



## **ALFRED DUMA LOCAL MUNICIPALITY**

### **DEPARTMENT PUBLIC SAFETY AND EMERGENCY SERVICES**

**CONTRACT NO. PS 06/2024**

### **SUPPLY, INSTALLATION AND MAINTENANCE OF THE CURRENT SURVEILLANCE CAMERA SYSTEM FOR A PERIOD OF THREE (3) YEARS**

Department Public Safety  
P O Box 29  
LADYSMITH  
3370

Telephone: 036 631 1777  
E-Mail: [bjstrydom@afredduma.gov.za](mailto:bjstrydom@afredduma.gov.za)

**BIDDERS NAME:** .....

**ALFRED DUMA LOCAL MUNICIPALITY**

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**ALFRED DUMA LOCAL MUNICIPALITY**

**DEPARTMENT PUBLIC SAFETY AND  
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**SUPPLY, INSTALLATION AND  
MAINTENANCE OF THE CURRENT  
SURVEILLANCE CAMERA SYSTEM FOR A  
PERIOD OF THREE (3) YEARS**

**BID INVITATION**

## ALFRED DUMA LOCAL MUNICIPALITY

### INVITATION TO BID

Bids are hereby invited from suitably qualified and experienced organisations/consortia in terms of Section 83 of the Municipal Systems Act, Act 32 of 2000 (as amended) and Sections 110 and 112 of the Municipal Finance Management Act, Act 56 of 2003 for the following:

**BID DOCUMENTS ARE NOW AVAILABLE ON THE NATIONAL TREASURY E-TENDER PORTAL, [www.etenders.gov.za](http://www.etenders.gov.za).**

### DEPARTMENT OF PUBLIC SAFETY AND EMERGENCY SERVICES

#### **BID NO. PS 06/2024: SUPPLY, INSTALLATION AND MAINTENANCE OF THE CURRENT SURVEILLANCE CAMERA SYSTEM FOR A PERIOD OF THREE (3) YEARS**

#### **PRE-QUALIFICATION CRITERIA**

1. Acceptable bids will be evaluated by using a system that awards points on the basis of 80/20 preferential point system of which 80 is for price and 20 is for Ownership as Specific Goal.
2. Race (HDI) 5/20- Ownership verification will be conducted in line with the Central Supplier Database and also by BBBEE scorecard attributes AND
3. RDP Goals 15/20- the bidding company to prove that it is located in the Alfred Duma Local municipal area.

Bid documents are obtainable from **Thursday 20 June 2024**.

#### **FUNCTIONALITY CRITERIA**

| No | Description Items                                                                                                                                                                                                                                    | Maximum Potential Score | Bid Evaluation Committee Scores | Page Ref. No. |
|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|---------------------------------|---------------|
| 1  | Number of years the company has been in existence. (5 points per year CK document to be used as proof)<br><b>(Attach company registration as proof)</b>                                                                                              | 5                       |                                 |               |
| 2  | Undertaken a work of a similar nature in any Municipality or Organ of the State and Private sector<br>(5 points per appointment letter or order and invoice or reference letter)<br><b>(Attach appointment letter or Order and Invoice as proof)</b> | 20                      |                                 |               |
| 3  | Registration with PSIRA<br>Attach certificate for the installation and monitoring of CCTV Cameras.                                                                                                                                                   | 5                       |                                 |               |
| 4  | ICASA Licence radio commination for CCTV Camera installations                                                                                                                                                                                        | 5                       |                                 |               |
| 5  | IT Technicians qualifications (N+ and/or A+ or IT Diploma)./<br>N+ and/or A+ 10 Points<br>IT Diploma 15 Points                                                                                                                                       | 15                      |                                 |               |

|  |                     |           |  |  |
|--|---------------------|-----------|--|--|
|  | <b>TOTAL SCORED</b> | <b>50</b> |  |  |
|--|---------------------|-----------|--|--|

4. **COMPULSORY BRIEFING SESSION AND SITE INSPECTION:** Tuesday 2 July 2024 at 10:00 at the Public Safety Boardroom, 422 Murchison Street, Ladysmith.
5. **CLOSING AND OPENING DATE, TIME AND VENUE:** Tuesday 23 July 2024 at 11:00 in Room 206 – Lister Clarence Building, 221 Murchison Street, Ladysmith.

#### **BID ENQUIRIES**

Bid enquiries are to be addressed to Mr BJ Strydom at Tel No. 036 631 1777.

#### **BID SUBMISSION**

Sealed bids with the contract number and description of the bid endorsed on the envelope, with the bidders' details clearly indicated, must be deposited into the bid box located in the Public Entrance Door, Ground Floor of the Lister Clarence Building, 221 Murchison Street, Ladysmith on or before the closing date and time. Bids received after the said closing date and time and not clearly marked as prescribed, will not be considered. Facsimile and emailed bids will not be accepted.

Bid documents may only be submitted on the original bid documentation form as issued by the Municipality.

The following documents are mandatory:

1. Up to date Municipal Rates and Service Charges and Water Statements where the company is located.
2. Joint Venture Agreement if the company has entered into a joint venture and specifying the name of the signatory in the JV.
3. CSD Report

**NB: Please note that the Municipality will only consider a service provider who is registered on the Central Suppliers Database (CSD).**

**FAILURE TO ATTEND THE COMPULSORY BRIEFING SESSIONS WILL INVALIDATE YOUR BID.**

**THE FOLLOWING IS APPLICABLE TO ALL BIDS:**

- **BIDDERS NEED TO SCORE A MINIMUM OF 60% TO BE ELIGIBLE FOR THE SECOND ROUND OF EVALUATION.**

#### **PLEASE NOTE:**

**BIDDERS ARE REQUIRED TO PROVIDE PROOF FOR EACH OF THE FOLLOWING, NAMELY QUALIFICATIONS DOCUMENTS AND REFERENCE LETTERS FOR PREVIOUSLY COMPLETED PROJECTS. FAILURE TO DO SO WILL RENDER THE BID INVALID.**

Alfred Duma Local Municipality is not bound to accept the lowest bid and reserves the right to accept whole or part of any bid or not to consider any bid not suitably endorsed or to reject any or the entire bid without stating the reasons thereof.

**NOTICE NO. 36/2024**

**DATED: 13/05/2024**

**ALFRED DUMA LOCAL MUNICIPALITY**

**DEPARTMENT OF PUBLIC SAFETY AND EMERGENCY  
SERVICES**

**CONTRACT NO. PS 06/2024**

**SUPPLY, INSTALLATION AND MAINTENANCE OF THE  
CURRENT SURVEILLANCE CAMERA SYSTEM FOR A  
PERIOD OF THREE (3) YEARS**

**CONDITIONS OF THE BID**

**ALFRED DUMA LOCAL MUNICIPALITY**

**DEPARTMENT PUBLIC SAFETY AND EMERGENCY SERVICES**

**CONTRACT NO PS 06/2024**

**INSTALLATION AND MAINTENANCE OF THE CURRENT SURVEILLANCE CAMERA  
SYSTEM FOR A PERIOD OF THREE (3) YEARS**

**CONDITIONS OF THE BID**

**A. GENERAL**

1. Bid documents must be completed in black ink and prices must include VAT.
2. **All pages and annexures must be initialed / sign in full signature where required.**
3. The lowest or any bid will not necessarily be accepted and Alfred Duma Local Municipality reserves the right to accept the whole or any part of a bid or to reject any or all the bid without stating the reasons thereof.
4. No bid will be accepted by fax or e-mail.
5. Bids are to remain open for acceptance for a period of One Hundred and Twenty (120) days from the date they are lodged and may be accepted at any time during the said period of One Hundred and Twenty (120) days.
6. All prices and details must be legible / readable to ensure the bid will be considered for adjudication.
7. Full details of services offered must be supplied together with the return documents. All additional documents returned with the bid documents must be firmly bound and marked as “**Additional**” to the specific bid reference number.
8. Only bids on ALFRED DUMA LOCAL MUNICIPALITY official bid documents will be accepted and the original document must be returned, fully completed and signed, in the form presented. **Failure to do so will invalidate such bid.**
9. **Corrections may not be made by means of a correcting fluid. In the event of a mistake having been made it shall be crossed out in ink and be accompanied by a full signature at each and every alteration. The Municipality reserves the right to reject the bid if corrections are not made in accordance with the above.**
10. Should it be considered necessary by the bidder that officials of Alfred Duma Local Municipality should proceed to other centers for inspection purposes, such costs shall be for the account of the bidder.
11. This contract will be governed by Alfred Duma Local Municipality “Conditions of the Bid” only and not any conditions supplied by the bidder.
12. The bidder must submit a comprehensive company profile, for example the founding company statements, as well as detailed exposition of previous work done.
13. If items are not bid for a line must be drawn through the space in pen.
14. Only bids received by **11:00** on the given closing date in the bid box will be considered.

**B. DEMONSTRATIONS AND INSPECTIONS**

1. All bidders must be prepared to demonstrate where required, free of charge and obligation, at the Alfred Duma Local Municipality or any other area within the boundary of the Alfred Duma Local Municipality, any services offered in this bid.
2. Where officials are required to attend demonstrations or inspections outside the boundary of the Alfred Duma Area, all costs to attend such demonstration must be borne by the bidder

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**GENERAL CONDITIONS OF CONTRACT**

**ALFRED DUMA LOCAL MUNICIPALITY**

**DEPARTMENT PUBLIC SAFETY AND EMERGENCY SERVICES**

**CONTRACT NO. PS 06/2024**

**SUPPLY, INSTALLATION AND MAINTENANCE OF THE CURRENT SURVEILLANCE  
CAMERA SYSTEM FOR A PERIOD OF THREE (3) YEARS**

**GENERAL CONDITIONS OF CONTRACT**

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## General Conditions of Contract

### 1. Definitions

The following terms shall be interpreted as indicated:

- 1.1. **“Closing time”** means the date and hour specified in the bidding documents for the receipt of bids.
- 1.2. **“Contract”** means the written agreement entered into between the purchaser and the supplier, as recorded in the contract form signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein.
- 1.3. **“Contract price”** means the price payable to the supplier under the contract for the full and proper performance of his contractual obligations.
- 1.4. **“Corrupt practice”** means the offering, giving, receiving, or soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution.
- 1.5. **“Countervailing duties”** are imposed in cases where an enterprise abroad is subsidized by its government and encouraged to market its products internationally.
- 1.6. **“Country of origin”** means the place where the goods were mined, grown or produced or from which the services are supplied. Goods are produced when, through manufacturing, processing or substantial and major assembly of components, a commercially recognized new product results that is substantially different in basic characteristics or in purpose or utility from its components.
- 1.7. **“Day”** means calendar day.
- 1.8. **“Delivery”** means delivery in compliance of the conditions of the contract or order.
- 1.9. **“Delivery ex stock”** means immediate delivery directly from stock actually on hand.
- 1.10. **“Delivery into consignees store or to his site”** means delivered and unloaded in the specified store or depot or on the specified site in compliance with the conditions of the contract or order, the supplier bearing all risks and charges involved until the goods are so delivered and a valid receipt is obtained.
- 1.11. **“Dumping”** occurs when a private enterprise abroad market its goods on own initiative in the RSA at lower prices than that of the country of origin and which have the potential to harm the local industries in the RSA.
- 1.12. **”Force majeure”** means an event beyond the control of the supplier and not involving the supplier’s fault or negligence and not foreseeable. Such events may include, but is not restricted to, acts of the purchaser in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions and freight embargoes.
- 1.13. **“Fraudulent practice”** means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of any bidder, and includes collusive practice among bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive the bidder of the benefits of free and open competition.
- 1.14. **“GCC”** means the General Conditions of Contract.

- 1.15. **“Goods”** means all of the equipment, machinery, and/or other materials that the supplier is required to supply to the purchaser under the contract.
- 1.16. **“Imported content”** means that portion of the bidding price represented by the cost of components, parts or materials which have been or are still to be imported (whether by the supplier or his subcontractors) and which costs are inclusive of the costs abroad, plus freight and other direct importation costs such as landing costs, dock dues, import duty, sales duty or other similar tax or duty at the South African place of entry as well as transportation and handling charges to the factory in the Republic where the goods covered by the bid will be manufactured.
- 1.17. **“Local content”** means that portion of the bidding price, which is not included in the imported content provided that local manufacture does take place.
- 1.18. **“Manufacture”** means the production of products in a factory using labor, materials, components and machinery and includes other related value-adding activities.
- 1.19. **“Order”** means an official written order issued for the supply of goods or works or the rendering of a service.
- 1.20. **“Project site,”** where applicable, means the place indicated in bidding documents.
- 1.21. **“Purchaser”** means the organization purchasing the goods.
- 1.22. **“Republic”** means the Republic of South Africa.
- 1.23. **“SCC”** means the Special Conditions of Contract.
- 1.24. **“Services”** means those functional services ancillary to the supply of the goods, such as transportation and any other incidental services, such as installation, commissioning, provision of technical assistance, training, catering, gardening, security, maintenance and other such obligations of the supplier covered under the contract.
- 1.25. **“Supplier”** means the successful bidder who is awarded the contract to maintain and administer the required and specified service(s) to the State.
- 1.26. **“Tort”** means in breach of contract.
- 1.27. **“Turnkey”** means a procurement process where one Consultant assumes total responsibility for all aspects of the project and delivers the full end product / service required by the contract.
- 1.28. **“Written” or “in writing”** means hand-written in ink or any form of electronic or mechanical writing.

## **2. Application**

- 2.1. These general conditions are applicable to all bids, contracts and orders including bids for functional and professional services (excluding professional services related to the building and construction industry), sales, hiring, letting and the granting or acquiring of rights, but excluding immovable property, unless otherwise indicated in the bidding documents.
- 2.2. Where applicable, special conditions of contract are also laid down to cover specific goods, services or works.
- 2.3. Where such special conditions of contract are in conflict with these general conditions, the special conditions shall apply.

### **3. General**

- 3.1. Unless otherwise indicated in the bidding documents, the purchaser shall not be liable for any expense incurred in the preparation and submission of a bid. Where applicable a non-refundable fee for documents may be charged.
- 3.2. Invitations to bid are usually published in locally distributed news media and on the municipality/municipal entity website.

### **4. Standards**

- 4.1. The goods supplied shall conform to the standards mentioned in the bidding documents and specifications.

### **5. Use of contract documents and information**

- 5.1. The supplier shall not, without the purchaser's prior written consent, disclose the contract, or any provision thereof, or any specification, plan, drawing, pattern, sample, or information furnished by or on behalf of the purchaser in connection therewith, to any person other than a person employed by the supplier in the performance of the contract. Disclosure to any such employed person shall be made in confidence and shall extend only so far as may be necessary for purposes of such performance.
- 5.2. The supplier shall not, without the purchaser's prior written consent, make use of any document or information mentioned in GCC clause 5.1 except for purposes of performing the contract.
- 5.3. Any document, other than the contract itself mentioned in GCC clause 5.1 shall remain the property of the purchaser and shall be returned (all copies) to the purchaser on completion of the supplier's performance under the contract if so required by the purchaser.
- 5.4. The supplier shall permit the purchaser to inspect the supplier's records relating to the performance of the supplier and to have them audited by auditors appointed by the purchaser, if so required by the purchaser.

### **6. Patent Rights**

- 6.1. The supplier shall indemnify the purchaser against all third-party claims of infringement of patent, trademark, or industrial design rights arising from use of the goods or any part thereof by the purchaser.
- 6.2. When a supplier developed documentation / projects for the municipality / municipal entity, the intellectual, copy and patent rights or ownership of such documents or projects will vest in the municipality / municipal entity.

### **7. Performance security**

- 7.1. Within thirty (30) days of receipt of the notification of contract award, the successful bidder shall furnish to the purchaser the performance security of the amount specified in SCC.
- 7.2. The proceeds of the performance security shall be payable to the purchaser as compensation for any loss resulting from the supplier's failure to complete his obligations under the contract.

- 7.3. The performance security shall be denominated in the currency of the contract, or in a freely convertible currency acceptable to the purchaser and shall be in one of the following forms:
- (a) a bank guarantee or an irrevocable letter of credit issued by a reputable bank located in the purchaser's country or abroad, acceptable to the purchaser, in the form provided in the bidding documents or another form acceptable to the purchaser; or
  - (b) a cashier's or certified cheque
- 7.4. The performance security will be discharged by the purchaser and returned to the supplier not later than thirty (30) days following the date of completion of the supplier's performance obligations under the contract, including any warranty obligations, unless otherwise specified.

## **8. Inspections, tests and analysis**

- 8.1. All per-bidding testing will be for the account of the bidder.
- 8.2. If it is a bid condition that goods to be produced or services to be rendered should at any stage be subject to inspections, tests and analyses, the bidder or contractor's premises shall be open, at all reasonable hours, for inspection by a representative of the purchaser or organization acting on behalf of the purchaser.
- 8.3. If there are no inspection requirements indicated in the bidding documents and no mention is made in the contract, but during the contract period it is decided that inspections shall be carried out, the purchaser shall itself make the necessary arrangements, including payment arrangements with the testing authority concerned.
- 8.4. If the inspections, tests and analyses referred to in clauses 8.2 and 8.3 show the goods to be in accordance with the contract requirements, the cost of the inspections, tests and analyses shall be defrayed by the purchaser.
- 8.5. Where the goods or services referred to in clauses 8.2 and 8.3 do not comply with the contract requirements, irrespective of whether such goods or services are accepted or not, the cost in connection with these inspections, tests or analyses shall be defrayed by the supplier.
- 8.6. Goods and services, which are, referred to in clauses 8.2 and 8.3 and which do not comply with the contract requirements may be rejected.
- 8.7. Any contract goods may on or after delivery be inspected, tested or analyzed and may be rejected if found not to comply with the requirements of the contract. Such rejected goods shall be held at the cost and risk of the supplier who shall, when called upon, remove them immediately at his own cost and forthwith substitute them with goods, which do comply with the requirements of the contract. Failing such removal the rejected goods shall be returned at the suppliers cost and risk. Should the supplier fail to provide the substitute goods forthwith, the purchaser may, without giving the supplier further opportunity to substitute the rejected goods, purchase such goods as may be necessary at the expense of the supplier.
- 8.8. The provisions of clauses 8.4 to 8.7 shall not prejudice the right of the purchaser to cancel the contract on account of a breach of the conditions thereof, or to act in terms of Clause 22 of GCC.

## **9. Packing**

- The supplier shall provide such packing of the goods as is required to prevent their damage or deterioration during transit to their final destination, as indicated in the contract. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during

transit, and open storage. Packing, case size and weights shall take into consideration, where appropriate, the remoteness of the goods' final destination and the absence of heavy handling facilities at all points in transit.

- The packing, marking, and documentation within and outside the packages shall comply strictly with such special requirements as shall be expressly provided for in the contract, including additional requirements, if any, and in any subsequent instructions ordered by the purchaser.

## **10. Delivery and documents**

- 10.1. Delivery of the goods and arrangements for shipping and clearance obligations shall be made by the supplier in accordance with the terms specified in the contract.

## **11. Insurance**

- 11.1. The goods supplied under the contract shall be fully insured in a freely convertible currency against loss or damage incidental to manufacture or acquisition, transportation, storage and delivery in the manner specified.

## **12. Transportation**

- 12.1. Should a price other than an all-inclusive delivered price be required, this shall be specified.

## **13. Incidental Services**

- 13.1. The supplier may be required to provide any or all of the following services, including additional services, if any:
- performance or supervision of on-site assembly and/or commissioning of the supplied goods;
  - furnishing of tools required for assembly and/or maintenance of the supplied goods;
  - furnishing of a detailed operations and maintenance manual for each appropriate unit of the supplied goods;
  - performance or supervision or maintenance and/or repair of the supplied goods, for a period of time agreed by the parties, provided that this service shall not relieve the supplier of any warranty obligations under this contract; and
  - Training of the purchaser's personnel, at the supplier's plant and/or on-site, in assembly, start-up, operation, maintenance, and/or repair of the supplied goods.
- 13.2. Prices charged by the supplier for incidental services, if not included in the contract price for the goods, shall be agreed upon in advance by the parties and shall not exceed the prevailing rates charged to other parties by the supplier for similar services.

## **14. Spare parts**

- 14.1. As specified, the supplier may be required to provide any or all of the following materials, notifications, and information pertaining to spare parts manufactured or distributed by the supplier:
- (a) such spare parts as the purchaser may elect to purchase from the supplier, provided that this election shall not relieve the supplier of any warranty obligations under the contract; and  
in the event of termination of production of the spare parts:
- (i) advance notification to the purchaser of the pending termination, in sufficient time to permit the purchaser to procure needed requirements; and
  - (ii) Following such termination, furnishing at no cost to the purchaser, the blueprints, drawings, and specifications of the spare parts, if requested.

## **15. Warranty**

- 15.1. The supplier warrants that the goods supplied under the contract are new, unused, of the most recent or current models and that they incorporate all recent improvements in design and materials unless provided otherwise in the contract. The supplier further warrants that all goods supplied under this contract shall have no defect, arising from design, materials, or workmanship (except when the design and/or material is required by the purchaser's specifications) or from any act or omission of the supplier, that may develop under normal use of the supplied goods in the conditions prevailing in the country of final destination.
- 15.2. This warranty shall remain valid for twelve (12) months after the goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated in the contract, or for eighteen (18) months after the date of shipment from the port or place of loading in the source country, whichever period concludes earlier, unless specified otherwise.
- 15.3. The purchaser shall promptly notify the supplier in writing of any claims arising under this warranty.
- 15.4. Upon receipt of such notice, the supplier shall, within the period specified and with all reasonable speed, repair or replace the defective goods or parts thereof, without costs to the purchaser.
- 15.5. If the supplier, having been notified, fails to remedy the defect(s) within the period specified, the purchaser may proceed to take such remedial action as may be necessary, at the supplier's risk and expense and without prejudice to any other rights which the purchaser may have against the supplier under the contract.

## **16. Payment**

- 16.1. The method and conditions of payment to be made to the supplier under this contract shall be specified.
- 16.2. The supplier shall furnish the purchaser with an invoice accompanied by a copy of the delivery note and upon fulfillment of other obligations stipulated in the contract.
- 16.3. Payments shall be made promptly by the purchaser, but in no case later than thirty (30) days after submission of an invoice or claim by the supplier.
- 16.4. Payment will be made in Rand unless otherwise stipulated.

## **17. Prices**

Prices charged by the supplier for goods delivered and services performed under the contract shall not vary from the prices quoted by the supplier in his bid, with the exception of any price adjustments authorized or in the purchaser's request for bid validity extension, as the case may be.

## **18. Variation orders**

In cases where the estimated value of the envisaged changes in purchase does not vary more than 15% of the total value of the original contract, the contractor may be instructed to deliver the goods or render the services as such. In cases of measurable quantities, the contractor may be approached to reduce the unit price, and such offers may be accepted provided that there is no escalation in price.

## **19. Assignment**

The supplier shall not assign, in whole or in part, its obligations to perform under the contract, except with the purchaser's prior written consent.

## **20. Subcontracts**

The supplier shall notify the purchaser in writing of all subcontracts awarded under these contracts if not already specified in the bid. Such notification, in the original bid or later, shall not relieve the supplier from any liability or obligation under the contract.

## **22. Delays in the supplier's performance**

- 22.1. Delivery of the goods and performance of services shall be made by the supplier in accordance with the time schedule prescribed by the purchaser in the contract.
- 22.2. If at any time during performance of the contract, the supplier or its subcontractor(s) should encounter conditions impeding timely delivery of the goods and performance of services, the supplier shall promptly notify the purchaser in writing of the fact of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the supplier's notice, the purchaser shall evaluate the situation and may at his discretion extend the supplier's time for performance, with or without the imposition of penalties, in which case the extension shall be ratified by the parties by amendment of contract.
- 22.3. The right is reserved to procure outside of the contract small quantities or to have minor essential services executed if an emergency arises, the supplier's point of supply is not situated at or near the place where the goods are required, or the supplier's services are not readily available.
- 22.4. Except as provided under GCC Clause 25, a delay by the supplier in the performance of its delivery obligations shall render the supplier liable to the imposition of penalties, pursuant to GCC Clause 22, unless an extension of time is agreed upon pursuant to GCC Clause 22.2 without the application of penalties.
- 22.5. Upon any delay beyond the delivery period in the case of a goods contract, the purchaser shall, without canceling the contract, be entitled to purchase goods of a similar quality and up to the same quantity in substitution of the goods not supplied in conformity with the contract and to return any goods delivered later at the supplier's expense and risk, or to cancel the contract and buy such goods as may be required to complete the contract and without prejudice to his other rights, be entitled to claim damages from the supplier.

## **23. Penalties**

R1500 per day per order will be charged

## **24. Termination for default**

- 24.1. The purchaser, without prejudice to any other remedy for breach of contract, by written notice of default sent to the supplier, may terminate this contract in whole or in part:
  - (a) if the supplier fails to deliver any or all of the goods within the period(s) specified in the contract, or within any extension thereof granted by the purchaser pursuant to GCC Clause 21.2;

- (b) If the supplier fails to perform any other obligation(s) under the contract; or
- (b) if the supplier, in the judgment of the purchaser, has engaged in corrupt or fraudulent practices in competing for or in executing the contract.

- 24.2. In the event the purchaser terminates the contract in whole or in part, the purchaser may procure, upon such terms and in such manner, as it deems appropriate, goods, works or services similar to those undelivered, and the supplier shall be liable to the purchaser for any excess costs for such similar goods, works or services. However, the supplier shall continue performance of the contract to the extent not terminated.

## **25. Antidumping and countervailing duties and rights**

When, after the date of bid, provisional payments are required, or anti-dumping or countervailing duties are imposed, or the amount of a provisional payment or anti-dumping or countervailing right is increased in respect of any dumped or subsidized import, the State is not liable for any amount so required or imposed, or for the amount of any such increase. When, after the said date, such a provisional payment is no longer required or any such anti-dumping or countervailing right is abolished, or where the amount of such provisional payment or any such right is reduced, any such favorable difference shall on demand be paid forthwith by the supplier to the purchaser or the purchaser may deduct such amounts from moneys (if any) which may otherwise be due to the supplier in regard to goods or services which he delivered or rendered, or is to deliver or render in terms of the contract or any other contract or any other amount which may be due to him.

## **26. Force Majeure**

- 26.1. Notwithstanding the provisions of GCC Clauses 22 and 23, the supplier shall not be liable for forfeiture of its performance security, damages, or termination for default if and to the extent that his delay in performance or other failure to perform his obligations under the contract is the result of an event of force majeure.
- 26.2. If a force majeure situation arises, the supplier shall promptly notify the purchaser in writing of such condition and the cause thereof. Unless otherwise directed by the purchaser in writing, the supplier shall continue to perform its obligations under the contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the force majeure event.

