

**OFFICE OF THE DIVISIONAL MANAGER CTU & DIRECTOR TRANSPORT, U.T,
CHANDIGARH.**

(PLOT NO.701 INDUSTRIAL AREA PHASE –I, Chandigarh.)

No. CCI/CTU/2018/7082

Dated: 23.07.18

E—TENDER NOTICE

E-tenders are invited in two bid system i.e. **Technical bid and Financial bid which are to be submitted online separately** from the Original Equipment Manufacturer (OEM) of approved makes of CCTV Cameras OR an Authorized Distributor/Dealer of approved makes for Supply, Installation, Testing & Commissioning of IP HD Fixed Day/Night IR Camera including Comprehensive Maintenance contract (CMC) for five years as per Technical Specifications/BOQ specified in the terms and conditions to the tender documents/RFP for ISBT's and Depots. **The detail of sites/locations shall be provided by CTU**). The detailed terms and conditions of the e-tender/DNIT can be downloaded from the website of Chandigarh Administration i.e. chdctu.gov.in or <http://etenders.chd.nic.in/>. The prospective bidders can also visit in the office of CTU during office hours on any working day by contacting General Manager, CTU-I (Mobile No. 07015765795), Asstt. Controller (F&A) (Mobile No. 9815552432), CTU-II/Store Purchase Assistant (Mobile No. 09417524603), CTU Administrative Block, Plot No. 701, Industrial Area, Phase I, Chandigarh or at mail ID ctu-chd@nic.in for any kind of information/ clarification with regard to the items.

The important date for submission of e-tender is as under:-

1. Last Date and Time for receipt of physical EMD
Submission & uploading of bid
on <http://etenders.chd.nic.in> : **20-08-2018 upto 2.00 P.M.**
2. Date and time of opening of Technical
Bid at CTU office : **20-08-2018 at 3.00 P.M.**
3. Earnest Money Deposit (EMD) : Rs.1,00,000/- (Rs.One Lakh only)
4. Date of Pre-Bid meeting : **06-08-2018 at 11.00 a.m.** in the office room of General Manager-I, CTU Plot No. 701, Industrial Area, Phase I, Chandigarh.

The undersigned reserves every right to (a) cancel/withdraw/amend the advertisement or extend the due date at his sole discretion or (b) accept or reject any tender without assigning any reason.

-sd/-

Divisional Manager CTU &
Director Transport,
U.T., Chandigarh.



**CHANDIGARH TRANSPORT UNDERTAKING
CHANDIGARH (UT)**

E-TENDER FOR SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF IP HD FIXED DAY/NIGHT IR CAMERA INCLUDING COMPREHENSIVE MAINTENANCE CONTRACT (CMC) FOR FIVE YEARS FOR CTU DEPOTS/ISBTS, CHANDIGARH.

23rd July, 2018

**Chandigarh Transport Undertaking,
Plot No. 701, Industrial Area Phase-1,
Chandigarh
Tel No: 0172-2679002
E-mail: ctu-chd@nic.in**

CHANDIGARH TRANSPORT UNDERTAKING
O/o Director Transport cum Divisional Manager, UT, Chandigarh, Plot No. 701,
Industrial Area Phase-1, Chandigarh

Tel No: 0172-2679002

E-mail: ctu-chd@nic.in

E-TENDER FOR SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF IP HD FIXED DAY/NIGHT IR CAMERA INCLUDING COMPREHENSIVE MAINTENANCE CONTRACT (CMC) FOR FIVE YEARS FOR CTU DEPOTS/ISBTS, CHANDIGARH.

E-PROCUREMENT SYSTEM

Time Schedule for the bids:

Bid Reference	:	CCI/CTU/2018/7082, Dated:23-07-2018
Date of commencement of downloading of bid document	:	<u>26-06-2018 at 11:00 am</u> onwards
Last date for seeking clarification if any.	:	<u>06-08-2018 up to 04:00 pm</u>
Pre-bid meeting	:	<u>06-08-2018 at 11:30 am</u>
Last date and time for bid submission/uploading of bid in e-procurement platform http://etenders.chd.nic.in	:	<u>20-08-2018 up to 2:00 pm</u>
Date and time of opening of technical bids (TECHNICAL BID)	:	The bids will be opened online by the Authorized Officers on <u>20-08-2018 Hrs 3:00 pm</u>
Date and time of opening of Financial Bids	:	Will be intimated to technically responsive bidders
Place of opening of bids and address for communication	:	Chandigarh Transport Undertaking O/o Director Transport cum Divisional Manager, Plot No. 701, Industrial Area Phase-1, Chandigarh

Note:

- (1) In the event of the specified date of opening of bids being declared a holiday, the bids shall be opened on the next working day at the same time and venue.
- (2) Completed bids shall be uploaded on the e-procurement platform by the Bidders using digital signatures and EMD, Tender fee be sent (by post or by hand) addressed to the **Director Transport cum Divisional Manager, Chandigarh Transport undertaking** in the manner described on or before the stipulated date & time on web portal <http://etenders.chd.nic.in>.

DISCLAIMER

This RFP is being issued by the Director Transport, U.T- cum - Divisional Manager, CTU, Chandigarh for inviting e-tenders for **“E-TENDER FOR SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF IP HD FIXED DAY/NIGHT IR CAMERA INCLUDING COMPREHENSIVE MAINTENANCE CONTRACT (CMC) FOR FIVE YEARS FOR CTU PREMISES/ISBTS, CHANDIGARH.”** (herein after called “CCTV Cameras”) on such terms and conditions and technical specifications as set out in this RFP document.

