

**Supply, Installation, Testing & Commissioning
of IP CCTV System at
O/o the Principal Accountant General
(Audit), Jharkhand, Ranchi.**

Indian Audit & Accounts Department
Doranda, Ranchi – 834002

Date of issue of tender document	16 July 2021
Last date for submission of tender	30 July 2021 by 1200 Hours
Date and time of opening technical bids	30 July 2021 at 1500 Hours
Opening of BOQ/ price bid	After evaluation of technical bid

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PART – 1 : Technical Bid

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O/o the Principal Accountant General (Audit), Jharkhand, Ranchi

1. Notice Inviting Tender

Ref. No. E.C.(Au)/CCTV/255/

Dated: 14 Jul 2021

Dear Sir,

Notice Inviting Tender – Supplying, installation, testing & commissioning of IP based CCTV system at O/o the Principal Accountant General (Audit), Jharkhand, Ranchi.

1. O/o the Principal Accountant General (Audit), Jharkhand, Ranchi, invites tender for the aforesaid work. The O/o the Principal Accountant General (Audit), Jharkhand, Ranchi intends to setup IP CCTV system in office premises.

You are requested to submit your offer in sealed envelope for the aforesaid work as per detailed specifications and other requirements as mentioned more specifically elsewhere in this tender document.

2. Sealed Bids in TWO separate sealed Envelopes indicating clearly “**Envelop - No.1 - Technical bid**” and “**Envelope No.2 – Price bid**”, shall be addressed by name to Sr Audit Officer/Estate Cell, O/o the **Principal Accountant General(Audit), Jharkhand, Ranchi – 834002** and Envelops should also be superscribed “**Supply, installation, testing & commissioning of IP based CCTV system at O/o the Principal Accountant General(Audit), Jharkhand, Ranchi.**” **Duly completed tender document shall be deposited in a Tender Box kept in Room No. 216 of this office building.** Last date for the submission of tender is 30 Jul 2021 by 12.00 hrs.
3. This NIT (tender document) can be downloaded from our website at <https://www.cag.gov.in/ag/jharkhand/en/tender>. The tender document will be available on the website, till the last date of submission. Tenderer may download the tender document from our website free of cost.
4. Envelope No. 1 shall contain:
 - a) “Technical bid” of tender with every page signed and stamped.
 - b) An initial part amount of **Rs 15,000/- (Rupees Fifteen Thousand Only)** towards **Earnest Money Deposit (EMD)** by way of Demand Draft (DD) from Nationalized/Scheduled Bank, drawn in favour of **Pay & Accounts Officer(Audit), O/o the Pr. Accountant General (A&E), Jharkhand, Ranchi payable at Ranchi**, to be submitted alongwith “Technical Bid” in a separate envelop. EMD envelop shall be super scribed as **EMD Supply, installation, testing & commissioning and maintenance of IP based CCTV system at O/o the Principal Accountant General (Audit), Jharkhand, Ranchi.** The Tender without EMD shall be rejected outrightly. No interest shall be paid on the EMD thus collected. Whereas EMD of the unsuccessful bidders will be refunded upon the issuance of work order to and acceptance of the same by the successful bidder.

5. Envelope No.2 shall contain

- a. Price Bid shall be addressed by name to the Sr. Audit Officer/Estate Cell, **O/o the Principal Accountant General (Audit), Jharkhand, Ranchi- 834002.**
 - b. Envelope No.2 shall not contain any condition whatsoever and any conditional bids shall be rejected.
 - c. Envelope No. 2 will be opened on same day after evaluation of Technical Bid. Price Bid envelopes shall be opened only in respect of those tenderers who are found to be eligible as per the prequalification criteria specified by O/o the Principal Accountant General (Audit), Jharkhand, Ranchi and have complied with all the requirements in tender document.
6. If the last date of receipt or opening of the tenders happens to be a holiday for Central Government, then the receipt and opening of the tenders shall be shifted to next working day without change of time and venue.
7. Before filling up the tenders, the bidders may note the following:
- a. The bids shall remain valid and open for acceptance for **03 months** from the date of opening of Envelope No.1. If the tenderer withdraws his tender before the expiry of the said period or makes any modifications in terms and conditions of the tender which are not acceptable to this office, then this office without prejudice to any other right or remedy will be at liberty to forfeit the earnest money of the tenderer.
 - b. Security Deposit: The successful bidder shall deposit 10% of the total value of work as security deposit after issue of Letter of Acceptance from the Office. The Earnest money deposited along with tender document shall be returned to the successful bidder on receipt of security deposit. The Security Deposit will be refunded after the expiry of defects liability period of two year.
 - c. **Time of Completion: (08 weeks)** Time is the essence of the contract. The Contractor shall be allowed to execute the work after working hours, in nights & on holidays, with the prior permission from the Estate Officer, O/o the Principal Accountant General (Audit), Jharkhand, Ranchi. No extra payments will be made for the work being done during the odd hours. **Date of commencement shall be either one-week, from the date of issue work order or the day on which the contractor will take possession of site, whichever is earlier.** The work shall be completed within **08 weeks** from the date of commencement.
 - d. The quantum of liquidated **damages** for delay in completion of the works per week shall be calculated at **0.50%** of the estimated cost subject to maximum of **5%** of the accepted tender amount.

- e. The tenderer should quote the rates in figures as well as in the words. The rate for each item should be worked out and the requisite total amount shall be calculated accordingly. Rates quoted by the contractor in item rate tender in figures and words shall be accurately filled in so that there is no discrepancy in the rates, figures and words. However, if a discrepancy is found in the rates in words and figures, then the rates quoted in words shall be taken as correct.
- f. The tenderers must include in their tender prices quoted for all taxes as per government norms, transportation charges, labour charges etc. if applicable. No extra claim on this account will in any case be entertained.
- g. The tender document must be filled in English. If any of the documents are missing or un-signed in price bid, the tender shall be considered invalid. In case of technical bid, the details of incomplete or missing documents will be intimated to the tenderer and the tenderer has to submit all those documents within 2 days after communicating the same, otherwise the tender will be rejected.
- h. O/o the Principal Accountant General (Audit), Jharkhand, Ranchi reserves the right to accept or reject any /all tender (s) in part or whole of any firm / firms without assigning any reasons for doing so.
- i. Canvassing in connection with tenders is strictly prohibited and the tenders submitted by the tenderer who resort to canvassing shall be liable to rejection.
- j. All taxes including GST, or any other payable/ prevailing tax on material or on finished works etc, in respect of this contract shall be payable by tenderer and the office will not entertain any claim whatsoever in this respect over the quoted price.
- k. Before quoting, the tenderer shall inspect the site, to fully acquaint himself about the condition in regard to accessibility of the site, working condition of site, locality including installations of tools and plants (T&P) and local authority regulations / restrictions if any , conditions affecting accommodations and movement of personnel etc. required for the satisfactory execution of the work contract. No claim whatsoever on such account shall be entertained by the O/o the Principal Accountant General (Audit), Jharkhand, Ranchi in any circumstances.
- l. The quantities of various items given in the schedule of quantities are approximate. The quantities of work may vary at time of allotment / execution of work. This office reserves the right to omit / delete any item(s) of work from the schedule at the time of allotment /execution of work. Contractor will be paid for the actual work done at the site duly verified by the authorized officer of this office.
- m. If the rate quoted by the contractor for any item / items are not workable or abnormally lower than the market rate, the full and final payment of the contractor will be settled after the satisfactory execution of these items.