## **27. Termination for insolvency**

The purchaser may at any time terminate the contract by giving written notice to the supplier if the supplier becomes bankrupt or otherwise insolvent. In this event, termination will be without compensation to the supplier, provided that such termination will not prejudice or affect any right of action or remedy, which has accrued or will accrue thereafter to the purchaser.

## **28. Settlement of Disputes**

- 28.1. If any dispute or difference of any kind whatsoever arises between the purchaser and the supplier in connection with or arising out of the contract, the parties shall make every effort to resolve amicably such dispute or difference by mutual consultation.

- 28.2. If, after thirty (30) days, the parties have failed to resolve their dispute or difference by such mutual consultation, then either the purchaser or the supplier may give notice to the other party of his intention to commence with mediation. No mediation in respect of this matter may be commenced unless such notice is given to the other party.
- 28.3. Should it not be possible to settle a dispute by means of mediation, it may be settled in a South African court of law.
- 28.4. Notwithstanding any reference to mediation and/or court proceedings herein,
- (a) the parties shall continue to perform their respective obligations under the contract unless they otherwise agree; and
  - (b) the purchaser shall pay the supplier any monies due the supplier for goods delivered and / or services rendered according to the prescripts of the contract.

## **29. Limitation of Liability**

- 29.1. Except in cases of criminal negligence or willful misconduct, and in the case of infringement pursuant to Clause 6;
- the supplier shall not be liable to the purchaser, whether in contract, tort, or otherwise, for any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits or interest costs, provided that this exclusion shall not apply to any obligation of the supplier to pay penalties and/or damages to the purchaser; and
- 29.2. the aggregate liability of the supplier to the purchaser, whether under the contract, in tort or otherwise, shall not exceed the total contract price, provided that this limitation shall not apply to the cost of repairing or replacing defective equipment.

## **30. Governing language**

The contract shall be written in English. All correspondence and other documents pertaining to the contract that is exchanged by the parties shall also be written in English.

## **31. Applicable law**

The contract shall be interpreted in accordance with South African laws, unless otherwise specified.

## **32. Notices**

- 32.1. Every written acceptance of a bid shall be posted to the supplier concerned by registered or certified mail and any other notice to him shall be posted by ordinary mail to the address furnished in his bid or to the address notified later by him in writing and such posting shall be deemed to be proper service of such notice
- 32.2. The time mentioned in the contract documents for performing any act after such aforesaid notice has been given, shall be reckoned from the date of posting of such notice.

### **33. Taxes and duties**

- 33.1. A foreign supplier shall be entirely responsible for all taxes, stamp duties, License fees, and other such levies imposed outside the purchaser's country.
- 33.2. A local supplier shall be entirely responsible for all taxes, duties, license fees, etc., incurred until delivery of the contracted goods to the purchaser.
- 33.3. No contract shall be concluded with any bidder whose tax matters are not in order. Prior to the award of a bid SARS must have certified that the tax matters of the preferred bidder are in order.
- 33.4. No contract shall be concluded with any bidder whose municipal rates and taxes and municipal services charges are in arrears.

### **34. Transfer of contracts**

The contractor shall not abandon, transfer, cede assign or sublet a contract or part thereof without the written permission of the purchaser.

### **35. Amendment of contracts**

No agreement to amend or vary a contract or order or the conditions, stipulations or provisions thereof shall be valid and of any force unless such agreement to amend or vary is entered into in writing and signed by the contracting parties. Any waiver of the requirement that the agreement to amend or vary shall be in writing, shall also be in writing.

### **36. Prohibition of restrictive practices**

- 36.1. In terms of section 4 (1) (b) (iii) of the Competition Act No. 89 of 1998, as mended, an agreement between, or concerted practice by, firms, or a decision by an association of firms, is prohibited if it is between parties in a horizontal relationship and if a bidder(s) is / are or a contractor(s) was / were involved in collusive bidding.
- 36.2. If a bidder(s) or contractor(s) based on reasonable grounds or evidence obtained by the purchaser has / have engaged in the restrictive practice referred to above, the purchaser may refer the matter to the Competition Commission for investigation and possible imposition of administrative penalties as contemplated in section 59 of the Competition Act No 89 Of 1998.
- 36.3. If a bidder(s) or contractor(s) has / have been found guilty by the Competition Commission of the restrictive practice referred to above, the purchaser may, in addition and without prejudice to any other remedy provided for, invalidate the bid(s) for such item(s) offered, and / or terminate the contract in whole or part, and / or restrict the bidder(s) or contractor(s) from conducting business with the public sector for a period not exceeding ten (10) years and / or claim damages from the bidder(s) or contractor(s) concerned.

**ALFRED DUMA LOCAL MUNICIPALITY**

**DEPARTMENT PUBLIC SAFETY AND EMERGENCY  
SERVICES**

**CONTRACT NO. PS 06/2024**

**SUPPLY, INSTALLATION AND MAINTENANCE OF THE  
CURRENT SURVEILLANCE CAMERA SYSTEM FOR A  
PERIOD OF THREE (3) YEARS**

**SPECIAL CONDITIONS OF THE BID**

## DEPARTMENT PUBLIC SAFETY AND EMERGENCY SERVICES

### CONTRACT NO. PS 06/2024

### SUPPLY, INSTALLATION AND MAINTENANCE OF THE CURRENT SURVEILLANCE CAMERA SYSTEM FOR A PERIOD OF THREE (3) YEARS

#### SPECIAL CONDITIONS

##### 1. QUALIFICATIONS FOR THE SCOPE OF WORK

Due to the highly technical nature of the System defined hereunder, the need for technical expertise in order to integrate additions within the extensive CCTV network as will be the case after the system functionality upgrade, and the fact that Alfred Duma Local Municipality would require support from the successful Bidder in terms of services, component spares and repairs for an extended period of at least 5 years after expiry of the guaranteed period, the following criteria shall be the minimum requirements to qualify for consideration for the award of this Bidder.

Bidders must have already been trading for at least four (4) years in the CCTV industry. It is essential that the Bidder has installed a minimum of two (2) previous city surveillance projects within the KZN Provincial Area with at least 50 Pan, Tilt and Zoom (PTZ) Camera Sites, which use both cable, and wireless wide area networking. The bidder must include previous award letters showing proof of this at any organ of state, which currently makes use of its services. The Bidder must also show proof of existing customers that they are contracted to for service of City CCTV Systems within 350kms of Alfred Duma Local Municipality.

The Bidder must supply full accreditation letters from camera manufacturer being proposed as well as the wireless manufacturer and software vendor. These letters must prove that the Bidder is certified to design sell and install goods in question.

The Bidder must supply a full specification sheet for all products which are listed in schedule A. The specification sheet must support each individual specification to prove compliance. (The Bidder must highlight each compliant point without changing any information.)

Bidders shall have offices and workshop facilities located within the KZN Provincial Area, details of which must be supplied. It would be an advantage if the Bidder has an IT technician situated within Alfred Duma Local area.

Bidders must have suitably qualified I.T technicians due to the fact that networks belonging to Alfred Duma Local Municipality may also be intergrated into the camera network at specific points. The Bidder must include at least one technicians' qualifications in N+, A+ or higher.

Each Bidder shall nominate a project manager as the aforesaid representative responsible for the implementation of the services. The project manager shall not be changed during the course of the contract without prior consultation with the **MPM**. The **MPM (Municipal project manager)** reserves the right to interview the applicant before appointment.

#### CONDITION OF CONTRACT

This contract will be valid for a period of three (3) years from the date of signature of the Service Level Agreement by the parties.

## **SERVICE LEVEL AGREEMENT**

A service level agreement will be entered into with the successful bidder.

- 3.1 Negotiations in respect of the service level agreement must be finalised within fourteen (14) calendar days of receipt of the letter of confirmation by the Municipality for the acceptance by the successful bidder. The successful bidder will capture the time frames or performance applying to this contract.
- 3.2 Should no consensus be reached within fourteen (14) calendar days of finalizing the Service Level Agreement (SLA), the Municipality will be entitled to:
  - i. cancel its acceptance of the bid, or
  - ii. extend the negotiation period without prejudice to any of its other rights in terms of this contract or common law.

## **MANDATORY OBJECTION PERIOD**

All administrative actions and decisions taken by the Municipality through its officials may become subject to an appeal process. As such, in terms of Section 49 of the Municipal Supply Chain Management Regulations No 27636 of 2005, a period of fourteen (14) days will be set aside to allow for the submission of appeals against the award/ process of making the award to a particular bidder by any interested party. Except in scenarios where the decision of a duly appointed appeal panel sets aside the appointment of the successful bidder as the service provider for this contract, the appointment will then be confirmed by the municipality in writing.

## **BID VALIDITY**

This bid shall not be withdrawn during a period of one hundred and twenty (120) days from the date on which it is to be lodged and it may be accepted at any time during that period.

## **BID COMPLIANCE**

The Bid must comply with the following: VAT must be indicated separately.

This bid or part thereof may not be ceded.

## **MEETINGS**

Progress meetings will be held monthly by both parties. This item is discussed further in the Service Level Agreement.

## **RETURNABLE DOCUMENTS**

The issued documents must be returned in the form and order in which they were issued to assist the Municipality to expedite adjudication of the bids.

## **OTHER MATTERS**

Bidders must also submit three year audited financial statements and credit ratings of the company.

Bidders must certify that he/she have no outstanding debts due to the Municipality where the bidder originates and any other Municipality or any service provider.

## **LOCAL LABOUR**

Where the execution of the specifications/scope of work requires sub-contracting, bidders are required to source local labours in terms of the Municipality's SMME policy.

Bidders awarded contracts of an amount greater than or equal to R1 000 000-00 must sub-contract at least 10% of the contract to local contractors, where sub-contracting is necessary to execute the contract.

Bidders awarded a contract of an amount greater than or equal to R1 000 000-00 must include 50% local labour in their staff component.

**ALFRED DUMA LOCAL MUNICIPALITY**

**DEPARTMENT PUBLIC SAFETY AND EMERGENCY  
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**CONTRACT NO. PS 06/2024**

**SUPPLY, INSTALLATION AND MAINTENANCE OF THE  
CURRENT SURVEILLANCE CAMERA SYSTEM FOR A  
PERIOD OF THREE (3) YEARS**

**SCOPE OF WORK**

## ALFRED DUMA LOCAL MUNICIPALITY

### DEPARTMENT PUBLIC SAFETY AND EMERGENCY SERVICES

#### CONTRACT NO. PS 06/2024

#### SUPPLY, INSTALLATION AND MAINTENANCE OF THE CURRENT SURVEILLANCE CAMERA SYSTEM FOR A PERIOD OF THREE (3) YEARS

#### SCOPE OF WORK

The Alfred Duma Local Municipality is sourcing a service provider that can supply, install and maintain the current surveillance camera system for a period of Three (3) years.

##### 1. DEFINITIONS FOR THE SCOPE OF WORK

- Specification shall be understood as the General Technical specification detailed hereinafter, inclusive of clauses, conditions and specified requirements. No exceptions or exclusions or amendments shall be perceived or implied without written acceptance and confirmation by the Executive Director Public safety and emergency Services or delegated person by the Head of the department.
- **MPM (Municipal Project Manager)** shall be understood as the Executive Director: Public Safety and Emergency Services or delegated person by the Executive Director.
- Street-camera/Camera site equipment shall be mainly understood to include; camera (I.P) PTZ Camera including Pole and all auxiliary equipment. For fixed cameras Analogue to I.P encoder (analogue camera only) and the provision of sending this camera data to the new Control room via the wide area Wide area network.
- The CCTV Control Room (Equipment room and monitoring room) and shall be mainly understood to include all control room design, Large surveillance servers, New Network video recording software products, Networking products and any such typical equipment required in interface to/or within the monitoring room, such as Displays, client machines (small servers) and cabling to peripheral devices.
- Accessory shall include any fitting, mounting bracket, cable harness, as mentioned and /or specified and /or defined herein.
- Wide area CCTV System shall include the CCTV Control Rooms and all camera systems being governed by the Alfred Duma Local Municipality departments.
- Equipment inventory shall be the list of all equipment detailing serial numbers, identification marks and any other pertinent information.
- Spares inventory shall be the list of all equipment held in stock. Includes purchase date, cost and any other pertinent information.
- Manufacturers' data sheets and manuals shall be understood to be all current documentation supplied by the manufacturer. Either paper based but preferably in electronic format (typical standard formats are PDF, DOC, and HTML)
- Installation Record shall be understood where available, as the "as-built" details and drawings of equipment.
- Maintenance Log shall be the record of all work done on equipment as listed in the Equipment Inventory.
- Certification shall be the procedure by which a third party gives written assurance that a product, process, service or company conforms to specified requirements.
- Verification of contract shall be the process for determining whether the requirements imposed in a maintenance contract have been achieved.

- Minimum Maintenance Performance standards shall be understood as a system capable of ensuring recording of all footage to be admissible in court.
- Reaction time shall be the period of time between logging of the fault and the arrival of the contractors personal, or via tele support.
- Commencement time shall be the period of time between logging of the fault and the commencement of the fault elimination onsite, or via tele support.
- Defect shall be the non-fulfillment of intended usage requirements.
- Level of performance shall be the degree of which the needs are satisfied, represented by a specific set of values for the quality characteristics.
- Reliability shall be the ability of an item to perform a required function under stated conditions for a stated period of time.
- Response shall be a response to a maintenance defect and signoff has been carried out by the MPM (municipal project manager or assigned delegate.)
- Maintenance contract for Alfred Duma Local Municipality's wide area CCTV crime surveillance system and all other camera systems within The Alfred Duma Local Municipality. The scope will be broken down into three sections. The first section being a CCTV System Installation. The second section is the maintenance of all CCTV systems within the Alfred Duma Local Municipality. The third and final section will involve refurbishment maintenance, which would include replacement and upgrading/expansion of assets as they wear out and are no longer serviceable.
- It must be noted that the quantities in the Bidder Form are for Bid comparison purposes only and therefore the Council does not guarantee the successful Bidder work throughout the year although the bidder may call upon to do work on an "as and when required" basis. This shall be based on the individual pricing included in this document.
- The historical usage patterns in no way indicate future trends. The estimated quantities provided in the bidder form are information and adjudication purpose only and in no way imply that future usage or buying patterns will be similar.
- The scope of service consists of installation of a wide area CCTV Network, preventative maintenance and monthly maintenance.
- Installations and extensions to be maintained include:
  - CCTV Control room located at Municipal Disaster Management Centre (MDMC)
  - Wireless PTZ CCTV System throughout the Municipal Area.
  - All other control rooms forming part of the Alfred Duma Municipality.
  - All Municipal buildings from all departments under governance by the Alfred Duma Local Municipality.
  - Camera sites: All camera sites existing and future will be located within the Alfred Duma Local Municipality boundaries.
- Alfred Duma Local Municipality shall be responsible for providing the positioning of all Camera Pole locations. All these items shall be installed and commissioned by the Bidder. The successful Bidder will be requested to provide additional quantities of the above-mentioned goods as per sections within this Bidder. This will be requested by using the same "as and when required" basis.
- Where electrical or Civil work is carried out the successful Bidder shall be responsible for supplying certificates of compliance where required before completion of

commissioning. (As per the Electrical Regulations under the Occupational Health and Safety Act.)

## **2. THE BIDDER HAS TO BE ABLE TO CONDUCT CCTV SYSTEM INSTALLATION AND MAINTENANCE UNDER THE FOLLOWING PRESCRIBED SCOPE OF WORK.**

A full camera and networking system installation is required to achieve a fully I.P network environment that will maximize the capacity of all existing networks which are already in place as well as uncover future possibilities with regards to serviceability, redundancy and new products. The quantities shown here may differ from year to year however the divided unit pricing will prevail.

### **2.1 Encoding**

- If any of the current CCTV systems in the Municipality have analogue cameras the use of Analogue to I.P encoders at the camera sites will be installed to achieve the desired outcome. (Please see specification of analogue to I.P encoder in section 8.6.4.1)

### **2.2 Fibre Splicing**

- If required it will be necessary to splice the fibre at both sides to ensure transmission back to the control room from the camera site.
- All necessary peripherals should be included at both ends to complete the job. EG: Pigtails, fibre convertors, ends and testing. (See Section 8.6.2.1)

### **2.3 Networking**

- The camera site would require a POE network switch to both power the analogue to I.P encoder and establish network connection.
- The Camera control room at Public Safety Services would be the termination point for all Fibre cables or wide area wireless network coming from camera sites, this termination point will require a Fibre switch as laid out within the technical specifications
- All networking systems must be fully grounded and lightning protection must be in place or installed at each point.
- UPS at each site would also assist greatly in ensuring the equipment don't suffer electrical damage due to power spikes and brown-outs.

### **2.4 Servers**

- For the best performance within the control room, it will be essential to ensure that the Servers have the correct specifications to record up to 64 cameras on one server the recordings to be stored for up to (8) eight weeks.
- The camera footage must have a function to backup all footage on to the server and transfer footage onto another server after the (8) eight-week period.
- The controller consoles will also need to have a client PC to do all viewing and recording of a second string for only one day.

### **2.5 Network recording system**

- To achieve full system operation, it is necessary to utilize software to make space for a platform that can be supported by local representation. The product must support the new requirements of the entire Alfred Duma Local Municipality. This system should support 4 displays immediately and have the capacity to add another 4 at

any stage. The software should allow a drag and drop system to maximize simplicity.

## **2.6 Displays**

- The face of the system needs to be the 43-inch-long life display monitors. Each controller will require 4 x 43-inch displays.
- **PTZ controllers**
- The inclusion of USB PTZ controllers for each operator will give the system a stable PTZ configuration.

## **3. CCTV MAINTENANCE TECHNICAL SCOPE OF WORK**

- The Bidder shall ensure the continued operation of the wide area CCTV system along with its wireless component and ensure that all design life of assets is achieved.
- The Current Wide area CCTV system is to be audited by the successful Bidder at the beginning of the contract.
- The results of the audit must identify the number of Cameras required by the Municipality and the location of these cameras within the Alfred Duma Local Municipal Area.
- The maintenance will be dealt with in three categories namely: Preventative, Breakdown/Corrective and Refurbishment.

## **4. SYSTEM CONFIGURATION.**

- CCTV Control room located at Public Safety and Emergency Services.
- Wireless PTZ CCTV System throughout the Municipal Area.
- All other Control Rooms within the Alfred Duma Local Municipality.
- All other buildings from all departments under governance within the Alfred Duma Local Municipality.
- All Municipal buildings from all departments under governance by the Alfred Duma Local Municipality.
- Camera sites: All camera sites existing and future that are located within the Alfred Duma Local Municipality boundaries.
- Remote Site will be all CCTV requirements from all departments within The Alfred Duma Local Municipality. (These sites may require a link back to the specific departments head office as well as a link to Public Safety And Emergency Services.)
- Camera Sites shall be all PTZ cameras mounted on camera poles throughout the Municipality.

## **5. FUNCTIONAL DESCRIPTION**

- This Bidder shall cover all CCTV systems handled by Alfred Duma Public Safety and Emergency Services as well as all Departments within the Alfred Duma Local Municipality that may be requiring CCTV. The Bidder shall also cover the supply of VOIP Phones as and when required as well as service and supply of the Video walls as and when required.

### **6.1 Monitoring Room**

- Please find a typical configuration of the Control room, applicable to some degree to all other existing control rooms.

- The Main Control room located at Public Safety and Emergency Services will be set up in such a way that there will be operators with an option to who will be setup to view any 64 cameras on the CCTV network at one time.
- The number of operators will change from control room to control room.
- Each operator will be armed with a Client machine (small server spec 2), and shall view 4 x 43-inch displays at one time.
- The Center is manned 24/7.

## **6.2 Equipment Room**

- This room houses all of the equipment needed to distribute all video footage which are displayed in the Monitoring room,
- The room houses Server cabinets containing the following, recording servers (Large spec servers), Redundancy recording servers, UPS Systems, Audio servers, Fibre termination, Network switching equipment and Wireless equipment.
- Adequate air conditioning has to be ensured for servers

## **6.3 Network Video Recording system**

- The Software shall manage and distribute all live video, and recorded footage from the server.
- A secure HTML5 interface for remote viewing must be possible on an approved basis.
- The service provider shall ensure that software that's licensed are fully paid for the period of (3) Three years.

## **6.4 Camera sites**

- Camera sites: All camera sites existing and future will be located within the Alfred Duma Local Municipality boundaries. The camera sites shall be indicated to the bidder that is awarded the Bid.

## **6.5 Networking**

- The Alfred Duma Local Municipality own and manage various I.T networks as well as CCTV networks. These networks may be used as and when required to minimize additional costs adding networks, subject to prior approval from the Manager: Information Technology
- The camera network must at all-times be separated from the data network. Where no camera network is in place, the service provider will be required to install such a network and not make use of the IT data network without written approval.

## **6.6 Fibre Networking**

- The Bidder will make use of all existing CCTV Fibre networks that are currently spliced in an analogue fashion.
- These networks will form the basis of a new 10 Gig network which will be the backbone of the CCTV system as it is currently and going forward.
- It may arise that network from other Departmental Fibre networks be used from time to time subject to approval.

## 6.7 Cabled Networks

- The existing camera networks on Alfred Duma Ladysmith sites which are running on I.P camera networks will be serviced on (as an when required basis.)

## 6.8 Switches and peripherals

- All switches and peripherals required shall be installed but will always require some representation from Alfred Duma Local Municipality to ensure that the I.T data networks are not compromised.

## 7 PHYSICAL DESCRIPTION

The below sections shall best describe the layout after the system functionality upgrade has been carried out.

### 7.1 Monitoring Room

The Monitoring room will consist of various controller workstations Each Controller workstation typically consists of the following.

- Client Server (small server spec 2)
- 64 channel Network video recording software
- Wired USB Keyboard and mouse
- PTZ controller
- 8 x 40-inch displays wall mount
- The operator will have the ability to open any 64 cameras at the same time for a live view application.
- It is suggested that each operator watches a maximum of 16 cameras however.
- The system shall have a drag and drop configuration, which will allow controllers to populate the various 4 displays in any configuration required for each occasion.
- The system will allow viewing of video footage for that day only without the ability to access the main servers' recordings.
- If an incident occurs it can be flagged for download by the supervisor and this will be stored on the provided secure server.
- The MPM will grant the viewing of extended periods of footage and this will only be available in the viewing room.

### 7.2 Equipment Room (include it for future upgrading)

The Equipment room house the following equipment.

Server Cabinet: 5 x Large Spec surveillance servers

Fibre Cabinet: Fibre Equipment Rack 1

Network Cabinet: Network switch cabinet 1

### 7.3 Network Video Recording system

- The Software system functions noted bellow should assist the Bidder to understand the desired outcome which should be derived when the Bidder has completed the **System Installation. (the software to be the same as the current software or equivalent and compatible)**

- A 64-channel license must be included for each unit as this represents a controller workstation.
- This must be upgradeable as a per camera license as and when required via an easy code insert rather than requirement of a disk.
- Each controller must be able to activate up to 8 displays on the system. This should be via a simple drag and drop activity between screens.
- The PTZ function must be available as a ghost overlay on the image for use by the operator as required in times when the physical PTZ controller is faulty.
- It would be required to have 2 PTZ controllers kept at the main control room at all times in case of faulty PTZ controllers.
- Overlay generation onto the image must be possible from the software to avoid pricey hardware needs.
- A low bandwidth system must be included to allow video to be drawn from remote cameras via 3g or data networks(The software must allow for this as and when required).
- Remote viewing must be available using an HTML5 interface. This interface should allow live view, recorded footage viewing, cutting of clips, opening of cameras or closing of cameras and lastly, restarting of the server from offsite. There must also be the inclusion of a chat feature from HTML 5 viewer to communicate with the operator in the control room (This must be subject to very strict encryption as it would be subject to authorization by Executive Director Public Safety and Emergency Service).
- License plate recognition must be available as an addition on license.
- Supply 1 lane licensing cost as well as any yearly licenses. (This will be shown on the Bill of quantities.)
- It must be possible to retrieve footage from SD cards installed in any cameras in the case of a network failure.
- The Recording system must be able to store footage up to (8) eight weeks.

#### **7.4 CAMERA SITES**

The Camera sites consisting of the following Main components

- **Mast or pole**  
Mast: 9 or 12m galvanized steel
- **Mast Equipment as follows:**

##### **Top End equipment**

- I.P. PTZ Camera
- Mountings
- Connectors and cabling (Possibly wireless unit)

##### **Bottom End equipment**

##### **Equipment Box and mountings Housing the following**

- POE injectors for wireless and camera Any other auxiliary equipment required.
- Power Cabling to Traffic controller or CDU(nearest electrical connection point)  
Wireless equipment linking Camera site to the Equipment to be included.

## 7.5 Network

The system shall be managed within the following brief set of rules and the Bidders must replicate this method for all work done within the Municipality CCTV Network.

It may occur that when the other departments share their networks with the CCTV network that the Bidder may need to make changes to suit requirement set out by that department.

### Fibre Networking

#### Equipment room (at Public Safety and Emergency Services)

- LC Splice Trays
- Splice Kits
- LC Mid couplers
- LC Unjacketed Pigtails
- LC Patch leads

#### Camera sites (Some of these items may vary between sites)

- Kiosks
- Large splice boxes
- Medium splice boxes
- LC Splice Trays
- Splice kits
- LC Mid couplers
- LC Unjacketed Pigtails
- LC Patch Leads

### T Networks (As per departmental requirement)

#### Cabled Networks

- Camera cables- Blue CAT 6
- Link Cables- Red CAT 6
- Server cables- Green CAT 6
- Sound cables- Yellow CAT 6
- Data Cables- Grey CAT 6
- Switches and peripherals-
- Control rooms and internal sites
- Camera sites
- Outdoor sites
- POE requiring sites

## 7. PREVENTATIVE MAINTENANCE

- The Preventative Maintenance should cover the items as detailed below and it would be undertaken on site (Field) and in the Monitoring Room.
- The successful Bidder will submit an annual Preventative Maintenance plan with the tender for approval. (Reporting to be done quarterly.)
- The Contractor must acquire approval from the **MPM (Municipal Project Manager)** before any maintenance work that would affect functionality of the system, is undertaken.

- All costs, during normal working hours, shall be inclusive of labour, transport and call-out fees.
- All maintenance must be achieved by applying technical knowledge, skills, tools and techniques in accordance with the manufacturers documentation, Council's guidelines and standard practices, as applicable to the specific system and/or equipment, in order to provide new service and/or maintain their functionality. **Field Preventative Maintenance**
- This work entails cleaning, adjusting, testing and documenting accordingly.
- The Contractor shall acquire approval from the **MPM (Municipal project manager)** before any maintenance is undertaken and this must include a Maintenance plan which should be discussed before commencement of the work.

**NB: There will be no costs attached to any call outs after preventative maintenance has been done, relating to preventative maintenance.**

### **8.1 Camera Unit**

- Check mounting hardware, bolts for corrosion, remove suspect bolts, clean and coat threads with silicon grease and replace.
- Check housings completely to ensure mounting is stable and that no external debris effect ventilation or PTZ movement.
- Check exterior camera weatherproofing. Check for vapor on inside of housing's window. Note and record conditions of humidity, if any, visible through glass window
- Inspect window for pitting and the window seal where visible for damage. Clean window to remove any dirt.

