (Non Linear Load) | < 5% |
| Current Crest Factor | up to 3: 1 maximum |
| Waveform Type | Pure Sine wave |
| Over Load | 110% 10 min |
| | 150% 60 Sec |
| | > 160% 200 m Sec |
| Efficiency | |
| AC Mode | >88% |
| Battery Mode | 90% |
| Battery Type | Maintenance-free sealed dry cell Lead-Acid battery; leak proof. |
| Backup Mins | >300Mins (5Hrs) |
| Operating Environment | 0 - 40 °C. |
| Operating Relative Humidity | 0 - 90% |

P054: 10 KVA Online UPS with 5 Hours Battery backup

| Description | Details |
|--------------------------------|----------------------------|
| INPUT | |
| Input Voltage | |
| a. Nominal Range | 208 / 220 / 230 / 240 V AC |
| b. Acceptable Range | 210 V to 240V AC |
| Frequency | 45- 55 Hz |
| Phase | Single Phase |
| Power factor | 0.9 @ Full Load |
| Communication Interface | RS232 , SNMP (Optional) |
| Indication | LCD Display |
| Noise Level | Less than 55dBA @ 1 Meter |
| OUTPUT | |
| Output Voltage Range | 208 / 220 / 230 VAC |
| Frequency (Synchronized Range) | 50 Hz +/- 1% |
| Frequency Range (Battery Mode) | 50Hz +/- 0.1Hz |
| THD (Linear Load) | < 2% |

| | |
|-----------------------------|---|
| THD (Non Linear Load) | < 5% |
| Current Crest Factor | up to 3: 1 maximum |
| Waveform Type | Pure Sine wave |
| Over Load | 110% 10 min |
| | 130% 60 Sec |
| | > 130% 1 Sec |
| Efficiency | |
| Battery Type | Maintenance-free sealed dry cell Lead-Acid battery; leak proof. |
| Backup Mins | >300Mins (5Hrs) |
| Battery Mode | 90% |
| AC Mode | >90% |
| Operating Environment | 0 - 40 °C. |
| Operating Relative Humidity | 20 - 90% |

P055: 1.5 Ton Inverter split AC with 5KVA stabilizer

| Description | Details |
|--|---------------------|
| Cooling Capacity (Watt)(Min~Max) | 5275 (991 ~ 5741) |
| Cooling Capacity (BTU/hr) | 18000 |
| Rated Cooling Capacity (50% Load) (Watt) | 2638 |
| Compressor Type | Inverter Rotary |
| Nominal Cooling Capacity (tonnage) | 1.5 |
| Electricity Consumed In 1600 Hours. (Units/Year) | 1104.65 |
| Noise Level Indoor (dB(a)) (High/ Medium/ Low) | 45/41/36.8 |
| Air Flow Volume (Wet CFM) (High / Medium / Low) | 420/315/275 |
| Acoustic Jacket On Compressor | Yes |
| Ambient Temp (Cooling) (degree C) | 52 |
| Stabilizer | 5 KVA |

P056: Renovation of Control room

| Description |
|--|
| Renovation of Control room works as per site requirements:- 1 feet height and 1 feet breadth excavation work for removing existing tiles at inner area as per site requirement. |
| 1 feet height and 1 feet breadth excavation work for removing existing paver blocks at outer area as per site requirement |
| R.C.C concrete work 1:2:3 ratio should be done as per site requirement. |
| Plastering work from inner and outer area of control room should be done as 1:4 ratio. |

| |
|---|
| Providing and fixing of vinyl flooring mat Thickness: 1.6mm at inner area of control room. |
| False ceilings:- Gypsum board thickness-12mm |
| Channel-3"x3/4 size 16 kg thickness |
| Demolishing of Inner and outer 9 inch wall and removing of old plastering in Terrace. |
| Terrace waterproofing as per site requirement. |
| Crack filling in interior and exterior surface of control room. |
| Scraping and painting in interior and exterior surface of control room as per site requirement. |
| 4' x 2' table - 2Nos and Rolling Chair - 4 Nos |
| Construct 4.5 feet compound wall and safety gate as per site requirement. |

P057: Construction of new UPS room

| Description |
|---|
| Construction of new UPS room as per site requirement:- 9" x 9" column Pile foundation as per site requirement. |
| 9" x 9" plinth beam as per site requirement. |
| Column and beam should be done RCC concrete with the ratio of 1:2:3 |
| Outer wall thickness should be done 4 1/2" with the ratio of 1:4 and plastering work with the ratio of 1:4 |
| Basement height : 1 Feet from the ground level. |
| 1:4:8 ratio for PCC work and 1:4 ratio flooring work. |
| Roof sheet should be 0.47 thickness and 40mm x 40mm pipe with 2mm thickness. |

P058: Renovation of BMS Operator living room

| Description |
|---|
| Providing and fixing of UPVC window - 3' x 4' |
| Removing of existing windows and closed by using brick with the ratio of 1:6. |
| Chamber brick and inner, outer plastering work should be done by 1:4 ratio. |
| Providing and fixing of PVC door single panel with the size of 2'6" x 7' |
| Plumbing work as per site requirement. |
| Terrace Sheet work-Providing and fixing of Sheet with metal pipe and fittings for Roof and side area. |
| Roof and Side sheet should be 0.47 thickness and 40mm x 40mm pipe with 2mm thickness. |

P059: Electrical Work at Control Room, UPS Room and BMS Operator living room

| Description |
|---|
| Concealed Electrical line with 1" PVC pipe and metal box |
| Control room lighting and Fan wiring by using 1.5sqmm and 2.5sqmm cable as per site requirement |
| UPS room lighting and Fan wiring by using 1.5sqmm and 2.5sqmm cable as per site requirement |
| Control room AC wiring by using 4sqmm cable as per site requirement |
| Inner and Outer LED light with wiring work should be done as per site requirement |
| Providing and fixing of maintenance free electrode earthing as per site condition. |

P060: Conventional 2 Zone Fire Alarm Panel

| Description | Details |
|-----------------------|---|
| Primary Power | 120 / 220VAC + 10% -15%, 60 / 50 Hz. 60W |
| Stand by Power | 24VDC (2 Nos of 12V, 7Ah Sealed Lead acid battery). |
| Quiescent current | 55mA |
| No of Relays | 3 |
| Relay Contact Rating | 2Amps @ 30 VDC, 0.5Amps @125VAC |
| Alarm Current | 15 - 30mA |
| Short Circuit Current | 42mA Maximum |
| Loop resistance | 50 ohms Maximum |
| End-Of-Line Resistor | 4.7K, 1/4watt |
| Stand by Current | 6.8mA (2.4mA for Detectors) |

P061: Conventional Smoke Detector

| Description | Details |
|--------------------------|-----------------------------|
| Operating Voltage | 9 ~ 33V DC. |
| Operating Temperature | -10 C to 37.8 C. |
| Storage Temperature | -10 C to 60 C. |
| Humidity | 0 - 95% RH, non-condensing |
| Reset Voltage | less than 1V |
| Standby Current | 50 µA. |
| Start up Time | 60s. |
| Start up Current | 170 µA. |
| Alarm Current | 90 mA.(Max). |
| Remote Output | 15mA maximum open collector |
| Smoke Sensitivity | |
| Air Velocity | 0 - 4000 fpm. |
| Cycle time | 5 Sec |

P062: Conventional Manual Call Point

| Description | Details |
|-------------------|---------|
| Operating Voltage | 24VDC |
| Operating Current | 30mA |
| Material | Plastic |
| IP Rating | IP-50 |

P063: Conventional Sounder

| Description | Details |
|-------------------|---------|
| Operating Voltage | 24V DC |

| | |
|-----------------------|--------------------------|
| Operating Current | 40 mA Max. |
| Sound Level | 100±5 dB@1m |
| Operating Temperature | 0 - 49° C / 32-120° F. |
| Sounder Type | |
| Tone Type | Fire Engine Siren |
| Material | ABS Plastic |

P064: Biometric Device

| Description | Details |
|-------------------------|--|
| Display | 3" Color TFT |
| Fingerprint Capacity | >500 |
| Card Capacity | >500 |
| Transaction Capacity | 1,00,000 |
| CPU | 800 Mhz 32bit Microprocessor |
| FAR | <=0.0001% |
| FRR | <=1% |
| Identification Speed | <0.5sec |
| Fingerprint Sensor | 500 DPI Optical Sensor |
| Algorithm Version | 10 or higher |
| Communication | TCP/IP, USB |
| Card Reader | Inbuilt Proximity card reader |
| Push data | Yes |
| Keypad | Yes |
| LED Indicator | Green/Red |
| Schedule Bell/Speaker | Mini speaker |
| Access Control Features | Wiegand: In and Out both 26 or 34 bit(with or without site code) Relay: 12V relay for lock EM lock, Bolt Lock or Strike Lock Support Fire Alarm :Yes Door Sensor:Yes Anti Passback : Yes Door Bell: Yes Support Exit Reader :Yes |
| Power Supply | DC 12V/1.5 Amp |
| Operating Temperature | 0 °C to 45 °C |
| Operating Humidity | 20% - 80% |

P065: Exit Reader

| Description | Details |
|-----------------------|----------------|
| Sensor | Optical Sensor |
| Communication | RS485 |
| Card Reader | Proximity |
| Voice Prompt | Buzzer |
| Working Voltage | 12V DC |
| Operating Temperature | 0 °C to 45 °C |
| Operating Humidity | 20% - 80% |

P066: EM Lock

| Description | Details |
|---------------------|--------------|
| Current Consumption | 500 mA/250mA |
| Voltage Tolerance | 115% |
| Holding Capacity | 600 LBS |
| Temperature | 10°C-55°C |
| Working Voltage | 12V DC |

P067: 43" Display

| Description | Details |
|-----------------------|--|
| Screen Size | 43" |
| Panel Technology | IPS |
| Aspect Ratio | 16:09 |
| Native Resolution | 1,920 x 1,080 (FHD) |
| Brightness | 450 cd/m2 |
| Contrast Ratio | 1,100:1 |
| Viewing Angle (H × V) | 178 x 178 |
| Response Time | 12 ms (G to G BW), 9.4 ms (WOT) |
| Operation Hours | 24 Hrs |
| Life Time (Typ.) | 50,000 Hrs |
| Orientation | Landscape & Portrait |
| Connectivity | Input : HDMI (3), DP, DVI-D, Audio, USB 3.0 Output : DP (SST), Audio (Off/Fixed/Variable), External Control : RS232C In/out, RJ45 In, IR Receiver In |
| Operation Temperature | 0°C to 40°C |
| Operation Humidity | 10% to 80% |
| Power Supply | 100-240V~, 50/60Hz |
| Power Type | Built-In Power |
| Power Consumption | Typ. / Max. : 75 W (TBD) / 95 W Smart Energy Saving : 55 W (TBD) |
| Certifications | IEC 60950-1 / EN 60950-1 / UL 60950-1, FCC Class "A" / CE / KC, ErP:Yes, Energy Star 7.0 |

P068: 55" Display

| Description | Details |
|-----------------------|---|
| Screen Size | 55" |
| Panel Technology | IPS |
| Aspect Ratio | 16:09 |
| Native Resolution | 3,840 x 2,160 (UHD, RGB) |
| Brightness (Typ.) | 500 cd/m ² |
| Contrast Ratio | 1,100:1 |
| Viewing Angle (H × V) | 178 x 178 |
| Response Time | 8ms (G to G) |
| Operation Hours | 24 Hrs |
| Life Time (Typ.) | 50,000 Hrs |
| Orientation | Portrait & Landscape |
| Connectivity | Input : HDMI (3), DP, DVI-D, Audio, USB 2.0 Output : DP, Audio (Off/Fixed/Variable), External Control : RS232C In/Out, RJ45 (LAN) In, IR In |
| Special Feature | Tilt (Facedown): Max. 30° IP Rating: IP5x |
| Operation Temperature | 0°C to 40°C |
| Operation Humidity | 10% to 80% |
| Power Supply | 100-240V~, 50/60Hz |
| Power Type | Built-In Power |
| Power Consumption | Typ. / Max. : 105W (TBD) / 145W (TBD) Smart Energy Saving : 80W (TBD) |
| Certifications | IEC 60950-1 / EN 60950-1 / UL 60950-1, FCC Class "A" / CE / KC, ErP:Yes, Energy Star 7.0 |

