



**ASSISTANT HIGH COMMISSION OF
INDIA, KHULNA, BANGLADESH**

www.ahcikhulna.gov.in

**Tender for
Supply and installation of CCTVs**

Date: 16th January 2024

Tender No.: KHU/ADM/871/01/2019

No. KHU/ADM/871/01/2019
ASSISTANT HIGH COMMISSION OF INDIA
KHULNA, BANGLADESH

NOTICE INVITING TENDER

Assistant High Commission of India, Khulna invites Tender under two bid system from firms for Supply, Installation, Testing and Commissioning of Closed Circuit Television (CCTV) Camera system in Assistant High Commission of India, Khulna.

2. The tender documents can be downloaded from the websites <https://www.ahci.khulna@mea.gov.in>. No tender fee will be charged for the tender documents. Please note that any corrigendum/addendum in the above tender documents, if required, will be hosted in the website of the Assistant High Commission of India, Khulna as mentioned above.

3. The interested firms should submit the bids in two separate sealed covers, super scribed as “Technical Bid” and “Financial Bid”. Both sealed covers should be put in a single enveloped super scribed as “Tender No. **KHU/ADM/871/01/2019** for Supply, Installation, Testing and Commissioning of Closed Circuit Television (CCTV) Camera system” and addressed to “Assistant High Commissioner, Assistant High Commission of India, Khulna, 65 Shamsur Rahman Road, Khulna-9100”. Please note that no tender documents will be accepted after the expiry of stipulated date and time for the purpose under any circumstances.

4. The Earnest Money Deposit (EMD) of BDT 1,50,000/- (BDT One Lakh Fifty Thousand only) in the form of Demand Draft/Pay Order in favour of the “Assistant High Commission of India, Khulna” is required to be submitted along with the Technical Bid. Bids shall not be considered in case the EMD is not submitted and would be rejected summarily.

5. The Technical Bids will be opened on **18.02.2024** by a Committee duly constituted by the Competent Authority of the Assistant High Commission of India, Khulna. The financial bids of only those bidders, whose Technical Bids are found responsive, shall be opened by the Committee authorized for the purpose.

6. The Competent Authority reserves the right to reject any or all the bids, or cancel the tender, without assigning any reason and the decision of the competent authority of the Assistant High Commission of India, Khulna shall be final and binding.

(Inder Jit Sagar)
Assistant High Commissioner
Assistant High Commission of India, Khulna

SECTION-I

DATES TO REMEMBER

SI. No.	Activity	Date
1.	Notice Inviting Tender	16.01.2024
2.	Site visit	From 16.01.2024 to 31.01.2024 between 1000-1700 hrs on any working day
3.	Pre-bid meeting	01.02.2024
4.	Last date of Tender Submission	16.02.2024
5.	Opening of Technical Bids	18.02.2024
6.	Opening of Financial Bids (of only those who qualifies in the minimum eligibility criteria)	21.02.2024

The Tender document can be downloaded from Post's website – www.ahcikhulna.gov.in.

SECTION II

INSTRUCTIONS TO BIDDERS (ITB)

1. Implementation period/Timelines

The complete implementation must be carried **within 1 months** after Award of Work.

2. Locations for the Supply, Installation & Warranty Services

The construction material/equipments covered under this document shall be supplied at the project location with **nationwide warranty for a period as provided by the OEM firm for a duration as mentioned in the Annexure A to Annexure J.**

3. Order Placements and Release of Payment

The Work Order and payment shall be processed by:

**Assistant High Commissioner
Assistant High Commission of India, Khulna**

4. Amendment of Bidding Documents

At any time prior to the deadline for submission of bids, AHCI, Khulna may, for any reason, whether on its own initiative or in response to the clarification request by a prospective bidder, modify the bid document.

5. Earnest Money Deposit (EMD)

- a. The tender documents must be accompanied by Earnest Money Deposit of appropriate amount, in the form of a Demand Draft (DD)/ Pay Order (PO) drawn on any Nationalized Bank, in favour of '**Assistant High Commission of India, Khulna**'. The amount towards EMD is **Tk.1,50,000/- [One Lakh Fifty thousand only]** and should be submitted in the envelope containing Technical bid. Bids submitted without EMD will stand rejected. EMD will not be accepted in the form of cash/cheque/ FDR/ BG or any other form except DD. **No interest shall be payable on EMD.**
- b. The EMD will be returned to the bidder(s) whose offer is not accepted by Assistant High Commission of India, Khulna within 30 days from the date of the placing of the final order(s) on the selected bidder(s).
- c. The successful bidder, on award of contract/order, must send the contract/ order acceptance in writing, within 7 days of award of contract/ order, failing which the EMD will be forfeited and the order will be placed to the next successful bidder.
- d. **The EMD shall be forfeited:**
 - i) If the bidder withdraws the bid during the period of bid validity specified in the tender.
 - ii) In case a successful bidder, fails to furnish the Performance Bank Guarantee
 - iii) If the bidder fails to furnish the acceptance in writing, within 7 days of award of contract/ order.
 - iv) Fails or refuses to honour his own quoted prices for the services or part thereof

