

Scope of Work and Additional Terms & Conditions

The Bidder under the scope of work in this GeM bid is envisaged to design the solution including but not limited to Supply, Installation and Commissioning of Equipment's/hardware, software required for the successful Implementation of Video Surveillance System at New MLA Quarters sector 17 Gandhinagar (herein after referred to as the "SITE"), as per the functional and technical specifications, scope of work mentioned in this GeM Bid. The bidder shall be responsible for implementation of the work as defined in the GeM bid.

Bidder is also responsible for all the components like CCTV Camera, Network Switch, UPS etc. required for the successful running of envisage solution.

This is a Turnkey/EPC kind of project. Wherein, bidder is required to propose an appropriate solution to meet the outcome envisaged. However, Bidder is responsible for any other components inadvertently missed out but it is required as per the proposed solution of the bidder and is essential for overall solution to successfully run during entire project duration than bidder has to consider the same in his proposed solution. TENDERER will not be liable for payment of any additional cost outside of Financial bid.

The complete scope of work would broadly be: design, engineering, supply, testing, installation, commissioning & warranty support of all project deliverables.

Quoted item is required to be offered with **5 (five) year OEM warranty**. All equipment including material to be installed by the Bidder shall be new and the product should not be declared end of support for 5 (Five) years and end of production for the next 1 (one) year by the OEM's. A certificate to that effect should be furnished from OEM on its letter head confirming the same. All equipment shall conform to the codes, standards and regulations applicable and benefit from the usual manufacturer's guarantees.

It is advisable to interested bidder to visit the site (New MLA Quarters sector 17 Gandhinagar) in consultation with at Gujarat Informatics Ltd., Gandhinagar.

Under the GeM portal, while creating bid some of the items seems 2 years & 3 years warranty. However, tenderer require 5 years warranty for each items (including UPS batteries). Bidders shall quote the price accordingly for each items considering 5 years warranty support.

Primary Product & OEM Turnover for evaluation: **CCTV Camera, VMS and NVR will be considered as Primary product for Experience, past performance and OEM Turnover evaluation.**

Clarification regarding this Tender: Bidders can seek written clarifications up to 10 days before bid submission date by email to gm-tech@gujarat.gov.in, dgmTech-gil@gujarat.gov.in & mgrhn-itcon@gujarat.gov.in.

1. Scope of work for IP Video Surveillance / CCTV System:

1. The Scope of complete work would broadly include Design, Engineering, Supply, Testing, Installation, Commissioning, Site Acceptance Test, Training, Documentation, Warranty and Maintenance during the contract period.

2. Supply, Installations, Testing & Commissioning, 5 year warranty support of High-performance IP based video surveillance system with complete recording and storage solution.
3. The scope is to Supply, Installation, Testing and Commissioning of the entire system end-to-end. The Successful Bidder will be responsible to make the system entirely operational for its intended use, by addition of components specific to its make/model even if not specifically mentioned in the BoQ. Also, latest versions of software and applications shall be provided by the Successful Bidder, as applicable at the time of execution and commissioning.
4. This shall include suitable brackets for mounting the cameras, weather-proof enclosures, fixtures, cables, connectors & any other devices/ peripherals required for the proper functioning of installed cameras.
5. The bidder should be responsible to integrate any existing setup in this new setup (if required from authority). The Successful Bidder has to furnish working drawings, solution design document and as-built drawings, which shall be an essential component of commissioning.
6. The storage should be designed, supply, implement and configured in such a way that it is capable to store & retrieve feeds of all the CCTV cameras in respective site/Location for last 30 days along with the earmarked/flagged feeds by the TENDERER without any additional cost to the TENDERER.
7. All the licenses procured, deployed by the bidder for this GeM bid should be in the name of TENDERER and valid perpetual for life.
8. The system shall support storage of H.264, H.265, better compression formats for all IP cameras connected to the system. The Video feeds being stored should not result in any loss of quality of video data due to further compression at the time of storage.

2. Camera installation in New MLA Quarters, sector 17, Gandhinagar:

- a) During the installation, the camera lens position has to be adjusted to get the desired view in the specific location.
- b) The camera should be configured in such a way that images and video feeds can be identified distinctively/easily.
- c) The cameras should be configured for automatic day / night display, so that without manual intervention, camera switches to night mode when the light condition is less.

3. Monitoring Center at New MLA Quarters, sector 17, Gandhinagar:

- a) This shall include the supply, installation, testing, commissioning & 5 year warranty support of active and passive components like network switches, enclosures, fixtures, cables, connectors and any other devices, peripherals required for the proper functioning of various components. Bidder is also responsible for necessary electrification of all the devices including all accessories in the control center. The Control center will be located in a separate room within the same campus or as decided by office of the TENDERER.
- b) The proposed solution shall be configured to view all the cameras in the site in a single screen.
- c) Actual power/electricity required will be provided by TENDERER. However, extension till the last mile/actual utility will be in the scope of successful bidder without any extra cost. Bidder have to quote accordingly. Further the Recurring Electricity charges under the project shall be paid by the TENDERER.
- d) The images, video feeds displayed on the monitoring displays should display the camera ID for identification.
- e) The successful bidder will be responsible for the integration of the Cameras with the proposed solution for recording of video feeds. The solution should be configured in such a way, so that

the video feeds would be kept for 30 days. After 30 days, the video feeds would be overwritten unless it is flagged or marked by the appropriate authority of at New MLA Quarters sector 17 Gandhinagar for investigation or any other purpose.

3.1 Technical Manpower Requirement

- (a) The successful bidder shall deploy **one (01) qualified technical manpower** on-site for the day-to-day operation, monitoring, preventive and corrective maintenance, troubleshooting, and support of the CCTV surveillance system. The deployed technical personnel shall also be responsible for real-time status reporting, incident reporting, and coordination with the concerned authorities to ensure the uninterrupted operation of the CCTV system.

Minimum Qualification:

- Diploma or Bachelor's Degree in Electronics, Electrical Engineering, Computer Engineering, Information Technology, or an equivalent discipline from a recognized institution.
 - Minimum **1 year of relevant experience** in the installation, operation, maintenance, or technical support of IP-based CCTV surveillance systems.
 - • The deployed manpower shall be available during the prescribed working hours and shall attend emergency breakdowns as and when required by the department.
4. **System Training:** This shall include providing hands on training related to system operation of the installed peripherals/equipment's to the designated/authorized representative of respective site after the successful commissioning of the project. Appropriate training material should be provided by the bidder during the training. All the cost associated with such training have to be borne by the bidder.
5. The bidder has to provide on-site 5 year warranty for all equipment's as mentioned in RFP.
6. All quoted Camera, NVR should have STQC Certificate or BIS-ER as per Guideline of Central Ministry.

7. Structured Cabling work (CAT 6):

- i. Bidder is responsible for laying of required LAN along with its required accessories like PVC Conduit/Casing Capping, laying, reinstating the site in its original condition, casing, capping, tagging etc.) for the surveillance infrastructures asked in the GeM bid. Bidder has to follow industry best practices of structured cabling like proper laying, tagging, capping, casing, clamping etc.
- ii. The bidder will have to submit a detailed technical solution document including layout diagram and proposed network architecture at the time of bid submission indicating the location of equipment to be installed to respective Office of the TENDERER for approval before implementation. The bidder has to take approval of respective Office of the TENDERER for Schematics Diagram (Layout) within 15 days from the date of Work Order for Cabling & laying work. Authority will decide the location of installation within maximum 15 days from the date of Work Order.
- iii. The Bidder for better understanding may visit the site(s) to understand existing infrastructure and setup, with prior written permission from the TENDERER before submission of their bid.

