



Rural Electrification and Renewable Energy Corporation

TENDER REFERENCE NO: 1000000612

**SUPPLY, INSTALLATION AND MAINTENANCE OF
CCTV SYSTEM AT REREC MWEIGA STORE**

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REREC STANDARD TENDER DOCUMENT FOR ELECTROMECHANICAL WORKS

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SECTION 1

INVITATION FOR TENDERS

TENDER REFERENCE NO.: 1000000612

The Rural Electrification & Renewable Energy Corporation invites bids from interested firms to tender/ **RFx No. 1000000612**; for – Supply, Installation and Maintenance of CCTV System at REREC Mweiga Store.

1. Tender documents detailing the requirements may be viewed at REREC E- Procurement Web Portal found on the REREC website (www.rea.co.ke) beginning on **16th June, 2021**.
2. Bidders who are interested in this tender **MUST** ensure that they are registered in REREC SAP SRM system and have set up their page. Please ensure compliance to the following
 - a) Each company must have two user accounts; **Admin Account** and **Employee Account**. Ensure that the following roles are NOT ASSIGNED to the employee; Employee Administrator and Supplier Master Data manager
 - b) Ensure that the admin account and employee account does not share same email address
 - c) Ensure that the Employee user name is between 4 and 12 characters.
 - d) It is a Mandatory requirement that all Bid Documents/Responses shall be uploaded to the COLLABORATION ROOM in the link with “RFx Response Number: Company Name”. Bidders shall not attach their documents at any other Tab of the Portal. Attachments placed elsewhere in the portal shall be declared non-responsive and will not be evaluated.
 - e) Prices **MUST** be entered under item term of the RFx. The prices entered here shall be similar to the prices in the price/BoQ Schedule and shall form part of the evaluation criteria.
 - f) For the purpose of this tender bidding, the employee account shall be used to submit your RFx responses. Bidders who require any form of assistance on the online bidding or clarification from our office should do so strictly seven (7) before the date of tender closing.
3. Completed Tenders are to be saved as PDF documents marked with RFx description to be submitted through the REREC E-Procurement Web Portal found on the REREC website (www.rea.co.ke) so as to be received on or before **7th July at 10.00am**.
4. Tenders will be opened electronically promptly thereafter in the presence of the Tenderer’s or their representatives who choose to attend in REREC Procurement Office at Kawi House.
5. Interested bidders are advised to visit the Corporation’s website, homepage, Information Center, SAP SRM Document, SAP SRM Supplier User Guide for registration and creation of their portal and Supplier Bidding Quick Reference Guide for submitting their response.
6. There shall be a **MANDATORY** site visit between for **RFx 1000000612** on **24th** and **25th** June 2021 at **Mweiga Stores** from **8a.m. – 4 P.m.** on both days.

CHIEF EXECUTIVE OFFICER
RURAL ELECTRIFICATION & RENEWABLE ENERGY CORPORATION

SECTION II - TENDER SUBMISSION CHECKLIST

2.0. The following documents shall form part of documents to be uploaded

	ITEM	TICK
1	Bid Security which is 2% of the total tender price.	
2	Copy of Company or Firm's Registration Certificate	
3	Copy of a Valid Tax Compliance Certificate and ePIN certificate with both VAT and income obligations	
4	Copy of business permit/council trade license including evidence of physical address	
5	Confidential Business Questionnaire	
6	Copy of CR12 form from registrar company for Limited Companies or a confirmation from registrar of Companies on the ownership of Sole proprietorship not more than 3 months old from tender closing.	
7	Power of Attorney notarized by Magistrate or Commissioner of Oaths	
8	Declaration Form(s) duly completed and signed.	
9	Standard Forms duly completed, signed and that the Tender validity period is as per the requirement.	
10	A list of Names and ranks of employees together with the assigned responsibilities together with Certified copies of Curriculum Vitae and certified copies of certificates for all the staffs that will be involved in the project. Appointment letters for the key personnel should be provided	
11	Submission of similar completed works done within the last five (5) years.	
12	Submission of catalogues, drawings and brochures containing technical data sheet as provided in the technical specification section for all the items.	
13	Submission of manufacturer's warranty for all the items	
14	Submission of certified copies of Audited accounts of the company for the last two financial years (Certified by a registered Certified Public Accountant)	

SECTION II:

INSTRUCTIONS TO TENDERERS

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INSTRUCTION TO TENDERERS

Note: The tenderer must comply with the following conditions and instructions and failure to do so is liable to result in rejection of the tender.

GENERAL

1. Definitions

- (a) **“Tenderer”** means any person or persons partnership firm or company submitting a sum or sums in the Bills of Quantities in accordance with the Instructions to Tenderers, Conditions of Contract Parts I and II, Specifications, Drawings and Bills of Quantities for the work contemplated, acting directly or through a legally appointed representative.
- (b) **“Approved tenderer”** means the tenderer who is approved by the Employer.
- (c) Any noun or adjective derived from the word **“tender”** shall be read and construed to mean the corresponding form of the noun or adjective **“bid”**. Any conjugation of the verb “tender” shall be read and construed to mean the corresponding form of the verb “bid.”
- (d) **“Employer”** means Rural electrification And Renewable Energy Corporation.

2. Eligibility and Qualification Requirements

- 2.1 This invitation to tender is open to all tenderers who are eligible as stated in the appendix.
- 2.2 The procuring entity’s employees, committee members, board members and their relative (spouse and children) are not eligible to participate in the tender.
- 2.3 To be qualified for award of Contract, the tenderer shall provide evidence satisfactory to the Employer of their eligibility under Sub clause 2.1 above and of their capability and adequacy of resources to effectively carry out the subject Contract. To this end, the tenderer shall be required to update the following information already submitted during prequalification:
 - (a) Details of experience and past performance of the tenderer on the works of a similar nature within the past five years and details of current work on hand and other contractual commitments.
 - (b) The qualifications and experience of key personnel proposed for administration and execution of the contract, both on and off site.
 - (c) Major items of construction plant and equipment proposed for use in carrying out the Contract. Only reliable plant in good working order and suitable for the work required of it shall be shown on this schedule. The tenderer will also indicate on this schedule when each item will be available on the Works. Included also should be a schedule of plant, equipment and material to be imported for the purpose of the Contract, giving details of make, type, origin and CIF value as appropriate.

- (d) Details of subcontractors to whom it is proposed to sublet any portion of the Contract and for whom Corporation will be requested for such subletting in accordance with clause 4 of the Conditions of Contract.
- (e) A draft Program of Works in the form of a bar chart and Schedule of Payment which shall form part of the Contract if the tender is accepted. Any change in the Program or Schedule shall be subjected to the approval of the Engineer.
- (f) Details of any current litigation or arbitration proceedings in which the Tenderer is involved as one of the parties.

2.4 Joint Ventures

Tenders submitted by a joint venture of two or more firms as partners shall comply with the following requirements:

- (a) The tender, and in case of a successful tender, the Form of Agreement, shall be signed so as to be legally binding on all partners.
- (b) One of the partners shall be nominated as being in charge; and this authorization shall be evidenced by submitting a power of attorney signed by legally authorized signatories of all the partners.
- (c) The partner in charge shall be authorized to incur liabilities and receive instructions for and on behalf of any and all partners of the joint venture and the entire execution of the Contract including payment shall be done exclusively with the partner in charge.
- (d) All partners of the joint venture shall be liable jointly and severally for the execution of the Contract in accordance with the Contract terms, and a relevant statement to this effect shall be included in the authorization mentioned under
(b) Above as well as in the Form of Tender and the Form of Agreement (in case of a successful tender).
- (e) A copy of the agreement entered into by the joint venture partners shall be submitted with the tender.

2.5 To qualify for contract awards, the tenderer shall have the following:

- a) Necessary qualifications, capability experience, services, equipment and facilities to provide what is being procured.
- b) Legal capacity to enter into a contract for procurement
- c) Shall not be insolvent, in receivership, bankrupt or in the process of being wound up and is not the subject of legal proceedings relating to the foregoing.
- d) Shall not be debarred from participating in public procurement.

3. Cost of Tendering

- 3.1 The tenderer shall bear all costs associated with the preparation and submission of his tender and the Employer will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the tendering process.
- 3.2 The responses of the bids shall be submitted through the Corporation's e-Procurement system. Any bid documents uploaded in the response shall be considered valid only if they are uploaded in the collaboration folder under Notes and Attachments tab and NOT in the Attachments
- 3.3 The Corporation will not be held responsible or liable for any errors and omissions to the response emanating from nonattendance of the pre-bid meeting (physical or via any digital online platform) or any wrongly submitted response.

4. Site Visit

- 4.1 The tenderer is advised to visit and examine the Site and its surroundings and obtain for himself on his own responsibility, all information that may be necessary for preparing the tender and entering into a contract. The costs of visiting the Site shall be the tenderer's own responsibility.
- 4.2 The tenderer and any of his personnel or agents will be granted permission by the Employer to enter upon premises and lands for the purpose of such inspection, but only upon the express condition that the tenderer, his personnel or agents, will release and indemnify the Employer from and against all liability in respect of, and will be responsible for personal injury (whether fatal or otherwise), loss of or damage to property and any other loss, damage, costs and expenses however caused, which but for the exercise of such permission, would not have arisen.

5. Tender Documents

- 5.1 The Tender documents comprise the documents listed here below and should be read together with any Addenda issued in accordance with Clause 7 of these instructions to tenderers.
 - a. Form of Invitation for Tenders
 - b. Instructions to Tenderers
 - c. Form of Tender
 - d. Appendix to Form of Tender
 - e. Form of Tender Surety
 - f. Statement of Foreign Currency Requirements
 - g. Form of Performance Security
 - h. Form of Agreement
 - i. Form of Advance payment Bank Guarantee
 - j. Schedules of Supplementary Information
 - k. General Conditions of Contract – Part I
 - l. Conditions of Particular Application – Part II
 - m. Specifications
 - p. Declaration Form

- 5.2 The tenderer is expected to examine carefully all instructions, conditions, forms, terms, specification and drawings in the tender documents. Failure to comply with the requirements for tender submission will be at the tenderer's own risk. Pursuant to clause 22 of Instructions to Tenderers, tenders which are not substantially responsive to the requirements of the tender documents will be rejected.
- 5.3 All recipients of the documents for the proposed Contract for the purpose of submitting a tender (whether they submit a tender or not) shall treat the details of the documents as "private and confidential"

6. Clarification of Tenders

- 6.1 A tenderer making inquiries relating to the tender documents may notify the Employer in writing or by telex, cable or facsimile at the Employer's mailing address indicated in the Invitation to Tender. The Employer will respond in writing to any request for clarification, which he receives earlier than 7 days prior to the deadline for the submission of tenders. Written copies of the Employer's response (including the query but without identifying the source of the inquiry) will be sent to all prospective tenderers who have purchased the tender documents.
- 6.2 Clarification of tenders shall be requested by the tenderer to be received by the procuring entity not later than 7 days prior to the deadline for submission of tenders.
- 6.3 The procuring entity shall reply to any clarifications sought by the tenderer within 3 days of receiving the request to enable the tenderer to make timely submission of its tender.

7. Amendment of Tender Documents

- 7.1 At any time prior to the deadline for submission of tenders the Employer may, for any reason, whether at his own initiative or in response to a clarification requested by a prospective tenderer, modify the tender documents by issuing Addenda.
- 7.2 Any Addendum will be notified in writing or by cable, telex or facsimile to all prospective tenderers who have purchased the tender documents and will be binding upon them.
- 7.3 In order to allow prospective tenderers reasonable time in which to take the Addendum into account in preparing their tenders, the Employer may, at his discretion, extend the deadline for the submission of tenders.

8. Language of Tender

- 8.1 The tender and all correspondence and documents relating to the tender exchanged between the tenderer and the Employer shall be written in the English language. Supporting documents and printed literature furnished by the tenderer with the tender may be in another language provided they are accompanied by an appropriate translation of pertinent passages in the above stated language. For the purpose of interpretation of the tender, the English language shall prevail.

9. Documents Comprising the Tender

9.1 The tender to be prepared by the tenderer shall comprise:

- a) The form of tender and appendix thereto.
- b) A tender security.
- c) The priced Bill of Quantity and Schedule.
- d) The information on eligibility and qualification.
- e) Detailed Compliance to The Technical Requirements
- f) Catalogues and Manufacturers Brochures
- g) Manufacturers Authorization for all items
- h) Manufacturer's Warranty for all items
- i) Financial Capability
- j) List of Previous Customers
- k) Any other materials required to be completed and submitted in accordance with the instructions to tenderers.

9.2 The Forms, Bills of Quantities and Schedules provided in the tender documents shall be used without exception (subject to extensions of the schedules in the same format and to the provisions of clause 13.2 regarding the alternative forms of Tender Surety).

10 Tender Prices

10.1 All the insertions made by the tenderer shall be made in INK and the tenderer shall clearly form the figures. The relevant space in the Form of Tender and Bills of Quantities shall be completed accordingly without interlineations or erasures except those necessary to correct errors made by the tenderer in which case the erasures and interlineations shall be initialed by the person or persons signing the tender.

10.2 A price or rate shall be inserted by the tenderer for every item in the Bills of Quantities whether the quantities are stated or not items against which no rate or price is entered by the tenderer will not be paid for by the Employer when executed and shall be deemed covered by the rates for other items and prices in the Bills of Quantities.

10.3 The prices and unit rates in the Bills of Quantities are to be the full [all-inclusive] value of the work described under the items, including all costs and expenses which may be necessary and all general risks, liabilities and obligations set forth or implied in the documents on which the tender is based. All duties and taxes and other levies payable by the Contractor under the Contract or for any other cause prior to the deadline for the submission of tenders, shall be included in the rates and prices and the total tender prices submitted by the Tenderer.

10.4 Each price or unit rate inserted in the Bills of Quantities should be a realistic estimate for completing the activity or activities described under that particular item and the tenderer is advised against inserting a price or rate against any item contrary to this instruction.

10.5 Every rate entered in the Bills of Quantities, whether or not such rate be associated with a quantity, shall form part of the Contract. The Employer shall have the right to call for any item of work contained in the Bills of Quantities, and such items of work to be paid for at the rate entered by the tenderer and it is the intention of the Employer to take full advantage of unbalanced low rates.

- 10.6 Unless otherwise specified the tenderer must enter the amounts representing 10% of the sub-total of the summary of the Bills of Quantities for Contingencies and Variation of Prices [V.O.P.] payments in the summary sheet and add them to the sub-total to arrive at the tender amount.
- 10.7 The tenderer shall furnish with his tender written confirmation from his suppliers or manufacturers of unit rates for the supply of items listed in the Conditions of Contract clause 47 where appropriate.
- 10.8 The rates and prices quoted by the tenderer are subject to adjustment during the performance of the Contract only in accordance with the provisions of the Conditions of Contract. The tenderer shall complete the schedule of basic rates and shall submit with his tender such other supporting information as required under clause 47 of the Conditions of Contract Part II.

11. Currencies of Tender and Payment

- 11.1 Tenders shall be priced in Kenya Shillings or any other convertible currency.
- 11.2 Tenderers are required to indicate in the Statement of Foreign Currency Requirements, which forms part of the tender, the foreign currency required by them. Such currency should generally be the currency of the country of the tenderer's main office. However, if a substantial portion of the tenderer's expenditure under the Contract is expected to be in countries other than his country of origin, then he may state a corresponding portion of the contract price in the currency of those other countries. However, the foreign currency element is to be limited to two (2) different currencies and a maximum of 30% (thirty percent) of the Contract Price.
- 11.3 The rate or rates of exchange used for pricing the tender shall be selling rate or rates of the Central Bank of Kenya ruling on the date closing of tenders.
- 11.4 Tenderers must enclose with their tenders, a brief justification of the foreign currency requirements stated in their tenders.

12. Tender Validity

- 12.1 The tender shall remain valid and open for acceptance for a period of One Hundred and Twenty (120) days from the specified date of tender opening or from the extended date of tender opening (in accordance with clause 7.4 here above) whichever is the later.
- 12.2 In exceptional circumstances prior to expiry of the original tender validity period, the Employer may request the tenderer for a specified extension of the period of validity. The request and the responses thereto shall be made in writing or by cable, telex or facsimile. A tenderer may refuse the request without forfeiting his Tender Surety. A tenderer agreeing to the request will not be required nor permitted to modify his tender, but will be required to extend the validity of his Tender Surety correspondingly.

13. Tender Security

- 13.1 The tenderer shall furnish as part of his tender, a Tender Security in the amount and form stated in the Appendix to Instructions to Tenderers.
- 13.2 The tender security shall be 2 percent of the tender price.
- 13.3 The tender security shall be valid for at least thirty (30) days beyond the tender validity period.
- 13.4 The format of the Surety shall be in accordance with the sample form of Tender Surety included in these tender documents; other formats may be permitted subject to the prior approval of the Employer. The Tender Surety shall be valid for thirty (30) days beyond the tender validity period.
- 13.5 Any tender not accompanied by an acceptable Tender Surety will be rejected by the Employer as non-responsive.
- 13.6 The Tender Sureties of unsuccessful tenderers will be returned as promptly as possible as but not later than fourteen (14) days after concluding the Contract execution and after a Performance Security has been furnished by the successful tenderer. The Tender Surety of the successful tenderer will be returned upon the tenderer executing the Contract and furnishing the required Performance Security.
- 13.7 The Tender Surety may be forfeited:
- (a) if a tenderer withdraws his tender during the period of tender validity: or
 - (b) in the case of a successful tenderer, if he fails
 - (i) to sign the Agreement, or
 - (ii) to furnish the necessary Performance Security
 - (c) If a tenderer does not accept the correction of his tender price pursuant to clause 23.

14. No Alternative Offers

- 14.1 The tenderer shall submit an offer which complies fully with the requirements of the tender documents unless otherwise provided for in the appendix.
- 14.2 Only one tender may be submitted by each tenderer either by himself or as partner in a joint venture.
- 14.3 The tenderer shall not attach any conditions of his own to his tender. The tender price must be based on the tender documents. The tenderer is not required to present alternative construction options and he shall use without exception, the Bills of Quantities as provided, with the amendments as notified in tender notices, if any, for the calculation of his tender price.
- 14.4 Any tenderer who fails to comply with this clause will be disqualified.

15. Pre-Tender Training

15.1 If a pre tender training is convened the tenderer's designated representative is invited to attend a pre-tender meeting, which if convened, will take place at the venue and time stated in the Invitation to Tender. The purpose of the meeting will be to clarify issues and to train the bidders on the use of online bidding system.

- (a) Non-attendance at the pre-tender meeting/training will not be cause for disqualification of a bidder.

16. Format and Signing of Tenders

16.1 The tenderer shall prepare his tender as outlined in clause 9 above

16.2 The Bills of Quantities shall be typed or written in indelible ink and shall be signed by a person or persons duly authorized to sign on behalf of the tenderer. All pages of the tender where amendments have been made shall be initialed by the person or persons signing the tender.

16.3 The complete tender shall be without alterations, interlineations or erasures, except as necessary to correct errors made by the tenderer, in which case such corrections shall be initialed by the person of persons signing the tender.

SUBMISSION OF TENDERS

17. Marking of Tenders

17.1 **The Cover page of the tender shall be marked as "ORIGINAL" before it is scanned and saved in PDF Format for online submission.**

17.2 NO Tenders shall be submitted to the Procuring entity in envelopes as REREC only accepts tenders submitted electronically through the E-procurement portal.

18. Creation And Submission of Tenders

18.1 Tenders must be received by the Employer online on the date and time specified in the Letter of Invitation, subject to the provisions of clause 18.2.

18.2 The Employer may, at his discretion, extend the deadline for the submission of tenders through the issue of an Addendum in accordance with clause 7, in which case all rights and obligations of the Employer and the tenderers previously subject to the original deadline shall thereafter be subject to the new deadline as extended.

18.3 The Bidder shall deliver the Bid via the Corporation's e-Procurement system as follows:

(a) Login to RREC portal via url <https://suppliers.rea.co.ke:44300/irj/portal>

N/B: It is assumed that you have already completed the registration process and that your registration has been approved by RREC and you have created an employee user account to transact with REA via url

[https://suppliers.rea.co.ke:44200/supportal\(bD1lbiZjPTUwMCZkPW1pbg==\)/bspwdapplication.do#VIEW_ANCHOR-ROS_TOP](https://suppliers.rea.co.ke:44200/supportal(bD1lbiZjPTUwMCZkPW1pbg==)/bspwdapplication.do#VIEW_ANCHOR-ROS_TOP)

(b) Choose RFX and Auction link in the navigation pane

(c) Click on the RFX number to open it

(d) Click Register and then Click Participate

(e) Click Create response; You will get a unique number for your response for the RFX.

(f) Navigate to the Notes and Attachments tab and click on Collaboration link at the bottom of the screen (the link will be in the format "Collaboration 'Company Name'"). If the bid response have not created a collaboration, you are required to delete the response and create again. Bid response documents can only be uploaded under the collaboration folders and not under add attachments.

N/B: You can view and download all documents pertaining to the tender from here. You are also required to upload any bid documents here.

(g) Enter bid price in the item details and fill in all required information for the response

(h) Check for errors by clicking the Check button

(i) Click on Save to review later or Submit to send the response to REA

19. Modification and Withdrawal of Tenders

19.1 A Bidder may withdraw its Bid after it has been submitted by sending a written notice, duly signed by an authorized representative, and shall include a copy of the authorization in accordance with ITB 21.3, (except that withdrawal notices do not require copies). All notices must be:

(a) prepared and submitted in accordance with ITB 21 and ITB 22 (except that withdrawals notices do not require copies),

- (b) Received by the Corporation prior to the deadline prescribed for submission of Bids, in accordance with ITB 23.

A withdrawn bid shall not be evaluated

19.2 Bids requested to be withdrawn in accordance with ITB 25.1 shall be returned unopened to the Bidders.

19.3 No Bid may be withdrawn in the interval between the deadline for submission of Bids and the expiration of the period of Bid validity specified by the Bidder on the Letter of Bid or any extension thereof.

19.4 A Bidder may modify its Bid after it has been submitted by editing the bid response prior to the tender submission deadline.

20. Tender Opening

20.1 The Employer will open the tenders in the presence of the tenderers' representatives who choose to attend at the time and location indicated in the Letter of Invitation to Tender. The tenderers' representatives who are present shall sign a register evidencing their attendance.

20.2 Tenders for which an acceptable notice of withdrawal has been submitted, pursuant to clause 19, will not be opened.

20.3 At the tender opening, the Employer will announce the tenderer's names, total tender price, tender price modifications and tender withdrawals, if any, the presence of the requisite Tender Surety and such other details as the Employer, at his discretion, may consider appropriate. No tender shall be rejected at the tender opening except for late tenders.

20.4 The Employer shall prepare a tender opening register and minutes of the tender opening including the information disclosed to those present.

20.5 Tenders not opened and read out at a tender opening shall not be considered further for evaluation, irrespective of the circumstances. A tender who for any reason was not available in the Tender opening platform of the Procuring Entity and whose price was not read will not be evaluated

21. Process to be Confidential

21.1 After the public opening of tenders, information relating to the examination, clarification, evaluation and comparisons of tenders and recommendations concerning the award of Contract shall not be disclosed to tenderers or other persons not officially concerned with such process until the award of Contract is announced.

21.2 Any effort by a tenderer to influence the Employer in the process of examination, evaluation and comparison of tenders and decisions concerning award of Contract may result in the rejection of the tenderer's tender.

Clarification Tenders

- 22.1 To assist in the examination, evaluation and comparison of tenders, the Employer may ask tenderers individually for clarification of their tenders, including breakdown of unit prices. The request for clarification and the response shall be in writing or by cable, facsimile or telex, but no change in the price or substance of the tender shall be sought, offered or permitted except as required to confirm the correction of arithmetical errors discovered by the employer during the evaluation of the tenders in accordance with clause 24.
- 22.2 No Tenderer shall contact the Employer on any matter relating to his tender from the time of the tender opening to the time the Contract is awarded. If the tenderer wishes to bring additional information to the notice of the Employer, he shall do so in writing.