- n. O/o the Principal Accountant General (Audit), Jharkhand, Ranchi does not bind itself to accept the lowest or any tender at all. The office also reserves the right to negotiate or partly accept any tender or all tenders received without assigning any reasons thereof.
- o. Any discrepancies, omissions, ambiguities in the tender documents, if any, or any doubt as to their meaning should be reported in writing to **O/o the Principal Accountant General (Audit), Jharkhand, Ranchi-834002** who will review the questions and if information sought is not clearly indicated or specified, the office will issue clarifications to all the tenderers which will become part of the Tender Document. O/o the Principal Accountant General(Audit), Jharkhand, Ranchi will not be responsible if the discrepancies, omissions, ambiguities in the tender documents or any doubts as to their meaning are not brought to the notice of office before three working days prior to the last date of submission of the tender.
- p. O/o the Principal Accountant General (Audit), Jharkhand, Ranchi also reserves the right to divide and distribute the work to more than one tenderer at its sole discretion.
- q. The successful bidder shall execute an agreement on non-judicial stamp paper with Sr. Audit Officer/Estate Cell O/o the Principal Accountant General (Audit), Jharkhand, Ranchi in accordance with the standard format enclosed (Articles of Agreement) within 07 days from date of issue of work order failing which the bidder's EMD may stand forfeited.
- r. The office may not be able to provide all DATA, Drawings & Documents related to the buildings. However the data available with us shall be made available to the contractor. All the necessary works related to the Job component (like as built drawings etc.) shall be under the scope of the party.
- s. Contract agreement shall be executed within 07 days from the date of issue of the work order by the successful tenderer in accordance with the agreement in the format prescribed herein. A work order by the O/o the Principal Accountant General (Audit), Jharkhand, Ranchi of a tender will constitute a binding contract between the office and the bidder so tendering, whether such formal agreement is or is not subsequently executed. Stamp duty in this respect shall be borne by the contractor.
- t. Virtual completion: The virtual date of completion will be the date on which the work is completed in all respects as laid out in the contract and performance of the system accepted by the representative of the office.
- u. Defect liability period: The Defects Liability Period shall be for a period of **two years** and shall commence from the date of virtual completion. Any defect that may appear within the Defects Liability Period, shall be rectified by the Contractors without any extra cost to the Employer. In case of failure to do so within 10 days from such notice issued by this office, the Employer may get such rectification works carried out through any other firm and expenditure incurred by this office shall be recovered from any money due to the Contractor at the cost and risk of the contractor. Only, after all the defects pointed out during the Defects Liability Period have been satisfactorily rectified by the Contractor, only after that release of the Security Deposit shall be considered. The maintenance as envisaged in the subsequent years should

also be carried out during the period of one year. In addition to the calls received by the office, the contractor shall have to make compulsory visits for checking the system and for preventive maintenance.

- V. For any clarification you may please contact Shri Ashok Kumar Sinha (Senior Audit Officer/Estate Cell) Mob no. 9431957448/8210861841 at O/o the Pr. Accountant General(Audit), during working hours.

Sr. Audit Officer/Estate Cell

2. FORM OF TENDER

To,
The Sr. Audit Officer/Estate Cell
O/o the Principal Accountant General (Audit), Jharkhand,
Ranchi, Doranda
834002

Dear Sir,

Notice Inviting Tender – Supplying, installation, testing & commissioning of IP based CCTV system at O/o the Principal Accountant General (Audit), Jharkhand, Ranchi .

- 1 I / We have examined the Scope of Works, Specifications and Schedule of Quantities and Terms and Conditions relating to the tender for the said works after having obtained the Tender document invited by you.
- 2 I / We have visited the site, examined the site of works specified in the Tender Document and acquired the requisite information relating thereto as affecting the Tender.
- 3 I / We hereby offer to execute and complete the works in strict accordance with the Tender Document at the item rates quoted by me / us in the attached Schedule of Quantities in all respects as per the specifications and Scope of Works described in the Tender Document and the Annexures containing Terms and Conditions.
- 4 I / We enclose herewith interest-free **Earnest Money Deposit (EMD) for Rs.15,000/- (Rupees Fifteen Thousand Only)** by Demand Draft payable to Pay & Accounts Officer(Audit), O/o the Pr. Accountant General (A&E), Jharkhand, Ranchi, payable at Ranchi and the sum shall be forfeited in the event of our withdrawal of Tender before expiry of the validity period of offer and/or in the event of our failure to execute the Contract when called upon to do so by accepting our Quotation.
- 5 In the event of this tender being accepted, I/We agree to enter into and execute the prescribed Agreement with O/o the Principal Accountant General (Audit), Jharkhand, Ranchi as per the format mentioned in this tender.
- 6 I/ We agree to pay all Government (Central and State) Taxes such as GST, TDS, etc. and other taxes prevailing from time to time and the rates quoted by me/us are inclusive of the same.
- 7 The rate quoted by me / us is inclusive of all taxes like GST, Income Tax, etc.
- 8 The rates quoted by me / us are firm and shall not be subjected to variations on account of fluctuation in the market rates, taxes or any other reasons whatsoever.
- 9 I / we hereby agree to abide by and fulfill all the Terms and Conditions and Provisions of the said Contract Document annexed hereto.

Name of the person authorized to sign and submit the Tender

D).....

II).....

Yours faithfully

Place

Date

Signature

Seal

3. PRE-QUALIFICATION CRITERIA

Minimum Eligibility Criteria for pre-qualification of tenderers is as follows:

The Bidding Firm/Company:-

1. Should have at least 03 years of experience in the field of SITC of IP CCTV systems.
2. Should have successfully completed in last 03 Year, in the field of SITC of IP CCTV systems for government buildings, Banks/FIs premises, reputed private organizations etc. Work/Purchase orders and Completion certificates issued by the client should be enclosed with the bid documents.
3. Should have annual turnover of at least 30 lakh in last three years.
4. Should submit GST returns and Income Tax Return certificates or as per applicable rules/regulations for the last 3 financial years.

Note: Any false and/or inadequate information can result in rejection of the tender.

4. General instructions and special conditions of the contract

1. **Mobilization advance:** No mobilization advance shall be paid to the Contractor.
2. **Storage at site:** Storage space may be allowed at site as per the availability. The Contractor will have to make his own arrangement for security and locking arrangement of the storage space. The Contractor may be required to vacate the storage space as per Employer's exigency without any extra cost.
3. **Stay arrangement at site: Contractors** workers will not be permitted to stay at site. The contractor has to make his own arrangement of stay for his employees.
4. **Extension of time:** If the Contractors desire any extension of time for completion of work on grounds of there having been unavoidable hindrances in execution or any other ground, they shall apply in writing immediately after the occurrence of the hindrances. Such application shall contain complete details of hindrances, which hindered the Contractors in the execution of the work. If in the opinion of office works be delayed by force majeure such as (a) war / hostilities, (b) riots or civil commotion, (c) earthquakes, fire tempest, lightening or other natural / physical disasters, etc., (d) restrictions imposed by the Government which prevent or delay the execution of the order or by any other reasons. If any such extension of time is granted by this office, the extension of time will be given without prejudice to office's right to recover liquidated damages or compensation under the relevant contract clause and no extra claim will be paid by the Employer whatsoever on account of delay or idle labour/machinery.
5. **Item rate tender:** The tenderer shall note that unless otherwise stated the tender is strictly on item rate basis and his attention is drawn to the fact that rate should be correct, workable and self-supporting. The tenderer shall carry out all works necessary for completion of work and for delivering the desired results. No claim shall be entertained on this account. The successful tenderer is bound to carry out any or all items of work necessary for the completion of the job even though such items are not included in the quantities and rates.
6. **Firmness of rates:** The rates quoted in the tender/offer shall be for the complete item including supply, installation, testing & commissioning at site as per relevant standard codes (BIS/IS). The rate shall also include all charges for storing, watch and ward, reinstating and making good the damaged work if any to its original finish, etc. The rates quoted shall be deemed to be for finished work to be measured at site. The rates quoted in the tender shall include all charges for packing, transport, loading, unloading and for delivery at site. The rates shall also be firm during the period of contract including extended period if any and rates shall not be subject to exchange variation, labour conditions, and fluctuations in railway freights, taxes or any conditions whatsoever. Tenderers must include in their rates GST or any other tax and prevailing duty or other levy as existing, levied by the Central Government or any State Government or Local Authority, transportation charges etc. if applicable. No claim in respect of increase in GST or other taxes, duty or levy during the duration of the contract shall be entertained by the Employer. The same will remain firm during the contract period. While quoting their rates the tenderer should include the following also if otherwise not stated herein before.