It is hereby clarified that this RFP is not an agreement and is not an offer or invitation by Chandigarh Transport undertaking to any party hereunder. The purpose of this RFP is to provide the bidder(s) with information to assist in the formulation of their proposal submission. This RFP document does not purport to contain all the information bidder may require. This RFP document may not be appropriate for all the persons, and it is not possible for Chandigarh Transport Undertaking to consider particular needs of each bidder. Each bidder should conduct its own investigation and analysis, and should check the accuracy, reliability and completeness of the information in this RFP document and obtain independent advice from appropriate sources. Chandigarh Transport Undertaking and their advisors make no representation or warranty and shall incur no liability financial or otherwise under any law, statute, rules or regulations or otherwise as to the accuracy, reliability or completeness of the RFP document.

Chandigarh Transport Undertaking may in their absolute discretion, but without being under any obligation to do so, update, amend or supplement information in this RFP document, as required from time to time.

1. **Scope of work:-**

The scope of work to be undertaken by the successful bidder as mentioned in the RFP/tender document and in compliance with the technical specification and Bill of Quantity. The scope of work includes supplying, installation, testing, commissioning of CCTV cameras, Network Video Recorders, switches, POE cable, power cable, poles for mounting CCTV cameras, Racks, Mounting brackets, PVC conduit/G.I. piping for laying cables etc. or any work associated thereto. The works includes design and execute an IP network based surveillance system and provide turn-key solution for the entire project. IP Dome and Bullet Cameras are required to be installed at various locations as per the requirement of Chandigarh Transport Undertaking (CTU) at ISBT-17, ISBT-43 or Depot's of CTU and to make system functional complete in all respect. Digging/Boring, filling of earth, Chipping of walls and ensuring to make the site to its original condition shall be the responsibility of the successful bidder including supply and installation of poles, housing & any additional fixtures. The work should be state of art and to be done in neat and clean manner. The successful bidder shall be responsible for restoring the area to its original shape wherever, the digging has been undertaken by him for end to end implementation of the system. The work includes complete equipments and required accessories along with necessary power systems including standard Uninterrupted Power Supply for the entire equipments, video connectors, patch connectors, patch cord, mounting and fitting hardware, plugs, sockets and any hardware/software, etc. as required for complete installation of the System. Electrical cabling upto the equipment at each location shall be the responsibility of the successful bidder. All Electrical cabling shall be done through HDPE/PVC conduit pipe/GI pipe and upto equipment at each location shall be in scope of successful bidder as per site requirement. The configuring of equipments is also in the scope of successful bidder. However, power supply to the UPS including cabling, space for installation of equipments shall be provided by CTU. **The minimum suggestive technical specifications and Bill of Material is given as per Annexure 'A1'.**

2 **QUALIFICATION CRITERIA**

2.1 **TECHNICAL QUALIFICATION CRITERIA:-**

- i) The prospective bidder must be either OEM itself OR Authorized Distributor/Dealer of approved makes of CCTV & NVR as mentioned in annexure-'A1'. The documentary proof duly notarized must be attached along with technical bid.
- ii) Experience of similar nature of 2 (two) project in last three years as on 31.03.2018 consisting at least 50 IP CCTV Cameras for each project in Government sector or Private sector (Fixed/Dome/PTZ etc.). Satisfactory performance/completion certificate and purchase orders (duly notarized or self attested) must be attached along with the technical bid.
- iii) The prospective bidder must have Registered service tax number/GST should be attached with the technical bid.

2.2 **FINANCIAL QUALIFICATION CRITERIA:**

The bidder should have average annual turnover of Rs. 50.00 Lakh (each year) (Rupees Fifty Lakh only) during the last three preceding years ending on 31.03.2016, 31.3.2017 and 31.3.2018 duly attested/audited by Chartered Accountant (CA). The bidder has to submit its documentary proof for the same.

3 **Documents comprising Bid:-**

1. Complete documents in support of Technical qualification criteria as defined above consisting completion Certificate, performance certificate, detailed work order etc in respect of completed projects and OEM or authorized dealer/distributor certificate.

- original should be deposited in physical form in the office of the Director Transport, UT, Chandigarh on or before the closing date of the bid.
5. Scanned copy of the affidavit (as per specimen given in the tender documents) must be attached with the technical bid online and the original should be deposited in physical form in the office of the Director Transport, UT, Chandigarh on or before the closing date of the bid.

Note:-Bidder shall furnish copies of all necessary documents duly certified/ attested by notary public with legible stamp. In absence of requisite documents, The Director Transport, Chandigarh Transport Undertaking, Chandigarh reserves the right to reject the bid without making any reference to bidders.