The bidder will have to do its own assessment/ measurements for finalization of scope of work / supply before submission of their bid.

- iv. Installation, termination and identification of wiring between station outlets and equipment room shall be considered part of the bidder work.
- v. The Passive Components of structured cabling distribution network will be free from manufacturing defects in material and workmanship under normal and proper use.
- vi. PVC pipe/casing capping Laying Labor Charges is inclusive laying of Cat 6 UTP cable. Bidder should consider the cost for the same accordingly.

8. Installation of Active Components: The bidder shall be responsible for:

- i. Supply, Installations, Testing & Commissioning of all the active components required for successfully running and maintenance of the entire system as per scope of work, functional and Technical specification of this RFP document.
- ii. Required active components will be installed at the locations identified for the surveillance.
- iii. The cameras have to be connected to the switches.
- iv. Bidder has to install UPS along with necessary electrification, power protection and connecting it with all devices asked under this RFP.

9. The quantity mentioned in the bid document on GeM is indicative based on the initial survey carried out for the project estimation and evaluation purpose. However, after issue of work order on GeM, bidder have to carry out the survey of at GIL and submit the final BoQ along with Schematic diagram of at GIL indicating the location of equipment to be installed and get it approved from the respective authority of at GIL for actual delivery & implementation of the material.
10. The bidder is required to deliver the material based on the surveyed BoQ approved by the respective Authority of at GIL instead of quantity mentioned on GeM within the total limit of BoQ mentioned in the Bid. In case if the access quantity required for installation & execution of solution except Camera, the bidder shall have to borne the cost for the same. However, in case of required BoQ is less than the total BoQ mentioned on GeM, the payment will be made on actual basis.
11. The successful bidder will have to offer the inspection in the manner as decided by GIL before delivering to the respective site or at customer sites. The cost of the same has to be borne by the supplier. Any deviation found in the specification of the produced goods from the bid specification will lead to the cancellation of the order. GIL/GoG will not be responsible for any time delay which may arise due to any deviation from the bid technical specification found at the time of inspection and the bidder has to deliver and install the ordered goods within prescribed time limit. At the time of inspection, bidder is required to produce OEM's confirmation on OEM's letter head for back to back warranty support as per bid terms & conditions.
12. Bidder will have to submit OEM Authorization on OEM letter head with bid number for all primary Quoted Product.
13. As per GeM GTC Clause 26 regarding Restrictions on procurement from a bidder of a country which shares a land border with India, bidder has to Submit Compliance Letter on OEM's and Bidder's letterhead with Quoted Make and Model List in the prescribed format. Non-submission of the same or

any false declaration and non-compliance of this would be a ground for disqualification/immediate termination of the contract and further legal action in accordance with the laws.

14. Service Terms:

1. The entire scope of the work depends on the technical skill and experience in management of the same level or kind of infrastructure.
2. It is mandatory for successful bidder to deploy the qualified professional to install, commission & maintain the equipment's, as defined under scope of work.
3. The successful bidder is free to deploy or to develop applications to facilitate the operation.
4. For extending better services to the user, the bidder will be allowed to deploy & use own tested and proven solution, with prior permission from user department.
5. The bidder need to manage & maintain various records related to the services extended to the user.
6. If the network is being operated & maintained by various agencies, then in such circumstances the bidder need to coordinate and approach various agencies, if required.
7. The bidder will be responsible to maintain documentation on the progress of the work and will have to update the same on regular basis. Bidder will have to submit the progress reports regularly, to the purchasing department.
8. The understanding of the comprehensive maintenance under warranty period is as follows.
 - a) In case of failure, the successful bidder needs to repair or replace the faulty part/component/device to restore the services at the earliest.
 - b) The cost of the repairing or replacement of faulty part/component/device has to be entirely borne by the Vendor.
 - c) All expenses related to part/component/device, including hiring of specialized technical expertise, in case required, has to be borne by the Vendor as part of comprehensive maintenance.
 - d) The Vendor also needs to make alternate arrangement in case of major failure happens, due to which services may be effecting for longer period.
 - e) After repairing or replacement of the part/component/device, the Vendor needs to put the same into operation.

15. Project Implementation:

1. The bidder will implement the project strictly as per the plan approved by purchasing department. The Vendor shall carry out cabling work at such locations as may be decided by the purchasing department within a specified period as specified in Instruction letter/LOI/Order and complete their provisional Acceptance Test to the satisfaction of purchasing department.
2. Installation, Commissioning and Acceptance of work will be undertaken by user department/GIL. All Invoices, Vouchers, Bills for supplied goods and services by the Supplier under the scope of the work will be verified measured and accepted by purchasing department for release of payment.
3. As part of implementation, the successful bidder shall provide details of equipment that will be incorporated in the proposed system and material as required. The location for storing spare parts and quantity there on should also be clearly indicated.
4. The successful bidder shall provide the necessary technical support, Standard Operating Procedure (SOP) and other information to the user department and its user organizations in implementing the proposed system applications. The user department at any time during the currency of the Agreement should have access to the proposed sites.
5. The successful bidder shall not disturb or damage the existing network of communication. If in case any damage to the network is done, the same shall be corrected with no extra cost. Successful

bidder shall also be responsible for paying penalty, as imposed by the service owner to which the damage is incurred.

6. In case of the material/solution supplied and installed is rejected owing to its non-conformity to the specification or due to the poor quality of workmanship, the same shall be replaced promptly.
7. Successful bidder shall treat all matters connected with the contract strictly confidential and shall undertake not to disclose, in any way, information, documents, technical data, experience and know how, without prior written permission from purchasing department.
8. Any damage caused to the property of purchasing department while executing the job shall be solely bidder's responsibility. In case any damage to the property is caused, the same will be recovered from the successful bidder. No any extra cost shall be paid to the successful bidder for such reasons.
9. The successful bidder will have to furnish the documentation of the work undertaken in consultation with purchasing department.
10. It is a turnkey project. The successful bidder shall be fully responsible for implementing the Project in totality and should include the items and their prices, if not included in Schedule of Requirement to complete the project on turnkey basis. Any claim whatsoever in this regard will not be entertained later on.
11. In the event of the delay in delivery of contracted services or services is not satisfactory the purchaser may procure goods from else ware as prescribed in bid and Vendor shall be liable without limitations for the difference between the cost of such substitution and the price set forth in the contract for the goods involved i.e. at the risk and cost of the successful bidder.
12. Purchasing department reserve the right to visit working site of the successful bidder with prior intimation. Successful bidder has to make necessary arrangement for the same.
13. All work shall be performed and executed by the successful bidder in strict conformity with the purchasing department and any relative instruction issued to the Supplier by purchasing department time to time.
14. The purchasing department shall associate few engineers / technicians during installation and commissioning work. Bidder shall ensure proper participation of the nominated personnel from purchasing department and train them on the system related. Also bidder shall organize the systematic training of selected personnel from the purchasing department on the operation / management of equipment's.