22. Determination of Responsiveness

- 23.1 Prior to the detailed evaluation of tenders, the Employer will determine whether each tender is substantially responsive to the requirements of the tender documents.
- 23.2 For the purpose of this clause, a substantially responsive tender is one which conforms to all the terms, conditions and specifications of the tender documents without material deviation or reservation. A material deviation or reservation is one which affects in any substantial way the scope, quality, completion timing or administration of the Works to be undertaken by the tenderer under the Contract, or which limits in any substantial way, inconsistent with the tender documents, the Employer's rights or the tenderers obligations under the Contract and the rectification of which would affect unfairly the competitive position of other tenderers who have presented substantially responsive tenders.
- 23.3 Each price or unit rate inserted in the Bills of Quantities shall be a realistic estimate of the cost of completing the works described under the particular item including allowance for overheads, profits and the like. Should a tender be seriously unbalanced in relation to the Employer's estimate of the works to be performed under any item or groups of items, the tender shall be deemed not responsive.
- 23.4 A tender determined to be not substantially responsive will be rejected by the Employer and may not subsequently be made responsive by the tenderer by correction of the non-conforming deviation or reservation.

23. Correction of Errors

- 24.1 There shall be no correction of prices. Award prices shall be the ones read out during opening and unless specified in the BDS shall be assumed to include all requisite taxes and levies

24. Conversion to Single Currency

- 25.1 For compensation of tenders, the tender price shall first be broken down into the respective amounts payable in various currencies by using the selling rate or rates of the Central Bank of Kenya ruling on the date on the date of tender closing.

25.2 The Employer will convert the amounts in various currencies in which the tender is payable (excluding provisional sums but including Day works where priced competitively) to Kenya Shillings at the selling rates stated in clause 25.1.

25. Evaluation and Comparison of Tenders

26.1 The Employer will evaluate and compare only tenders determined to be substantially responsive to the requirements of the tender documents in accordance with clause 23.

26.2 In evaluating tenders, the Employer will determine for each tender the evaluated tender price by adjusting the tender price as follows:

- (a) Making any correction for errors pursuant to clause 24.
- (b) Excluding Provisional Sums and provision, if any, for Contingencies in the Bills of Quantities, but including Day works where priced competitively.

26.3 The Employer reserves the right to accept any variation, deviation or alternative offer. Variations, deviations, alternative offers and other factors which are in excess of the requirements of the tender documents or otherwise result in the accrual of unsolicited benefits to the Employer, shall not be taken into account in tender evaluation.

26.4 Price adjustment provisions in the Conditions of Contract applied over the period of execution of the Contract shall not be taken into account in tender evaluation.

26.5 If the lowest evaluated tender is seriously unbalanced or front loaded in relation to the Employer's estimate of the items of work to be performed under the Contract, the Employer may require the tenderer to produce detailed price analyses for any or all items of the Bills of Quantities, to demonstrate the relationship between those prices, proposed construction methods and schedules. After evaluation of the price analyses, the Employer may require that the amount of the Performance Security set forth in clause 29 be increased at the expense of the successful tenderer to a level sufficient to protect the Employer against financial loss in the event of subsequent default of the successful tenderer under the Contract.

26.6 Firms incorporated in Kenya where indigenous Kenyans own 51% or more of the share capital shall be allowed a 15% preferential bias provided that they do not sub-contract work valued at more than 50% of the Contract Price excluding Provisional Sums to a non-indigenous sub-contractor.

26.7 The tender evaluation committee shall evaluate the tender within 30 days of the validity period from the date of opening the tender.

26.8 Persons not officially involved in the evaluation of tender shall not attempt in any way to influence the evaluation.

AWARD OF CONTRACT

27 (a) Post – Qualification and Award

- 27.1 In the absence of pre-qualification, the employer will determine to its satisfaction whether the tenderer that is selected as having submitted the lowest evaluated responsive tender is qualified to perform the contract satisfactorily.
- 27.2 The determination will take into account the tenderer financial, technical and production activities. It will be based on examination of the documentary evidence of the tenderers qualifications submitted by the tenderer, pursuant to paragraph 2.3 (a), (b) and (c) as well as such other information as the employer deems necessary and appropriate.
- 27.3 An affirmative determination will be a pre-requisite for award of the contract to the tenderer. A negative determination will result in rejection of the tenderer's tender, in which the employer will proceed to the next lowest evaluated tender to make a similar determination of that Tenderer's capabilities to perform satisfactorily.
- 27.4 Subject to clause 27.2, the Employer will award the Contract to the tenderer whose tender is determined to be substantially responsive to the tender documents and who has offered the lowest evaluated tender price subject to possessing the capability and resources to effectively carry out the Contract Works.
- 27.5 The Employer reserves the right to accept or reject any tender, and to annul the tendering process and reject all tenders, at any time prior to award of Contract, without thereby incurring any liability to the affected tenderers or any obligation to inform the affected tenderers of the grounds for the Employer's action.
- 27.6 The Employer reserves the right at the time of contract award to increase or decrease the number of projects originally specified in the schedule of projects without any change in unit price or other terms and conditions.

28. Notification of Award and signing of contract

- 28.1 Prior to the expiration of the period of tender validity prescribed by the Employer, the Employer will notify the successful tenderer by cable, telefax or telex and confirmed in writing by registered letter that his tender has been accepted. This letter (hereinafter and in all Contract documents called "Letter of Acceptance") shall name the sum (hereinafter and in all Contract documents called "the Contract Price") which the Employer will pay to the Contractor in consideration of the execution and completion of the Works as prescribed by the Contract.
- 28.2 Upon the furnishing of a Performance Security by the successful tenderer, the unsuccessful tenderers will promptly be notified that their tenders have been unsuccessful.
- 28.3 At the same time the employer notifies the successful tenderer that his tender has been accepted, the employer shall notify the other tenderers that their tenders have been unsuccessful.

28.4 Within fourteen [14] days of receipt of the form of Contract Agreement from the Employer, the successful tenderer shall sign the form and return it to the Employer together with the required Performance Security.

28.5 The parties to the contract shall have it signed within 30 days from the date of notification of contract award unless there is an administrative review request.

28.6 A tenderer who gives false information in the tender document about his qualification or who refuses to enter into a contract after notification of contract award shall be considered for debarment from participating in future public procurement.

29. Performance Guarantee

29.1 Within twenty eight [28] days of receipt of the notification of award from the Employer, the successful tenderer shall furnish the Employer with a Performance Security in an amount stated in the Appendix to Instructions to Tenderers.

29.2 The Performance Security to be provided by the successful tenderer shall be an unconditional

Bank Guarantee issued at the tenderer's option by an established and a reputable Bank approved by the Employer and located in the Republic of Kenya and shall be divided into two elements namely, a performance security payable in foreign currencies (based upon the exchange rates determined in accordance with clause 35.4 of the Conditions of Contract) and a performance security payable in Kenya Shillings. The value of the two securities shall be in the same proportions of foreign and local currencies as requested in the form of foreign currency requirements.

29.3 Failure of the successful tenderer to lodge the required Performance Security shall constitute a breach of Contract and sufficient grounds for the annulment of the award and forfeiture of the Tender Security and any other remedy under the Contract the Employer may award the Contract to the next ranked tenderer.

30. Advance Payment

30.1 An advance payment, if approved by the Employer, shall be made under the Contract, if requested by the Contractor, in accordance with clause 33.1 of the Conditions of Contract. The Advance Payment Guarantee shall be denominated in the proportion and currencies named in the form of foreign currency requirements. For each currency, a separate guarantee shall be issued. The guarantee shall be issued by a bank located in the Republic of Kenya, or a foreign bank through a correspondent bank located in the Republic of Kenya, in either case subject to the approval of the Employer.

31. Corrupt and fraudulent practices

31.1 The procuring entity requires that tenderers observe the highest standard of ethics during the procurement process and execution of contract. A tenderer shall sign a declaration that he has not and will not be involved in corrupt or fraudulent practices.

SECTION III

APPENDIX TO INSTRUCTIONS TO TENDERERS

No.	ITT Reference Clause	Particulars of Appendix
1.	Eligible Tenderers	<i>This tender is open for local bidders</i>
2.	Origin of Eligible goods	<i>All goods shall be from an eligible source country</i>
3.	Documents Comprising the Tender – List of Previous Customers	<i>The Tenderer shall submit at least five (5) names of customers of similar goods.</i>
4	Tender Prices	<i>Tendered prices shall be fixed for the period of the contract</i>
5.	Prices on price schedule	<i>Tenderers shall be required to note that they shall be responsible for payment of ALL taxes which includes VAT to the relevant authority.</i>
6	Tender Prices	<i>The tender price entered in the bidding system shall match the total price quoted in the Price schedule.</i>
6.	Manufacturer’s Authorization	<i>That, in the case of a Tenderer offering to supply goods under the contract which the Tenderer did not manufacture or otherwise produce, the Tenderer has been duly authorized by the goods’ manufacturer or Producer to supply the goods. The authorization shall strictly be in the form and content as prescribed in the Manufacturer’s Authorization Form in the Tender Document and embossed with the manufacturers seal.</i>
7.	Documentary evidence of financial capability	<i>The 2yrs audited financial statements required must be those that are signed by Certified Public Accountants and signed by directors. They must attach ICPAK Certificate.</i>
9.	Catalogues, Brochures, Manufacturer’s Drawings.	<i>A detailed description of the essential technical and performance characteristics of the goods whether in brochures, catalogues, drawings or otherwise, stamped by the manufacturer.</i>
10.	Sample(s)	<i>This is not applicable in this tender.</i>
11.	Warranty – Period	<i>This warranty period shall be one (1) year from date of commissioning.</i>
12.	Tender Security	<i>All bidders shall submit a Tender security 2% of total tender price VAT inclusive offered by the bidder. Any Tender not accompanied by the Tender Security will be rejected by REREC as non-responsive.</i>
13	Validity of Tenders	<i>The tender shall be valid for 120 days</i>
14	Submission of Tenders	<i>The responses of the bids shall be submitted through the Corporation’s e-Procurement system. Any bid documents uploaded in the response shall be considered valid only if they are uploaded in the collaboration folder under Notes and Attachments tab and NOT in the Attachments</i>

16	Site Visit	<i>The tenderers shall visit the site between Date 24th and 25th of June 2021 at their own cost. This is mandatory and shall form part of the evaluation criteria.</i>
17	Award of Contract	<i>The award of the contract shall be on made to the lowest evaluated bidder.</i>

The following information regarding the particulars of the tender shall complement and or amend the provisions of the Instructions to Tenderers *hereinafter abbreviated as ITT*. Wherever there is a conflict between the provisions of the ITT and the Appendix, the provisions of the Appendix herein shall prevail over those of the ITT.

SECTION IV

CONDITIONS OF CONTRACT (Including erection on site)

SPECIAL CONDITIONS

(The Clauses referred to in Part II – Section A are those where the provision in the General Conditions (Part I) refer to an alternative solution to be stated in Part II. The provisions in the General Conditions will apply unless an alternative solution is given in Part II – Section A. The clauses in this section need therefore not be completed, but must be completed if alternative solutions to the relevant Part I provisions are necessary.)

1.0 Conditions Precedent to Commencement (Sub-clause 1.1.1.)

The following financial and administrative requirements are conditions precedent to commencement: Submission of performance bond.

2.0 Defects Liability Period (Sub-clause 1.1.11.)

The Defects Liability Period is **twenty four Months**.

3.0 Operation and Maintenance Manuals (Sub-clause 6.6.)

Operation and Maintenance Manuals shall be in **English language**.

4.0 General Obligations (Sub-clause 8.1.)

6.1 The following facilities will be provided by the Employer: NONE.

6.2 The facilities will be provided at the following rates: N/A

5.0 Performance Security (Sub-clause 10.1)

The Contractor shall obtain a Performance Security of **10% of the contract price**.

6.0 Contractor Equipment (Sub-clause 14.1)

The following items of Contractor's Equipment will be provided free of charge by the Employer for the Contractor's use: **None**.

7.0 Price Variation

Contract price variation **shall not be allowed**.

8.0 Delayed Payment (Sub-clause 33.6.)

There shall be no interest on delayed payment.

9.0 Customs and Import Duties (Sub-clause 48.1.)

The Contractor shall pay for customs, import duties and taxes in consequence of the importation of the Plant.

10.0 Arbitration (Sub-clause 50.2)

The rules of arbitration shall be those contained in the Arbitration Act of the Laws of Kenya.

SECTION V
SUMMARY OF EVALUATION PROCESS

1. PRELIMINARY EVALUATION

The following are the **MANDATORY Requirements** that **SHALL** constitute the evaluation criteria at the Preliminary Evaluation Stage:

1. Bidder documents/Attachments have been submitted in the Collaboration folder of the SAP SRM System.
2. Confirmation that the bidder's prices appear during tender opening. The entered prices in the Items Tab of the SRM Portal must be same as the prices in the Tender form/price schedules and the same prices are read out during opening.(award shall be based on the read out prices).
3. Confirmation of submission of Tender Security from a local Bank inform of either; inform of Bank guarantee or Bankers' cheque or Insurance Guarantee (Insurance issuing the guarantee must be part of the Public Procurement Regulatory Authority (PPRA) approved list, which validity shall be at least 150 days from the date of tender opening. Tender security value. Tender security value **SHALL** be at least 2% (percent) of the tender price.
4. The tenderer **SHALL** attach copies of: Certificate of Incorporation of Business, Copy of E-PIN Certificate with both VAT and Income Tax Obligations, Valid Tax Compliance Certificate at the time of tender submission, certified CR 12 Certificate issued not more than 3 months from the date of Tender closing, Notarized by a Magistrate or Commissioner of Oaths.
5. Copy of Business Permit in the County of Operation.
6. Power of Attorney Notarized by a Magistrate or Commissioner of Oaths Indicating the Authorized signatory for the documents of the bidder.
7. The tenderer **SHALL** dully fill the Standard Forms (Letter of application, Form of Tender, Tender Questionnaire, Declaration Form, Confidential Business Questionnaire, Site Visit form) in the format provided.
8. The tenderer **SHALL** provide the qualification and experience of key personnel proposed for the administration and execution of the contract, both on and off site. The tenderer to attach C.V.s of the personnel and certified copies of academic and professional certificates.
9. The tenderer shall provide certificates from the Named Manufacturer for training on the same related products. Minimum three technical team representatives.
10. The tenderer **SHALL** provide details of experience and past performance on works of a similar nature within the past five years and details of current work on hand and other contractual commitments. The tenderer to attach at least three completion certificates from the owner of the works undertaken.
11. The tender **SHALL** provide proof of availability of construction plant and equipment proposed for use in carrying out the contract. The Equipment shall include motor vehicles and Electrical Testing equipment. Proof of ownership or lease required.
12. The tenderer **SHALL** provide a price schedule in the format provided.
13. The tenderer **SHALL** provide a valid NCA 5 and above in electrical services registration. The category **MUST** have CCTV installations.

14. The tenderer **SHALL** provide a valid operating certificate from Communication Authority as a telecommunication contractor.
15. The tenderer **SHALL** submit catalogues and brochures containing technical data and drawings as provided in the technical specifications.
16. The tenderer **SHALL** provide latest Audited financial reports for the last two years. The 2yrs audited financial statements required must be those that are signed by Certified Public Accountants and signed by directors. They must attach ICPAK Certificate.
17. The tenderer **SHALL** provide manufacturers authorization & Warranty for all items.
18. Submission of Valid ISO 9001:2015 certification for the Manufacturers of all the equipment/Components.
19. Submission of a manufacturer's Certificate to an Authorized Distributor with their LOGO.

NB. Tenders which do not satisfy any of the requirements set out above SHALL be rejected as per Public Procurement and Assets Disposal Act 2015 and shall not proceed to financial evaluation stage.

2. TECHNICAL EVALUATION

The following **SHALL** constitute the evaluation criteria at the Technical Evaluation stage:

- 2.1 Full compliance to Technical Specifications outlined in Section V1.
- 2.2. Catalogues, technical brochures, drawings and technical data as requested and provided for in the tender Specification (REREC Requirement). The Catalogs, Brochures and drawings should be clear and legible and signed and stamped by the Manufacturer.

DETAILED TECHNICAL EVALUATION

NO.	Description of criteria	MaxPoints	Awarded	Remarks
1.1	<p>Previous experience: Details of similar projects Undertaken successfully within the last 5years. Identified by letters of reference from clients, completion certificates for the respective projects.</p> <p>a)No of Years in operations Above 5 years-10marks 3-5 years-5marks 2-3 years-3marks Below 2 years-1mark</p> <p>b)Implementation of Similar projects (attach LPOs or contract Documents) Above 4 Projects-5marks 3 projects-3marks 2 projects-2marks Below 2 projects-1 mark</p> <p>c) Value of Projects Implementation(attach LPO's or contracts) Ksh 15Million and above-5marks Ksh10-15Million-3Marks Ksh.5-10Million-2Marks Below 5Million-1mark</p>	20		

1.2	<p>A. Programme of Supply</p> <p>Bidders should provide a Gantt Chart for the supply of all equipment that includes all major milestones and details of the supply, testing and delivery schedules. The points shall be awarded as follows.</p> <ul style="list-style-type: none"> • Bidders who submit a Gantt Chart that indicates a supply period of less than or equal to 8 weeks (20 points) • Bidders who submit a Gantt Chart that indicates a supply of more than 8 weeks (8 points) • Bidders who do not submit Gantt Chart at all (0 points) 	20		
1.3	<p>B. Bidders should provide:-</p> <ul style="list-style-type: none"> • Valid Operating certificate from Communication Authority. (5 points) • Telecommunication Contractor (5 points) • NCA Class 5 and above – NCA in Electrical (with CCTV) (5 points) • The tenderer must provide a certified copy of valid Manufacturer's Authorization Letter (MAF) covering all items the tenderer has tendered from the Original Equipment Manufacturer (OEM) (5 points) 	20		
1.4	<p>Experience and qualifications of Staff Scheduled for the project (certified copies of CV's, certifications and certificates including degrees shall be attached)</p> <p>a)</p> <ul style="list-style-type: none"> • A bidder who presents personnel (at least 3 staff with more than 5 years working experience in similar installations) (9 points) • A bidder who presents personnel (at least 3 staff with less than 5 years working experience in similar installations) (6 points) • A bidder who presents personnel with inadequate background qualification (0) points <p>b)</p> <p>Academic and professional certificates and Evidence of registration with any relevant professional bodies (at least 3 personnel) – CCNA (2), CCNP (1) CCIE with a bias in Routing & Switching (1).</p>	20		

	<ul style="list-style-type: none"> • Degree in, Information Technology or computer science. (9points.) • Degree in Electrical engineering (Telecommunication, power or Electronic) (7points.) • Diploma in Electrical, Telecommunication, Electronic or information technology/computer science. (5points.) Project management skills <ul style="list-style-type: none"> • Project manager with PMP or PRINCE II certification – (2points) • No project manager with PMP or PRINCE II certification – (0 points) 			
1.5	Warranty and After Sales Service Should provide manufacturers authorization letters, warranties statements and evidence of presence of LOCAL workshop for after sale services on all equipment as specified in the tender document. The points shall be awarded as follows: <ul style="list-style-type: none"> • A bidder who provides the stated requirements.(20points) • A bidder who does not provides the stated requirements.(0points) 	20		
	TOTAL MARKS %	100		

NB: Bidders who fail to achieve 75% and above shall not proceed to the financial evaluation stage.

3. FINANCIAL EVALUATION

The following SHALL constitute the evaluation criteria at the Financial Evaluation stage.

- 3.1 The Procuring Entity SHALL apply the prevailing mean exchange rate at the time of tender closing for purposes of conversion of tender currencies into one common currency for comparison of unit prices. The source of the prevailing exchange rate shall be the Central Bank of Kenya.
- 3.2 Evaluation of the tendered price competitiveness amongst bidders.

NB: Tenders which do not satisfy any of the requirements set out above shall be rejected as per Public Procurement and Assets Disposal Act – 2015

SECTION VI:

SCOPE OF WORK AND SPECIFICATIONS

Rural electrification And Renewable Energy Corporation requires the services of an experienced provider to supply, install and commission CCTV at our Mweiga stores Nyeri, Kawi and Mombasa road go down.

In order to get maximum benefit from this exercise, the successful bidder will be expected to: -

- Prepare a proposal for supply, installation and commissioning of CCTV, user training on the proposed CCTV Installation.
- Install and configure a CCTV that is fully compatible with the existing system.
- Customize the system and compartmentalize its access levels via appropriate interfaces to allow Corporation wide access.
- Provide comprehensive onsite user training to selected personnel from the Different Directorates within the Corporation.
- Develop and document a Maintenance Agreement (Service Level Agreement) for long term maintenance of the system and continuous user training.
- Provide a detailed project implementation plan.
- There's a mandatory site visit.
- All cameras are inclusive of accessories
- All connections from cabinet to cabinet should be fiber.
- The Go down area will have a pendant pole at the center at the go down drive way on both sectors of Go down and have panoramic view camera model indicated with PTZ view.
- The loading zone area and dispatch to have 2pcs vari focal (VF) positioned in a strategic to view the in and out daily activities there.
- The back area in the inside on the wall on both sides of the Go down to have 2 cameras facing each other on the corner to be the mini bullet The office lobby to have the camera ceiling mounted
- Manage all the cameras of all the branches.
- The work station to control the video wall and its 24-inch screen.
- The network storage to record all the branches at the headquarters with 48 BAY SAN with extender.
- Provide the video wall software and the ANPR module.
- The system to be in a way we can add Access control Modules.
- The cabling should be cat 6 cable pure copper.