4 EARNEST MONEY DEPOSIT (EMD)/BID SECURITY.

- 4.1 The prospective bidders shall submit Earnest Money Deposit (EMD) amounting to **Rs.1,00,000/- (Rupees: One lakh only)** in the shape of Bank Draft/FDR/Bank Guarantee in physical form of any scheduled Bank in favour of Divisional Manager CTU & Director Transport UT Chandigarh, Plot No. 701, Industrial Area Phase-I, Chandigarh, payable at Chandigarh and scanned copy of the same must be submitted along with the technical bid online.
- 4.2 The EMD of the unsuccessful bidder will be returned immediately after the allotment of the said contract and the EMD of the successful bidder will be returned after depositing the performance security and signing of agreement as per tender documents.
- 4.3 The e-tender must be accompanied with Earnest Money Deposit (EMD) for the amount as mentioned and drawn in the name of the Divisional Manager CTU & Director Transport, U.T., Chandigarh, Plot No. 701, Industrial Area, Phase I, Chandigarh, payable at Chandigarh which should be valid for 180 days beyond the opening of technical bid.
- 4.4 In case of successful bidders backs out, his/her earnest money/security shall be forfeited along with interest thereupon and the bidder will be black listed for any future contract as per Chandigarh Administration Finance Department Notification No. 1927-F&PO(3)-2009/1170, dated 27.02.2009.
- 4.5 No bidder is exempted from furnishing the Earnest Money Deposit (EMD) and tender fee under any circumstances.

5 SUBMISSION OF BIDS

- 5.1 Bidders shall have to submit technical and financial bid Online only and EMD and bid processing fee is to be deposited physically before due date and time of the e-tender.
- 5.2 Technical bid shall consist of the documents as mentioned in clause no 3 above and any other documents as well as the technical and commercial information required in accordance with the tender document.
- 5.3 Financial Bid shall contain the price bid only.

6 Financial BID:-

- i) The bidder (s) should submit their price bid/commercial bid online only as per the BOQ to the tender documents available on the e-tender website for complete job (Supply,

iii) The Price Bid will only be opened of those bidders who technically qualify in the evaluation of their technical bids. For opening Price Bid, time and date will be intimated separately.

7 EVALUATION AND COMPARISON OF BIDS

The Department will evaluate and compare only those bids which are determined to be responsive to the requirements of this bid Document.

8 AWARD OF CONTRACT: AWARD CRITERIA

The Contract will be awarded to the bidder in whose Total Bid Price will be lowest as per financial bid/BOQ (excluding all taxes/GST), provided bidder fulfills all other terms and conditions of the tender documents.

9 TIME PERIOD FOR THE COMPLETION OF WORK:

The work for the supply, installation, testing and commissioning (complete job) should be completed within one month from the date of the Letter of Award (LOA)/work order.

10 DEPARTMENT RIGHT TO ACCEPT ANY BID AND TO REJECT ANY OR ALL BIDS

The Department reserves the right to accept or reject any Bid, and to annul the Bid Process and reject all Bids without assigning any reason.

11 PERFORMANCE SECURITY-

- 11.1 The successful bidder will have to deposit performance security @10% of the total cost of the Project in the form of Fixed Deposited Receipt (FDR) or a Bank Guarantee from a commercial bank in favour of "The Divisional Manager, CTU & Director Transport U.T., Chandigarh" payable at Chandigarh, which should be valid for a period of 66 months from the date of supply order/Letter of Award (LOA) and shall have to be deposited and signing the agreement on the non judicial stamp paper of Rs.100/- within 15 days from the date of issue of the Letter of Award/Supply Order.
- 11.2 In case of delay in performance security up to 30 days from prescribed time limit, penalty as per penalty clauses shall be imposed. In case of further delay CTU will be at liberty to forfeit EMD so deposited.
- 11.3 In case of violation of any of terms and conditions as mentioned in the tender documents, the performance security of the bidder(s) shall be forfeited in full along with interest thereupon and the bidder will also be black listed for any future contract as per Chandigarh Administration Finance Department Notification No. 1927-F&PO(3)-2009/1170, dated 27.02.2009 by the Director Transport, U.T., Plot No. 701, Industrial Area, Phase 1, Chandigarh.

100% TOTAL BID/UNIT PRICE INCLUDING CMC cost.

- (i) After satisfactory installation of complete Equipment & accessories as mentioned in schedule of quantities : **70% of CAPEX cost.**
- (ii) After successful functioning of the project in : **30% of CAPEX cost** the CTU premises and report of the General Manager/Incharge of the depot/unit concern/ Satisfactory report of the inspection committee.
- (iii) The comprehensive maintenance cost (OPEX) shall be paid 06% of total bid price for every year. For getting the Opex/maintenance/CMC payment, the successful bidder shall submit the bills on 7th day of every next year. On receipt of the bill the Department shall release payment to the successful bidder subject to recoveries, if any, within 30 days.

13. COMPREHENSIVE MAINTENANCE CONTRACT

- (i) The successful bidder is liable to maintain the complete system in functioning condition at all time i.e. 24 hrs x 7 days round the clock till completion of CMC period i.e. 5 years from date of functioning of complete system. The comprehensive maintenance contract includes repair and replacement of all parts required to make system functional round the clock. The successful bidder shall attend call of the department for any type of repair/defect/malfunctioning during CMC period immediately without any charges, whatsoever in this regard.
- (ii) The successful bidder shall replace with stand-by spare parts of equal technical specification till rectification of major/minor repair to make the system functional round the clock i.e. 24 hours x 7 days. In case of failure (minor repair) successful bidder shall be given 24 hrs to rectify the same from date and time of complaint, if not rectified within 24 hours, a penalty as per penalty clauses (beyond 24 hrs from the time of complaint up to 3 days) shall be imposed. In case of replacement of parts requires (major repair), time limit is seven days beyond 24 hours from the time of complaint, otherwise the penalty as per penalty clauses shall be imposed.
- (iii) The successful bidder shall be liable for any loss/damage claimed by third party in case non-functioning/unavailability of footage of CCTV for the region where CCTV's are installed.