### **8.2 Pole**

- Check the mast and mounting hardware including fasteners for corrosion.
- Replace lubricate or touch up as required.
- Any corrosion must be removed using wire brush and paper and coat with cold galvanize.
- The Contractor to undertake any inspection necessary that is not covered above. Note: All screws of bolts to be stainless steel.
- Note: The eight M24 mast securing nuts must be locked by a second nut.

### **8.3 Manholes**

- Inspect the condition/integrity of the cables.
- The manholes are to be checked three times per year.

### **8.4 Control Room Preventative Maintenance**

- This work entails cleaning, adjusting, testing and documenting accordingly.
- The LAN consists of the Server which is located in the Equipment room and the controller client stations located in the Monitoring Room.
- The Contractor is to test and check the functionality of the software as well as remove all unwanted or unauthorized software.
- The contractor shall also use system software to update all I.P equipment firmware including all cameras encoders, wireless and main NVR software from the Equipment room.

### **8.5 Monitoring Rooms**

**Video display walls and spot monitors**

- Clean units and check picture quality.
- Check that operation is in accordance with the relevant Manufacturer's Documentation.
- If any faults are found replace-using spare parts required and as advised by the manufacturer.

## **8.6 Camera performance**

- These checks are used to determine the functionality of the equipment associated with the video image and include digital and I.P cameras (Static, High speed and panoramic).
- The Contractor shall be familiar with the installation, operation, functionality and maintenance of these items.
- Check Camera Pan and tilt.
- Check lens zoom, focus, auto Iris and manual iris.
- Check Home, Presets and tour camera patrols against required hot spot lists.
- Check if Wiper washer function is working from control room. (Only required on existing analogue cameras)
- The contractor shall also undertake to inspect the unit for any other faults not covered above.

## **8.7 Controller Workstations**

- Client Workstation PC
- Check that correct camera list or required cameras are activated for the selected controller.
- Check that recording is activated for a one-day period.
- Carry out routine software updates including the following. (Anti-Virus, NVR software updates, deleting of unwanted data.)
- Carry out routine cleaning on client pc to ensure that it is dust free and running at the correct temperature.
- Keyboard and Mouse
- Check Functionality
- PTZ Controller
- Check calibration
- Check for physical defects

## **8.8 EQUIPMENT ROOM**

### **Large spec Surveillance servers**

- Check Link Cables and other peripheral cabling connections.
- Check that recording is activated for at least 90 days period.
- Carry out routine software updates including the following. (Anti-Virus, NVR software updates, deleting of unwanted data.)
- Ensure that all drives are maintained at full health by doing routine hard drive tests.
- Check and ensure that all Raid configurations are working correctly.
- Carry out routine cleaning on client pc to ensure that it is dust free and running at the correct temperature.

## **8.9 Fibre Equipment**

- Check that all cables are labeled tidy and safe from bending.

- Check all fibre connections to establish that all necessary TX and RX links are being established.
- Check that all fibre racks are fixed in the cabinets correctly.

### **8.10 Network switching equipment**

- Check conditions of cables and connectors.
- Remove dust and wipe clean
- Ensure all settings are correct as per the requirements of the Bid.

## **9 WORKSHOP PREVENTATIVE MAINTENANCE**

- A simulated camera site must be setup in the assigned Community Services camera control center to enable the testing and fault finding for all scenarios possible.

### **9.1 Maintenance schedule**

- All preventative maintenance must be carried out four times per year in three monthly cycles. i.e: each camera site will be inspected once every three months.
- A monthly report will be provided giving the sites that were visited and the observations per site.
- A system maintenance software system shall be provided to keep records of all services that transpire. The software should be made available to Alfred Duma MPM as well.

## **10 EMERGENCY CORRECTIVE/BREAKDOWN MAINTENANCE**

Prior to any work being carried out an emergency order to approve any maintenance work must be obtained from the **MPM (Municipal project manager)**. The emergency repair shall include:

- The repair of Fibre cables in terms of splicing.
- The repair of Camera sites.
- The repair of Remote sites cameras and other needs.
- The repairs of the monitoring room.
- The repairs to equipment in the equipment room.
- Repair of defects that affect that immediate and continued functioning of the CCTV installation not otherwise covered by the Preventative Maintenance Program or Refurbishment Maintenance Program
- Defects and breakdowns that have an immediate effect on either functionality of security at the facility shall be treated in an emergency manner and are to be responded to within the following timeframes.
- Note: (The contractor shall have on hand a fully functional field installation unit at all times)
- Critical failure-within (12 hours) Twelve
- Major Failure-within (24 hours) Twenty-Four

Notes: All work shall be cost for I.A.W. schedule F (this includes standby rates, after hour rates and public holiday rates).

Where applicable, the faulty equipment should be sent back to the supplier/Manufacturer and a detailed report must be received from the supplier after the equipment has been repaired. The contractor should charge the handling fee.

## 11. REFURBISHMENT MAINTENANCE

**NOTE:** NO work shall be undertaken prior to the approval of the **MPM (Municipal project manager)**.

This entails replacement and upgrading/expansion of assets as they wear out and are no longer serviceable so as to allow the entire system to operate at the minimum maintenance performance standard. During the contract term, the contractor shall inform the **MPM (Municipal project manager)** of any equipment and infrastructure elements that have reached the end of their serviceable life and require replacement. That work would be undertaken using tendered rates.

The equipment bellow will also be used for expansion of the system however the individual pricing tendered will be used and multiplied as and when required.

**The following equipment is to be used to fulfil refurbishment maintenance needs using unit pricing provided for in the bill of materials and documented below:**

|      |                                                               |
|------|---------------------------------------------------------------|
| 1    | <b>SERVERS/CONTROL UNITS</b>                                  |
| 1.1  | DESKTOP TOWER i7 or equivalent 16GB 512ssd                    |
| 1.2  | LAPTOP i7 or equivalent 16GB 512ssd 4GB GRAPHICS              |
| 1.3  | SERVER TOWER INTEL Single Xeon or equivalent Processor 32gb   |
| 1.4  | Server TOWER Intel Xeon Dual Processor or equivalent 64gb ram |
| 1.5  | Desktop memory 8gb                                            |
| 1.6  | Desktop memory 16gb                                           |
| 1.7  | Laptop memory 8gb                                             |
| 1.8  | Laptop memory 16gb                                            |
| 1.9  | Server memory – 8gb                                           |
| 1.10 | Server memory – 16gb                                          |
| 1.11 | Graphic card 4gb gddr5 – 4 output                             |
| 1.12 | Graphic card 6gb gddr5 – 4 output                             |
| 1.13 | Windows server 2022 software or equivalent                    |
| 1.14 | Windows server RDP software 0-5 user or equivalent            |
| 1.15 | Windows server CALS 5 user or equivalent                      |
| 1.16 | Windows 11 professional or equivalent                         |
| 1.17 | 512 SSD 6gbps                                                 |
| 1.18 | 1TB SSD 6gbps                                                 |
| 1.22 | Seagate or equivalent sv35 hard drive 4tb                     |
| 1.23 | Seagate or equivalent sv35 hard drive 6tb                     |
| 1.24 | Seagate or equivalent sv35 hard drive 8tb                     |
| 1.25 | Seagate or equivalent sv35 hard drive 10tb                    |
| 1.26 | NAS Storage device 6 bay                                      |
| 1.27 | NAS Storage device 8 bay                                      |
| 1.28 | NAS Storage device 16 bay                                     |
| 1.28 | Small server for (remote sites)                               |
| 1.29 | Small server 2 or client station                              |
| 1.30 | Medium surveillance server (remote sites)                     |
| 1.31 | Large surveillance server                                     |
| 1.32 | Extra large backup recording device                           |

**Small server for (Remote sites)**

- Core I7 4771 3,50GHz CPU or equivalent
- 16GB DDR3-1333 Ram
- 120GB Solid state drive for operating system
- 3 x 3TB surveillance drive 7200RPM
- Graphics for dual display monitors
- Rack-mountable or Tower configuration as required
- DVD writer
- Windows 11 Professional 64-bit. or equivalent

**Small server 2 or Client station**

- Core I7 4771 3,50GHz CPU or equivalent
- 16GB DDR3-1333 Ram
- 120GB Solid state drive for operating system
- 1 3TB surveillance drive 7200RPM
- Graphics for 8 display monitors
- Rack-mountable or Tower configuration as required
- DVD writer
- Windows 11 Professional 64-bit. or equivalent

**Medium Surveillance Server (Remote sites)**

- Single Intel Xeon E5-2630V2 2,6Ghz 6 core CPU or equivalent
- 24GB ram 1600mhz DDR3 ECC REG
- 120GB Solid state drive for operating system
- 7 x 3TB surveillance drive 7200RPM
- Raid 5 configuration for redundancy
- Graphics for 8 display monitors
- Rack-mountable configuration
- DVD writer
- Windows 11 Professional 64-bit. or equivalent
- 10GB Ethernet card
- Option to add additional Processor

**Large Surveillance Server**

- Dual Intel Xeon E5-2680 2,7Ghz 8 core CPU (2 x CPU) or equivalent
- 32 GB ram 1600mhz DDR3 ECC REG
- 2 x 120GB Solid state drive for operating system in a RAID 1 configuration
- 20 x 3TB surveillance drive 7200RPM
- Raid 60 configuration for redundancy
- Raid controller with battery backup
- Redundant power supply
- Rack-mountable configuration
- 10GB Ethernet card
- DVD writer
- Windows Storage Server 2019 or equivalent

**Extra Large Backup recording device**

- Dual Intel Xeon E5-2680 2,7Ghz 8 core CPU (2 x CPU) or equivalent
- 12 x 8GB ram 1600mhz DDR3 ECC REG (96GB)
- 2 x 120GB Solid state drive for operating system in a RAID 1 configuration
- 72 x 3TB surveillance drive 7200RPM
- Raid 60 configuration for redundancy
- Raid controller with battery backup
- Redundant power supply
- Rack-mountable configuration
- 10GB Ethernet card
- DVD writer
- Windows Storage Server 2019 or equivalent

## 2. ADDITIONAL HARDWARE COMPONENTS

|     | Additional components                                   |
|-----|---------------------------------------------------------|
| 2.1 | Supply of dual display output cards 2gb (graphics card) |
| 2.2 | Supply of quad display output cards 2gb (graphics card) |
| 2.3 | 4GB DDR3-1333 RAM (memory)                              |
| 2.4 | 8GB ram 1600mhz DDR3 ECC REG (memory)                   |
| 2.5 | 3tb surveillance drive 7200rpm                          |
| 2.6 | INTEL XEON E5-2630V2 2,6Ghz 6 core CPU or equivalent    |

### Graphics cards (For equipment above)

- Dual display output cards 2GB
- Quad display output cards 2GB

### Additional memory (For equipment above)

- 8GB DDR3-1333 Ram
- 8GB ram 1600mhz DDR3 ECC REG

### Hard drives

- **3TB surveillance drive 7200RPM**

## PROCESSORS

- **Intel Xeon E5-2630V2 2,6Ghz 6 core CPU** or equivalent

## 2. Networking

|      |                                      |
|------|--------------------------------------|
| 3.1  | Gen2 power beam 5ghz                 |
| 3.2  | Nano station 5ghz                    |
| 3.3  | Singel sector point to point         |
| 3.4  | Multi sector point to point          |
| 3.5  | Gen2 rocket 5ghz                     |
| 3.6  | Wireless microwave dish 800/1600mbps |
| 3.7  | Ubiquiti lr unifi 6 or equivalent    |
| 3.8  | Hap router board + lte               |
| 3.9  | Router board switch rb4011           |
| 3.10 | Router board configuration per hour  |

|      |                                               |
|------|-----------------------------------------------|
| 3.11 | Neo 5000                                      |
| 3.12 | Alpha 2000                                    |
| 3.13 | 5000 cpe su-air                               |
| 3.14 | Radwin lightning surge arrestor or equivalent |
| 3.15 | Poe injector 48v                              |
| 3.16 | Poe injector 24v                              |

## **Fibre Equipment**

|    |                                          |
|----|------------------------------------------|
| 1  | 1GB Fibre convertor                      |
| 2  | 10gb Fibre convertor                     |
| 3  | 1GB Fibre Gbic SFP + module              |
| 4  | 10 GB Fibre Gbic SFP + module            |
| 5  | Lc pigtails                              |
| 6  | LC Mid couplers                          |
| 7  | LC to LC patch leads                     |
| 8  | 24 Port LC patch panel                   |
| 9  | Switch 4 port poe                        |
| 10 | Switch 8 port poe gigabit rackmountable  |
| 11 | Switch 24 port poe gigabit rackmountable |
| 12 | CONDUIT + SADDLES per meter              |
| 13 | Fibre injectors                          |
| 14 | Fibre Patch Fly leads                    |
| 15 | 24 Port LC patch panel                   |

### **1. 1GB Fibre convertor**

- Single mode Fibre compliant
- Compliant with the following standards IEEE802.3ab, IEEE802.3z, IEEE802.3x
- Full duplex flow control (IEEE802.3x)
- 1 x 1Gb SFP Slot
- 1 x 1Gb RJ45 port
- Operating temperature 0 to 40 degrees Celsius
- Transmission distance 15km

### **2. 10GB Fibre convertor**

- Single mode Fibre compliant
- Compliant with the following standards IEEE802.3ab, IEEE802.3z, IEEE802.3x
- Full duplex flow control (IEEE802.3x)
- 1 x 10Gb SFP Slot
- 1 x 10Gb RJ45 port
- Operating temperature 0 to 40 degrees Celsius
- Transmission distance 15km

### **3. 1GB Fibre Gbic SFP + module**

- Single mode Fibre compliant
- Must support 10GBase Ethernet
- Hot swappable input/output device
- Supports digital optical monitoring capability
- Transmission Distance 40km

- Operating temperature 0 to 70 degrees Celsius

#### **4. 10GB Fibre Gbic SFP module converter**

- Single mode Fibre compliant
- Must support 1000Base Ethernet
- Hot swappable input/output device
- Supports digital optical monitoring capability
- Transmission Distance 40km
- Operating temperature 0 to 70 degrees Celsius

#### **5. LC Pigtails**

- Usable in 50/125,62.5/125 and 10/125 (single mode) applications

#### **6. LC mid couplers**

- Hook: Plastic PBT 30% GF. Filled blue or grey UL94 v-0
- Alignment sleeve: Phosphor-Bronze or Zirconia
- Plate: SUS 304 stainless steel
- Cap: Plastic ABS UL94 v-0
- Increase in insertion loss:  $-<0.15\text{dB}$
- Retention force 200-600gf
- Operating temperature minus 40 to 80 degrees Celsius

#### **7. LC to LC patch leads**

- Usable in 50/125,62.5/125 and 10/125 (single mode) applications

#### **8. 24 Port LC patch panel**

- All parts Mild steel construction
- All parts Powder coated
- Adjustable by 56mm, allowing recess as required
- 1U in height
- Must fit on standard 19 inch racks
- Provision for 6 glands
- 2 piece sliding

#### **Splice kit**

|     |                                            |
|-----|--------------------------------------------|
| 1   | Heavy duty fibre cable 12 core (per meter) |
| 2   | Heavy duty fibre cable 24 core (per meter) |
| 3   | Heavy duty fibre cable 48 core (per meter) |
| 4   | Aerial Fibre 12 core (per meter)           |
| 5   | Aerial Fibre 24core (per meter)            |
| 6.  | Aerial Fibre 48 core (per meter)           |
| 7   | Armoured Tube Fibre 12 core (per meter)    |
| 8.  | Armoured Tube Fibre 24 core (per meter)    |
| 9.  | Armoured Tube Fibre 48 core (per Meter)    |
| 10. | Armoured tube Fibre 48 core (per meter)    |
| 11. | Splice box - U box                         |

### **Heavy Duty Fibre cable 12 core**

- Outer diameter 18,8mm
- Weight 238kg per km
- Minimum bend radius loaded 37,6cm
- Minimum bend radius unloaded 18,8cm
- Max Tensile load in (Newtons) short term 2700, long term 800.
- Maximum vertical rise 344m
- Operating temperature minus 40 to 70 degrees Celsius
- Crush resistance 44N/mm
- Flexing 25 cycles

### **Heavy Duty Fibre cable 24 core**

- Outer diameter 18,8mm
- Weight 238kg per km
- Minimum bend radius loaded 37,6cm
- Minimum bend radius unloaded 18,8cm
- Max Tensile load in (Newtons) short term 2700, long term 800.
- Maximum vertical rise 344m
- Operating temperature minus 40 to 70 degrees Celsius
- Crush resistance 44N/mm
- Flexing 25 cycles

### **Heavy Duty Fibre cable 48 core**

- Outer diameter 18,8mm
- Weight 238kg per km
- Minimum bend radius loaded 37,6cm
- Minimum bend radius unloaded 18,8cm
- Max Tensile load in (Newtons) short term 2700, long term 800.
- Maximum vertical rise 344m
- Operating temperature minus 40 to 70 degrees Celsius
- Crush resistance 44N/mm
- Flexing 25 cycles

### **Aerial Fibre 12 core**

- Short spans of up to 249m
- Outer diameter 11,8mm
- Weight 99kg per km
- Minimum bend radius loaded 23,6cm
- Minimum bend radius unloaded 11,8cm
- High frequency (Aeolian) vibration 100 million cycles
- Low frequency (Gallop) vibration 100 thousand cycles
- Sag and tension example
- Max span 249m, total sag at NESC loading 4.18%
- Operating temperature minus 40 to 70 degrees Celsius
- Crush resistance 44N/mm
- Flexing 25 cycles

### **Aerial Fibre 24 core**

- Short spans of up to 249m
- Outer diameter 11,8mm
- Weight 99kg per km
- Minimum bend radius loaded 23,6cm
- Minimum bend radius unloaded 11,8cm
- High frequency (Aeolian) vibration 100 million cycles
- Low frequency (Galloping) vibration 100 thousand cycles
- Sag and tension example
- Max span 249m, total sag at NESC loading 4.18%
- Operating temperature minus 40 to 70 degrees Celsius
- Crush resistance 44N/mm
- Flexing 25 cycles

### **Aerial Fibre 48 core**

- Short spans of up to 249m
- Outer diameter 11,8mm
- Weight 99kg per km
- Minimum bend radius loaded 23,6cm
- Minimum bend radius unloaded 11,8cm
- High frequency (Aeolian) vibration 100 million cycles
- Low frequency (Galloping) vibration 100 thousand cycles
- Sag and tension example
- Max span 249m, total sag at NESC loading 4.18%
- Operating temperature minus 40 to 70 degrees Celsius
- Crush resistance 44N/mm
- Flexing 25 cycles

### **Armoured Tube Fibre 12 core**

- Buffer tube diameter 4mm
- Jacket diameter 11mm
- Minimum bend radius loaded 22cm
- Weight 138kg per km
- Minimum bend radius unloaded 11cm
- Max tensile load (Short term) 2700, (long term) 800.
- Maximum vertical rise 593m
- Operating temperature minus 40 to 70 degrees Celsius
- Crush resistance 44N/mm
- Flexing 25 cycles

### **Armoured Tube Fibre 24 core**

- Buffer tube diameter 4mm
- Jacket diameter 11mm
- Weight 138kg per km
- Minimum bend radius loaded 22cm
- Minimum bend radius unloaded 11cm

- Max tensile load (Short term) 2700, (long term) 800.
- Maximum vertical rise 593m
- Operating temperature minus 40 to 70 degrees Celsius
- Crush resistance 44N/mm
- Flexing 25 cycles

### **Armoured Tube Fibre 48 core**

- Buffer tube diameter 6mm
- Jacket diameter 13mmWeight 181kg per km
- Minimum bend radius loaded 26cm
- Minimum bend radius unloaded 13cm
- Max tensile load (Short term) 2700, (long term) 800.
- Maximum vertical rise 452m
- Operating temperature minus 40 to 70 degrees Celsius
- Crush resistance 44N/mm
- Flexing 25 cycles

### **Splice box**

- **U box**

### **Switching**

|   |                        |
|---|------------------------|
| 1 | Fibre switches 8 port  |
| 2 | Fibre switches 16 port |
| 3 | Fibre switches 24 port |

### **8 Port Gigabit Switch with 4 port POE**

- Support layer 2 switching
- Support for IEEE 802.3ad Link Aggregation Control Protocol (LACP)
- Support for up to 256 VLANs simultaneously
- 802.1X: RADIUS authentication
- Support IPv6
- Web user interface
- Switch capacity of 13.6Gbps
- 32W dedicated POE over all 4 ports

### **16 Port Smart Switch with 4 Gigabit ports and 16 POE ports**

- Full Layer 2 Switching Capabilities
- 370W dedicated POE over all 16 ports
- Switching bandwidth should be 176Gbps
- A maximum of 255 active VLANs
- 4000 VLAN IDs
- Switches should support stacking
- Enhanced QoS should include 4 egress queues per port and strict priority queuing.

### **24 Port Smart Switch with 4 Gigabit ports and 24 POE ports**

- Full Layer 2 Switching Capabilities

- 370W dedicated POE over all 24 ports
- Switching bandwidth should be 176Gbps
- A maximum of 255 active VLANs
- 4000 VLAN IDs
- Switches should support stacking
- Enhanced QoS should include 4 egress queues per port and strict priority queuing.

## Cabinets

### All cabinets must include the following:

- Fabricated from sheet metal
- Epoxy powder coated
- Lockable glass door
- SABS ISO 9001:2008 certified
- 100mm swing frame collar
- Must include power plugs and fans
- Wall mounted.

|    |                                                     |
|----|-----------------------------------------------------|
| 1  | cabinet 4u 400mm deep                               |
| 2  | cabinet 6u 500 +100mm                               |
| 3  | cabinet wall box 9u 400 + 100, glass door           |
| 4  | cabinet 12u 400 +100mm wallbox - glass door         |
| 5  | cabinet rack 27u x 600 x 800 glass front -full spec |
| 6  | cabinet 42u 600 x 800mm - glass f & solid           |
| 7  | patch panel 24 way cat6                             |
| 8  | 1u brush panel                                      |
| 9  | cat 6 metal connector                               |
| 10 | junction box                                        |
| 11 | cat 6 boot                                          |
| 12 | cat 6 single patch box                              |
| 13 | cat 6 dual patch box                                |
| 14 | 10way metal power duct                              |
| 15 | rack mount shelf                                    |
| 16 | 2u front mount shelf,                               |
| 17 | 1u blank black metal plates                         |
| 18 | fan kit, 120mm 220v fan steel finger guard, lead    |
| 19 | cat 6 shielded cable-earthed                        |
| 20 | cat 6 solid copper cable per meter                  |
| 21 | cctv rj59 cable                                     |
| 22 | cctv bnc connector                                  |
| 23 | cctv dc jack                                        |
| 24 | cctv video baulan                                   |
| 25 | cctv 30 amp power supply                            |
| 26 | apc or equivalent surge protection multiplug 5 way  |
| 27 | surge protector plug                                |

## UPS (Uninterruptible Power Supply)

- **2000va Rackmount Online UPS**
- Must have the efficiency of at least 90%
- Input frequency range 45-65Hz, auto selecting

- Input current distortion: Max 6% at 100% load at 230Vac
- Nominal output voltage: 220Vac, 225Vac, 230Vac or 240Vac, user selectable.
- Output Connectors: IEC 320 C13
- Overload Rating (Normal Operation - Online): 150% for 30 seconds, 125% for 1 minute, 105% continuous
- A 16A 2-pole circuit breaker must be fitted at the input.
- Operating temperature: 0 – 40 degrees
- Audible noise: Less than 55dBA at 1 meter
- Must include software to monitor the device
- 
- **1000va Rackmount Online UPS**
- Must have the efficiency of at least 88%
- Input frequency range 45-65Hz, auto selecting
- Input current distortion: Max 6% at 100% load at 230Vac
- Nominal output voltage: 220Vac, 225Vac, 230Vac or 240Vac, user selectable.
- Output Connectors: IEC 320 C13
- Overload Rating (Normal Operation - Online): 150% for 30 seconds, 125% for 1 minute, 105% continuous
- A 10A 2-pole circuit breaker must be fitted at the input.
- Operating temperature: 0 – 40 degrees
- Audible noise: Less than 55dBA at 1 meter
- Must include software to monitor the device.

## Backup UPS

|    | <b>9. UPS</b>                                            |
|----|----------------------------------------------------------|
| 1  | 1000va on-line tower ups                                 |
| 2  | 2000va 2u on-line rackmount ups                          |
| 3  | 1000va 2u on-line rackmount ups                          |
| 4  | Rack mount kit for ups                                   |
| 5  | 1200va inverter unit                                     |
| 6  | 2.4kva inverter unit complete                            |
| 7  | 3kva inverter unit complete                              |
| 8  | 5kva inverter unit complete                              |
| 9  | 100ah 12v deep cycle battery                             |
| 10 | 200ah 12v deep cycle battery                             |
| 11 | 330w solar pv module                                     |
| 12 | Inverter battery box with top plate                      |
| 13 | Electrical sundries base db, circuits, cable per install |

## Network Video Recording Software

- The system shall be a digital video and remote monitoring system with a capability of simultaneously displaying, recording, replaying recorded footage.
  - The system shall be truly I.P in nature and shall capable of supporting the following video sources:
  - I.P Video cameras (most popular brands are to be included in this) A separate list of supported I.P cameras is to be provided.
  - ONVIF compliant devices including encoders.
1. The system shall use Universal Plug and Play (UPNP) to discover I.P devices and retrieve the settings from those devices and ONVIF device discovery.

2. The system shall adopt an HTML5 remote viewer which must allow use of any windows device to view all video on the selected server as well as view footage and cut clips if required. This must all be available without adding any additional software onto the machines being used.
3. The HTML5 viewer must also allow us to remotely restart the server as well as open or close any cameras on the server.
4. The system must be able to retrieve footage from SD cards should the network go down for any reason. This must be possible to be drawn easily by the operator.
5. The viewing of recorded footage must be very easily available by double clicking the image of which image is required.
6. Each video image must allow for full quality size enlargement at the click of a button for easier access to definition.
7. It should be possible to move all video images using a drag and drop facility to any of the 8 displays which could be in use.
8. The system shall be capable of running in a Windows (32 or 64bit) operating system environment.
9. Automatic updates must be available if connected on the internet.
10. It must be possible to connect I/O devices to the system to trigger actions from PTZ cameras.
11. The system shall maintain user activity logs
12. The system shall enable all sub-systems on site to be time-synchronized.
13. The system shall manage a number of Inputs and Relay outputs.
14. The system shall provide setup wizards for fast, simple addition of cameras.
15. The system shall provide a "time-out" facility for remote connections.
16. The system shall store complete site configuration on site (or off-site) for retrieval in the event of hard drive failure. This configuration shall be easily re-instated.
17. The system shall be easily upgraded to later versions via automatic update on the menu. This must not require a disk.
18. The system shall be easily expandable by the addition of I.P cameras licenses.
19. Special features shall be pre-built into the system and may be unlocked with a software key, enabling a qualified user to quickly activate these features as required.
20. The system shall manage the recording and streaming of video as well as up to 8 displays per server without the requirement of an additional server for any of the above functions.
21. Managing multiple, simultaneous video streams of various bitrates, frame rates and resolutions from the video sources, including MegaPixel video, MJPEG, MPEG4 or H.264 and video compression algorithms according to camera capability.
22. Receiving and storing MegaPixel video data
23. Creating and managing multiple databases for events or LPR
24. Recording frame rates of 30 frames per second.
25. Routing selected video streams to selected Video Monitors for viewing and reviewing of video (Up to 8 separate screens should be supported from the same server).
26. Displaying video in HD where required.
27. Controlling Pan-Tilt-Zoom (PTZ) cameras from the user interface via a software overlay popup.
28. All recorded video shall be possible to draw camera name as well as date and time onto video clips that are cut using the HTML5 remote viewer.