6. Preparation and submission of Bids:

- a. Two-bid system will be followed for this tender. In this system, bidder must

submit his offer as explained below.

b. Envelope No. 1: "Technical Bid":

- (i) Duly filled Technical bid with proper seal and signature of authorized person on each page of the bid and tender document should be submitted in duplicate.
- (ii) All the necessary documents including those in support of Minimum Eligibility Criteria should be submitted with Technical Bid. These documents should be self attested.
- (iii) Compliance of Technical Specifications mentioned in Annexure A to Annexure J.
- (iii) Earnest Money Deposit should be submitted with the "Technical Bid".

c. Envelope 2: "Financial Bid":

- (a) Tender Submission Sheet as per Annexure- 1,
- (b) No other documents except "Price Schedule" may be submitted along with Financial Bid otherwise the bid shall stand rejected.
- (c) All amounts are to be quoted only in Bangladeshi Taka. The price quoted in the Financial bid shall be considered final and no price escalation will be permitted.

The Bid shall be neatly arranged, plain and intelligible and the language of the Bid should be English. Each page of the bid should be signed. They should not contain any terms and conditions, printed or otherwise, which are not applicable to the Bid. The conditional bid will be summarily rejected. Insertions, postscripts, additions and alterations shall not be recognized, unless confirmed by bidder's signature.

The bidder, as part of its Technical bid, will submit its company profile and information regarding its key personnel, per Annexure-5 of this tender document, with supporting documents such as copy of National ID, etc.

7. Period of validity of bids

- e. Bids shall be valid for a minimum 180 days from the date of submission of bids. A bid valid for a shorter period shall stand rejected.
- f. AHCI Khulna may ask for the bidder's consent to extend the period of validity. Such request and the response shall be made in writing only. The bidder is free not to accept such request without forfeiting the EMD. A bidder agreeing to the request for extension will not be permitted to modify his bid.

8. Performance Bank Guarantee

- a) The successful bidder has to deposit Performance Bank Guarantee in the form of a Demand Draft/Pay Order/ Bank Guarantee drawn in favour of the Assistant High Commission of India, Khulna payable at Khulna. If it is Bank Guarantee, the same should be as per the format given in Annexure-4 to this tender document.
- (b) Performance Bank Guarantee will be of an amount equivalent to 5% (five percent) of the total Contract Price.
- (c) Performance Bank Guarantee should be submitted within fifteen (15) days of signing of Contract Agreement.
- (d) This bank guarantee shall remain valid till the completion of warranty period/defect liability period.

(e) No interest shall be payable on Performance Bank Guarantee.

9. Late Bids

Any bid inadvertently received by AHCI, Khulna after the deadline for submission of bids, will not be accepted and returned unopened to the bidder.

10. Award of Contract

Award Criteria:

- a. AHCI, Khulna shall award the contract to the eligible bidder whose technical bid has been accepted and determined as the lowest evaluated commercial bid.
- b. The lowest price criteria shall be applied on the total.
- c. If more than one bidder happens to quote the **same lowest price, AHCI, Khulna** reserves the right to split the order and award the contract to more than one bidder.

11. Purchaser's Right to amend Scope of Work

If, for any unforeseen reasons, AHCI, Khulna is required to change the Scope of Supply, this change shall be acceptable to the bidder without change in the unit price quoted.

Interpretation of the clauses in the Tender Document/Contract Document in case of any ambiguity/dispute in the interpretation of any of the clauses in this Tender Document, AHCI Khulna's interpretation of the clauses shall be final and binding on all parties.

12. Cancellation of Tender

The Assistant High Commission of India, Khulna reserves the right to cancel the tender or re-tender at any stage for security reasons or for any other reason as decided by the Competent Authority.

SECTION III:

SPECIAL CONDITIONS OF CONTRACT (SCC)

1. **The Location:** The project shall be executed at the Chancery complex of the Assistant High Commission of India, Khulna, 65-Shamsur Rahman Road, Khulna-9100. A site visit and pre-bid meeting will be held in the above mentioned address on 01.02.2024. Prospective bidders are expected to visit the site and attend the pre-bid meeting. In any case, the tenderer shall be deemed to have visited the site and have full knowledge of the site in all respects before submitting the bids.

2. **Prices**

- a. The price quoted shall be considered firm and no price escalation will be permitted.
- b. Bidders must quote the price in the format given in Annexure-1
- c. All items are to be quoted only in Bangladeshi Taka.
- d. The prices quoted should be inclusive of freight, insurance, packing, distribution, after sales service, applicable taxes.

3. **Work Schedule**

Upon award of contract, the successful bidder should submit a work schedule indicating the time lines.