7. **Sundry items:** The quoted rate shall include the cost of all minor/sundry items to make it functional.
8. **Revision in tender:** Any request for revision of original tender rates, specifications or conditions by a tenderer received after submission of bid documents shall not be entertained.
9. **Liquidated damages :**

Time is the essence of the contract and Liquidated Damages" shall be recovered from the contractor's dues for delay in completion of the work on his part, subject to force majeure clause. The quantum of liquidated damages per week shall be calculated at 0.50% of the estimated cost put to tender subject to a maximum 5% of the accepted tender amount.
10. **Compensation for delay :** The tenderer shall not be entitled to any compensation for any loss suffered by him on account of delays in commencing or executing the work, whatever the cause of delays may be including delays arising out of modifications to the work entrusted to him or in any subcontract connected therewith or delays in awarding contracts for other trades of the project or in commencement or completion of such works or in procuring government controlled or other building materials or in obtaining water and power connections for construction purpose or for any other reason whatsoever and the Employer shall not be liable for any claim in respect thereof. The Employer does not accept liability for any sum besides the tender amount, subject to such variations as are provided for herein.
11. **Variation items/ Extra items:** Rates of extra or substituted items shall wherever possible be derived from the tender rates of related items or market rates.
12. **Nature of work:** The tenderer must obtain for himself on his own responsibility and at his own expenses all the information which may be necessary for the purpose of making tender and for entering into a contract and inspect the site of the work, acquaint himself with all local conditions, means of access to the work, nature of work and all matters pertaining thereto.
13. **Co-operation with other contractors:** The successful tenderer must cooperate with the other contractor appointed by the Employer so that the work shall proceed smoothly with the least possible delay and to the satisfaction of this office.
14. **Contractor's Representative on Works:** Contractor shall maintain at site responsible, efficient, qualified and well experienced in charge during the contract period. Any clarifications, explanation, instructions or notices given by the Employer to such in-charge shall be deemed to be given to the contractor and shall be binding on the contractor.

15. **Dismissal of Workman:** Contractor shall, on the request of the Employer, immediately dismiss from the work any person in the opinion of Employer be unsuitable or incompetent or who may be guilty of misconduct.
16. **Inspection of work :** The contractor shall at the instructions of the Employer within such time as notified, open up for inspection any work and if the contractor refuse or neglect to comply with such instructions, the Employer may employ other workman to open the same. Such work if it is found not in accordance with approved specifications, or the instructions, expenses of opening up and redoing if required shall be borne by and recoverable from the Contractor from any money due or which may become due to the contractor.
17. **Notices :** Notices of the Employer, to the contractor may be served personally or by being left at or sent by registered post to the last known place of the business of the party to whom the same is given or in the case of the contractor by being left on the works. Notices may be served at or sent by registered post to the registered office of the contractor. Any notice sent by registered post shall be deemed to be served at the time when in the ordinary course of post, it would be delivered.
18. **Deletion of items:** The tender rates shall be fixed and applicable for any increase or decrease in the tendered quantities. The Employer can increase or decrease any quantities to any extent or even delete particular item as per requirements and the contractor shall not be paid anything extra on this account. Nothing extra will be paid by the office on account of omission / deletion of items or decrease in the quantity of items. The office shall not entertain any claim whatsoever from the contractor on this account. The payment shall be made as per joint measurement, counting of items etc.
19. **Arbitration :** If any dispute, difference or question shall at any time arise between the parties as to the construction of this Agreement or concerning anything or as to the rights, liabilities and duties of the parties hereunder, except in respect of matters for which it is provided hereunder that the decision of the Employer or its representative is final and binding, the same shall be referred to conciliation or arbitration after giving at least 30 days notice in writing to the other (herein after referred to as the "Notice for Conciliation / Arbitration") clearly setting out the items of dispute to a Conciliator or the Sole Arbitrator who shall be appointed as herein after provided for the purpose of appointing the Conciliator or the Sole Arbitrator who shall be appointing the Conciliator or the Sole Arbitrator referred above, the Employer shall send to the contractors, within thirty days of the Notice of Conciliation / Arbitration, a panel of three names who shall be presently not related with this office of the Employer or the contractors. The Contractor shall, on receipt of the names as aforesaid, select any one of the members so named to be appointed as the Conciliator or Sole Arbitrator, as the case may be, and communicate his name to the Employer within fifteen days of receipt of the members. The Employer shall thereupon without any delay, appoint the said person as the Conciliator or Sole Arbitrator.

If the Employer fails to send to the Contractors, the panel or three names as aforesaid within the period specified, the contractor shall send to the Employer, a panel of three names of persons who shall be unconnected with either party. The Employer shall, on receipt of the names as aforesaid, select any one of the person's name and appoint him as the Conciliator or Sole Arbitrator. If the Employer fails to select the person and appoint him as the Conciliator or Sole Arbitrator within thirty days of receipt of the panel and inform the contractor accordingly, the contractor shall be entitled to appoint one of the persons from the panel as the Conciliator or Sole Arbitrator and communicate his name to the Employer.

If the person so appointed is unable or unwilling to act or refuses his appointment or

vacates his office due to any reason whatsoever, another person shall be appointed as aforesaid.

The Conciliation / Arbitration shall be governed by the Conciliation and Arbitration Act, 1996 as in force from time to time. Where the parties do not agree with the Conciliator and appoint an Arbitrator (s) the award of the Arbitrator (s) shall be final and binding on the parties. It is hereby agreed that in all disputes referred to Arbitration, the Arbitrator shall give a separate Award in respect of each dispute or difference in accordance with the terms of the reference and the Award shall be a reasoned Award.

The fees, if any, of the Conciliator or the Arbitrator shall, initially be paid in equal proportion by each of the parties. The cost of the Conciliation / Arbitration including the fees, if any, of the Conciliator or the Arbitrator, shall be directed to be finally borne by such party or parties to the dispute, in such matter or proportion as may be directed by the Conciliator or the Arbitrator, as the case may be in the Award.

The employer and the contractor also hereby agree that the Arbitration under this Clause shall be a condition precedent to any right to action under the contract with regard to the matters hereby expressly agreed to be so referred to Arbitration.

20. Termination of contract by the Employer:

If the contractor being an individual or a firm, commit any "Act of Insolvency" or shall be adjudged an insolvent or being an incorporated company shall have an order for compulsory winding up or applies for voluntary winding up or subject to the supervision of the court and of the official assignee or the liquidator, in such acts of insolvency or winding up shall be unable within seven days after notice to him requiring him to do so, to show to the reasonable satisfaction of the employer that they are able to carry out and fulfill the contract, and to give security, therefore, if so required by the employer.

Shall charge or encumber this contract or any payments due or which may become due to the contractor there under. OR

If the contractor has abandoned the contract OR

Has failed to commence the works, or has without any lawful excuse under these conditions suspended the progress of the works for seven days after receiving from the employer written notice to proceed, OR

Has failed to proceed with the works with such due diligence and failed to make such due progress as would enable the works to be completed within the time agreed upon, OR

Has failed to remove materials from the site or to pull down and replace work for seven days after receiving from the employer written notice that the said materials of work were condemned and rejected by the employer under these conditions OR

Has neglected or failed persistently to observe and perform all or any of the acts, matters or things by this contract to be observed and performed by the contractor for seven days after written notice shall have been given to the contractor requiring the contractor to observe or perform the same, OR

Has to the detriment of good workmanship or in defiance of the employer's instructions to the contrary sublet any part of the contract. Then and in the event of any of the aforesaid cases, the Employer may, notwithstanding any previous waiver, after giving seven days' notice in writing to the contractor, determine the contract but without thereby Affecting the powers of the employer or the obligations and liabilities of the contractor, the whole of which shall continue in force as fully as if the contract has not been so determined and as if the works subsequently executed has been executed by or on behalf of the contractor. And further, the Employer may enter upon and take possession of the work and all plant, tools, scaffolding, sheds, machinery and materials lying upon the premises or the adjoining lands or roads and use the same as his own property or may employ the same by means of his own servants and workmen in

carrying on and completing the works or by employing any other contractors or other persons to complete works, and the contractor shall not in any way interrupt or do any act, matter or thing to prevent or hinder such other contractor or other person or persons employed for completing and finishing or using the materials and plant for the works. When the works shall be completed or as soon thereafter as convenient, the employer shall give a notice in writing to the contractor to remove his surplus materials and plant, and should the contractor fail to do so within a period of 14 days after the receipt thereof by him, the employer shall sell the same by public auction, and shall give credit to the contractor for the amount realized on deducting there from the costs of removal and sales. If any sum shall be due or payable to or by the employer for the values of the said plant and materials so taken possession of by the employer and the expense of loss which the employer shall have been put to in requiring the works to be completed, and the amount, if any, owing to the contractor and the amount which shall be so certified shall thereupon be paid by the employer to the contractor or by the contractor to the employer, as the case may be, and the employer's certificate shall be final and conclusive between the parties.