29. The GUI shall be capable of being viewed over up to 8 monitors from one software computer. The user shall be able to customize the monitors so that they can view different components (e.g. live view, alerts and recorded footage.)
30. The layout of the user interface shall be customizable. System functions or features that are not activated, or to which the user does not have access shall be hidden from view – the user shall only see functions that he/she uses.
31. User access to site resources shall be access-controlled by username and password, but resource access rights at the sites shall control operator remote access to resources.

## **Encoders and Integration devices**

### **Single Channel Analogue to I.P Encoder**

- Provide multiple streams at 30 frames per second in motion JPEG or H264
- Support resolutions up to 720 x 576
- Support multiple streams individually configured Motion JPEG and H.264 video streams
- Controllable frame rate and bandwidth
- Support POE
- Accept IPV4 as well as DHCP
- Must have at least one RS-422/485 port to allow control of PTZ cameras.
- Must support PTZ patrols and at least 100 presets.
- Allow text and date/time overlay.
- Support synchronization with an NTP server
- Include embedded event functionality which may be triggered by events like Video loss/active tampering or motion.
- The device should support event actions which trigger the following actions. Remote notification including video upload and preset call-up upon event.
- Must include two way full duplex audio with external inputs and outputs.
- Operating temperature supported must be between 0 degrees and 50 degrees Celsius.
- Must support SD card storage
- Must support a pre and post buffer of 64mb
- Must include four configurable external I/O ports

### **Four Channel Analogue to I.P Encoder**

- Provide one H264 and one MJPEG stream per channel at 30 frames per second.
- Provide controllable frame rate and bandwidth
- Support resolutions up to 720 x 576
- Controllable frame rate and bandwidth
- Support POE
- Accept IPV4 as well as DHCP
- Must have at least four RS-422/485 ports to allow control of PTZ cameras.
- Must support PTZ patrols and at least 100 presets.
- Allow text and date/time overlay.
- Support synchronization with an NTP server
- Include embedded event functionality which may be triggered by events like Video loss/active tampering or motion.

- The device should support event actions which trigger the following actions. Remote notification including video upload and preset call-up upon event.
- Must include two way full duplex audio with external inputs and outputs for sound.
- Operating temperature supported must be between 0 degrees and 50 degrees Celsius.
- Must support SD card storage up to 64 GB
- Must support a pre and post alarm video buffering
- Must include four configurable external I/O ports

### **Sixteen Channel Analogue to I.P Encoder**

- Provide one H264 and one MJPEG stream per channel at 30 frames per second per channel.
- Provide controllable frame rate and bandwidth
- Support resolutions up to 720 x 576
- Accept IPV4 as well as DHCP
- Must have at least 16 RS-422/485 ports to allow control of PTZ cameras.
- Must support PTZ patrols and at least 100 presets.
- Allow text and date/time overlay.
- Allow privacy mask
- Support synchronization with an NTP server
- Include embedded event functionality which may be triggered by events like Video loss/active tampering or motion.
- The device should support event actions which trigger the following actions. Remote notification including video upload and preset call-up upon event.
- Must include two way full duplex audio with external inputs and outputs for sound.
- Operating temperature supported must be between 0 degrees and 50 degrees Celsius.
- Must support four SD card storage up to 64 GB each
- Must support a pre and post alarm video buffering
- Must include 1 x 1000 base TX Ethernet (RJ45) + 1 x Auxiliary Ethernet (RJ45) 1 x Gbps SFP slot
- Must include 16 configurable external I/O ports

### **Eight Channel Network Ethernet I/O device**

- Include eight configurable I/O ports
- I/O functionality should include input trigger and output toggle/pulse
- Two way full duplex audio
- Audio input must support balanced microphones 48v
- Support synchronization with an NTP server
- Accept IPV4 as well as DHCP
- Event triggers should include audio detection and external inputs
- Event actions should include email, HTTP and TCP external output port
- Support POE

### **Rugged sixteen port Ethernet I/O device**

- Include Eight digital inputs, Four digital outputs with four configurable digital Input/Outputs
- Two Ethernet ports for daisy chain capabilities
- Operating temperature at least -10 degrees to 60 degrees Celsius.
- Atex Zone 2 certification

- Shock rating IEC 60068-2-27

## Displays

|    | <b>DISPLAY AND ACCESSORIES</b>      |
|----|-------------------------------------|
| 1  | Monitor 23 Inch Hdmi                |
| 2  | 32" Led Panel Hdmi                  |
| 3  | 43" Led Panel Hdmi                  |
| 4  | Hdmi Extender – Single 40m          |
| 5  | Hdmi Extender 50 Meter              |
| 6  | Hdmi Extender 200 Meter             |
| 7  | Hdmi Splitter 4 Way                 |
| 8  | Tv Wall Mount Bracket – 32 Inch     |
| 9  | Tv Wall Mount Bracket – 42 Inch     |
| 10 | Hdmi Cable 2 Meter                  |
| 11 | Hdmi Cable 5 Meter                  |
| 12 | Hdmi Cable 10 Meter                 |
| 13 | Hdmi Cable 15 Meter                 |
| 14 | Mini Display Port To Hdmi Converter |
| 15 | Vga To Hdmi Adaptor                 |
| 16 | Dp To Hdmi Adaptor                  |

### 23 Inch display

- Native Display Resolution 1920 x 1080 WXGA
- High Brightness 500 cd/
- Contrast Ratio 1,300:1, 40,000:1 DCR
- IPS Panel: 178°/178° Ultra Wide Viewing Angle
- Commercial Grade - Designed for 24/7 continuous operation
- Viewing Angle and Life Expectancy Enhanced in Portrait and Landscape Mode
- Built-In Ready for NC2000
- Narrow Bezel 30.4mm
- RJ-45 LAN Control
- HDMI™/DVI with HDCP
- Convenient External Speaker-Out
- RoHS Compliant
- Split Zoom - Self video wall Up to 5 x 5 matrix - adjusts for bezel width
- 3-Year Limited Warranty

### 32 inch LED Display

- Native Display Resolution 1920 x 1080 FHD
- High Brightness 400 cd/m2
- Contrast Ratio 1,300:1,
- Dynamic CR 500,000:1
- IPS Panel: 178°/178° Ultra Wide Viewing Angle
- Designed for 24/7 continuous operation
- Orientation Portrait and Landscape Mode
- Narrow Bezel 18,9mm at top right and left, Bottom Bezel width = 26mm
- External control via RJ-45
- HDMI™/DVI with HDCP

- External Speaker-Out
- RoHS Compliant
- Split Zoom - Self video wall Up to 15 x 15 matrix
- Lifetime of 60000 hrs3-Year Limited Warranty

### **43 inch LED Display**

- Native Display Resolution 1920 x 1080 FHD
- High Brightness 450 cd/m2
- Contrast Ratio 1,300:1,
- Dynamic CR 500,000:1
- IPS Panel: 178°/178° Ultra Wide Viewing Angle
- Designed for 24/7 continuous operation
- Orientation Portrait and Landscape Mode
- Narrow Bezel width 11,5mm
- HDMI™/DVI with HDCP
- External Speaker-Out
- RoHS Compliant
- Split Zoom - Self video wall Up to 15 x 15 matrix adjusts for bezel width
- Lifetime of 60000 hrs
- 3-Year Limited Warranty

### **Infra-Red Illumination**

|   | <b>Infra-Red Illumination</b> |
|---|-------------------------------|
| 1 | 60M infra-Red Illuminator     |
| 2 | 200M infra-Red Illuminator    |
| 3 | 300M infra - Red Illuminator  |
| 4 | 1000M infrared Illuminator    |

### **60M infrared Illuminator**

- Maximum distance 60m (at narrow angle)
- LED technology
- Supported angles in range 10 ,30,50,120 degrees
- Optics LED technology
- POE support IEEE802.3af
- Internal and external IP66 rated
- Temp range -30 to 50 degrees Celsius
- Power adjustment on unit
- 3 year warranty

### **200M infrared Illuminator**

- Maximum distance 200m (at narrow angle)
- LED technology
- Supported angles in range 10-20 , 30-60 , 50- 100 , 120-180 degrees
- Optics LED technology
- Internal and external IP66 rated
- Temp range -50 to 50 degrees Celsius
- Adaptive illumination
- Vandal resistant
- High definition lighting (High power LED technology)

- 5 year warranty

### **300M infra - Red Illuminator**

- Maximum distance 300m (at narrow angle)
- LED technology
- Supported angles in range 10-20 , 30-60 , 50- 100 , 120-180 degrees
- Optics LED technology
- Internal and external IP66 rated
- Temp range -50 to 50 degrees Celsius
- Adaptive illumination
- Vandal resistant
- High definition lighting (High power LED technology)
- 5 year warranty

### **1000M infra-Red Illuminator**

- Maximum distance 700m (at narrow angle)
- Maximum distance with dual units 1000m (at narrow angle)
- LED technology
- Supported angles in range 5-15 , 10-30 , 30-90, 50-180 degrees
- Optics LED technology
- Internal and external IP66 rated
- Temp range -50 to 50 degrees Celsius
- Adaptive illumination
- Vandal resistant
- High definition lighting (High power LED technology)

### **POE Injector**

- Poe injector that is compatible to the cameras and system

### **HIGH POWER POE INJECTOR**

Function:

- Data and power are fed to a network video product through an Ethernet cable
- Use together with a POE splitter for a network video product without built-in PoE support

Data Rate:

- 10/100/1000 Mbps

Installation and management:

- Power selector: 15 W or 30 W
- Automatically detects POE and High POE-enabled devices and supplies inline power
- Local LED management display

Input Power

- AC Input Voltage: 100 to 240 V AC

- AC Frequency 50-60 Hz

Maximum Output power:

- 55 V DC (max. 60 W)

Connectors:

- Shielded RJ45, EIA 568A and 568B
- Power connector C13

Network Cables:

- Shielded category 5 (or higher)

Wiring:

- Data provided over pairs 1 /2 and 3/6 for 10/100 Ethernet, over all four pairs of Gigabit Ethernet.
- Power over pairs 1/ 2 (-), 3/6 (+), 4/5 (+) and 7/8 (-)

Display and Indicators:

- Port interfaces are located on the front panel
- Port LED: Power indicator and Data connectivity

Operating conditions:

- -10°C to 45°C
- At 30W: -10°C to 55°C
- Humidity max 90%

Dimensions:

- 38 x62 x 151 mm

Weight:

- 320g

Optional accessories:

- Mid span DIN Clip A
- Mains Cable Angle C13 – Open 0.5m

Warranty:

3-year warranty

## **POE INJECTOR DEVICE WITH BATTERY BACKUP AND SURGE PROTECTION**

### **POE Injector with 2 injector points**

#### **Overview:**

- Delivers peak power of 55Watts
- Powered by DC Battery supply
- Charger with 4 stage charging process
- Input 230 AC surge protection provided
- PoE outputs provide floating DC supply which conforms to PoE standard 802.13a/f/g

## **Electrical Specification:**

### **Battery/Charger Description:**

- $\pm 20\%$  variation with surge and transient voltage protection
- 4 stage charging process; a) current battery status and analysis, b) Bulk charging, c) Charge termination analysis and d) float charge holding and load current sharing
- Charger capacity 7.5Ahr to 60Ahr
- Front panel LED indicates current charging status and final charging state.
- Overcurrent protection provided between charger and battery supply

### **POE Injectors:**

- 802.13a/f/g compliant
- Overcurrent and power reversal protection is provided
- RS232 output from each injector output enables the measurement of output power consumption and voltage levels
- In multiple injector systems, each injector can be moved independently of others
- Each injector output consists of 2x RJ45 connectors
- LED at the power supply output RJ45 connector provides a) LED flashing slowly – awaiting PoE device to be connected, b) LED flashes quickly- external PoE device is discovered and classified, and d) LED permanently on – external device is now powered in a fully operational status

### **Mechanical Specification:**

- the second cover housing provides for weather protection
- Total weight: 15-25kg, depending on battery capacity installed

## **POE Injector with 3 injector points**

### **Overview:**

- Delivers peak power of 55Watts
- Powered by DC Battery supply
- Charger with 4 stage charging process
- Input 230 AC surge protection provided
- PoE outputs provide floating DC supply which conforms to PoE standard 802.13a/f/g

## **Electrical Specification:**

### **Battery/Charger Description:**

- $\pm 20\%$  variation with surge and transient voltage protection

- 4 stage charging process; a) current battery status and analysis, b) Bulk charging, c) Charge termination analysis and d) float charge holding and load current sharing
- Charger capacity 7.5Ahr to 60Ahr
- Front panel LED indicates current charging status and final charging state.
- Overcurrent protection provided between charger and battery supply

### **POE Injectors:**

802.13a/f/g compliant

Overcurrent and power reversal protection is provided

RS232 output from each injector output enables the measurement of output power consumption and voltage levels

In multiple injector systems, each injector can be moved independently of others

Each injector output consists of 2x RJ45 connectors

LED at the power supply output RJ45 connector provides a) LED flashing slowly – awaiting PoE device to be connected, b) LED flashes quickly- external PoE device is discovered and classified, and d) LED permanently on – external device is now powered in a fully operational status

### **Mechanical Specification:**

- the second cover housing provides for weather protection
- Total weight: 15-25kg, depending on battery capacity installed

### **POE Injector with 4 injector points**

#### **Overview:**

- Delivers peak power of 55Watts
- Powered by DC Battery supply
- Charger with 4 stage charging process
- Input 230 AC surge protection provided
- PoE outputs provide floating DC supply which conforms to PoE standard 802.13a/f/g

### **Electrical Specification:**

#### **Battery/Charger Description:**

- +-20% variation with surge and transient voltage protection
- 4 stage charging process; a) current battery status and analysis, b) Bulk charging, c) Charge termination analysis and d) float charge holding and load current sharing
- Charger capacity 7.5Ahr to 60Ahr
- Front panel LED indicates current charging status and final charging state.

- Overcurrent protection provided between charger and battery supply

#### **POE Injectors:**

- 802.13a/f/g compliant
- Overcurrent and power reversal protection is provided
- RS232 output from each injector output enables the measurement of output power consumption and voltage levels
- In multiple injector systems, each injector can be moved independently of others
- Each injector output consists of 2x RJ45 connectors
- LED at the power supply output RJ45 connector provides a) LED flashing slowly – awaiting PoE device to be connected, b) LED flashes quickly- external PoE device is discovered and classified, and d) LED permanently on – external device is now powered in a fully operational status.

#### **Mechanical Specification:**

- the second cover housing provides for weather protection
- Total weight: 15-25kg, depending on battery capacity installed

#### **POE Injector with 5 injector points**

##### **Overview:**

- Delivers peak power of 55Watts
- Powered by DC Battery supply
- Charger with 4 stage charging process
- Input 230 AC surge protection provided
- POE outputs provide floating DC supply which conforms to PoE standard 802.13a/f/g

#### **Electrical Specification:**

##### **Battery/Charger Description:**

- +-20% variation with surge and transient voltage protection
- 4 stage charging process; a) current battery status and analysis, b) Bulk charging, c) Charge termination analysis and d) float charge holding and load current sharing
- Charger capacity 7.5Ahr to 60Ahr
- Front panel LED indicates current charging status and final charging state.
- Overcurrent protection provided between charger and battery supply

#### **POE Injectors:**

- 802.13a/f/g compliant
- Overcurrent and power reversal protection is provided

- RS232 output from each injector output enables the measurement of output power consumption and voltage levels
- In multiple injector systems, each injector can be moved independently of others
- Each injector output consists of 2x RJ45 connectors
- LED at the power supply output RJ45 connector provides a) LED flashing slowly – awaiting POE device to be connected, b) LED flashes quickly- external PoE device is discovered and classified, and d) LED permanently on – external device is now powered in a fully operational status

#### **Mechanical Specification:**

- the second cover housing provides for weather protection
- Total weight: 15-25kg, depending on battery capacity installed

#### **POE Injector with 6 injector points**

##### **Overview:**

- Delivers peak power of 55Watts
- Powered by DC Battery supply
- Charger with 4 stage charging process
- Input 230 AC surge protection provided
- POE outputs provide floating DC supply which conforms to PoE standard 802.13a/f/g

#### **Electrical Specification:**

##### **Battery/Charger Description:**

- +-20% variation with surge and transient voltage protection
- 4 stage charging process; a) current battery status and analysis, b) Bulk charging, c) Charge termination analysis and d) float charge holding and load current sharing
- Charger capacity 7.5Ahr to 60Ahr
- Front panel LED indicates current charging status and final charging state.
- Overcurrent protection provided between charger and battery supply

##### **POE Injectors:**

- 802.13a/f/g compliant
- Overcurrent and power reversal protection is provided
- RS232 output from each injector output enables the measurement of output power consumption and voltage levels
- In multiple injector systems, each injector can be moved independently of others
- Each injector output consists of 2x RJ45 connectors
- LED at the power supply output RJ45 connector provides a) LED flashing slowly – awaiting POE device to be connected, b) LED flashes quickly- external PoE device

is discovered and classified, and d) LED permanently on – external device is now powered in a fully operational status

### **Mechanical Specification:**

- the second cover housing provides for weather protection
- Total weight: 15-25kg, depending on battery capacity installed

## **Cameras**

### **Indoor Dome Cameras**

#### **One Megapixel low cost fixed lens dome. (For areas with good lighting)**

- Image sensor must be a 1/4 " progressive scan cmos
- Lens must be a 2,8mm fixed iris
- Minimum illumination 1,5-100 000 lux
- Provide multiple streams at 30 frames per second in motion JPEG or H264
- Support resolutions up to 1280 x 720 hd tv 720p
- Support multiple streams individually configured Motion JPEG and H.264 video streams
- Controllable frame rate and bandwidth
- Support POE
- Accept IPV4 as well as DHCP
- Allow text and date/time overlay.
- Support synchronization with an NTP server
- Include embedded event functionality, which may be triggered by events like active tampering or motion detection.
- The device should support event actions, which trigger the following actions. Remote notification including video upload.
- Operating temperature supported must be between 0 degrees and 45 degrees Celsius.
- Must support SD card storage up to 64gb
- Must support a pre and post buffer.
- Must support a narrow yet high format. (narrow view requirements).
- Incorporate IEEE 802.1X security authentication
- Provide a platform allowing the upload of third party applications into the camera.
- Include pixel counter
- Must be IP 42 water dust and impact resistant

#### **Two Megapixel low cost fixed lens dome. (For areas with good lighting)**

- Image sensor must be a 1/ 2,7 " progressive scan cmos
- Lens must be a 2,8mm fixed iris
- Minimum illumination 1,5-100 000 lux
- Provide multiple streams at 30 frames per second in motion JPEG or H264
- Support resolutions up to 1920 x 1080 hd tv 1080p
- Support multiple streams individually configured Motion JPEG and H.264 video streams
- Controllable frame rate and bandwidth
- Support POE
- Accept IPV4 as well as DHCP

- Allow text and date/time overlay.
- Support synchronization with an NTP server
- Include embedded event functionality, which may be triggered by events like active tampering or motion detection.
- The device should support event actions, which trigger the following actions. Remote notification including video upload.
- Operating temperature supported must be between 0 degrees and 40 degrees Celsius.
- Must support SD card storage up to 64gb
- Must support a pre and post buffer.
- Must support a narrow yet high format. (narrow view requirements).
- Incorporate IEEE 802.1X security authentication
- Provide a platform allowing the upload of third party applications into the camera.
- Include pixel counter
- Must be IP 42 water dust and impact resistant

### **Three Megapixel low cost fixed lens dome. (For areas with good lighting)**

- Image sensor must be a 1/ 3,6 “ progressive scan cmos
- Lens must be a 1,6mm fixed iris
- Minimum illumination 0,6-200 000 lux
- Exposure zones and fine tuning of low light behavior
- Provide multiple streams at 20 frames per second in motion JPEG or H264
- Support resolutions up to 2048 x 1536
- Support multiple view streaming where up to 8 individual cut out areas can be configured as a separate image.
- Digital PTZ function with presets and patrol feature
- Support multiple streams individually configured Motion JPEG and H.264 video streams
- Controllable frame rate and bandwidth
- Support POE
- Accept IPV4 as well as DHCP
- Allow text and date/time overlay.
- Support synchronization with an NTP server
- Include embedded event functionality, which may be triggered by events like active tampering or motion detection.
- The device should support event actions, which trigger the following actions.
- Remote notification including video upload and go to PTZ preset position.
- Operating temperature supported must be between 0 degrees and 45 degrees Celsius.
- Must support SD card storage up to 64gb
- Must support a pre and post buffer.
- Must support a narrow yet high format. (narrow view requirements).
- Incorporate IEEE 802.1X security authentication
- Provide a platform allowing the upload of third party applications into the camera.
- Include pixel counter
- Must be IP 42 water dust and impact resistant

### **Five Megapixel fish eye dome. (For areas with good lighting)**

- Image sensor must be a 1/ 3,2 “ progressive scan cmos
- Lens must be a 1,3mm fixed iris
- Minimum illumination 0,6-200 000 lux

- Provide multiple streams at 12 frames per second in motion JPEG or H264
- Support resolutions up to 2592 x 1944 (5mp)
- 360 degree overview, panorama, double panorama, quad view
- Support multiple view streaming where up to 4 individual cut out areas can be configured as a separate image.
- Digital PTZ function with de warping ,presets and patrol feature
- Support multiple streams individually configured Motion JPEG and H.264 video streams
- Controllable frame rate and bandwidth
- Support POE
- Accept IPV4 as well as DHCP
- Allow text and date/time overlay.
- Support synchronization with an NTP server
- Include embedded event functionality, which may be triggered by events like active tampering or motion detection.
- The device should support event actions, which trigger the following actions. Remote notification including video upload and go to PTZ preset position.
- Operating temperature supported must be between 0 degrees and 45 degrees Celsius.
- Must support SD card storage up to 64gb
- Must support a pre and post buffer.
- Incorporate IEEE 802.1X security authentication
- Provide a platform allowing the upload of third party applications into the camera.
- Include pixel counter
- Discreet housing

### **One Megapixel low cost fixed lens dome. (For areas with Bad lighting)**

- Image sensor must be a 1/4 " progressive scan cmos
- Lens must be a 2,8mm fixed iris
- Automatic Day night functionality with built in infrared
- Minimum illumination 0.8-100 000 lux (colour)
- Minimum illumination 0.16 lux (Black and white)
- Minimum illumination 0 lux with Infrared on
- Provide multiple streams at 30 frames per second in motion JPEG or H264
- Support resolutions up to 1280 x 800
- Support multiple streams individually configured Motion JPEG and H.264 video streams
- Controllable frame rate and bandwidth
- Support POE
- One Alarm input/ One Alarm output
- Accept IPV4 as well as DHCP
- Allow text and date/time overlay.
- Support synchronization with an NTP server
- Include embedded event functionality, which may be triggered by events like active tampering or motion detection.
- The device should support event actions, which trigger the following actions. Remote notification including video upload.
- Operating temperature supported must be between minus 30 degrees and +50 degrees Celsius.
- Must support SD card storage up to 64gb
- Must support a pre and post buffer.
- Must support a narrow yet high format. (narrow view requirements).

- Incorporate IEEE 802.1X security authentication
- Provide a platform allowing the upload of third party applications into the camera.
- Include pixel counter
- Must be IP 66 and NEMA 4X rated
- Outdoor ready
- De humidifying membrane

### **Two Megapixel low cost fixed lens dome. (For areas with Bad lighting)**

- Image sensor must be a 1/ 2.7 “ progressive scan cmos
- Lens must be a 3.6mm fixed iris
- Automatic Day night functionality
- Minimum illumination 0.8-100 000 lux (colour)
- Minimum illumination 0.16 lux (Black and white)
- Provide multiple streams at 30 frames per second in motion JPEG or H264
- Support resolutions up to 1920 x 1080
- Support multiple streams individually configured Motion JPEG and H.264 video streams
- Controllable frame rate and bandwidth
- Support POE
- One Alarm input/ One Alarm output
- Accept IPV4 as well as DHCP
- Allow text and date/time overlay.
- Support synchronization with an NTP server
- Include embedded event functionality, which may be triggered by events like active tampering or motion detection.
- The device should support event actions, which trigger the following actions.  
Remote notification including video upload.
- Operating temperature supported must be between minus 30 degrees and +50 degrees Celsius.
- Must support SD card storage up to 64gb
- Must support a pre and post buffer.
- Must support a narrow yet high format. (narrow view requirements).
- Incorporate IEEE 802.1X security authentication
- Provide a platform allowing the upload of third party applications into the camera.
- Include pixel counter
- Must be IP 66 and NEMA 4X rated
- De humidifying membrane

### **Three Megapixel low cost fixed lens dome. (For areas with Bad lighting)**

- Image sensor must be a 1/ 3.6 “ progressive scan cmos
- Lens must be a 2 mm fixed iris
- Automatic Day night functionality
- Minimum illumination 0.3-200 000 lux (colour)
- Minimum illumination 0.06 lux (Black and white)
- Provide multiple streams at 20 frames per second in motion JPEG or H264
- Support resolutions up to 2048 x 1536
- Support multiple streams individually configured Motion JPEG and H.264 video streams
- Controllable frame rate and bandwidth
- Support multiple view streaming where up to 8 individual cut out areas can be configured as a separate image.