4. **Project Monitoring Committee**

Payments would be released by Assistant High Commission of India, Khulna upon certification of bills by Project Monitoring Committee constituted to monitor the progress of work.

5. **Taxes and Duties**

The prices quoted should be inclusive of freight, insurance and other taxes (VAT) till project location. However, the bidder should insure the consignment till actual delivery to the Assistant High Commission of India, Khulna.

6. **Performance Bank Guarantee (PBG):**

The successful bidder will be required to furnish the Performance Bank Guarantee in form of a Bank Guarantee for the 5 % (Five percent) amount of the Purchase Order within 15 days of receipt of Purchase Order, as per the format attached to this document (Refer Annexure-5). This bank guarantee shall remain valid till the completion of warranty period/defect liability period.

7. **Warranty:**

All the items covered under the schedule of requirements, shall carry a warranty period as mentioned in the technical specifications in Annexure A to Annexure J as provided by the OEM firm of the said equipment from the date of installation/Commissioning/completion. The bidder must undertake to provide the installation and warranty service at Khulna. The repairing/rectification/replacement/configuration required, if any, of the items under warranty must be done at on site workshop.

8. Payments:

No advance payment will be admissible. Payment will be made only after installation and successful commissioning of the CCTV system to the AHCI, Khulna's satisfaction against submission of proper bills & invoices

9. Penalty for delayed Services:

- a. AHCI, Khulna reserves the right to levy penalty @ of 0.5% of total value of ordered items per day of delay beyond the scheduled deliveries/execution of the order successfully, subject to maximum of 5% of the order value.
- b. AHCI, Khulna reserves the right to cancel the order in case the delay is more than 8 weeks.

10. Force Majeure:

AHCI may consider relaxing the penalty and delivery requirements, as specified in this document, if and to the extent that, the delay in performance or other failure to perform its obligations under the contract is the result of an Force Majeure. Force Majeure is defined as an event of effect that cannot reasonably be anticipated such as acts of nature (like earthquakes, floods, storms etc.), acts of states, the direct and indirect consequences of wars (declared or undeclared), hostilities, national emergencies, civil commotion and strikes at successful Bidder's premises.

SECTION IV

SCOPE OF WORK

Sl.No.	Item of work
1.	<p>Supply, installation, commissioning & servicing of CCTV cameras – 16 , 2 LED Screens, SFP POE Switch, Server, VMS, CCTV Passive Items, Work station, UPS.</p> <p>[Technical specifications and other details are provided in Annexure A-J & Quantity of items are provided in the Bill of Quantity in Annexure -1]</p>

SECTION V

GENERAL TECHNICAL SPECIFICATIONS

Eligibility Criteria for Contractors:

Assistant High Commission of India, Khulna desires the following eligibility criteria for qualification of the contractors to bid for the project. Hence, the documents witnessing the following points should also be sent along with their bids:

- i. Contractor's firms who have minimum 05 (five) years of general experience
- ii. Details of past experience of executing similar works with supporting documents including the work completion reports
- iii. Tenderer must have valid VAT Registration certificate from the Concerned Department.
- iv. Tenderer must have upto date Trade License.
- v. The tender documents must have been purchased from the stated source.
- vi. Contact and other details as per Annexure-4 of this tender document must be provided by all the tenderers.

Annexure -1**Format for Submitting the Price Schedule****(To be submitted along with the financial bid in separate sealed cover)**

BID No.

Date:.....

TENDER

Assistant High Commissioner,
Assistant High Commission of India, Khulna
65 Shamsur Rahman Road, Khulna

Dear Sir,

Sub: Financial Bid for Tender no.

I / We are submitting tender for theagainst Tender Notice No.....dated...As part of the Bid, we hereby offer Figures BDT.....(In Words BDT.....). A Bill of Quantity specifying item wise price is placed below:

Bill of Quantity (BoQ)

Sl. No.	Equipment	Specification	Number	Price (in BDT)
1	4 MP Bullet Camera	As per Annexure-A	10	
2	4 MP Dome Camera	As per Annexure-B	2	
3	PTZ Camera	As per Annexure-C	3	
4	Omni-directional camera	As per Annexure-D	1	
5	Switiches- 8 port, 16 port and 24 port	As per Annexure-E	As per Actuals	
6	Server	As per Annexure-F	1	
7	VMS- for 16 Channel	As per Annexure-G	1 for 16 cameras	
8	Work Station	As per Annexure-H	2	
9	Passive items	As per Annexure-I	As per Actuals	
10	Display	42 LED display	2	
11	UPS	As per power requirement	As per Actuals	
Total				

The above mentioned price is inclusive of all the applicable taxes; fees, as per regulations.

We have read these conditions carefully and will comply strictly. We agree to bind by this offer if we are selected as the preferred bidder.