15. Acceptance Test:

Acceptance Test will be conducted in as follows:

- 15.1 THE OFFICE reserve the right to inspect equipment's. The cost of all such tests shall be borne by the Vendor. Any inspected goods fail for confirm to specification after installation, THE OFFICE may reject them and the Vendor shall have to replace the rejected goods. In case of inspection waiver the same shall be obtained before the dispatch of goods. Inspection of rest of material shall be done at site. Sample approval should be obtained before installation for such material.
- 15.2 The first step will involve successful installation of all sites. The provisional acceptance of these sites will be defined as Partial Acceptance.
- 15.3 The date on which Acceptance Certificate is issued shall be deemed to be the date of successful Commissioning of the System.
- 15.4 Any delay by the Vendor in the Acceptance Testing shall render the Vendor liable to the imposition of appropriate Penalties.

16. Payment terms, penalty terms and Implementation time lime

Particular	Time limit	Penalty, In case of Delay	Payment
Survey by Successful bidder after issue of work order & submission of BoQ and Schematics Diagram (Layout)	$T1 = T0 + 15$ days from the date of issue of work order	-	-
Delivery of material after approval of surveyed BoQ and Schematics Diagram (Layout)	$T2 = T0 + 30$ days	If the bidder fails to deliver the requisite hardware and software within the time limit as mentioned in the bid, then a sum equivalent to one percent (0.5%) of the total contract value shall be deducted from the payment from each calendar week of delay or part thereof.	70 % payment will be made after Delivery of all hardware and related peripherals at site. The inspection will be done by GIL.
Completion of installation & commissioning & training.	$T3 = T0 + 45$ days	If the bidder fails to install the requisite hardware and software within 45 days, then a sum equivalent to 0.5 % of the value of the uninstalled equipment i.e. due for installation as per given schedule will be deducted from the payment and the value shall be deducted from the payment for each calendar week of delay or part thereof	30 % payment will be made after Installation, commissioning, training & acceptance.

T0 = date of issue of work order & Days means calendar days

Note: In the bid document (created on GeM), delivery time is mentioned as 45 days. However, this is to clarify that, successful bidder has to complete supply, installation, commissioning & training within the time limit of 45 days.

- If the bidder fails to deliver the requisite hardware and software within the time limit as mentioned in the bid, then a sum equivalent to one percent (1%) of the total contract value shall be deducted from the payment from each calendar week of delay or part thereof.
- The amount of penalty for delay in delivery & installation shall be subject to maximum limit of 10 % of the total contract value.
- Delay in excess of 10 weeks will be sufficient to cause for termination of the contract. In that case the Performance Bank Guarantee of the bidder will be forfeited.
- In case, the selected bidder does not supply the ordered items for any reason, the bidder will be liable to pay the difference amount to the purchaser, over and above the performance guarantee, which indenter department has to pay to the next or other selected bidder for purpose of the said items.

16.1 Operational Penalties:

- During warranty period, if the complaint is not resolved within 48 hrs, the penalty of Rs. 500 per day for Camera, Switch, and UPS & within 72 hrs for networking components and other

peripherals, the penalty of Rs. 300 per day will be levied. However, if the complaints not resolved within 7 days then from 8th day to 14th day, penalty would be levied @ 150% and from 15th day onwards penalty @ 200% of the above rates would be levied. The amount of penalty will be recovered from the Performance bank guarantee during warranty period.

- b) In case of major failure happens due to which services may be effecting for longer period, the bidder will be required to an immediate alternate arrangement of the same till it is repaired. Failure to arrange for the immediate repair/replacement will be liable for penalty of Rs.500 per day for Camera, Switch, UPS and Rs. 300 per day for networking components and other peripherals. The amount of penalty will be recovered from the Performance bank guarantee during warranty period.
- c) The Bidder/System Integrator will be required to co-ordinate with The office, software vendor and/or do liaisoning with other service provider to achieve the end-to-end connectivity. This also includes Server OS configuration with respect to LAN/WAN technologies implementation.

17. PERFORMANCE GUARANTEE:

17.1 The Vendor shall furnish Performance Guarantee for the duration of warranty period + extra 2 months to THE OFFICE / GoG for an amount equal to 5% of the value of order.

17.2 The performance guarantee will be in the form of bank guarantee for the amount equal of 5% of the value of the Order towards faithful performance of the contract obligation, and performance of the equipment during Warrantee period. In case of poor and unsatisfactory field services, THE OFFICE shall invoke the PBG.

17.3 The Performance Guarantee shall be valid for the duration of warranty period + extra 2 months and shall be denominated in Indian Rupees and shall be in the form of an unconditional Bank Guarantee issued by any Nationalized Bank including the public sector bank or Private Sector Banks authorized by RBI or Commercial Bank or Regional Rural Banks of Gujarat or Co-Operative Bank of Gujarat (operating in India having branch at Ahmedabad / Gandhinagar) as per the G.R. no. EMD/10/2020/42/DMO dated 19.10.2020 issued by Finance Department or further instruction issued by Finance department time to time in the format provided by THE OFFICE to be submitted within 15 working days of receipt of award.

17.4 The Performance Guarantee shall be discharged by THE OFFICE and returned to the Vendor within 30 days from the date of expiry of the Performance Bank Guarantee.

17.5 The Successful bidder has to submit Performance Bank Guarantee @ 5% of total order value within 15 days from the date of issue of Purchase order

18. Additional document to be submitted:

In the technical bid section of GeM, the bidder is also required to upload following documents;

- Brochure and OEM Compliance of the Offered product on OEM Letter head.
- Compliance of the SoW, SLA and Payment terms etc. as uploaded as part of the GeM Bid on bidder's letterhead.
- Undertaking as per guidelines published by Ministry of Finance, Dept. of Expenditure, Public Procurement division dated 23.07.2020 in the given format by Bidder as well as OEM.

19. BoQ:

Sr. No.	Item	Qty.
1	2MP Dome Camera	19
2	4MP Bullet Camera	31
3	2MP PTZ Camera 30X	4
4	64 Channel NVR with 8 SATA Interface Loaded with 64TB Storage Capacity	1
5	8 Port Network PoE Switch	9
6	CAT6 8 Port Patch Panel	9
7	CAT6 Patch Cord -1Mtr	54
8	55" Display	3
9	12U Network Rack	1
10	9U Network Rack	8
11	1KVA Online UPS with 30Min Back-up	1
12	CAT6 Information Outlet and Face Plate	54
13	Surge Protection Device	9
14	CAT6 Cable Indoor 1 mtr. With Laying	3780
15	25 MM PVC PIPE with Laying	1890
16	Monitoring Workstation	2
17	VMS License bank for Camera	54
18	VMS Licenses for workstations	1
19	Technical Manpower Requirement	1

Note: The above items are as per Tenderer requirements. However, bidder should provide all the hardware required for completion of the entire solution.

20. Make and Model list

Sr. No.	Item	Make & Model
1	2MP Dome Camera	
2	4MP Bullet Camera	
3	2MP PTZ Camera 30X	
4	64 Channel NVR with 8 SATA Interface Loaded with 64TB Storage Capacity	
5	8 Port Network PoE Switch	
6	CAT6 8 Port Patch Panel	
7	CAT6 Patch Cord -1Mtr	
8	55" Display	
9	12U Network Rack	
10	9U Network Rack	

11	1KVA Online UPS with 30Min Back-up	
12	CAT6 Information Outlet and Face Plate	
13	Surge Protection Device	
14	CAT6 Cable Indoor 1 mtr. With Laying	
15	25 MM PVC PIPE with Laying	
16	Monitoring Workstation	
17	VMS License bank for Camera	
18	VMS Licenses for workstations	
19	Technical Manpower Requirement	

Note: The Bidder may quote only one option (i.e. one Make and Model of latest mfg. year can be quoted) against each item cluster wise. Bidders are required to mention Make and Model of the product (Do not write “OEM” against items). Bidders are expected to give make and model of the product). Ensure that all equipment including material to be installed by the Bidder shall be new and the product should not be de-supported or declared end of life during the next 5 years.