On termination of the contract, the contractor shall forth with remove himself and his workmen from the work site.

21. **Indemnity clause** :The Contractor shall indemnify O/o the Principal Accountant General(Audit), Jharkhand, Ranchi for any loss suffered by them as a result of disclosure of any confidential information. The Contractor shall not publish, permit to be published, or disclose any particulars of the Works in any trade or technical paper or elsewhere without the previous agreement of said office. The Contractor shall indemnify the office (employer) against all claims in respect of rights, and shall defend all actions arising from claims, and shall himself pay all royalties, license fees, damages, cost and charges of all and every sort that may be legally incurred in respect thereof. The Contractor shall indemnify and keep indemnified O/o the Principal Accountant General(Audit), Jharkhand, Ranchi and hold him harmless in respect of all and any loss and expenses arising from any such injury or damage to persons or property as aforesaid and also against any claim made in respect of injury or damage, whether under any Statute or otherwise and also in respect of any award of compensation or damages consequent upon such claim. The Contractor shall also indemnify and keep indemnified this office against all claims which may be made against the office by any person/ member of the public or other third party in respect of anything which may arise in respect of the works or in consequence thereof. The Contractor shall also similarly indemnify the O/o the Principal Accountant General(Audit), Jharkhand, Ranchi against all claims which may be made upon the office whether under the Workmen Compensation Act or any other statute in force during the currency of this contract or at Common Law in respect of any employee of the Contractor or any Sub-Contractor.
22. **Matters to be finally determined by the Employer** : The employer's decision, opinion, direction, with respect to all or any of the matter such as scope of work, contractor to provide everything necessary, materials and workmanship to conform the description, assignment of subletting, defects after completion, delay & extension of time, opened up works and the schedule of rates as contained in the Price Bid hereof and as to the exercise by them the right to have any works opened up shall be final and conclusive and binding on the contractor. Employer's instructions if any, in this regard in case of any urgency, shall also be complied immediately.
23. **Corrections or overwriting** : All erasures and alterations made while filling the tender must be attested by initials of the tenderer. Overwriting of figures is not permitted. Failure to comply with either of these conditions will render the tender void at the employer's discretion.

24. Mismatch in figures and words :

Rates and amounts should be quoted both in figures and in words in columns specified. A Schedule of Probable Quantities in respect of each work and Specifications accompany these General and Special Conditions. The Price Bid should contain not only the rates but also the value of each item of work entered in a separate column and all the amounts quoted against various items should be totalled in order to show the aggregate value of the entire tender. If on check there are differences between the rates given by the Contractor in words and figures or in the amount worked out by him, the following procedure shall be followed;

- 24.1. When there is a difference between the rates in figures and in words, the rates which correspond to the amounts worked out by the Contractor, shall be taken as correct.
- 24.2. When the amount of an item is not worked out by the Contractor or it does not correspond with the rate written either in figures or in words, then the rate quoted by the Contractors in words shall be taken as correct.
- 24.3. When the rates quoted by the Contractor in figures and in words tallies but the amount is not worked out correctly, the rate quoted by the contractor shall be taken as correct and not the amount.

25. Sub-standard work and material : If any work or material used at site is found to be unsound, imperfect or inferior from what is specified in the contract, the Contractor shall be advised to rectify or re-execute the work or remove the material as the case may be, within a reasonable time depending upon the nature of work. If the Contractor fails to do so, the work shall be got redone or rectified or the material replaced through any other agency at the risk and cost of the Contractor.

26. Payment of bills: Payment will be made after the completion of all works subject to the satisfaction of the employer. All payments will be made only by electronic fund transfer. The proforma for electronic payment shall be submitted along with the tender as per annexure. Due to the nature of work the number of items actually utilized in the execution/completion of work may vary from what is mentioned in the bill of quantities. Therefore the contractor shall be entitled to receive payment on the basis of joint measurements taken on site, installation and commissioning, approved and certified by the representative of the O/o the Principal Accountant General(Audit), Jharkhand, Ranchi.

27. Modifications to design :

The Tenderer shall carry out all the work strictly in accordance with details and instructions of the representative of the office (Employer). If in the opinion of the said representative, changes have to be made in the design and with the prior approval in writing of the Employer, they desire the Tenderer to carry out the same, the Tenderer shall carry out the same. The representative of the office (Employer) decision in such cases shall be final.

5. Safety code

1. During- the execution of works, every care shall be taken to ensure that the safety and convenience of workmen staff, authority visitors to site and the public are duly catered to and that all operations are carried out in such a manner as to cause least interference with day to day working of the office.
2. When a ladder is used, it shall be rigid construction made either of good quality wood or steel. The steps shall have a minimum width of 450 mm. and a maximum rise of 300 mm. Suitable hand holds of good quality wood or steel shall be provided and the ladder shall be given an inclination not steeper than $\frac{1}{4}$ to 1 ($\frac{1}{4}$ horizontal to 1 vertical).
3. Safe means of access shall be provided to all working places. Every ladder shall be securely fixed. No portable single ladder shall be over 9 M. in length while the width between said rails in sung ladder shall in no case be less than 190 mm. for ladder up to and including 3 M. in length. For longer ladders this width shall be increased at least 20 mm. for each additional meter of length.
4. All personnel of the Contractor involve in execution of the work shall be provided with safety helmets. Persons employed on metal cutting and grinding shall wear safety glasses.
5. Adequate precaution shall be taken to prevent danger from electrical equipment. No materials on any of the sites of work shall be so stacked or placed as to cause danger or inconvenience to any person or the public.
6. The Contractor shall take all measure on the site of the work to protect the public from accidents and shall be bound to bear the expenses of defense of every suit, action or other proceedings at law that may be brought by any persons for injury sustained owing to neglect of the above precautions and to pay any such persons or which may with the consent of the Contractor, be paid to compensate any claim by any such person.
7. No electric cable or apparatus which is liable to be a source of danger over a cable or apparatus used by the operator shall remain electrically charged.
8. All necessary personnel safety equipment as considered adequate by the Employer should be kept available for the use of the persons employed on the site and the Contractor should take adequate steps to ensure proper use of equipment by those concerned.
9. The Contractor shall not employ men below the age of 18 years.
10. All scaffolds, ladders and other safety devices mentioned or described herein shall be maintained in safe condition and no scaffolding, ladder or equipment shall be altered or removed while it is in use.
11. These safety provisions should be brought to the notice of all concerned by display on a notice board at a prominent place at work spot. The person responsible for compliance of the safety code shall be named thereon by the Contractor.
12. Notwithstanding all the above clauses there is nothing in these to exempt the Contractor from the operations of any other Act or Rule in Force in the Republic of India.

6. Scope of Work

The scope of work shall include the following.

- i. Supply, installation, testing and commissioning (SITC) of IP CCTV Surveillance System at Office Building and the premises of O/o the Principal Accountant General (Audit), Jharkhand, Ranchi.
- ii. Delivery of entire material to above said locations including packing, handling, transporting, clearing, loading/unloading etc. involved in transit.
- iii. Supplying, Installation, testing & commissioning (SITC) of all the components/equipments / accessories, etc. as per technical specifications, and handing over to the Employer.
- iv. Wherever the ground is dug for cable laying etc, it shall be restored to original condition. All debris etc. shall be disposed off to the nearest defined place by municipal authority or by employer as applicable.
- v. Providing all-inclusive service including all spares, etc. during defect liability period.
- v. All engineering, equipment, labour, and permits required to satisfactorily complete the work required by this Specification.
- vi. Any other work related to but not specifically mentioned above, required for completion of the job as per the intent and scope of work.