P069: 75" Display

| Description | Details |
|-----------------------|----------------------|
| Screen Size | 75" |
| Panel Technology | IPS |
| Native Resolution | 3,840 × 2,160 (UHD) |
| Brightness (Typ.) | 350 nit |
| Contrast Ratio | 1,200 : 1 |
| Viewing Angle (H × V) | 178 × 178 |
| Response Time | 6 ms (G to G) |
| Operation Hours | 24 Hrs |
| Life Time (Typ.) | 50,000 Hrs |
| Orientation | Portrait & Landscape |

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| | |
|-----------------------|---|
| Connectivity | Input : HDMI (2, HDCP 2.2/1.4), HDMI (1, HDCP 1.4), DP (1, HDCP 2.2/1.3), DVI-D (1, HDCP 1.4), Audio, USB 2.0 Type A (2) Output : DP, Audio (Off / Fixed / Variable) External Control : RS232C In / Out (4 Pin Phone Jack), RJ45 (LAN) In, IR In |
| Operation Temperature | 0 °C to 40 °C |
| Operation Humidity | 10 % to 80 % |
| Power Supply | AC 100 - 240 V ~, 50 / 60 Hz |
| Power Type | Built-in Power |
| Power Consumption | Typ. / Max. : 160 W / 185 W Smart Energy Saving : 112 W |
| Speaker | Built-in (10 W × 2) |
| Certifications | IEC 60950-1 / EN 60950-1 / UL 60950-1, FCC Class "A" / CE / KC, ErP:Yes, Energy Star 8.0 |

P070: Desktop Computer

| Description | Details |
|-------------------|---|
| Processor | 8 th Generation, Intel Core i7 processor (3.2 GHZ upto 4.60 GHZ, 12 MB Cache). |
| Memory | 8GB DDR4 UDIMM @ 2400 MHZ Upgradeable upto 32 GB. |
| Hard Disk Drive | 1 TB SATA Hard Disk Drive. |
| Operating System | Windows 10 professional preloaded with DVD Media. |
| Graphics | Integrated Graphics. |
| Display | VGA Display port. |
| Network Interface | Integrated LAN 1 Gbps Network card with remote booting facility. |
| Monitor | 23" LED. |
| Slots | 4 PCI / PCI Express Slots. |
| Ports | Parallel – 1, HDMI – 1, RJ45 – 1, DVI Audio 3.5mm Jack, 8 USB Ports (Rear-4 Front -4). |
| DVD | DVD Writer. |
| Accessories | Keyboard and Optical Mouse. |

P071: 42U Rack

| Description | Details |
|--|--|
| Racks for Server with fans, spike suppressors, terminations and cable managers | 42 U (2004 mm x 609 mm x 1008 mm) with Cable Manager, PDU, and Fan Material must be of standard make & quality. |
| Standard | ISI or Equivalent, |

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| | |
|-------------------|--|
| Installation Type | Indoor |
| Design | Aluminum extruded frame structure design, This aluminum frame structure shall be Powder coated with Matt finish. |
| Type | Floor movable rack |
| General | Side panels shall be detachable with slam latches, ventilation slot on side panels, full vented top cover (minimum 2 Nos. of 230 VAC Fans) and bottom cover with the cable entry provision. Hardware Screw pocket included. It shall have front and rear glass/perforated cover with locks. Rack's depth shall be sufficient to accommodate Server. |

P072: Single core 10 Sqmm flexible cable

| Description | Details |
|--------------------|------------------------------|
| Type | PVC insulated Flexible cable |
| Core | 1 |
| Sqmm | 10 |
| Category | FRLS |
| Conductor material | Copper |
| Conductor Type | Multi Stranded |

P073: 3 core 16 Sqmm armoured cable

| Description | Details |
|--------------------|------------------------------|
| Type | Armoured PVC insulated cable |
| Core | 3 |
| Sqmm | 16 |
| Category | FRLS |
| Conductor material | Copper |
| Conductor Type | Multi Stranded |

P074: Double Pole 40Amps MCB

| Description | Details |
|--------------------------------|---|
| Current Rating | 40A |
| Number of Poles | Double-Pole (DP) |
| Electro Thermal Characteristic | B, C and D curve |
| Breaking Capacity | 10 kA |
| Rated Voltage | 240 / 415 V AC |
| Current Limitation Class | 3 |
| Frequency | 50 to 60 Hz |
| Rated Impulse Voltage | 4 kV |
| Minimum Operating Voltage | 24 V AC |
| Degree of Protection | IP 20 |
| Termination | Dual termination on both the sides (Cable and Busbar) |

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| | |
|------------------------------------|---|
| Applied Connection Torque | 6 N m |
| Permissible Ambient Temp. | - 5° C to + 55° C |
| Calibration Temperature | 30° C |
| Mechanical Life (operating cycles) | >100,000 |
| Mounting | Snap fixing on standard profile 35 X 7.5mm DIN-Rail as per EN 50022 |

P075: Double Pole 63Amps MCB

| Description | Details |
|------------------------------------|---|
| Current Rating | 63A |
| Number of Poles | Double-Pole (DP) |
| Electro Thermal Characteristic | B, C and D curve |
| Breaking Capacity | 10 kA |
| Rated Voltage | 240 / 415 V AC |
| Current Limitation Class | 3 |
| Frequency | 50 to 60 Hz |
| Rated Impulse Voltage | 4 kV |
| Minimum Operating Voltage | 24 V AC |
| Degree of Protection | IP 20 |
| Termination | Dual termination on both the sides (Cable and Busbar) |
| Applied Connection Torque | 6 N m |
| Permissible Ambient Temp. | - 5° C to + 55° C |
| Calibration Temperature | 30° C |
| Mechanical Life (operating cycles) | >100,000 |
| Mounting | Snap fixing on standard profile 35 X 7.5mm DIN-Rail as per EN 50022 |

P076: Four Pole 63Amps MCB

| Description | Details |
|--------------------------------|---|
| Current Rating | 63A |
| Number of Poles | Four-Pole (FP) |
| Electro Thermal Characteristic | B, C and D curve |
| Breaking Capacity | 10 kA |
| Rated Voltage | 240 / 415 V AC |
| Current Limitation Class | 3 |
| Frequency | 50 to 60 Hz |
| Rated Impulse Voltage | 4 kV |
| Minimum Operating Voltage | 24 V AC |
| Degree of Protection | IP 20 |
| Termination | Dual termination on both the sides (Cable and Busbar) |

Tender Ref: ELCOT/EG/612/Museum/Security Gadgets/2020-21

| | |
|------------------------------------|---|
| Applied Connection Torque | 6 N m |
| Permissible Ambient Temp. | - 5° C to + 55° C |
| Calibration Temperature | 30° C |
| Mechanical Life (operating cycles) | >100,000 |
| Mounting | Snap fixing on standard profile 35 X 7.5mm DIN-Rail as per EN 50022 |

9.5 Free Warranty

All products delivered under the current tender should be covered with one year free warranty. Any fault / defective components should be rectified / replaced at free of cost.

Any service calls should be attended within 24 hours from the time of receipt of calls.

If any replacement or break down of any of the equipment or any offsite repairs / services is needed, the equipment should be restored within 48 hours.

9.6 Training

Suitable training should be given to managing staff of Government Museum, Chennai and the personnels deployed in Control Room on operating and managing of equipments installed at Govt. Museum Chennai. The number of persons to be trained will be decided by Museum Department. The training should be provided at free of cost.

9.7 Documents to be submitted

Product Brochures

User Manual

Invoice, Delivery Challan & Installation Certificate

Troubleshooting Manual

9.8 Delivery Schedule

Supply, Installation and Commissioning of Security Gadget Systems as per the Bill of Material specified in the scope of work should be completed within **two months** from the date of signing of Contract. The exact location of the installation of Security Gadgets at Govt. Museum, Chennai will be provided by the Department of Museums to the successful bidder. However the delay in granting permission and site readiness will be excluded from the time schedule.

In general the delivery schedule is taken from the next date of purchase order and on specific instructions from ELCOT the delivery schedule is taken from the date of LOA or any written instruction through email or Fax etc.

a) Based on any urgent requirement of Government Museum, Delivery Schedule may be reduced by ELCOT after the discussions with the Successful Bidders. In such cases, preference will be given to the bidder(s) / successful bidders who have sufficient stock and meet the delivery schedule of the intending departments, without violation of any rules, acts etc. In such specific cases, if the L1 bidder is not ready to supply the required urgent quantity, then the items will be procured from the other successful bidders, who is ready to supply the items and the decision of ELCOT will be final in this regard.

b) The Successful Bidder after obtaining the Purchaser address shall visit the sites to assess the readiness of the site for installation. ELCOT advises the successful bidder not to supply the items for the sites which are not ready and in this connection, the successful bidder on receipt of supply instructions from ELCOT shall get the information on site readiness from the respective purchaser.

c) However the Purchaser is responsible for the site preparation before the scheduled installation dates.

d) The Successful Bidder is responsible for all unpacking, assemblies, wiring, installations, cabling between hardware units and connecting to power supplies. The Successful Bidder will test all hardware operations and accomplish all adjustments necessary for successful and continuous operation of the hardware at all the installation sites.

e) If required, the Successful Bidder selected for various equipments to be installed at single user premises shall co-ordinate with each other and prepare a list where delivery is planned by all the parties, so that installation and handing over can be carried out to the purchasers suitably / simultaneously by all the parties. The Successful Bidder must send the proposed delivery schedule to each purchaser and to ELCOT well in advance.

f) The Successful Bidder shall be responsible for commissioning of the items supplied by preparing interfacing / integrating with purchaser's equipment / accessories / software supplied by other bidders.

g) After successful Installation, commissioning and handing over of the ordered items to the purchasers the Successful Bidder must obtain signed installation certificate / Installation Report (IR) in the Installation Certificate Format prescribed by ELCOT along with Sample test results duly certified by the respective purchaser on the installed items. The Installation Report should carry the full specification and OEM description as per tender / contract / purchase / work order.

h) The Successful Bidder shall send status report in the format prescribed in such intervals as may be required by ELCOT from time to time till the execution of the entire order. Such status report should accompany with each claim for payment.

i) The Successful Bidder shall undertake to supply spares for the maintenance of the supplied items for period of minimum FIVE years or extended period mutually accepted.

j) The details of the service centre representatives responsible for attending the installation, warranty services at each purchaser site, name and designation of the contact person and centre in-charge, higher level in-charge who is responsible to oversee the service centres, person to whom complaints can be made in case the service provided by any centre is not satisfactory, phone, fax, mobile numbers & email address must be provided well in advance to each purchaser and to ELCOT. The above shall be complied by the Successful Bidders. Service Centre details shall be made available in the Websites of the OEM / Bidder and ELCOT.

k) In the rare event of non-acceptance of delivery items by the user, the successful bidder shall immediately report ELCOT for suitable directions.

9.9 Maintenance

One Year Maintenance period will start from the date of certification by Government Museum, Egmore, Chennai - 8 and after the successful installation and commissioning of the Security Gadgets and Post / Paid warranty for next four years after completion of one year warranty period will be applicable.

Any non-working component/accessories should be made good or replaced to ensure seamless working of the Security Gadget Systems.

9.9.1 Preventive Maintenance:

The Contractor shall perform four inspections in a year at three-month intervals during the warranty and post warranty period. These inspections will include and any other relevant tasks.

- Visual checks, Operational Test of all the Hardware units.
- Perform diagnostics on all equipments
- Correct the diagnosed problem
- Resolve previous outstanding problems if any
- Submit a report on the above to the Customer and ELCOT

10. Tender Evaluation

10.1 Sample submission

- a) **One Sample of each items of the specification mentioned in the scope of work in clause 8.3 – Bill of Materials** should be submitted on a predefined date which will be informed later, along with Sample Submission Form as indicated in Appendix-3. The make, model number and brochures / specification of the items should be specified in the Sample Submission Form for testing by ELCOT. Technical Compliance Statement of the Tender has to be submitted in the technical bid.
- b) The Bidders have to submit the sample items on a date which will be indicated later by ELCOT for demonstration of the equipments. No time extension is allowed for submission of samples. Samples submitted after the above due date, would be liable for rejection.
- c) Such samples should be delivered at the address mentioned in Sl.No.1 of Clause 2- Tender Schedule.
- d) If the samples are not delivered within the time limit specified in the Tender, it would be treated as non-responsive to the Tender conditions and the Bids are liable for rejection.