CCTV camera system for New MLA Quarters sector 17 Gandhinagar

Specification sheet

Sr. No.	Product Details	Specification
1. 2MP Dome Camera		
1	Image Sensor Type	1/2.8 Progressive Scan CMOS Sensor or better
2	Image Sensor Size	0.357 or better
3	Camera Image Sensing capacity (Picture Mode)	2MP or Higher
4	Resolution	Full HD (1920 X 1080 pixels),
5	Day::Night Capable	Yes
6	IR illumination Range (mtr)	50 m or better
7	Focal Length(mm)	3.0 ~ 11.0 or better
8	Frame Rate (FPS)	25/30 FPS
9	Video Compression	H.265, H.264/MJPEG (The camera OEM Should be a genuine manufacturer and should be an official valid H.265 HEVC licensee and should be listed on HEVC website at the time of submitting bid.)
10	Video Streaming	Triple Compressed simultaneous Stream

		The Camera shall be able to set up and stream out minimum three (3) stream profiles simultaneously. Each stream profile should have its own compression resolution, frame rate and quality independently. Should support minimum 1st stream at 1080P and 2nd stream at 720P or D1/CIF or better.
11	Audio Support	Yes
12	Audio Streaming	Two-Way
13	Number of Audio Input Channel	1
14	Number of Audio Output Channel	1
15	Alarm Support	Yes
16	Number of Alarm Digital Input	1
17	Number of Alarm Relay Output	1
18	Pre/Post Alarm Buffer	Yes
19	Minimum Illumination for Capturing Color Image (L)	0.1 lux @ F1.6 or Better
20	WDR (Wide Dynamic Range)	120 DB
21	SNR (Signal to Noise Ratio)	50-60
22	On Board SD Card Support	Yes (Up to 256 GB)
23	SD Card Memory(GB)	32GB
24	SD Card Type	SDXC Class 10, 1 or latest higher version
25	SD Card Speed	Minimum 10 Mbps
26	Protocol	IPv4, IPv6, ICMP, TCP, UDP, DHCP, PPPoE, RTP/RTSP/RTCP, DNS, DDNS, NTP, FTP, UPnP, HTTP, HTTPS, SMTP, 802.1x, SNMP, Multicast, SSL/TLS1.2, ONVIF Profile S, G, T.
27	Installation Type	Indoor
28	Material of the Housing construction	Aluminum
29	Protection	IP66, IK 10 rated housing
30	Mounting bracket	Wall & Ceiling Mounted
31	Power Input	PoE
32	Warranty (A)	5 years
33	Time for Replacement of Defective Product During Warranty Period (H)	72

34	BIS Registration for safety general requirements as per IS 13252 (Part 1):latest	Yes
35	Lens Type	Motorized Varifocal
36	Type of Camera Housing	Dome CAMERA
37	IP Camera	Yes
38	PTZ Camera	No
39	Pan Speed (deg::Sec)	NA
40	Optical Zoom	NA
41	Digital Zoom	12X or better
42	Tilt Speed (deg::Sec)	NA
43	ONVIF Support	Yes, ONVIF Profile S, G, T.
44	Certification	FCC/ equivalent Indian Standard, CE/equivalent Indian Standard, UL 62368-1/ equivalent Indian Standard, BIS. Note: In case of Make in India Product UL certification is not required. However, MII product should have a certification from a STQC Lab with equivalent IEC standard (IEC 62368-1) before the date of publishing of the RFP
45	Audio	All type of IP camera has inbuilt/External mic and connectivity option for external mic in the supplied camera from day1. Bidder should ensure that audio recording should be happen along with video on storage device from day 1
46	Edge Storage Sync	In the event of failure of connectivity to the central server the camera shall record video locally on the SD card automatically. After the connectivity is restored these recordings shall be automatically merged with the server recording such that no manual intervention is required to transfer the SD card based recordings to server.
47	Cyber Security	The cameras offered must be cyber security certified with UL Cyber security certificate/ GDPR/ NIST/ TPM/ Cybersecurity Chipset/ Any other cyber security certificate from Indian Government body or Cert-in Empanelled lab for mitigating cyber security risk.
48	Undertaking	Undertaking required from OEM:
		1. No support and use of GB/T 28181 protocol.
		2. The cameras offered must be NDAA compliant.
		3. The MAC ID's of the CCTV Cameras to be supplied against this tender shall be registered in the name of the OEM of the CCTV Cameras.
		4. The OEM of CCTV Camera should be a member of ONVIF and quoted models should be listed on official website of

		ONVIF. The CCTV OEM should not be suspended/ blacklisted by ONVIF.
2. 4MP Bullet Camera		
1	Image Sensor Type	1/2.7" Progressive Scan CMOS Sensor or better
2	Image Sensor Size	0.357 or better
3	Camera Image Sensing capacity (Picture Mode)	4MP or Higher
4	Resolution	Full HD (1920 X 1080 pixels)
5	Day::Night Capable	Yes
6	IR illumination Range(mtr)	60 or better
7	Focal Length(mm)	3.0 ~ 11.0 or better
8	Frame Rate (FPS)	4MP @ 25/30 FPS
9	Video Compression	H.265, H.264/MJPEG
10	Video Streaming	Triple Compressed simultaneous Stream
		The Camera shall be able to set up and stream out minimum three (3) stream profiles simultaneously. Each stream profile should have its own compression resolution, frame rate and quality independently. Should support minimum 1st stream at 1080P and 2nd stream at 720P or D1/CIF or better.
11	Audio Support	Yes
12	Audio Streaming	Two-Way
13	Number of Audio Input Channel	1
14	Number of Audio Output Channel	1
15	Alarm Support	Yes
16	Number of Alarm Digital Input	1
17	Number of Alarm Relay Output	1
18	Pre/Post Alarm Buffer	Yes
19	Minimum Illumination for Capturing Color Image (L)	0.1 lux @ F1.6 or Better
20	WDR (Wide Dynamic Range)	120 DB

21	SNR (Signal to Noise Ratio)	50-60
22	On Board SD Card Support	Yes (Up to 256 GB)
23	SD Card Memory(GB)	32GB
24	SD Card Type	SDXC Class 10, 1 or latest higher version
25	SD Card Speed	Minimum 10 Mbps
26	Protocol	TCP/IP, HTTP, HTTPS, RTSP, RTP, UDP, SMTP, FTP, DHCP, DNS, DDNS, NTP, SNMP
27	Installation Type	Outdoor
28	Material of the Housing Construction	Aluminium
29	Protection	IP67, IK 10 & NEMA-4X rated housing
30	Mounting bracket	Wall Mounted
31	Power Input	PoE
32	Warranty (A)	5 years
33	Time for Replacement of Defective Product During Warranty Period (H)	72
34	BIS Registration for safety general requirements as per IS 13252 (Part 1):latest	Yes
35	Lens Type	2.8 mm Fixed Lens or 2.8~12 mm Motorized Varifocal Lens
36	Type of Camera Housing	Bullet Camera
37	IP Camera	Yes
38	PTZ Camera	No
39	Pan Speed (deg::Sec)	NA
40	Optical Zoom	NA
41	Digital Zoom	12X or better
42	Tilt Speed (deg::Sec)	NA
43	ONVIF Support	Yes, ONVIF Profile S, G, T.
44	Certification	FCC/ equivalent Indian Standard, CE/equivalent Indian Standard, UL 62368-1/ equivalent Indian Standard, BIS. Note: In case of Make in India Product UL certification is not required. However, MII product should have a certification from a STQC Lab with equivalent IEC standard (IEC 62368-1) before the date of publishing of the RFP
45	Audio	All type of IP camera has inbuilt/External mic and connectivity option for external mic in the supplied camera from day1. Bidder should ensure that audio recording should be happen along with video on storage device from day 1