Warranty:

The entire equipment/ system shall be warranted to be free from defective workmanship or materials and any defects that may appear within **24 months** (two years) from the date of issue of completion certificate for the work, which in the opinion of the employer have arisen from bad workmanship or materials, shall upon intimation by the employer, be made good by the Contractor at his own cost within the time specified.

During the said period of 24 months (DLP) , the contractor (successful tenderer) shall make periodical inspection of the working of the entire system free of charge at least once in 15 days or earlier, if required, and attend to such other service that may be required of him. The warranty period shall be 24 months from the date of handing over of the entire system to the employer.

The total Security Deposit @ 10% submitted by the successful tenderer shall originally be valid till end of DLP. The security deposit will be released after the DLP is over.

Penalty for delay in service during defect liability period (DLP):

During the DLP, all care shall be taken so that the downtime of the system is kept minimum and in any case, not more than the allowed time for attending to repairs. Any defects in any of the cameras shall be repaired within **24 hours** from the time of reporting complaint in writing (complaints through SMS, e-mails, fax etc. shall also be treated as complaints in writing). Any defects in any of the servers, switches, routers etc., leading to complete breakdown of the system, shall be repaired within **12 working hours** from the time of reporting complaint in writing. Any defects/ problems associated with the software shall be attended to immediately, **but not later than 12 hours from the time of the problem being noticed**/ reported. If the downtime exceeds the above mentioned period, penal recovery shall be made from the payments due to the contractor at the following rates:

1-7 days excluding date of lodging of complaint: Rs. 100/= per day

From 8th day to 30 days: Rs. 250/= per day

More than 30 days: Rs. 350/= per day

Non-functional server / software leading to system failure - @ Rs 2000/- per day or part thereof beyond the authorized maintenance period

Penalty of 0.5% of the cost of the equipment will be charged every quarter if, the Preventive Maintenance is not done by tenderer.

However extension of warranty/replacement of equipment will not be applicable if the breakdown is due to reasons not attributable to the tenderer. However, the onus of proving the same would be on the tenderer. If the system's defect is attributable to mishandling, negligence or operation by unauthorized staff, the tenderer will not be liable to repair the same under the contract. The tenderer under such circumstances shall charge extra for spare & service rendered.

The penalty amount will be recovered from the Security Deposit lying with the Office. Complaint(s) will be deemed to be resolved only on the availability of the Customer Call Report (CCR) signed by both the service engineer and authorized representative of the office, confirming that the complaint is resolved. Date and time of resolution of the complaint shall be indicated clearly.

Others Issues:

- a. The contractor must bear in mind that all the work shall be carried out strictly in accordance with the specifications made by the employer and also in compliance of the requirement of the local public authorities and any other Acts/Rules/Regulations and no deviation on any account will be permitted.
- b. The Contractor shall carry out all the work strictly in accordance with details, and instructions of the representative of the Office (Employer). If in the opinion of the representative of employer nominal changes have to be made to suit the site condition and with the prior approval in writing of the employer, they desire the Contractor to carry out the same, the Contractor shall carry out the same without any extra charge.
- c. The tenderer must obtain for himself on his own responsibility and at his own expense, all the information which may be necessary for the purpose of making a tender and for entering into a contract and must examine the drawings, inspect the site of the work, and acquaint himself with all local conditions, means of access to the work, nature of the work and all matters pertaining thereto. The employer's decision in such cases shall be final and shall not be open to arbitration.
- d. A Schedule of Probable Quantities in respect of each work and Specifications accompany these Special Conditions. The Schedule of Probable Quantities is liable to alteration by omissions, deductions or additions at the discretion of the employer.
- e. The contractor shall not be entitled to any compensation for any loss suffered by him on account of delays in commencing or executing the work, whatever the cause of delays may be, including delays arising out of modifications to the work entrusted to him or in any sub-contract connected therewith or delays in awarding contracts for other trades of the project or in commencement or completion of such works. The employer does not accept liability for any sum besides the tender amount, subject to such variations as are provided for herein.
- f. The successful tenderer is bound to carry out all items of work necessary for completion of the job even though such items are not included in the quantities and rates. Schedule of instruction in respect of such additional items and their quantities will be issued in writing by the employer.
- g. The successful tenderer must co-operate with other contractors appointed by the employer so that the work shall proceed smoothly with the least possible delay. He should make his own arrangement for storage and protection of all materials supplied by him.

Testing & Commissioning:

SL. No.	Description	Visual	Test Readings	Documentation
1	All cables are tested for continuity, insulation, resistance, etc.			√
2	System installation proper as per drawing	√		
3	Carry out visual checks on all cameras, cables, camera housing etc. to ensure they are clean and free from any mechanical damage.	√		
4	Check for proper termination & feruling	√		
5	Check input A/C supply voltage		√	
6	Check Input supply DC voltage at every camera		√	
7	Check proper connection of video cable to ensure that there is no video loss	√		√
8	Check all camera's signal on monitor. Also check for clarity , sharpness of the picture	√		
10	Check recording, playback & other various features randomly	√		
11	Check recording frame rate	√		√
12	Check all software server & client has been installed correctly & running without any bug/error		√	

Documentation:

The CCTV system contractor, upon completion of all the activities, shall offer the system to the customer for acceptance. For this, the contractor shall provide the customer with the following documentation:

1. Copy of detailed report
2. Component and equipment list
3. Product description sheets
4. System design drawing(s)
6. System schematic diagram(s)
7. System operating manual
8. Original licensed copies of all the software (OS, DVMS, Video analytics, Antivirus, etc.)

Final acceptance and Handover-takeover:

Prior to final acceptance, the contractor shall provide complete operation and maintenance instruction manuals to the employer along with all the above mentioned documents. All aspects of system operation and maintenance shall be detailed, including wiring diagrams of all circuits, a written description of the system design, sequence of operation and drawing(s), illustrating control logic and equipment used in the system. Checklists and procedures for emergency situations, maintenance operations and procedures shall be included in the manual.

Representative of Office (Employer) then shall test and inspect the functioning of various components (e.g. cameras and their functions, recording features, etc.) and a joint report shall be prepared. In case of any observations from employer's side, the same shall be conveyed to the contractor in writing and got attended to by the contractor to the satisfaction of the inspecting officials.

The entire system then shall be taken over by the employer and the defect liability period shall start from the same day.

O/o the Principal Accountant General (Audit), Jharkhand, Ranchi reserves the right to inspect equipment's and OFC, Cat-6 cables, other equipment, etc. Any inspected goods fail for confirm to specification after installation, the office may reject them and the Vendor shall have to replace the rejected goods. In case of inspection waiver the same shall be obtained before the Sample approval should be obtained before installation for such material.

Training:

The contractor shall provide the employer with details of the training required by personnel to operate and maintain the CCTV system.

The Contractor and the customer shall jointly agree the number of staff to attend the training courses.

For all the active components/ equipment, namely; CCTV cameras, server, network switch, and Network attached storage device, the OEMs shall provide a certificate, indicating the end of life and end of support in form of spares etc. The product selected should conform to the tender specified life period. Further, all software provided for the above system, including operating system, video management software, client software etc. should be upgraded, if necessary, as and when a new upgrade is released by the developer/ OEM at no extra cost during the tender specified life period of the above system. A certificate, confirming the above, shall be submitted from the respective developers/ OEMs along with Part-I as per the proforma specified in the tender.

7. Technical Specifications: IP Based CCTV System

1.0 Description in general:

The System proposed is IP based CCTV System.

The objective shall be to provide high degree of IP based Electronic surveillance to the entire Premises at both the locations. It is also essential to have recorded images of all cameras to be stored **at least for 15 days** to facilitate investigations of a reported case.

This section of the specification includes the supply, installation, testing & commissioning of IP CCTV system and imparting training to concerned officials in connection with IP CCTV system including all components.

All equipment and materials used shall be standard components from the current line/range of products that are regularly manufactured and used in the system.

2.0 Scope:

Overview of the system

Proposed system consists of 50 nos. IP cameras at O/o the Principal Accountant General (Audit), Jharkhand, Ranchi' NVR/servers, switches, storage, workstations, monitors, cables, etc.

The control room which is proposed on Ground Floor shall have all the equipment housed in an equipment rack.