10.2 Special Concession for ELCOT approved products

- a) If the samples of the tender specification has already been tested and approved by ELCOT in earlier tenders, then the Bidder need not submit those products for sample evaluation. The bidder shall provide the reference of the tender number and test reports.
- b) ELCOT reserves the right to call for samples again if need arises and to call for any other sample of any other item at any point of time.

10.3 Compliance with Technical Specification

All the Bidders should submit the item as asked for testing. The compliance statement would be prepared and evaluated. The samples of those bidders, which do not conform to the technical specifications, the bids of those bidders will be rejected.

10.3 Evaluation Results

The Evaluation test results will enable ELCOT to derive the following details:

- a) To know whether the bidders propose to offer the configuration as per the Tender specification or not.
- b) To provide decision support for the Technical Committee whether to accept or reject the products.

10.4 Analysis of Evaluation Results

- a) If the equipment supplied for evaluation meets the tender specifications, it would be treated that the equipment had passed the “specifications test”. If the specifications are below the tender specifications, then the equipment would be treated as “failed” in the “specifications test”. The bidders should take utmost care to bring in the samples which should be equal to or better than the specifications given in the tender document.
- b) ELCOT reserves the right to reject a sample if it is found that it does not meet the specifications. In such cases the bidder would be treated as “failed” in this test. However, ELCOT reserves its right to offer one last opportunity to the bidder to produce another sample for evaluation, say within a short period of 2-3 days. Such a sample would be evaluated again to find out whether the bidder gets “pass” in this test.
- c) Offering this additional opportunity is solely at the discretion of ELCOT. ELCOT would be pleased to provide such an opportunity ONLY if public interest (healthy competition) demands such a step. In the normal course, such an additional opportunity would not be given to the bidders.
- d) The supplied item should be as per the approved specification of the sample submitted and the OEM concerned. Any improved specification of the items should be submitted for evaluation and has to be accepted by ELCOT. If any deviation found during the contract period, the penal action will be initiated including blacklisting of the successful bidder.

10.5 Technical Bid Evaluation

- a) A Technical Committee will examine the Technical Bids against the Eligibility Criteria based on the support documents submitted by the Bidders.

- b) The bidders who comply with all the Eligibility criteria and whose sample qualify in the benchmark test are eligible for further processing.

10.6 Demonstration by the Bidders

- a) The Bidders who fulfilled the Bid compliance with Tender Eligibility Criteria as mentioned above may be required to demonstrate the functioning of the sample Security Gadgets as per the requirements of the Museum. The Eligible Bidders should be ready for the demonstration at a short notice.
- b) The Eligible Bidders who are able to demonstrate will be considered for further processing and will be called as Technically Qualified Bidders. The Eligible Bidders who failed to demonstrate will be rejected.

10.7 Warranty Clause

The warranty clause during the Standard warranty period of 3 years and CAMC period of 4th & 5th year would be applicable as follows.

- a) All the Tendered items should be supplied to the Purchaser site free from breakages, malfunctions, breakdowns or manufacturing defects. If any of the items are found defective due to manufacturing defect or design fault or transit damage occurred at the time of supply or within one month from the date of installation, the items in full should be replaced.
- b) All the materials and components of the Tendered items should be covered with a replacement warranty during the Standard warranty and CAMC period from the date of signing of installation report of the ordered items. The successful Bidder shall be liable to make good the loss by replacing the items or other accessories found defective during the warranty period.
- c) The successful Bidder should give an undertaking to maintain the spares of all the hardware items of 2% of the total quantity ordered. Service Level Agreement (SLA) during maintenance support period (warranty and CAMC).
- d) During the warranty and CAMC support period, the complaints received from the Purchasers should be attended as below.
 - 1) If the complaint is received during the forenoon (up to 2 PM), the complaint should be attended on the same day.
 - 2) If the complaint is received during the afternoon (after 2 PM), the complaint should be attended on the next day. If next day is the declared

Holiday, the complaint should be attended in the next working day under normal circumstances. In emergency situations or urgent requirement of the Purchaser, the complaint should be attended within 2 hours on the same day.

- 3) All the complaints should be rectified within 2 working days excluding the date of complaint.
- 4) Penalty for non-adherence of the tender terms and if the complaints are not rectified within the stipulated period, an equivalent standby shall be supplied till rectification. A penalty of 0.25% on the value of the item will be charged per day till the equipment is put on working condition, in case the standby item is not supplied. 0.25% per day subject to Maximum of 30 days on value of the item, thereafter ELCOT holds the options for cancellation of the order and re-procures the same from any other bidder at the cost of successful bidder and forfeits the EMD/SD / Performance Security of the bidder.
- 5) Weekly breakdowns maintenance report shall be sent to ELCOT with details of rectification.
- 6) After expiry of warranty, the purchaser/ELCOT has option to enter into Comprehensive Annual Maintenance Contract (CAMC) with successful bidder for Post Warranty Maintenance of the items.

11. Payment Clause

- 11.1 100% of the total cost of ordered items will be paid by ELCOT on behalf of the Purchaser, after receipt of funds from the Purchaser, on installation, commissioning and handing over of the ordered items to the Purchaser, after testing and fulfilling the technical specifications on submission of an irrevocable Bank Guarantee from scheduled banks (except Yes bank) for 5% of the cost of the ordered value valid for 40 months during the warranty period. (OR)
- 95% of the total cost of ordered items will be paid by ELCOT on behalf of the Purchaser, after receipt of funds from the Purchaser, on installation, commissioning and handing over of the ordered items to the Purchaser, after testing all the software and fulfilling the technical specifications and the balance 5% will be released to the successful bidder after completion of 3 years warranty period.
- 11.2 ELCOT advises the successful bidder to supply the items only if the site is ready. On receipt of the purchaser details, the concerned authority may be contacted for issue of Site Ready Certificate and then arrange for supplies only to the sites, which are ready.
- However if the site is not ready within 15 days of delivery, on submission of proof of delivery and SNR certificate from the Purchaser
- OR
- if the site is not ready within 30 days of delivery, on submission of proof of delivery (without SNR certificate from the purchaser) and after checking with purchaser, 75% of total cost will be paid, after receipt of funds from the Purchaser and balance 25% of the total cost will be paid on installation, commissioning and handing over of the ordered items, on submission of an irrevocable Bank Guarantee from scheduled bank (except Yes bank) for 5% of the cost of the ordered value valid for period of 40 months during the warranty period.
- 11.3 Bills will be honoured within 30 working days after submission of bills along with all supporting documents in complete shape and accepted by ELCOT.
- 11.4 The Successful Bidder hereby agrees to get the refund of incentive, excise duty and proportionate sales tax from authorities concerned and pass it on to Purchaser(s) if the Government or any other appropriate agency reduces the

Excise duty or Sales tax or give incentive of any type retrospectively after supplying the Ordered items failing which action will be taken to recover the balance amount from the Successful Bidder under the Revenue Recovery Act or any other relevant act. If the purchaser request/claim for exemption from ED or Tax, then the successful bidder before accepting the order should produce the relevant documentation and accordingly the PO / Work order will be issued.

- 11.5 Penalty amount if any, will be adjusted in the payment due to the Successful Bidder.
- 11.6 All taxes and other levies imposed by Governments in India will be paid at actual as applicable.
- 11.7 If any purchaser department have obtained exemption from payment of any duty or taxes or any concessional rate of duty or taxes, then the bidder / successful bidder/ contractor should extend the concession to the department / purchaser and bill the purchaser/ purchaser accordingly.

Appendix-1 Model Form of Contract

(To be executed on a Rs. 100/- Non-Judicial Stamp Paper bought in Tamil Nadu by the Successful Bidder for the supply, installation and commissioning of Security Gadgets)

(NO FIGURES IN NUMERALS OR WORDS SHALL BE FILLED UP IN THIS SAMPLE FORM AT THE TIME OF SUBMISSION OF TENDER)

This CONTRACT is entered into at Chennai on the day of (Year) between Electronics Corporation of Tamil Nadu Limited, a wholly owned Government of Tamil Nadu Undertaking, a Company registered under the Companies Act, 1956 and having its Registered office at 692, Anna Salai, Nandanam, Chennai- 600 035 herein after referred to as "ELCOT" (which term shall mean and include its Successors and permitted assigns) on behalf of Purchaser (s) to be communicated by ELCOT from time to time (herein after referred to as "Purchaser (s)") and a Company registered under the Companies Act, 1956 and having its Registered Office at hereinafter referred to as the "Successful Bidder" (which term shall mean and include its Successors and permitted assigns)

Whereas, ELCOT had floated a Rate Contract Tender vide **Tender No.ELCOT/EG/612/Museum/Security Gadgets/2020-21** for the supply, installation and commissioning of Security Gadgets and the Successful Bidder has been selected as one of the successful bidders in the Tender as per the following terms and conditions:-

1. This document on having been signed by both the parties shall constitute a binding contract between the parties and shall remain in force for a period of 36 months. But in the event of any breach of agreement at any time on the part of the Successful Bidder, the contract shall be determinable by ELCOT without compensation to the Successful Bidder. The contract may also be put to an end at any time by ELCOT upon giving seven days notice to the Successful Bidder.
2. The Successful Bidder agrees that in the event of failure of 10% or more of the vital components of the equipments occurring during the first three year warranty period, ELCOT would have a right to blacklist them for any procurement through ELCOT for a period of three years from that date.
3. The Successful Bidder agrees to supply and maintain the Bill of Materials detailed in ELCOT Tender **ELCOT/EG/612/Museum/Security Gadgets/2020-21** after carrying

out successfully all tests prescribed by the Purchaser(s) at an unit price plus applicable Taxes as indicated in Annexure to this Contract to the Purchaser(s) before the specified date. The price offered is firm and is not subject to enhancement on any ground.

4. Delivery Schedule:

Supply, Installation and Commissioning of Security Gadget Systems as per the Bill of Material specified in the scope of work should be completed within **two months** from the date of issuing of Purchase Order. However the delay in granting permission and site readiness will be excluded from the time schedule.

a) Based on any urgent requirement of Government Museum, Delivery Schedule may be reduced by ELCOT after the discussions with the Successful Bidders. In such cases, preference will be given to the bidder(s) / successful bidders who have sufficient stock and meet the delivery schedule of the intending departments, without violation of any rules, acts etc. In such specific cases, if the L1 bidder is not ready to supply the required urgent quantity, then the items will be procured from the other successful bidders, who is ready to supply the items and the decision of ELCOT will be final in this regard.

b) The Successful Bidder after obtaining the Purchaser address shall visit the sites to assess the readiness of the site for installation. ELCOT advises the successful bidder not to supply the items for the sites which are not ready and in this connection, the successful bidder on receipt of supply instructions from ELCOT shall get the information on site readiness from the respective purchaser.

c) However the Purchaser is responsible for the site preparation before the scheduled installation dates.

d) The Successful Bidder is responsible for all unpacking, assemblies, wiring, installations, cabling between hardware units and connecting to power supplies. The Successful Bidder will test all hardware operations and accomplish all adjustments necessary for successful and continuous operation of the hardware at all the installation sites.

- e) If required, the Successful Bidder selected for various equipments to be installed at single user premises shall co-ordinate with each other and prepare a list where delivery is planned by all the parties, so that installation and handing over can be carried out to the purchasers suitably / simultaneously by all the parties. The Successful Bidder must send the proposed delivery schedule to each purchaser and to ELCOT well in advance.
- f) The Successful Bidder shall be responsible for commissioning of the items supplied by preparing interfacing / integrating with purchaser's equipment / accessories / software supplied by other bidders.
- g) After successful Installation, commissioning and handing over of the ordered items to the purchasers the Successful Bidder must obtain signed installation certificate / Installation Report (IR) in the Installation Certificate Format prescribed by ELCOT along with Sample test results duly certified by the respective purchaser on the installed items. The IR should carry the full specification and OEM description as per tender / contract / purchase / work order.
- h) The Successful Bidder shall send status report in the format prescribed in such intervals as may be required by ELCOT from time to time till the execution of the entire order. Such status report should accompany with each claim for payment.
- i) The Successful Bidder shall undertake to supply spares for the maintenance of the supplied items for period of minimum FIVE years or extended period mutually accepted.
- j) The details of the service centre representatives responsible for attending the installation, warranty services at each purchaser site, name and designation of the contact person and centre in-charge, higher level in-charge who is responsible to oversee the service centres, person to whom complaints can be made in case the service provided by any centre is not satisfactory, phone, fax, mobile numbers & email address must be provided well in advance to each purchaser and to ELCOT. The above shall be complied by the Successful Bidders. Service Centre details shall be made available in the Websites of the OEM / Bidder and ELCOT.