14. PENALTY CLAUSES:

14.1 Penalty shall be imposed as follows:-

S.No.	Description	Penalty /Other Actions
1.	Delay in submission of performance security up to 30 days.	Rs. 2,000/- per day
2.	In case of delay in Supply, Install, Testing, Commissioning of complete system.	Rs. 500/- per day
3.	In case of delay in repair of cameras and its allied components for minor repair	Rs. 500/- per day per incident
4.	In case of delay in repair of cameras and its allied components for major repair (i.e. if requires replacement of spare part)	Rs.1000/- per day per incident

15. VALIDITY OF TENDER.

The offer of tender will be valid for a period of 180 days from the date of opening of technical bid. Withdrawal of offer of finalized firm during this period shall result into forfeiture of earnest money.

16. SECRECY

16.1 Any information obtained in the course of the execution of the contract by the Bidder/Bidder, his servants or agents or any person so employed, as to any matter whatsoever, which would or might be directly or indirectly, of use to any enemy of India, must be treated secret and shall not at any time be communicated to any person.

16.2 Any breach of the aforesaid conditions shall entitle the Department to cancel the contract and to hiring or authorize the hiring of the buses at the risk and cost of the Bidder/Bidder, as applicable.

17. INSPECTION OF INSTALLATION OF COMPLETE SYSTEM

17.1 Department or representative(s) authorized by the Department shall carry out inspection of CCTV Cameras after installation and commissioning.

17.2 For any Deficiency noted by the Department, the successful bidder shall initiate immediate remedial actions for the same as advised by the Department.

18. REMOVAL OF REJECTED CCTV CAMERAS

On rejection of CCTV Cameras, during the inspection or assessment of performance during testing and commissioning the camera (s) shall be removed and replaced by the Bidder/Bidder at his own cost within a week from the date of intimation of such rejection.

19. SETTLEMENT OF DISPUTE AND ARBITRATION-

19.1 Amicable resolution

(a) Save where expressly stated otherwise in this Contract, any dispute, difference or controversy of whatever nature howsoever arising under, out of or in relation to this Contract between the Parties and so notified in writing by either Party to the other (the "Dispute") in the first instance shall be attempted to be resolved amicably by the Parties and failing such the same shall be resolved in accordance with the procedure set forth in **sub-clause (b)** below.

(b) Either Party may require the Dispute to be referred to Transport Secretary, Union Territory, Chandigarh for amicable settlement. Upon such reference, both the Parties and the Transport Secretary or his nominee (who can be an employee of Chandigarh UT dealing with the Contract or otherwise) shall meet at the earliest mutual convenient and in any event within 15 (fifteen) days of such reference to discuss and attempt to amicably resolve the Dispute. If the Dispute is not amicably resolved within 15 (fifteen) days of such meeting, either Party may refer the Dispute to arbitration in accordance with the provisions given below.

(b) **Place of Arbitration.**

The place of arbitration shall be Chandigarh only.

(c) **Language**

The request for arbitration, the answer to the request, the terms of reference, any written submissions, any orders and rulings shall be in English and, if oral hearings take place, English shall be the language to be used in the hearings.

(d) **Enforcement of Award**

Any decision or award resulting from arbitration shall be final and binding upon the Parties. The parties hereto hereby waive, to the extent permitted by Law, any rights to appeal or to review of such award by any Court or Tribunal. The Parties here to agree that the arbitral award may be enforced against the Parties to the arbitration proceedings or their assets wherever they may be found and that a judgment upon the arbitral award may be entered in any Court having jurisdiction thereof.

(e) **Fees and Expenses**

The fees and expenses of the arbitrators and all other expenses of the arbitration shall be initially borne and paid by respective parties equally subject to determination by the arbitrators. The arbitrators may provide in the arbitral award for the reimbursement to the prevailing party of its costs and expenses in bringing or defending the arbitration claim, including legal fees and expenses incurred by the said party.

(f) **Performance during Arbitration**

Pending the submission of and / or decision on a dispute difference or claim or until the arbitral award is published the parties shall continue to perform all of their obligations under this Contract without prejudice to a final adjustment in accordance with such award.

20. **GENERAL TERMS AND CONDITIONS.**

- 20.1 The prices/rates to be quoted by the intending bidder/bidder shall include the supply, laying of cables including digging/boring and installations, at the site, of all equipment, ancillary material and other items whatsoever required for carrying out the job to fulfill the intent and purpose as laid down in the specifications. The bidder price shall be deemed to include all nuts, bolts, shims, clamps, supports, components etc., as required for proper fixing and/or grouting of equipment, ancillary items, etc. as per requirement for the installation, Testing & Commissioning of complete system.
- 20.2 The rates quoted should be F.O.R. destination (excluding taxes/GST). i.e. CTU Depots/ISBTs, Chandigarh or the place specified by the office. The GST/taxes as applicable from time to time.
- 20.3 Materials/items other than mentioned in RFP and with different specifications will not be accepted.
- 20.4 Standard quality material will only be accepted as per specification mentioned in the tender documents.
- 20.5 Materials received with other than desired specifications/Sub standard materials shall be returned at bidder's risk and cost or it may be kept in CTU Depot workshop at bidder's risk and bidder will have to make replacement of these items within fifteen days from the date of inspection by committee failing which, the recovery equivalent to the amount of sub standard materials/other specifications materials will be made from the payment of bills.
- 20.6 All the documents/GRs must be sent direct to this office. The payment will be made through bank draft/RTGS as per the schedule/terms of payment mentioned in the tender.