The system shall consist of following main components:

- a) High resolution IP cameras
- b) NVR
- c) POE switches
- d) Storage
- e) HD LED Monitors
- f) Cables and accessories, etc.

The Contractor will install, test & commission the system. The viewing angles and clarity, etc. shall be shown to the representative of O/o the Principal Accountant General (Audit), Jharkhand, Ranchi to their satisfaction before finalizing the location, zoom and angle, etc. The specifications of all components shall be strictly followed and shall be as per given technical specifications or better.

3.0 Applicable standard:

Original Equipment Manufacturer Standard.

4.0 Approvals:

As given in technical specifications

5.0 System Components:

General: All the vendors must attach the point by point compliance for below specification in their technical bid.

5.1. Network Video Recorder (NVR) and NVS

The equipment envisaged is a 64 channel NVR recorder suitable for Megapixel IP cameras with built in ports for easy connection to compatible IP cameras. It should be equipped with H.264 Video codec encoding. The NVR shall support minimum 12 TB hard drives. It should have HDMI and VGA output for high resolution output to a HD TV or computer monitor.

Real time: It should record all cameras at 1080p resolution at 25/30 fps per camera without any frame skipping. Further the recording can be motion activated recording or calendar based recording or manual mode. It should accept 2 MP IP cameras. It should have user selectable recording resolutions: 4 MP, 2 MP, 1.3MP, etc. It should have adequate input bit rate.

It should be possible to easily configure IP cameras on the same network. It should also be possible to have real time viewing in HD for all cameras on NVR.

The network failure is registered immediately if the failure is longer than 10 seconds. Once the network connection has been restored, gaps in the recording are automatically filled without manual intervention.

Storage must be programmed for disc management system which will automatically reap old recordings to overwrite with the new ones when maximum usage is reached.

The system shall be able to carry adequate hard disks to achieve at least 12 TB recording storage.

The system shall support dual gigabit Ethernet ports.

The system shall be able to centrally configure all devices and system settings from one interface.

The system shall support system status watchdog and automatically restart the system when abnormal event happened.

The system shall include management server, recording server, metadata server, and client for configuring and viewing.

The management server shall be able to centrally manage all servers in the system including configuration, license management, and event monitor.

The system shall support more features by upgrading, without re-install or re-configuring whole system

Sl. No.	Description NVR
1.	Operating System : Embedded Linux
2.	IP Camera Input : Min 64 Channel
3.	Video O/P : 1 HDMI , 1 VGA
4.	Compression : H.264 / MJPEG/H.265 or better
5.	Video Resolution : 2560 X 1920 , 2048 X 1536, 1920 X 1080, 1280 X 720
6.	Recording Resolution : 1920 X 1080
7.	Recording Speed : upto 30 fps per channel
8.	Video Display Split : 1/4/9/16
9.	Video Detection : Motion, Video Loss, Camera Blank
10.	Alarm Input : 4 Channel
11.	Hard Disk : 8 SATA ports
12.	Smart Phone Surveillance Support : iPhone, iPad, Android, Windows Phone
13.	Protocol : IPv4/IPv6, HTTP, TCP/IP, UDP, UPnP,RTSP, SMTP, NTP, DHCP, DNS, PPPOE, DDNS, FTP, IP Filter
15	Trigger Event : Recording, Alarm, Email, FTP, Screen tips
16	Recording Mode : Manual , Schedule , STOP, Alarm and MD
17	Search Mode : Time/Date , Alarm , Motion Detection , Exact Search (accurate to second)
18	Playback : Play, Stop, Pause, Rewind, Fast Play, slow play, full screen, backup
19	Backup Mode : USB Device / Network
20	Interface Ports : USB 2.0 port, USB 3.0 port , 1 RS485 , 1 RS232,1 RJ45
21	Ethernet Ports : 1 RJ-45 port (10/100M Base T)
22	Power Supply : AC 100V~240V 50/60Hz
23	Regulatory : CE, FCC,UL
24	Product warranty : atleast 2 years
25	Working environment : 0 deg C – 55 deg C

Note: The contractor should also confirm to provide free upgrade of software and camera firmware as and when released for support of ONVIF standards.

5.2. 2 MP Day/Night IP HD bullet camera with 30 mtr IR

Sl. No.	Parameter	Specification
1	Image sensor	1/3" or better type CMOS colour Sensor
2	Effective Pixels	1920*1080 (2MP)
3	Scanning System	Progressive Scan
4	Resolution	1080p Full HD images up to 25/30 fps
5	Min Illumination	Day Mode (colour) – 0.10 lux Night Mode (Monochrome) – 0 lux when IR LED ON
6	White Balance	Automatic/ Manual
7	High Light Compensation	Required
8	Electronic Shutter	Auto
9	Gain Control	Auto / Manual
10	Day and Night functionality	Automatic, Color, Mono
11.a	Signal-to-Noise Ratio (SNR)	More than 50dB
12.b	Dynamic Noise Reduction (DNR)	3DNR
13	IR Distance	Upto 30 m
14	Lens	2.8 mm – 12 mm
15	Wide Dynamic Range	Digital WDR
16	Television System	NTSC/PAL
17.a	Frame Rate	25 FPS/30 FPS for 1920 x 1080p at H.264 Compression or better
17.b	Compression	H.264 Compression (main profile/high profile) and MJPEG
18	Bit Rate	32Kbps – 10Mbps
19	Alarm Event	Events / alerts send via FTP, HTTP,email, Pre-Post alarm video buffering.
20	Video Streams	2 Streams of H.264 and
21		1 Stream of MJPEG Required, Live stream 1080p should
22	Dual H.264 (Recording & Viewing) Intelligent Video	support min. 25/30 FPS and recording at lower resolution and frame rate or vice versa as may be configured. Motion detection etc.
23	Ethernet	10Base-T / 100Base-TX, RJ-45 connector
	Network Protocols	IPv4/IPv6, TCP/IP, HTTP, HTTPs , DHCP, UDP, DNS, SMTP, RTP, RTSP,

24	support	SNMP, IGMP, ICMP, NTP, 802.1x protocols/Should meet all functional requirement of the project
25	Weather protection, vandal Outdoor Use	IP66/IP67
26	Housing	Weather and dust resistance with an aesthetic appeal (Metallic) IP66 rated
27	View Material	Poly carbonate/ Vandalproof
28	Ambient Operating Temperature	0 °C to 50 °C
29	Ambient Operating Humidity	20 to 80% RH non-condensing
30	Power Source	12V DC . PoE port should be available on camera
31	Power Consumption	As per IEEE PoE Standards
32	Mounting	Shall be on pole with stand / wall mounted / ceiling mounted with suitable brackets including sun-shroud / canopy
33	Certifications	Specific models should be UL listed, CE, FCC compliant

5.3 2 MP Day/Night IP HD Dome camera with 30 mtr IR

Sl. No.	Parameter	Specification
1	Image sensor	1/3" or better type CMOS colour Sensor
2	Effective Pixels	1920*1080 (2MP)
3	Scanning System	Progressive Scan
4	Resolution	1080p Full HD images up to 25/30 fps
5	Min Illumination	Day Mode (colour) – 0.10 lux Night Mode (Monochrome) – 0 lux when IR LED ON
6	White Balance	Automatic/ Manual
7	High Light Compensation	Required
8	Electronic Shutter	Auto
9	Gain Control	Auto / Manual
10	Day and Night functionality	Automatic, Color, Mono
11.a	Signal-to-Noise Ratio (SNR)	More than 50dB
12.b	Dynamic Noise Reduction (DNR)	3DNR
13	IR Distance	Upto 30 mtr
14	Lens	3.6 mm
15	Wide Dynamic Range	digital WDR
16	Television System	NTSC/PAL
17.a	Frame Rate	25 FPS/30 FPS for 1920 x 1080p at H.264 Compression or better
17.b	Compression	H.264 Compression (main profile/high profile) and MJPEG
18	Bit Rate	32Kbps – 10Mbps
19	Alarm Event	Events / alerts send via FTP, HTTP,email, Pre-Post alarm video buffering.
20	Video Streams	2 Streams of H.264 and 1 Stream of MJPEG
21	Dual H.264 (Recording & Viewing)	Required, Live stream 1080p should support min. 25/30 FPS and recording at lower resolution and frame rate or vice versa as may be configured.
22	Intelligent Video	Motion detection etc.
23	Ethernet	10Base-T / 100Base-TX, RJ-45 connector
	Network Protocols	IPv4/IPv6, TCP/IP, HTTP, HTTPS , DHCP, UDP, DNS, SMTP, RTP, RTSP,