If our bid is accepted, we commit to submit a Performance Guarantee / Security Deposit in accordance with the Bidding Documents.

We also declare that the Government of India or any other Government body has not declared us ineligible or black-listed us on charges of engaging in corrupt, fraudulent, collusive or coercive practices or any failure/lapses of serious nature.

If any information or document submitted is found to be false/incorrect, the Assistant High Commission may cancel my / our Tender and can take any action as deemed fit including termination of the contract, forfeiture of all dues including Earnest Money and blacklisting of my / our firm and all partners of the firm, etc.

NOTE: All the above work will conform to City Municipality Norms.

Note:

Above quoted price is complete in all respect, including applicable taxes as per technical specifications and terms & conditions mentioned in the bid document.

Yours faithfully,

(Signature of Authorised
Signatory)

Name:

Designation:

Company Seal:

Annexure -2

Notification of Award

Contract No:

Date:

To:
[Name of Contractor]

This is to notify you that your Tender dated *[insert date]* for the execution of the Works for *[name of project/Contract]* for the Contract Price of Tk *[amount in figures and in words]*, as corrected and modified in accordance with the Instructions to Tenderers is hereby accepted by *[name of Employer]*.

You are requested to proceed with the execution of the Works on the basis that this Notification of Award shall constitute the formation of a Contract, which shall become binding upon you furnishing a Performance Security within fourteen (14) days, and signing the Contract Agreement within twenty- one (21) days,

We attach the Contract Agreement for your perusal and signature.

Signed

Duly authorised to sign for and on behalf of

[name of Procuring Entity]

Date:

Annexure -3**Contract Agreement**

THIS AGREEMENT made the [day] day of [month] [year] between [name and address of Employer] (hereinafter called “the Employer”) of the one part and [name and address of Contractor] (hereinafter called “the Contractor”) of the other part:

WHEREAS the Employer invited Tenders for certain works, viz, [brief description of works] and has accepted a Tender by the Contractor for the execution of those works in the sum of Taka [Contract price in figures and in words] (hereinafter called “the Contract Price”).

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the General Conditions of Contract hereafter referred to.
2. The documents forming the Contract shall be interpreted in the following order of priority:
 - a. the letter of Notification of Award
 - b. the signed Contract Agreement;
 - c. the completed Tender Submission Sheet as submitted by the Tenderer;
 - d. the letter of acceptance by the Tenderer,
 - e. Performance Guarantee
3. In consideration of the payments to be made by the Employer to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Employer to execute and complete the works and to remedy any defects therein in conformity in all respects with the provisions of the Contract.
4. The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of the works and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the laws of Bangladesh on the day, month and year first written above.

For the Employer:

For the Contractor:

Signature

Print

Name

Title

In the presence of

Name

Address

Annexure -4

PROFORMA OF BANK GUARANTEE
(on non-judicial paper of appropriate value)

To
The
Assistant High Commissioner
Assistant High Commission of India
Khulna, Bangladesh

BANK GUARANTEES NO:

DATE:

Dear Sir(S)

This has reference to the Purchase Order No. _____ Dated _____ been placed by Assistant High Commission of India, Khulna (Name & Address of vendor) for.

The conditions of this order provide that the vendor shall,

1. Arrange to deliver & install the items listed in the said order to the consignee, as per details given in said order, and
2. Arrange for the comprehensive warranty service support towards the items supplied by vendor on site across Bangladesh, as per the warranty clause in said purchase order.

M/s (Name of Vendor) has accepted the said purchase order with the terms and conditions stipulated therein and have agreed to issue the performance bank guarantee on their part, towards promises and assurance of their contractual obligations vide the purchase order No. _____ M/s. (name of vendor) holds a current account with us and has approached us and at their request and in consideration of the promises, we hereby furnish such guarantees as mentioned hereinafter.

AHCI, Khulna shall be at liberty without reference to the Bank and without affecting the full liability of the Bank hereunder to take any other undertaking of security in respect of the suppliers obligations and/or liabilities under or in connection with the said contract or to vary the terms vis-a-vis the supplier or the said contract or to grant time and or indulgence to the supplier or to reduce or to increase or otherwise vary the prices or the total contract value or to forebear from enforcement of all or any of the obligations of the supplier under the said contract and/or the remedies of the AHCI, Khulna under any security(ies) now, or hereafter held by the AHCI, Khulna and no such dealing(s) with the supplier or release or forbearance whatsoever shall have the effect of releasing the bank from its full liability of the AHCI, Khulna hereunder or of prejudicing right of the AHCI, Khulna against the bank.

This undertaking guarantee shall be a continuing undertaking guarantee and shall remain valid and irrevocable for all claims of the AHCI, Khulna and liabilities of the supplier arising upto and until date.....

Your right to recover the said sum of BDT. _____ (Taka _____ only) from us in manner aforesaid will not be affected/or suspended by reason of the fact that any dispute or

disputes have been raised the said M/s and/or that any dispute or disputes are pending before any officer, tribunal or court or Arbitrator.