- Digital PTZ with presets and patrols
- Support POE
- One Alarm input/ One Alarm output
- Accept IPV4 as well as DHCP
- Allow text and date/time overlay.
- Support synchronization with an NTP server
- Include embedded event functionality, which may be triggered by events like active tampering or motion detection.
- The device should support event actions, which trigger the following actions. Remote notification including video upload and go to PTZ preset position.
- Operating temperature supported must be between minus 30 degrees and +50 degrees Celsius.
- Must support SD card storage up to 64gb
- Must support a pre and post buffer.
- Must support a narrow yet high format. (narrow view requirements).
- Incorporate IEEE 802.1X security authentication
- Provide a platform allowing the upload of third party applications into the camera.
- Include pixel counter
- Must be IP 66 and NEMA 4X rated
- De humidifying membrane

### **Single Channel camera body for multiple discreet head options**

- Provide frame rate of up to 30FPS
- Support resolutions up to 1080p
- Support WDR (Wide dynamic range)
- Support multiple streams individually configured Motion JPEG and H.264 video streams
- Controllable frame rate and bandwidth
- Support POE
- four Alarm input/outputs
- Accept IPV4 as well as DHCP
- Allow text and date/time overlay.
- Support synchronization with an NTP server
- The device should support event actions, which trigger the following actions. Remote notification including video upload.
- Must support standard SD card storage device
- Must support a narrow yet high format. (narrow view requirements).
- Incorporate IEEE 802.1X security authentication
- Provide a platform allowing the upload of third party applications into the camera.
- Support two way audio
- Support RS232
- Support extension of up to 12 between main unit and camera sensor unit.

### **Rugged mobile surveillance camera**

- Image sensor must be a 1/ 2,8 “ progressive scan cmos
- Must support Wide dynamic range
- Lens must include a 3,6 mm
- Lens must have a fixed Iris
- Minimum illumination 0.3-lux
- Provide multiple streams at 30 frames per second in motion JPEG or H264
- Support resolutions up to 720p

- Support multiple streams individually configured Motion JPEG and H.264 video streams
- Controllable frame rate and bandwidth
- Support POE
- Accept IPV4 as well as DHCP
- Allow text and date/time overlay.
- Support synchronization with an NTP server
- Include embedded event functionality, which may be triggered by events like active tampering or motion detection.
- The device should support event actions, which trigger the following actions.
- Remote notification including video upload.
- Operating temperature supported must be between minus 30 degrees Celsius and +60 degrees Celsius.
- Must support SD card storage up to 64gb
- Must support a pre and post buffer.
- Must support a narrow yet high format. (narrow view requirements).
- Provide a platform allowing the upload of third party applications into the camera.
- Include pixel counter
- Must be IP 66, IP67 Rated
- Must be NEMA 4X Rated
- Must be IK08 impact resistant.
- Must include Approval EN 50155 class T3 (Vibration, Shock, Bump, Temperature)
- Must include Approval ISO 16750-3 (Vibration)
- Optional Lenses must include: Lens change to 2,8mm 6mm or 8mm option.

### **Rugged mobile surveillance camera 2 megapixel**

- Image sensor must be a 1/ 2,8 “ progressive scan cmos
- Must support Wide dynamic range
- Lens must include a 3,6 mm
- Lens must have a fixed Iris
- Minimum illumination 0.3-lux
- Provide multiple streams at 30 frames per second in motion JPEG or H264
- Support resolutions up to 1920 X 1080
- Support multiple streams individually configured Motion JPEG and H.264 video streams
- Controllable frame rate and bandwidth
- Support POE
- Accept IPV4 as well as DHCP
- Allow text and date/time overlay.
- Support synchronization with an NTP server
- Include embedded event functionality, which may be triggered by events like active tampering or motion detection.
- The device should support event actions, which trigger the following actions.
- Remote notification including video upload.
- Operating temperature supported must be between minus 30 degrees Celsius and +60 degrees Celsius.
- Must support SD card storage up to 64gb
- Must support a pre and post buffer.
- Must support a narrow yet high format. (narrow view requirements).
- Provide a platform allowing the upload of third party applications into the camera.
- Include pixel counter

- Must include an audio in for microphones or line in
- Must include one input and one output for external devices.
- Must be IP 66, IP67 Rated
- Must be NEMA 4X Rated
- Must be IK08 impact resistant
- Must include Approval EN 50155 class T3 (Vibration, Shock, Bump, Temperature)
- Must include Approval ISO 16750-3 (Vibration)

#### **One Megapixel Varifocal dome camera incl I/O and audio M3304 replacement**

- Image sensor must be a 1/4 " progressive scan cmos
- Lens must be a 2,8mm fixed iris
- Automatic Day night functionality with built in infrared
- Minimum illumination 0.8-100 000 lux (colour)
- Minimum illumination 0.16 lux (Black and white)
- Minimum illumination 0 lux with Infrared on
- Provide multiple streams at 30 frames per second in motion JPEG or H264
- Support resolutions up to 1280 x 800
- Support multiple streams individually configured Motion JPEG and H.264 video streams
- Controllable frame rate and bandwidth
- Support POE
- One Alarm input/ One Alarm output
- Accept IPV4 as well as DHCP
- Allow text and date/time overlay.
- Support synchronization with an NTP server
- Include embedded event functionality, which may be triggered by events like active tampering or motion detection.
- Remote notification including video upload.
- Operating temperature supported must be between minus 30 degrees and +50 degrees Celsius.
- Must support SD card storage up to 64gb
- Must support a pre and post buffer.
- Must support a narrow yet high format. (narrow view requirements).
- Incorporate IEEE 802.1X security authentication
- Provide a platform allowing the upload of third party applications into the camera.
- Include pixel counter
- Must be IP 66 and NEMA 4X rated
- Outdoor ready
- De humidifying membrane

#### **One Megapixel Varifocal dome incl SD card support and extreme low light**

- Image sensor must be a 1/3 " progressive scan cmos
- Lens must include a varifocal 2,5 mm to 6mm
- Lens must have a P-Iris
- Remote focus and zoom
- Automatic Day night functionality
- Minimum illumination 0.1-lux (color)
- Minimum illumination 0.02 lux (Black and white)
- Provide multiple streams at 30 frames per second in motion JPEG or H264
- Support resolutions up to 1280 x 960 1,3mp

- Support multiple streams individually configured Motion JPEG and H.264 video streams
- Controllable frame rate and bandwidth
- Support POE
- Accept IPV4 as well as DHCP
- Allow text and date/time overlay.
- Support synchronization with an NTP server
- Include embedded event functionality, which may be triggered by events like active tampering or motion detection.
- The device should support event actions, which trigger the following actions.
- Remote notification including video upload.
- Operating temperature supported must be between 0 degrees and +50 degrees Celsius.
- Must support SD card storage up to 64gb
- Must support a pre and post buffer.
- Must support a narrow yet high format. (narrow view requirements).
- Incorporate IEEE 802.1X security authentication
- Provide a platform allowing the upload of third party applications into the camera.
- Include pixel counter
- Tamper resistant

**One Megapixel Varifocal dome include SD card support and extreme low light and audio and I/O support**

- Image sensor must be a 1/3 " progressive scan cmos
- Lens must include a varifocal 3mm to 9mm
- Lens must have a P-Iris
- Remote focus and zoom
- Automatic Day night functionality
- Minimum illumination 0.15-lux (color)
- Minimum illumination 0.03 lux (Black and white)
- Provide multiple streams at 30 frames per second in motion JPEG or H264
- Support resolutions up to 1280 x 960 1,3mp
- Support multiple streams individually configured Motion JPEG and H.264 video streams
- Controllable frame rate and bandwidth
- Support POE
- Accept IPV4 as well as DHCP
- Allow text and date/time overlay.
- Support synchronization with an NTP server
- Must include two way audio with one input and one output. (Built in microphone also available)
- Include embedded event functionality, which may be triggered by events like active tampering or motion detection.
- The device should support event actions, which trigger the following actions.
- Remote notification including video upload.
- Operating temperature supported must be between 0 degrees and +50 degrees Celsius.
- Must support SD card storage up to 64gb
- Must support a pre and post buffer.
- Must support a narrow yet high format. (narrow view requirements).
- Wide dynamic range up to 120db
- Incorporate IEEE 802.1X security authentication

- Provide a platform allowing the upload of third party applications into the camera.
- Include pixel counter
- IK 10 impact resistant casing
- One input and one output

### **P3345 Megapixel Varifocal dome incl SD card support and extreme low light and audio and I/O support**

- Image sensor must be a 1/3 " progressive scan cmos
- Lens must include a varifocal 3mm to 9mm
- Lens must have a P-Iris
- Remote focus and zoom
- Automatic Day night functionality
- Minimum illumination 0.15-lux (colour)
- Minimum illumination 0.03 lux (Black and white)
- Provide multiple streams at 30 frames per second in motion JPEG or H264
- Support resolutions up to 1280 x 960 1,3mp
- Support multiple streams individually configured Motion JPEG and H.264 video streams
- Controllable frame rate and bandwidth
- Support POE
- Accept IPV4 as well as DHCP
- Allow text and date/time overlay.
- Support synchronization with an NTP server
- Must include two way audio with one input and one output. (Built in microphone also available)
- Include embedded event functionality, which may be triggered by events like active tampering or motion detection.
- The device should support event actions, which trigger the following actions.
- Remote notification including video upload.
- Operating temperature supported must be between 0 degrees and +50 degrees Celsius.
- Must support SD card storage up to 64gb
- Must support a pre and post buffer.
- Must support a narrow yet high format. (narrow view requirements).
- Wide dynamic range up to 120db
- Incorporate IEEE 802.1X security authentication
- Provide a platform allowing the upload of third party applications into the camera.
- Include pixel counter
- IK 10 impact resistant casing
- One input and one output

### **Fixed Box Cameras**

#### **Low Cost non megapixel wide angle varifocal (for areas with good lighting)**

- Image sensor must be a 1/4 " progressive scan cmos
- Lens must be a varifocal 2.9 to 8.2mm DC iris
- Minimum illumination 0.6lux
- Provide multiple streams at 30 frames per second in motion JPEG or H264
- Support resolutions up to 800 x 600 at 30 frames per second

- Support multiple streams individually configured Motion JPEG and H.264 video streams
- Controllable frame rate and bandwidth
- Support POE
- Accept IPV4 as well as DHCP
- Allow text and date/time overlay.
- Support synchronization with an NTP server
- Include embedded event functionality, which may be triggered by events like active tampering or motion detection.
- The device should support event actions, which trigger the following actions.
- Remote notification including video upload.
- Operating temperature supported must be between minus 20 degrees and +50 degrees Celsius.
- Must support a pre and post buffer.
- Must support a narrow yet high format. (narrow view requirements).
- Provide a platform allowing the upload of third-party applications into the camera.
- Include pixel counter

#### **Low-cost megapixel wide angle varifocal (for areas with good lighting)**

- Image sensor must be a 1/4 "progressive scan cmos
- Lens must be a varifocal 2.8 to 8.0mm DC iris
- Minimum illumination 0.6lux
- Provide multiple streams at 30 frames per second in motion JPEG or H264
- Support resolutions up to 1280 x 720 at 30 frames per second
- Support multiple streams individually configured Motion JPEG and H.264 video streams
- Controllable frame rate and bandwidth
- Support POE
- Accept IPV4 as well as DHCP
- Allow text and date/time overlay.
- Support synchronization with an NTP server
- Include embedded event functionality, which may be triggered by events like active tampering or motion detection.
- The device should support event actions, which trigger the following actions.
- Remote notification including video upload.
- Operating temperature supported must be between minus 20 degrees and +50 degrees Celsius.
- Must support a pre and post buffer.
- Must support a narrow yet high format. (narrow view requirements).
- Provide a platform allowing the upload of third party applications into the camera.
- Include pixel counter

#### **Low cost non Megapixel day night varifocal Box camera**

- Image sensor must be a 1/4 " progressive scan cmos
- Lens must be a varifocal 2.5 to 6 mm DC iris
- Automatic Day night functionality with built in infra-red
- Minimum illumination 0.6 lux in colour
- Minimum illumination 0.08 lux in black and white
- Minimum illumination 0.lux with infra-red on

- Provide multiple streams at 30 frames per second in motion JPEG or H264
- Support resolutions up to 800 x 600 at 30 frames per second
- Support multiple streams individually configured Motion JPEG and H.264 video streams
- Controllable frame rate and bandwidth
- Support POE
- Accept IPV4 as well as DHCP
- Allow text and date/time overlay.
- Support synchronization with an NTP server
- Include embedded event functionality, which may be triggered by events like active tampering or motion detection.
- The device should support event actions, which trigger the following actions. Remote notification including video upload.
- Operating temperature supported must be between 0 degrees and 40 degrees Celsius.
- Must support SD card storage up to 64gb
- Must support a pre and post buffer.
- Must support a narrow yet high format. (narrow view requirements).
- Provide a platform allowing the upload of third party applications into the camera.
- Include one alarm input and one alarm output

#### **Low cost Megapixel day night varifocal Box camera**

- Image sensor must be a 1/4 " progressive scan cmos
- Lens must be a varifocal 2.5 to 6 mm DC iris
- Automatic Day night functionality with built in infra-red
- Minimum illumination 0.6 lux in colour
- Minimum illumination 0.08 lux in black and white
- Minimum illumination 0.lux with infra-red on
- Provide multiple streams at 30 frames per second in motion JPEG or H264
- Support resolutions up to 1280 x 720 at 30 frames per second
- Support multiple streams individually configured Motion JPEG and H.264 video streams
- Controllable frame rate and bandwidth
- Support POE
- Accept IPV4 as well as DHCP
- Allow text and date/time overlay.
- Support synchronization with an NTP server
- Include embedded event functionality, which may be triggered by events like active tampering or motion detection.
- The device should support event actions, which trigger the following actions. Remote notification including video upload.
- Operating temperature supported must be between 0 degrees and 40 degrees Celsius.
- Must support SD card storage up to 64gb
- Must support a pre and post buffer.
- Must support a narrow yet high format. (narrow view requirements).
- Provide a platform allowing the upload of third party applications into the camera.
- Include one alarm input and one alarm output

### **1.3 Megapixel Vehicle CCTV camera incl SD card support and extreme low light**

- Mounted in patrol vehicle
- Automatic number plate recognition
- Upload data and down load data
- CCTV camera be able to record traffic offences
- Image sensor must be a 1/3 " progressive scan cmos
- Lens must include a varifocal 2.8 mm to 8mm dc iris
- Remote back focus
- Automatic Day night functionality
- Minimum illumination 0.1-lux (colour)
- Minimum illumination 0.02 lux (Black and white)
- Provide multiple streams at 30 frames per second in motion JPEG or H264
- Support resolutions up to 1280 x 960 1,3mp
- Support multiple streams individually configured Motion JPEG and H.264 video streams
- Controllable frame rate and bandwidth
- Support POE
- Accept IPV4 as well as DHCP
- Allow text and date/time overlay.
- Support synchronization with an NTP server
- Include embedded event functionality, which may be triggered by events like active tampering or motion detection.
- The device should support event actions, which trigger the following actions.  
Remote notification including video upload.
- Operating temperature supported must be between 0 degrees and +50 degrees Celsius.
- Must support SD card storage up to 64gb
- Must support a pre and post buffer.
- Must support a narrow yet high format. (narrow view requirements).
- Incorporate IEEE 802.1X security authentication
- Provide a platform allowing the upload of third party applications into the camera.
- Include pixel counter
- Include digital Ptz presets
- Include one Input and one output
- Include two way full duplex audio
- Shall include backlight compensation
- Include wide dynamic range
- Include fine tuning of low light behavior

### **1.3 Megapixel Varifocal Box camera incl SD card support and extreme low light**

- Image sensor must be a 1/3 " progressive scan cmos
- Lens must include a varifocal 2.8 mm to 8mm dc iris
- Remote back focus
- Automatic Day night functionality
- Minimum illumination 0.1-lux (colour)
- Minimum illumination 0.02 lux (Black and white)
- Provide multiple streams at 30 frames per second in motion JPEG or H264
- Support resolutions up to 1280 x 960 1,3mp
- Support multiple streams individually configured Motion JPEG and H.264 video streams

- Controllable frame rate and bandwidth
- Support POE
- Accept IPV4 as well as DHCP
- Allow text and date/time overlay.
- Support synchronization with an NTP server
- Include embedded event functionality, which may be triggered by events like active tampering or motion detection.
- The device should support event actions, which trigger the following actions.  
Remote notification including video upload.
- Operating temperature supported must be between 0 degrees and +50 degrees Celsius.
- Must support SD card storage up to 64gb
- Must support a pre and post buffer.
- Must support a narrow yet high format. (narrow view requirements).
- Incorporate IEEE 802.1X security authentication
- Provide a platform allowing the upload of third party applications into the camera.
- Include pixel counter
- Include digital Ptz presets
- Include one Input and one output
- Include two way full duplex audio
- Shall include backlight compensation
- Include wide dynamic range
- Include fine tuning of low light behavior

## **Two Megapixel Varifocal Box camera incl SD card support and Low light**

- Image sensor must be a 1/ 2.8 “ progressive scan cmos
- Lens must include a varifocal 2.8 mm to 8mm P iris
- Remote back focus
- Automatic Day night functionality
- Minimum illumination 0.2-lux (color)
- Minimum illumination 0.04 lux (Black and white)
- Provide multiple streams at 30 frames per second in motion JPEG or H264
- Support resolutions up to 1920 x 1080
- Support multiple streams individually configured Motion JPEG and H.264 video streams
- Controllable frame rate and bandwidth
- Support multiple view streaming where up to 8 individual cut out areas can be configured as a separate image.
- Digital PTZ with presets and patrols
- Support POE
- Accept IPV4 as well as DHCP
- Allow text and date/time overlay.
- Support synchronization with an NTP server
- Include embedded event functionality, which may be triggered by events like active tampering or motion detection.
- The device should support event actions, which trigger the following actions.
- Remote notification including video upload.
- Operating temperature supported must be between 0 degrees and +50 degrees Celsius.
- Must support SD card storage up to 64gb
- Must support a pre and post buffer.

- Must support a narrow yet high format. (narrow view requirements).
- Incorporate IEEE 802.1X security authentication
- Provide a platform allowing the upload of third party applications into the camera.
- Include pixel counter
- Include one Input and one output
- Include two way full duplex audio
- Shall include backlight compensation
- Include wide dynamic range
- Include fine tuning of low light behavior

### **Five Megapixel Varifocal Box camera incl SD card support and Low light**

- Image sensor must be a 1/3.2 " progressive scan cmos
  - Lens must include a varifocal 2.8 mm to 8mm P iris
  - Remote back focus
  - Automatic Day night functionality
  - Minimum illumination 0.2-lux (color)
  - Minimum illumination 0.04 lux (Black and white)
  - Maximum frame rate 12frames per second at 5MP quality
  - Support resolutions up to 2592 x 1944 (5mp)
  - Support multiple streams individually configured Motion JPEG and H.264 video streams
  - Controllable frame rate and bandwidth
  - Support multiple view streaming where up to 8 individual cut out areas can be configured as a separate image.
  - Digital PTZ with presets and patrols
  - Support POE
  - Accept IPV4 as well as DHCP
  - Allow text and date/time overlay.
  - Support synchronization with an NTP server
  - Include embedded event functionality, which may be triggered by events like active tampering or motion detection.
  - The device should support event actions, which trigger the following actions.
  - Remote notification including video upload.
  - Operating temperature supported must be between 0 degrees and +50 degrees Celsius.
  - Must support SD card storage up to 64gb
  - Must support a pre and post buffer.
  - Must support a narrow yet high format. (narrow view requirements).
- 
- Incorporate IEEE 802.1X security authentication
  - Provide a platform allowing the upload of third party applications into the camera.
  - Include pixel counter
  - Include digital Ptz presets
  - Include one Input and one output
  - Include two way full duplex audio
  - Shall include backlight compensation
  - Include wide dynamic range
  - Include fine tuning of low light behavior

### **Non Megapixel Extreme Low light with varifocal lens**

- Image sensor must be a 1/3 " progressive scan cmos

- Lens must include a varifocal 2.8 mm to 8mm DC iris
- Remote back focus
- Automatic Day night functionality
- Minimum illumination 0.05-lux (colour)
- Minimum illumination 0.008 lux (Black and white)
- Maximum frame rate 30frames per second
- Support resolutions up to 768 x 576
- Support multiple streams individually configured Motion JPEG and H.264 video streams
- Controllable frame rate and bandwidth
- Support POE
- Accept IPV4 as well as DHCP
- Allow text and date/time overlay.
- Support synchronization with an NTP server
- Include embedded event functionality, which may be triggered by events like active tampering or motion detection.
- The device should support event actions, which trigger the following actions.
- Remote notification including video upload.
- Operating temperature supported must be between 0 degrees and +50 degrees Celsius.
- Must support SD card storage up to 64gb
- Must support a pre and post buffer.
- Must support a narrow yet high format. (narrow view requirements).
- Incorporate IEEE 802.1X security authentication
- Provide a platform allowing the upload of third party applications into the camera.
- Include pixel counter
- Include one Input and one output
- Include two way audio
- Shall include backlight compensation
- Include wide dynamic range contrast
- Include fine tuning of low light behavior

### **One Megapixel Extreme Low light with varifocal lens**

- Image sensor must be a 1/3 " progressive scan cmos
- Lens must include a varifocal 2.8 mm to 8mm P iris
- Remote back focus
- Automatic Day night functionality
- Minimum illumination 0.1-lux (colour)
- Minimum illumination 0.02 lux (Black and white)
- Maximum frame rate 30 frames per second at 1mp quality
- Support resolutions up to 1280 x 960
- Support multiple streams individually configured Motion JPEG and H.264 video streams
- Controllable frame rate and bandwidth
- Support POE
- Accept IPV4 as well as DHCP
- Allow text and date/time overlay.
- Support synchronization with an NTP server
- Include embedded event functionality, which may be triggered by events like active tampering or motion detection.
- The device should support event actions, which trigger the following actions.

- Remote notification including video upload.
- Operating temperature supported must be between 0 degrees and +50 degrees Celsius.
- Must support SD card storage up to 64gb
- Must support a pre and post buffer.
- Must support a narrow yet high format. (narrow view requirements).
- Incorporate IEEE 802.1X security authentication
- Provide a platform allowing the upload of third party applications into the camera.
- Include pixel counter
- Include one Input and one output
- Include two way audio
- Shall include backlight compensation
- Include wide dynamic range capture up to 120 dB
- Include fine tuning of low light behavior

### **Two Megapixel Day night zoom capable box camera**

- Image sensor must be a 1/ 3 “ progressive scan cmos
- Lens must include a zoom able 5.1 to 51mm lens
- Optical zoom 10 x and Digital zoom 12 x
- Automatic Day night functionality
- Minimum illumination 2 lux (colour)
- Minimum illumination 0.2 lux (Black and white)
- Maximum frame rate 30 frames per second at 2mp quality
- Support resolutions up to 1920 x 1080
- Support multiple streams individually configured Motion JPEG and H.264 video streams
- Controllable frame rate and bandwidth
- Support POE
- Accept IPV4 as well as DHCP
- Allow text and date/time overlay.
- Support synchronization with an NTP server
- Include embedded event functionality, which may be triggered by events like active tampering or motion detection.
- The device should support event actions, which trigger the following actions.  
Remote notification including video upload.
- Operating temperature supported must be between 0 degrees and +45 degrees Celsius.
- Must support SD card storage
- Must support a pre and post buffer.
- Must support a narrow yet high format. (narrow view requirements).
- Incorporate IEEE 802.1X security authentication
- Provide a platform allowing the upload of third party applications into the camera.
- Include two Input and two output
- Include two way audio
- Shall include backlight compensation
- Pan and Tilt head support

### **Two Megapixel Infrared, zoom capable box camera**

- image sensor must be a 1/ 2.9 “ progressive scan cmos
- Lens must include a zoomable 4.7 to 84.6mm lens
- Optical zoom 18 x and Digital zoom 12 x

- Built in infrared illumination
- Automatic Day night functionality
- Minimum illumination 0.5 lux (colour)
- Minimum illumination 0.04 lux (Black and white)
- Minimum illumination 0 lux (Infrared on)
- Maximum frame rate 30 frames per second at 2mp quality
- Support resolutions up to 1920 x 1080
- Support multiple streams individually configured Motion JPEG and H.264 video streams
- Controllable frame rate and bandwidth
- Support POE
- Accept IPV4 as well as DHCP
- Allow text and date/time overlay.
- Support synchronization with an NTP server
- Include embedded event functionality, which may be triggered by events like active tampering or motion detection.
- The device should support event actions, which trigger the following actions.
- Remote notification including video upload.
- Operating temperature supported must be between minus 40 degrees and +50 degrees Celsius.
- Must support SD card storage 64gb
- Must support a pre and post buffer.
- Must support a narrow yet high format. (narrow view requirements).
- Incorporate IEEE 802.1X security authentication
- Provide a platform allowing the upload of third party applications into the camera.
- Include two Input and two output
- Include two way audio
- Shall include backlight compensation
- Include IP66 rated enclosure
- Include NEMA 4x rating

## **PTZ Cameras**

### **One Megapixel digital ptz dome**

- Image sensor must be a 1/4 " progressive scan cmos
- Lens must include a 3.6mm lens
- Digital zoom 3x
- 25 preset positions
- Minimum illumination 1.4 lux (colour)
- Maximum frame rate 30 frames per second at 1mp quality
- Support resolutions up to 1280 x 720
- Support multiple streams individually configured Motion JPEG and H.264 video streams
- Controllable frame rate and bandwidth
- Support POE
- Accept IPV4 as well as DHCP
- Allow text overlay.
- Support synchronization with an NTP server
- Include embedded event functionality, which may be triggered by events like motion detection and audio detection.
- The device should support event actions, which trigger the following actions.  
Remote notification including video upload.