Areas to be covered

1. Nyeri Mweiga
2. Kawi
3. Mombasa road Go down

Works to be done

<u>PLACE</u>	<u>Requirement</u>
1. Nyeri-Mweiga	<ul style="list-style-type: none"> • Installation of 30 cameras inside the buildings and on the parameter wall. This include:- <ol style="list-style-type: none"> I. Rooms offices/server/control room II. Guard office(Audio) III. Parking and to view compound/Perimeter IV. Inside the go down V. Inside the go down/short distances outside VI. Boundary wall gate VII. Pole bracket(To be long galvanized round pole) VIII. 2(Two) twenty four port switch IX. 1(one) 16 port switch • The cabling should run in the conduit • Cabinet to cabinet connection should be connected by fibre • The cables should be terminated first by patch panel before connection to the switch • Relocate existing 32 channel to Nyeri with upto date firmware • Relocate 2(two) 65 Inch Monitoring screen • Provide a splitter -4 port hdmi
2. Kawi (Nairobi)	<ul style="list-style-type: none"> • Installation, configuration of central storage device(24*14t sata Hdds) • Installation of 55 inch monitor screen connected with hdmi • Wall mount bracket for screen • Installation and configuration of Giga switch 10/100/1000 mbps • Installation of workstation
3. Mombasa road Godown	<ul style="list-style-type: none"> • Installation and configuration of NVR • Installation and configuration of HDD 8TB surveillance • Installation of 20 cameras on the following areas: <ol style="list-style-type: none"> i. Server room ii. Office iii. Inside the go down iv. Main entry gate v. Shed inside go down/Extension of loading area vi. Loading zone area vii. Go down side walls viii. Main reception/Guard House main gate • Dome bracket on the main reception • Installation of video wall monitoring bracket • Installation and configuration of monitoring control room video wall screen • Installation of smart video wall plate • Installation of screen bracket video wall base • Installation and configuration of video wall decoder • Installation and configuration of of 1(one) 24 port giga switch • Installation and configuration of 3(three) giga switch 16 port • Installation of professional server with 300ch license • Installation of professional smart wall module(4 by 2) • Installation of ANPR Module • Installation and configuration of video management server • Installation and configuration of a core switch • Installation and configuration of a streaming server • Installation and configuration of 16CH decoder • Installation and configuration of 3(three) workstation)

CCTV SPECIFICATION

QTY	ITEM	SPECIFICATIONS	BIDDERS RESPONSE
Qty 14	Camera (4MP Dome Camera 2.8mm)	For room for video wall/operation	
	Image Sensor	1/2.7" Progressive Scan CMOS	
	Min. Illumination	Color: 0.003 Lux @ (F1.4, AGC ON)	
	Shutter Speed	1/3 s to 1/100,000 s	
	Day & Night	ICR Cut	
	Angle Adjustment	Pan: 0° to 355°, tilt: 0° to 75°, rotate: 0° to 355°	
	Slow Shutter	Yes	
	P/N	P/N	
	Wide Dynamic Range	120 dB	
	Lens		
	Lens Type & FOV	2.8 mm, horizontal FOV 103°, vertical FOV 55°, diagonal FOV 123° 4 mm, horizontal FOV 83°, vertical FOV 45°, diagonal FOV 98° 6 mm, horizontal FOV 53°, vertical FOV 28°, diagonal FOV 62°	
	Aperture	F1.4	
	Lens Mount	M12	
	Aperture Type	Fixed	
	Illuminator		
	IR Range	Up to 30 m	
	Wavelength	850 nm	
	Smart Supplement Light	Yes	
	Supplement Light	IR	
	Video		
	Max. Resolution	2592 × 1944	
	Main Stream	50Hz: 20fps (2592 × 1944) 25fps (2688 × 1520, 2304 × 1296, 1920 × 1080, 1280 × 720) 60Hz: 20fps (2944 × 1656) 30fps (2688 × 1520, 2304 × 1296, 1920 × 1080, 1280 × 720)	
	Sub Stream	50Hz: 25fps (640 × 480, 640 × 360, 320 × 240) 60Hz: 30fps (640 × 480, 640 × 360, 320 × 240)	
	Third Stream	50Hz: 25fps (1280 × 720, 640 × 480, 640 × 360, 360 × 240) 60Hz: 30fps (1280 × 720, 640 × 480, 640 × 360, 360 × 240)	

Video Compression	Main stream: H.265/H.264 Sub-stream: H.265/H.264/MJPEG Third stream: H.265/H.264	
Video Bit Rate	32 Kbps to 8 Mbps	
H.264 Type	Baseline Profile/Main Profile/High Profile	
H.265 Type	Main Profile	
H.264+	Main Stream supports	
H.265+	Main Stream supports	
Bit Rate Control	CBR/VBR	
Scalable Video Coding (SVC)	Yes	
Region of Interest (ROI)	1 fixed regions for each stream	
Audio		
Environment Noise Filtering	Yes	
Audio Sampling Rate	8 kHz/16 kHz/32 kHz/44.1 kHz/48 kHz	
Audio Compression	G.711ulaw/G.711alaw/G.722.1/G.726/MP2L2/PCM/MP3	
Audio Bit Rate	64Kbps(G.711ulaw/G.711alaw)/16Kbps(G.722.1)/16Kbps(G.726)/32-192Kbps(MP2L2)/8-320Kbps(MP3)	
Network		
Simultaneous Live View	Up to 6 channels	
API	ONVIF (PROFILE S, PROFILE G, PROFILE T), ISAPI, SDK, ISUP	
Protocols	TCP/IP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, RTSP, NTP, UPnP, SMTP, IGMP, 802.1X, QoS, IPv6, UDP, Bonjour, SSL/TLS	
Smooth Streaming	Yes	
User/Host	Up to 32 users. 3 user levels: administrator, operator and user	
Security	Password protection, complicated password, HTTPS encryption, IP address filter, Security Audit Log, basic and digest authentication for HTTP/HTTPS, TLS 1.2, WSSE and digest authentication for ONVIF	
Network Storage	microSD/SDHC/SDXC card (256 GB) local storage, and NAS (NFS, SMB/CIFS), auto network replenishment (ANR) Together with high-end Hikvision memory card, memory card encryption and health detection are supported	
Client	iVMS-4200, Hik-Connect, Hik-Central	
Web Browser	Plug-in required live view: IE8+, Chrome 41.0-44, Firefox 30.0-51, Safari 8.0-11 Plug-in free live view: Chrome 57.0+, Firefox 52.0+	
Image		
Day/Night Switch	Day, Night, Auto, Schedule	
Image Enhancement	BLC, HLC, 3D DNR	

Image Parameters Switch	Yes	
Image Settings	Rotate mode, saturation, brightness, contrast, sharpness, gain, white balance adjustable by client software or web browser	
Interface		
Alarm	-ISU: 1 input, 1 output (max. 12 VDC @30 mA)	
Audio	-ISU: 1 input (line in), two-core terminal block, max. Input amplitude: 3.3 Vpp, input impedance: 4.7 KΩ, interface type: non-equilibrium; 1 output (line out), two-core terminal block, max. input amplitude: 3.3 Vpp, input impedance: 100 Ω, interface type: non-equilibrium	
On-board Storage	Built-in micro SD slot, up to 256 GB	
Hardware Reset	Yes	
Communication Interface	1 RJ45 10M/100M self-adaptive Ethernet port	
Intelligent (Traditional Algorithm)		
Basic Event	Motion detection, video tampering alarm, exception (network disconnected, IP address conflict, illegal login, HDD full, HDD error), scene change detection	
Intelligent (Deep Learning Algorithm)		
Face Capture	Yes	
Premier Protection	Line crossing detection, intrusion detection, region entrance detection, region exiting detection	
General		
Storage Conditions	-30 °C to 60 °C (-22 °F to 140 °F). Humidity 95% or less (non-condensing)	
Startup and Operating Conditions	-30 °C to 60 °C (-22 °F to 140 °F). Humidity 95% or less (non-condensing)	
Power Supply	12 VDC ± 25%, reverse polarity protection PoE: 802.3af, class 3	
Power Consumption and Current	12 VDC, 0.45 A, max. 5.4 W PoE: (802.3af, 36 V to 57 V), 0.2 A to 0.1 A, max. 6.5 W	
Power Interface	Ø5.5 mm coaxial power plug	
Material	Metal upper cover and base	
Camera Dimension	Ø121 × 92 mm (4.8" × 3.6")	
Package Dimension	150 × 150 × 141 mm (5.9" × 5.9" × 5.6")	
Camera Weight	585 g (1.3 lb.)	
With Package Weight	836 g (1.8 lb.)	

Linkage Method	Upload to NAS/memory card, notify surveillance center, trigger record, trigger capture, strobe light, audible warning *Note: External device is required.	
Web Client Language	32 languages English, Russian, Estonian, Bulgarian, Hungarian, Greek, German, Italian, Czech, Slovak, French, Polish, Dutch, Portuguese, Spanish, Romanian, Danish, Swedish, Norwegian, Finnish, Croatian, Slovenian, Serbian, Turkish, Korean, Traditional Chinese, Thai, Vietnamese, Japanese, Latvian, Lithuanian, Portuguese (Brazil)	
General Function	Anti- flicker, heartbeat, mirror, privacy masks, flash log, password reset via e-mail, pixel counter	
Software Reset	Yes	
Approval		
EMC	FCC (47 CFR Part 15, Subpart B); CE-EMC (EN 55032: 2015, EN 61000-3-2: 2014, EN 61000-3-3: 2013, EN 50130-4: 2011 +A1: 2014); RCM (AS/NZS CISPR 32: 2015); IC (ICES-003: Issue 6, 2016); KC (KN 32: 2015, KN 35: 2015)	
Safety	UL (UL 60950-1); CB (IEC 60950-1:2005 + Am 1:2009 + Am 2:2013); CE-LVD (EN 60950-1:2005 + Am 1:2009 + Am 2:2013); BIS (IS 13252(Part 1):2010+A1:2013+A2:2015); LOA (IEC/EN 60950-1)	
Environment	CE-RoHS (2011/65/EU); WEEE (2012/19/EU); Reach (Regulation (EC) No 1907/2006)	
Protection	-ISU: Ingression protection: IP66 (IEC 60529-2013), IK10 (IEC 62262:2002) -I: Ingression protection: IP67 (IEC 60529-2013), IK10 (IEC 62262:2002)	

QTY	ITEM	SPECIFICATIONS	BIDDERS RESPONSE
qty 8	Monitoring	monitoring control room video wall screen	
	Display		
	Screen Size	46 inch	
	Active Display Area	1018.08 (H) mm × 572.67 (V) mm	
	Backlight	Direct-lit LED backlight	
	Pixel Pitch	0.53 mm	
	Physical Seam	3.5 mm	
	Bezel Width	2.3 mm (top/left), 1.2 mm (bottom/right)	
	Resolution	1920 × 1080@60 Hz (downward compatible)	
	Brightness	500 cd/m ²	
	Viewing Angle	Horizontal 178°, vertical 178°	
	Color Depth	8 bit, 16.7 M	
	Contrast Ratio	1200:1	
	Response Time	8 ms	
	Color Gamut	72% NTSC	
	Surface Treatment	Haze 25%, 3H	
	Interface		
	Video & Audio Input	VGA × 1, HDMI × 1, DVI × 1, DP × 1, USB × 1	
	Video & Audio	DP × 1, HDMI × 1	

	Output		
	Control Interface	RS232 IN × 1, RS232 OUT × 1	
	Power		
	Power Supply	100-240 VAC, 50/60 Hz	
	Power Consumption	≤ 111 W	
	Standby Consumption	≤ 0.5 W	
	Working Environment		
	Working Temperature	0°C to 40°C (32°F to 104°F)	
	Working Humidity	10% to 80% RH (non-condensing)	
	Storage Temperature	-20°C to 60°C (-4°F to 140°F)	
	Storage Humidity	10% to 80% RH (non-condensing)	
	General		
	Casing Material	SECC	
	VESA	600 (H) mm × 400 (V) mm	
	Product Dimension (W × H × D)	1021.98 mm × 576.57 mm × 72.25 mm (40.24" × 22.7" × 2.84")	
	Package Dimension (W × H × D)	Carton with two displays: 1214 mm × 783 mm × 414 mm (47.8" × 30.83" × 16.3") Carton with a single display: 1214 mm × 783 mm × 414 mm (47.8" × 30.83" × 16.3")	
	Net Weight	21.09 ± 0.5 Kg (46.50 ± 1.1 lb) for single display	
	Gross Weight	Carton with two displays: 52.68 ± 0.5 Kg (116.14 ± 1.1 lb) Carton with a single display: 28.03 ± 0.5 Kg (61.80 ± 1.1 lb)	
	Packing List	LCD display × 1, power cable × 1, network cable × 1, screw × 4, remote control × 1, IR receiver × 1, CD-ROM × 1, RS-232 converter × 1, quick start guide × 1	

QTY	ITEM	SPECIFICATIONS	BIDDERS RESPONSE
qty 8	Model	video wall monitor brackets	
	Color	Black	
	Material	Cold-rolled steel plate (SPCC)	
	Surface Treatment	Electrostatic spraying	
	VESA	600 (H) mm × 400 (V) mm	
	Dimension (W × H × D)	796 mm × 577 mm × 200 mm (31.34" × 22.72" × 7.87")	
	Gross Weight	20.61 ± 0.5 Kg (45.44 ± 1.1 lb)	
	Net Weight	18 ± 0.5 Kg (39.68 ± 1.1 lb)	

QTY	ITEM	SPECIFICATIONS	BIDDERS RESPONSE
qty 4	Model	smart video wall plate	
	Color	Black	
	Material	Cold-rolled steel plate (SPCC)	
	Surface Treatment	Electrostatic spraying	
	Dimension (W × H × D)	1022 mm × 800 mm × 830 mm (40.24" × 31.5" × 32.68")	
	Gross Weight	64.44 ± 0.5 Kg (142.06 ± 1.1 lb)	
	Net Weight	57.6 ± 0.5 Kg (126.98 ± 1.1 lb)	

Video wall decoder

Qty	Item	Description	Bidders Response
2	Decoding		
	Decoding Resolution	Up to 12MP	
	Decoding Channel	128-ch	
	Decoding Capability	24MP@30fps: 8-ch, 12MP@20fps:16-ch, 8MP@30fps: 32-ch, 5MP@30fps: 48-ch, 3MP@30fps: 80-ch, 1080p@30fps/3 Mbps: 128-ch	
	Split Screen	1/4/6/8/9/12/16/25/36	
	Input	VGA, DVI-I	
	Input Resolution	VGA, DVI-I: WSXGA: 1680×1050/60Hz, WXGA: 1440 × 900/60Hz, WXGA: 1280×800/60Hz, 1366×768/60Hz, 1080p: 1920 × 1080@50/60Hz, UXGA: 1600 × 1200@60Hz, XVGA: 1280 × 960@60Hz, 720p: 1280 × 720@50Hz/60Hz, SXGA: 1280 × 1024@60Hz, XGA: 1024 × 768@60Hz	
	Output	HDMI: 16-ch, BNC: 8-ch, 2 DB 15	
	Output Resolution	HDMI: 4K: 3840 × 2160@30Hz (for odd interface only) , 1080p: 1920 × 1080@50/60Hz, WSXGA: 1680×1050/60Hz, UXGA: 1600 × 1200@60Hz (for odd interface only), 720p: 1280 × 720@50Hz/60Hz, SXGA: 1280 × 1024@60Hz, XGA: 1024 × 768@60Hz	
	Network Interface	2 10/100/1000 Mbps Ethernet interface	
	Serial Interface	1 RS-232 (RJ45), 1 RS-485	
	Audio Output	16-ch, 2 DB 15	
	Two-way Audio Out	1-ch, 3.5 mm connector (2.0 Vp-p, 1 KΩ)	
	Alarm In	8	
	Two-way Audio In	1-ch, 3.5 mm connector (2.0 Vp-p, 1 KΩ)	
	Alarm Out	8	
	Power Supply	100 to 240 VAC	
	Power Consumption	≤108W	
	Dimensions(W × D × H)	440 × 311 × 80 mm (17.32 × 12.24 × 3.15 inch)	
	Working Temperature	-10 °C to +55 °C (14 °F to 131 °F)	
	Working Humidity	10% to 90%	
	Weight	≤ 6.4 kg (14.11 lb)	

QTY	ITEM	SPECIFICATIONS	BIDDERS RESPONSE
qty 4	Model	24 port switch	
	Network parameters		
	Port number	24 × gigabit PoE ports, 1 × gigabit RJ45 port, and 1 × gigabit SFP fiber optical port	
	Port type	RJ45 port, full duplex, MDI/MDI-X adaptive	
	Standard	IEEE 802.3, IEEE 802.3u, IEEE 802.3x, IEEE 802.3ab, IEEE 802.3z	
	Forwarding mode	Store-and-forward switching	
	MAC address table	8 K	
	Switching capacity	52 Gbps	
	Packet forwarding rate	38.688 Mpps	
	Internal cache	4.1 Mbits	
	PoE power supply		
	PoE standard	IEEE 802.3af, IEEE 802.3at	
	PoE power pin	Support 4-core power supply, and Ethernet cable 1/2/3/6 provide power supply.	
	PoE port	Ports 1 to 24	
	Max. port power	30 W	
	PoE power budget	370 W	
	Max. power consumption	400 W	
	General		
	Shell	Metal material	
	Weight	2.88 kg (6.35 lb)	
	Dimensions (L × H × D)	440 mm × 44 mm × 220.8 mm (17.3" × 1.7" × 8.7")	
	Operating temperature	0°C to 40°C (32°F to 104°F)	
	Storage temperature	-40°C to 85°C (-40°F to 185°F)	
	Operating humidity	5% to 95% (no condensation)	
	Storage humidity	5% to 95% (no condensation)	
	Power supply	100 to 240 VAC, 50/60 Hz, Max. 6.5 A	
	Power consumption	400 W	

QTY	ITEM	SPECIFICATIONS	BIDDERS RESPONSE
qty 3	Model	16 port switch	
	Network parameters		
	Port number	16 × gigabit PoE ports, 1 × gigabit RJ45 port, and 1 × gigabit SFP fiber optical port	
	Port type	RJ45 port, full duplex, MDI/MDI-X adaptive	
	Standard	IEEE 802.3, IEEE 802.3u, IEEE 802.3x, IEEE 802.3ab, IEEE 802.3z	
	Forwarding mode	Store-and-forward switching	
	MAC address table	8 K	
	Switching capacity	36 Gbps	

Packet forwarding rate	26.784 Mpps	
Internal cache	4.1 Mbits	
PoE power supply		
PoE standard	IEEE 802.3af, IEEE 802.3at	
PoE power pin	Support 4-core power supply, and Ethernet cable 1/2/3/6 provide power supply.	
PoE port	Ports 1 to 16	
Max. port power	30 W	
PoE power budget	230 W	
Max. power consumption	250 W	
General		
Shell	Metal material	
Weight	2.67 kg (5.89 lb)	
Dimensions (L × H × D)	440 mm × 44 mm × 220.8 mm (17.3" × 1.7" × 8.7")	
Operating temperature	0°C to 40°C (32°F to 104°F)	
Storage temperature	-40°C to 85°C (-40°F to 185°F)	
Operating humidity	5% to 95% (no condensation)	
Storage humidity	5% to 95% (no condensation)	
Power supply	100 to 240 VAC, 50/60 Hz, Max. 4 A	
Power consumption	250 W	

QTY	ITEM	SPECIFICATIONS	BIDDERS RESPONSE
qty 1	Features -	Management software with 300CH license	
Devices and Resources			
	Cameras	300 ^①	
	Alarm Inputs	300	
	Alarm Outputs	300	
	Recording Servers	64	
	Streaming Servers	64	
	Areas	300	
	Cameras per Area	64	
	Alarm Inputs per Area	64	
	Alarm Outputs per Area	64	
	Recording		
	Recording Schedule	3,000	
	Recording Schedule Template	200	
	Event & Alarm		
	Event and Alarm Rules	3,000	
	Storage of Events or Alarms without Pictures	100/s	

	Events or Alarms Sent to Clients <i>*The clients include Control Clients and Mobile Clients.</i>	120/s 100 Clients/s	
	Notification Schedule Templates	200	
	Picture		
	Picture Storage	20/s (Stored in SYS Server) 80/s (Stored in Recording Server)	
	Users and Roles		
	Concurrent Accesses via Web Clients, Control Clients, and OpenAPI Clients	100	
	Concurrent Accesses via Mobile Clients and OpenAPI Clients	100	
	Users	3,000	
	Roles	3,000	
	Streaming Server's Maximum Performance		
	Video Input Bandwidth per Streaming Server	300 × 2 Mbps	
	Video Output Bandwidth per Streaming Server	300 × 2 Mbps	

	ITEM	SPECIFICATIONS	BIDDERS RESPONSE
1	Central-P-SmartWall-Module	Smart wall module (4 by 2)	
	General		
	Cameras	3,000 ² (current site)	
		100,000 ³ (remote sites)	
	Alarm Inputs	3.000	
	Alarm Outputs	3.000	
	Encoding Devices	-	
	Encoding Devices, Access Control Devices, and Remote Sites	1,024 ^{2,3}	
	ANPR Cameras	Maximum: 3000)	
	People Counting Cameras	Maximum: 3000)	
	Heat Map Cameras	Maximum: 3000)	
	Recording Servers	64	
	Streaming Servers	64	

Areas	3.000	
Area Hierarchies	5	
Cameras per Area	64	
Alarm Inputs per Area	64	
Alarm Outputs per Area	64	
Recording		
Recording Schedules	30,000 (for cameras on current site and from remote sites)	
Recording Schedule Templates	200	
Event and Alarm		
Event and Alarm Rules	10,000 (current site and remote sites)	
Events and Alarms without Pictures Received per Second	1204	
Events and Alarms with Pictures Received per Second	100	
Arming Schedule Templates	200	
Alarm Categories	25	
Alarm Priorities	255	
Email Templates	Unlimited	
Report Rules	100	
Event or Alarm Rules in One Report Rule	32	
Event or Alarm Logs in One Sent Report	0 or 10 Mb	
Logs and Records Storage		
Alarm Logs	000.000	
Event Logs	000.000	
Operation Logs	000.000	
System Logs	000.000	
Tags	000.000	
License Plate Recognition Records	000.000	
People Counting Records	stored for 2 years	
Heat Map Records	Stored for 2 years	
Users and Roles		

Concurrent Accesses via Web Clients, Control Clients, and OpenSDK Clients	100	
Concurrent Accesses via Mobile Clients and OpenSDK Clients	100	
Users	3.000	
Roles	3.000	
Map		
E-maps	1.024	
Map Resolution	92×8192	
Hot Regions per Map	64	
Camera Hot Spots per Map	128	
Alarm Input Hot Spots per Map	128	
Alarm Output Hot Spots per Map	128	
Labels per Map	128	
Hot Regions in Total	1.024	
Camera Hot Spots in Total	3.000	
Alarm Input Hot Spots in Total	3.000	
Alarm Output Hot Spots in Total	3.000	
Labels in Total	3.000	
Elements on GIS Map in Total	3.000	
Vehicle		
Vehicle Lists	100	
Vehicles per Vehicle List	5.000	
Under Vehicle Surveillance Systems	4	
Vehicle Undercarriage Pictures	3.000	
Face Comparison		
Face Pictures	10.000	
Face Comparison Groups	64	
Persons in One Face Comparison	10.000	
Person		
Persons	10.000	

Cards	50.000	
Fingerprints	40.000	
Credentials (Card + Fingerprint)	50.000	
Access Control		
Access Control Devices	128	
Doors	128	
Doors on Each E-map	128	
Doors on E-maps in Total	128	
Anti-Passback Rules	128	
Doors in One Anti-Passback Rule	16	
Access Groups	64	
Persons in One Access Group	1.000	
Access Levels	128	
Doors in One Access Level	128	
Access Levels Assigned to One Access Group	8	
Access Schedules	32	
Attendance Groups	64	
Persons in One Attendance Group	1.000	
Shift Schedules	128	
Holidays	16	
Smart Wall		
Decoding Devices	32	
Smart Walls	32	
View Groups	100	
Views per View Group	10	
Views Auto-Switched Simultaneously	32	
Operation Logs Storage	500.000	
Streaming Server Maximum Performance		
Video Input Bandwidth per Streaming Server	300 x 2 Mbps	
Video Output Bandwidth per Streaming Server	300 x 2 Mbps	
Supported Languages		

	Languages	English, Spanish, Russian, French, Italian, Polish, Turkish, Dutch, Portuguese, German, Czech, Bulgarian, Hungarian, Thai, Danish, Japanese, Simplified Chinese, Traditional Chinese	

	ITEM	SPECIFICATIONS	BIDDERS RESPONSE
Qty 2		<u>Professional ANPR Module</u>	
	Features Devices and Resources	Maximum Performance	
	Cameras	General Performance: 3,000 ^① High Performance: 10,000 ^② High Performance (RSM): 100,000 ^②	
	Managed Device IP Addresses <i>*Including Encoding Devices, Access Control Devices, Elevator Control Devices, Security Control Devices, Digital Signage Terminals, and Remote Sites</i>	General Performance: 1,024 ^① High Performance: 2,048 ^②	
	Video Intercom Devices	2,048	
	Alarm Inputs (Including Zones of Security Control Devices)	3,000	
	Alarm Outputs	3,000	
	Dock Stations	1,500	
	Security Radars and Radar PTZ Cameras	30	
	Alarm Inputs of Security Control Devices	2,048	
	DS-5600 Series Face Recognition Terminals When Applied with Hikvision Turnstiles	32	
	Recording Servers	64	
	Streaming Servers	64	
	Security Audit Server	8	
	DeepinMind Server	64	
	ANPR Cameras	3,000	
	People Counting Cameras	Recommended: 300	
	Heat Map Cameras	Recommended: 70	
	Thermal Cameras	Recommended: 20 ^③	