Our liability under this guarantee is restricted to BDT_____ (_____Taka only) Our guarantee shall remain in force until unless a suit action to enforce a claim under guarantee is filed against us within six months from (which is date of expiry of guarantee) all your rights under the said guarantee shall be forfeited and we shall be relieved and discharged from all liabilities there under. We have power to issue this guarantee in your favour under Memorandum and Articles of Association of our Bank and the undersigned has full power to do under the power of Attorney dated.

Notwithstanding anything contained herein:

- A. Our liability under this guarantee shall not exceed BDT.....(in words)
- B. This bank guarantee shall be valid up to.....& unless a suit for action to enforce a claim under guarantee is filed against us within six months from the date of expiry of guarantee. All your rights under the said guarantee shall be forfeited and we shall be relieved and discharged from all liabilities there after i.e. after six months from the date of expiry of this Bank guarantee
- C. We are liable to pay the guaranteed amount or any parts thereof under this bank guarantee only and only if you serve upon us a written claim or demand or before
- D. The Bank guarantee will expire on

Granted by the Bank

Yours faithfully,

For (Name of Bank)

SEAL OF THE

BANK

Authorised Signatory

Annexure-5**CONTACT DETAILS FORM****Bidder's description format summary**

Name of the Bidding Firm	
Name of Partner(s) & Nationality	
Name of the Authorized Signatory	[user]
Nationality	
Passport No.	
E Mail ID	
Telephone No.	
Fax No.	
Year of Incorporation	
Registration No.	
Service tax no.	
Registered Office & Address	

Branch offices in (with address and Contact details) if any	
Average Annual turnover in the <i>last five</i> financial years	
Total Staff Strength with Nationality of Employees	
Total Technical staff percentage	
Nationality of Staff working in Company and to be deputed for work	

DETAILS ABOUT KEY PERSONNEL OF THE BIDDING COMPANY

(With ID proof/supporting documents)

- 1.
- 2.
- 3.
- 4.
- 5.

Bidder information

(More detailed information on the following aspect may be given in typed form)

Business background

How many years has your firm been in business? How many years under its present business name?

Ans:

Attach a current organizational chart and include the total number of employees in your firm in AAA, by various locations.

Claims and Suits (Explain any "Yes" answers)

Has your firm, its subsidiaries or its parent companies, ever filed for bankruptcy?

Has your firm ever failed to complete work awarded to it?

Are there any judgments, claims, arbitration proceedings or suits pending or outstanding against your firm or its officers?

Has your firm filed any lawsuits or requested arbitration with regard to any contract(s) within the last five years?

Financial Information :

How long has your company been providing the services outlined in this Tender? Please list contact names and phone number for three (3) companies with which you have entered into facilities/property management contracts, and include a brief description of the scope covered under each.

Please list your top five (5) customers and indicate what % of your business they represent.

Who are your bankers?

**TECHNICAL SPECIFICATIONS OF REQUIRED ITEMS TO BE SUBMITTED WITH THE TECHNICAL
BID**

Annexure A

List of Brands for all cameras:

Sl No.	Brand Name
1.	Axis Communication
2.	Mobotix
3.	Arecont Vision
4.	Wavesys Global
5.	Wiska

4 MP Fixed Bullet Camera with viewing distance upto 40 meters

S No	Parameter	Specification	Compliance and Specification
1.	Image Sensor	1/3" Progressive CMOS or better	
2.	Day/Night Operation	Automatic switch	
3.	Minimum Illumination	Colour : 0.2 lux BW: 0.05 lux or better	
4.	Image Resolution	4 Mega Pixel or better	
5.	Video Compression	H.264 / H.265	
6.	Frame Rate	25 fps or better	
7.	Stream	Dual or Above	
8.	Motion Detection	Built in or IP integrated	
9.	Wide Dynamic Range	120 dB or better	
10.	IR	20 Mts or better	
11.	Interface	RJ45 10BSE-T/100BASE-TX PoE	
12.	Protocols	IPv4, IPv6, HTTP, HTTPS, SSL/TLS, DHCPv4/v6 and additional	
13.	Security	User Authentication, IP Filtering and user access log	
14.	Event Trigger	Motion detection and tamper detection	
15.	Operating Temperature	Should work in all seasons of Khulna, Bangladesh	
16.	Operating humidity	As per expected humidity of Khulna, Bangladesh	
17.	Onvif	Should be compliant	
18.	NDDA Complaint	The proposed camera should be NDAA Compliant	
19.	Warranty	5 Years OEM warranty or better	
20.	Make & Model	Brands as per Annexure-A	