- Operating temperature supported must be between 0 degrees and +45 degrees Celsius.
- Must support SD card storage 64gb
- Must support a pre and post buffer.
- Incorporate IEEE 802.1X security authentication
- Provide a platform allowing the upload of third party applications into the camera.
- Include one way built in mic audio
- Shall include backlight compensation
- Include IP51 rated enclosure
- Pixel counter
- Fine tuning behavior of low light

### **One Megapixel External wall mount ptz dome**

- Image sensor must be a 1/ 2.9 “ progressive scan cmos
- Lens must include a 4.7 to 84.6mm lens
- Optical zoom 18x
- Digital zoom 12x
- 100 preset positions
- Minimum illumination 0.4 lux in (colour)
- Minimum illumination 0.04 lux in (black and white)
- Maximum frame rate 30 frames per second at 1mp quality
- Support resolutions up to 1280 x 720
- Support multiple streams individually configured Motion JPEG and H.264 video streams
- Controllable frame rate and bandwidth
- Support high power over ethernet
- Accept IPV4 as well as DHCP
- Allow text overlay.
- Support synchronization with an NTP server
- Include embedded event functionality, which may be triggered by events like motion detection, audio detection, external inputs and temperature.
- The device should support event actions, which trigger the following actions.
- Remote notification including video upload as well as ptz presets.
- Operating temperature supported must be between minus 20 degrees to 50 degrees Celsius.
- Must support SD card storage 64gb
- Must support a pre and post buffer.
- Incorporate IEEE 802.1X security authentication
- Provide a platform allowing the upload of third party applications into the camera.
- Include two way built in mic audio
- Shall include backlight compensation
- Include IP66 rated enclosure
- Include NEMA4x rating
- Include IK07 impact resistance
- Pixel counter
- Fine tuning behavior of low light
- Four configurable inputs/outputs

### **Two Megapixel External wall mount ptz dome**

- Image sensor must be a 1/ 2.9 “ progressive scan cmos

- Lens must include a 4.7 to 84.6mm lens
- Optical zoom 18x
- Digital zoom 12x
- 100 preset positions
- Minimum illumination 0.5 lux in (colour)
- Minimum illumination 0.04 lux in (black and white)
- Maximum frame rate 30 frames per second at 2mp quality
- Support resolutions up to 1920 x 1080
- Support multiple streams individually configured Motion JPEG and H.264 video streams
- Controllable frame rate and bandwidth
- Support high power over ethernet
- Accept IPV4 as well as DHCP
- Allow text overlay.
- Support synchronization with an NTP server
- Include embedded event functionality, which may be triggered by events like motion detection, audio detection, external inputs and temperature.
- The device should support event actions, which trigger the following actions.
- Remote notification including video upload as well as ptz presets.
- Operating temperature supported must be between minus 20 degrees to 50 degrees Celsius.
- Must support SD card storage 64gb
- Must support a pre and post buffer.
- Incorporate IEEE 802.1X security authentication
- Provide a platform allowing the upload of third party applications into the camera.
- Include two way built in mic audio
- Shall include backlight compensation
- Include IP66 rated enclosure
- Include NEMA4x rating
- Include IK07 impact resistance
- Pixel counter
- Fine tuning behavior of low light
- Four configurable inputs/outputs
- 20x individual 3d privacy masks (to ensure privacy where needed)

### **One Megapixel External Variable mount ptz dome**

- Image sensor must be a 1/3 " progressive scan ccd
- Lens must include a 4.4 to 132mm lens
- Electronic image stabilizer
- Automatic defog (to automatically detect fog and digitally filter it out)
- Optical zoom 30x
- Digital zoom 12x
- 256 preset positions
- Minimum illumination 0.2 lux in (colour)
- Minimum illumination 0.04 lux in (black and white)
- Maximum frame rate 30 frames per second at 1mp quality
- Support resolutions up to 1280 x 720
- Support multiple streams individually configured Motion JPEG and H.264 video streams
- Controllable frame rate and bandwidth
- Support high power over Ethernet

- Accept IPV4 as well as DHCP
- Allow text overlay.
- Support synchronization with an NTP server
- Include embedded event functionality, which may be triggered by events like motion detection, shock detection temperature,)
- The device should support event actions, which trigger the following actions. Remote notification including video upload as well as ptz presets.
- Must include temperature control
- Operating temperature supported must be between minus 50 degrees to 50 degrees Celsius.
- Must support SD card storage 64gb
- Must support a pre and post buffer.
- Incorporate IEEE 802.1X security authentication
- Provide a platform allowing the upload of third party applications into the camera.
- Shall include backlight compensation
- Include IP66 rated enclosure
- Include NEMA4x rating
- Include IK10 rated
- Pixel counter
- Fine tuning behavior of low light

#### **One Megapixel External Variable mount ptz dome (with cooling feature)**

- Image sensor must be a 1/3 " progressive scan ccd
- Lens must include a 4.4 to 132mm lens
- Electronic image stabilizer
- Automatic defog (to automatically detect fog and digitally filter it out)
- Optical zoom 30x
- Digital zoom 12x
- 256 preset positions
- Minimum illumination 0.2 lux in (colour)
- Minimum illumination 0.04 lux in (black and white)
- Maximum frame rate 30 frames per second at 1mp quality
- Support resolutions up to 1280 x 720
- Support multiple streams individually configured Motion JPEG and H.264 video streams
- Controllable frame rate and bandwidth
- Accept IPV4 as well as DHCP
- Allow text overlay.
- Support synchronization with an NTP server
- Include embedded event functionality, which may be triggered by events like motion detection, shock detection temperature,)
- The device should support event actions, which trigger the following actions.
- Remote notification including video upload as well as ptz presets.
- Must include a fan and heater for temperature control
- Operating temperature supported must be between minus 20 degrees to 75 degrees Celsius.
- Must support SD card storage 64gb
- Must support a pre and post buffer.
- Incorporate IEEE 802.1X security authentication
- Provide a platform allowing the upload of third party applications into the camera.
- Shall include backlight compensation

- Include IP66 rated enclosure
- Include NEMA4x rating
- Pixel counter
- Fine tuning behavior of low light
- Must include 2 xSFP slots for Fibre and 2 x RJ45 connections for daisy chain capability
- Two configurable inputs/outputs
- Comply with MIL-810G standard

### **One Megapixel External Variable mount ptz dome (with Pressurized stainless steel casing)**

- Image sensor must be a 1/3 " progressive scan ccd
- Lens must include a 4.4 to 132mm lens
- Electronic image stabilizer
- Automatic defog (to automatically detect fog and digitally filter it out)
- Optical zoom 30x
- Digital zoom 12x
- 256 preset positions
- Minimum illumination 0.2 lux in (colour)
- Minimum illumination 0.04 lux in (black and white)
- Maximum frame rate 30 frames per second at 1mp quality
- Support resolutions up to 1280 x 720
- Support multiple streams individually configured Motion JPEG and H.264 video streams
- Controllable frame rate and bandwidth
- Accept IPV4 as well as DHCP
- Allow text overlay.
- Support synchronization with an NTP server
- Include embedded event functionality, which may be triggered by events like motion detection, shock detection temperature,)
- The device should support event actions, which trigger the following actions.
- Remote notification including video upload as well as ptz presets.
- Operating temperature supported must be between minus 30 degrees to 50 degrees Celsius.
- Must support SD card storage 64gb
- Must support a pre and post buffer.
- Incorporate IEEE 802.1X security authentication
- Provide a platform allowing the upload of third party applications into the camera.
- Include two way built in mic audio
- Shall include backlight compensation
- The Housing shall be made of Marine Grade Stainless steel for improved life in corrosive environments
- Shall be pressurized with nitrogen for ultimate protection.
- Include IP6K9K rating
- Include IP67 rating
- Include IP66 rated enclosure
- Include NEMA4x rating
- Pixel counter
- Fine tuning behavior of low light
- Must include 2 xSFP slots for Fibre and 2 x RJ45 connections for daisy chain capability

- Two configurable inputs/outputs
- Comply with MIL-810G standard

### **Two Megapixel External Variable mount ptz dome**

- Image sensor must be a 1/3 " progressive scan cmos
- Lens must include a 4.45 to 89mm lens
- Highlight compensation
- Optical zoom 20x
- Digital zoom 12x
- 256 preset positions
- Minimum illumination 0.6 lux in (colour)
- Minimum illumination 0.04 lux in (black and white)
- Maximum frame rate 30 frames per second at 2mp quality
- Support resolutions up to 1920 x 1080
- Support multiple streams individually configured Motion JPEG and H.264 video streams
- Controllable frame rate and bandwidth
- Support high power over ethernet
- Accept IPV4 as well as DHCP
- Allow text overlay.
- Support synchronization with an NTP server
- Include embedded event functionality, which may be triggered by events like motion detection, shock detection temperature,)
- The device should support event actions, which trigger the following actions. Remote notification including video upload as well as ptz presets.
- Must include temperature control
- Operating temperature supported must be between minus 50 degrees to 50 degrees Celsius.
- Must support SD card storage 64gb
- Must support a pre and post buffer.
- Incorporate IEEE 802.1X security authentication
- Provide a platform allowing the upload of third party applications into the camera.
- Shall include backlight compensation
- Include IP66 rated enclosure
- Include NEMA4x rating
- Include IK10 rated
- Pixel counter
- Fine tuning behavior of low light

### **Two Megapixel External Variable mount ptz dome (with cooling feature)**

- Image sensor must be a 1/3 " progressive scan cmos
- Lens must include a 4.45 to 89mm lens
- Highlight compensation
- Optical zoom 20x
- Digital zoom 12x
- 256 preset positions
- Minimum illumination 0.6 lux in (colour)
- Minimum illumination 0.04 lux in (black and white)
- Maximum frame rate 30 frames per second at 2mp quality
- Support resolutions up to 1920 x 1080

- Support multiple streams individually configured Motion JPEG and H.264 video streams
- Controllable frame rate and bandwidth
- Support high power over Ethernet
- Accept IPV4 as well as DHCP
- Allow text overlay.
- Support synchronization with an NTP server
- Include embedded event functionality, which may be triggered by events like motion detection, shock detection temperature,)
- The device should support event actions, which trigger the following actions.
- Remote notification including video upload as well as ptz presets.
- Must include a fan for temperature control
- Operating temperature supported must be between minus 20 degrees to 75 degrees Celsius.
- Must support SD card storage 64gb
- Must support a pre and post buffer.
- Incorporate IEEE 802.1X security authentication
- Provide a platform allowing the upload of third party applications into the camera.
- Shall include backlight compensation
- Include IP66 rated enclosure
- Include NEMA4x rating
- Pixel counter
- Fine tuning behavior of low light
- Must include 2 xSFP slots for Fibre and 2 x RJ45 connections for daisy chain capability
- Two configurable inputs/outputs
- Comply with MIL-810G standard

### **Two Megapixel External Variable mount ptz dome (with Pressurized stainless steel casing)**

- Image sensor must be a 1/3 " progressive scan cmos
- Lens must include a 4.45 to 89mm lens
- Highlight compensation
- Optical zoom 20x
- Digital zoom 12x
- 256 preset positions
- Minimum illumination 0.6 lux in (colour)
- Minimum illumination 0.04 lux in (black and white)
- Maximum frame rate 30 frames per second at 2mp quality
- Support resolutions up to 1920 x 1080
- Support multiple streams individually configured Motion JPEG and H.264 video streams
- Controllable frame rate and bandwidth
- Accept IPV4 as well as DHCP
- Allow text overlay.
- Support synchronization with an NTP server
- Include embedded event functionality, which may be triggered by events like motion detection, shock detection temperature,)
- The device should support event actions, which trigger the following actions. Remote notification including video upload as well as ptz presets.
- Operating temperature supported must be between minus 30 degrees to 50 degrees Celsius.

- Must support SD card storage 64gb
- Must support a pre and post buffer.
- Incorporate IEEE 802.1X security authentication
- Provide a platform allowing the upload of third party applications into the camera.
- Shall include backlight compensation
- The Housing shall be made of Marine Grade Stainless steel for improved life in corrosive environments
- Shall be pressurized with nitrogen for ultimate protection.
- Include IP6K9K rating
- Include IP67 rating
- Include IP66 rated enclosure
- Include NEMA4x rating
- Pixel counter
- Fine tuning behavior of low light
- Must include 2 x SFP slots for Fibre and 2 x RJ45 connections for daisy chain capability
- Two configurable inputs/outputs
- Comply with MIL-810G standard

### **PTZ Controller**

- Power via USB Interface
- USB 1.1/2.0/3.0 compliant
- Compatible with Windows XP/Vista/7/8/10/11 and/or all Windows Server Editions
- Operating temperature: 0 – 60 degrees
- Hall-effect joystick with three axis, X/Y: for pan and tilt, Z: knob for zoom
- Deflection: Square delimiter, Pan/Tilt (XY):  $\pm 15^\circ$ , Zoom (Z):  $\pm 25^\circ$

### **Brackets and Housings**

#### **Outdoor Housing**

- Entirely made of techno polymer
- Stainless steel external screws
- IP66/IP67 rated (with cable glands or optional sealing rings)
- Vandal proof protection (IK10)
- Pre-arranged for internal cable management bracket
- Available accessories : heater, camera power supply, fan assisted heater
- **Outdoor Bracket**
- Cable managed bracket
- Max load 25kg
- Must be Aluminum
- Fully adjustable Swivel head
- Weight 0,6kg
- Sealing rings OWBIP2 or OWBIP3 to ensure an IP66 protection to the housing

### **Poles and peripherals**

#### **9 Meter Pole**

- Galvanized steel

#### **12 Meter Pole**

- Galvanized steel

### **Lightning protection**

#### **Coaxial PTZ camera protection with PSU and RS485**

- No of pairs x 1
- Maximum operating voltage 6,8V
- Operating current 0.4mA
- Max discharge current (Differential mode) 400A (8.20)
- Max discharge current (Common mode) 5 kA
- Residual voltage (Differential mode) Approximately 20v
- Residual voltage (Common mode) Approximately 70v
- Insertion loss <0,1dB @ 2Mbits/s
- Return loss > 40dB
- 3 way push type screw terminals

### **Surge Arrestor**

- Nominal voltage 230/400VAC/Hz
- Rated voltage 275 VAC
- Nominal discharge current 20kA
- Maximum discharge current 40kA
- Voltage protection level at 5 kA < 1kV
- Voltage protection level at Isn 1,5kV
- Short circuit with stand capability with maximum backup fuse. : 50kA /50Hz

### **100 BASE-T Power over Ethernet protection**

- Clamping Voltage < 70V (1,2/50)
- Maximum discharge current –coarse protection 4,5kA (8/20)
- Maximum discharge current – Fine protection 300A (8/20)
- Pairs protected 1-2, 3-6,4-5,7-8
- Standards compliance Fast Ethernet 802.3u :IEC 11801 and IEEE 802.3
- Data rate > 200Mbit/s
- Bandwidth (3dB) per pair >350 MHz

### **Two Way multi plug protection**

- Power module Nom. Continuous current 230VAC 50Hz
- Maximum continuous 275VAC 50Hz
- Maximum continuous current 16A
- Earth leakage <1,5mA
- Maximum discharge current (8/20) 8kA
- Response time <25ns
- Filtration at 100kHz 50dB
- Standards compliance IEC 99.4, IEC 950, IEC 61643-1

### **Data module**

- Maximum discharge current 8/20 100 Base-T
- Residual voltage (differential mode) 2.5kA
- Residual voltage (common mode) <25V
- Response time <100V
- Data speed 100Mbps

## **Software Analytics**

### **License plate recognition**

- Fully I.P License plate recognition software
- Must support Full HD capture
- Must support SMS or email function if a earmarked plate is selected
- Must support a cloud based storage system

## **Wireless**

### **Point To Point (This range must support an external antennae option for long distance)**

- Frequency bands 4.9- 6.0 GHz frequency
- Integrated 28Dbi antennae
- Up to 280Mbps net throughput
- Distance up to 50km using integrated antenna
- Radio must support MIMO with OFDM 64/128 technology
- Transmit power up to 23dBm
- Channel bandwidth 5/10/20/40MHz
- Gigabit Ethernet port
- Include a spectrum analyzer
- Full fledged second layer switch
- Full VLAN support IEEE802.1q and 802.1ad
- STP support
- RIPv2/OSPFv2/static routing
- Environmental conditions: -40 degrees to 60 degrees
- Must support antenna alignment.
- LOS (line of site) and NLOS (non line of site) support
- Hardware capacity must be easily upgradeable by license upgrades.
- External Antenna version available
- Distance up to 80km (With antenna version)

### **Point To Multipoint**

- Frequency bands 4.9- 6.0 GHz frequency
- Integrated 16Dbi 90 degree sector antenna
- Up to 240Mbps net throughput
- Distance up to 35km using integrated antenna
- Radio must support MIMO with OFDM 64/128 technology
- Transmit power up to 23dBm
- Channel bandwidth 5/10/20/40MHz
- Gigabit Ethernet port
- Include a spectrum analyzer
- Full fledged second layer switch
- Full VLAN support IEEE802.1q and 802.1ad
- STP support
- RIPv2/OSPFv2/static routing
- Environmental conditions: -40 degrees to 60 degrees
- Must support antenna alignment.

## **M5 client radio**

M5 Client radio compatible with standard wireless or Ubiquity units

### **Max Sector point to multi point**

Max Sector point to multi point compatible with standard wireless or Ubiquity units

### **Rocket dish point to multi point**

Point to Multi point compatible with standard wireless or Ubiquity units

### **Rocket M wireless unit.**

Point to Multi point compatible with standard wireless or Ubiquity units

### **Wireless subscriber unit POE**

- Frequency bands 4.9- 6.0 GHz frequency
- Integrated 28Dbi dual polarization antenna
- Up to 300Mbps throughput
- Distance between 15km and 25km integrated antenna
- Radio must support MIMO with OFDM 64/128 technology
- Transmit power up to 23dBm
- Channel bandwidth 5/10/20/40MHz
- Must include two fast Ethernet 10/100 base-T RJ45 connections.
- One of the Ethernet ports must support POE output for cameras
- Include a spectrum analyzer
- Full-fledged second layer switch
- Full VLAN support IEEE802.1q and 802.1ad
- STP support
- RIPv2/OSPFv2/static routing
- Environmental conditions: -40 degrees to 60 degrees
- Must support antenna alignment

### **Gigabit Wireless Repair Bridge (71-76GHz and 81-86GHz range)**

- Frequency band Between 71-76GHz / 81- 86GHz
- Modulation must support QPSK
- Transmit power output +22dBm
- Channel bandwidth 1000MHz
- Data rate 1,25 Gbps full duplex (Ethernet)
- Standards compliance IEEE 802.3z, 802.3ab
- Powered via POE or 220v -Temperature range minus -45 to 60 degrees

### **Gigabit Wireless Repair Bridge (24 GHz range)**

- Frequency band Between 24.05 and 24.25GHz
- Modulation must support QPSK and QAM
- Channel bandwidth 100MHz
- Data rate maximum 1,4 Gbps
- Maximum range 13km
- Packets per second 1 Million
- Temperature range minus -45 to 55 degrees
- Powered via POE or 220v Encryption 128-Bit AES Powered via POE or 220v

### **1Gbps total throughput Wireless repeater bridge (17GHz range or 24GHz range)**

- Frequency band Between 17,1 -17,3 GHz
- Modulation schemes 4/16/32/64/128/256/512/1024 QAM
- Transmit power output +20dB
- 7,14,28,56 MHz channel bandwidth support
- Data rate from 50mbps to 1 Gbps total throughput

- Ethernet QOS IEEE 802.1p
- Flow control IEEE 802.3x
- Temperature range minus -35 to 55 degrees
- IP65 rated for outdoor
- Powered via POE or 220v

### **Camera Software:**

#### **Licenses:**

- Devices: Core Device license for up to 32 devices per system
- Universal device license for more than 32 devices and for third party devices
- Upgrade license: Axis Camera Station 4 to Universal device license
- Core Device License to Universal Device license
- 30 Day unlimited trial can be upgraded to licensed version

#### **Video:**

##### Audio:

Two- way audio Streaming, AAC, G.711, G.726 compression

##### Video compression:

- H.264 (MPEG- 4 Part 10/AVC)
- Motion JPEG
- Support for Axis' zipstream technology on selected cameras

##### Resolutions:

- Supports all camera resolutions up to 8.3 megapixels (4K)

##### Frame Rates:

- Up to 60 images per second per camera

### **Storage:**

#### Storage Media:

- Use local hard drives or high-performance NAS for storage

#### Storage Capacity:

- Unlimited recording database, limited only by disk space
- Duration can be limited per camera to conform to local legal requirement

### **Live View:**

- Camera Live View:
- Flexible live view configuration
- Corridor format
- Multiple monitors
- Hot-spot, camera/view sequence, Site maps, Web page, Digital PTZ, Image enhancement

### **PTZ**

- Control of PTZ and dome cameras using mouse, keyboard or joystick
- Area zoom
- Programmable hot-keys

**Playback:**

- Search for recordings:
- Search for recordings based on camera
- Date and time timeline visualization,
- Smart search
- Video scrubbing
- Bookmarks
- Locking of prioritized recordings

**Playback:**

- Up to 64x or frame by frame
- Up to 25 cameras synchronized playback

**Export:**

- Manual and scheduled export
- Single images in JPEG format
- Video in ASF format
- Digital signature on exported recordings
- Standalone player

**Triggers and Events:**

- Events triggered by video motion detection
- Active tampering alarm
- Cross Line Detection
- External I/O
- Action button
- System triggers
- Device event triggers

**Scheduled recording:**

- Schedule per camera for continuous recording or customization of weekday and weekend recordings

**Alarm actions:**

- Record
- Visual notification
- Audible alert
- Switch to camera/view
- Go to PTZ preset
- Email
- Alarm procedure
- External I/O acknowledgement of alarms

- HTTP notification

#### **Logs:**

- Alarm, event and audit logs

#### **System:**

##### **Scalability:**

- User interface is optimized for systems up to 50 cameras
- Software allows for unlimited number of cameras restricted only by system hardware specification

#### **Operating System**

- Windows 10 Pro 64-bit compatibility
- For all Axis *supported* Operating Systems compatibility

#### **System Hardware**

- Hardware requirement of an ACS system depend on the total bandwidth generated by cameras and fetched by clients.
- Recommendation below are based on street corner scenario: H.264 zipstream level low (10) encoding on 1080p resolution cameras at 25 fps with an estimated average bandwidth of 3.80 Mbit/s.
- UPS for servers

#### **Small system, combined client and Server:**

- Up to 100Mbit/s video data (equivalent to up to 26 video channels of above specification)
- Minimum Intel Core i5 2.9 GHz or equivalent
- 8GB DDR3-1600 RAM
- Graphics card with 1 GB dedicated video memory, such as NVIDIA GeForce GTX 750 1GB or equivalent
- Hard drive SATA 6Gb/s 7200 RPM Enterprise Class- Up to 48 Mbps per drive for optimal performance

#### **Large System, separate clients and server:**

- Up to 256 Mbit/s video data (equivalent of up to 67 video channels of above specification)
- Client: Intel Core i7, such as Intel Core i7-4770 Quad Core 3.4 Ghz or equivalent, 8GB DDR – 1600 RAM, 1Gbit/s Network, Graphics card with 1 GB dedicated video memory Gb, such as NVIDIA GeForce GTX 750 1GB or equivalent
- Server: Intel Core i7, such as Intel Core i7 – Quad Core Ghz or equivalent, 8GB DDR3 – 1600 RAM, 1Gbit/s Network, Hard drive SATA 6Gbit/s 7200 RPM Enterprise Class – up to 48Mbps per drive for optimal performance:

#### **Multi-server System:**

- All systems with higher performance requirements than above shall have multiple servers.
- Add more ACS servers and divide the bandwidth load equally per server with each server within above specifications.

#### **Mobile Access:**

- Apps for android and iOS or equivalent devices available from equivalent to current system Security:

- Multiple user access levels with password protection using local or Windows domain users
- Failover recording in cameras with SD card.

## **CIVILS**

- Pole mounting
- Labour Rates
- Project manager
- Civil engineer
- Mechanical engineer
- I.T Engineer
- Software Developer
- Electrician
- Foreman
- Driver
- Camera technician
- General labourer (trenching and basic labour)
- Fibre splicing per splice
- Fibre tech

**ALFRED DUMA LOCAL MUNICIPALITY**

**DEPARTMENT PUBLIC SAFETY AND EMERGENCY  
SERVICES**

**CONTRACT NO. PS 06/2024**

**SUPPLY, INSTALLATION AND MAINTENANCE OF THE  
CURRENT SURVEILLANCE CAMERA SYSTEM FOR A  
PERIOD OF THREE (3) YEARS**

**FORMS TO BE COMPLETED BY THE BIDDER**

## INVITATION TO BID

YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF THE (NAME OF MUNICIPALITY/ENTITY)

BID NUMBER: ..... CLOSING DATE: ..... CLOSING TIME: .....

DESCRIPTION.....

**The successful bidder will be required to fill in and sign a written Contract Form (MBD 7).**

BID DOCUMENTS MAY BE POSTED TO:

.....

.....

OR

DEPOSITED IN THE BID BOX SITUATED AT (*STREET ADDRESS*)

.....

.....

**Bidders should ensure that bids are delivered timeously to the correct address. If the bid is late, it will not be accepted for consideration.**

The bid box is generally open 24 hours a day, 7 days a week.

**ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS – (NOT TO BE RE-TYPED)**

THIS BID IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT AND THE PREFERENTIAL PROCUREMENT REGULATIONS, 2011, THE GENERAL CONDITIONS OF CONTRACT (GCC) AND, IF APPLICABLE, ANY OTHER SPECIAL CONDITIONS OF CONTRACT

**NB: NO BIDS WILL BE CONSIDERED FROM PERSONS IN THE SERVICE OF THE STATE (as defined in Regulation 1 of the Local Government: Municipal Supply Chain Management Regulations)**

THE FOLLOWING PARTICULARS MUST BE FURNISHED  
(FAILURE TO DO SO MAY RESULT IN YOUR BID BEING DISQUALIFIED)

NAME OF BIDDER .....

POSTAL ADDRESS .....

STREET ADDRESS .....

TELEPHONE NUMBER CODE.....NUMBER.....

CELLPHONE NUMBER .....

FACSIMILE NUMBER CODE ..... .NUMBER.....

E-MAIL ADDRESS .....

VAT REGISTRATION NUMBER .....

HAS AN ORIGINAL AND VALID TAX CLEARANCE CERTIFICATE BEEN ATTACHED? (MBD 2) YES/NO

HAS A B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE BEEN SUBMITTED? (MBD 6.1) YES/NO

IF YES, WHO WAS THE CERTIFICATE ISSUED BY?

AN ACCOUNTING OFFICER AS CONTEMPLATED IN THE CLOSE CORPORATION ACT (CCA) ☐

A VERIFICATION AGENCY ACCREDITED BY THE SOUTH AFRICAN NATIONAL ACCREDITATION SYSTEM (SANAS) ☐

A REGISTERED AUDITOR ☐

(Tick applicable box)

**(A B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE MUST BE SUBMITTED IN ORDER TO QUALIFY FOR PREFERENCE POINTS FOR B-BBEE)**

ARE YOU THE ACCREDITED REPRESENTATIVE

IN SOUTH AFRICA FOR THE GOODS/SERVICES/WORKS OFFERED ? YES/NO (IF YES ENCLOSE PROOF)

SIGNATURE OF BIDDER .....

DATE .....

CAPACITY                      UNDER                      WHICH                      THIS                      BID                      IS                      SIGNED  
.....

TOTAL BID PRICE..... TOTAL NUMBER OF ITEMS OFFERED .....