- k) In the rare event of non-acceptance of delivery items by the user, the successful bidder shall immediately report ELCOT for suitable directions.
5. The price of the ordered items as per the Tender includes excise duty, Surcharges, Freight, Octroi, insurance, commissioning, and such other levies that may be applicable. Any concessional tax or Duty claimed by purchaser shall be considered based on documentation.
6. The goods or materials to be supplied under this contract are to be of the quality and of the sort mentioned in the ELCOT Tender document.
7. The goods or materials are to be delivered on F.O.R destination indicated by ELCOT/Purchaser(s) without any extra cost in such quantities or numbers contained in the purchase order to be issued by ELCOT from time to time. Any amendments to the orders in terms of quantities or delivery period etc., may be incorporated on a mutually agreed basis. The delivery of goods to the destination is the responsibility of the Successful Bidder only. The goods supplied under the contract shall be covered for comprehensive insurance by the Successful Bidder till delivery and acceptance by the authority concerned.
8. ELCOT is entitled to change the list of purchaser address from time to time based on the requirement of the Purchaser(s). In this situation, the successful bidder shall not claim any additional charges except for any major amount involved which will be resolved mutually.
9. The goods sold under this agreement shall not be taken back. However any replacement necessitated, as part of the warranty commitments shall be carried out by the Successful Bidder and faulty parts/materials that arise out of such replacements shall be taken back by the Successful Bidder within a reasonable time.
10. If the supply and maintenance of the Ordered items are not effected as specified in the purchase order, Purchaser(s) /ELCOT shall have the full authority to cancel the order and to take any such action that will be deemed fit in the circumstances.
11. In case of failure by the Successful Bidder to deliver goods or materials demanded from them, within the period specified for delivery or in case of goods or materials

delivered by them, not being of the stipulated quality and specifications or in the case of goods or materials being delivered without a correct invoice in duplicate, ELCOT or anyone duly authorized by ELCOT shall have the power to reject any such goods or materials and to purchase from others instead of any goods or materials so rejected or not delivered. Unless the successful Bidder shall themselves forthwith supply that shall be sufficient and satisfactory any excess of cost so incurred by the Purchaser(s) over the contract price together with all charges and expenses attending the purchase shall be recoverable by ELCOT / Purchaser(s) from the Successful Bidder.

12. Liquidated damage will be levied at the rate of 0.25% per day on the un-delivered portion of the material, if the delivery has not been completed in full within the stipulated period. If the Successful Bidder fails to supply even after the lapse of two months after the stipulated date of delivery, then the orders/contracts are liable for cancellation and the EMD/ Security Deposit will be forfeited in addition to ELCOT reserving the right to blacklist the successful bidders for a period of three years from participating in ELCOT's tenders. This alone will not relieve the Bidder and the difference in cost of the items purchased through other technically qualified Bidders or any other alternative sources will be recovered from the successful Bidder.
13. The Successful Bidder agrees that in the event of non-fulfillment or non-observance of any of the conditions stipulated in the tender Terms & Conditions and work order, the Successful Bidder shall pay as penalty an amount equivalent to 5% of total value of Contract or an amount equal to the actual loss incurred by the Purchaser(s) whichever is higher subject to the condition that the loss amount would not exceed the value of the goods supplied / to be supplied.
14. Notwithstanding anything contained in the penalty clause, ELCOT reserves the right to blacklist the successful bidder from taking part in any of the procurement operations of ELCOT for a minimum period of three years from the date of blacklisting for failure to carry out supply in time or according to the quality and quantity prescribed or any such similar reasons. This penalty shall be over and above all other penalties.
15. Warranty

- i) The materials or goods are to be given Standard warranty of 3 years with CAMC period of 2 years, after installation and commissioning against any manufacturing defect and bad workmanship solely by the Successful Bidder irrespective of whether the same have been manufactured by them or not. The warranty period of 3 years will commence from the date of installation and commissioning of the ordered items after carrying out successfully the tests prescribed by Purchaser/(s) and installation in good working condition. A report of services attended on monthly basis must be submitted to ELCOT for each order during the warranty period.
- ii) The Successful Bidder shall undertake to supply the spares for the Standard warranty and CAMC period of the offered items. If any manufacturing or other technical defect is found during the warranty and CAMC period from the date of installation, commissioning and handing over of the ordered items to Purchaser (s), they will have to be rectified or replaced free of cost by the Successful Bidder in good working condition.
- (iii) If the complaints are not rectified within the stipulated period as mentioned in the tender conditions, an equivalent standby shall be supplied till rectification. A penalty of 0.25% on the value of the item will be charged per day till the equipment is put on working condition, in case the standby item is not supplied.
- (iv) The Successful Bidder agrees to provide comprehensive maintenance of the ordered items, which shall include preventive maintenance and corrective maintenance at the location specified by the Purchaser(s). The maintenance shall include replacement of all parts. The Ordered items, which are down, shall be restored in good working condition within 48 hours. Otherwise, the Successful Bidder shall be liable for a penalty of 10% per week of breakdown period on the costs of only those machineries, which are non-functional. The Purchaser(s) reserves the right to terminate the maintenance contract in the event of unsatisfactory maintenance and claim damages for non-fulfillment of contract.

16. Payment Terms:

- a) 100% of the total cost of ordered items will be paid by ELCOT on behalf of the Purchaser, after receipt of funds from the Purchaser, on installation,

commissioning and handing over of the ordered items to the Purchaser, after testing all the software and fulfilling the technical specifications on submission of an irrevocable Bank Guarantee from scheduled banks (except Yes bank) for 5% of the cost of the ordered value valid for 40 months during the warranty period. (OR)

- b) 95% of the total cost of ordered items will be paid by ELCOT on behalf of the Purchaser, after receipt of funds from the Purchaser, on installation, commissioning and handing over of the ordered items to the Purchaser, after testing all the software and fulfilling the technical specifications and the balance 5% will be released to the successful bidder after completion of 3 years warranty period.
- c) However if the site is not ready within 15 days of delivery, on submission of proof of delivery and SNR certificate from the Purchaser

OR

if the site is not ready within 30 days of delivery, on submission of proof of delivery (without SNR certificate from the purchaser) and after checking with purchaser, 75% of total cost will be paid, after receipt of funds from the Purchaser and balance 25% of the total cost will be paid on installation, commissioning and handing over of the ordered items, on submission of an irrevocable Bank Guarantee from scheduled banks (except Yes bank) for 5% of the cost of the ordered value valid for period of 40 months during the warranty period.

- d) Bills will be honoured within 30 working days after submission of bills along with all supporting documents in complete shape. The Successful Bidder shall file relevant invoices online using the web based procurement software in operation at ELCOT.
- e) The Successful Bidder hereby agrees to get the refund of incentive, excise duty and proportionate sales tax from authorities concerned and pass it on to Purchaser(s) if the Government or any other appropriate agency reduces the Excise duty or Sales tax or give incentive of any type retrospectively after supplying the Ordered items failing which action will be taken to recover the balance amount from the Successful Bidder under the Revenue Recovery Act or any other relevant act.

- f) Penalty amount if any, will be adjusted in the payment due to the Successful Bidder.
 - g) All taxes and other levies imposed by Governments in India will be paid at actual as applicable.
17. The contract or any part share of interest in it is not be transferred or assigned by the Successful Bidder directly or indirectly to any person or persons whomsoever without the prior written consent of the Purchaser(s).
18. Neither the Purchaser(s)/ELCOT nor the Successful Bidder shall be liable to the other for any delay or failure in the performance of their respective obligations due to causes or contingencies beyond their reasonable control such as
- i) Natural phenomena including but not limited to earthquakes, floods and epidemics.
 - ii) Acts of any Government authority domestic or foreign including but not limited to war declared or undeclared, priorities and quarantine restrictions.
 - iii) Accidents or disruptions including, but not limited to fire, explosions, break down of essential machinery or equipment, power and water shortages.
19. The following documents shall be deemed to form and be read and construed as part of this Contract.
- a) Technical Specifications
 - b) Tender Terms and Conditions
 - c) Amendments issued by ELCOT for the Tender document
 - d) Corrigendum / Clarifications issued by ELCOT for the Tender Document
 - e) Detailed final offer of the Successful Bidder
 - f) Purchase Order(s) issued by ELCOT from time to time
 - g) Correspondence made by ELCOT to the Successful Bidder from time to time during the period of the contract.
 - h) Wherever the offer conditions furnished by the Successful Bidder are at variance with conditions of this contract or conditions stipulated in the purchase order, the latter shall prevail over the offer conditions furnished by the Successful Bidder.

20. (a) Unless otherwise provided in the agreement, any notice, request, consent or other communication given or required to be given hereunder shall be given by mailing the same by registered mail, postage prepaid, return receipt requested in the case of the Successful Bidder to the Purchaser(s) at their respective addresses and set forth above or with other addresses and to the attention of such other person or persons as may hereafter be designated by like notice here under and any such notice sent by post shall be deemed to have been served on the date when in the ordinary course of post, it would have been delivered at the address to which it was sent.

(b) Any notice to the Successful Bidder shall be deemed to be sufficiently served, if given or left in writing at their usual or last known place of abode or business.

21. Termination of Contract:

21.1 Termination for default:-

(a) ELCOT may without prejudice to any other remedy for breach of contract, by written notice of default with a notice period of seven days, sent to the Successful Bidder, terminate the contract in whole or part,

(i) if the Successful Bidder fails to deliver any or all of the goods within the time period(s) specified in the Contract, or fails to supply the items as per the Delivery Schedule or within any extension thereof granted by ELCOT; or

(ii) if the Successful Bidder fails to perform any of the obligation(s) under the contract; or

(iii) if the Successful Bidder, in the judgement of ELCOT, has engaged in fraudulent and corrupt practices in competing for or in executing the Contract.

(b) In the event of ELCOT terminating the Contract in whole or in part, ELCOT may procure, upon terms and in such manner as it deems appropriate, the goods and services similar to those and delivered and the Successful Bidder shall be liable to ELCOT for any additional costs for such similar goods. However, the Successful Bidder shall continue the performance of the contract to the extent not terminated.

21.2 Termination for Insolvency:-

ELCOT may at any time terminate the Contract by giving written notice with a notice period of 7 days to the Successful Bidder, if the Successful Bidder becomes bankrupt or otherwise insolvent. In this event, termination will be without compensation to the Successful Bidder, provided that such termination will not prejudice or affect any right of action or remedy that has accrued or will accrue thereafter to ELCOT.

21.3 Termination for Convenience:-

ELCOT may be written notice, with a notice period of seven days sent to the Successful Bidder, may terminate the Contract, in whole or in part, at any time for its convenience. The notice of termination shall specify that termination is for ELCOT's convenience, the extent to which performance of work under the Contract is terminated, and the date upon which such termination becomes effective. On termination, the successful Bidder is not entitled to any compensation whatsoever.

22. ELCOT reserves the right to cancel the order(s) and to terminate the contract in the event of short performance or non performance of the Successful Bidder.

23. **Dispute and Jurisdiction:**

"Any dispute or difference, whatsoever, arising between the parties to this contract arising out of or in relation to the terms of this contract shall be resolved by the parties mutually by acting in good faith towards fulfilling the contract and for this purpose the parties mutually agree to furnish or exchange all relevant documents, information and any other material within their special knowledge and thereby conclude their discussions between them / their representatives or officers within a period of time as may be mutually agreed to say the time of commencement of the move to resolve the dispute.

"In case, the parties failed to resolve the disputes amicably within the time frame agreed and in the manner stated supra, the aggrieved party shall approach the Court in Chennai City alone to the exclusion of all other courts to adjudicate the unresolved dispute".