4 MP Dome Camera with viewing distance up to 40 meters

S No	Parameter	Specification	Compliance and Specification
1.	Image Sensor	1/3” Progressive CMOS or better	
2.	Day/Night Operation	Automatic switch	
3.	Minimum Illumination	Colour : 0.2 lux B/W: 0.04 lux or better	
4.	IR Illumination	18 Meter range or better	
5	Image Resolution	4 Mega Pixel or better	
6.	Video Compression	H.264 / H.265	
7.	Frame Rate Bit Rate	30 FPS or better	
8.	Stream	Dual or Above	
9.	Motion Detection	Built in or IP integrated	
10.	Wide Dynamic Range	120 dB or better	
11.	Interface	RJ45 10BASE-T/100BASE-TX PoE	
12.	Protocols	IPv4, IPv6, HTTP, HTTPS, SSL/TLS, DHCPv4/v6 and additional	
13.	Security	User Authentication, IP Filtering and user access log	
14.	Event Trigger	Motion detection and tamper detection	
15	Operating Temperature	Should work in all seasons of Khulna, Bangladesh	
16	Operating humidity	As per expected humidity of Khulna, Bangladesh	
17	Onvif	Should be compliant	
18	NDDA Complaint	The proposed camera should be NDAA Compliant	
19	Warranty	5 Years OEM warranty or better	
20	Make & Model	Brands as per Annexure-A	

PTZ Camera

S No	Parameter	Specification	Compliance and Specification
1.	Image Sensor	1 /2.8” Progressive CMOS or better	
2.	Day/Night Operation	Automatic with IR Cut Filter	
3.	Minimum Illumination	Colour : 0.07 lux B/W: 0.01 lux or better	
4.	Optical Zoom	30 Minimum & 12x Digital Zoom, or better	
5	Lens	5-120 mm or better	
6.	Image Resolution	1920 x 1080 or better	
7.	Video Compression	H.264 / H.265	
8.	Frame Rate Bit Rate	Full HD 1080p fps 30 Fps or better	
9.	Motion Detection	Built in or IP integrated	
10.	Electronic Shutter	1/10000 s to 1s or better	
11	Wide Dynamic Range	120 dB or better	
12	Image Freeze on PTZ	Required	
13.	Event Trigger	Motion detection and tamper detection	
14	Preset Positions	100 or better	
15	Protocols	IPv4, IPv6, HTTP, HTTPS, SSL/TLS, DHCPv4/v6 and additional	
16	Security	User Authentication, IP Filtering and user access log	
17	Logs	The camera shall provide logs of latest connections, access attempts, users connected changes in the cameras etc.	
18	Interface	RJ45 100BSE-T/100 BASE-TX	
19	Enclosure	IP66-and NEMA 4X-rate	
20	Operating Temperature	Should work in all seasons of Khulna, Bangladesh	
21	Operating humidity	As per expected humidity of Khulna, Bangladesh	
22	NDDA Complaint	The proposed camera should be NDAA Compliant	
23	Onvif	Compliant	
19	Warranty	5 Years OEM warranty	
20	Make & Model	Brands as per Annexure-A	

Omni Directional Camera

S No	Description	Specification	Compliance
1	Cameras	02 or more	
2.	Image Sensor	Each camera should have 1/2.8” Progressive scan CMOS or better	
3.	Day/Night Operation	Yes with Built in Automatic IR Cut Filter	
4.	Minimum Illumination	Colour : 0.02 Lux	
5	Lens	3-6 mm	
6	Field of View	Collectively 360 ⁰	
7	Image Resolution	No of cameras x 1920x1080 (1080p)	
8	Compression	H.264 / High, Baseline and Main Profiles, MJPEG H.265	
9	Frame Rate Bit Rate	Up to 25/30 fps	
10	Stream	Dual or above	
11	Motion Detection	Yes built in with multiple configurable areas in the video stream.	
12	Event Trigger	Motion detection and tamper detection	
13	Protocols	IPv4, IPv6, HTTP, HTTPS, SSL/TLS, DHCPv4/v6 and additional	
14	Security	User Authentication, IP Filtering and user access log	
15	Interface	RJ45, 100 Base-TX	
16	IR illumination	Four individually controllable IR with power-efficient, Range or reach 20m	
17	Enclosure	IP66-, IP 67 and NEMA 4X-	
18	Operating Temperature	Should work in all seasons of Khulna, Bangladesh	
19	Operating humidity	As per expected humidity of Khulna, Bangladesh	
20	NDDA Complaint	Should be NDAA Compliant	
21	Onvif	Compliant	
22	Warranty	5 Years OEM warranty	
23	Make & Model	Brands as per Annexure - A	