Queue Management Cameras	Recommended: 300	
Digital Signage Terminals	1,024	
Areas	3,000	
Cameras per Area	256	
Alarm Inputs per Area	256	
Alarm Outputs per Area	256	
Recording		
Recording Schedule	General Performance: 3,000 ^① High Performance: 10,000 ^②	
Recording Schedule Template	200	
Event & Alarm		
Event and Alarm Rules	General Performance: 3,000 ^① High Performance: 10,000 ^②	
Storage of Events or Alarms without Pictures	General Performance: 100/s ^① High Performance: 1,000/s ^②	
Events or Alarms Sent to Clients <i>*The clients include Control Clients and Mobile Clients.</i>	120/s 100 Clients/s	
Picture		
Picture Storage <i>*Including event/alarm pictures, face pictures, and vehicle pictures.</i>	20/s (Stored in SYS Server) 80/s (Stored in Recording Server)	
Reports		
Regular Report Rules	100	
Event or Alarm Rules in One Event/Alarm Report Rule	32	
Records in One Sent Report	10,000 or 10 MB	
Resources Selected in One Report <i>*With this limitation, you can generate a neat and clear report via the Control Client and it costs less time.</i>	20	
Data storage		
Data Retention Period	Stored for 3 Years	

People Counting	5 million	
Heat Map	0.25 million	
ANPR	60 million	
Events	60 million	
Alarms	60 million	
Access Records	1.4 billion	
Attendance Records	55 million	
Visitor Records	10 million	
Operation Logs	5 million	
Service Information Logs	5 million	
Service Error Logs	5 million	
Recording Tags	60 million	
Users and Roles		
Concurrent Accesses via Web Clients, Control Clients, and OpenAPI Clients	100	
Concurrent Accesses via Mobile Clients and OpenAPI Clients	100	
Users	3,000	
Roles	3,000	
Vehicle (ANPR)		
Vehicle Lists	100	
Vehicles per Vehicle List	5,000	
Under Vehicle Surveillance Systems	4	
Vehicle Undercarriage Pictures	3,000	
Entrance & Exit		
Lanes	8	
Cards Linked with Vehicles	250,000	
Vehicle Passing Frequency in Each Lane	1 Vehicle/s	
Face Comparison		
Persons with Profiles for Face Comparison	1,000,000	
Face Comparison Groups	64	
Persons in One Face Comparison Group	1,000,000	
Person		
Person Group	3,000	
Person Group Hierarchies	10	
Access Control		
Persons with Credentials for	50,000	

	Access Control		
	Visitors	10,000	
	Total Credentials (Card + Fingerprint)	250,000	
	Cards	250,000	
	Fingerprints	200,000	
	Profiles	50,000	
	Access Points (Doors + Floors)	1,024	
	Access Levels	512	
	Access Schedules	32	
	Time and Attendance		
	Persons for Time and Attendance	10,000	
	Shift Schedules	128	
	Major Leave Types	64	
	Minor Leave Types of One Major Type	128	
	Smart Wall		
	Decoding Devices	32	
	Smart Walls	32	
	Views	1,000	
	View Groups	100	
	Views in One View Group	10	
	Cameras in One View	150	
	Views Auto- Switched Simultaneously	32	
	Intelligent Recognition		
	Resource Groups for Intelligent Recognition	1,000	
	Resources in One Group	64	
	Digital Signage		
	Materials	10,000	
	Programs	2,000	
	Schedules	1,000	
	Release Records	1,000	

QTY	ITEM	SPECIFICATIONS	BIDDERS RESPONSE
qty 1	server	Video Management Server	
	Processor	Up to two Intel® Xeon® SP, up to 28 cores per processor This model is configured two Intel® Xeon® SP(4114*2)	

Memory	24 DDR4 DIMM slots, Supports RDIMM /LRDIMM, speeds up to 2666MT/s, 3TB max Up to 12 NVDIMM, 192 GB Max Supports registered ECC DDR4 DIMMs only This model is configured 64G DDR4 DIMM	
Storage controllers	(Optional) Internal controllers: PERC H330, H730p, H740p, HBA330, Software RAID (Optional) (SWRAID) S140 Boot Optimized Storage Subsystem: HWRAID 2 x M.2 SSDs 120GB, 240 GB (Optional) External PERC (RAID): H840 (Optional) External HBAs (non-RAID): 12 Gbps SAS HBA This model is configured PERC H330	
Drive bays	Front drive bays: up to 8 x 3.5” SAS/SATA HDD max 80TB, Optional DVD-ROM, DVD+RW This model is configured 600G SAS 15Kx4(RAID_10)	
Power supplies	Titanium 750W, Platinum 495W, 750W, 1100W, 1600W 48VDC 1100W, 380HVDC 1100W, 240HVDC 750W (China/Japan) Hot plug power supplies with full redundancy and Up to 6 hot plugs fans with full redundancy This model is configured 495W(1+1)	
Sizing	Form factor: Rack (2U) Chassis depth: 715.5 mm 715.5 × 482 × 86.8 mm (28.2 × 19.0 × 3.4 inch)	
Sizing with Package	960 × 610 × 295 mm (37.8 × 24.0× 11.6 inch)	
Embedded management	IPMI 2.0 compliant iDRAC9 with Lifecycle Controller (Express, Enterprise) Quick Sync 2 wireless module optional This model :iDRAC9, Enterprise	
Bezel	security bezel	
OpenManage™ Software	Open Manage Enterprise Open Manage Essentials Open Manage Mobile Open Manage Power Center	
Net weight	26.5kg	
Weight Package	35.1 kg	
Integrations connections	Integrations: Microsoft® System Center, VMware® vCenter™, BMC Software Connections: Nagios & Nagios XI, Oracle Enterprise Manager, HP Operations Manager, IBM Tivoli Netcool/OMNibus, IBM Tivoli® Network Manager, CA Network and Systems Management	

Security	TPM 1.2/2.0 optional Cryptographically signed firmware System Lockdown , Secure erase Secure Boot	
I/O & Ports	Network daughter card options: 4 x 1GE or 2 x 10GE + 2 x 1GE or 4 x 10GE or 2 x 25GE This model is configured 4 x 1GE Front ports: Video, 2 x USB 2.0, available USB 3.0, dedicated IDRAC Direct Micro-USB Rear ports: Video, serial, 2 x USB 3.0, dedicated iDRAC network port Video card: VGA	
Supported operating systems	Canonical® Ubuntu® LTS Citrix® XenServer® Microsoft Windows Server® with Hyper-V Red Hat® Enterprise Linux SUSE® Linux Enterprise Server VMware® ESXi This model is not configured by default.	

QTY	ITEM	SPECIFICATIONS	BIDDERS RESPONSE
qty 1	Item	core switch	
	Backplane	256Gbps	
	Forwarding rate	136Mpps	
	MAC	64K	
	Ports	24 10/100/1000M Base-T ports+24 1000Base-X ports +8 10G SFP+ ports	
	Dimensions(W×D×H)(mm)	442.5×350×44	
	Consumption	<55W	
	Power supply	AC : 100V-240V, 50Hz±10%	
	Environment	Operating temperature/humidity: 0°C-45°C, 5%-95% non-condensing Storage temperature/humidity: -20°C-70°C ; 5%-95% non-condensing	
	MAC exchange	Support 64K MAC address table; Support to view and remove MAC addresses Support MAC address aging time configurable Support MAC Sticky based on port constraint MAC address learning and dynamic binding MAC Supports static, dynamic, and black hole MAC table entries. Support source MAC address filtering	
	VLAN	Support IEEE 802.1Q (VLAN), the whole machine supports 4K VLAN. Support GVRP Support QinQ Support VLAN based on MAC/ protocol /IP subnet / policy / port Support Private VLAN Support 1:1 and N:1 VLAN Mapping	

		functions	
	IPv4	Static Routing, RIPv1/2, RIPng, OSPF, OSPFv3, IS-IS, IS-ISv6, BGP, BGP4+, ECMP, Routing Strategy	
	IPV6	Support ND (Neighbor Discovery) Support PMTU Support Ipv6 Ping, Ipv6 Tracert, Ipv6 Telnet Support ACL based on source Ipv6 address, destination Ipv6 address, four port, protocol type, and so on. Support MLD v1/v2 snooping (Multicast Listener Discovery snooping)	
	QoS	It supports speed limit on port direction and direction. Supports 8 priority queues per port. Support mapping from message 802.1p to different queues Support SP, WRR and SP+WRR algorithm Support for message priority and message redirection Support L2 (Layer 2) ~L4 (Layer 4) packet filtering function, provide source MAC address, destination MAC address, source IP address, destination IP address, TCP/UDP protocol source/destination port number, protocol, VLAN packet filtering function Support functions based on queue speed limit and port shaping.	
	MCE	Support MCE	
	MPLS VPN	LDP protocol P/PE of MPLS VPN MPLS TE MPLS OAM	
	Multicast	Support IGMP v1/v2/v3 Snooping and fast leave mechanism Supporting multicast forwarding in VLAN and multicast multi VLAN replication Multicast load sharing supporting bundled ports Support controllable multicast Port based multicast traffic statistics Support IGMP v1/v2/v3, PIM-SM, PIM-DM, PIM-SSM	
	Virtualization	Support VSS virtualization technology	

Reliability	<p>Support STP (IEEE 802.1d), RSTP (IEEE 802.1w) and MSTP (IEEE 802.1s) protocol.</p> <p>Support EAPS (Ethernet loop protection protocol) and MEAPS (fast ring network protection protocol).</p> <p>Support FlexLinkLite tree topology protection mechanism to provide millisecond protection for primary and secondary links.</p> <p>Support BPDU protection, root protection and loopback protection.</p> <p>Support VRRP</p> <p>Support GR for OSPF, BGP</p> <p>Support BFD for OSPF, BGP</p>	
Security	<p>Support 802.1x, support single port maximum user number limit Storm suppression</p> <p>Filter</p> <p>User level management and password protection</p> <p>Support AAA authentication, support Radius, TACACS+ and many other ways.</p> <p>Support 802.1X authentication, support MAC authentication, and support MAC bypass authentication.</p> <p>Support to prevent DOS, ARP attack function, ICMP anti attack Support binding of IP, MAC, port and VLAN</p> <p>Support MAC address learning limit</p> <p>Support DHCP Snooping</p> <p>Support port isolation, Sticky MAC</p> <p>Support MAC address filtering Support SSH V2.0</p> <p>Support multicast, broadcast and unknown unicast message suppression</p> <p>Support CPU protection function</p>	
Management	<p>Console, Telnet, SSH2.0, Web SNMP v1/v2/v3</p> <p>TFTP</p> <p>RMON</p>	

	ITEM	SPECIFICATIONS	BIDDERS RESPONSE
Qty 1	model	streaming server	
	Processor	Up to two Intel® Xeon® SP, up to 28 cores per processor	
		This model is configured one Intel® Xeon® SP (4110*1)	
	memory	24 DDR4 DIMM slots, Supports RDIMM /LRDIMM, speeds up to 2666MT/s, 3TB max	
		Up to 12 NVDIMM, 192 GB Max	
		Supports registered ECC DDR4 DIMMs only	
		This model is configured 32G DDR4 DIMM	

storage controllers	(Optional) Internal controllers: PERC H330, H730p, H740p, HBA330, Software RAID (Optional) (SWRAID) S140 Boot Optimized Storage Subsystem: HWRAID 2 x M.2 SSDs 120GB, 240 GB	
	(Optional) External PERC (RAID): H840	
	(Optional) External HBAs (non-RAID): 12 Gbps SAS HBA	
	This model is configured PERC H330	
drive bays	Front drive bays: up to 8 x 3.5" SAS/SATA HDD max 80TB, Optional DVD-ROM, DVD+RW	
	This model is configured 1TB 7.2K SATA×2(RAID_1)	
power supplies	Titanium 750W, Platinum 495W, 750W, 1100W, 1600W	
	48VDC 1100W, 380HVDC 1100W, 240HVDC 750W (China/Japan)	
	Hot plug power supplies with full redundancy and Up to 6 hot plugs fans with full redundancy	
	This model is configured 495W(1+1)	
sizing	Form factor: Rack (2U) Chassis depth: 715.5 mm 715.5 × 482 × 86.8 mm (28.2 × 19.0 × 3.4 inch)	
sizing with package	960 × 610 × 295 mm (37.8 × 24.0 × 11.6 inch)	
embedded management	IPMI 2.0 compliant	
	iDRAC9 with Lifecycle Controller (Express, Enterprise) Quick Sync 2 wireless module optional	
	This model :iDRAC9, Enterprise	
bezel	security bezel	
OpenManage™ Software	OpenManage Enterprise OpenManage Essentials OpenManage Mobile OpenManage Power Center	
intergrations connections	Integrations: Microsoft® System Center, VMware® vCenter™, BMC Software : HP Operations Manager, IBM Tivoli Netcool/OMNIBus, IBM Tivoli® Network Manager,	
	CA Network and Systems Management	
	Connections: Nagios & Nagios XI,	
	Oracle Enterprise Manager,	
Net weight	26.5 kg	
Weight Package	35.1 kg	
Security	TPM 1.2/2.0 optional Cryptographically signed firmware System Lockdown Secure erase	

QTY	ITEM	SPECIFICATIONS	BIDDERS RESPONSE
qty 5	Model	workstation	
	System		
	Processor	Intel® Celeron® Processor J3455 (2M Cache, up to 2.3 GHz), 64 bit, 4 Core;	
	Memory	DDR3L, 4GB	
	Graphics card	Intel® HD Graphics 500	
	Operating system	Win10 IoT Ent LTSB 2016 Entry EPKEA, 64 bit	
	System disk (OS, VMS)	mSATA 64GB	
		Optional: mSATA 128GB	
	SATA interface	2 SATA interfaces	
		1TB/2TB/3TB/4TB/5TB/6TB/8TB/10TB capacity for each disk	
	Video/Audio output		
	HDMI interface	2 ×HDMI interface	
		4K (3840 × 2160)/30Hz, 2K (2560 × 1440)/60Hz, 1920 × 1080/60Hz, 1600 × 1200/60Hz, 1280 × 1024/60Hz, 1280 × 720/60Hz, 1024 × 768/60Hz	
	VGA interface	1 × VGA interface	
		1920 × 1080/60Hz, 1280 × 1024/60Hz, 1280 × 720/60Hz, 1024 × 768/60Hz	
	Audio input	1-ch, 3.5 mm audio connector	
	Audio output	1-ch, 3.5 mm audio connector	
	External interface		
	LAN	2 x RJ45 10M/100M/1000M self-adaptive Ethernet interface	
	USB interface	Front panel: 2 × USB 2.0; Rear panel: 4 × USB 3.0	
	Serial interface	RS-232; RS-485	
	Alarm input / output	4/2	
	POE Interface		
	Interface	8 RJ-45 10/100 Mbps self-adaptive Ethernet interfaces	
	Output power	≤ 120 W	
	Supported standard	IEEE 802.3 af/at	
	General		
	Power supply	100 to 240 VAC, 50 to 60 Hz	
	Consumption (without hard disk)	≤ 30 W	
	Working temperature	0 to +45° C (+32 to +113° F)	
	Working humidity	10 to 90 % (Non-condensing)	
	Chassis	19-inch rack-mounted 1U chassis	
	Dimensions (W × D × H)	445 × 290 × 45 mm (17.5" × 11.4" × 1.8")	
	Weight (without hard disk)	≤ 3 kg (6.6 lb)	

QTY	ITEM	SPECIFICATIONS	BIDDERS RESPONSE
qty 1	Model	central storage device(SAN)	
	Performance		
	Video (2 Mbps stream rebuilding)	400-ch	
	Controller		
	Processor	64-bit multi-core processor	
	Cache	16 GB, extendable to 32 GB	
	Storage		
	HDD slot	24 (the device is packaged with 19 HDDs)	
	Interface	SATA	
	Capacity	Up to 18 TB per HDD	
	RAID	RAID5, RAID6, iRAID	
	Disk	Disk detection pre-alarm and repair	
	Logical volume	Recording volume management	
	Recording		
	Recording type	Continuous recording, manual recording, and alarm recording	
	Video protection	Video lock, video loss alarm	
	Search and download	Log in storage system to search, play and download videos. Support searching videos by time, and event type	
	Maintenance and Management		
	Management method	GUI based on web, serial port CLI, platform	
	Alarm method	Audio, indicator, GUI	
	Network		
	Protocol	RTSP, ONVIF, HKSDK	
	External interface		
	Data network interface	4, 1000 Mbps Ethernet interface	
	Management network interface	1, 1000 Mbps Ethernet interface	
	SAS interface	1	
	COM interface	1, RS-232	
	USB interface	2 × USB 3.0, 2 × USB 2.0	
	VGA interface	Supported (VGA and RS-232 interface cannot be used at the same time)	

	IPMI interface	Supported	
	General		
	Power supply	100 to 240 VAC/47 to 63Hz, redundant power supply	
	Power consumption (with HDDs)	≤ 369.8 W	
	Environment temperature	l Working: 5 °C to 40 °C (41 °F to 104 °F) l Storing: -20 °C to +70 °C (-4 °F to +158 °F)	
	Environment humidity	l Working: 20% to 80% RH (non-condensing/frozen) l Storing: 5% to 90% RH (non-condensing/frozen)	
	Dimensions (W × D × H)	445 × 175 × 746 mm (17.5 × 6.9 × 29.4 inch)	
	Weight (without HDDs)	≤ 40 kg (88.2 lb)	

QTY	ITEM	SPECIFICATIONS	BIDDERS RESPONSE
qty 2	Model	Monitoring screen	
	Display		
	Screen Size	55 inch	
	Active Display Area	1209.6 (H) mm × 680.4 (V) mm	
	Backlight	Direct-lit LED backlight	
	Pixel Pitch	0.63 mm	
	Physical Seam	3.5 mm	
	Bezel Width	2.3 mm (top/left), 1.2 mm (bottom/right)	
	Resolution	1920 × 1080@60 Hz (downward compatible)	
	Brightness	500 cd/m ²	
	Viewing Angle	Horizontal 178°, vertical 178°	
	Color Depth	8 bit, 16.7 M	
	Contrast Ratio	1200:1	
	Response Time	8 ms (G to G)	
	Color Gamut	72% NTSC	
	Surface Treatment	Haze 25%, 3H	
	Interface		
	Video & Audio Input	HDMI × 1, DVI × 1, VGA × 1, DP × 1, USB × 1	
	Video & Audio Output	DP × 1, HDMI × 1	
	Control Interface	RS232 IN × 1, RS232 OUT × 1	
	Power		
	Power Supply	100-240 VAC, 50/60 Hz	
	Power Consumption	≤ 187 W	
	Standby Consumption	≤ 0.5 W	
	Working environment		

Working Temperature	0°C to 40°C (32°F to 104°F)	
Working Humidity	10% to 80% RH (non-condensing)	
Storage Temperature	-20°C to 60°C (-4°F to 140°F)	
Storage Humidity	10% to 80% RH (non-condensing)	
General		
Casing Material	SECC	
VESA	600 (H) mm × 400 (V) mm	
Product Dimension (W×H×D)	1213.5 mm × 684.3 mm × 71.74 mm (47.78" × 26.94" × 2.82")	
Package Dimension (W×H×D)	Carton with two displays: 1404 mm × 910 mm × 464 mm (55.28" × 35.83" × 18.27") Carton with a single display: 1404 mm × 910 mm × 464 mm (55.28" × 35.83" × 18.27")	
Net Weight	25.87 ± 0.5 Kg (57.03 ± 1.1 lb) for single display	
Gross Weight	Carton with two displays: 65.73 ± 0.5 Kg (144.91 ± 1.1 lb) Carton with a single display: 37.39 ± 0.5 Kg (82.43 ± 1.1 lb)	
Packing List	LCD display × 1, power cable × 1, network cable × 1, screw × 4, remote control × 1, IR receiver × 1, CD-ROM × 1, RS-232 converter × 1, quick start guide × 1	

QTY	ITEM	SPECIFICATIONS	BIDDERS RESPONSE
qty 2	Model	screen bracket video wall base	
	Color	Black	
	Material	Cold-rolled steel plate (SPCC)	
	Surface Treatment	Electrostatic spraying	
	Dimension (W × H × D)	1022 mm × 800 mm × 830 mm (40.24" × 31.5" × 32.68")	
	Gross Weight	64.44 ± 0.5 Kg (142.06 ± 1.1 lb)	
	Net Weight	57.6 ± 0.5 Kg (126.98 ± 1.1 lb)	

QTY	ITEM	SPECIFICATIONS	BIDDERS RESPONSE
qty 1	Model	NVR	
	Video/Audio input		
	IP video input	64-ch	
		Up to 12 MP resolution	
	Two-way audio	1-ch, RCA (2.0 Vp-p, 1 k Ω)	
	Network		
	Incoming bandwidth	320 Mbps or 200 Mbps (when RAID is enabled)	
	Outgoing bandwidth	256 Mbps, or 200 Mbps (when RAID is enabled)	

	Remote connection	128	
	Video/Audio output		
	Recording resolution	12 MP/8 MP/6 MP/5 MP/4 MP/3 MP/1080p/UXGA/720p/VGA/4CIF/DCIF/2CIF/CIF/QCIF	
	CVBS output (Optional)	1-ch, BNC (1.0 Vp-p, 75 Ω), resolution: PAL: 704 × 576, NTSC: 704 × 480	
	VGA1 /HDMI1 output resolution	HDMI1: 4K (3840 × 2160)/60Hz, 4K (3840 × 2160)/30Hz, 2K (2560 × 1440)/60Hz, 1920 × 1080p/60Hz, 1600 × 1200/60Hz, 1280 × 1024/60Hz, 1280 × 720/60Hz, 1024 × 768/60Hz	
		VGA1: 2K (2560 × 1440)/60Hz, 1920 × 1080p/60Hz, 1600 × 1200/60Hz, 1280 × 1024/60Hz, 1280 × 720/60Hz, 1024 × 768/60Hz	
	VGA2 /HDMI2 output resolution	1920 × 1080p/60Hz, 1280 × 1024/60Hz, 1280 × 720/60Hz, 1024 × 768/60Hz	
	Audio output	2-ch, RCA (2.0Vp-p, 1 KΩ)	
	Decoding		
	Decoding format	H.265/H.265+/H.264/H.264+/MPEG4/MJPEG	
	Live view/Playback resolution	12 MP/8 MP/6 MP/5 MP/4 MP/3 MP/1080p/UXGA/720p/VGA/4CIF/DCIF/2CIF/CIF/QCIF	
	Synchronous playback	16-ch	
	Capability	4-ch @ 4K or 16-ch @ 1080p	
	Network management		
	Network protocol	TCP/IP, DHCP, HIK Cloud P2P, DNS, DDNS, NTP, SADP, SMTP, NFS, iSCSI, UPnP™, HTTPS, RTP, UDP/IP, HTTP, FTP, SNMP	
	Hard disk		
	SATA	8 SATA interfaces – NAS storage DS-A81024D HOT PLUG 24HDD SATA (6TB each) is optional	
	eSATA	1 eSATA interface	
	Capacity	Up to 6TB capacity for each HDD	
	Disk array		
	Array type	RAID0, RAID1, RAID5, RAID6, RAID10	
	Number of arrays	4	
	External interface		
	Network interface	2, RJ-45 10/100/1000 Mbps self-adaptive Ethernet interface	
	Serial interface	RS-232; RS-485; Keyboard	
	USB interface	Front panel: 2 × USB 2.0; Rear panel: 1 × USB 3.0	