Tender Ref: ELCOT/EG/612/Museum/Security Gadgets/2020-21

In Witness whereof the parties hereto have signed on the day, month and year above written in the presence of

| | | | |
|----------|----------------------|----------|--|
| | For and on behalf of | | For and on behalf of Electronics Corporation of Tamil Nadu Limited |
| | | | |
| Witness: | | Witness: | |
| Witness: | | Witness: | |

Appendix-2 Bank Guarantee Format

(To be executed in Rs.100/- Stamp Paper)

To
The Managing Director
Electronics Corporation of Tamil Nadu Limited
MHU Complex II Floor
692 Anna Salai, Nandanam
Chennai - 600035

Bank Guarantee No:
Amount of Guarantee:
Guarantee covers from:
Last date for lodgement of claim:

This Deed of Guarantee executed by (Banker's Name & Address) having our Head Office at(address) (hereinafter referred to as "the Bank") in favour of The Managing Director, Electronics Corporation of Tamil Nadu Limited, MHU Complex II Floor, 692 Anna Salai, Nandanam, Chennai - 600035 (hereinafter referred to as "the Beneficiary") for an amount not exceeding Rs._____-/- (Rupees _____ Only) as per the request of M/s. _____ having its office address at _____ (hereinafter referred to as "Successful bidder") against Letter of Acceptance reference _____ dated __/__/__ of M/s. Electronics Corporation of Tamil Nadu Limited. This guarantee is issued subject to the condition that the liability of the Bank under this guarantee is limited to a maximum Rs._____-/- (Rupees _____ Only) and the guarantee shall remain in full force up to ____ months from the date of Bank Guarantee and cannot be invoked otherwise by a written demand or claim by the beneficiary under the Guarantee served on the Bank before ____ months from the date of Bank Guarantee.

AND WHEREAS it has been stipulated by you in the said ORDER that the Successful bidder shall furnish you with a Bank Guarantee by a Scheduled/Nationalised Bank for the sum specified therein as security for compliance with the Contractor's performance obligations for a period in accordance with the contract.

AND WHEREAS we have agreed to give the Successful bidder a Guarantee.

THEREFORE, we (Bankers address)....., hereby affirm that we are Guarantors and responsible to you on behalf of the Successful bidder up to a total of Rs._____-/- (Rupees _____ Only) and we undertake to pay you, upon your first written demand declaring the Successful bidder to be in default under the contract and

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without any demur, cavil or argument, any sum or sums within the limit of Rs._____-/- (Rupees _____ Only) as aforesaid, without your needing to prove or show grounds or reasons for your demand or the sum specified therein. We will pay the guaranteed amount notwithstanding any objection or dispute whatsoever raised by the Successful bidder.

This Guarantee is valid until _____ months from the date of Bank Guarantee.

Notwithstanding, anything contained herein

Our liability under this guarantee shall not be exceed Rs._____-/- (Rupees _____ Only). This bank guarantee shall be valid up to ____ months from the date of Bank Guarantee and we are liable to pay the guaranteed amount or any part thereof under this Bank Guarantee only and only if you serve upon us a written claim or demand on or before _____

In witness whereof the Bank, through its authorised Officer, has set its, hand and stamp on this at _____.

Witness:

(Signature)

(Name in Block Letters)

Appendix-3 Sample Submission Form

Date of submission: __/__/__

Bidder Name :

Bidder Address :

Tender No. :

Sample Submitted On :

Tender Product SI No. :

| Sl. No. | Item Code No. in the Tender | Item Description | Make | Model | Sl. No of the Item |
|---------|-----------------------------|------------------|------|-------|--------------------|
| | | | | | |
| | | | | | |
| | | | | | |

BIDDER

ELCOT

| | |
|----------------------------------|---|
| Bidding Company Name: | Name & Designation of the Person Receives the Sample: |
| Signature of the Representative: | Store I/C Name & Designation: |
| Name: | Signature: |
| Designation: | |
| Contact No. | |

**Appendix – 4 Manufacturer's Letter of Guarantee
(Manufacturer Authorisation Form)**

To
The Managing Director,
Electronics Corporation of Tamil Nadu Ltd.,
MHU Complex, II Floor,
692, Anna Salai,
Nandanam, Chennai – 600 035.

Sir,

We hereby authorise M/sto undertake to submit a Bid, and subsequently negotiate and sign the contract with the purchaser against the Tender No.ELCOT/EG/612/Museum Security Gadgets/2020-21 for the (type the Description of goods) developed by us. We hereby extend our full warranty for the goods offered for supply by the above firm against this tender.

We also undertake to provide timely supplies as per terms of tender and as agreed mutually and also to provide a trouble free and continuous support either directly or through our authorised partners under our supervision during the Warranty and CAMC period. We will provide the necessary spares support in the event of replacement of any spare parts is necessitated while providing Warranty and CAMC period or any Extended Warranty Period and if the spares are not available then we will arrange for complete replacement of the item(s) with an equivalent / higher model.

For this tender we authorise M/s. _____ (Complete address and full contact details of the partner) to be our sales and service partner. In the event of discontinuation of supply and service by our partner viz., M/s. _____ or any problem arises during provision of supply and services, the entire responsibility to provide trouble free and continuous supply and services to the end user / purchaser rests with us and we undertake to provide supply and services directly or through our alternative sales / service partners.

**In case of violation of any of the conditions above, I / We
understand that I/ We are liable to be blacklisted by ELCOT for a period of three
years.**

Signature with date:

Name of the signatory:

Designation:

- Note:** (1) Competent authority of the Manufacturer / Principal should issue the letter of authority.
- (2) If the Bidder submits the Manufacturer's Letter of Guarantee other than the specimen provided above will not be considered as valid and hence will lead to rejection of the Bid itself.

Appendix-5 Format for Clarifications / Amendments

FORMAT FOR
QUERIES ON TENDER CONDITIONS AND TECHNICAL SPECIFICATIONS

FOR COMMERCIAL CONDITIONS:

| Sl. No. | Page No. | Clause No. | Title of the Clause | Description of the Clauses as per Tender Document | Amendment requested | Reasons for requesting the amendment |
|---------|----------|------------|---------------------|---|---------------------|--------------------------------------|
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FOR TECHNICAL SPECIFICATIONS:

| Sl. No. | Page No. | Product Code | Item Name | Existing Specification as per Tender Document | Technical Parameter as per Tender Document | Amendment requested | Reasons for requesting the amendment |
|---------|----------|--------------|-----------|---|--|---------------------|--------------------------------------|
| | | | | | | | |
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| | | | | | | | |
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| | | | | | | | |

Annexure-1 Technical Bid

A1.1 Check-list for Enclosures

| Documents to be submitted | | Fill (YES or NO) |
|---|---|------------------|
| Filled Tender Technical Bid Form and Price Bid Form | | |
| Payment of Portal Charges and EMD amount | | |
| Two Part Bid submission | | |
| Letter of Authorisation for signing the Tender document | | |
| Eligibility Criteria | | |
| 1. | Certificate of Incorporation of Bidder / Partnership Firm / Sole Proprietorship Firm. | |
| 2. | Certificate of Incorporation of OEM. | |
| 3. | Copy of Purchase Order issued in the name of Bidder dated prior to 31.12.2017 and Copy of Completion / Performance Certificate for the above Purchase Order. | |
| 4. | Copies of the Audited Balance sheets / Profit and Loss account for the last 3 Audited Financial years (2017-2018, 2018-2019 & 2019-2020) along with the Provisional Certificate for the year 2019-20. | |
| 5. | Copy of Purchase Order in the name of the bidder and copy of completion/ performance certificate obtained from the Purchasers. | |
| 6. | Service Centre Facilities OEM/ Bidder's Own Service Centre: Copies of the land-line telephone bills (month before the due date)/ valid rental agreement/any legal proof OEM's /Bidder's Franchisee Service centre: Copies of the valid agreement entered between the Franchisee and the OEM / Bidder Proof of availability of service centre in Chennai. | |
| 7. | Copies of ISO 9001, ISO 14001, ISO 27001 and CMMI Level 5 compliance Certificate. | |
| 8. | Letter of authorization from the OEM for the supply and support services. Photocopy of the Evaluation Assurance Level (EAL) / UL, CE, FCC, RoHS, REACH and BIS Certificates. Quoted Camera models listed in ONVIF Portal. | |
| 9. | Proof for availability of the office in Chennai. | |
| 10. | URL Homepage of OEM. | |
| 11. | Copy of OEM's Manufacturing License. (or) Copy of Manufacturer's authorization letter for Authorised Distributors / Dealers | |

A1.2 Profile of the Bidder

| | | |
|----|---|------------------|
| 1. | Name of the Company | Principal Bidder |
| 2. | Year of incorporation | |
| 3. | Nature of the Company (Registered Company or Partnership or Proprietary) | |
| 4. | Registered office (In India) or the office covering the Business transaction in India | |
| | Telegraphic Address | |
| | Office Telephone Number | |
| | Fax Number | |
| | Contact Person | |
| | Name | |
| | Personal Telephone Number | |
| | Email Address | |
| 5. | Local presence at Tamil Nadu | |
| | Telegraphic Address | |
| | Office Telephone Number | |
| | Fax Number | |
| | Contact Person | |
| | Name | |
| | Personal Telephone Number | |
| | Email Address | |
| 6. | Registration Details | |
| | Permanent Account Number | |
| | GST Registration Number | |
| 7. | Banker's Name, Address and Account Number | |
| 8. | ESI Registration No. and ESI Remittance details for last 3 years | |
| 9. | PF Registration No. and PF Remittance details for last 3 years. | |

A1.3 Details in support of Eligibility Criteria

| Sl. No. | Description | Please give details along with proof |
|---------|---|--------------------------------------|
| 1. | Certificate of Incorporation of Bidder / Partnership Firm / Sole Proprietorship Firm. | |
| 2. | Certificate of Incorporation of OEM. | |
| 3. | Copy of Purchase Order issued in the name of Bidder dated prior to 31.12.2017 and Copy of Completion / Performance Certificate for the above Purchase Order. | |
| 4. | Copies of the Audited Balance sheets / Profit and Loss account for the last 3 Audited Financial years (2017-2018, 2018-2019 & 2019-2020) along with the Provisional Certificate for the year 2019-20. | |
| 5. | Copy of Purchase Order in the name of the bidder and copy of completion/ performance certificate obtained from the Purchasers. | |
| 6. | Service Centre Facilities OEM/ Bidder's Own Service Centre: Copies of the land-line telephone bills (month before the due date)/ valid rental agreement/any legal proof OEM's /Bidder's Franchisee Service centre: Copies of the valid agreement entered between the Franchisee and the OEM / Bidder Proof of availability of service centre in Chennai. | |
| 7. | Copies of ISO 9001, ISO 14001, ISO 27001 and CMMI Level 5 compliance Certificate. | |
| 8. | Letter of authorization from the OEM for the supply and support services. Photocopy of the Evaluation Assurance Level (EAL) / UL, CE, FCC, RoHS, REACH and BIS Certificates. Quoted Camera models listed in ONVIF Portal. | |
| 9. | Proof for availability of the office in Chennai. | |
| 10. | URL Homepage of OEM. | |
| 11. | Copy of OEM's Manufacturing License. (or) Copy of Manufacturer's authorization letter for Authorised Distributors / Dealers. | |

A1.5 Hardware Compliance

The Bidders should submit the details of the make and model of each item offered against the tender requirement (as per tender specification) and samples for the same need to be submitted for evaluation.

| # | Item Code | Item Description | Item Quoted details along with Make & Model |
|----|-----------|---|---|
| 1 | P-001 | 4MP IP Bullet Camera with motorised zoom | |
| 2 | P-002 | 4MP IP Bullet Camera with WDR | |
| 3 | P-003 | 4MP IP Bullet Camera with Video analytics | |
| 4 | P-004 | 4MP IP Dome Camera with Audio | |
| 5 | P-005 | 2MP IP Bullet Camera with Automatic Number Plate Recognition (ANPR) | |
| 6 | P-006 | 32 Channel Network video recorder with 4 SATA Interfaces | |
| 7 | P-007 | 6TB Hard Disk Drive | |
| 8 | P-008 | 16 Port gigabit L2 Managed PoE Switch with 2 nos of SFP Slot & SFP Modules fully loaded with all accessories. | |
| 9 | P-009 | 24 Port gigabit L2 Managed PoE Switch with 2 nos of SFP Slot & SFP Modules fully loaded with all accessories. | |
| 10 | P-010 | Splicing of 12 port Light guide Interconnect Unit (LIU) fully populated with modules/ adapters | |
| 11 | P-011 | SC-LC Cables, Connectors etc. | |
| 12 | P-012 | 4U Rack with Accessories,connectors etc. | |
| 13 | P-013 | 6U Rack with Accessories,connectors etc. | |
| 14 | P-014 | 9U Rack with Accessories,connectors etc. | |
| 15 | P-015 | Cat-6 UTP 4 pair FRPVC Cable in existing conduit/pipe on surface/recess/concealed, with connectors, termination etc. | |
| 16 | P-016 | Optic Fibre Communication Outdoor cable (6 core, SMF) in existing pipe on surface/ recess/ concealed, with connectors/ adaptors, termination etc. | |