- 20.9 Earnest money/performance security and/or any other sum of the bidder(s) lying with office of the Divisional Manager, CTU & Director Transport, U.T., Chandigarh, Plot No. 701, Industrial Area, Phase I,, Chandigarh in connection with any other tender/case shall not be considered/ adjusted against this tender.
- 20.10 Any conditional, telegraphic tenders, fax tenders, tender without earnest money deposit, tender not on the prescribed form or any deviation from the terms and conditions of the tender notice shall not be entertained and rejected out rightly.
- 20.11 This tender form is not transferable.
- 20.12 No bidder is exempted from furnishing the Earnest Money Deposit (EMD) under any circumstances, except Micro and small Enterprises (MSEs) as defined in MSE Procurement Policy issued by Department of Micro, small and medium Enterprises (MSME) or registered with the Central Purchase Organization or concerned Ministry or Department. (The documentary proof must attach with the technical bid online)
- 20.13 Any conditional terms and conditions mentioned by the firm in their covering letter or in the tender documents will not be considered at any circumstances.
- 20.14 The quantities of items under may vary according to the network designed by the bidder & site requirements. This will be decided during detail engineering and shall be subject to approval of the Director Transport, CTU, Chandigarh. The payment shall be made on actual basis for these items.
- 20.16 The successful bidder (firms/Companies) is liable to install complete system as defined in BoQ along with its allied equipments (Complete job) within one month from the date of issue of rate award letter. In case, the successful bidder backs out or failed to do the job, the Earnest Money Deposit/security shall be forfeited and the bidder shall be black listed for any future contract as per Chandigarh Administration, Finance Department Notification No. 1927- F&PO(3)-2009/1170, dated 27.2.2009 on the following types of situations:-
- i) Dishonest/fraudulent/sharp practices are indulged in by the party.
 - ii) Advancing a claim on the basis of forged documents.
 - iii) Sale or supply of spurious items and compromising public safety.
 - iv) Material concealment/suppression of facts or gross misrepresentation of facts.
 - iv) Any other case or situation involving national security.
 - v) On breach of any of the terms and conditions of the RFP/Tender.

**TECHNICAL
SPECIFICATIONS
AND
BILL OF QUANTITIES**

2.	Effective pixels	1920 x 1080 pixels(minimum)	
3.	Lens focal length	9-40mm or better	
4.	Lens Type	P iris / DC Auto Iris	
5.	Min. Illumination	Color: 0.25 lux or better, B/W: 0.05 lux or better	
6.	Video Compression	H.264, MPEG/MJPEG.	
7.	Frame Rate	1080P(1920x1080), @25/30fps	
8.	Image Setting	AGC, AWB, WDR	
9.	Users	Minimum 4 simultaneous unicast users	
10.	Supported Interface	ONVIF Profile S	
11.	Power Supply	12V DC or 24V AC, PoE (IEEE 802.3af)	
12.	Memory slot	Edge Storage 32GB minimum	
13.	Operating Temperature	-10°C to 50°C	
14.	Housing	Outdoor : IP66 Vandal proof IK10	
15.	Certificate	CE, FCC, UL	
16.	Make	Vendor to specify	
17.	Model	Vendor to specify	
18.	Data sheet	To be submitted	

2.	Effective Pixels	1920 x 1080 pixels(minimum)	
3.	Lens focal length	3 to 9 mm or better	
4.	Lens Type	P iris / DC Auto Iris	
5.	Min. Illumination	Colour: 0.25 lux or better, B/W: 0.05 lux or better	
6.	Video Compression	H.264, MPEG/MJPEG.	
7.	Frame Rate	1080P(1920x1080), @25/30fps	
8.	Image Setting	AGC, AWB, WDR	
9.	Users	Minimum 4 simultaneous unicast users	
10.	Supported Interface	ONVIF Profile S	
11.	Power Supply	12V DC or 24V AC, PoE (IEEE 802.3af)	
12.	Memory slot	Edge Storage 32GB minimum	
13.	Housing	IP 66 standard & vandal proof, IK10	
14.	Operating Temperature	-10°C to 50°C	
15.	Certificate	CE, FCC, UL	
16.	Make	Vendor to specify	
17.	Model	Vendor to specify	
18.	Data sheet	To be submitted	

2.	Effective Pixels	1920 x 1080 pixels(minimum)	
3.	Lens focal length	3 to 9mm or better	
4.	Lens Type	P iris / DC Auto Iris	
5.	IR Beam Distance	25 m or better	
6.	Min. Illumination	Color: 0.25 Lux or better; B/W: 0 Lux (IR ON)	
7.	Video Compression	H.264, MPEG/MJPEG	
8.	Frame Rate	1080P(1920x1080), @25/30fps	
9.	Image Setting	AGC, AWB, WDR	
10.	Users	4 simultaneous unicast users	
11.	Supported Interface	ONVIF Profile S	
12.	Power Supply	12V DC or 24V AC, PoE (IEEE 802.3af)	
13.	Memory slot	Edge Storage 32GB minimum	
14.	Operating Temperature	-10°C to 50°C	
15.	Housing	IP66, IK10	
16.	Certificate	CE, FCC, UL	
17.	Make	Vendor to specify	
18.	Model	Vendor to specify	
19.	Data sheet	To be submitted	