24	support	SNMP, IGMP, ICMP, NTP, 802.1x protocols/Should meet all functional requirement of the project
25	Weather protection, vandal Outdoor Use	IP67
26	View Material	Poly carbonate/ Vandalproof
27	Ambient Operating Temperature	0 °C to 50 °C
28	Ambient Operating Humidity	20 to 80% RH non-condensing
29	Power Source	12V DC. PoE port should be available on camera
30	Power Consumption	As per IEEE PoE Standards
31	Mounting	Shall be on pole with stand / wall mounted / ceiling mounted with suitable brackets including sun-shroud / canopy
32	Certifications	Specific models should be UL listed, CE, FCC compliant

5.4 8 Channel POE Switch

SI NO.	Parameter	Specification
1.	Network Connector	5-port RJ45 for 10/100 base-TX, auto MDI/MDIX
2.	POE Inject port	4-port with 802.3af/at PoE Injector function
3.	DIP Switch	Standard mode for 100mtr Extended mode for 250mtr
4.	Switch Architecture	Store & forward switch architecture
5.	MAC Address table	1K MAC address table with auto learning function
6.	EST Protection	6KV
7.	Switch Fabric	1 Gbps
8.	Switch Throughput	0.74Mbps @ 64bytes
9.	Maximum Packet Size	1536bytes
10.	Flow Control	Back Pressure for half duplex, IEEE 802.3x pause frame for full duplex
11.	Power Requirement	50(+/-5) V DC, 1.25A
12.	Power Consumption	Max 75watts
13.	POE Standard	IEEE 802.3af Power over Ethernet/PSE IEEE 802.3at Power over Ethernet plus/PSE
14.	POE Power Supply Type	end-span + mid-span
15.	Power Pin Assignment	1/2(+),4/5(+), 3/6(-),7/8(-)
16.	POE Power Output	Per port 51VDC, 300mA, max. 15.4 watts (IEEE 802.3af) Per port 51VDC, 600mA, max. 30 watts (IEEE 802.3at)
17.	Standard Compliance	IEEE 802.3 Ethernet IEEE 802.3u Fast Ethernet IEEE 802.3x Flow control IEEE 802.3af Power over Ethernet IEEE 802.3at Power over Ethernet plus
18.	Operating Environment	0 to 50 degree C

5.5 LED display screen

S.NO	FEATURES	PARAMETERS
1	Monitor	Minimum 43" , Full HD (LED)
2	Display Resolution	1080p and minimum viewing of 16 cameras
3	Backlight Module	Dynamic Edge LED
4	Video Signal	480/60i, 480/60p,1080/60i, 1080/50p (HDMI)
5	MPEG noise reduction	Yes
6	Viewing Angle (H/V)	BTA
7	Response Time	8 ms (gray to gray, avg.)
8	Computer Input	HDMI/Audio in, USB 2.0
9	Video Colour System	NTSC (3.58 MHz, 4.43 MHz), PAL, PAL60, SECAM
10	Power Supply	100V to 240 V AC, 50/60 Hz
11	Remote Control	Infra Red Remote with Control Function Required
12	Mounting	Shall be suitable for rigid support mounting from Wall, Ceiling, column & Table Top

5.6 Unmanaged Network Switches (8 port)

Sl. No.	PARAMETERS	DESCRIPTION
1.	Type	Gigabit Ethernet
2.	Operation	Receive & forward
3.	Max MAC enteries	4000
4.	Memory bandwidth	Atleast 8 Gbps
5.	RJ45 ports	Minimum 4/8 nos. 10/100/1000 BASE-T Ethernet Ports. Uplink port should have sufficient speed to avoid network congestion, preferably network should not be loaded more than 70% at any stage, fully IEEE 802.3 compliant with 2 giga Ethernet up link.
6.	Protocols and compliances	The switch should provide all standard protocols and compliances
7.	storage temperature	0 to 70°C
8.	Humidity	95% max RH, non-condensing
9.	Ingress protection	IP30 protection minimum
10.	Mounting	Rackmount, wall or desktop mounting options

5.7 CAT 6 cables

S.NO	FEATURE	REQUIRED PARAMETERS
1	Type of Cable	Unshielded Twisted Pair (UTP) CAT 6 cable Pair-shielded 100 Ohm installation cable with overall braided screen, suitable for transmission frequencies of up to 250 MHz
2	Conductor	4 pair UTP cable 24 AWG Solid bare Copper
3	Primary insulation	High Density polyethylene
4	Outer Sheath	FR-PVC Insulation thickness 0.2 mm nominal
6	Shielding	Screened to ensure protection against EMI and for cross talk compliance.
7	Application standard	ANSI/TIA-568-C.2 category 6 ISO 11801 Class E
8	Application	Indoor / outdoor installation

5.8 Earth Cable (if required)

All power equipments installed shall be earthed with 1 core 2 sq mm, multi strand, copper, PVC wire, PVC insulated unarmoured cable.

Earth Pits: Earth pits shall not be made.

5.9 Breakers and Fuses:

5.9.1 All electrical circuits shall be fed from molded case circuit breakers, installed in the "line" lead, using separate breaker for each circuit. Neutrals may be bussed but must be identified with the associated circuit breaker.

5.9.2 Each type of power supply (230 V AC, 50Hz) of each section shall be isolated by means of adequately rated single pole thermal magnetic circuit breaker.

5.9.3 Circuit breaker shall be of the miniature thermal magnetic type and shall be of plug in construction (supply with plug in terminal block)

5.9.4 Current trip rating shall be selected to protect the load as applicable, for instrument supply generally 0.5A (assumed), common circuit breaker is to be provided to switch on and off the AC supply of the control system.

5.10 Cable laying

Cable laying shall conform to BIS norms. For underground cables DWC conduits shall be used and in case of cables above ground PVC capping- casing to be used, as per BIS standards.

5.11 Rack features:

1. Rack should be of specified OEM with robust aluminium extruded frame construction and full vented top cover with cable entry provision and gland plates on top and bottom cover.
2. The rack should have castors.
3. 19” equipment mounting angles and depth support channel
4. Side panels should have slam lock facility
5. Other features as per industry standard.

**8. Equipments offered by the tenderer
(To be filled in by the Tenderer)**

Sl. No.	Item	No. of items	Whether complies with the tender Specifications or not? If No, Please mention the deviations
1.	2 MP Day/Night IP HD DOME Camera with IR 30 mtrs.	10	
2.	2 MP Day/Night IP HD Bullet Camera with IR 30 mtrs.	40	
3.	Hard disks (8 TB each)	04	
4.	Switches (8 port POE switch 2 giga uplink)	03	
5.	8 channel POE switch dual uplink	04	
6.	4 port switch giga	04	
7.	POE 4port 2 uplink	04	
8.	16 channel POE switch dual uplink	01	
9.	Cat 6 cable (in bundle)	10	
10.	2U DVR rack wall mounted	16	
11.	4U rack DVR NVR	02	
12.	NVR (64 channel 08 SATA)	01	
13.	LED Display (43 inch)	01	
14.	Installation and configuration charges (for each camera)	50	
15.	Laying of wire with accessories		

9. Articles of Agreement

(On Rs. 200/- Stamp Paper)

Articles of agreement made on theof.2021 between the O/o the Principal Accountant General(Au), Jharkhand, Ranchi (hereinafter called 'the Employer') which expression shall, unless repugnant to the context mean and include its successors and assigns of the one part and M/s (Herein after called "the Contractor") which expression shall unless repugnant to the context mean and include its successors and assigns of the other part.