46	Edge Storage Sync	In the event of failure of connectivity to the central server the camera shall record video locally on the SD card automatically. After the connectivity is restored these recordings shall be automatically merged with the server recording such that no manual intervention is required to transfer the SD card based recordings to server.
47	Cyber Security	The cameras offered must be cyber security certified with UL Cyber security certificate/ GDPR/ NIST/ TPM/ Cybersecurity Chipset/ Any other cyber security certificate from Indian Government body or Cert-in Empanelled lab for mitigating cyber security risk.
48	Undertaking	Undertaking required from OEM: 1. No support and use of GB/T 28181 protocol. 2. The cameras offered must be NDAA compliant. 3. The MAC ID's of the CCTV Cameras to be supplied against this tender shall be registered in the name of the OEM of the CCTV Cameras. 4. The OEM of CCTV Camera should be a member of ONVIF and quoted models should be listed on official website of ONVIF. The CCTV OEM should not be suspended/ blacklisted by ONVIF.

3. 2MP PTZ Camera 30X

1	Image Sensor Type	Progressive Scan Sony CMOS Sensor
2	Image Sensor Size	0.357 or better
3	Camera Image Sensing capacity (Picture Mode)	2MP or Higher
4	Resolution	Full HD (1920 X 1080 pixels)
5	Day::Night Capable	Yes
6	Min. Illumination	Color mode: 0.1 lux @ F1.6 or better B/W: 0 lux with IR illumination on
7	Scanning System	Progressive
8	S / N Ratio	≥ 55dB
9	IR illumination Range(mtr)	200 meter or better
10	IR Intensity	Automatically Adjust
11	IR on/Off Control	Auto
12	WDR	True WDR 120 db or better
Lens		
13	Optical Zoom	30X or better
14	Focal Length	4.3 to 129mm (The minimum required optical zoom is 30 X). Focal length of 4.3 to 129. ± 25 % is accepted.

15	Focus Control	Auto/Manual
Video		
16	Video Compression	H.265, H.264 MJPEG (The camera OEM Should be a genuine manufacturer and should be an official valid H.265 licensee and should be listed on website at the time of submitting bid.)
17	Video Streaming	Triple Compressed simultaneous Stream
		The Camera shall be able to set up and stream out minimum three (3) stream profiles simultaneously. Each stream profile can have its own compression resolution, frame rate and quality independently. Should support minimum two (2) streams at 2MP.
18	Frame Rate	1920×1080 @ 25/30 FPS
19	Day and Night	Automatic, Color, Mono
20	White Balance	Auto & Manual
21	Noise Reduction	2D & 3D
22	Motion Detection	Required
23	Region of Interest	Required
24	Digital Zoom	12X or better
Network		
25	Ethernet	RJ-45 (10/100Base-T)
26	Alarm I/O	Minimum 1 Input & 1 Output contact for 3rd party interface
27	Protocols	IPv4, IPv6, ICMP, TCP, UDP, DHCP, PPPoE, RTP/RTSP/RTCP, DNS, DDNS, NTP, FTP, UPnP, HTTP, HTTPS, SMTP, 802.1x, SNMP, Multicast, SSL/TLS1.2, ONVIF Profile S, G, T.
28	Streaming Method	Unicast / Multicast
29	Local Storage	Minimum 32 GB and should support up to 256GB. In the event of failure of connectivity to the central server the camera shall record video locally on the SD card automatically. After the connectivity is restored these recordings shall be automatically merged with the server recording such that no manual intervention is required to transfer the SD card based recordings to server.
Pan Tilt Zoom		
30	PTZ	Pan: 360° endless 1°to 240°/s /continuous, (Auto), 0.1 to 200°/s (Manual)
		Tilt: -10° to +90° (Auto flip), 150°/s (Auto), 0.1 to 120°/s (Manual)
		30x optical zoom and 12x digital zoom
		256 preset positions

		Pre-set tour
31	Security	Password Protection, IP Address filtering, User Access Log, HTTPS encryption, IEEE 802.1X network access control
32	Intelligent Video	Motion Detection, Camera Tampering, Loitering, Line crossing, Intrusion,
33	Event Trigger	Camera tampering detection, digital input, manual trigger, motion detection, SD card full
34	Event Action	Event notification via digital output, email, HTTP, FTP, SD card
		File upload via email, HTTP, FTP, SD card
		Move to pre-set
35	Power	PoE+ IEEE 802.3at/PoE++ IEEE 802.3bt and 12VDC/24AC/24VDC/36VDC
General		
36	Working Temperature/ Humidity	0°C to 60 °C, 10-95% RH
37	IP Rating	IP67, IK10, NEMA 4X or higher
38	Certification	FCC/ equivalent Indian Standard, CE/equivalent Indian Standard, UL 62368-1/ equivalent Indian Standard, BIS. Note: In case of Make in India Product UL certification is not required. However, MII product should have a certification from a NABL-approved lab/STQC Lab with equivalent IEC standard (IEC 62368-1) before the date of publishing of the RFP
39	Cyber Security	The cameras offered must be cyber security certified with UL Cyber security certificate/ GDPR/ NIST/ TPM/ Cybersecurity Chipset/ Any other cyber security certificate from Indian Government body or Cert-in Empanelled lab for mitigating cyber security risk.
40	Undertaking	Undertaking required from OEM:
		1. No support and use of GB/T 28181 protocol.
		2. The cameras offered must be NDAA compliant.
		3. The MAC ID's of the CCTV Cameras to be supplied against this tender shall be registered in the name of the OEM of the CCTV Cameras.
		4. The OEM of CCTV Camera should be a member of ONVIF and quoted models should be listed on official website of ONVIF. The CCTV OEM should not be suspended/ blacklisted by ONVIF.
4. 64 Channel NVR with 8 SATA Interface Loaded with 64TB Storage Capacity		