2.	Resolution/Effective Pixels	1920 x 1080 pixels(minimum)	
3.	Focus Length	4.3 mm to 129 mm or 6mm to 180mm or any focus length with ratio of 30X	
4.	Zoom	30X Optical or better, 12X Digital or better	
5.	Pan Range / Speed	360° Rotation / 240°per sec.	
6.	Tilt Range / Speed	0°-90°	
7.	White Balance	ATW/Indoor/Outdoor	
8.	Min. Illumination	Color: 0.04 lux or better B/W: 0.001 lux or better IR: 0 Lux	
9.	IR Beam Distance	150 metres using Internal or External Illuminators	
10.	Video Compression	H.264, MPEG/MJPEG.	
11.	Image Setting	BLC, AGC, AWB, 3D Noise reduction, WDR	
12.	On Screen Display	Text, time and date overlay; Editable OSD (bitmap format)	
13.	Users	4 simultaneous unicast users	
14.	Ethernet	RJ-45 (10/100 BASE-T)	
15.	Supported Interface	ONVIF Profile S	
16.	Power Supply	12V DC/ 24V AC/ PoE (IEEE 802.3af)	
17.	Memory slot	Edge Storage 32GB minimum	
18.	Housing	IP66 Weatherproof with Heater and blower & vandal proof	
19.	Operating Temperature	-30°C to 60°C	
20.	Certificate	CE, FCC, UL	
21.	Make	Vendor to specify	
22.	Model	Vendor to specify	
23.	Data sheet	To be submitted	

2.	12 MB Level 3 cache or better	
3.	32GB DDR3 ECC SD RAM	
4.	1TB, 3.5", 7.2Krpm, SATA III x 2	
5.	Embedded Dual/redundant NC326i Multifunction Gigabit NICs (2 Gigabit NICs)	
6.	RAID Controller	
7.	Hot Plug Fully Dual/Redundant Power supply (90V to 264V, 47Hz to 63Hz)	
8.	Licensed Operating system compatible with Video recording, Backup and recovery software latest Windows Server 64 Bit	
9.	RAID Level: RAID 0, 1, 5	
10.	4xPCIe/PCIx expansion slots	
11.	Operating temperature 10° to 40° C or better	
12.	Should meet all features of VMS as specified in System Features point no. 2.3.16 (Special terms & conditions)	
13.	CE, FCC Certification	
14.	Make and Model : Vendor to specify ,Data sheet to be submitted	

6. Client PC with Dual Output SI Scope

Sr. No.	Feature	Specifications	Vendor's Compliance
1.	CPU	Core i7 series processor	
2.	RAM	8 GB DDR3 or better	
3.	Hard Drives	500 GB or better	
4.	Video Card	4 GB card with dual output	
5.	Optical Drive	16X super-multi DVD	
6.	Operating system	Licensed latest Windows® OS 64-bit Professional version	
7.	Make & Model	Vendor to specify	
8.	Data sheet	To be submitted	

2.	Port type	8-port 10/100/1000 TX Copper Port and 2 Nos. Combo SFP Gigabit Ports	
3.	Specifications	Does the switch meet all the specifications put forth in point no. 2.3.17(Special terms & conditions)	
4.	Power supply	240 VAC 50 Hz UPS supply from the Central Control Point	
5.	Operating Temperature	0°C to 40°C or higher	
6.	Make	Vendor to specify	
7.	Model	Vendor to specify	
8.	Data sheet	To be submitted	

8. Layer 2 Network POE Switch with 2 SFP Gigabit ports

Sr. No.	Feature	Specifications	Vendor's Compliance
1.	Switch type	19" Rack Mountable Layer-2 Switch	
2.	Port type	8-port POE 10/100/1000 TX Copper Port and 2 Nos. Combo SFP Gigabit Ports	
3.	Specifications	Does the switch meet all the specifications put forth in point no. 2.3.17(Special terms & conditions)	
4.	Power supply	240 VAC 50 Hz UPS supply from the Central Control Point	
5.	Operating Temperature	0°C to 40°C or higher	
6.	Make	Vendor to specify	
7.	Model	Vendor to specify	
8.	Data sheet	To be submitted	

2.	Port type	24 Nos. 10/100/1000 base-T (auto sensing) Copper Port and 4 Nos. Combo SFP 10 Gigabit Ports	
3.	Specifications	Does the switch meet all the specifications put forth in point no. 2.3.18(Special terms & conditions)	
4.	Power supply	240 VAC 50 Hz UPS supply from the Central Control Point	
5.	Operating Temperature	0°C to 40°C or higher	
6.	Make	Vendor to specify	
7.	Model	Vendor to specify	
8.	Data sheet	To be submitted	

10. Monitors

Sr. No.	Feature	Specifications	Vendor's Compliance
1.	Type	LED/LFD	
2.	Size	55"/56" Flat Screen	
3.	Resolution	High Definition	
4.	Contrast Ratio	10000:1 or better	
5.	PC signal Input	VGA, HDMI or better	
6.	USB Port	2 or more	
7.	Power supply	AC 110 - 240 V, 50/60 Hz	
8.	Make & Model	Vendor to specify	
9.	Data sheet	To be submitted	