	Alarm in/out	16/4	
	General		
	Power supply	100 to 240 VAC, 50 to 60 Hz	
	Max. Power	200 W	
	Consumption (without hard disk)	≤ 30 W	
	Working temperature	-10 to +55° C (+14 to +131° F)	
	Working humidity	10 to 90 %	
	Chassis	19-inch rack-mounted 2U chassis	
	Dimensions (W × D × H)	445 × 470 × 90 mm (17.5" × 18.5" × 3.5")	
	Weight (without hard disk)	≤ 10 kg (22 lb)	

QTY	ITEM	SPECIFICATIONS	BIDDERS RESPONSE
Qty 11	Camera (6mm BULLET)	50m	
	Image Sensor	1/3" Progressive Scan CMOS	
	Min. Illumination	Color: 0.003 Lux @ (F1.4, AGC ON), B/W: 0 Lux with IR	
	Shutter Speed	1/3 s to 1/100,000 s	
	Day & Night	IR cut filter	
	Angle Adjustment	Pan: 0° to 360°, tilt: 0° to 90°, rotate: 0° to 360°	
	Slow Shutter	Yes	
	P/N	P/N	
	Wide Dynamic Range	120 dB	
	Lens		
	Lens Type	Fixed focal lens, 2.8, 4, and 6 mm optional	
	Focal Length & FOV	2.8 mm, horizontal FOV 103°, vertical FOV 55°, diagonal FOV 123° 4 mm, horizontal FOV 83°, vertical FOV 45°, diagonal FOV 98° 6 mm, horizontal FOV 53°, vertical FOV 28°, diagonal FOV 62°	
	Aperture	F1.4	
	Lens Mount	M12	
	Iris Type	Fixed	
	DORI		

	DORI	2.8 mm: D: 60.0 m, O: 23.8 m, R: 12.0 m, I: 6.0 m 4 mm: D: 80.0 m, O: 31.7 m, R: 16.0 m, I: 8.0 m 6 mm: D: 120.0 m, O: 47.6 m, R: 24.0 m, I: 12.0 m	
	Illuminator		
	IR Range	2I: Up to 60 m 4I: Up to 80 m	
	IR Wavelength	850 nm	
	Smart Supplement Light	Yes	
	Supplement Light Type	IR	
	Video		
	Max. Resolution	2688 × 1520	
	Main Stream	50 Hz: 25 fps (2688 × 1520, 1920 × 1080, 1280 × 720) 60 Hz: 30 fps (2688 × 1520, 1920 × 1080, 1280 × 720)	
	Sub-Stream	50 Hz: 25 fps (640 × 480, 640 × 360) 60 Hz: 30 fps (640 × 480, 640 × 360)	
	Third Stream	50 Hz: 10 fps (1920 × 1080, 1280 × 720, 640 × 480, 640 × 360) 60 Hz: 10 fps (1920 × 1080, 1280 × 720, 640 × 480, 640 × 360) *Third stream is supported under certain settings.	
	Video Compression	Main stream: H.265/H.264/H.265+/H.264+ Sub-stream: H.265/H.264/MJPEG Third stream: H.265/H.264 *Third stream is supported under certain settings.	
	Video Bit Rate	32 Kbps to 8 Mbps	
	H.264 Type	Baseline Profile/Main Profile/High Profile	
	H.265 Type	Main Profile	
	H.264+	Main stream supports	
	H.265+	Main stream supports	
	Bit Rate Control	CBR/VBR	
	Scalable Video Coding (SVC)	H.264 and H.265 encoding	
	Region of Interest (ROI)	1 fixed region for main stream and sub-stream	
	Network		
	Simultaneous Live View	Up to 6 channels	
	API	Open Network Video Interface (PROFILE S, PROFILE G, PROFILE T), ISAPI, SDK	

Protocols	TCP/IP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, RTSP, NTP, UPnP, SMTP, IGMP, 802.1X, QoS, IPv4, IPv6, UDP, Bonjour, SSL/TLS, PPPoE, SNMP, ARP	
User/Host	Up to 32 users. 3 user levels: administrator, operator and user	
Security	Password protection, complicated password, HTTPS encryption, IP address filter, Security Audit Log, basic and digest authentication for HTTP/HTTPS, TLS 1.1/1.2, WSSE and digest authentication for Open Network Video Interface	
Network Storage	MicroSD/SDHC/SDXC card (256 GB) local storage, and NAS (NFS, SMB/CIFS), auto network replenishment (ANR) Together with high-end Hikvision memory card, memory card encryption and health detection are supported	
Client	iVMS-4200, Hik-Connect, Hik-Central	
Web Browser	Plug-in required live view: IE 10+ Plug-in free live view: Chrome 57.0+, Firefox 52.0+ Local service: Chrome 57.0+, Firefox 52.0+	
Image		
SNR	≥ 52 dB	
Day/Night Switch	Day, Night, Auto, Schedule	
Image Enhancement	BLC, HLC, 3D DNR	
Image Parameters Switch	Yes	
Image Settings	Rotate mode, saturation, brightness, contrast, sharpness, gain, white balance adjustable by client software or web browser	
Interface		
On-Board Storage	Built-in micro SD slot, up to 256 GB	
Hardware Reset	Yes	
Ethernet Interface	1 RJ45 10 M/100 M self-adaptive Ethernet port	
Event		
Basic Event	Motion detection (human and vehicle targets classification), video tampering alarm, exception	
Smart Event	Scene change detection	
Deep Learning Function		
Face Capture	Yes	
Perimeter Protection	Line crossing detection, intrusion detection, region entrance detection, region exiting detection	
General		
Storage Conditions	-30 °C to 60 °C (-22 °F to 140 °F). Humidity	

		95% or less (non-condensing)	
Startup and Operating Conditions		-30 °C to 60 °C (-22 °F to 140 °F). Humidity 95% or less (non-condensing)	
Power Supply		12 VDC ± 25%, reverse polarity protection PoE: 802.3af, Class 3	
Power Consumption and Current		2I: 12 VDC, 0.63 A, max. 7.5 W PoE (802.3af, 36 V to 57 V), 0.25 A to 0.16 A, max. 9 W 4I: 12 VDC, 0.88 A, max. 10.5 W PoE (802.3af, 36 V to 57 V), 0.34 A to 0.21 A, max. 12 W	
Power Interface		Ø5.5 mm coaxial power plug	
Camera Material		Metal except for sunshield	
Camera Dimension		Ø105 mm × 289.5 mm (Ø4.1" × 11.4")	
Package Dimension		386 mm × 156 mm × 155 mm (15.2" × 6.1" × 6.1")	
Camera Weight		Approx. 1075 g (2.4 lb.)	
With Package Weight		Approx. 1584 g (3.5 lb.)	
Linkage Method		Upload to NAS/memory card/FTP, notify surveillance center, trigger recording, trigger capture, send email	
Web Client Language		33 languages English, Russian, Estonian, Bulgarian, Hungarian, Greek, German, Italian, Czech, Slovak, French, Polish, Dutch, Portuguese, Spanish, Romanian, Danish, Swedish, Norwegian, Finnish, Croatian, Slovenian, Serbian, Turkish, Korean, Traditional Chinese, Thai, Vietnamese, Japanese, Latvian, Lithuanian, Portuguese (Brazil), Ukrainian	
General Function		Anti-flicker, heartbeat, mirror, privacy mask, flash log, password reset via email, pixel counter	
Software Reset		Yes	
Firmware Version		V5.5.112	
Approval			
EMC		FCC (47 CFR Part 15, Subpart B); CE-EMC (EN 55032: 2015, EN 61000-3-2: 2014, EN 61000-3-3: 2013, EN 50130-4: 2011 + A1: 2014); RCM (AS/NZS CISPR 32: 2015); KC (KN 32: 2015, KN 35: 2015)	
Safety		UL (UL 60950-1); CB (IEC 60950-1: 2005 + Am 1: 2009 + Am 2013); CE-LVD (EN 60950-1: 2005 + Am 1: 2009 + Am 2: 2013); LOA (IEC/EN 60950-1)	

Environment	CE-ROHS (2011/65/EU); WEEE (2012/19/EU); REACH (Regulation (EC) No 1907/2006)	
Protection	IP67 (IEC 60529-2013)	

QTY	ITEM	SPECIFICATIONS	BIDDERS RESPONSE
Qty 3	Camera (6mm BULLET)	80m	
	Image Sensor	1/3" Progressive Scan CMOS	
	Min. Illumination	Color: 0.003 Lux @ (F1.4, AGC ON), B/W: 0 Lux with IR	
	Shutter Speed	1/3 s to 1/100,000 s	
	Day & Night	IR cut filter	
	Angle Adjustment	Pan: 0° to 360°, tilt: 0° to 90°, rotate: 0° to 360°	
	Slow Shutter	Yes	
	P/N	P/N	
	Wide Dynamic Range	120 dB	
	Lens		
	Lens Type	Fixed focal lens, 2.8, 4, and 6 mm optional	
	Focal Length & FOV	2.8 mm, horizontal FOV 103°, vertical FOV 55°, diagonal FOV 123° 4 mm, horizontal FOV 83°, vertical FOV 45°, diagonal FOV 98° 6 mm, horizontal FOV 53°, vertical FOV 28°, diagonal FOV 62°	
	Aperture	F1.4	
	Lens Mount	M12	
	Iris Type	Fixed	
	DORI		
	DORI	2.8 mm: D: 60.0 m, O: 23.8 m, R: 12.0 m, I: 6.0 m 4 mm: D: 80.0 m, O: 31.7 m, R: 16.0 m, I: 8.0 m 6 mm: D: 120.0 m, O: 47.6 m, R: 24.0 m, I: 12.0 m	
	Illuminator		
	IR Range	2I: Up to 60 m 4I: Up to 80 m	
	IR Wavelength	850 nm	
	Smart Supplement Light	Yes	
	Supplement Light Type	IR	
	Video		
	Max. Resolution	2688 × 1520	

Main Stream	50 Hz: 25 fps (2688 × 1520, 1920 × 1080, 1280 × 720) 60 Hz: 30 fps (2688 × 1520, 1920 × 1080, 1280 × 720)	
Sub-Stream	50 Hz: 25 fps (640 × 480, 640 × 360) 60 Hz: 30 fps (640 × 480, 640 × 360)	
Third Stream	50 Hz: 10 fps (1920 × 1080, 1280 × 720, 640 × 480, 640 × 360) 60 Hz: 10 fps (1920 × 1080, 1280 × 720, 640 × 480, 640 × 360) *Third stream is supported under certain settings.	
Video Compression	Main stream: H.265/H.264/H.265+/H.264+ Sub-stream: H.265/H.264/MJPEG Third stream: H.265/H.264 *Third stream is supported under certain settings.	
Video Bit Rate	32 Kbps to 8 Mbps	
H.264 Type	Baseline Profile/Main Profile/High Profile	
H.265 Type	Main Profile	
H.264+	Main stream supports	
H.265+	Main stream supports	
Bit Rate Control	CBR/VBR	
Scalable Video Coding (SVC)	H.264 and H.265 encoding	
Region of Interest (ROI)	1 fixed region for main stream and sub-stream	
Network		
Simultaneous Live View	Up to 6 channels	
API	Open Network Video Interface (PROFILE S, PROFILE G, PROFILE T), ISAPI, SDK	
Protocols	TCP/IP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, RTSP, NTP, UPnP, SMTP, IGMP, 802.1X, QoS, IPv4, IPv6, UDP, Bonjour, SSL/TLS, PPPoE, SNMP, ARP	
User/Host	Up to 32 users. 3 user levels: administrator, operator and user	
Security	Password protection, complicated password, HTTPS encryption, IP address filter, Security Audit Log, basic and digest authentication for HTTP/HTTPS, TLS 1.1/1.2, WSSE and digest authentication for Open Network Video Interface	
Network Storage	MicroSD/SDHC/SDXC card (256 GB) local storage, and NAS (NFS, SMB/CIFS), auto network replenishment (ANR) Together with high-end Hikvision memory card, memory card encryption and health detection are supported	
Client	iVMS-4200, Hik-Connect, Hik-Central	

Web Browser	Plug-in required live view: IE 10+ Plug-in free live view: Chrome 57.0+, Firefox 52.0+ Local service: Chrome 57.0+, Firefox 52.0+	
Image		
SNR	≥ 52 dB	
Day/Night Switch	Day, Night, Auto, Schedule	
Image Enhancement	BLC, HLC, 3D DNR	
Image Parameters Switch	Yes	
Image Settings	Rotate mode, saturation, brightness, contrast, sharpness, gain, white balance adjustable by client software or web browser	
Interface		
On-Board Storage	Built-in micro SD slot, up to 256 GB	
Hardware Reset	Yes	
Ethernet Interface	1 RJ45 10 M/100 M self-adaptive Ethernet port	
Event		
Basic Event	Motion detection (human and vehicle targets classification), video tampering alarm, exception	
Smart Event	Scene change detection	
Deep Learning Function		
Face Capture	Yes	
Perimeter Protection	Line crossing detection, intrusion detection, region entrance detection, region exiting detection	
General		
Storage Conditions	-30 °C to 60 °C (-22 °F to 140 °F). Humidity 95% or less (non-condensing)	
Startup and Operating Conditions	-30 °C to 60 °C (-22 °F to 140 °F). Humidity 95% or less (non-condensing)	
Power Supply	12 VDC ± 25%, reverse polarity protection PoE: 802.3af, Class 3	
Power Consumption and Current	2I: 12 VDC, 0.63 A, max. 7.5 W PoE (802.3af, 36 V to 57 V), 0.25 A to 0.16 A, max. 9 W 4I: 12 VDC, 0.88 A, max. 10.5 W PoE (802.3af, 36 V to 57 V), 0.34 A to 0.21 A, max. 12 W	
Power Interface	Ø5.5 mm coaxial power plug	
Camera Material	Metal except for sunshield	
Camera Dimension	Ø105 mm × 289.5 mm (Ø4.1" × 11.4")	
Package Dimension	386 mm × 156 mm × 155 mm (15.2" × 6.1" × 6.1")	
Camera Weight	Approx. 1075 g (2.4 lb.)	

With Package Weight	Approx. 1584 g (3.5 lb.)	
Linkage Method	Upload to NAS/memory card/FTP, notify surveillance center, trigger recording, trigger capture, send email	
Web Client Language	33 languages English, Russian, Estonian, Bulgarian, Hungarian, Greek, German, Italian, Czech, Slovak, French, Polish, Dutch, Portuguese, Spanish, Romanian, Danish, Swedish, Norwegian, Finnish, Croatian, Slovenian, Serbian, Turkish, Korean, Traditional Chinese, Thai, Vietnamese, Japanese, Latvian, Lithuanian, Portuguese (Brazil), Ukrainian	
General Function	Anti-flicker, heartbeat, mirror, privacy mask, flash log, password reset via email, pixel counter	
Software Reset	Yes	
Firmware Version	V5.5.112	
Approval		
EMC	FCC (47 CFR Part 15, Subpart B); CE-EMC (EN 55032: 2015, EN 61000-3-2: 2014, EN 61000-3-3: 2013, EN 50130-4: 2011 + A1: 2014); RCM (AS/NZS CISPR 32: 2015); KC (KN 32: 2015, KN 35: 2015)	
Safety	UL (UL 60950-1); CB (IEC 60950-1: 2005 + Am 1: 2009 + Am 2013); CE-LVD (EN 60950-1: 2005 + Am 1: 2009 + Am 2: 2013); LOA (IEC/EN 60950-1)	
Environment	CE-ROHS (2011/65/EU); WEEE (2012/19/EU); REACH (Regulation (EC) No 1907/2006)	
Protection	IP67 (IEC 60529-2013)	

QTY	ITEM	SPECIFICATIONS	BIDDERS RESPONSE
qty 2	Camera (PTZ 4MP)		
	Image Sensor	1/2.8" progressive scan CMOS	
	Min. Illumination	Color: 0.005 Lux @ (F1.2, AGC ON), B/W: 0.001 Lux @ (F1.2, AGC ON), 0 Lux with IR	
	Shutter Speed	1/1 s to 1/30000 s	
	Slow Shutter	yes	
	Focus	semi-auto, manual, auto	
	Day & Night	ICR	
	Day/Night Switch	day, night, auto, scheduled-switch	
	BLC	yes	
	WDR	120 dB WDR	
	HLC	yes	

3D DNR	yes	
Defog	yes	
EIS	yes	
Regional Exposure	yes	
Regional Focus	yes	
Image Settings	saturation, brightness, contrast, sharpness	
White Balance	auto, ATW, sodium lamp, fluorescent lamp, indoor, outdoor, MWB, Locked WB	
Digital Zoom	16 ×	
Optical Zoom	32 ×	
Privacy Mask	up to 24 masks, polygon region, mosaic mask, mask color configurable	
SNR	> 52 dB	
Lens		
Focal Length	4.8 mm to 153 mm, 32 × Optical	
Zoom Speed	approx.4.2s	
FOV	Horizontal field of view: 54.3° to 2° (wide-tele), Vertical field of view: 31.8° to 1.1° (wide-tele), Diagonal field of view: 61.1° to 2.3° (wide-tele)	
Aperture	F1.2	
PTZ		
Movement Range (Pan)	360°	
Movement Range (Tilt)	-15° to 90° (auto flip)	
Pan Speed	pan speed: configurable from 0.1° to 160°/s, preset speed: 240°/s	
Tilt Speed	tilt speed: configurable from 0.1° to 120°/s, preset speed 200°/s	
Proportional Zoom	yes	
Presets	300	
Patrol Scan	8 patrols, up to 32 presets for each patrol	
Pattern Scan	4 pattern scans	
Power-off Memory	yes	
Park Action	preset, pattern scan, patrol scan, auto scan, tilt scan, random scan, frame scan, panorama scan	
3D Positioning	yes	
PTZ Status Display	yes	
Preset Freezing	yes	
Scheduled Task	preset, pattern scan, patrol scan, auto scan, tilt scan, random scan, frame scan, panorama scan, dome reboot, dome adjust, aux output	
Video		
Max. Resolution	2560 × 1440	
Stream Type	main stream, sub-stream, third stream	

Main Stream	50Hz: 25fps (2560 × 1440, 1920 × 1080, 1280 × 960, 1280 × 720) 60Hz: 30fps (2560 × 1440, 1920 × 1080, 1280 × 960, 1280 × 720)	
Sub-Stream	50Hz: 25fps (704 × 576, 640 × 480, 352 × 288); 60Hz: 30fps (704 × 480, 640 × 480, 352 × 240)	
Third Stream	50Hz: 25fps (1920 × 1080, 1280 × 960, 1280 × 720, 704 × 576, 640 × 480, 352 × 288); 60Hz: 30fps (1920 × 1080, 1280 × 960, 1280 × 720, 704 × 480, 640 × 480, 352 × 240)	
Video Compression	H.265, H.264, MJPEG	
Video Bit Rate	32 kbps to 16384 kbps	
H.264 Type	baseline profile, main profile, high profile	
H.265 Type	main profile	
H.264+	yes	
H.265+	yes	
SVC	yes	
ROI	dynamic face tracking, fixed region, main stream, sub-stream and third stream respectively support eight fixed areas	
Audio		
Audio Compression	G.711alaw, G.711ulaw, G.722.1, G.726, MP2L2, PCM	
Audio Bit rate	MP2L2: 32 kbps, 40 kbps, 48 kbps, 56 kbps, 64 kbps, 80 kbps, 96 kbps, 112 kbps, 128kbps, 144 kbps, 160 kbps, 192 kbps	
Audio Sampling Rate	MP2L2: 16 kHz, 32 kHz, 48 kHz, PCM: 8 kHz, 16 kHz, 32 kHz, 48 kHz	
Environment Noise Filtering	yes	
Smart Features		
Face Capture	yes	
Basic Event	audio exception, motion detection, alarm input, alarm output, video tampering alarm, exception	
Smart Event	intrusion detection, line crossing detection, region entrance detection, region exiting detection, unattended baggage detection, object removal detection	
Smart Tracking	manual tracking, event tracking, auto-tracking	
Smart Record	ANR, Dual-VCA	
Alarm Linkage	preset, patrol scan, pattern scan, memory card video recording, alarm output, sending email, notify surveillance center, upload to FTP, smart tracking	

Perimeter Protection	Line crossing, intrusion, region entrance, region exiting Support alarm triggering by specified target types (human and vehicle)	
Network		
Network Storage	NAS (NFS, SMB/ CIFS), ANR	
Protocols	IPv4/IPv6, HTTP, HTTPS, 802.1x, Qos, FTP, SMTP, UPnP, SNMP, DNS, DDNS, NTP, RTSP, RTCP, RTP, TCP/IP, UDP, IGMP, ICMP, DHCP, PPPoE, Bonjour	
API	ISAPI, Hikvision SDK, Hik-Connect, ONVIF (Profile S, Profile G, Profile T), ISUP	
Simultaneous Live View	20	
User/Host	32	
Smooth Streaming	yes	
Security Measures	Authenticated username and password, MAC address binding, HTTPS encryption, 802.1X authenticated access, IP address filter	
Client	iVMS-4200, Hik-Connect	
Web Browser	IE 8 to 11, Chrome 57+, Firefox 52+, Safari 12+	
Interface		
Communication Interface	RJ45, self-adaptive 10M/100M Ethernet port	
On-board Storage	support microSD/microSDHC/microSDXC cards, up to 256 GB	
Alarm Input	2 alarm inputs	
Alarm Output	1 alarm output	
Audio Input	1 audio input	
Audio Output	1 audio output, line level, impedance: 600 Ω	
Supplement Light		
IR Distance	200 m	
General		
Power	24 VAC, Hi-PoE	
Power Consumption and Current	Max. 42 W, including max. 10 W for heater and max. 18 W for supplement light	
Operating Condition	-30°C to 65°C (-22°F to 149°F); humidity lower than 90%RH	
Reset	yes	
Demist	Demist by heating the glass	
Material	ADC 12, PC, PC+10%GF	
Dimensions	Φ 220 mm × 353.4 mm (Φ 8.66" × 13.91")	
Weight	Approx. 5 kg (11.02 lb.)	
Approval		
Protection	IP66 Standard, IK10 (excluding glass window), 6000V Lightning Protection, SurgeProtection and Voltage Transient Protection	

QTY	ITEM	SPECIFICATIONS	BIDDERS RESPONSE
qty 2	Pole Bracket (To be Long Galvanized Round POLE)		
	Model Parameters	DS-1604ZJ-Pole	
	parameters	Vertical Pole Mounting Bracket for Speed Dome	
	Appearance	Hikvision White	
	Material	Aluminum Alloy and Steel	
	Dimension	355.5 mm × 261.8 mm × 170.7 mm (14" × 10.31" × 6.72")	
	Weight	3.8 Kg (8.38 lb.)	