1	64 Channels or better NVR with supports up to 8 SATA hard drives each support up to 10TB, should be loaded with 64 TB Capacity of HDDs. Should support RAID 0/1/5/6/10.
2	Support 4K streaming, Support 64 Channel up to (3840*2160) Resolution Support 320 Mbps of incoming Bandwidth and support USB 2.0 & 3.0 ports.
3	Support H.264 and H.265
4	2# of Gigabit port with load balancing and failover
5	Support ONVIF Profile S / G / T and above cameras, should support Remote live view and remote playback
6	HDMI, 2 nos. of USB port, 1 no. e-SATA port, should support Network, USB data backup
7	Should support 2in 2 out Alarm interfaces and 2 serial interfaces (RS232/RS485)
8	Should support 16 Channels streaming in Single screen @ 1080P and 16 Channels synchronous Playback @ 1080P
9	Should support Pre/Post recording
10	Certification- FCC/ equivalent Indian Standard, CE/equivalent Indian Standard, UL 62368-1/equivalent Indian Standard, BIS certified at the time of bidding. The OEM should have ISO 9001:2008 or latest and ISO 14001:2004 or latest certificate for Manufacturing. In case of Make in India Product UL certification is not required, however, MII product should have a certification from a NABL-approved lab/STQC Lab with equivalent IEC standard (IEC 62368-1) before the date of publishing of the RFP.
11	Operating Temperature: 0-50 °C, should be Rack mounted
12	NVR Should be capable of recording both Audio and Video.
13	The storage taken above is indicative. Bidder has to ensure that the proposed NVR is capable of storing 1 month's video and audio footage. In case there is the requirement of more storage bidder will arrange at no extra cost to tenderer
5. 8 Port Network PoE Switch	
1	Switch Specification - Product offered must have Warranty/Support/Modules/Software/Features Activated from day 1
2	The Switch should have 8 x 10/100/1000Base-T ports + 2 x 1G SFP Ports, Managed Switch. Support IEEE 802.3af/at, 130W Min Power Budget and Up to 30 W power output per PoE port.
3	RJ-45 console port for accessing the command line interface (CLI) of this switch for configuration, management, and monitoring.
4	Switch should be Forwarding mode: store and forward, Switching Capacity: 20Gbps, Packet forwarding rate: 14.88 Mpps and 8K MAC address table with MAC address learning and aging automatically, Static, Dynamic, filter address table Support.
5	The Switch should Support: Min IPv6 Ping, IPv6 Traceroute, IPv6 Telnet.
6	The Switch should have Operation Temperature • 0 to 50 °C (32 to 122 °F)

7	The Switch should support Management features Http & Https, CLI/GUI, SNMP V1/V2/V3, LLDP, RMON, Syslog
8	Spanning Tree Support STP (IEEE 802.1d) RSTP (IEEE 802.1w) and MSTP (IEEE 802.1s) protocol, Support loop protection, BPDU protection
9	The Switch should support VLAN,802.1Q, Support 4K VLAN, GVRP, MAC VLAN, Voice VLAN. Support Packet filtering function, Media Access Control Protocol, Port mirroring, one to one/Many to One.
10	The Switch should support Security features, Password Protection, ARP Protection, IP Sources Protection, DoS Protection, DoS protection, DHCP Snooping, DHCP attack protection, port security, port isolation, Radius and Tacacs+, LLDP, HTTPS, SSL, TLS, SSHv1/v2, IP-MAC-Port, 802.1X AAA.
11	The Switch should support Multicast features, IGMP v1/v2/v3 Snooping, IGMP Fast Leave, IGMP Querier. Multicast group policy and multicast number limit
12	The Switch should Support Traffic classification of each field of L2/L3/L4 protocol headers, CAR traffic Control, 802.1P/DSCP priority remark, Multiple queuing algorithms such as SP, WRR or SP+WRR, WRED/WFQ, Traffic Policing and Traffic Shaping.
13	Switch should be supplied with the all necessary components like Power supply, Power cord, All Fan Module, Rack-mount kit, Installation Guide, etc. and necessary software image file to fulfil all above mention feature set from day 1.

6. 8 Port CAT 6 Patch Panel

1	Material	Powder Coated Steel
2	Ports	08 Port
3	Size	483mm X 44.2mm (1U)
4	Colour	Black
5	Mounting Style	Punch Down (Module)
6	Compatible	Compatible with both T568A and T568B wiring options. Backward compatible with Category 5e cabling standards
7	AWG Support	Supports solid 22-24 AWG wires and stranded 24-26 AWG
8	Connector Module Holder	High Impact, Flame-Retardant Plastic Compound
9	Flammability Rating	UL 94V-0
10	Safety Rating	UL1863
11	Identification	Each port of the panel is numbered and has a designated label area for clear port identification
12	Cable Management	Rear cable management bar which should act as stress reliever for terminated cables
13	Standards Compliance	ISO/IEC 11801 Class E, TIA/EIA-568B.2-1
14	Application	IEEE 802.af, IEEE 802.3at for PoE applications.
15	Certification	UL, CE, ETL Channel Tested

CAT 6 Unshielded Keystone Jack

16	Material	High Impact, Flame-Retardant Plastic Compound
17	Type	Category 6
18	Insertion/Extraction life	750 cycle minimum
19	Jack Contact Material	50μ Nickel over gold

20	Conductor Compatibility Range	22-26AWG solid cable
21	IDC Type	Dual (110 Or Krone) Type
22	Current rating	1.5A max
23	Insulation resistance	500 M ohm (min)@100 Vdc
24	Contact Resistance	20 M ohm (max) per contact
25	Retention	50N
26	Voltage rating	230 V rms max.
27	Flammability Rating	UL 94V-0
28	Safety Rating	UL1863
29	Colour Coding	As Per 568 A/B Standards
30	Standards Compliance	ANSI/TIA-568-C.2, ISO/IEC-11801, EN50173-2
31	Application	IEEE 802.af, IEEE 802.3at for PoE applications
32	Certification	UL, CE

7. Cat 6 UTP Patch Cord, LSZH – 1Mtr.

1	Cable Conductor	Stranded Bare Annealed Copper
2	Wire Insulation	SFS PE
3	Jacket	Low Smoke Zero Halogen (LSZH)
4	Bend Radius	> 23 mm without load
5	Flame Test	IEC 60332-1
6	Gas Emissions testing	IEC 60754
7	Smoke Density Testing	IEC 61034
8	Conductor Resistance	< 73 Ω/km
9	Tensile Strength	96N min
10	Durability	1000 Mating Cycles
11	Propagation Delay	1-250MHz: < 25 ns/100m
12	Current rating	1.0A max
13	Insulation resistance	150 M ohm/km
14	Voltage rating	72 V DC
15	Contact resistance	20 M ohm (max) per contact
16	Length	1 meter
17	Standards Compliance	ANSI/TIA-568-C.2 and ISO/IEC-11801 (2nd Edition), IEC 61156-2, EN 50173; EN 50288-6-2 Category 6 standard
18	Application	IEEE 802.af, IEEE 802.3at for PoE applications
19	Certification	UL, CE, ETL Channel Tested

8. 55"Display

1	55"Display	55 inch Display, IPS Technology,3840x2160 (UHD)4K,400 cd/m2 ,1200:1, Input- 3 HDMI, RJ45 -1, RS232, USB-1 output Optical Output -1 for digital audio, Built In WIFI, WI-FI, Smart Share /Screen Share , Fail over, Wake on LAN, Wireless access point/Hotspot, Pre-loaded You-tube app, Play via URL, Audio Playback,20W(10W x 2) Speaker and Accessories. OS - Android/WebOS/Tizen
9. 12 U Rack including required accessories, power strip and dressing. (Networking/Server Rack)		
1	Size of Server Rack Enclosure	12U
2	Warranty (Years)	5 Years
3	Type of Server Racks	Rack Enclosures
	Additional Specification Parameters	
4	Surge Protector Power Strip should be Supply along with Rack and Accessories	
10. 9 U Rack including required accessories, power strip and dressing. (Networking/Server Rack)		
1	Size of Server Rack Enclosure	9U
2	Warranty (Years)	5 Years
3	Type of Server Racks	Rack Enclosures
	Additional Specification Parameters	
4	Bidder has to supply the wall mount 9U rack with 600VA Line Interactive UPS with 10-15min. Backup & Size should be capable to kept the proposed hardware to be kept in the rack	
11. 1 KVA UPS ONLINE UPS, Single Phase Input, Single Phase output and 30 Min. Battery Backup		
1	UPS Rating	1 KVA True online UPS
2	Type	Online Double Conversion UPS
3	Mounting	Tower type
4	Output Power Capacity	1000 VA
5	Input Power Factor	0.99 at full load
6	Nominal Input Voltage	230V
7	Input Voltage range	160V -300 VAC at full load 110V - 300 VAC < 60% load
8	Input Frequency	50/60 Hz +/-5 Hz (auto sensing)
9	Output KW	800 W
10	Output Voltage Distortion on linear load	<3%
11	Output Voltage Distortion on non linear load	<5%