**ANY ENQUIRIES REGARDING THE BIDDING PROCEDURE MAY BE DIRECTED TO:**

**Municipality / Municipal Entity:** .....

**Department:** .....

**Contact Person:** .....

**Tel:** .....

**Fax:** .....

**ANY ENQUIRIES REGARDING TECHNICAL INFORMATION MAY BE DIRECTED TO:**

**Contact Person:** .....

**Tel:** .....

**Fax:** .....

**ALFRED DUMA LOCAL MUNICIPALITY  
DEPARTMENT PUBLIC SAFETY AND EMERGENCY SERVICES**

**TAX CLEARANCE CERTIFICATE REQUIREMENTS**

**It is a condition of bid that the taxes of the successful bidder must be in order, or that satisfactory arrangements have been made with South African Revenue Service (SARS) to meet the bidder's tax obligations.**

1. In order to meet this requirement bidders are required to complete in full the attached form TCC 001 "Application for a Tax Clearance Certificate" and submit it to any SARS branch office nationally. The Tax Clearance Certificate Requirements are also applicable to foreign bidders / individuals who wish to submit bids.
2. SARS will then furnish the bidder with a Tax Clearance Certificate that will be valid for a period of 1 (one) year from the date of approval.
3. The original Tax Clearance Certificate must be submitted together with the bid. Failure to submit the original and valid Tax Clearance Certificate will result in the invalidation of the bid. Certified copies of the Tax Clearance Certificate will not be acceptable.
4. In bids where Consortia / Joint Ventures / Sub-contractors are involved, each party must submit a separate Tax Clearance Certificate.
5. Copies of the TCC 001 "Application for a Tax Clearance Certificate" form are available from any SARS branch office nationally or on the website [www.sars.gov.za](http://www.sars.gov.za).
6. Applications for the Tax Clearance Certificates may also be made via eFiling. In order to use this provision, taxpayers will need to register with SARS as eFilers through the website [www.sars.gov.za](http://www.sars.gov.za).

## DECLARATION OF INTEREST

1. No bid will be accepted from persons in the service of the state<sup>1</sup>.
2. Any person, having a kinship with persons in the service of the state, including a blood relationship, may make an offer or offers in terms of this invitation to bid. In view of possible allegations of favouritism, should the resulting bid, or part thereof, be awarded to persons connected with or related to persons in service of the state, it is required that the bidder or their authorised representative declare their position in relation to the evaluating/adjudicating authority.
3. In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.

3.1 Full Name of bidder or his or her representative:.....

3.2 Identity Number: .....

3.3 Position occupied in the Company (director, trustee, hareholder<sup>2</sup>):.....

3.4 Company Registration Number: .....

3.5 Tax Reference Number:.....

3.6 VAT Registration Number: .....

3.7 The names of all directors / trustees / shareholders members, their individual identity numbers and state employee numbers must be indicated in paragraph 4 below.

3.8 Are you presently in the service of the state? **YES / NO**

3.8.1 If yes, furnish particulars. ....

.....

<sup>1</sup>MSCM Regulations: "in the service of the state" means to be –

(a) a member of –

- (i) any municipal council;
- (ii) any provincial legislature; or
- (iii) the national Assembly or the national Council of provinces;

- (b) a member of the board of directors of any municipal entity;
- (c) an official of any municipality or municipal entity;
- (d) an employee of any national or provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act No.1 of 1999);
- (e) a member of the accounting authority of any national or provincial public entity; or
- (f) an employee of Parliament or a provincial legislature.

<sup>2</sup> Shareholder” means a person who owns shares in the company and is actively involved in the management of the company or business and exercises control over the company.

3.9 Have you been in the service of the state for the past twelve months? ..... **YES / NO**

3.9.1 If yes, furnish particulars.....

.....

3.10 Do you have any relationship (family, friend, other) with persons  
in the service of the state and who may be involved with  
the evaluation and or adjudication of this bid? ..... **YES / NO**

3.10.1 If yes, furnish particulars.

.....

.....

3.11 Are you, aware of any relationship (family, friend, other) between  
any other bidder and any persons in the service of the state who  
may be involved with the evaluation and or adjudication of this bid? ..... **YES / NO**

3.11.1 If yes, furnish particulars

.....

.....

3.12 Are any of the company's directors, trustees, managers,  
principle shareholders or stakeholders in service of the state? **YES / NO**

3.12.1 If yes, furnish particulars.

.....  
.....

3.13 Are any spouse, child or parent of the company's directors  
trustees, managers, principle shareholders or stakeholders  
in service of the state? **YES / NO**

3.13.1 If yes, furnish particulars.

.....  
.....

3.14 Do you or any of the directors, trustees, managers,  
principle shareholders, or stakeholders of this company  
have any interest in any other related companies or  
business whether or not they are bidding for this contract. **YES / NO**

3.14.1 If yes, furnish particulars:

.....  
.....

4. Full details of directors / trustees / members / shareholders.

| Full Name | Identity Number | State Employee Number |
|-----------|-----------------|-----------------------|
|           |                 |                       |
|           |                 |                       |

|  |  |  |
|--|--|--|
|  |  |  |
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.....

**Signature**

.....

**Date**

.....

**Capacity**

.....

**Name of Bidder**

**ALFRED DUMA LOCAL MUNICIPALITY**  
**DEPARTMENT PUBLIC SAFETY AND EMERGENCY**  
**SERVICES**

**CONTRACT NO. PS 06/2024**

**SUPPLY, INSTALLATION AND MAINTENANCE OF THE**  
**CURRENT SURVEILLANCE CAMERA SYSTEM FOR A**  
**PERIOD OF THREE (3) YEARS**

**PROCUREMENT DOCUMENTS**

## **PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2022**

This preference form must form part of all tenders invited. It contains general information and serves as a claim form for preference points for specific goals.

**NB: BEFORE COMPLETING THIS FORM, TENDERERS MUST STUDY THE GENERAL CONDITIONS, DEFINITIONS AND DIRECTIVES APPLICABLE IN RESPECT OF THE TENDER AND PREFERENTIAL PROCUREMENT REGULATIONS, 2022**

### **1. GENERAL CONDITIONS**

1.1 The following preference point systems are applicable to invitations to tender:

- the 80/20 system for requirements with a Rand value of up to R50 000 000 (all applicable taxes included); and

- a) The applicable preference point system for this tender is the 80/20 preference point system.
- b) 80/20 preference point system will be applicable in this tender. The lowest/ highest acceptable tender will be used to determine the accurate system once tenders are received.

1.2 Points for this tender (even in the case of a tender for income-generating contracts) shall be awarded for:

- (a) Price; and
- (b) Specific Goals.

1.3 **To be completed by the organ of state:**

The maximum points for this tender are allocated as follows:

|                                                  | <b>POINTS</b> |
|--------------------------------------------------|---------------|
| <b>PRICE</b>                                     | <b>80</b>     |
| <b>SPECIFIC GOALS</b>                            | <b>20</b>     |
| <b>Total points for Price and SPECIFIC GOALS</b> | <b>100</b>    |

- 1.4 Failure on the part of a tenderer to submit proof or documentation required in terms of this tender to claim points for specific goals with the tender, will be interpreted to mean that preference points for specific goals are not claimed.
- 1.5 The organ of state reserves the right to require of a tenderer, either before a tender is adjudicated or at any time subsequently, to substantiate any claim in regard to preferences, in any manner required by the organ of state.

## 2. DEFINITIONS

- (a) **“tender”** means a written offer in the form determined by an organ of state in response to an invitation to provide goods or services through price quotations, competitive tendering process or any other method envisaged in legislation;
- (b) **“price”** means an amount of money tendered for goods or services, and includes all applicable taxes less all unconditional discounts;
- (c) **“rand value”** means the total estimated value of a contract in Rand, calculated at the time of bid invitation, and includes all applicable taxes;
- (d) **“tender for income-generating contracts”** means a written offer in the form determined by an organ of state in response to an invitation for the origination of income-generating contracts through any method envisaged in legislation that will result in a legal agreement between the organ of state and a third party that produces revenue for the organ of state, and includes, but is not limited to, leasing and disposal of assets and concession contracts, excluding direct sales and disposal of assets through public auctions; and
- (e) **“the Act”** means the Preferential Procurement Policy Framework Act, 2000 (Act No. 5 of 2000).

## 3. FORMULAE FOR PROCUREMENT OF GOODS AND SERVICES

### 3.1. POINTS AWARDED FOR PRICE

#### 3.1.1 THE 80/20 OR 90/10 PREFERENCE POINT SYSTEMS

A maximum of 80 or 90 points is allocated for price on the following basis:

**80/20**

**or**

**90/10**

$$P_s = 80 \left( 1 - \frac{P_t - P_{min}}{P_{min}} \right) \quad \text{or} \quad P_s = 90 \left( 1 - \frac{P_t - P_{min}}{P_{min}} \right)$$

Where

- $P_s$  = Points scored for price of tender under consideration
- $P_t$  = Price of tender under consideration
- $P_{min}$  = Price of lowest acceptable tender

### 3.2. FORMULAE FOR DISPOSAL OR LEASING OF STATE ASSETS AND INCOME GENERATING PROCUREMENT

#### 3.2.1. POINTS AWARDED FOR PRICE

A maximum of 80 or 90 points is allocated for price on the following basis:

80/20

or

90/10

$$Ps = 80 \left( 1 + \frac{Pt - P_{max}}{P_{max}} \right) \text{ or } Ps = 90 \left( 1 + \frac{Pt - P_{max}}{P_{max}} \right)$$

Where

- Ps = Points scored for price of tender under consideration  
Pt = Price of tender under consideration  
Pmax = Price of highest acceptable tender

#### 4. POINTS AWARDED FOR SPECIFIC GOALS

- 4.1. In terms of Regulation 4(2); 5(2); 6(2) and 7(2) of the Preferential Procurement Regulations, preference points must be awarded for specific goals stated in the tender. For the purposes of this tender the tenderer will be allocated points based on the goals stated in table 1 below as may be supported by proof/ documentation stated in the conditions of this tender:
- 4.2. In cases where organs of state intend to use Regulation 3(2) of the Regulations, which states that, if it is unclear whether the 80/20 or 90/10 preference point system applies, an organ of state must, in the tender documents, stipulate in the case of—
- (a) an invitation for tender for income-generating contracts, that either the 80/20 or 90/10 preference point system will apply and that the highest acceptable tender will be used to determine the applicable preference point system; or
  - (b) any other invitation for tender, that either the 80/20 or 90/10 preference point system will apply and that the lowest acceptable tender will be used to determine the applicable preference point system,
- then the organ of state must indicate the points allocated for specific goals for both the 90/10 and 80/20 preference point system.

**Table 1: Specific goals for the tender and points claimed are indicated per the table below.**  
**(Note to organs of state: Where either the 90/10 or 80/20 preference point system is**

***applicable, corresponding points must also be indicated as such.***

***Note to tenderers: The tenderer must indicate how they claim points for each preference point system.)***

| The specific goals allocated points in terms of this tender                                                                                                                    | Number of points allocated<br>(90/10 system)<br>(To be completed by the organ of state) | Number of points allocated<br>(80/20 system)<br>(To be completed by the organ of state) | Number of points claimed<br>(90/10 system)<br>(To be completed by the tenderer) | Number of points claimed<br>(80/20 system)<br>(To be completed by the tenderer) |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|---------------------------------------------------------------------------------|
| RDP Goals 15/20- the bidding company to prove that it is located in the Alfred Duma Local municipal area. Bidders are required to attach proof of address to earn these points | N/A                                                                                     | 15                                                                                      | N/A                                                                             |                                                                                 |
| Race (HDI) 5/20- Ownership verification will be conducted in line with the Central Supplier Database(CSD)                                                                      | N/A                                                                                     | 5                                                                                       | N/A                                                                             |                                                                                 |
|                                                                                                                                                                                |                                                                                         | 20                                                                                      |                                                                                 |                                                                                 |

#### **DECLARATION WITH REGARD TO COMPANY/FIRM**

4.3. Name of company/firm.....

4.4. Company registration number: .....

4.5. TYPE OF COMPANY/ FIRM

- ☐ Partnership/Joint Venture / Consortium
- ☐ One-person business/sole propriety
- ☐ Close corporation
- ☐ Public Company
- ☐ Personal Liability Company
- ☐ (Pty) Limited
- ☐ Non-Profit Company

☐ State Owned Company

[TICK APPLICABLE BOX]

4.6. I, the undersigned, who is duly authorised to do so on behalf of the company/firm, certify that the points claimed, based on the specific goals as advised in the tender, qualifies the company/ firm for the preference(s) shown and I acknowledge that:

- i) The information furnished is true and correct;
- ii) The preference points claimed are in accordance with the General Conditions as indicated in paragraph 1 of this form;
- iii) In the event of a contract being awarded as a result of points claimed as shown in paragraphs 1.4 and 4.2, the contractor may be required to furnish documentary proof to the satisfaction of the organ of state that the claims are correct;
- iv) If the specific goals have been claimed or obtained on a fraudulent basis or any of the conditions of contract have not been fulfilled, the organ of state may, in addition to any other remedy it may have –
  - (a) disqualify the person from the tendering process;
  - (b) recover costs, losses or damages it has incurred or suffered as a result of that person's conduct;
  - (c) cancel the contract and claim any damages which it has suffered as a result of having to make less favourable arrangements due to such cancellation;
  - (d) recommend that the tenderer or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, be restricted from obtaining business from any organ of state for a period not exceeding 10 years, after the *audi alteram partem* (hear the other side) rule has been applied; and
  - (e) forward the matter for criminal prosecution, if deemed necessary.

.....  
**SIGNATURE(S) OF TENDERER(S)**

**SURNAME AND NAME:** .....

**DATE:** .....

**ADDRESS:** .....  
.....

**CONTRACT FORM - RENDERING OF SERVICES**

**THIS FORM MUST BE FILLED IN DUPLICATE BY BOTH THE SERVICE PROVIDER (PART 1) AND THE PURCHASER (PART 2). BOTH FORMS MUST BE SIGNED IN THE ORIGINAL SO THAT THE SERVICE PROVIDER AND THE PURCHASER WOULD BE IN POSSESSION OF ORIGINALLY SIGNED CONTRACTS FOR THEIR RESPECTIVE RECORDS.**

**PART 1 (TO BE FILLED IN BY THE SERVICE PROVIDER)**

1. I hereby undertake to render services described in the attached bidding documents to (name of the institution)..... in accordance with the requirements and task directives / proposals specifications stipulated in Bid Number..... at the price/s quoted. My offer/s remain binding upon me and open for acceptance by the Purchaser during the validity period indicated and calculated from the closing date of the bid.
2. The following documents shall be deemed to form and be read and construed as part of this agreement:
  4. Bidding documents, viz  
 Invitation to bid;  
 Tax clearance certificate;  
 Pricing schedule(s);  
 Filled in task directive/proposal;  
 Preference claims for Broad Based Black Economic Empowerment Status Level of Contribution in terms of the Preferential Procurement Regulations 2011;  
 Declaration of interest;  
 Declaration of Bidder's past SCM practices;  
 Certificate of Independent Bid Determination;  
 Special Conditions of Contract;  
 General Conditions of Contract; and  
 Other (specify)
3. I confirm that I have satisfied myself as to the correctness and validity of my bid; that the price(s) and rate(s) quoted cover all the services specified in the bidding documents; that the price(s) and rate(s) cover all my obligations and I accept that any mistakes regarding price(s) and rate(s) and calculations will be at my own risk.
4. I accept full responsibility for the proper execution and fulfilment of all obligations and conditions devolving on me under this agreement as the principal liable for the due fulfilment of this contract.
5. I declare that I have no participation in any collusive practices with any bidder or any other person regarding this or any other bid.
6. I confirm that I am duly authorised to sign this contract.

NAME (PRINT) .....

CAPACITY .....

SIGNATURE .....

NAME OF FIRM .....

DATE .....

**WITNESSES**

1. ....

2. ....

DATE: .....

**CONTRACT FORM - RENDERING OF SERVICES**

**PART 2 (TO BE FILLED IN BY THE PURCHASER)**

I..... in my capacity as.....  
 Accept your bid under reference number .....dated.....for the rendering of services indicated hereunder and/or further specified in the annexure(s).

An official order indicating service delivery instructions is forthcoming.

I undertake to make payment for the services rendered in accordance with the terms and conditions of the contract, within 30 (thirty) days after receipt of an invoice.

| DESCRIPTION OF SERVICE | PRICE (ALL APPLICABLE TAXES INCLUDED) | COMPLETION DATE | B-BBEE STATUS LEVEL OF CONTRIBUTION | MINIMUM THRESHOLD FOR LOCAL PRODUCTION AND CONTENT (if applicable) |
|------------------------|---------------------------------------|-----------------|-------------------------------------|--------------------------------------------------------------------|
|                        |                                       |                 |                                     |                                                                    |

I confirm that I am duly authorized to sign this contract.

SIGNED AT ..... ON .....

NAME (PRINT) .....

SIGNATURE .....

OFFICIAL STAMP

WITNESSES

.....

.....

DATE: .....

## DECLARATION OF BIDDER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES

- (i) This Municipal Bidding Document must form part of all bids invited.
- (ii) It serves as a declaration to be used by municipalities and municipal entities in ensuring that when goods and services are being procured, all reasonable steps are taken to combat the abuse of the supply chain management system.
- (iii) The bid of any bidder may be rejected if that bidder, or any of its directors have:
1. abused the municipality's / municipal entity's supply chain management system or committed any improper conduct in relation to such system;
  2. been convicted for fraud or corruption during the past five years;
  3. willfully neglected, reneged on or failed to comply with any government, municipal or other public sector contract during the past five years; or
  4. been listed in the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004).
- (iv) **In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.**

| Item  | Question                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Yes | No |
|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|----|
| 4.1   | <p>Is the bidder or any of its directors listed on the National Treasury's Database of Restricted Suppliers as companies or persons prohibited from doing business with the public sector?</p> <p>(Companies or persons who are listed on this Database were informed in writing of this restriction by the Accounting Officer/Authority of the institution that imposed the restriction after the <i>audi alteram partem</i> rule was applied).</p> <p><b>The Database of Restricted Suppliers now resides on the National Treasury's website(<a href="http://www.treasury.gov.za">www.treasury.gov.za</a>) and can be accessed by clicking on its link at the bottom of the home page.</b></p> | Yes | No |
| 4.1.1 | If so, furnish particulars:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |     |    |
| 4.2   | <p>Is the bidder or any of its directors listed on the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004)?</p> <p><b>The Register for Tender Defaulters can be accessed on the National Treasury's website (<a href="http://www.treasury.gov.za">www.treasury.gov.za</a>) by clicking on its link at the bottom of the home page.</b></p>                                                                                                                                                                                                                                                                           | Yes | No |
| 4.2.1 | If so, furnish particulars:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |     |    |

|             |                                                                                                                                                                                                                                        |            |           |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|-----------|
| 4.3         | Was the bidder or any of its directors convicted by a court of law (including a court of law outside the Republic of South Africa) for fraud or corruption during the past five years?                                                 | Yes        | No        |
| 4.3.1       | If so, furnish particulars:                                                                                                                                                                                                            |            |           |
| <b>Item</b> | <b>Question</b>                                                                                                                                                                                                                        | <b>Yes</b> | <b>No</b> |
| 4.4         | Does the bidder or any of its directors owe any municipal rates and taxes or municipal charges to the municipality / municipal entity, or to any other municipality / municipal entity, that is in arrears for more than three months? | Yes        | No        |
| 4.4.1       | If so, furnish particulars:                                                                                                                                                                                                            |            |           |
| 4.5         | Was any contract between the bidder and the municipality / municipal entity or any other organ of state terminated during the past five years on account of failure to perform on or comply with the contract?                         | Yes        | No        |
| 4.5.1       | If so, furnish particulars:                                                                                                                                                                                                            |            |           |

#### CERTIFICATION

I, THE UNDERSIGNED (FULL NAME) .....  
 CERTIFY THAT THE INFORMATION FURNISHED ON THIS  
 DECLARATION FORM TRUE AND CORRECT.

I ACCEPT THAT, IN ADDITION TO CANCELLATION OF A CONTRACT, ACTION MAY BE TAKEN  
 AGAINST ME SHOULD THIS DECLARATION PROVE TO BE FALSE.

.....  
**Signature**

.....  
**Date**

.....  
**Position**

.....  
**Name of Bidder**

**CERTIFICATE OF INDEPENDENT BID DETERMINATION**

- 1 This Municipal Bidding Document (MBD) must form part of all bids<sup>1</sup> invited.
- 2 Section 4 (1) (b) (iii) of the Competition Act No. 89 of 1998, as amended, prohibits an agreement between, or concerted practice by, firms, or a decision by an association of firms, if it is between parties in a horizontal relationship and if it involves collusive bidding (or bid rigging).<sup>2</sup> Collusive bidding is a *pe se* prohibition meaning that it cannot be justified under any grounds.
- 3 Municipal Supply Regulation 38 (1) prescribes that a supply chain management policy must provide measures for the combating of abuse of the supply chain management system, and must enable the accounting officer, among others, to:
  - a. take all reasonable steps to prevent such abuse;
  - b. reject the bid of any bidder if that bidder or any of its directors has abused the supply chain management system of the municipality or municipal entity or has committed any improper conduct in relation to such system; and
  - c. cancel a contract awarded to a person if the person committed any corrupt or fraudulent act during the bidding process or the execution of the contract.
- 4 This MBD serves as a certificate of declaration that would be used by institutions to ensure that, When bids are considered, reasonable steps are taken to prevent any form of bid-rigging.
- 5 In order to give effect to the above, the attached Certificate of Bid Determination (MBD 9) must be completed and submitted with the bid:

<sup>1</sup> Includes price quotations, advertised competitive bids, limited bids and proposals.

<sup>2</sup> Bid rigging (or collusive bidding) occurs when businesses, that would otherwise be expected to compete, secretly conspire to raise prices or lower the quality of goods and / or services for purchasers who wish to acquire goods and / or services through a bidding process. Bid rigging is, therefore, an agreement between competitors not to compete.

**CERTIFICATE OF INDEPENDENT BID DETERMINATION**

I, the undersigned, in submitting the accompanying bid:

\_\_\_\_\_

(Bid Number and Description)

in response to the invitation for the bid made by:

\_\_\_\_\_

(Name of Municipality / Municipal Entity)

Do hereby make the following statements that I certify to be true and complete in every respect:

I certify, on behalf of: \_\_\_\_\_ that:

(Name of Bidder)

- I have read and I understand the contents of this Certificate;
- I understand that the accompanying bid will be disqualified if this Certificate is found not to be true and complete in every respect;
- I am authorized by the bidder to sign this Certificate, and to submit the accompanying bid, on behalf of the bidder;
- Each person whose signature appears on the accompanying bid has been authorized by the bidder to determine the terms of, and to sign, the bid, on behalf of the bidder;
- For the purposes of this Certificate and the accompanying bid, I understand that the word "competitor" shall include any individual or organization, other than the bidder, whether or not affiliated with the bidder, who:
  - (a) Has been requested to submit a bid in response to this bid invitation;
  - (b) Could potentially submit a bid in response to this bid invitation, based on their qualifications, abilities or experience; and
  - (c) Provides the same goods and services as the bidder and/or is in the same line of business as the bidder

## MBD 9

- The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However communication between partners in a joint venture or consortium<sup>3</sup> will not be construed as collusive bidding.
- In particular, without limiting the generality of paragraphs 6 above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:

**2.12.** prices;

**2.13.** geographical area where product or service will be rendered (market allocation)

(c) Methods, factors or formulas used to calculate prices;

(d) The intention or decision to submit or not to submit, a bid;

(e) The submission of a bid which does not meet the specifications and conditions of the bid; or

(f) Bidding with the intention not to win the bid.

9.8 In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications and conditions or delivery particulars of the products or services to which this bid invitation relates.

9.9 The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the Awarding of the contract.

<sup>3</sup> Joint venture or Consortium means an association of persons for the purpose of combining their expertise, property, capital, efforts, skill and knowledge in an activity for the execution of a contract.

10. I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No 12 of 2004 or any other applicable legislation.

.....  
Signature

.....  
Date

.....  
Position

.....  
Name of Bidder

**PARTICULARS OF BIDDER**

THE FOLLOWING PARTICULARS MUST BE FURNISHED  
(FAILURE TO DO SO MAY RESULT IN YOUR BID BEING DISQUALIFIED)

Name of Bidder:\_\_\_\_\_

Postal Address\_\_\_\_\_

Street Address\_\_\_\_\_

Telephone Number      Code\_\_\_\_\_Number\_\_\_\_\_

Cellphone Number\_\_\_\_\_

Facsimile Number Code\_\_\_\_\_Number\_\_\_\_\_

Contact Person\_\_\_\_\_

Company / Enterprise Income Tax  
Reference Number:\_\_\_\_\_

**NO / YES**

Has an original Tax Clearance Certificate been attached (MBD2)

Vat Registration Number\_\_\_\_\_

Company Registration No \_\_\_\_\_

Is the Firm registered or does it have a Business Licence(s): (Tick one box)

☐ YES

☐ NO

If YES, give details and quote relevant Reference numbers and dates

\_\_\_\_\_  
\_\_\_\_\_

Are you the accredited Representative in South Africa for the  
Goods / services offered by you?

YES/NO (If YES enclose proof)

AN ORIGINAL TAX CLEARANCE CERTIFICATE MUST BE ATTACHED TO YOUR BID.

The undersigned, who warrants that he/she is duly authorised to do so on behalf of the firm, affirms that the information furnished is true and correct.