QTY	ITEM	SPECIFICATIONS	BIDDERS RESPONSE
QTY 3	5KVA UPS		
	Output		
	Output Power Capacity	4000 Watts / 5000 VA	
	Max Configurable Power	4000 Watts / 5000 VA	
	Nominal Output Voltage	230V	
	Output Voltage Note	Configurable for 220 : 230 or 240 nominal output voltage	
	Efficiency at Full Load	96.0%	
	Output Voltage Distortion	Less than 5% at full load	
	Output Frequency (sync to mains)	47 - 53 Hz for 50 Hz nominal	
	Other Output Voltage	220, 240	
	Topology	Line Interactive	
	Waveform Type	Sine wave	
	Output Connections	(8) IEC 320 C13 (2) IEC 320 C19 (4) IEC Jumpers	
	Input		
	Nominal Input Voltage	230V	

Input Frequency	50/60 Hz +/- 3 Hz (auto sensing)	
Input Connections	Hard Wire 3-wire	
Input voltage range for main operations	160 - 286V	
Input voltage adjustable range for mains operation Batteries & Runtime	151 - 302V	
Battery Type	VRLA	
Typical recharge time	3 hour(s)	
Replacement Battery	<u>RBC55</u>	
RBC™ Quantity	2	
Communications & Management		
Interface Port(s)	DB-9 RS-232, SmartSlot	
Pre-Installed SmartSlot™ Cards	<u>AP9630</u>	
Control panel	LED status display with On Line : On Battery : Replace Battery and Overload indicators	
Audible Alarm	Audible and visible alarms : configurable delays	
Surge Protection and Filtering		
Surge energy rating	480 Joules	
Filtering	Full time multi-pole noise filtering : 0.3% IEEE surge let-through : zero clamping response time : meets UL 1449	
Physical		
Maximum Height	222.00 mm	
Maximum Width	483.00 mm	
Maximum Depth	660.00 mm	
Rack Height	5U	
Net Weight	97.73 KG	
Shipping Weight Shipping Height	106.82 KG 635.00 mm	
Shipping Width	610.00 mm	
Shipping Depth	762.00 mm	
Master Carton Units	1.00	
Color	Black	
Units per Pallet	4.00	
Environmental		
Operating	0 - 40 °C	

	Environment		
	Operating Relative Humidity	0 - 95%	
	Operating Elevation	0-3000 meters	
	Storage Temperature	-15 - 45 °C	
	Storage Relative Humidity	0 - 95%	
	Storage Elevation	0-15000 meters	
	Audible noise at 1 meter from surface53. dBA of unit		
	Online Thermal Dissipation	430.00 BTU/hr	
	Conformance		
	Regulatory Approvals	C-tick, CE, EN 50091-1, EN 50091-2, GOST, GS Mark, VDE	
	Standard Warranty	2 years repair or replace	
	Sustainable Offer Status		
	RoHS	Compliant	
	REACH	REACH: Contains No SVHCs	
	Battery Directive	Compliant	
	Other Environmental Compliance	China RoHS	

QTY	ITEM	SPECIFICATIONS	BIDDERS RESPONSE
3	3KVA UPS		
	Output	Product features	
	Power Capacity	2100W/3000VA	
	Nominal Output Voltage	230V	
	Output Frequency	47-63Hz	
	Wave Form Type	Sine wave	
	Output Connections	(8) IEC 320 C13, (1) C19	
	Input		
	Nominal Input Voltage	230V	
	Input Voltage Range for main operations (Max adjustable range)	180-287V (170-300V)	
	Input Frequency	50/60 Hz +/-3 Hz (auto sensing)	
	Input Connection	IEC 320 C20	
	Batteries and Runtime		
	Battery Type	Maintenance-free sealed lead-acid battery with suspended electrolyte, leak proof	

Typical Backup Time 1/2 Load (min)	11MIN	
Typical Backup Time full Load (min)	3.5 MIN	
Replacement Battery	APCRBC150	
Communication and Management		
Interface Ports	USB and Serial (RJ45)	
Control Panel and audible alarms	Etched glass LCD display with LED status indicators; alarm on battery, distinctive low battery alarm	
Surge Protection and Filtering		
Surge Energy Rating	724J	
Filtering	Full time multi-pole noise filtering: 0.3% IEEE surge let-through, zero clamping response time, meets UL1449	
Physical		
Maximum Height	435 mm (17.13 in)	
Maximum Width	197 mm (7.76 in)	
Maximum Depth	544 mm (21.42 in)	
Net Weight	43.00 kg (95 lbs)	
Conformance		
Regulatory	VDE-GS, CE, EAC, C-Tick, IRAM, SABS	
Warranty and Equipment Protection Policy	2 years repair or replace	

PANOVU Camera 8mp (dome)

<u>Qty 2</u>	<u>Item</u>	<u>Description</u>	<u>Bidders response</u>
	Image Sensor	1/1.8" Progressive Scan CMOS	
	Shutter Speed	1/25 s to 1/100,000 s	
	Day & Night	IR cut filter. Blue glass module to reduce ghost phenomenon.	
	Angle Adjustment	Pan: 0° to 355°, tilt: 0° to 90°	
	WDR	Digital WDR	
	Aperture	F1.4	
	Focus	Manual, semi-auto	
	FOV	2.8 mm: horizontal FOV 180°, vertical FOV 90° 6 mm: horizontal FOV 180°, vertical FOV 25°	
	Lens Mount	M16	
	Lens Type	Fixed lens, 2.8 mm/6 mm, four lenses	
	IR Range	Four IR LEDs, up to 20 m	
	Wavelength	850 nm	
	Max. Resolution	2.8 mm Panorama+ePTZ mode: panorama channel 1920 × 1080; ePTZ channel: 1920 × 1080	

		<p>Panorama mode: 3840 × 2160 Original mode: 1920 × 1080 6 mm</p> <p>Panorama+ePTZ mode: panorama channel 2400 × 400; ePTZ channel: 1920 × 1080 Panorama mode: 6480 × 1080 Original mode: 1920 × 1080</p>	
	Main Stream	<p>2.8 mm</p> <p>Panorama+ePTZ mode: panorama channel 50Hz: 25fps (1920 × 1080, 1280 × 720), 60Hz: 30fps (1920 × 1080, 1280 × 720); ePTZ channel: 50Hz: 25fps (1920 × 1080, 1280 × 720), 60Hz: 30fps (1920 × 1080, 1280 × 720)</p> <p>Panorama mode: 50Hz: 25fps (3840 × 2160, 2560 × 1440, 1920 × 1080), 60Hz: 30fps (3840 × 2160, 2560 × 1440, 1920 × 1080)</p> <p>Original mode: 50Hz: 25fps (1920 × 1080), 60Hz: 30fps (1920 × 1080)</p> <p>6 mm</p> <p>Panorama+ePTZ mode: panorama channel 50Hz: 25fps (2400 × 400), 60Hz: 30fps (2400 × 400); ePTZ channel: 50Hz: 25fps (1920 × 1080, 1280 × 720), 60Hz: 30fps (1920 × 1080, 1280 × 720)</p> <p>Panorama mode: 50Hz: 25fps (6480 × 1080, 4800 × 800, 3600 × 600), 60Hz: 30fps (6480 × 1080, 4800 × 800, 3600 × 600)</p> <p>Original mode: 50Hz: 25fps (1920 × 1080), 60Hz: 30fps (1920 × 1080)</p>	
	Sub Stream	<p>2.8 mm Panorama mode: 50Hz: 25fps (1280 × 720, 640 × 360), 60Hz: 30fps (1280 × 720, 640 × 360)</p> <p>6 mm</p> <p>Panorama mode: 50Hz: 25fps (2400 × 400, 1920 × 320, 1440 × 240), 60Hz: 30fps (2400 × 400, 1920 × 320, 1440 × 240)</p>	
	Video Compression	<p>Main stream: H.265/H.264 Sub-stream: H.265/H.264/MJPEG</p>	
	H.264 Type	Baseline Profile/ Main Profile/ High Profile	
	H.265 Type		
	Video Bit Rate	32 Kbps to 65 Mbps	
	SVC	H.264 and H.265 encoding	
	H.264+	Main stream support	
	H.265+	Main stream support	

Audio Compression	G.711/G.722.1/G.726/MP2L2/PCM	
Audio Bit Rate	64Kbps(G.711)/16Kbps(G.722.1)/16Kbps(G.726)/32-192Kbps(MP2L2)/32Kbps(PCM)	
Environment Noise Filtering	Yes	
Audio Sampling Rate	8 kHz/16 kHz/32 kHz/48 kHz	
Basic Event	Motion detection (only panorama and original modes support), video tampering alarm, exception (network disconnected, IP address conflict, illegal login, HDD full, HDD error)	
People Density	Yes (only panorama mode supports)	
Linkage Method	Upload to FTP/NAS/memory card, notify surveillance center, send email, trigger alarm output, trigger recording, trigger capture	
Image Enhancement	BLC, HLC, 3D DNR, Defog, EIS (only the original mode supports)	
Image Setting	Rotate mode (only the original mode supports), saturation, brightness, contrast, sharpness, AGC, and white balance are adjustable by client software or web browser	
Target Cropping	Yes (only panorama mode supports)	
Day/Night Switch	Day/Night/Auto/Schedule/Triggered by Alarm In	
Picture Overlay	LOGO picture can be overlaid on video with 128 × 128 24 bit bmp format	
Network Storage	microSD/SDHC/SDXC card (256 GB), local storage and NAS (NFS,SMB/CIFS), ANR	
Protocols	TCP/IP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, RTSP, RTCP, PPPoE, NTP,	
	UPnP, SMTP, SNMP, IGMP, 802.1X, QoS, IPv6, UDP, Bonjour	
API	ONVIF (PROFILE S, PROFILE G), ISAPI, SDK, Ehome Security Password protection, complicated password, HTTPS encryption, 802.1X authentication	
Simultaneous Live View	Up to 20 channels	
User/Host	Up to 32 users. 3 user levels: administrator, operator and user	
Client	iVMS-4200	
Web Browser	IE8+	
Communication Interface	1 RJ45 10M/100M/1000M Ethernet port; 1 RS-485 interface (half duplex, HIKVISION, Pelco-P, Pelco-D, self-adaptive)	
	Audio1 input (line in), 3.5 mm 3-section connector, max. input amplitude: 1 vpp, input	

		impedance: 4.7 K Ω , interface type: non-equilibrium; 1 output (line out), 3.5 mm 3-section connector, max. output amplitude: 1 vpp, output impedance: 100 Ω , interface type: non-equilibrium	
	On-board Storage	Built-in microSD/SDHC/SDXC slot, up to 256GB	
	Firmware Version	V5.5.84	
	Web Client Language	English	
	General Function	Anti-flicker, heartbeat, mirror (only original mode supports), privacy masks (only original mode supports), password protection, watermark, IP address filter, pixel counter	
	Reset	Reset via reset button on camera body, web browser and client software	
	Startup and Operating Conditions	40 °C to +60 °C (-40 °F to +140 °F), humidity 95% or less (non-condensing)	
	Storage Conditions	40 °C to +60 °C (-40 °F to +140 °F), humidity 95% or less (non-condensing)	
	Power Supply	12 VDC, three-core terminal block, PoE (802.3at)	
	Power Consumption and Current	12 VDC, 1.6 A, max. 24 W, PoE (802.3at, 42.5 V to 57 V), 0.5 to 0.4 A	
	Material	Aluminum alloy	
	Dimensions	Camera: 189.5 × 207.63 × 206.62 mm (7.46" × 8.17" × 8.13 With Package: 340 × 261 × 293 mm (13.4" × 10.3" × 11.5"))	
	Weight	Camera: approx. 3 kg (6.6 lb.) With package: approx. 5 kg (11 lb.)	
	Heater	Yes	
	EMC	FCC (47 CFR Part 15, Subpart B); CE-EMC (EN 55032: 2015, EN 61000-3-2: 2014, EN 61000-3-3: 2013, EN 50130-4); RCM (AS/NZS CISPR 32:2015); IC (ICES-003: Issue 6, 2016); KC (KN 32: 2015, KN 35: 2015);	
	Approval	FCC (47 CFR Part 15, Subpart B); CE-EMC (EN 55032: 2015, EN 61000-3-2: 2014, EN 61000-3-3: 2013, EN 50130-4); RCM (AS/NZS CISPR 32:2015); IC (ICES-003: Issue 6, 2016); KC (KN 32: 2015, KN 35: 2015);	
	Safety	UL (UL 60950-1); CB (IEC 60950-1:2005 + Am 1:2009 + Am 2:2013); BIS (IS 13252 (Part 1): 2010+A1:2013+A2:2015); CE-LVD (EN 60950-1:2005 + Am 1:2009 + Am 2:2013);	
	Chemistry	CE-ROHS (2011/65/EU); REACH (Regulation (EC) No 1907/2006);	

		WEEE (2012/19/EU);	
	Protection	Ingress protection: IK10 (IEC 62262:2002), IP67 (IEC 60529-2013)	
	Fiber Optical Interface Type	NFC: FC interface	
	Optical Type	NFC: Single mode, single fiber	
	Input/output Wavelength	NFC: Tx1310nm/1.25G, Rx1550nm/1.25G	

Dome VF Camera 2.8-12mm

Qty 4	Item	Description	Bidders response
	Image Sensor	1/2.7" Progressive Scan CMOS	
	Min. Illumination	Color: 0.003 Lux @ (F1.4, AGC ON)	
	Day & Night	ICR Cut	
	Shutter Speed	/3 s to 1/100,000 s	
	Angle Adjustment	1 Pan: 0° to 355°, tilt: 0° to 75°, rotate: 0° to 355°	
	Slow Shutter	Yes	
	P/N	P/N	
	Wide Dynamic Range	120 dB	
	Power-off Memory	Yes	
	Lens Type & FOV	2.8 to 12 mm, horizontal FOV 108° to 30°, vertical FOV 56° to 17°, diagonal FOV 131° to 35°	
	Aperture	F1.4	
	Lens Mount	Ø 14	
	Aperture Type	Fixed	
	Focus	Auto	
	Illuminator		
	IR Range	Up to 40 m	
	Wavelength	850 nm	
	Smart Supplement Light	Yes	
	Supplement Light	IR	
	Video		
	Max. Resolution	2592 × 1944	
	Main Stream	50Hz: 20fps (2592 × 1944) 25fps (2688 × 1520, 2304 × 1296, 1920 × 1080, 1280 × 720) 60Hz: 20fps (2944 × 1656) 30fps (2688 × 1520, 2304 × 1296, 1920 × 1080, 1280 × 720)	
	Sub Stream	50Hz: 20fps (2592 × 1944) 25fps (2688 × 1520, 2304 × 1296, 1920 × 1080, 1280 × 720) 60Hz: 20fps (2944 × 1656)	

		30fps (2688 × 1520, 2304 × 1296, 1920 × 1080, 1280 × 720) 50Hz: 25fps (640 × 480, 640 × 360, 320 × 240) 60Hz: 30fps (640 × 480, 640 × 360, 320 × 240)	
	Third Stream	50Hz: 25fps (1280 × 720, 640 × 480, 640 × 360, 360 × 240) 60Hz: 30fps (1280 × 720, 640 × 480, 640 × 360, 360 × 240)	
	Video Compression	Main stream: H.265/H.264 Sub-stream: H.265/H.264/MJPEG Third stream: H.265/H.264	
	Video Bit Rate	32 Kbps to 8 Mbps	
	H.264 Type	Baseline Profile/Main Profile/High Profile	
	Main Profile	H.265 Type	
	H.264+	Main Stream supports	
	H.265+	Main Stream supports	
	Bit Rate Control	CBR/VBR	
	Scalable Video Coding (SVC)	Yes	
	Region of Interest (ROI)	1 fixed regions for each stream	
	Environment Noise Filtering	Yes	
	Audio Sampling Rate	8 kHz/16 kHz/32 kHz/44.1 kHz/48 kHz	
	Audio Compression	G.711ulaw/G.711alaw/G.722.1/G.726/M P2L2/PCM/MP3	
	Audio Bit Rate	64Kbps(G.711ulaw/G.711alaw)/ 16Kbps(G.722.1)/16Kbps(G.726)/32-192Kbps(MP2L2)/ 8-320Kbps(MP3)	
	Network Simultaneous Live View	Up to 6 channels	
	API	ONVIF (PROFILE S, PROFILE G, PROFILE T), ISAPI, SDK, ISUP	
	Protocols	TCP/IP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, RTSP, NTP, UPnP, SMTP, IGMP, 802.1X, QoS, IPv6, UDP, Bonjour, SSL/TLS	
	Smooth Streaming	Yes	
	User/Host	Up to 32 users. 3 user levels: administrator, operator and user	
	Security	Password protection, complicated	

		password, HTTPS encryption, IP address filter, Security Audit Log, basic and digest authentication for HTTP/HTTPS, TLS 1.2, WSSE and digest authentication for ONVIF	
	Network Storage	microSD/SDHC/SDXC card (256 GB) local storage, and NAS (NFS, SMB/CIFS), auto network replenishment (ANR) Together with high-end Hikvision memory card, memory card encryption and health detection are supported	
	Client	iVMS-4200, Hik-Connect, Hik-Central	
	Web Browser	microSD/SDHC/SDXC card (256 GB) local storage, and NAS (NFS, SMB/CIFS), auto network replenishment (ANR) Together with high-end Hikvision memory card, memory card encryption and health detection are supported Plug-in required live view: IE8+, Chrome 41.0-44, Firefox 30.0-51, Safari 8.0-11 Plug-in free live view: Chrome 57.0+, Firefox 52.0+	
	Image Day/Night Switch	Day, Night, Auto, Schedule	
	Image Enhancement	BLC, HLC, 3D DNR	
	Image Parameters Switch	Yes	
	Image Settings	Rotate mode, saturation, brightness, contrast, sharpness, gain, white balance adjustable by client software or web browser	
	Alarm	1 input, 1 output (max. 24 VDC/24 VAC @500 mA)	
	Audio	1 input (line in), 3.5 mm connector, max. input amplitude: 3.3 Vpp, input impedance: 4.7 K Ω , interface type: non-equilibrium; 1 output (line out), 3.5 mm connector, max. output amplitude: 3.3 Vpp, output impedance: 100 Ω , interface type: non-equilibrium	
	On-board	Built-in micro SD slot, up to 256 GB	

	Storage		
	Hardware Reset	Yes	
	Communication Interface	1 RJ45 10M/100M self-adaptive Ethernet port	
	Basic Event	Motion detection, video tampering alarm, exception (network disconnected, IP address conflict, illegal login, HDD full, HDD error), scene change detection	
	Face Capture	Yes	
	Premier Protection	Line crossing detection, intrusion detection, region entrance detection, region exiting detection	
	Storage Conditions	30 °C to 60 °C (-22 °F to 140 °F). Humidity 95% or less (non-condensing)	
	Startup and Operating Conditions	-30 °C to 60 °C (-22 °F to 140 °F). Humidity 95% or less (non-condensing)	
	Power Supply	12 VDC ± 25%, reverse polarity protection PoE: 802.3af, class 3	
	Power Consumption and Current	12 VDC, 0.9 A, max. 10.8 W PoE: (802.3af, 36 V to 57 V), 0.36 A to 0.23 A, max. 12.9 W	
	Power Interface	Two-core terminal block	
	Material	Metal	
	Camera Dimension	Ø 153.5 × 133.1 mm (6.0" × 5.2")	
	Package Dimension	244 × 174 × 173 mm (9.6" × 6.9" × 6.8")	
	Camera Weight	830 g (1.8 lb.)	
	With Package Weight	1709 g (3.8 lb.)	
	Linkage Method	Upload to NAS/memory card, notify surveillance center, trigger record, trigger capture, strobe light, audible warning *Note: External device is required.	
	Web Client Language	32 languages English, Russian, Estonian, Bulgarian, Hungarian, Greek, German, Italian, Czech, Slovak, French, Polish, Dutch, Portuguese, Spanish, Romanian, Danish, Swedish, Norwegian, Finnish, Croatian, Slovenian, Serbian, Turkish, Korean, Traditional Chinese,	

		Thai, Vietnamese, Japanese, Latvian, Lithuanian, Portuguese (Brazil)	
	General Function	Anti- flicker,heartbeat, mirror, privacy masks, flash log, password reset via e- mail, pixel Counter	
	Software Reset	Yes	
	EMC	FCC (47 CFR Part 15, Subpart B); CE- EMC (EN 55032: 2015, EN 61000-3-2: 2014, EN 61000-3-3: 2013, EN 50130-4: 2011 +A1: 2014); RCM (AS/NZS CISPR 32: 2015); IC (ICES-003: Issue 6, 2016); KC (KN 32: 2015, KN 35: 2015)	
	Safety	UL (UL 60950-1); CB (IEC 60950- 1:2005 + Am 1:2009 + Am 2:2013); CE- LVD (EN 60950-1:2005 + Am 1:2009 + Am 2:2013); BIS (IS 13252(Part 1):2010+A1:2013+A2:2015); LOA (IEC/EN 60950-1)	
	Environment	CE-ROHS (2011/65/EU); WEEE (2012/19/EU); REACH (Regulation (EC) No 1907/2006	
	Protection	Ingression protection: IP66 (IEC 60529- 2013), IK10(IEC 62262:2002)	

Vari focal dome bracket

Qty	Item	Specifications	Bidders response
2	Works with	Clare Vision Motorized Varifocal Dome Camera Clare Vision Motorized Varifocal Turret Camera	
	Color	White	
	Construction	Aluminum	
	Dimensions (W x H x D)	9.6 x 6.4 x 6.3 in (243.84 x 162.56 x 160.02 mm)	
	Weight	4.6 lb (2086.52 g)	

Copper cat 6

Qty	Item	Specifications	Bidders response
45boxes	Category	U/UTP CAT6-4P-PVC-CM	
	Test Standard	ISO/IEC11801、 TIA-568-C.YD/T1019	
	Conductor	Material SOLID-Bare Copper Nom.O.D.(mm)0.565up+0.005 down -0.005	
	Insulation	Material HDPE	
		Diameter 1.02±0.03mm	
	Sheath	Thickness 0.55±0.05 mm External 6.2±0.4 mm	

		O.D.	
		Surface	Clean, Frap, Satiation
		Material	PVC (complies RoHS), CM
		Color	Multiple
Surface Printing	Letter height	3.0±0.3mm	
	Color	Black	
	Print error & Space	≤±0.5%, 1m	
Core Color	1 White- Blue /Blue	2 White-Orange /Orange	
	3 White-Green /Green	4 White- Brown /Brown	
Packing	305±1.5m		
Rip-cord	Yes	Drain wire No	
Sheath Physical Properties	Tensile Strength		
	Before Aging (Mpa)	≥13.5	
	Elongation(%)	≥150	
	Aging Period (°C×hrs)	100°C×24h×10d	
	After Aging Tensile Strength(Mpa)	≥12.5	
	Elongation(%)	≥125	
	Cold bend(-20±2°C×4h)	8×Cable O.D., No visible cracks	
Electrical Characteristics (20°C)	1.0-250.0MHz Impedance ((Ω)	100±15	
	1.0-250.0MHz Delay Skew (ns/100m)	≤45	
	DC Resistance (Ω/100m) max	9.38	
	DC Conductor Resistance Unbalance (%) max	5.0	

QTY	ITEM	SPECIFICATIONS	BIDDERS RESPONSE
3	9U CABINET		
	Style	Wall Mounted	
	Rack Type	Wall-Mount	
	Installed Whole System Maximum Rack Depth (in.)	16.5	
	Installed Whole System Maximum	41.9	

	Rack Depth (cm)		
	Installed Whole System Minimum Rack Depth (in.)	3	
	Rack Height (U Spaces)	9	
	Shipping Dimensions (hwd in.)	22.6 x 26.4 x 20.5	
	Shipping Dimensions (hwd cm)	57.40 x 67.06 x 52.07	
	Shipping Weight (lbs.)	38.4	
	Shipping Weight (kg)	17.41	
	Unit Dimensions (hwd / in)	19.88 x 23.63 x 17.78	
	Unit Weight (lbs.)	35	
	Unit Weight (kg)	15.875	
	Unit Dimensions (cm)	50.49 x 60.02 x 45.16	
	Color	Black	
	Weight Capacity - Stationary (lbs.)	200	
	Weight Capacity - Stationary (kg)	90.7	
	Cable Access Hole Measurement (inches)	9.812 x 2.35 (l x w)	
	Grounding Lug	Front and Back door frames	
	Product Warranty Period (Worldwide)	5-year limited warranty	

Bullet VF Camera 2.8mm-12 mm

Qty	Item	Description	Bidders response
3	Image Sensor	1/2.7" Progressive Scan CMOS	
	Min. Illumination	Color: 0.003 Lux @ (F1.4, AGC ON)	
	Day & Night	ICR Cut	
	Shutter Speed	1/3 s to 1/100,000 s	
	Slow Shutter	Yes	
	Angle Adjustment	Pan: 0° to 355°, tilt: 0° to 90°, rotate: 0° to 360°	
	P/N	P/N	
	Wide Dynamic Range	120 dB	
	Power-off Memory	Yes	
	Lens Type & FOV	2.8 to 12 mm, horizontal FOV 108° to 30°, vertical FOV 56° to 17°, diagonal FOV 131° to 35°	
	Aperture	F1.4	
	Lens Mount	Ø 14	
	Aperture Type	Fixed	