12	Output voltage regulation	230V +1%
13	Wave Form Type	Pure Sinewave
14	Crest Factor	3:1
15	Over voltage cut off Device	Required inbuilt
16	Inbuilt Surge protection	Required
17	Eco Mode	Required
18	Battery Rack & Interlinks	Supply of suitable, industry standard stand for installation & interlinks for battery connection
19	Battery Make	Exide / Quanta/ Relicell / Amaron / Luminous
20	Minimum Backup time on full load	30 minutes
21	Minimum VAH	1008 (12 v x Battery AH x Nos. of batteries)
22	Battery Charger Capacity	Required 10% of Battery AH
23	Temperature Compensated battery charger	Required
24	Conformal Coating	PCB conformal coating required
25	Operating Environment	0 - 40 °C
26	Protection	Short circuit, Over temperature, DC low/High, Overload
27	Certification	BIS, ROHS, CE required
28	EMC	EN 62040 -2
29	Safety	IEC 62040 -1
30	Performance	IEC 62040 -3
31	Static Bypass	Inbuilt required
32	Communication	Required RS 232 & USB Com port
33	Enclosure	IP 20
34	UPS Warranty	5 years
35	Battery Warranty	5 years

12. CAT6 Information Outlet and Face Plate

1	Type	Single port faceplate as per requirement
2	Material	High Impact Thermoplastic (ABS) UL94V-0 fire retardant
3	Colour	White
4	Dust protection	Spring loaded shuttered Port for Protection
5	Standards Compliance	Conforms to ANSI/TIA/EIA 568A-B.2.2001 standards

CAT 6 Unshielded Keystone Jack

6	Material	High Impact, Flame-Retardant Plastic Compound
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7	Type	Category 6
8	Insertion/Extraction life	750 cycle minimum
9	Jack Contact Material	50μ Nickel over gold
10	Conductor Compatibility Range	22-26AWG solid cable
11	IDC Type	Dual (110 Or Krone) Type
12	Current rating	1.5A max
13	Insulation resistance	500 M ohm (min)@100 Vdc
14	Contact Resistance	20 M ohm (max) per contact
15	Retention	50N
16	Voltage rating	230 V rms max.
17	Flammability Rating	UL 94V-0
18	Safety Rating	UL1863
19	Colour Coding	As Per 568 A/B Standards
20	Standards Compliance	ANSI/TIA-568-C.2, ISO/IEC-11801, EN50173-2
21	Application	IEEE 802.af, IEEE 802.3at for PoE applications
22	Certification	UL, CE

13. Surge Protection Device (SPD)

1	Nominal AC voltage	230 V (50-60 Hz)
2	SPD in accordance with - EN 61643-11/IEC 61643-11	Type 2/Class II
3	Max operating AC voltage [L-N]	275 V
4	Max operating voltage [N-PE]	255 V
5	Nominal discharge current	20 kA
6	Max discharge current	40 kA
7	Voltage protection level [L-N]	<1 kV
8	Voltage protection level [N-PE]	<1.5 kV
9	Response time [L-N]	<25 ns
10	Response time [N-PE]	<100 ns
11	Operating temperature range	0-65 C
12	Degree of protection	IP 20 rating
13	Enclosure protection	IEC 60529 or equivalent Indian standard

14	Certification	UL 1449 or equivalent Indian standard
15	Visual Display	LED indicator (Green and Red)
16	Features	Audible Alarm

14. CAT 6 UTP Cable - Indoor

1	Type	Unshielded Twisted Pair, Category 6, TIA / EIA 568-C.2 & ISO/IEC 11801
2	Conductors	23 AWG solid bare copper
3	Insulation	High Density Polyethylene
4	Jacket	FR PVC
5	Pair Separator	Cross-member (+) fluted Spline
6	Operating temperature	-10 °C to +65 °C
8	Frequency	Tested up to Minimum 250 MHz
9	Packing Box	305 Meters/Box
10	Cable Outer Diameter	6.3 +/- 0.4 mm
12	Bend Radius	4 * Cable Diameter
13	Impedance	100 Ohms + / - 15 ohms, 1 to 250 MHz
14	Mutual Capacitance	5.6 nF MAX /100 Mtr
15	Conductor Resistance	73 Ohms Max / KM nominal
16	Propagation Delay Skew	35 ns/100 Mtrs. MAX
17	Max. Tensile strength	110N
18	Standard Compliance	ANSI/TIA-568 C.2 category 6, ISO/IEC-11801, Class E/ IEC 61156-5: category 6
19	Application	IEEE 802.af and IEEE 802.3at for PoE
20	Certification	UL, CE, ETL, ETL Listed/Intertek Certified, or IS Standard Certified

15. PVC Pipe - Rigid Plain Conduits of Insulating Materials

1	Classification of Conduit	Medium Mechanical Stresses
2	Nominal Size of the Conduit, (mm)	25
3	Length (Meters)	3
4	Socket ended conduit (at one end)	Yes
5	ISI Marked	No

16. Monitoring Workstation

1	Processor	Latest generation Intel® Core™ i5 / Intel® Xeon® / AMD Ryzen™ 5 or higher processor.
2	RAM	32GB (Upgradable to 64GB)
3	Graphics	Internal/External Graphic controller with minimum 4 GB video memory (non- shared), NVIDIA/AMD
4	Internal Storage	1TB SSD or better

5	Network interface	1G ports for providing Ethernet connectivity
6	Operating System	Windows 11 Professional
7	Other	Bidder should have to ensure smooth functioning of the CCTV camera systems in the installed VMS/CMS under the server configuration. The Server requirements mentioned in this RFP are a minimum indicative requirement. The bidders are advised to carry out a detailed assessment of the server requirements to fulfil the objectives of this RFP. Any additional server capacity requirements for the same as a part of the solution. The same has to be managed by the bidder at no additional cost to the tenderer. Bidder has to submit the required server details in the solutions document.
8	Keyboard & Mouse	Wired

17. VMS for Monitoring

1	The VMS should support the device management (Cameras, NVRs, PTZ, etc.) & User Management
2	The client of one single PC shall be able to visit multiple embedded NVRs simultaneously and make configurations as well.
3	The software shall support 100 IP devices like NVRs, Encoders and decoders (or) 300 IP channels.
4	The Software shall support query and playback via remote embedded NVRs, and the video can be downloaded during playback.
5	The software shall support video split up 1/4/9/16/25/36/49/64 or customized split on live monitoring
6	The software shall support Multiview on live screen while monitoring by the operators
7	Video management Client Software shall have the device management features like Auto find, add, delete, device group, reboot, setup, etc.
8	Client software shall have the features to generate health report like Device status, alarm info, HDD info, system info, etc.,
9	Software shall have the ability to support direct connectivity of IP Encoders and decoders.
10	Software shall support 16 channels playback screen
11	Software shall support Multi screen split, Snapshot, Record, Audio, Talkback, Alarm output control and PTZ control like PTZ, Presets, Cruise, Auto-scan, Pattern, Focus, Joystick control.
12	Software shall support the video source like local storage, centralized storage and device storage.
13	Software shall support Import/export the configuration files, video export on .avi or .mkv or .mp4 format which is playable by any Video player.
14	Software shall support the playback features like Snapshot, Audio, E-PTZ, Speed increase or decrease up to 8X, Synchronization playback with time search.