2.	Capacity	5/6 kVA	
3.	Back up time at full load	30 Minutes	
4.	Input Rating: Voltage (At full load) Frequency input power factor	180V AC -290V AC, 47Hz-53 Hz >0.99	
5.	Output Rating: Voltage(From No load to Full load) Frequency Total Harmonic Distortion.	220/230/240 V AC \pm 1% 50Hz \pm 0.1 Hz Less than 3% on Linear Load Less Than 6% on Nonlinear load	
6.	Overall Efficiency (Double Conversion mode)	More than 88 %	
7.	Overload Capacity at 0.8 pf	130% for 1 minute, 110% for 10 minutes	
8.	Display Acoustic Noise at rated load (at 1 mtr.)	LCD Display Less than 65 db	
9.	Maximum permissible non linear load	100% with 3:1 crest Factor	
10.	Environmental characteristics	0-40 degree Celsius temp. 90% RH at 20 degree Celsius.	
11.	Following protection shall be provided	a) Overload and short circuit at output of UPS b) Over voltage at output c) Deep Discharge at battery terminals.	
12.	Monitor for the following shall be provided	UPS Status, Load level, Battery level, Input / Output Voltage, Discharge Timer, Fault Condition	
13.	Enclosures of UPS shall meet minimum	IP 20 protection requirements.	
14.	Make & Model	Vendor to specify	
15.	Data sheet	To be submitted	

3.	Input Voltage	230 V +10%, -15% or better, Single Phase	
4.	Input Frequency	50±3 Hz or better	
5.	Nominal Output Voltage	230V , Single Phase	
6.	Output Voltage	User selectable 220, 230 or 240V	
7.	Output Frequency (sync'd to mains)	50 +/- 3Hz	
8.	Output Voltage Waveform	Pure sinusoidal	
9.	Battery type	Sealed maintenance free	
10.	Battery Backup	Minimum 30 minutes	
11.	Alarm/Alerts	Audible and visible alarms	
12.	Operating Environment	0 - 40 °C or better	
13.	Relative Humidity	95% RH non-condensing	
14.	Network manageable	Provides remote management of the UPS over network	
15.	Protection	Fuse on AC , Fuse on DC	
16.	Regulatory Approvals	CE, EN	
17.	Make	Vendor to specify	
18.	Model	Vendor to specify	
19.	Data sheet	To be submitted	

13. CAT6 Data Cable

Sr. No.	Feature	Specifications	Vendor's Compliance
1.	Conductor size and type	23 AWG Bare Copper , 4 Pair Cable	
2.	Characteristic Impedance	100 ohm	
3.	Cable jacket material	PVC	
4.	Cable jacket characteristics	Flame-retardant	
5.	Transmission frequency	Up to 650 MHz	
6.	Standardisation	ISO/IEC 11801 2nd Ed.; IEC 61156-5 2nd Ed.; EN 50173-1; EN 50288-6-1; EIA/TIA 568B2-1	
7.	Make & Model	Vendor to specify	

3.	Cable class	Central loose tube with jelly field	
4.	Cable jacket Material	HDPE	
5.	Cable jacket characteristics	Water-tight	
6.	Fiber/conductor cladding diameter	9/125 µm	
7.	Operational wavelength	1310nm to 1550nm	
8.	Make & Model	Vendor to specify	

15. Power Cable (3 Core, 2.5 Sq. mm) Quantity 2500m

Sr. No.	Feature	Specifications	Vendor's Compliance
1.	Type of Cable	3 Core X 2.5 Sq. mm Copper conductor cable	
2.	Construction	2.5 Sq. mm multi stranded annealed bare electrolytic grade copper conductor	
3.	Voltage Rating	Up to and including 1100V	
4.	Current Rating	16A maximum	
5.	Make	Vendor to specify	

16. Joystick/ Keyboard for controlling PTZ Camera

Sr. No.	Feature	Specifications	Vendor's Compliance
1.	Baud Rates	1200, 4800, 9600, 19200, 57600	
2.	Operating Distance	RS232: 50' (15.2m) RS422: 4000' (1219m) LAN: 328' (100m)	
3.	Joystick	3-axis proportional control	
4.	Touch Wheel	Both Modes: DVR/NVR control Camera selection	
5.	Camera Function Keys	View, Tour, PTZ Call, Alt, Undo, Set, Iris, (2) Focus, MonA, MonB	
6.	DVR/NVR Keys	Rec/Stop, Play Fwd, Play Rev, Review, Search, Touch Pad and Ring for FF, REW, Step FWD, REV	
7.	Certification	CE, FCC, UL	