Focus	Auto	
IR Range	Up to 60 m	
Wavelength	850 nm	
Smart Supplement Light	Yes	
Supplement Light	IR	
Max. Resolution	2592 × 1944	
Main Stream	50Hz: 20fps (2592 × 1944) 25fps (2688 × 1520, 2304 × 1296, 1920 × 1080, 1280 × 720) 60Hz: 20fps (2944 × 1656) 30fps (2688 × 1520, 2304 × 1296, 1920 × 1080, 1280 × 720)	
Sub Stream	50Hz: 25fps (640 × 480, 640 × 360, 320 × 240) 60Hz: 30fps (640 × 480, 640 × 360, 320 × 240)	
Third Stream	50Hz: 25fps (1280 × 720, 640 × 480, 640 × 360, 360 × 240) 60Hz: 30fps (1280 × 720, 640 × 480, 640 × 360, 360 × 240)	
Video Compression	Main stream: H.265/H.264 Sub-stream: H.265/H.264/MJPEG Third stream: H.265/H.264	
Video Bit Rate	32 Kbps to 8 Mbps	
H.264 Type	Baseline Profile/Main Profile/High Profile	
H.265 Type	Main Profile	
H.264+	Main Stream supports	
H.265+	Main Stream supports	
Bit Rate Control	CBR/VBR	
Scalable Video Coding (SVC)	Yes	
Region of Interest (ROI)	1 fixed regions for each stream	
Environment Noise Filtering	Yes	
Audio Sampling Rate	8 kHz/16 kHz/32 kHz/44.1 kHz/48 kHz	
Audio Compression	G.711ulaw/G.711alaw/G.722.1/G.726/MP2L2/PCM/MP3	
Audio Bit Rate	64Kbps(G.711ulaw/G.711alaw)/16Kbps(G.722.1)/16Kbps(G.726)/32-192Kbps(MP2L2)/ 8-320Kbps(MP3)	
Simultaneous Live View	Up to 6 channels	
API	ONVIF (PROFILE S, PROFILE G, PROFILE T), ISAPI, SDK, ISUP	

Protocols	TCP/IP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, RTSP, NTP, UPnP, SMTP, IGMP, 802.1X, QoS, IPv6, UDP, Bonjour, SSL/TLS	
Smooth Streaming	Yes	
User/Host	Up to 32 users. 3 user levels: administrator, operator and user	
Security	Password protection, complicated password, HTTPS encryption, IP address filter, Security Audit Log, basic and digest authentication for HTTP/HTTPS, TLS 1.2, WSSE and digest authentication for ONVIF	
Network Storage	microSD/SDHC/SDXC card (256 GB) local storage, and NAS (NFS, SMB/CIFS), auto network replenishment (ANR) Together with high-end Hikvision memory card, memory card encryption and health detection are supported	
Client	iVMS-4200, Hik-Connect, Hik-Central	
Web Browser	Plug-in required live view: IE8+, Chrome 41.0-44, Firefox 30.0-51, Safari 8.0-11 Plug-in free live view: Chrome 57.0+, Firefox 52.0+	
Day/Night Switch	Day, Night, Auto, Schedule	
Image Enhancement	BLC, HLC, 3D DNR	
Image Parameters Switch	Yes	
Image Settings	Rotate mode, saturation, brightness, contrast, sharpness, gain, white balance adjustable by client software or web browser	
Alarm	1 input, 1 output (max. 24 VAC/24 VDC @500 mA)	
Audio	1 input (line in), 3.5 mm connector, max. input amplitude: 3.3 Vpp, input impedance: 4.7 K Ω , interface type: non-equilibrium; 1 output (line out), 3.5 mm connector, max. output amplitude: 3.3 Vpp, output impedance: 100 Ω , interface type: non-equilibrium	
On-board Storage	Built-in micro SD slot, up to 256 GB	
Hardware Reset	Yes	
Communication Interface	1 RJ45 10M/100M self-adaptive Ethernet port	
Basic Event	Motion detection, video tampering alarm, exception (network disconnected, IP address conflict, illegal login, HDD full, HDD error), scene change detection	
Face Capture	Yes	

Premier Protection	Line crossing detection, intrusion detection, region entrance detection, region exiting detection	
Storage Conditions	-30 °C to 60 °C (-22 °F to 140 °F). Humidity 95% or less (non-condensing)	
Startup and Operating Conditions	-30 °C to 60 °C (-22 °F to 140 °F). Humidity 95% or less (non-condensing)	
Power Supply	12 VDC ± 25%, reverse polarity protection	
Power Consumption and Current	PoE : 802.3at, class 4	
	12 VDC, 1.12 A, max. 13.5 W PoE: (802.3at, 42.5 V to 57 V), 0.5 A to 0.3 A, max. 15 W	
Power Interface	Two-core terminal plug	
Material	ADC12	
Camera Dimension	Ø 144 × 333 mm (5.7" × 13.1")	
Package Dimension	385 × 190 × 180 mm (15.2" × 7.5" × 7.1")	
Camera Weight	1450 g (3.2 lb.)	
With Package Weight	2589 g (5.7 lb.)	
Linkage Method	Upload to NAS/memory card, notify surveillance center, trigger record, trigger capture, strobe light, audible warning *Note: External device is required.	
Web Client Language	32 languages English, Russian, Estonian, Bulgarian, Hungarian, Greek, German, Italian, Czech, Slovak, French, Polish, Dutch, Portuguese, Spanish, Romanian, Danish, Swedish, Norwegian, Finnish, Croatian, Slovenian, Serbian, Turkish, Korean, Traditional Chinese, Thai, Vietnamese, Japanese, Latvian, Lithuanian, Portuguese (Brazil)	
General Function	Anti- flicker, heartbeat, mirror, privacy masks, flash log, password reset via e-mail, pixel counter	
Software Reset	Yes	
EMC	FCC (47 CFR Part 15, Subpart B); CE-EMC (EN 55032: 2015, EN 61000-3-2: 2014, EN 61000-3-3: 2013, EN 50130-4: 2011 +A1: 2014); RCM (AS/NZS CISPR 32: 2015); IC (ICES-003: Issue 6, 2016); KC (KN 32: 2015, KN 35: 2015)	

	Safety	UL (UL 60950-1); CB (IEC 60950-1:2005 + Am 1:2009 + Am 2:2013); CE-LVD (EN 60950-1:2005 + Am 1:2009 + Am 2:2013); BIS (IS 13252(Part 1):2010+A1:2013+A2:2015); LOA (IEC/EN 60950-1)	
	Environment	CE-RoHS (2011/65/EU); WEEE (2012/19/EU); Reach (Regulation (EC) No 1907/2006)	
	Protection	Ingression protection: IP66 (IEC 60529-2013), IK10 (IEC 62262:2002)	

4mp dome camera (audio)

Qty	Item	Description	Bidders offer
2	Image Sensor	1/2.7" Progressive Scan CMOS	
	Min. Illumination	Color: 0.007 Lux @ (F1.2, AGC ON), 0.012 Lux @ (F1.6, AGC ON)	
	Shutter Speed	1/3 s to 1/100,000 s	
	Slow Shutter	Yes	
	Focal length	2.8/4/6 mm	
	Focus	Fixed	
	Aperture	F1.6	
	FOV	2.8 mm, horizontal FOV: 104°, vertical FOV: 58°, diagonal FOV: 124° 4 mm, horizontal FOV: 83°, vertical FOV: 44°, diagonal FOV: 99° 6 mm, horizontal FOV: 51°, vertical FOV: 28°, diagonal FOV: 58°	
	Lens Mount	M12	
	Auto-Iris	No	
	Day & Night	IR cut filter	
	DNR	3D DNR	
	Wide Dynamic Range	120dB	
	3-Axis Adjustment	Pan: 0° to 355°, tilt: 0° to 75°, rotate: 0° to 355°	
	IR Range	Up to 30 m	
	Wavelength	850 nm	
	Video Compression	Main stream: H.265/H.264 Sub stream: H.265/H.264/MJPEG	
	H.264 Type	Main Profile/High Profile	
	H.264+	No	
	H.265 Type	Main Profile	
	H.265+	No	
	Video Bit Rate	32 Kbps to 16 Mbps	
	SVC	H.265 encoding and H.264 encoding support	
	Max. Resolution	2688 × 1520	
	Main Stream	50Hz: 25 fps (2688 × 1520, 1920 × 1080, 1280 × 720) 60Hz: 30 fps (2688 × 1520, 1920 × 1080, 1280 × 720)	

	Sub Stream	50Hz: 25 fps (704 × 576, 640 × 480, 352 × 288) 60Hz: 30 fps (704 × 480, 640 × 480, 352 × 240)	
	Image Enhancement	BLC/3D DNR	
	Image Settings	Saturation, brightness, contrast, sharpness, AGC, white balance adjustable by client software or web browser	
	ROI (Region of Interest)	Support 1 fixed region for main stream and sub stream separately	
	Day/Night Switch	Day/Night/Auto/Schedule/Triggered by Alarm In(-S)	
	Environment Noise Filtering	Yes	
	Sampling Rate	8kHz/16kHz	
	Audio Compression	G.711/G.722.1/G.726/MP2L2/PCM	
	Audio Bit Rate	64Kbps(G.711)/16Kbps(G.722.1)/16Kbps(G.726)/32-160Kbps(MP2L2)	
	Network Storage	Support micro SD/SDHC/SDXC card (128G) local storage, NAS (NFS,SMB/CIFS), ANR	
	Alarm Trigger	Tampering alarm, network disconnected, IP address conflict, illegal login, HDD full HDD error	
	Protocols	TCP/IP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, RTSP, RTCP, PPPoE, NTP, UPnP, SMTP, SNMP, IGMP, 802.1X, QoS, IPv6, UDP, Bonjour	
	General Function	One-key reset, anti-filter	
	Firmware Version	V5.5.61	
	API	ONVIF (PROFILE S, PROFILE G), ISAP	
	Simultaneous Live View	Up to 6 channels	
	User/Host	Up to 32 users 3 levels: Administrator, Operator and User	
	Client	iVMS-4200, Hik-Connect, iVMS-5200, iVMS-4500	
	Web Browser	IE8+, Chrome 31.0-44, Firefox 30.0-51, Safari 8.0+	
	Communication Interface	1 RJ45 10M/100M self-adaptive Ethernet port	
	On-board Storage	Built-in micro SD/SDHC/SDXC slot, up to 128 GB	
	Reset Button	Yes	
	Audio (-S)	1 audio input (line in/mic in), 1 audio output, mono sound	
	Alarm (-S)	1 alarm input, 1 alarm output	
	Behavior Analysis	Line crossing detection, intrusion detection, region entrance detection, region exit detection, false alarm filter by target	

		classification	
	Operating Conditions	30 °C to +50 °C (-22 °F to +122 °F), humidity 95% or less (non-condensing)	
	Power Supply	12 VDC ± 25%, 5.5 mm coaxial power Plug PoE (802.3af, class 3)	
	Power Consumption	12 VDC, 0.7 A, max: 8.5 W PoE (802.3af, 36 V to 57 V), 0.3 A to 0.2 A max: 10 W	
	Protection Level	IK10, IP67 (If the camera is installed outdoor, the bracket DS-1253ZJ-M should be used together with other pendant mounting bracket or wall mounting bracket to reduce IR reflective in the rainy day)	
	Material	Front cover: metal, back cover: metal	
	Dimensions	Camera: Φ 121.4 × 92.2 mm (Φ 4.8" × 3.6")	
	Weight	Camera: 600 g (1.3 lb.) With package: 760 g (1.7 lb.)	

Dome bracket

Quantity	Item	Description	Bidders offer
1	Parameter	Wall Mounting Bracket for Dome Camera (with adaptor plate)	
	Appearance	Hik White	
	Range of Application	Suitable for dome camera wall mounting	
	Material	Aluminum Alloy	
	Dimension	132×183.5×228.5mm	
	Weight	870g	

ANPR Number plate

Qty	Item	Description	Bidders offer
2	Image Sensor	1/1.8" Progressive Scan CMOS	
	Min. Illumination	Color: 0.002 Lux @ (F1.2, AGC ON), 0 Lux with IR	
	Shutter Speed	1 s to 1/100,000 s	
	Slow Shutter	Yes	
	Day & Night	IR Cut Filter	
	Digital Noise Reduction	3D DNR	
	WDR	140 dB	
	Angle Adjustment	Bracket, pan: 0° to 355°, tilt: 0° to 90°, rotate: 0° to 360°	
	Focal length	2.8 to 12 mm 8 to 32 mm	
	Aperture	2.8 to 12 mm: F1.2 8 to 32 mm: F1.6	
	Focus	Auto, semi-auto, manual	
	FOV	2.8 to 12 mm: horizontal FOV 103.3° to 38.6°, vertical FOV 54.2° to 21.9°, diagonal FOV	

	124.2° to 44.3° 8 to 32 mm: horizontal FOV 42.5° to 13.4°, vertical FOV 23.4° to 7.7°, diagonal FOV 49° to 15.3°	
Lens Mount	Integrated	
IR Range	2.8 to 12 mm: up to 50 m 8 to 32 mm: up to 100 m	
Wavelength	850 nm	
Video Compression	Main stream: H.265/H.264/H.265+/H.264+ Sub stream/third stream/fourth stream/fifth stream/custom stream: H.265/H.264/MJPEG	
H.264 Type	Baseline Profile/Main Profile/High Profile	
H.264+	Main stream supports	
H.265 Type	Main Profile	
H.265+	Main stream supports	
Video Bit Rate	32 Kbps to 16 Mbps	
Audio Compression	No	
Audio Bit Rate	No	
Perimeter Protection	Line crossing detection, intrusion detection, region entrance detection, region exiting detection, unattended baggage detection, object removal detection	
Exception Detection	Scene change detection, defocus detection	
Statistics	No	
Face Detection	Yes	
Recognition	License Plate Recognition	
Region of Interest	4 fixed regions for main stream, sub stream, third stream, fourth stream, and fifth stream, and dynamic tracking	
Accuracy (Under recommended installation and lighting conditions)	Capture rate > 98% Vehicle moving direction recognition accuracy > 96% Mistaken capture rate < 2% (entrance/exit), < 5% (checkpoint)	
Blocklist and Allowlist	Max. 10,000 records	
No License Plate Detection	Yes	
Motorcycle LPR	Yes (only applicable to checkpoint)	
Max. Resolution	1920 × 1080	
Main Stream	50Hz: 25fps (1920 × 1080,	

	1280 × 960, 1280 × 720) 60Hz: 30fps (1920 × 1080, 1280 × 960, 1280 × 720)	
Sub Stream	50Hz: 25fps (704 × 576, 640 × 480) 60Hz: 30fps (704 × 480, 640 × 480)	
Third Stream	50Hz: 25fps (1920 × 1080, 1280 × 960, 1280 × 720, 704 × 576, 640 × 480) 60Hz: 30fps (1920 × 1080, 1280 × 960, 1280 × 720, 704 × 480, 640 × 480)	
Fourth Stream	50Hz: 25fps (1920 × 1080, 1280 × 960, 1280 × 720, 704 × 576, 640 × 480) 60Hz: 30fps (1920 × 1080, 1280 × 960, 1280 × 720, 704 × 480, 640 × 480) 50Hz: 25fps (1920 × 1080, 1280 × 720, 704 × 576, 640 × 480) 60Hz: 30fps (1920 × 1080, 1280 × 720, 704 × 480, 640 × 480)	
Fifth Stream	50Hz: 25fps (704 × 576, 640 × 480) 60Hz: 30fps (704 × 480, 640 × 480)	
Custom Stream	50Hz: 25fps (1920 × 1080, 1280 × 720, 704 × 576, 640 × 480) 60Hz: 30fps (1920 × 1080, 1280 × 720, 704 × 480, 640 × 480)	
Image Enhancement	BLC, HLC, 3D DNR, Defog, EIS, lens distortion correction	
Image Setting	Rotate mode, saturation, brightness, contrast, sharpness, AGC, and white balance are adjustable by client software or web browser	
Target Cropping	Yes	
SVC	H.264 and H.265 encoding	
Day/Night Switch	Day/Night/Auto/Schedule/Trig gered by Alarm In/ Triggered by video	
Picture Overlay	LOGO picture can be overlaid	

	on video with 128 × 128 24bit bmp format	
Network Storage	microSD/SDHC/SDXC card (256 GB), local storage and NAS (NFS, SMB/CIFS), ANR	
Alarm Trigger	Motion detection, video tampering alarm, network disconnected, IP address conflict, illegal login, HDD full, HDD error, alarm for listed license plate in the blacklist and allowlist	
Protocols	TCP/IP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, RTSP, RTCP, PPPoE, NTP, UPnP, SMTP, SNMP, IGMP, 802.1X, QoS, IPv6, UDP, Bonjour	
Security Measures	Password protection, HTTPS encryption, IEEE 802.1x port-based network access control, IP address filter, basic and digest authentication for HTTP/HTTPS, WSSE and digest authentication for ONVIF	
General Function	One-key reset, anti-flicker, five streams and custom stream, heartbeat, password protection, privacy mask, watermark, IP address filter	
API	ONVIF (PROFILE S, PROFILE G), ISAPI, SDK	
Simultaneous Live View	Up to 20 channels	
User/Host	Up to 32 users. 3 user levels: administrator, operator and user	
Client	iVMS-4200, Hik-Connect, iVMS-5200, Hik-Central	
Web Browser	One-key reset, anti-flicker, five streams and custom stream, heartbeat, password protection, privacy mask, watermark, IP address filter Plug-in required live view: IE8+, Chrome31.0-44, Mozilla Firefox30.0-51, Safari8.0+ Plug-in free live view: Chrome45+, Mozilla Firefox52+	
Audio	No	

Communication Interface	1 RJ45 10M/100M/1000M Ethernet port, 1 RS-485 interface (half duplex, HIKVISION, Pelco-P, Pelco-D, self-adaptive)	
Alarm	2 inputs, 2 outputs (up to 24 VDC 1A or 110 VAC 500 mA)	
Video Output	1Vp-p composite output (75 Ω /CVBS)	
On-board storage	Built-in micro SD/SDHC/SDXC slot, up to 256 GB	
BNC	CVBS analog output (4CIF resolution), internal	
Reset Button	Yes	
Environment Noise Filtering	No	
Audio Sampling Rate	No	
Firmware Version	5.5.60	
Operating Conditions	-30 °C to 60 °C (-22 °F to 140 °F), -H: -40 °C to 60 °C (-40 °F to 140 °F) Humidity 95% or less (non-condensing)	
Power Supply	12 VDC \pm 20%, two-core terminal block PoE (802.3at, class 4)	
Power Consumption and Current	-IZS: 12 VDC, 1.2 A, max. 14 W; PoE (802.3at, 42.5 V to 57 V), 0.4 A to 0.3 A -IZHS: 12 VDC, 1.4 A, max. 16.5 W; PoE (802.3at, 42.5 V to 57 V), 0.4 A to 0.3 A	
Protection Level	IP67, IK10	
Heater	-H: yes	
Material	Aluminum alloy	
Dimensions	Camera: Φ 140 \times 351 mm (Φ 5.5" \times 13.8") With package: 405 \times 190 \times 180 mm (15.9" \times 7.5" \times 7.1")	
Weight	Camera: approx. 2.5 kg (5.51 lb.) With package: approx. 2.75 kg (6.06 lb.)	

Bullet 4mm Colorvu 24/7 coloured

Qty	Item	Specifications	Bidders Response
	4mp colorvu		
1	Image Sensor	Progressive Scan CMOS1/1.8"	
	Min. Illumination	0.0014 @ F1.0 (1/30 s, AGC ON), 0.002 @ F1.2 (1/30 s, AGC ON), 0 Lux with LED on	

Shutter Speed	1/3 s to 1/100,000 s	
Slow Shutter	Yes	
Focal length	4/6 mm	
Focus	Fixed	
Aperture	F1.0	
FOV	4 mm, horizontal FOV: 89°, vertical FOV: 46°, diagonal FOV: 107.5° 6 mm, horizontal FOV: 54°, vertical FOV: 29°, diagonal FOV: 63°	
Lens Mount	M16	
Auto-Iris	No	
DNR	3D DNR	
Wide Dynamic Range	120dB	
Angle Adjustment	Pan: 0° to 360°, tilt: 0° to 90°	
Video Compression	Main stream: H.265/H.264 Sub stream: H.265/H.264/MJPEG Third stream: H.265/H.264	
H.264 Type	Baseline Profile/Main Profile/High Profile	
H.264+	Main stream supports	
H.265 Type	Main Profile	
H.265+	Main stream supports	
Video Bit Rate	32 Kbps to 8 Mbps	
Max. Resolution	2560 × 1440	
Main Stream	50Hz: 25fps (2560 × 1440, 1920 × 1080, 1280 × 720) 60Hz: 24fps (2560 × 1440), 30fps (2304 × 1296, 1920 × 1080, 1280 × 720)	
Sub Stream	50Hz: 25fps (640 × 480, 640 × 360, 320 × 240) 60Hz: 30fps (640 × 480, 640 × 360, 320 × 240)	
Third stream	50Hz: 1fps (1280 × 720, 640 × 480, 640 × 360, 352 × 288, 320 × 240) 60Hz: 1fps (1280 × 720, 640 × 480, 640 × 360, 352 × 288, 320 × 240)	
Image Enhancement	BLC/3D DNR/HLC/Defog	
Image Settings	Rotate mode, saturation, brightness, contrast, sharpness, AGC, white balance adjustable by client software or web browser	
ROI (Region of Interest)	No	
Network Storage	Support micro SD/SDHC/SDXC card (128G) local storage, NAS (NFS,SMB/CIFS), ANR	
Alarm Trigger	Motion detection, video tampering detection, network disconnected, IP address conflict, illegal login, HDD full, HDD error	
Protocols	TCP/IP, ICMP, HTTP, HTTPS, FTP,	

		DHCP, DNS, DDNS, RTP, RTSP, RTCP, PPPoE, NTP, UPnP, SMTP, SNMP, IGMP, 802.1X, QoS, IPv6, UDP, Bonjour	
	General Function	One-key reset, three streams, heartbeat, mirror, password protection, privacy mask, watermark, IP address filter	
	Firmware Version	V5.5.53	
	API	ONVIF (PROFILE S, PROFILE G), ISAPI	
	Simultaneous Live View	Up to 6 channels	
	User/Host	Up to 32 users 3 levels: Administrator, Operator and User	
	Client	iVMS-4200, Hik-Connect, iVMS-4500, iVMS-5200	
	Web Browser	IE8+, Chrome 31.0-44, Firefox 30.0-51, Safari 8.0+	
	Communication Interface	1 RJ45 10M/100M self-adaptive Ethernet port	
	On-board Storage	Built-in micro SD/SDHC/SDXC slot, up to 128 GB	
	Reset Button	Yes	
	SVC	H.265 encoding and H.264 encoding support	
	Behavior Analysis	Line crossing detection, intrusion detection	
	Operating Conditions	-30 °C to +60 °C (-22 °F to +140 °F), humidity 95% or less (non-condensing)	
	Power Supply	12 VDC ± 25%, 5.5 mm coaxial power plug PoE (802.3af, class 3)	
	Power Consumption	12 VDC, 0.5 A, max: 6 W PoE: (802.3af, 36 V to 57 V), 0.3 A to 0.1 max: 7.5 W	
	Visible Light Range	Warm white LEDs (3000K), up to 30m	
	Protection Level		
	Accessory	The wall mount is included in the package, and the wall mount model is DS-1292ZJ	
	Material	Front cover: metal, back cover: metal	
	Dimensions	Camera: 114 × 110 × 220 mm (4.5" × 4.3" × 8.7")	
	Weight	Camera: 920 g (2 lb.)	