Signature: \_\_\_\_\_

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

Duly authorised to sign on behalf of: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_

Telephone Number: \_\_\_\_\_

### **ENQUIRY CONTACT DETAILS**

**ANY ENQUIRIES REGARDING THE BIDDING PROCEDURE MAY BE DIRECTED TO:**

MUNICIPALITY: ALFRED DUMA LOCAL MUNICIPALITY  
DEPARTMENT: DEPARTMENT BUDGET AND TREASURY  
CONTACT PERSON: MS NF GODO  
TEL: 036 637 2231 – EXTENSION 1208

**ANY ENQUIRIES REGARDING TECHNICAL INFORMATION MAY BE DIRECTED TO:**

CONTACT PERSON: MR BJ STRYDOM  
TEL: 036 361 1777

**ALFRED DUMA LOCAL MUNICIPALITY**

**DEPARTMENT PUBLIC SAFETY AND  
EMERGENCY SERVICES**

**CONTRACT NO. PS 06/2024**

**SUPPLY, INSTALLATION AND MAINTENANCE  
OF THE SURVEILLANCE CAMERA SYSTEM FOR  
A PERIOD OF (3) YEARS**

**PRICING SCHEDULE**

**ALFRED DUMA LOCAL MUNICIPALITY**

**DEPARTMENT PUBLIC SAFETY AND EMERGENCY SERVICES**

**CONTRACT NO PS 06/2024**

**SUPPLY, INSTALLATION AND MAINTENANCE OF THE CURRENT  
SURVEILLANCE CAMERA SYSTEM FOR A PERIOD OF THREE (3) YEARS**

**SERVICE REQUIRED**

- 1. All prices quoted MUST INDICATE VAT SEPARATELY**
- 2. Year 1 Prices are fixed**
- 3. Year 2 and year 3 prices are subject to CPIX change and the supplier is required to request such changes in writing.**

| <b>Item<br/>number</b> | <b>DESCRIPTION</b>                                            | <b>QTY<br/>[unit<br/>]</b> | <b>UNIT PRICE<br/>(excl VAT)</b> | <b>TOTAL (Incl VAT)</b> |
|------------------------|---------------------------------------------------------------|----------------------------|----------------------------------|-------------------------|
| 1                      | SERVERS/CONTROL UNITS                                         | 1                          |                                  |                         |
| 1.1                    | Desktop Tower I7 16gb 512ssd or equivalent                    | 1                          |                                  |                         |
| 1.2                    | Laptop I7 16gb 512ssd 4gb Graphics or equivalent              | 1                          |                                  |                         |
| 1.3                    | Server Tower Intel Single Xeon Processor 32gb or equivalent   | 1                          |                                  |                         |
| 1.4                    | Server Tower Intel Xeon Dual Processor 64gb Ram or equivalent | 1                          |                                  |                         |
| 1.5                    | Desktop Memory 8gb                                            | 1                          |                                  |                         |
| 1.6                    | Desktop Memory 16gb                                           | 1                          |                                  |                         |
| 1.7                    | Laptop Memory 8gb                                             | 1                          |                                  |                         |
| 1.8                    | Laptop Memory 16gb                                            | 1                          |                                  |                         |
| 1.9                    | Server Memory – 8gb                                           | 1                          |                                  |                         |
| 1.10                   | Server Memory – 16gb                                          | 1                          |                                  |                         |
| 1.11                   | Graphic Card 4gb Gddr5 – 4 Output                             | 1                          |                                  |                         |
| 1.12                   | Graphic Card 6gb Gddr5 – 4 Output                             | 1                          |                                  |                         |
| 1.13                   | Windows Server 2022 Software or equivalent                    | 1                          |                                  |                         |
| 1.14                   | Windows Server Rdp Software 0-5 User or equivalent            | 1                          |                                  |                         |

|           |                                                         |   |  |  |
|-----------|---------------------------------------------------------|---|--|--|
| 1.15      | Windows Server Cals 5 User or equivalent                | 1 |  |  |
| 1.16      | Windows 11 Professional or equivalent                   | 1 |  |  |
| 1.17      | 512 Ssd 6gbps                                           | 1 |  |  |
| 1.18      | 1tb Ssd 6gbps                                           | 1 |  |  |
| 1.22      | Seagate Sv35 Hard drive 4tb or equivalent               | 1 |  |  |
| 1.23      | Seagate Sv35 Hard drive 6tb or equivalent               | 1 |  |  |
| 1.24      | Seagate Sv35 Hard drive 8tb or equivalent               | 1 |  |  |
| 1.25      | Seagate Sv35 Hard drive 10tb or equivalent              | 1 |  |  |
| 1.26      | Nas Storage Device 6 Bay                                | 1 |  |  |
| 1.27      | Nas Storage Device 8 Bay                                | 1 |  |  |
| 1.28      | Nas Storage Device 16 Bay                               | 1 |  |  |
| 1.29.     | Supply Of Small Server For (Remote Sites)               | 1 |  |  |
| 1.30      | Supply Of Small Server 2 Or Client Station              | 1 |  |  |
| 1.31      | Supply Of Medium Surveillance Server (Remote Sites)     | 1 |  |  |
| 1.32      | Supply Of Large Surveillance Server (Equipment Room)    | 1 |  |  |
| 1.33      | Supply Of Extra-Large Recording Device (Equipment Room) | 1 |  |  |
| 1.34      | CCTV 16 CHANNEL 1080 HD DVR                             | 1 |  |  |
| 1.35      | CCTV 16 CHANNEL SMART NVR+POE                           | 1 |  |  |
| 1.36      | CCTV 32 CHANNEL SMART NVR+POE                           | 1 |  |  |
| 1.37      | CCTV BLAZER ALL IN ONE SERVER 256CH 16HDD BAY (SERVER)  | 1 |  |  |
| <b>2.</b> | <b>Additional Components</b>                            |   |  |  |
| 2.1       | Supply Of Dual Display Output Cards 2gb (Graphics Card) | 1 |  |  |
| 2.2       | Supply Of Quad Display Output Cards 2gb (Graphics Card) | 1 |  |  |
| 2.3       | 4GB DDR3-1333 RAM (Memory)                              | 1 |  |  |
| 2.4       | 8GB Ram 1600mhz DDR3 ECC REG (Memory)                   | 1 |  |  |
| 2.5       | 3tb Surveillance Drive 7200rpm                          | 1 |  |  |
| 2.6       | INTEL XEON E5-2630V2 2,6Ghz 6 Core CPU or equivalent    | 1 |  |  |

|           |                                                                        |   |  |  |
|-----------|------------------------------------------------------------------------|---|--|--|
| <b>3.</b> | <b>Networking</b>                                                      |   |  |  |
| 3.1       | 1gb Fibre Convertor                                                    | 1 |  |  |
| 3.2       | 10gb Fibre Convertor                                                   | 1 |  |  |
| 3.3       | 1 GB Fibre Gbic SFP + Module                                           | 1 |  |  |
| 3.4       | 10 GB Fibre Gbic SFP + Module                                          | 1 |  |  |
| 3.5       | Lc Pigtails                                                            | 1 |  |  |
| 3.6       | Lc Midcouplers                                                         | 1 |  |  |
| 3.7       | LC To LC Patch Leads                                                   | 1 |  |  |
| 3.5       | 24 Port LC Patch Panel                                                 | 1 |  |  |
| 3.6       | Splice Kit                                                             | 1 |  |  |
| 3.7       | Splice Box                                                             | 1 |  |  |
| 3.8       | Heavy Duty Fibre Cable 12 Core (Per Meter)                             | 1 |  |  |
| 3.9       | Heavy Duty Fibre Cable 24 Core (Per Meter)                             | 1 |  |  |
| 3.10      | Heavy Duty Fibre Cable 48 Core (Per Meter)                             | 1 |  |  |
| 3.11      | Aerial Fibre Cable 12 Core (Per Meter)                                 | 1 |  |  |
| 3.12      | Aerial Fibre Cable 24 Core (Per Meter)                                 | 1 |  |  |
| 3.13      | Aerial Fibre Cable 48 Core (Per Meter)                                 | 1 |  |  |
| 3.14      | Armoured Tube Fibre 12 Core (Per Meter)                                | 1 |  |  |
| 3.15      | Armoured Tube Fibre 24 Core (Per Meter)                                | 1 |  |  |
| 3.16      | Armoured Tube Fibre 48 Core (Per Meter)                                | 1 |  |  |
| 3.17      | Cat 6 Network Cabling (Per Meter)                                      | 1 |  |  |
| 3.18      | 8-Port 10/100/1000 Gigabit Switch With 4 Port POE                      | 1 |  |  |
| 3.19      | 24-Port 10/100/1000 Smart Switch With 4 Gigabit Ports And 24 POE Ports | 1 |  |  |
| 3.20      | Gen2 Power Beam 5ghz                                                   | 1 |  |  |
| 3.21      | Nano Station 5ghz                                                      | 1 |  |  |
| 3.22      | Single Sector Point To Point                                           | 1 |  |  |
| 3.24      | Multi Sector Point To Point                                            | 1 |  |  |
| 3.25      | Gen2 Rocket 5ghz                                                       | 1 |  |  |
| 3.26      | Wireless Microwave Dish 800/1600mbps                                   | 1 |  |  |

|          |                                                                                                   |   |  |  |
|----------|---------------------------------------------------------------------------------------------------|---|--|--|
| 3.27     | Ubiquiti Lr Unifi 6 or equivalent                                                                 | 1 |  |  |
| 3.29     | Hap Router Board + Lte                                                                            | 1 |  |  |
| 3.30     | Router Board Switch Rb4011                                                                        | 1 |  |  |
| 3.31     | Router Board Configuration Per Hour                                                               | 1 |  |  |
| 3.32     | Neo 5000 or equivalent                                                                            | 1 |  |  |
| 3.33     | Alpha 2000 or equivalent                                                                          | 1 |  |  |
| 3.34     | 5000 Cpe Su-Air                                                                                   | 1 |  |  |
| 3.35     | Radwin Lightning Surge Arrestor or equivalent                                                     | 1 |  |  |
| 3.36     | Poe Injector 48v                                                                                  | 1 |  |  |
| 3.37     | Poe Injector 24v                                                                                  | 1 |  |  |
| <b>4</b> | <b>Network Video Recording Software</b>                                                           |   |  |  |
| 4.1      | 8 Channel Software License (Must Include All Base Licenses And Per Channel Licenses As Required)  | 1 |  |  |
| 4.2      | 16 Channel Software License (Must Include All Base Licenses And Per Channel Licenses As Required) | 1 |  |  |
| 4.3      | 32 Channel Software License (Must Include All Base Licenses And Per Channel Licenses As Required) | 1 |  |  |
| 4.4      | 64Channel Software License (Must Include All Base Licenses And Per Channel Licenses As Required)  | 1 |  |  |
| 4.5      | Single Channel License (Additional Licenses For Addition To Above Options)                        | 1 |  |  |
| 4.6      | Yearly License Per Channel                                                                        | 1 |  |  |
| <b>5</b> | <b>Encoders And Integration Devices</b>                                                           |   |  |  |
| 5.1      | Single Channel Analogue To I.P Encoder                                                            | 1 |  |  |
| 5.2      | Four Channel Analogue To I.P Encoder                                                              | 1 |  |  |
| 5.3      | Sixteen Channel Analogue To I.P Encoder                                                           | 1 |  |  |
| 5.4      | Eight Channel Network Ethernet I/O Device                                                         | 1 |  |  |
| 5.5      | Rugged Sixteen Port Ethernet I/O Device                                                           | 1 |  |  |
| <b>6</b> | <b>Displays</b>                                                                                   | 1 |  |  |
| 6.1      | 23 Inch Pc Monitor                                                                                | 1 |  |  |
| 6.2      | 32 Inch LED Display                                                                               | 1 |  |  |

|          |                                                                             |   |  |  |
|----------|-----------------------------------------------------------------------------|---|--|--|
| 6.3      | 42 Inch LED Display                                                         | 1 |  |  |
| 6.4      | 47 Inch LED Display                                                         | 1 |  |  |
| 6.5      | 55 Inch LED Display                                                         | 1 |  |  |
| 6.6      | 60M Infrared Illuminator                                                    | 1 |  |  |
| 6.7      | 200M Infrared Illuminator                                                   | 1 |  |  |
| 6.8      | 300M Infrared Illuminator                                                   | 1 |  |  |
| 6.9      | 1000M Infrared Illuminator                                                  | 1 |  |  |
| <b>7</b> | <b>Poe Injectors</b>                                                        |   |  |  |
| 7.1      | High Power Poe Injector                                                     | 1 |  |  |
| 7.2      | POE Injector With 2 Injector Points                                         | 1 |  |  |
| 7.3      | POE Injector With 3 Injector Points                                         | 1 |  |  |
| 7.4      | POE Injector With 4 Injector Points                                         | 1 |  |  |
| 7.5      | POE Injector With 5 Injector Points                                         | 1 |  |  |
| 7.6      | POE Injector With 6 Injector Points                                         | 1 |  |  |
| <b>8</b> | <b>Cameras</b>                                                              |   |  |  |
| 8.1      | 1 Megapixel Low Cost Fixed Lens Dome (Areas With Good Lighting)             | 1 |  |  |
| 8.2      | 2 Megapixel Low Cost Fixed Lens Dome (Areas With Good Lighting)             | 1 |  |  |
| 8.3      | 3 Megapixel Low Cost Fixed Lens Dome (Areas With Good Lighting)             | 1 |  |  |
| 8.4      | 5 Megapixel Fish Eye Dome (Areas With Good Lighting)                        | 1 |  |  |
| 8.5      | 1 Megapixel Low Cost Fixed Lens Dome (For Areas With Bad Lighting)          | 1 |  |  |
| 8.6      | 2 Megapixel Low Cost Fixed Lens Dome (For Areas With Bad Lighting)          | 1 |  |  |
| 8.8      | 3 Megapixel Low Cost Fixed Lens Dome (For Areas With Bad Lighting)          | 1 |  |  |
| 8.9      | Miniature HD TV Cctv Body (Covert Rugged And Non-Intrusive Heads Available) | 1 |  |  |

|      |                                                                                                        |   |  |  |
|------|--------------------------------------------------------------------------------------------------------|---|--|--|
| 8.10 | Rugged Mobile Surveillance Camera                                                                      | 1 |  |  |
| 8.11 | Wide Angle Vandal Proof Mobile Surveillance Camera                                                     | 1 |  |  |
| 8.12 | 1 Megapixel Varifocal Fixed Dome Camera                                                                | 1 |  |  |
| 8.13 | 1 Megapixel Varifocal Fixed Dome Camera (Incl I/O And Audio)                                           | 1 |  |  |
| 8.14 | 1 Megapixel Varifocal Dome Including SD Card Support And Extreme Low Light Capabilities                | 1 |  |  |
| 8.15 | 1 Megapixel Varifocal Dome Including SD Card Support And Extreme Low Light Capabilities, Audio And I/O | 1 |  |  |
| 8.16 | Low Cost Non Megapixel Wide Angle Varifocal (For Areas With Good Lighting)                             | 1 |  |  |
| 8.17 | Low Cost Megapixel Wide Angle Varifocal (For Areas With Good Lighting))                                | 1 |  |  |
| 8.18 | Low Cost Non Megapixel Day Night Varifocal Box Camera                                                  | 1 |  |  |
| 8.19 | Low Cost Megapixel Day Night Varifocal Box Camera                                                      | 1 |  |  |
| 8.20 | 1.3 Megapixel VEHICLE CCTV Camera Incl SD Card Support And Extreme Low Light                           | 1 |  |  |
| 8.21 | 1,3 Megapixel Varifocal Box Camera Including Sd Card Support And Extreme Low Light                     | 1 |  |  |
| 8.22 | 2 Megapixel Varifocal Box Camera Including Sd Card Support And Extreme Low Light                       | 1 |  |  |
| 8.23 | 5 Megapixel Varifocal Box Camera Including Sd Card Support And Extreme Low Light                       | 1 |  |  |
| 8.24 | Non Megapixel Extreme Low Light With Varifocal Lens                                                    | 1 |  |  |
| 8.25 | 1 Megapixel Extreme Low Light With Varifocal Lens                                                      | 1 |  |  |
| 8.26 | 2 Megapixel Day Night Zoom Capable Box Camera                                                          | 1 |  |  |
| 8.27 | 2 Megapixel Infrared Zoom Capable Box Camera                                                           | 1 |  |  |

|      |                                                                                |   |  |  |
|------|--------------------------------------------------------------------------------|---|--|--|
| 8.28 | 1 Megapixel Digital PTZ Dome                                                   | 1 |  |  |
| 8.30 | 1 Megapixel External Wall Mount PTZ Dome                                       | 1 |  |  |
| 8.31 | 2 Megapixel External Wall Mount PTZ Dome                                       | 1 |  |  |
| 8.32 | 1 Megapixel External Variable Mount PTZ Dome                                   | 1 |  |  |
| 8.33 | 1 Megapixel External Variable Mount PTZ Dome Spec 2                            | 1 |  |  |
| 8.34 | 1 Megapixel External Variable Mount PTZ Dome For Harsh Environment             | 1 |  |  |
| 8.35 | 2 Megapixel External Variable Mount PTZ Dome                                   | 1 |  |  |
| 8.36 | 2 Megapixel External Variable Mount PTZ Dome Spec 2                            | 1 |  |  |
| 8.37 | 2 Megapixel External Variable Mount PTZ Dome For Harsh Environment             | 1 |  |  |
| 8.38 | 2 Megapixel Body cam                                                           | 1 |  |  |
| 8.39 | Number plate recognition system                                                | 1 |  |  |
| 8.40 | 2.8-12MM/PR- 7 LINE SMART ANPR BULLET CAMERA<br>(For Number plate recognition) | 1 |  |  |
| 8.41 | 1080P HD BULLET FIXED 2.8/3.6 CAMERA                                           | 1 |  |  |
| 8.42 | 1080P HD DOME FIXED 2.8/3.6 CAMERA                                             | 1 |  |  |
| 8.43 | 1080P HD VERIFOCAI BULLET 2.8-12mm                                             | 1 |  |  |
| 8.44 | 1080P HD VERIFOCAI DOME 2.8-12mm                                               | 1 |  |  |
| 8.45 | IP BULLET 2MP H.265 2.8MM WITH SD 30M                                          | 1 |  |  |
| 8.46 | IP DOME 2MP H.265 2.8MM WITH SD 30M                                            | 1 |  |  |
| 8.47 | IP BULLET 4MP 2.8MM 30M IR WDR                                                 | 1 |  |  |
| 8.48 | IP DOME 4MP 2.8MM 30M IR WDR                                                   | 1 |  |  |
| 8.49 | IP BULLET 4MP WDR VERIFOCAI 2.8-12mm or equivalent                             | 1 |  |  |
| 8.50 | IP DOME 4MP WDR VERIFOCAI 2.8-12mm or equivalent                               | 1 |  |  |

|            |                                                                 |   |  |  |
|------------|-----------------------------------------------------------------|---|--|--|
| 8.51       | 4MP PTZ DARKFIGHTER 23X OPTZOOM<br>200M IR HI-POE or equivalent | 1 |  |  |
| 8.52       | NETWORK KEYBOARD NETWORK<br>(PTZ CONTROLLER)                    | 1 |  |  |
| 8.53       | COLOURVU 4MP BULLET or equivalent                               | 1 |  |  |
| 8.54       | COLOURVU 4MP DOME or equivalent                                 | 1 |  |  |
| 8.55       | ACCUSENSE 4MP BULLET camera or<br>equivalent                    | 1 |  |  |
| 8.56       | ACCUSENSE 4MP DOME or equivalent                                | 1 |  |  |
| 8.57       | SMART PTZ 8MP 40x ZOOM                                          | 1 |  |  |
| 8.58       | 5MP BULLET SMART TIOC CAMERA                                    | 1 |  |  |
| 8.59       | Ptz Controller                                                  | 1 |  |  |
| 8.60       | Outdoor Box Camera Housing                                      | 1 |  |  |
| 8.61       | Outdoor Bracket                                                 | 1 |  |  |
| 8.62       | Steel Camera Pole 9m                                            | 1 |  |  |
| 8.63       | Steel Camera Pole 12m                                           | 1 |  |  |
| 8.64       | Coaxial PTZ Camera Protection With PSU<br>And RS485             | 1 |  |  |
| 8.65       | Surge Arrestor                                                  | 1 |  |  |
| 8.66       | 100 Base-T Power Over Ethernet<br>Protection                    | 1 |  |  |
| 8.67       | Two Way Multi Plug Protection                                   | 1 |  |  |
| 8.68       | Data Module                                                     | 1 |  |  |
| <b>9</b>   | <b>Software Analytics</b>                                       |   |  |  |
| 9.1        | License Plate Recognition Add On Module<br>(Per Camera License) | 1 |  |  |
| 9.2        | Yearly License Per Camera                                       | 1 |  |  |
| 9.3        | Network Video Software Compatible With<br>Axis                  | 1 |  |  |
| 9.4        | License Fee For Numberplate Recognition                         | 1 |  |  |
| <b>10.</b> | <b>Wireless</b>                                                 |   |  |  |
| 10.1       | Wireless Point To Point                                         | 1 |  |  |
| 10.2       | Wireless Point To Multipoint                                    | 1 |  |  |
| 10.3       | Wireless Subscriber Unit                                        | 1 |  |  |

|           |                                                                              |   |  |  |
|-----------|------------------------------------------------------------------------------|---|--|--|
| 10.4      | Gigabit Wireless Repair Bridge (71-76Ghz And 81-86Ghz)                       | 1 |  |  |
| 10.5      | Gigabit Wireless Repair Bridge (24Ghz Range)                                 | 1 |  |  |
| 10.6      | 1 Gbps Total Throughput Wireless Repair Bridge (17Ghz Range Or 24 Ghz Range) | 1 |  |  |
| <b>11</b> | <b>Cabinets</b>                                                              |   |  |  |
| 11.1      | Cabinet 4u 400mm Deep                                                        | 1 |  |  |
| 11.2      | Cabinet 6u 500 +100mm                                                        | 1 |  |  |
| 11.3      | Cabinet WALL BOX 9U 400 + 100, GLASS DOOR                                    | 1 |  |  |
| 11.4      | Cabinet 12U 400 +100MM WALLBOX - GLASS DOOR                                  | 1 |  |  |
| 11.5      | Cabinet RACK 27U X 600 X 800 GLASS FRONT -FULL SPEC                          | 1 |  |  |
| 11.6      | Cabinet 42U 600 X 800MM - GLASS F & SOLID                                    | 1 |  |  |
| 11.7      | Patch Panel 24 Way Cat6                                                      | 1 |  |  |
| 11.8      | 1u Brush Panel                                                               | 1 |  |  |
| 11.9      | Cat 6 Metal Connector                                                        | 1 |  |  |
| 11.10     | Junction Box                                                                 | 1 |  |  |
| 11.11     | Cat 6 Boot                                                                   | 1 |  |  |
| 11.12     | Cat 6 Single Patch Box                                                       | 1 |  |  |
| 11.13     | Cat 6 Dual Patch Box                                                         | 1 |  |  |
| 11.14     | 10way Metal Power Duct                                                       | 1 |  |  |
| 11.15     | Rack Mount Shelf                                                             | 1 |  |  |
| 11.16     | 2u Front Mount Shelf,                                                        | 1 |  |  |
| 11.17     | 1u Blank Black Metal Plates                                                  | 1 |  |  |
| 11.18     | Fan Kit, 120mm 220v Fan Steel Finger Guard, Lead                             | 1 |  |  |
| 11.19     | Cat 6 Shielded Cable-Earth-Red                                               | 1 |  |  |
| 11.20     | Cat 6 Solid Copper Cable Per Meter                                           | 1 |  |  |
| 11.21     | Cctv Rj59 Cable                                                              | 1 |  |  |
| 11.22     | Cctv Bnc Connector                                                           | 1 |  |  |
| 11.23     | Cctv Dc Jack                                                                 | 1 |  |  |

|           |                                                                                      |   |  |  |
|-----------|--------------------------------------------------------------------------------------|---|--|--|
| 11.24     | Cctv Video Baulan                                                                    | 1 |  |  |
| 11.25     | Cctv 30 Amp Power Supply                                                             | 1 |  |  |
| <b>12</b> | <b>Splice Kit</b>                                                                    |   |  |  |
| 12.1      | Heavy Duty Fibre Cable 12 Core (Per Meter)                                           | 1 |  |  |
| 12.2      | Heavy Duty Fibre Cable 24 Core (Per Meter)                                           | 1 |  |  |
| 12.3      | Heavy Duty Fibre Cable 48 Core (Per Meter)                                           | 1 |  |  |
| 12.4      | Aerial Fibre 12 Core (Per Meter)                                                     | 1 |  |  |
| 12.5      | Aerial Fibre 24core (Per Meter)                                                      | 1 |  |  |
| 12.6      | Aerial Fibre 48 Core (Per Meter)                                                     | 1 |  |  |
| 12.7      | Armoured Tube Fibre 12 Core (Per Meter)                                              | 1 |  |  |
| 12.8      | Armoured Tube Fibre 24 Core (Per Meter)                                              | 1 |  |  |
| 12.9      | Armoured Tube Fibre 48 Core (Per Meter)                                              | 1 |  |  |
| 12.10     | Armoured Tube Fibre 48 Core (Per Meter)<br>Splice Box - U Box<br>Splice Kit Complete | 1 |  |  |
| <b>13</b> | <b>Civils</b>                                                                        |   |  |  |
| 13.1      | Pole Mounting (Turnkey Project)                                                      | 1 |  |  |
| 13.2      | Trenching Per Meter                                                                  | 1 |  |  |
| 13.3      | LABOUR RATES Per Hour                                                                | 1 |  |  |
| 13.4      | Project Manager                                                                      | 1 |  |  |
| 13.5      | Civil Engineer                                                                       | 1 |  |  |
| 13.6      | Mechanical Engineer                                                                  | 1 |  |  |
| 13.7      | I.T Engineer                                                                         | 1 |  |  |
| 13.8      | Software Developer                                                                   | 1 |  |  |
| 13.9      | Electrician                                                                          | 1 |  |  |
| 13.10     | Foreman                                                                              | 1 |  |  |
| 13.11     | Driver                                                                               | 1 |  |  |
| 13.12     | Camera Technician                                                                    | 1 |  |  |
| 13.13     | General Labourer                                                                     | 1 |  |  |
| 13.14     | Fibre Splicing Per Splice                                                            | 1 |  |  |
| 13.15     | Fibre Technician                                                                     | 1 |  |  |
| 13.16     | Preventative Monthly Maintenance Cost                                                | 1 |  |  |

|       |                                 |   |  |  |
|-------|---------------------------------|---|--|--|
| 13.17 | Call Out Cost Per Hour          | 1 |  |  |
| 13.18 | Traveling Cost Per Km           | 1 |  |  |
| 13.19 | Steel work welder per hour      | 1 |  |  |
| 13.20 | Software configuration per hour | 1 |  |  |
| 13.21 | Cherry Picker per day           | 1 |  |  |
|       | <b>TOTAL PRICE</b>              |   |  |  |

**ALFRED DUMA LOCAL MUNICIPALITY**

**DEPARTMENT PUBLIC SAFETY AND  
EMERGENCY SERVICES**

**CONTRACT NO. PS 06/2024**

**SUPPLY, INSTALLATION AND MAINTENANCE  
OF THE SURVEILLANCE CAMERA SYSTEM FOR  
A PERIOD OF (3) YEARS**

**CHECK LIST**

## CHECK LIST

| No | Description                                                                      | Ticked by Bidder | Ticked by Municipal Representative |
|----|----------------------------------------------------------------------------------|------------------|------------------------------------|
| 1  | Initial/ Sign of all pages                                                       |                  |                                    |
| 2  | Briefing Session attended on                                                     |                  |                                    |
| 3  | Closing/Bid Submission at                                                        |                  |                                    |
| 4  | Form of bid completed                                                            |                  |                                    |
| 5  | Original Tax Clearance Certificate attached MBD 2                                |                  |                                    |
| 6  | Original valid B-BBEE Status Level Verification Certificates or certified copies |                  |                                    |
| 7  | Pricing Schedule completed MDB 3.3                                               |                  |                                    |
| 8  | Bid Declaration of interest Completed MBD 4                                      |                  |                                    |
| 9  | Preferential Points Claimed MBD 6.1                                              |                  |                                    |
| 10 | Preferential % Calculated and claimed MBD 6.1                                    |                  |                                    |
| 11 | All witnesses signed where it required MBD 6.1                                   |                  |                                    |
| 12 | Bid Declaration with regard to Equity completed                                  |                  |                                    |
| 13 | Particulars of Bidders Completed                                                 |                  |                                    |
| 14 | Contract Form MBD Form 7.2 completed                                             |                  |                                    |
| 15 | Declaration of Bidders Past SCM Practice MBD Form 8 completed                    |                  |                                    |
| 16 | Certificate of Independent Bid Determination MBD Form 9 completed                |                  |                                    |
| 17 | Pre- qualification Score Card completed                                          |                  |                                    |
| 18 | Pricing Schedule completed                                                       |                  |                                    |