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| | | | |
|----|-------|---|--|
| 17 | P-017 | 3 core 2.5 Sqmm Flexible power cable in existing conduit/pipe on surface/recess/ concealed including all accessories, termination, etc. | |
| 18 | P-018 | 3 Core 4 Sqmm Armoured power cable in existing conduit/pipe on surface/recess/ concealed including all accessories, termination, etc. | |
| 19 | P-019 | 25 mm dia, PVC Conduit (ISI Marked) with all bends, Tees & other accessories. | |
| 20 | P-020 | 32 mm inner dia HDPE pipe (PN-6) with all accessories on surface/recess/ concealed. | |
| 21 | P-021 | 50 mm dia GI Pipe (Class B) with all accessories on surface/recess/ concealed. | |
| 22 | P-022 | Excavation in Soft/ Hard Soil with the required depth up to 50 cm & Backfilling. | |
| 23 | P-023 | Road Cutting with the required depth up to 25 cm & Backfilling. | |
| 24 | P-024 | 3 Mtrs Camera GI Pole | |
| 25 | P-025 | Single Pole 10Amps MCB | |
| 26 | P-026 | Single Pole 16Amps MCB | |
| 27 | P-027 | Double Pole 32Amps MCB | |
| 28 | P-028 | 4 LOOP Addressable Panel | |
| 29 | P-029 | Multi sensor | |
| 30 | P-030 | Manual Call Point | |
| 31 | P-031 | Sounder Cum Strobe | |
| 32 | P-032 | Isolator Module | |
| 33 | P-033 | Control Module | |
| 34 | P-034 | Loop card | |
| 35 | P-035 | TCP/IP Card | |
| 36 | P-036 | Centralized Monitoring Software | |
| 37 | P-037 | GSM Module | |
| 38 | P-038 | Addressable Panel Battery | |

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| | | | |
|----|-------|---|--|
| 39 | P-039 | 2 core 1.5 Sqmm armoured cable | |
| 40 | P-040 | Controller | |
| 41 | P-041 | Call station | |
| 42 | P-042 | Zone Expander | |
| 43 | P-043 | Extension Keypad | |
| 44 | P-044 | Digital Amplifier | |
| 45 | P-045 | Wall mount speaker | |
| 46 | P-046 | Intrusion Panel | |
| 47 | P-047 | 4 Wire Magnetic Contact | |
| 48 | P-048 | Beam Sensor | |
| 49 | P-049 | GSM Dialer | |
| 50 | P-050 | Hooter | |
| 51 | P-051 | 2 core 1.5 Sqmm flexible cable | |
| 52 | P-052 | 6 core 1 Sqmm flexible cable | |
| 53 | P-053 | 20 KVA Online UPS with 5 Hours Battery backup and necessary Rack,link and Terminals, etc. | |
| 54 | P-054 | 10 KVA Online UPS with 5 Hours Battery backup and necessary Rack,link and Terminals, etc. | |
| 55 | P-055 | 1.5 Ton Inverter split AC with 5KVA stabilizer | |
| 56 | P-056 | Renovation of Control room. | |
| 57 | P-057 | Construction of new UPS room. | |
| 58 | P-058 | Renovation of BMS Operator living room. | |
| 59 | P-059 | Electrical Work at Control Room, UPS Room and BMS Operator living room | |
| 60 | P-060 | Conventional 2 Zone Fire Alarm Panel | |
| 61 | P-061 | Conventional Smoke Detector | |

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| | | | |
|----|-------|--|--|
| 62 | P-062 | Conventional Manual Call Point | |
| 63 | P-063 | Conventional Sounder | |
| 64 | P-064 | Biometric Device | |
| 65 | P-065 | Exit Reader | |
| 66 | P-066 | EM Lock | |
| 67 | P-067 | 43" Display, to be connected with NVR for camera viewing, complete with wall/ceiling/floor mounting arrangement. | |
| 68 | P-068 | 55" Display, to be connected with NVR for camera viewing, complete with wall/ceiling/floor mounting arrangement. | |
| 69 | P-069 | 75" Display, to be connected with NVR for camera viewing, complete with wall/ceiling/floor mounting arrangement. | |
| 70 | P-070 | Desktop computer. | |
| 71 | P-071 | 42U Rack with Accessories,connectors etc. | |
| 72 | P-072 | Single core 10 Sqmm flexible cable | |
| 73 | P-073 | 3 core 16 Sqmm armoured cable | |
| 74 | P-074 | Double Pole 40Amps MCB | |
| 75 | P-075 | Double Pole 63Amps MCB | |
| 76 | P-076 | Four Pole 63Amps MCB | |

A 1.6 Declaration

I / We agree that the offer shall remain open for acceptance for a minimum period as stipulated in the Tender from the date of opening of the tender and thereafter until it is withdrawn by us by notice in writing duly addressed to the authority of opening the tender and sent by registered post with acknowledgement due or otherwise delivered at the office of the authority. The EMD amount shall not bear any interest and shall be liable to be forfeited to ELCOT should I/We fail to abide by the stipulations to keep the offer open for a period mentioned above or fail to sign and complete the contract document as required by ELCOT and furnish the Security Deposit as specified in the terms and conditions of the contract. The EMD amount may be adjusted towards SD or refunded to me/us unless the same or any part thereof has been forfeited as aforesaid.

I / We agree to adhere with the schedule of implementation and deliver the items as specified in the tender.

I / We declare that the Price bid has been submitted without any conditions and strictly as per the Terms and Conditions of the tender document and I/We am/are aware that the Price bid is liable to be rejected if it contains any other conditions.

I / We declare that the information furnished in the tender is true to the best of my/our knowledge. If any false/fictitious information is found I/We agree to the rejection of the bids and consequence action.

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A 1.7 Price Bid

Mandatory Component: P1: Supply, Installation and Commissioning of CCTV System

| Code No. | Item Description | Qty (In Nos.) | Units | Unit rate (In Rs.) | GST (in %) | GST Amount (In Rs.) | Total price without taxes (In Rs.) | Total price with GST (In Rs.) | Total price with GST in words |
|----------|---|---------------|-------|--------------------|------------|---------------------|------------------------------------|-------------------------------|-------------------------------|
| P-001 | 4MP IP Bullet Camera with motorised zoom | 16 | Nos | | | | | | |
| P-002 | 4MP IP Bullet Camera with WDR | 268 | Nos | | | | | | |
| P-003 | 4MP IP Bullet Camera with Video analytics | 24 | Nos | | | | | | |
| P-004 | 4MP IP Dome Camera with Audio | 30 | Nos | | | | | | |
| P-005 | 2MP IP Bullet Camera with Automatic Number Plate Recognition (ANPR) | 6 | Nos | | | | | | |
| P-006 | 32 Channel Network video recorder with 4 SATA Interfaces | 12 | Nos | | | | | | |
| P-007 | 6TB Hard Disk Drive | 48 | Nos | | | | | | |
| P-008 | 16 Port gigabit L2 Managed PoE Switch with 2 nos of SFP Slot & SFP Modules fully loaded with all accessories. | 15 | Nos | | | | | | |
| P-009 | 24 Port gigabit L2 Managed PoE Switch with 2 nos of SFP Slot & SFP Modules fully loaded with all accessories. | 11 | Nos | | | | | | |
| P-010 | 12 port Light guide Interconnect Unit (LIU) fully populated with modules/ adapters. | 16 | Nos | | | | | | |
| P-011 | SC-LC Cables, Connectors etc. | 32 | Nos | | | | | | |
| P-012 | 4U Rack with Accessories, connectors etc. | 4 | Nos | | | | | | |
| P-013 | 6U Rack with Accessories, connectors etc. | 11 | Nos | | | | | | |

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| | | | | | | | | | |
|-------|--|-------|------|--|--|--|--|--|--|
| P-014 | 9U Rack with Accessories, connectors etc. | 3 | Nos | | | | | | |
| P-015 | Supply and Laying of Cat-6 UTP 4 pair FRPVC Cable in existing conduit/pipe on surface/recess/concealed, with connectors, termination etc. | 27755 | Mtrs | | | | | | |
| P-016 | Supply and Laying of Optic Fibre Communication Outdoor cable (6 core, SMF) in existing pipe on surface/ recess/ concealed, with connectors/ adaptors, termination etc. | 4500 | Mtrs | | | | | | |
| P-017 | Supply and Laying of 3 core 2.5 Sqmm Flexible power cable in existing conduit/pipe on surface/recess/ concealed including all accessories, termination, etc. | 1947 | Mtrs | | | | | | |
| P-018 | Supply and Laying of 3 Core 4 Sqmm Armoured power cable in existing conduit/pipe on surface/recess/ concealed including all accessories, termination, etc. | 1896 | Mtrs | | | | | | |
| P-019 | Supply and Laying of 25 mm dia, PVC Conduit (ISI Marked) with all bends, Tees & other accessories. | 21925 | Mtrs | | | | | | |
| P-020 | Supply and Laying of 32 mm inner dia HDPE pipe (PN-6) with all accessories on surface/recess/ concealed. | 4500 | Mtrs | | | | | | |
| P-021 | Supply and Laying of 50 mm dia GI Pipe (Class B) with all accessories on surface/recess/ concealed. | 150 | Mtrs | | | | | | |
| P-022 | Excavation in Soft/ Hard Soil with the required depth up to 50 cm & Backfilling. | 1000 | Mtrs | | | | | | |
| P-023 | Road Cutting with the required depth up to 25 cm & Backfilling. | 150 | Mtrs | | | | | | |

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| | | | | | | | | | |
|-------|------------------------|----|-----|--|--|--|--|--|--|
| P-024 | 3 Mtrs Camera GI Pole | 42 | Nos | | | | | | |
| P-025 | Single Pole 10Amps MCB | 9 | Nos | | | | | | |
| P-026 | Single Pole 16Amps MCB | 9 | Nos | | | | | | |
| P-027 | Double Pole 32Amps MCB | 4 | Nos | | | | | | |
| | Total in Figures | | | | | | | | |
| | Quoted rate in words | | | | | | | | |

Mandatory Component: P2: Supply, Installation and Commissioning of Fire Alarm System

| Code No. | Item Description | Qty (In Nos.) | Units | Unit rate (In Rs.) | GST (in %) | GST Amount (In Rs.) | Total price without taxes (In Rs.) | Total price with GST (In Rs.) | Total price with GST in words |
|----------|---|---------------|-------|--------------------|------------|---------------------|------------------------------------|-------------------------------|-------------------------------|
| P-028 | 4 LOOP Addressable Panel | 7 | Nos | | | | | | |
| P-029 | Multi sensor | 236 | Nos | | | | | | |
| P-030 | Manual Call Point | 19 | Nos | | | | | | |
| P-031 | Sounder Cum Strobe | 20 | Nos | | | | | | |
| P-032 | Isolator Module | 30 | Nos | | | | | | |
| P-033 | Control Module | 20 | Nos | | | | | | |
| P-034 | Loop card | 8 | Nos | | | | | | |
| P-035 | TCP/IP Card | 7 | Nos | | | | | | |
| P-036 | Centralized Monitoring Software | 1 | No | | | | | | |
| P-037 | GSM Module | 7 | Nos | | | | | | |
| P-038 | Addressable Panel Battery | 36 | Nos | | | | | | |
| P-039 | Supply and Laying of 2 core 1.5 Sqmm armoured cable | 11850 | Mtrs | | | | | | |