4mp Bullet 4mm

Qty	Item	Description	Bidders response
12	Image Sensor	1/3" Progressive Scan CMOS	
	Min. Illumination	Color: 0.003 Lux @ (F1.4, AGC ON), B/W: 0 Lux with IR	

Shutter Speed	1/3 s to 1/100,000 s	
Day & Night	IR cut filter	
Angle Adjustment	Pan: 0° to 360°, tilt: 0° to 90°, rotate: 0° to 360°	
Slow Shutter	Yes	
P/N	P/N	
Wide Dynamic Range	120 dB	
Lens Type	Fixed focal lens, 2.8, 4, and 6 mm optional	
Focal Length & FOV	2.8 mm, horizontal FOV 103°, vertical FOV 55°, diagonal FOV 123° 4 mm, horizontal FOV 83°, vertical FOV 45°, diagonal FOV 98° 6 mm, horizontal FOV 53°, vertical FOV 28°, diagonal FOV 62°	
Aperture	F1.4	
Lens Mount	M12	
Iris Type	Fixed	
DORI	2.8 mm: D: 60.0 m, O: 23.8 m, R: 12.0 m, I: 6.0 m 4 mm: D: 80.0 m, O: 31.7 m, R: 16.0 m, I: 8.0 m 6 mm: D: 120.0 m, O: 47.6 m, R: 24.0 m, I: 12.0	
IR Range	Up to 40 m	
IR Wavelength	850 nm	
Smart Supplement Light	Yes	
Supplement Light Type	IR	
Max. Resolution	2688 × 1520	
Main Stream	50 Hz: 25 fps (2688 × 1520, 1920 × 1080, 1280 × 720) 60 Hz: 30 fps (2688 × 1520, 1920 × 1080, 1280 × 720)	
Sub-Stream	50 Hz: 25 fps (640 × 480, 640 × 360) 60 Hz: 30 fps (640 × 480, 640 × 360)	
Third Stream	50 Hz: 10 fps (1920 × 1080, 1280 × 720, 640 × 480, 640 × 360) 60 Hz: 10 fps (1920 × 1080, 1280 × 720, 640 × 480, 640 × 360) *Third stream is supported under certain settings.	
Video Compression	Main stream: H.265/H.264/H.265+/H.264+ Sub-stream: H.265/H.264/MJPEG Third stream: H.265/H.264 *Third stream is supported under certain settings.	
Video Bit Rate	32 Kbps to 8 Mbps	
H.264 Type	Baseline Profile/Main Profile/High Profile	

	H.265 Type	Main Profile	
	H.264+	Main stream supports	
	H.265+	Main stream supports	
	Bit Rate Control	CBR/VBR	
	Scalable Video Coding (SVC)	H.264 and H.265 encoding	
	Region of Interest (ROI)	1 fixed region for main stream and sub-stream	
	Environment Noise Filtering	-U: Yes	
	Audio Sampling Rate	-U: 8 kHz/16 kHz/32 kHz/44.1 kHz/48 kHz	
	Audio Compression	-U: G.711ulaw/G.711alaw/G.722.1/G.726/MP2L2/PCM/MP3/AAC	
	Audio Bit Rate	-U: 64 Kbps (G.711ulaw/G.711alaw)/16 Kbps (G.722.1)/16 Kbps (G.726)/32 to 192 Kbps (MP2L2)/8 to 320 Kbps (MP3)/16 to 64 Kbps (AAC)	
	Simultaneous Live View	Up to 6 channels	
	API	Open Network Video Interface (PROFILE S, PROFILE G, PROFILE T), ISAPI, SDK	
	Protocols	TCP/IP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, RTSP, NTP, UPnP, SMTP, IGMP, 802.1X, QoS, IPv4, IPv6, UDP, Bonjour, SSL/TLS, PPPoE, SNMP, ARP	
	User/Host	Up to 32 users. 3 user levels: administrator, operator and user	
	Security	Password protection, complicated password, HTTPS encryption, IP address filter, Security Audit Log, basic and digest authentication for HTTP/HTTPS, TLS 1.1/1.2, WSSE and digest authentication for Open Network Video Interface	
	Network Storage	MicroSD/SDHC/SDXC card (256 GB) local storage, and NAS (NFS, SMB/CIFS), auto network replenishment (ANR) Together with high-end Hikvision memory card, memory card encryption and health detection are supported.	
	Client	iVMS-4200, Hik-Connect, Hik-Central	
	Web Browser	Plug-in required live view: IE 10+ Plug-in free live view: Chrome 57.0+, Firefox 52.0+	

		Local service: Chrome 57.0+, Firefox 52.0+	
	SNR	≥ 52 dB	
	Day/Night Switch	Day, Night, Auto, Schedule	
	Image Enhancement	BLC, HLC, 3D DNR	
	Image Parameters Switch	Yes	
	Image Settings	Rotate mode, saturation, brightness, contrast, sharpness, gain, white balance adjustable by client software or web browser	
	Built-in Microphone	-U: Yes	
	On-Board Storage	Built-in micro SD/SDHC/SDXC slot, up to 256 GB	
	Hardware Reset	Yes	
	Ethernet Interface	1 RJ45 10 M/100 M self-adaptive Ethernet port	
	Basic Event	Motion detection (human and vehicle targets classification), video tampering alarm, exception	
	Smart Event	Scene change detection	
	Face Capture	Yes	
	Perimeter Protection	Line crossing detection, intrusion detection, region entrance detection, region exiting detection	
	Storage Conditions	30 °C to 60 °C (-22 °F to 140 °F). Humidity 95% or less (non-condensing)	
	Startup and Operating Conditions	30 °C to 60 °C (-22 °F to 140 °F). Humidity 95% or less (non-condensing)	
	Power Supply	12 VDC ± 25%, reverse polarity protection PoE: 802.3af, Class 3	
	Power Consumption and Current	12 VDC, 0.5 A, max. 6.0 W PoE (802.3af, 36 V to 57 V), 0.2 A to 0.13 A, max. 7.0 W	
	Power Interface	Ø 5.5 mm coaxial power plug	
	Camera Material	ADC12	
	Camera Dimension	Ø 70 mm × 161.7 mm (Ø 2.8" × 6.4")	
	Package Dimension	216 mm × 121 mm × 118 mm (8.5" × 4.8" × 4.6")	
	Camera Weight	Approx. 485 g (1.1 lb.)	
	With Package Weight	Approx. 724 g (1.6 lb.)	

	Linkage Method	Upload to NAS/memory card/FTP, notify surveillance center, trigger recording, trigger capture, send email	
	Web Client Language	33 languages English, Russian, Estonian, Bulgarian, Hungarian, Greek, German, Italian, Czech, Slovak, French, Polish, Dutch, Portuguese, Spanish, Romanian, Danish, Swedish, Norwegian, Finnish, Croatian, Slovenian, Serbian, Turkish, Korean, Traditional Chinese, Thai, Vietnamese, Japanese, Latvian, Lithuanian, Portuguese (Brazil), Ukrainian	
	General Function	Anti-flicker, heartbeat, mirror, privacy mask, flash log, password reset via email, pixel counter	
	Software Reset	Yes	
	Firmware Version	V5.5.112	
	EMC	FCC (47 CFR Part 15, Subpart B); CE-EMC (EN 55032: 2015, EN 61000-3-2: 2014, EN 61000-3-3: 2013, EN 50130-4: 2011 + A1: 2014); RCM (AS/NZS CISPR 32: 2015); KC (KN 32: 2015, KN 35: 2015)	
	Safety	UL (UL 60950-1); CB (IEC 60950-1: 2005 + Am 1: 2009 + Am 2: 2013); CE-LVD (EN 60950-1: 2005 + Am 1: 2009 + Am 2: 2013); LOA (IEC/EN 60950-1)	
	Environment	CE-RoHS (2011/65/EU); WEEE (2012/19/EU); Reach (Regulation (EC) No 1907/2006)	
	Protection	IP67 (IEC 60529-2013)	

Multi-Mode fiber

Qty	Items	Description					Bidders response
200m	Fibre	Multimode fibre	50/125 µm	50/125 µm	50/125 µm	62.5/125 µm	
		(ITU-T G651)	OM4	OM3	OM2	OM1	

		Attenuation @ 850 nm dB/km	≤ 3.5 (2.5)	≤ 3.5 (2.5)	≤ 3.5 (2.5)	≤ 3.5 (3.0)
		Attenuation @ 1300 nm dB/km	≤ 1.5 (0.7)	≤ 1.5 (0.7)	≤ 1.5 (0.7)	≤ 1.5 (0.7)
		Bandwidth @ 850 nm MHz-km	≥ 3500	≥ 1500	≥ 500	≥ 200
		Bandwidth @ 1300 nm MHz-km	≥ 500	≥ 500	≥ 500	≥ 500
		Numerical aperture	0.2 ± 0.015	0.2 ± 0.015	0.2 ± 0.015	0.275 ± 0.015
		Core diameter μm	50 ± 2.0	50 ± 2.0	50 ± 2.0	62.5 ± 2.5
		Cladding diameter μm	125 ± 1.0	125 ± 1.0	125 ± 1.0	125 ± 2
		Primary coating diameter μm	242 ± 5	242 ± 5	242 ± 5	245 ± 10

SFP Module 10/100/1000

Qty	Item	Description	Bidders response
20	Fiber type	SMF, duplex fiber, 9/125um	
	Connector	LC	
	Date Rate	1250 Mbps	
	Connector quantity	2	
	Distance	0~20km	
	Wavelength	Tx1310nm/Rx1310nm	
	TX Power	-6~-1dBm	
	RX Sens (Max.)	-21dBm	
	Operating temperature	0~70°C	
	Storage temperature	-40~85°C	
	Relative humidity	30~80%	
	Power supply voltage	DC 3.3V	

**SCHEDULE OF REQUIREMENTS AND DELIVERY
DELIVERY POINT: REREC KAWI HOUSE**

Number	Item Description	Type	Quantity	REREC Requirement	Bidders response
1.	Camera	4mp Dome camera 2.8mm	14	1 Month	
2.	Video wall screen		8	1 Month	
3.	Video wall monitoring brackets		8	1 Month	
4.	Smart video wall plate		4	1 Month	
5.	Video wall decoder		2	1 Month	
6.	24 port switch	Giga	4	1 Month	
7.	16 port switch	Giga	3	1 Month	
8.	Management software	with 300 channel license	1	1 Month	
9.	Smart wall module(4 by 2)		1	1 Month	
10	Professional ANPR Module		2	1 Month	
11.	Video management Server		1	1 Month	
12.	Core switch		1	1 Month	
13	Streaming server		1	1 Month	
14.	Workstation		5	1 Month	
15.	Central Storage device	SAN	1	1 Month	
16	Monitoring screen	55 inch	2	1 Month	
17.	screen bracket video wall base		2	1 Month	
18	NVR	64 channels	1	1 Month	
19.	6mm bullet	80metres	3	1 Month	
	6mm bullet	50metres	11		
20.	PTZ 4mp		2	1 Month	
21.	Pole bracket		2	1 Month	
22.	UPS	5KVA	3	1 Month	
23.	UPS	3KVA	3	1 Month	
24.	Panovu camera 8mp	dome	2	1 Month	
25.	Dome VF camera 2.8mm-12mm	Dome vf	4	1 Month	
26	Dome Bracket	Vari focal	2	1 Month	
27.	Cat 6 cable pure copper		45boxes	1 Month	
28	9u cabinet		3	1 month	
29	Bullet VF camera 2.8mm-12mm	Bullet VF	3	1 Month	
30	camera	4mp dome 2.8mm audio	2	1 Month	
31	Dome bracket		1	1 Month	
32	Anpr number plate	Anpr 2mp	2	1 Month	
33	Bullet 4mm	Colorvu 24/7 coloured	1	1 Month	
34	Bullet	4mp Bullet 4mm	12	1 Month	
35	Fibre Cable		200m	1Month	
36	Sfp Modules		20	1Month	

SECTION VII

PART A

PRICE SCHEDULE FOR - SUPPLY, INSTALLATION AND MAINTENANCE OF CCTV AT REREC MWEIGA STORE FOR ONE YEAR

	Description	TOTAL KSHS (VAT EXCLUSIVE)	TOTAL KSHS (VAT INCLUSIVE)
PART A	Supply, Installation And Maintenance Of CCTV System At REREC Mweiga Store (This is the price to be quoted online)		
Total Quote for the tender to be Entered under items tab in the system			

**PART B
PRICE SCHEDULE FOR – ANNUAL MAINTENANCE OF CCTV AT REREC MWEIGA
STORE**

Bidders are advised to quote for the maintenance services and replaceable parts. These prices shall be used during maintenance period.

MAINTENANCE SERVICES

	Description	TOTAL KSHS (VAT EXCLUSIVE)	TOTAL KSHS (VAT INCLUSIVE)
PART B	Quotation for annual maintenance of the CCTV (The price is exclusive of the replaceable parts)		
TOTAL QUOTE			

PART C

REPLACEABLE PARTS

	Description	TOTAL KSHS (VAT EXCLUSIVE)	TOTAL KSHS (VAT INCLUSIVE)
TOTAL QUOTE			

SECTION VIII

STANDARD FORMS

1. Form of Tender
2. Tender Questionnaire
3. Declaration Form
4. Confidential Business Questionnaire
5. Form of Agreement
6. Form of Tender Security
7. Performance Bank Guarantee (unconditional)
8. Bank Guarantee for Advance Payment
9. Letter of Notification of Award
12. Site Visit Form

FORM OF TENDER

TO: _____ [Name of Employer) _____ [Date]
_____ [Name of Tender]

Dear Sir,

1. In accordance with the Conditions of Contract, Specifications, Drawings and Bills of Quantities for the execution of the above named Works, we, the undersigned offer to construct, install and complete such Works and remedy any defects therein for the sum of Kshs. _____ [Amount in figures] Kenya Shillings ____
_____ [Amount in words]
2. We undertake, if our tender is accepted, to commence the Works as soon as is reasonably possible after the receipt of the Project Manager’s notice to commence, and to complete the whole of the Works comprised in the Contract within the time stated in the Appendix to Conditions of Contract.
3. We agree to abide by this tender until _____ [Insert date], and it shall remain binding upon us and may be accepted at any time before that date.
4. Unless and until a formal Agreement is prepared and executed this tender together with your written acceptance thereof, shall constitute a binding Contract between us.
5. We understand that you are not bound to accept the lowest or any tender you may receive.

Dated this _____ day of _____ 20_____

Signature _____ in the capacity of _____

Duly authorized to sign tenders for and on behalf of

_____ [Name of Employer]

of _____ [Address of Employer]

Witness; Name _____

Address _____

Signature _____

Date _____

TENDER QUESTIONNAIRE

Please fill in block letters.

Full names of tenderer

.....

Full address of tenderer to which tender correspondence is to be sent (unless an agent has been appointed below).....

Telephone number (s) of tenderer.....

Telex address of tenderer.....

Name of tenderer's representative to be contacted on matters of the tender during the tender period.....

Details of tenderer's nominated agent (if any) to receive tender notices. This is essential if the tenderer does not have his registered address in Kenya (name, address, telephone, telex)

.....

.....

Signature of Tenderer

Make copy and deliver to: _____(Name of Employer)

DECLARATION FORM

Date _____

To _____

The tenderer i.e. (name and address) _____

_____ declare the following:

Has not been debarred from participating in public procurement.

Has not been involved in and will not be involved in corrupt and fraudulent practices regarding public procurement.

Title

Signature

Date

(To be signed by authorized representative and officially stamped)

CONFIDENTIAL BUSINESS QUESTIONNAIRE

You are requested to give the particulars indicated in Part 1 and either Part 2 (a), 2 (b) or 2 (c) and 2 (d) whichever applies to your type of business.

You are advised that it is a serious offence to give false information on this Form.

Part 1 – General

Business Name

Location of business premises; Country/Town.....

Plot No..... Street/Road

Postal Address..... Tel No.....

Nature of Business.....

Current Trade Licence No..... Expiring date.....

Maximum value of business which you can handle at any time: Kshs.....

Name of your bankers.....

Branch.....

Part 2 (a) – Sole Proprietor

Your name in full..... Age.....

Nationality..... Country of Origin.....

*Citizenship details

Part 2 (b) – Partnership:

Give details of partners as follows:

Name in full Nationality Citizenship Details Shares

1.....

2.....

3.....

Part 2(c) – Registered Company:

Private or public.....

State the nominal and issued capital of the Company-

Nominal Kshs.....

Issued Kshs.....

Give details of all directors as follows:

Name in full	Nationality.	Citizenship Details*.	Shares.
--------------	--------------	-----------------------	---------

1.....

2.....

3.....

4.....

Part 2(d) – Interest in the Firm:

Is there any person / persons in(Name of Employer) who has interest in this firm?

Yes/No.....(Delete as necessary)

I certify that the information given above is correct.

.....

(Title)

(Signature)

(Date)

* Attach proof of citizenship

FORM OF AGREEMENT

THIS AGREEMENT, made the _____ day of _____ 20 _____ between _____ of [or whose registered office is situated at] _____

(hereinafter called “the Employer”) of the one part AND _____ of [or whose registered office is situated at] _____ (hereinafter called “the Contractor”) of the other part.

WHEREAS THE Employer is desirous that the Contractor executes

_____ (*name and identification number of Contract*) (hereinafter called “the Works”) located at _____ [*Place/location of the Works*] and the Employer has accepted the tender submitted by the Contractor for the execution and completion of such Works and the remedying of any defects therein for the Contract Price of Kshs. _____ [*Amount in figures*], Kenya Shillings _____ [*Amount in words*].

NOW THIS AGREEMENT WITNESSETH as follows:

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

The following documents shall be deemed to form and shall be read and construed as part of this Agreement i.e.
Letter of Acceptance
Form of Tender
Conditions of Contract Part I
Conditions of Contract Part II and Appendix to Conditions of Contract
Specifications
Drawings
Priced Bills of Quantities

- 3. In consideration of the payments to be made by the Employer to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Employer to execute and complete the Works and remedy any defects therein in conformity in all respects with the provisions of the Contract.
- 4. The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

IN WITNESS whereof the parties thereto have caused this Agreement to be executed the day and year first before written.

The common Seal of _____

Was hereunto affixed in the presence of _____

Signed Sealed, and Delivered by the said _____

Binding Signature of Employer _____

Binding Signature of Contractor _____

In the presence of (i) Name _____

Address _____

Signature _____

[ii] Name _____

Address _____

Signature _____

FORM OF TENDER SECURITY

WHEREAS(hereinafter called “the Tenderer”) has submitted his tender dated for the construction of (*name of Contract*)

KNOW ALL PEOPLE by these presents that WE having our registered office at(hereinafter called “the Bank”), are bound unto(hereinafter called “the Employer”) in the sum of Kshs..... for which payment well and truly to be made to the said Employer, the Bank binds itself, its successors and assigns by these presents sealed with the Common Seal of the said Bank this Day of20.....

THE CONDITIONS of this obligation are:

- a) If after tender opening the tenderer withdraws his tender during the period of tender validity specified in the instructions to tenderers

Or

- b) If the tenderer, having been notified of the acceptance of his tender by the Employer during the period of tender validity:
 - I. Fails or refuses to execute the form of Agreement in accordance with the Instructions to Tenderers, if required; or
 - II. Fails or refuses to furnish the Performance Security, in accordance with the Instructions to Tenderers;
 - III. Rejects a correction of an arithmetic error in the tender.

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

This guarantee will remain in force up to and including thirty (30) days after the period of tender validity, and any demand in respect thereof should reach the Bank not later than the said date.

[date]

[signature of the Bank]

[witness]

[seal]

(Amend accordingly if provided by Insurance Company)

PERFORMANCE BANK GUARANTEE (UNCONDITIONAL)

To: _____(Name of Employer) _____(Date)
_____ (Address of Employer)

Dear Sir,

WHEREAS _____(hereinafter called “the Contractor”) has undertaken, in pursuance of Contract No. _____ dated _____ to execute _____ (hereinafter called “the Works”);

AND WHEREAS it has been stipulated by you in the said Contract that the Contractor shall furnish you with a Bank Guarantee by a recognized bank for the sum specified therein as security for compliance with his obligations in accordance with the Contract;

AND WHEREAS we have agreed to give the Contractor such a Bank Guarantee:

NOW THEREFORE we hereby affirm that we are the Guarantor and responsible to you, on behalf of the Contractor, up to a total of Kshs. _____ (amount of Guarantee in figures) Kenya Shillings _____ (amount of Guarantee in words), and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of Kenya Shillings _____ (amount of Guarantee in words) as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein.

We hereby waive the necessity of your demanding the said debt from the Contractor before presenting us with the demand.

We further agree that no change, addition or other modification of the terms of the Contract or of the Works to be performed thereunder or of any of the Contract documents which may be made between you and the Contractor shall in any way release us from any liability under this Guarantee, and we hereby waive notice of any change, addition, or modification.

This guarantee shall be valid until the date of issue of the Certificate of Completion.

SIGNATURE AND SEAL OF THE GUARANTOR _____

Name of Bank _____

Address _____

Date _____

(Amend accordingly if provided by Insurance Company)

BANK GUARANTEE FOR ADVANCE PAYMENT

To: _____ [name of Employer] _____ (Date)
_____ [address of Employer]

Gentlemen,

Ref: _____ [name of Contract]

In accordance with the provisions of the Conditions of Contract of the above-mentioned Contract, We, _____ [name and Address of Contractor] (hereinafter called "the Contractor") shall deposit with _____ [name of Employer] a bank guarantee to guarantee his proper and faithful performance under the said Contract in an amount of Kshs. _____ [amount of Guarantee in figures] Kenya Shillings _____ [amount of Guarantee in words].

We, _____ [bank or financial institution], as instructed by the Contractor, agree unconditionally and irrevocably to guarantee as primary obligator and not as Surety merely, the payment to _____ [name of Employer] on his first demand without whatsoever right of objection on our part and without his first claim to the Contractor, in the amount not exceeding
Kshs _____ [amount of Guarantee in figures] Kenya Shillings _____ [amount of Guarantee in words], such amount to be reduced periodically by the amounts recovered by you from the proceeds of the Contract.

We further agree that no change or addition to or other modification of the terms of the Contract or of the Works to be performed thereunder or of any of the Contract documents which may be made between

_____ [name of Employer] and the Contractor, shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

No drawing may be made by you under this guarantee until we have received notice in writing from you that an advance payment of the amount listed above has been paid to the Contractor pursuant to the Contract.

This guarantee shall remain valid and in full effect from the date of the advance payment under the Contract until _____ (name of Employer) receives full payment of the same amount from the Contract.

Yours faithfully,

Signature and Seal _____

Name of the Bank or financial institution _____

Address _____

Date _____

Witness: Name: _____

Address: _____

Signature: _____

Date: _____

LETTER OF NOTIFICATION OF AWARD

Address of Procuring Entity

To: _____

RE: Tender No. _____

Tender Name _____

This is to notify that the contract/s stated below under the above mentioned tender have been awarded to you.

Please acknowledge receipt of this letter of notification signifying your acceptance.

The contract/contracts shall be signed by the parties within 30 days of the date of this letter but not earlier than 14 days from the date of the letter.

You may contact the officer(s) whose particulars appear below on the subject matter of this letter of notification of award.

(FULL PARTICULARS)

SIGNED FOR ACCOUNTING OFFICER



**PROCUREMENT
DEPARTMENT**

DATE:.....

RE: SITE CERTIFICATE FORM

This is to confirm thatof

P.O.Box, did a site survey for the Supply and installation CCTV at REREC
Mweiga Offices.

Name of Representative:.....

Company Name:-.....

Company Seal/Stamp

REREC REPRESENTATIVE

NAME:..... NAME:..... NAME:.....

SIGN..... SIGN..... SIGN.....

Company Stamp/Seal