SFP POE Switch

S No	Description	Specification			Compliance and Specification
1	PoE Port	8*10/100/1000 port support IEEE802.3 af/at	16*10/100/1000 port support IEEE802.3 af/at	24*10/100/1000 port support IEEE802.3 af/at	
2	Switch capacity	5 Gbps or better	7 Gbps or better	8 Gbps or better	
3	Transmission distance	100-150 m			
4	Protocol	IEEE802.3 af/IEEE802.3 at			
5	PoE Type	End-span			
6.	Network standard	IEEE 802.3, IEEE02.3u, 802.3x, 802.3af/at			
7.	Network medium	10/100/1000 Mbps 5 class and above non shielded twisted pair.			
8.	SFP Port	Yes			
9	Forwarding Rate	100 Mbps: 14880pps/1000Mbps:1480pps			
10	MAC address	MAC Address table 8 K			
11	Port function	Power priority mechanism, fast and forward, MAC IEEE802.3X Full-duplex and mode and back-pressure for half-duplex mode.			
12.	Indicators	Each port occupied 1 Link/Act 100 Mbps POE status Indicator, Whole power indicator.			
13.	Working Temperature	Should work in all seasons of Khulna, Bangladesh			

Server for minimum 45 days back up

S No	Description	Specification	Compliance and Specification
For 16 Cameras			
1	CPU	64-bit high performance, minimum one processor of 8 core or higher intel/AMD CPU operating at 2.1 GHz or more with a minimum of 11 MB L3 cache or higher	
2	Memory	32 GB DDR RAM Up-gradable to 512 GB	
3	Hard Drive	SAS 10k rpm or higher hot swappable Hard disk in raid 5 or 6 configuration having usable space of 45TB or more	
4	Recording server	Rack Mountable	
5	Fans	Normal with Redundant FANS.	
6	Network Adapter (NIC)	Dual 10/100/1000 MBPS ports.	
7	Keyboard	USB Keyboard	
8	Mouse	Optical Mouse with scroll	
9	Operating system	Licensed MS Windows Server or Linux (Latest version)	
10	Anti-virus Software	Compatible with Windows/Linux with offline update provision.	

VMS

S No	Specification	Compliance
1	The software should have inbuilt facility to store configuration of cameras.	
2	The software shall support flexible 1/4/9/16/25 user defined windows split screen display mode or scroll mode on the PC/Workstation monitor or on preview monitor as per site requirement.	
3	The software shall be able to control all cameras features such as PTZ control, auto/manual focus, and color balance of camera, Selection of presets, Video tour selection etc.	
4	The software is required to generate reports of stored device configuration. The control software is required to provide alarm and alarm log. The log shall be able to be archived, printed and displayed using a device filter, a device group filter and or a time window.	
5	The software shall have user access authority configurable on per device or per device group basis. The authorized user shall have the facility to request the access of any camera and can control the camera for a reservation period. Control or camera is released after the reservation period.	
6	The system software shall provide User activity log (audit trail) with use id, time stamp, and action performed, etc.	
7	The administrator shall be able to add, edit & delete users with rights. It shall be possible to view ability/rights of each user or the cameras which can be viewed & controlled as per the permission assigned by the administrator.	
8	The system software should provide Analytic features such as Intrusion, Motion detection and Security device Alarm etc as per site requirement.	
9	The system software shall have recording modes viz. continuous, manual, or programmed modes on date, time and camera-wise. All modes shall be disabled and enabled using scheduled configuration. It shall also be possible to search and replay the recorded images on date, time. And camera wise. It shall provide onscreen controls for remote operation of PTZ cameras.	
10	It shall have the facility for scheduled recording. Different recording speeds (fps) and resolution for each recording mode for each camera shall be possible.	
11	It shall provide programmable motion detection and recording, to be defined, area-wise.	
12	The setting shall be individually configurable for each alarms and each camera, pre-record duration. This shall allow the Camera Server to capture video prior to the alarm/event, as well as after the alarm/ event. Shall be selectable from a list of values ranging between 0 seconds and 5 minutes.	
13	Data storage should be at a secure location, with strictly controlled access. The capacity of storage should be for the period of continuous 45 days or more. For every 30 disks one spare disk needs to be configured over and above required capacity. The storage system should follow FIFO on recording.	
14	The software shall support a built-in Hardware of Software watchdog module. Watchdog shall monitor operation of all services and automatically restart them if they are malfunctioning.	
15	The software should be able to receive alarm signal of the camera and should be able to send relay out signal through the camera.	
16	The software should provide a reporting utility for tracking but not limited to the following	

	options. Video and images shall be stored with reports for documenting events.	
Alarms, Incidents, Operator logs, Service requests		
17	It shall be possible to get reports on past events by querying the audit databases. It shall allow the search by User Log-on, entity configuration, Incident, Alarm, Application Failure, and Equipment failure.	
18	It shall allow passage of specific alarms to specified users rather than sending all alarms to every user.	
User Facilities covered In Application Software		
19	The client shall perform the following applications simultaneously without interfering with any of the Archive Server operations (Recording, Alarms, etc.) : a. Live display of cameras b. Control PTZ cameras c. Playback of archived video d. Retrieval of archived video e. Instant replay of Live video f. Configuration of system settings	
20	The user applications shall provide an authentication mechanism, which verifies the validity of the user	
21	The user shall be able to define bookmarks, the amount of time he wishes to go back from a predefined list or through a custom setup period	
22	The user shall be allowed to add bookmarks to recorded clips of video	
23	The user shall be able to choose and trigger an action from a list of available actions included but are not limited to: I. view camera in a video tile II. View Map or procedure in video tile III. starting/ stopping PTZ pattern IV. Go to PTZ preset V. Sending alert messages	
24	The user shall be capable to display all camera sequences created in the system	