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| | | | | | | | | | |
|--|----------------------|--|--|--|--|--|--|--|--|
| | Total in Figures | | | | | | | | |
| | Quoted rate in words | | | | | | | | |

| Mandatory Component: P3: Supply, Installation and Commissioning of Public Address System | | | | | | | | | |
|---|---|---------------|-------|--------------------|------------|---------------------|------------------------------------|-------------------------------|-------------------------------|
| Code No. | Item Description | Qty (In Nos.) | Units | Unit rate (In Rs.) | GST (in %) | GST Amount (In Rs.) | Total price without taxes (In Rs.) | Total price with GST (In Rs.) | Total price with GST in words |
| P-040 | Controller | 1 | No | | | | | | |
| P-041 | Call station | 1 | No | | | | | | |
| P-042 | Zone Expander | 1 | No | | | | | | |
| P-043 | Extension Keypad | 1 | No | | | | | | |
| P-044 | Digital Amplifier | 1 | No | | | | | | |
| P-045 | Wall mount speaker | 45 | Nos | | | | | | |
| P-046 | Intrusion Panel | 10 | Nos | | | | | | |
| P-047 | 4 Wire Magnetic Contact | 40 | Nos | | | | | | |
| P-048 | Beam Sensor | 21 | Nos | | | | | | |
| P-049 | GSM Dialer | 12 | Nos | | | | | | |
| P-050 | Hooter | 31 | Nos | | | | | | |
| P-051 | Supply and Laying of 2 core 1.5 Sqmm flexible cable | 3120 | Mtrs | | | | | | |
| P-052 | Supply and Laying of 6 core 1 Sqmm flexible cable | 1500 | Mtrs | | | | | | |
| | Total in Figures | | | | | | | | |
| | Quoted rate in words | | | | | | | | |

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| Mandatory Component: P4: Supply, Installation and Commissioning of Control room infrastructure and UPS | | | | | | | | | |
|---|---|---------------|-------|--------------------|------------|---------------------|------------------------------------|-------------------------------|-------------------------------|
| Code No. | Item Description | Qty (In Nos.) | Units | Unit rate (In Rs.) | GST (in %) | GST Amount (In Rs.) | Total price without taxes (In Rs.) | Total price with GST (In Rs.) | Total price with GST in words |
| P-053 | 20 KVA Online UPS with 5 Hours Battery backup and necessary Rack,link and Terminals, etc. | 2 | Nos | | | | | | |
| P-054 | 10 KVA Online UPS with 5 Hours Battery backup and necessary Rack,link and Terminals, etc. | 2 | Nos | | | | | | |
| P-055 | 1.5 Ton Inverter split AC with 5KVA stabilizer | 3 | Nos | | | | | | |
| P-056 | Renovation of Control room | 1 | LS | | | | | | |
| P-057 | Construction of new UPS room | 1 | LS | | | | | | |
| P-058 | Renovation of BMS Operator living room | 1 | LS | | | | | | |
| P-059 | Electrical Work at Control Room, UPS Room and BMS Operator living room | 1 | LS | | | | | | |
| P-060 | Conventional 2 Zone Fire Alarm Panel | 1 | No | | | | | | |
| P-061 | Conventional Smoke Detector | 6 | Nos | | | | | | |
| P-062 | Conventional Manual Call Point | 1 | No | | | | | | |
| P-063 | Conventional Sounder | 2 | No | | | | | | |
| P-064 | Biometric Device | 1 | No | | | | | | |
| P-065 | Exit Reader | 1 | No | | | | | | |
| P-066 | Supply and Installation of EM Lock | 1 | No | | | | | | |
| P-067 | Supply and Installation of 43" Display, to be | 11 | Nos | | | | | | |

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| | | | | | | | | | |
|-------|--|------|------|--|--|--|--|--|--|
| | connected with NVR for camera viewing, complete with wall/ceiling/floor mounting arrangement as per specifications(24/7) | | | | | | | | |
| P-068 | Supply and Installation of 55" Display, to be connected with NVR for camera viewing, complete with wall/ceiling/floor mounting arrangement as per specifications(24/7) | 1 | No | | | | | | |
| P-069 | Supply and Installation of 75" Display, to be connected with NVR for camera viewing, complete with wall/ceiling/floor mounting arrangement as per specifications(24/7) | 1 | No | | | | | | |
| P-070 | Supply and Installation of Desktop computer as per the specification. | 3 | Nos | | | | | | |
| P-071 | Supply and Installation 42U Rack with Accessories,connectors etc. as per specifications. | 3 | Nos | | | | | | |
| P-072 | Supply and Laying of Single core 10 Sqmm flexible cable | 100 | Mtrs | | | | | | |
| P-073 | Supply and Laying of 3 core 16 Sqmm armoured cable | 2150 | Mtrs | | | | | | |
| P-074 | Supply and Installation of Double Pole 40Amps MCB | 2 | Nos | | | | | | |
| P-075 | Supply and Installation of Double Pole 63Amps MCB | 4 | Nos | | | | | | |
| P-076 | Supply and Installation of Four Pole 63Amps MCB | 2 | Nos | | | | | | |
| | Total in Figures | | | | | | | | |
| | Quoted rate in words | | | | | | | | |

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| Mandatory Component: P5:Price Bid Summary of P1, P2, P3 & P4 | | | | |
|---|---|------------------------------------|---------------------------------|-------------------------------|
| # | Item Description | Total Price without taxes (In Rs.) | Total price with taxes (In Rs.) | Total price with GST in words |
| P1 | Supply, Installation and Commissioning of CCTV System | | | |
| P2 | Supply, Installation and Commissioning of Fire Alarm System | | | |
| P3 | Supply, Installation and Commissioning of Public Address System | | | |
| P4 | Supply, Installation and Commissioning of Control room infrastructure and UPS | | | |

| P6: Optional Items – Supply of Security Gadgets Items | | | | | | | | | |
|--|---|---------------|-------|--------------------|------------|---------------------|------------------------------------|-------------------------------|-------------------------------|
| # | Item Description | Qty (In Nos.) | Units | Unit rate (In Rs.) | GST (in %) | GST Amount (In Rs.) | Total price without taxes (In Rs.) | Total price with GST (In Rs.) | Total price with GST in words |
| P-001 | 4MP IP Bullet Camera with motorised zoom | 1 | No | | | | | | |
| P-002 | 4MP IP Bullet Camera with WDR | 1 | No | | | | | | |
| P-003 | 4MP IP Bullet Camera with Video analytics | 1 | No | | | | | | |
| P-004 | 4MP IP Dome Camera with Audio | 1 | No | | | | | | |
| P-005 | 2MP IP Bullet Camera with Automatic Number Plate Recognition (ANPR) | 1 | No | | | | | | |
| P-006 | 32 Channel Network video recorder with 4 SATA Interfaces | 1 | No | | | | | | |
| P-007 | 6TB Hard Disk Drive | 1 | No | | | | | | |

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| | | | | | | | | | |
|-------|--|---|-----|--|--|--|--|--|--|
| P-008 | 16 Port gigabit L2 Managed PoE Switch with 2 nos of SFP Slot & SFP Modules fully loaded with all accessories. | 1 | No | | | | | | |
| P-009 | 24 Port gigabit L2 Managed PoE Switch with 2 nos of SFP Slot & SFP Modules fully loaded with all accessories. | 1 | No | | | | | | |
| P-010 | 12 port Light guide Interconnect Unit (LIU) fully populated with modules/ adapters. | 1 | No | | | | | | |
| P-011 | SC-LC Cables, Connectors etc. | 1 | No | | | | | | |
| P-012 | 4U Rack with Accessories, connectors etc. | 1 | No | | | | | | |
| P-013 | 6U Rack with Accessories, connectors etc. | 1 | No | | | | | | |
| P-014 | 9U Rack with Accessories, connectors etc. | 1 | No | | | | | | |
| P-015 | Supply and Laying of Cat-6 UTP 4 pair FRPVC Cable in existing conduit/pipe on surface/recess/concealed, with connectors, termination etc. | 1 | Mtr | | | | | | |
| P-016 | Supply and Laying of Optic Fibre Communication Outdoor cable (6 core, SMF) in existing pipe on surface/ recess/ concealed, with connectors/ adapters, termination etc. | 1 | Mtr | | | | | | |
| P-017 | Supply and Laying of 3 core 2.5 Sqmm Flexible power cable in existing conduit/pipe on surface/recess/ concealed including all accessories, termination, etc. | 1 | Mtr | | | | | | |

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| | | | | | | | | | |
|-------|---|---|-----|--|--|--|--|--|--|
| P-018 | Supply and Laying of 3 Core 4 Sqmm Armoured power cable in existing conduit/pipe on surface/recess/concealed including all accessories, termination, etc. | 1 | Mtr | | | | | | |
| P-019 | Supply and Laying of 25 mm dia, PVC Conduit (ISI Marked) with all bends, Tees & other accessories. | 1 | Mtr | | | | | | |
| P-020 | Supply and Laying of 32 mm inner dia HDPE pipe (PN-6) with all accessories on surface/recess/ concealed. | 1 | Mtr | | | | | | |
| P-021 | Supply and Laying of 50 mm dia GI Pipe (Class B) with all accessories on surface/recess/ concealed. | 1 | Mtr | | | | | | |
| P-022 | Excavation in Soft/ Hard Soil with the required depth up to 50 cm & Backfilling. | 1 | Mtr | | | | | | |
| P-023 | Road Cutting with the required depth up to 25 cm & Backfilling. | 1 | Mtr | | | | | | |
| P-024 | 3 Mtrs Camera GI Pole | 1 | No | | | | | | |
| P-025 | Single Pole 10Amps MCB | 1 | No | | | | | | |
| P-026 | Single Pole 16Amps MCB | 1 | No | | | | | | |
| P-027 | Double Pole 32Amps MCB | 1 | No | | | | | | |
| P-028 | 4 LOOP Addressable Panel | 1 | No | | | | | | |
| P-029 | Multi sensor | 1 | No | | | | | | |
| P-030 | Manual Call Point | 1 | No | | | | | | |
| P-031 | Sounder Cum Strobe | 1 | No | | | | | | |
| P-032 | Isolator Module | 1 | No | | | | | | |
| P-033 | Control Module | 1 | No | | | | | | |
| P-034 | Loop card | 1 | No | | | | | | |

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| | | | | | | | | | |
|-------|--|---|-----|--|--|--|--|--|--|
| P-035 | TCP/IP Card | 1 | No | | | | | | |
| P-036 | Centralized Monitoring Software | 1 | No | | | | | | |
| P-037 | GSM Module | 1 | No | | | | | | |
| P-038 | Addressable Panel Battery | 1 | No | | | | | | |
| P-039 | Supply and Laying of 2 core 1.5 Sqmm armoured cable | 1 | Mtr | | | | | | |
| P-040 | Controller | 1 | No | | | | | | |
| P-041 | Call station | 1 | No | | | | | | |
| P-042 | Zone Expander | 1 | No | | | | | | |
| P-043 | Extension Keypad | 1 | No | | | | | | |
| P-044 | Digital Amplifier | 1 | No | | | | | | |
| P-045 | Wall mount speaker | 1 | No | | | | | | |
| P-046 | Intrusion Panel | 1 | No | | | | | | |
| P-047 | 4 Wire Magnetic Contact | 1 | No | | | | | | |
| P-048 | Beam Sensor | 1 | No | | | | | | |
| P-049 | GSM Dialer | 1 | No | | | | | | |
| P-050 | Hooter | 1 | No | | | | | | |
| P-051 | Supply and Laying of 2 core 1.5 Sqmm flexible cable | 1 | Mtr | | | | | | |
| P-052 | Supply and Laying of 6 core 1 Sqmm flexible cable | 1 | Mtr | | | | | | |
| P-053 | Supply and Installation of 20 KVA Online UPS with 5 Hours Battery backup and necessary Rack,link and Terminals, etc. | 1 | No | | | | | | |
| P-054 | Supply and Installation of 10 KVA Online UPS with 5 Hours Battery backup and necessary Rack,link and Terminals, etc. | 1 | No | | | | | | |

Tender Ref: ELCOT/EG/612/Museum SMCS/2020-21

| | | | | | | | | | |
|-------|--|---|----|--|--|--|--|--|--|
| P-055 | Supply and Installation of 1.5 Ton Inverter split AC with 5KVA stabilizer | 1 | No | | | | | | |
| P-056 | Renovation of Control room as per site requirements | 1 | LS | | | | | | |
| P-057 | Construction of new UPS room as per site requirement | 1 | LS | | | | | | |
| P-058 | Renovation of BMS Operator living room as per site requirements | 1 | LS | | | | | | |
| P-059 | Electrical Work at Control Room, UPS Room and BMS Operator living room | 1 | LS | | | | | | |
| P-060 | Supply and Installation of Conventional 2 Zone Fire Alarm Panel | 1 | No | | | | | | |
| P-061 | Supply and Installation of Conventional Smoke Detector | 1 | No | | | | | | |
| P-062 | Supply and Installation of Conventional Manual Call Point | 1 | No | | | | | | |
| P-063 | Supply and Installation of Conventional Sounder | 1 | No | | | | | | |
| P-064 | Supply and Installation of Biometric Device | 1 | No | | | | | | |
| P-065 | Supply and Installation of Exit Reader | 1 | No | | | | | | |
| P-066 | Supply and Installation of EM Lock | 1 | No | | | | | | |
| P-067 | Supply and Installation of 43" Display, to be connected with NVR for camera viewing, complete with wall/ceiling/floor mounting arrangement as per specifications(24/7) | 1 | No | | | | | | |
| P-068 | Supply and Installation of 55" Display, to be connected with NVR for camera viewing, complete with wall/ceiling/floor mounting arrangement as per | 1 | No | | | | | | |