WHEREAS The Employer is desirous of getting executed the work of "Supply, Installation, Testing and Commissioning (SITC) of IP CCTV system at O/o the Principal Accountant General(Au), Jharkhand, Ranchi and its premises:

The Contractor has agreed to execute the said works **i.e.**, Supply, Installation, Testing and Commissioning (SITC) of IP CCTV system at O/o the Principal Accountant General(Au), Jharkhand, Ranchi and its premises:

subject to the provisions hereinafter contained and subject also to the instructions to the Bidders, Notice inviting tender, form of tender, pre-qualification criteria, general instructions and special conditions of the contract, safety code, scope of work, technical specifications, the said drawings, the Schedule of Quantities and Bidders Schedule of Quantities, all of which are hereinafter collectively referred to as '**the said conditions**', strictly in accordance with the said drawings annexed hereto and the Specification and Schedule of Quantities referred to above at or for the respective rates set out in the Bidders Schedule of Quantities annexed hereto, amounting to the sum as hereunder arrived at or such other sum as may become payable hereunder (herein under referred to as the said contract amount).

NOW THEREFORE THIS AGREEMENT WITNESSETH THAT:

1. In consideration of the said Contract Amount to be paid by the Employer to the contractor at the time and in the manner set forth in the said conditions and in accordance with the schedule of payments, the Contractor shall upon completion subject to the said conditions execute and complete the work shown in the said Drawings and described in the said Specifications and Schedule of Quantities.
2. The said Conditions and the Annexure thereto shall be read and construed as forming part of this agreement and the parties hereto respectfully abide by, submit themselves to the said condition and perform the agreements on their part respectively contained in said conditions.
3. Tender documents containing notice to the Contractors, Conditions of Contract, Appendix thereto, Special Conditions of Contract, Technical Specifications and Schedule of Quantities

with the rates entered therein, shall be read and stamped forming part of this agreement and the parties hereto shall positively abide by and submit themselves to the conditions and specifications and perform the agreements on their part respectively in conditions contained.

4. This Contract is neither a fixed lump sum Contract nor an item rate Contract, but is a Contract to carry out work to be paid for according to actual measured quantities and rates contained in the Schedule of Quantities and probable quantities provided in the said Conditions.

5. The employer reserves to itself the right of altering the drawing, nature of the work by adding to, reducing or omitting any items of work or having portions of the same carried out without prejudice to this Contract.

6. The Contractor should have experienced and competent staff which will enable them to ensure proper quality check on the materials, and who will ensure to carry out proper tests as required by the specifications and will supervise the day-to-day working and execution of contract works.

7. If the Contractor has any doubt about the quality of any materials or any difficulty in supervision of the day to day work, it shall be the duty of the Contractor to report the matter in writing forthwith to the employer and for the time being, to suspend that portion of the work about which difficulty is experienced and the Contractor will abide by the direction of the employer.

8. The Contractor covenants and warrants that completed items of work as well as the entire work on completion will be in conformity with the Specifications and the terms and conditions of Contract and will be of proper quality and description.

9. Time shall be considered as the essence of this Agreement and Contractor hereby agrees to complete the work within **08 weeks starting after one week from date of issue of work order or the date on which contractor takes the possession of site, whichever is earlier**, nevertheless to the provisions of extension of time as contained in the said conditions.

10. All payments by the employer under this contract will be made at **Ranchi** by e-payment only.

11. All disputes arising out of or in any way connected with this agreement shall be deemed to have arisen at Ranchi and only court at Ranchi shall have jurisdiction to determine the same.

12. This agreement shall be signed in duplicate; the original document shall be kept in the custody of the Employer and the duplicate with Contractor. Stamp duty shall be borne by the Contractor.

IN WITNESS WHEREOF the employer has set its hand hereunto through its duly authorized official and the contractor has caused these presents under its common seal/by its duly authorized representative at the place and on the date and year first hereinabove written.

As witness our hands are affixed this day of 2021.

Signed and sealed by the said employer

in the presence of

.....

.....

Witness No. 1

Witness No. 2

Signed and Sealed by the said Contractor

.....

.....

in the presence of

Witness No. 1

Witness No. 2

10. Proforma for electronic payment

Details of Bank Account to be furnished by the contractor/service provider for effecting the payment through ECS (e-payment).

Name and address of contractor/service provider with phone nos:

Sl. No.	Details required	Information furnished
1	Name of the account holder (As appearing in the Bank account)	
2	Name of the Bank	
3	Name of the branch	
4	Account number	
5	RTGS/NEFT/IFS code	
6	PAN No.	
7	GST No.	

Please attach a photocopy of one cancelled check leaf of the above Bank account and the copy of PAN Card.

11. Annexure I

General details about the Contractor

Sl. No.	Description	Information to be filled up by the Contractors
1	Name of the Contractor /Organization and address of the Registered Office	
2	Year of establishment	
3	Type of the Organization (whether Sole Proprietorship, Partnership, Private Limited or Co-operative body, etc.)	
4	Name of the Proprietor/Partner/Directors of the Organization/Firm:	
	(a)	
	(b)	
	(c)	
	(d)	
5	Details of Registration – Whether Partnership firm, Company, etc. Name of Registering Authority, Date and Registration Number	
6	Whether registered with Government/Semi- Government/Municipal Authorities or any other Public Organization and if so, in which class and since when?	
7	Experience in the Relevant field	
8	Areas of business activities other than this work	
9	Address of business activities other than this work, if any and place of business	

10	Address of office through which the proposed work of the Bank will be handled and the name and designation of the Officer-in-charge	
11	Adequate and satisfactory evidence to indicate financial capacity of the Organisation to undertake the said construction work with names of Bankers and their full addresses (Income-tax clearance certificate and Audited Balance Sheet and Profit and Loss Account for past three years should be attached)	
12	Yearly turn-over of the Organization during last three years (Rs.)	
13	Whether any Civil Suit/litigation/debarred participation in contract/black listed arisen in the contracts executed during the last ten years/being executed now. If yes, please furnish the details.	

Note: Audited Balance Sheet and Profit and Loss Account for past three years should be attached separately.

12. Annexure II

Work experience

List of important Projects executed by the contractor (only those projects that meets the requirements of Pre-Qualification criteria mentioned in Chapter 3 of this tender)

Sr.No.	Name & Location of work	Cost of work	Name of owner	Full address	Name of the contact person from owner's side for whom work was executed	Contact no. of the contact person of the owner (Mandatory)	Email id of the contact person (Mandatory)	Completion period		Whether the work was left incomplete (reasons if any for delay in completion of work) or contract was terminated from either side (give full details)	Any other relevant information
								Stipulated	Actual		
1	2	3	4	5	6	7	8	9	10	11	12

NOTE: Contractor shall submit the completion certificates of all the above mentioned work issued by the respective clients and shall produce before O/o the Principal Accountant General (Audit), Jharkhand, Ranchi whenever called for.

Part – 2 : Price Bid

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Bill of Quantities

Supply, installation, testing & commissioning of IP CCTV system at O/o the Principal Accountant General(Audit), Jharkhand,Ranchi

Sr. No.	Description of work	Item	Unit	Qty.	Rate per unit (Rs.) (all inclusive)	Total Amount (all inclusive) (Rs.)
1	Supply, Installation Testing & Commissioning (SITC)	2 MP Day/Night IP HD DOME Camera with IR 30 mtrs.	No.	10		
2		2 MP Day/Night IP HD Bullet Camera with IR 30 mtrs.	No.	40		
3		Hard disks (8 TB each)	No.	04		
4		Switches (8 port POE switch 2 giga uplink)	No.	03		
5		8 channel POE switch dual uplink	No.	04		
6		4 port switch giga	No.	04		
7		POE 4port 2 uplink	No.	04		
8		16 channel POE switch dual uplink	No.	01		
9		Cat 6 cable (in bundle)	No.	10		
10		2U DVR rack wall mounted	No.	16		
11		4U rack DVR NVR	No.	02		
12		NVR (64 channel o8 SATA)	No.	01		
13		LED Display (43 inch)	No.	01		
14		Installation and configuration charges (for each camera)	No.	50		
15		Laying of wire with accessories	mtrs			
TOTAL (Rs.)						
Total Amount (in words):						

Note:

1. BOQ shall be submitted on this sheet only. BOQ submitted on other sheets/format shall be rejected.
2. Above mentioned rates shall be inclusive of all taxes, duties, charges etc.

END