SCHEDULE OF QUANTITIES

1	IP Fixed Dome Camera with 3 to 9mm (or better) vari focal lens ,power supply unit or POE enabled, surge protection unit and mounting accessories complete in all respect as per specification in Annexure A1	Honeywell/ Pelco/ Bosch/ Sony/Axis/ Mobotix /Arecont Vision	30 Nos.
2	IP Fixed Dome Camera with 3 to 9mm (or better) vari focal lens ,power supply unit or POE enabled, surge protection unit and mounting accessories complete in all respect as per specification in Annexure A1	Honeywell/ Pelco/ Bosch/ Sony/Axis/Mobotix /Arecont Vision	40 Nos.
3	Control keyboard with function key, joystick, optional LCD display	Honeywell/ Pelco/ Bosch/ Sony/Axis/Mobotix/ Arecont Vision	4 Nos.
B	DATABASE SERVER & VIDEO MANAGEMENT SOFTWARES		
4	Data Base Server with Digital Video Management Software for 300 Camera Licences and 20 Client Licences	Server: Same make as of cameras or HP/DELL /IBM VMS: Same make as of cameras or Milestone/ Mirasys/Exaccq/ NUUO.	1 Nos.
C	NETWORK VIDEO RECORDER & CLIENT PC		
5	NVR Hardware to record minimum 256 Cameras (HDD bank/Network Attached Storage with 128 TB HDD expandable to 192 TB for minimum 30 Days recording backup) as per specification in Annexure A1	Same make as of cameras or HP/DELL /IBM	4 Nos.
6	Client PC with dual output complete in all respect as per specification in Annexure A1	HP/DELL/Lenovo	10 Nos.
D	OPTIONAL HARDWARE FOR INTEGRATION OF EXISTING CAMERAS		
7	Four Channel or more Encoders, Video resolution: 4CIF, Compression; H.264, MJPEG (for converting the Analog Input to IP) if required, to be configured with the Data Base Server for the existing cameras	Honeywell/ Pelco/ Bosch/ Sony/Axis/Mobotix/ Arecont Vision	10 Nos.
E	SWITCHES		
8	L2 Switch with 8 nos. 10/100/1000 Mbps PoE+ ports and additionally 2 nos. of 1G Copper or SFP based dual purpose ports complete in all respect as per specification in Annexure A1	Cisco/HP/Extreme/ Brocade/ Juniper	20 Nos.
9	L3 Switch with minimum 24 nos. 10/100/1000 Mbps ports SFP, Modular slot should support 4 x 10Gig ports, have Dual redundant modular power supplies and fans complete in all respect as per specification in Annexure A1	Cisco/HP/Extreme/ Brocade/ Juniper	2 Nos.
10	SFP Gigabit modules	Cisco/HP/Extreme/ Brocade/ Juniper/Netgear	20 Nos.
F	MONITORS		
11	55"/56" LED monitor	Sony/LG/Samsung	7 Nos.
12	24" LED monitor	Dell/ HP/Lenovo	3 Nos.
G	UPS		
13	UPS (5kVA/6kVA) with one hour Backup	APC/Liebert/Emerson/ Eaton	4 Nos.
14	UPS (2KVA) with 30 Minute Backup	APC/Liebert/Emerson/ Eaton	5 Nos.
15	UPS (500/600 VA)	APC/Liebert/Emerson/ Eaton	26 Nos.

19	Power Cable (2 core , 1 Sq. mm)	Finolex/Havels/ Polycab	1000 M
20	HDPE Pipe (32mm) (ISI certified)	Industrial Grade	1000 M
21	PVC Conduit (25mm) (ISI Certified)	BEC/ AKG/ Diplast	2000 M
22	GI Pipe (32mm)	BEC/AKG/ Diplast/TATA	100 M
23	LIU 6/24 Port fully loaded with pigtails	R&M/ Amp/ Lapp/ Molex/Dlink	25 Nos.
24	OFC SC/LC,	R&M/ Amp/ Lapp/ Molex/Dlink	25 Nos.
25	Patch Panels (as per site requirement)	R&M/ Amp/ Lapp/ Molex/Dlink	25 Nos.
26	MS Pole (6 mtr) with Lightning Arrestor connected to Earthing Pit	Hot Dip Galvanised	6 Nos.
27	LC to LC or LC to SC or SC to LC	Hot Dip Galvanised	10 Nos.
J	Racks		
28	IP55 6U Racks	Rittal / Valrack	25 Nos.
29	Floor mounted 24U Rack for control room	Rittal/ Valrack/APC/HP	2 Nos.
J	Excavation		
30	Excavation for R.C.C including dismantling with cutter & making good the same of required length and width as per site conditions		100 mtr
31	Excavation for cement concreting including dismantling with cutter & making good the same with cutter & making good the same of required length and width as per site conditions		100 mtr
32.	Excavation for soil with cutter & making good the same of required length and width as per site conditions		100 mtr

Note: The quantities of items under 'E','G','H','I' and 'J' may vary according to the network designed by the bidder & as per site requirements. This will be decided during detail engineering and shall be subject to approval of CTU Authority. The payment shall be made on actual basis for these items.

_____ of the firm namely M/s. _____ are duly authorized to apply for this Tender.

2. I, the undersigned, have read and understood the above detailed terms and conditions, Tender Notice/DNIT, Technical requirement, Bid Evaluation Criteria (BEC) 1 and undertake to abide by them.
3. I undertakes that the I/my firm/company has not been blacklisted/debarred or prosecuted by the any Department of Govt. of India or any State Govt./STU/PSU/Corpn/IT. or any Union Territory or any Public undertaking or court of law.
4. I hereby undertake that the rate quoted in this tender are not more than the market prevailing rate/price and the same are also applicable to other Govt. department/STUs.

Signature of the Bidder

Name of the Bidder _____

Address _____

Tel No. _____

Email ID. _____

PAN/TAN No. _____

GSTIN _____