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| | | | | | | | | | |
|-------|--|---|-----|--|--|--|--|--|--|
| | specifications(24/7) | | | | | | | | |
| P-069 | Supply and Installation of 75" Display, to be connected with NVR for camera viewing, complete with wall/ceiling/floor mounting arrangement as per specifications(24/7) | 1 | No | | | | | | |
| P-070 | Supply and Installation of Desktop computer as per the specification. | 1 | No | | | | | | |
| P-071 | Supply and Installation 42U Rack with Accessories, connectors etc. as per specifications. | 1 | No | | | | | | |
| P-072 | Supply and Laying of Single core 10 Sqmm flexible cable | 1 | Mtr | | | | | | |
| P-073 | Supply and Laying of 3 core 16 Sqmm armoured cable | 1 | Mtr | | | | | | |
| P-074 | Supply and Installation of Double Pole 40Amps MCB | 1 | No | | | | | | |
| P-075 | Supply and Installation of Double Pole 63Amps MCB | 1 | No | | | | | | |
| P-076 | Supply and Installation of Four Pole 63Amps MCB | 1 | No | | | | | | |
| | Total in Figures | | | | | | | | |
| | Quoted rate in words | | | | | | | | |

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| P7: Optional Items: Installation and Commissioning Charges | | | | | | | | | |
|---|---|------------------|-------|-----------------------|---------------|---------------------------|--|--|--|
| # | Item Description | Qty (In Nos.) | Units | Unit rate (In Rs.) | GST (in %) | GST Amount (In Rs.) | Total price without taxes (In Rs.) | Total price with GST (In Rs.) | Total price with GST in words |
| P-001 | 4MP IP Bullet Camera with motorised zoom | 1 | No | | | | | | |
| P-002 | 4MP IP Bullet Camera with WDR | 1 | No | | | | | | |
| P-003 | 4MP IP Bullet Camera with Video analytics | 1 | No | | | | | | |
| P-004 | 4MP IP Dome Camera with Audio | 1 | No | | | | | | |
| P-005 | 2MP IP Bullet Camera with Automatic Number Plate Recognition (ANPR) | 1 | No | | | | | | |
| P-006 | 32 Channel Network video recorder with 4 SATA Interfaces | 1 | No | | | | | | |
| P-007 | 6TB Hard Disk Drive | 1 | No | | | | | | |
| P-008 | 16 Port gigabit L2 Managed PoE Switch with 2 nos of SFP Slot & SFP Modules fully loaded with all accessories. | 1 | No | | | | | | |
| P-009 | 24 Port gigabit L2 Managed PoE Switch with 2 nos of SFP Slot & SFP Modules fully loaded with all accessories. | 1 | No | | | | | | |
| P-010 | 12 port Light guide Interconnect Unit (LIU) fully populated with modules/ adapters. | 1 | No | | | | | | |
| P-011 | SC-LC Cables, Connectors etc. | 1 | No | | | | | | |
| P-012 | 4U Rack with Accessories, connectors etc. | 1 | No | | | | | | |
| P-013 | 6U Rack with Accessories, connectors etc. | 1 | No | | | | | | |
| P-014 | 9U Rack with Accessories, connectors etc. | 1 | No | | | | | | |

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| | | | | | | | | | |
|-------|---|---|-----|--|--|--|--|--|--|
| P-015 | Supply and Laying of Cat-6 UTP 4 pair FRPVC Cable in existing conduit/pipe on surface/recess/concealed, with connectors, termination etc. | 1 | Mtr | | | | | | |
| P-016 | Supply and Laying of Optic Fibre Communication Outdoor cable (6 core, SMF) in existing pipe on surface/recess/ concealed, with connectors/ adaptors, termination etc. | 1 | Mtr | | | | | | |
| P-017 | Supply and Laying of 3 core 2.5 Sqmm Flexible power cable in existing conduit/pipe on surface/recess/ concealed including all accessories, termination, etc. | 1 | Mtr | | | | | | |
| P-018 | Supply and Laying of 3 Core 4 Sqmm Armoured power cable in existing conduit/pipe on surface/recess/ concealed including all accessories, termination, etc. | 1 | Mtr | | | | | | |
| P-019 | Supply and Laying of 25 mm dia, PVC Conduit (ISI Marked) with all bends, Tees & other accessories. | 1 | Mtr | | | | | | |
| P-020 | Supply and Laying of 32 mm inner dia HDPE pipe (PN-6) with all accessories on surface/recess/ concealed. | 1 | Mtr | | | | | | |
| P-021 | Supply and Laying of 50 mm dia GI Pipe (Class B) with all accessories on surface/recess/ concealed. | 1 | Mtr | | | | | | |
| P-022 | Excavation in Soft/ Hard Soil with the required depth up to 50 cm & Backfilling. | 1 | Mtr | | | | | | |
| P-023 | Road Cutting with the required depth up to 25 cm & Backfilling. | 1 | Mtr | | | | | | |
| P-024 | 3 Mtrs Camera GI Pole | 1 | No | | | | | | |
| P-025 | Single Pole 10Amps MCB | 1 | No | | | | | | |
| P-026 | Single Pole 16Amps MCB | 1 | No | | | | | | |
| P-027 | Double Pole 32Amps MCB | 1 | No | | | | | | |
| P-028 | 4 LOOP Addressable Panel | 1 | No | | | | | | |
| P-029 | Multi sensor | 1 | No | | | | | | |

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|-------|---|---|-----|--|--|--|--|--|--|
| P-030 | Manual Call Point | 1 | No | | | | | | |
| P-031 | Sounder Cum Strobe | 1 | No | | | | | | |
| P-032 | Isolator Module | 1 | No | | | | | | |
| P-033 | Control Module | 1 | No | | | | | | |
| P-034 | Loop card | 1 | No | | | | | | |
| P-035 | TCP/IP Card | 1 | No | | | | | | |
| P-036 | Centralized Monitoring Software | 1 | No | | | | | | |
| P-037 | GSM Module | 1 | No | | | | | | |
| P-038 | Addressable Panel Battery | 1 | No | | | | | | |
| P-039 | Supply and Laying of 2 core 1.5 Sqmm armoured cable | 1 | Mtr | | | | | | |
| P-040 | Controller | 1 | No | | | | | | |
| P-041 | Call station | 1 | No | | | | | | |
| P-042 | Zone Expander | 1 | No | | | | | | |
| P-043 | Extension Keypad | 1 | No | | | | | | |
| P-044 | Digital Amplifier | 1 | No | | | | | | |
| P-045 | Wall mount speaker | 1 | No | | | | | | |
| P-046 | Intrusion Panel | 1 | No | | | | | | |
| P-047 | 4 Wire Magnetic Contact | 1 | No | | | | | | |
| P-048 | Beam Sensor | 1 | No | | | | | | |
| P-049 | GSM Dialer | 1 | No | | | | | | |
| P-050 | Hooter | 1 | No | | | | | | |
| P-051 | Supply and Laying of 2 core 1.5 Sqmm flexible cable | 1 | Mtr | | | | | | |
| P-052 | Supply and Laying of 6 core 1 Sqmm flexible cable | 1 | Mtr | | | | | | |

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|-------|--|---|----|--|--|--|--|--|--|
| P-053 | Supply and Installation of 20 KVA Online UPS with 5 Hours Battery backup and necessary Rack,link and Terminals, etc. | 1 | No | | | | | | |
| P-054 | Supply and Installation of 10 KVA Online UPS with 5 Hours Battery backup and necessary Rack,link and Terminals, etc. | 1 | No | | | | | | |
| P-055 | Supply and Installation of 1.5 Ton Inverter split AC with 5KVA stabilizer | 1 | No | | | | | | |
| P-056 | Renovation of Control room as per site requirements | 1 | LS | | | | | | |
| P-057 | Construction of new UPS room as per site requirement | 1 | LS | | | | | | |
| P-058 | Renovation of BMS Operator living room as per site requirements | 1 | LS | | | | | | |
| P-059 | Electrical Work at Control Room, UPS Room and BMS Operator living room | 1 | LS | | | | | | |
| P-060 | Supply and Installation of Conventional 2 Zone Fire Alarm Panel | 1 | No | | | | | | |
| P-061 | Supply and Installation of Conventional Smoke Detector | 1 | No | | | | | | |
| P-062 | Supply and Installation of Conventional Manual Call Point | 1 | No | | | | | | |
| P-063 | Supply and Installation of Conventional Sounder | 1 | No | | | | | | |
| P-064 | Supply and Installation of Biometric Device | 1 | No | | | | | | |
| P-065 | Supply and Installation of Exit Reader | 1 | No | | | | | | |
| P-066 | Supply and Installation of EM Lock | 1 | No | | | | | | |
| P-067 | Supply and Installation of 43" Display, to be connected with NVR for camera viewing, complete with wall/ceiling/floor mounting arrangement as per specifications(24/7) | 1 | No | | | | | | |

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| | | | | | | | | | |
|-------|--|---|-----|--|--|--|--|--|--|
| P-068 | Supply and Installation of 55" Display, to be connected with NVR for camera viewing, complete with wall/ceiling/floor mounting arrangement as per specifications(24/7) | 1 | No | | | | | | |
| P-069 | Supply and Installation of 75" Display, to be connected with NVR for camera viewing, complete with wall/ceiling/floor mounting arrangement as per specifications(24/7) | 1 | No | | | | | | |
| P-070 | Supply and Installation of Desktop computer as per the specification. | 1 | No | | | | | | |
| P-071 | Supply and Installation 42U Rack with Accessories, connectors etc. as per specifications. | 1 | No | | | | | | |
| P-072 | Supply and Laying of Single core 10 Sqmm flexible cable | 1 | Mtr | | | | | | |
| P-073 | Supply and Laying of 3 core 16 Sqmm armoured cable | 1 | Mtr | | | | | | |
| P-074 | Supply and Installation of Double Pole 40Amps MCB | 1 | No | | | | | | |
| P-075 | Supply and Installation of Double Pole 63Amps MCB | 1 | No | | | | | | |
| P-076 | Supply and Installation of Four Pole 63Amps MCB | 1 | No | | | | | | |

Optional Items: P8: Comprehensive Annual Maintenance Charges

| # | Item Description | Total value (In Rs.) | AMC (In %) | AMC Amount (In Rs.) | GST (in %) | GST Amount (In Rs.) | Total price with GST in words |
|----|--------------------------------|-------------------------|------------|------------------------|---------------|------------------------|----------------------------------|
| P1 | CCTV (CAMC for 4th year) | | | | | | |
| P1 | CCTV (CAMC for 5th year) | | | | | | |
| P2 | Fire Alarm (CAMC for 4th year) | | | | | | |

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| | | | | | | | |
|----|---|--|--|--|--|--|--|
| P2 | Fire Alarm (CAMC for 5th year) | | | | | | |
| P3 | Public Address System (CAMC for 4th year) | | | | | | |
| P3 | Public Address System (CAMC for 5th year) | | | | | | |
| P4 | Control room infrastructure and UPS (CAMC for 4th year) | | | | | | |
| P4 | Control room infrastructure and UPS (CAMC for 5th year) | | | | | | |

Note:

- 1) The Bidder shall submit the offer by filling up all the columns against each item. Bidders shall quote for all the items in the above list. Partial quote is not allowed.
- 2) Warranty: Three Years.
- 3) The Grand total cost of Price Bid Clause from P1 to P4 will be added and evaluated to arrive L1 as per the Tamil Nadu Transparency in Tender Act 1998 and the Tamil Nadu Transparency in Tender Rules 2000 with latest amendments.
- 4) Bidders have to quote for all the Optional Items.
- 5) Optional Items will be invoked if necessary with required quantity.
- 6) The optional cost is to be used subject to the requirement and discretion of the customer.