25	The user shall be allowed for unlimited cameras sequences, which can be run independently of each other on either of the monitor tiles.	
26	The user shall be able to drag and drop a camera from a tree of available cameras into any video tile for live viewing	
27	Support digital zoom on a fixed/PTZ camera's live and recorded video streams.	
28	The user shall be allowed to access the PTZ configuration with no need of additional hardware	

Work Station

1.	Technical Specifications	Compliance
2.	Core i9 Processor 3.0 GHz or better	
3.	Memory: 32 GB DDR RAM or better	
4.	Form factor: Tower	
5.	Hard Drives: 450 GB SSD and 2 TB SATA or better	
6.	Graphic Card: 2x4 GB graphics card with HDMI Port	
7.	Network Adapter (NIC): Dual Integrated 10/100/1000 Mbps ports.	
8.	Keyboard: USB keyboard	
9.	Mouse: Optical Mouse with scroll	
10.	Operating System: Licensed M S Windows/Linux	
11.	Anti -Virus Software Compliance with Windows/Linux with offline update provision	

CCTV Passive items

Sl. No.	Networking, Cabling , ETC	Compliance
1	CABLES	
a	General Features	
i	All cables used for the project shall be supplied as under: a) ISO certified reputed cable manufacturer b) Ensure high bandwidth, low attenuation and low losses in signal quality	
ii	Backbone Network up to Switches (L3 Switches to L2 Swiches): OFC	
iii	From Switches to each node (L2 Swicth to servers, Workstation, cameras, displays etc.) : UTP Cat 6	
iv	Laying of cable inside the building shall be in conduit and for outdoor a. Through HDPE pipe in sift soil. b. In concrete/read cutting area, it shall be laid in GI pipe	
v	Cable and spools shall be of flame retardant type	
b	Optical fiber cable	
i	Optic Fibre 6 Core, SMF, 9/125 micron, 1000 Mbps	
ii	Core Diameter @1310 nm: 9+ or-0.6 micro meter Cladding Diameter : 125+ or – micro meter	
iii	Max. Attenuation (Cables with Fibres) At 1310 nm: 0.36 dB/km at 1550 nm: 0.25 dB/km	
iv	Secondary Buffer Material : Gel Filled Loose Tube	
v	Min. bend Radius: 20x Outer Diameter	
vi	Fibre Core: Should be Silica glass equivalent	
c	CAT 6 UTP Cable	
	Suitable or high speed data applications, Gigabit Ethernet	
	4 Pairs, easily identifiable color striped outlet	
	Termination of 4 pair balanced twisted pair copper cable	
	Shall be wired straight through	
	Rear protective strain relief cap	
2	PATCH CORDS	
a	Push & Pull design with latch	
b	Shall be wired straight through	
c	Bend relief compliant boots to ensure proper CAT6 performance	
3	OFC PATCH CORDS	
	Suitable for single mode SC type fiber cable connectors with plastic moulded plug type connectors. Standard ceramic ferrules	
4	OFC CONNECTORS	
	Single mode SC/LC type with push-pull mechanism, fully in compliance, with latest industry standards.	
5	OFC ADAPTORS	
	Suitable for Single mode SC/LC type fiber with push-pull mechanism,	

	fully in compliance, with latest industry standards. It shall be with snap/latch mechanism.	
6	Light Guide Interconnect Unit (LIU)	
	Rack Mount Type LIU fully populated with required modules, connectors, etc. shall be supplied and installed as required.	
7	9U WALL MOUNT RACK	
a	Portable 9U WALL Mount Rack having front Transparent Toughened glass door. The Rear door material shall be CRCA Steel.	
b	It should consist of secure locks, keyboard tray sliding and rotary , shelf for CRT/TFT Display, support cable entry from top or bottom, vertical & horizontal managers, fan for heat dissipation, dust or water resistant and PDU power strips.	
c	Minimum 60 Kgs Load Bearing capacity	
8	OUTDOOR JUNCTION BOX	
a	Protection Class: IP-55	
b	Size: Junction Box must be appropriate size to house different components as per CCTV system design conforming to tender specifications	
c	Power & earthing: The Junction Box shall be provided with external earthing lugs 5 socket Power termination with MCB or More	
9	Poles	
a	GI Poles	
b	Erection: proper sturdy fixing, including civil/groundwork	