15	Software shall support alarm type such as External alarm, video loss, motion, tampering, disk full or error.	
16	Software shall support event actions such as Trigger recording, PTZ movement, alarm, popup video.	
17	Software shall support device configuration such as Network, encode, PTZ, image, event, record, disk, account, maintenance	
18	Software shall have the ability to receive & Pop-up the alarm generated from IP devices like cameras and NVR.	
19	Software shall have ability to receive all the analytics features supported by IP cameras and NVRs.	
20	Software shall support logs such as Client log, remote device log, operation log, system log, alarm log.	
21	Software shall support P2P connectivity for live viewing, playback & alert management of the devices over the internet.	
18. VMS Base plus client Licence		
1	General	The VMS should support any ONVIF compliant IP cameras and should support ONVIF Profile S, G, T & M and same should be reflected in www.onvif.org in the Conformant Devices.
		VMS shall be capable of being deployed in a virtualized server environment without loss of any functionality.
		The Offered VMS must be Open Platform Video Management Software (VMS) Application, should be Brand Agnostic, & should support various third Party ONVIF IP Cameras, this is Compulsorily required so that the Same VMS Applications can be scaled up in future by just Adding third Party IP Cameras & Additional Software Licenses.
2	Support of NVR and DVR	The Offered VMS must support the Following features when Connected with Third Party DVR's & NVR's i. Fetching & Displaying Live Streams from all Channels, ii. Recorded Playback Video Streams from all Channels, iii. Alarm Events Health Status of DVR's & NVR's iv. VMS is capable to search old video footage from the storage.
3	Video channels Support	The IP Video Management Software should allow Live Viewing, Recording and Management solution of Network Video surveillance systems & shall not have any Limit on the Number of Cameras to be Connected & shall be Scalable to Unlimited IP Cameras in Future by Augmentation of Camera channel Licenses & server Hardware Components.
4	User Management	Centrally controlled user management - Users, roles, rules and privileges should be stored on the VMS server allowing any authorized user to log into any workstation
5	Device Discovery	The VMS shall have ability to easily install, configure, modify, search and remove surveillance devices with automatic discovery of IP devices.

6	Event management	The VMS shall have ability to enforce custom settings for event detection, alarm notification, recording, input/out (I/O) control, and other features in response to events. The alarm management module shall support graphical displays with interactive icons to display the status of the cameras & other inputs.
7	Software/Patch Upgrade	It Should allow quick software and patch upgrade and support of new devices, drivers and operating systems. System should be able to implement software upgrades without requiring all hardware components to be reconfigured.
8	Recording & Transfer	Should support Multiple streaming, must support for Independent Stream Configuration for Recording & Live Streaming Separately Should allow each stream to be viewed independently by client viewer. The VMS Client must have Options to select the Recording Stream for Viewing, Separate Live Stream for Viewing & must also have the option to directly stream the Cameras irrespective of the Recording stream and Live Stream. Recording from connected cameras should be stored in individual databases. Should support multiple storage file formats such as asf/.ts/.wmv etc. Should support recording in all resolution at desired FPS Should support video cum audio recording Shall support automatic failover for recording The VMS Shall have a Built-in Storage Calculation tool, that shall allow for Storage Calculation based on the Total No. of Cameras Added, No. of days Storage is required & the Available Hard disks within the Server/Mapped Storage. The Storage Calculation must also provide estimation of the No. of Days recording that can take place depending on the Total Availability of Storage Space & No. of Cameras added & configured at their respective configuration. The Proposed VMS Solution must support native Fail over with in the application with no dependency on any external application for both hardware and application redundancy. The native failover architecture must be for both management and recording servers The Fail over and Fall-back management and recording Server shall be on hot standby, ready to take over during the primary management server fails. No manual action from the user shall be required. The fail-over time should not be beyond 30 Seconds. Should automatically retrieve and store recording stored on the camera once the network connectivity between the camera storage and the VMS is restored.

		Edge Recording Synchronization: VMS Server and Camera should sync recordings in case of network or other communication failure between camera and VMS, through ONVIF G Profile or through Dedicated SDK/API Integration or any other proposed solution Shall be capable of transferring recorded images to recordable media (such as CD/DVD and/or tapes) or Video Exports with Watermark and Encrypted with SSL / TLS technology, one can protect the video tampering and prove that the video is not tampered.
9	Customized Record Retention	Should support Customized recording retention period for specific camera, group, area etc.
10	Parameter Configuration	The VMS shall have ability to configure multiple streams with different quality parameters e.g. Codec (H.264, H.265, MPEG, JPEG) , resolution, frame & bit rate etc.
11	Protocol Support	HTTP, TCP, UDP, RTSP, Multicast.
12	Device Search	The VMS shall have ability to search and view device(s) based on standard criteria like ID, Name, Location, Group, Type etc.
13	Storage Indexing	VMS should store video feeds in a standard folder tree structure so that it becomes easy for system admin to browse videos categories based on year, month, date and time wise. Also, the file name should indicate important attributes like camera location, date, time etc.
14	Controls	PTZ configuration and control including presets, patterns, patrolling, priority, Zoom in/out and permissions. PTZ Control, Digital PTZ Control, PTZ Joystick Support, Preset position setup, Preset position search, Optical zoom in, zoom out, focus in, focus out, Digital zoom enable / disable, Full screen view enable/disable, Camera connect/ disconnect
15	Image Snapshot	System should allow creating a still image from live or recorded feed and storing it into a workstation.
16	Video Search and retrieval	The VMS shall have ability to quickly search and retrieve recordings: Search methods should include search by camera(s), group, date/time, alarm/event / bookmark list, smart (motion) search by creating motion index or by generating thumbnail summary of a video archive to locate specific event. The VMS Application must Support for P2P Communication Model for Communication of the NVR & the VMS at the state Offices. Any Additional Hardware & Software required for Achieving the P2P Communication Model has to be Considered as a part of the BID.
17	Playback Control	The system should offer following playback controls like Play/Pause, Lock speed, Forward playback, Reverse playback.

18	Reports	The system should provide interactive reporting interface with standard and user-defined custom reports and filtering options to:
		Review currently logged in users and functions being performed.
		Retrieve audit trails - user activities, errors and system logs.
		View list of hardware units and selected configuration options.
		List down configured users and corresponding roles & permissions.
		View details of bookmarks, event/alarm history and exported evidences.
19	Security	The VMS recorders should be able to connect via a secure connection using authentication and encryption
		o Authentication - user and password credentials
		o Encryption – 256 Bit encryption Techniques
		The VMS recorder should be able to connect via a secure HTTPS connection to its associated edge devices (IP cameras & encoders)
		The VMS management database connection should be encrypted using 256bit encryption
		The VMS should encrypt the exported file format using password protection
		The OEM of the proposed VMS should have certificate from CERT-IN empaneled Government auditors/ agencies to mitigate cyber security attacks as per OWASP Top 10 Vulnerabilities. And should have CERT-IN certificate before the date publishing of the RFP.
20	License	The proposed VMS should be supplied with all types of required licenses including workstation/client licenses (Web, Mobile) valid perpetual for life.
21	External Storage Connectivity & it's Resiliency	The VMS must support for Connecting Multiple External Storage Devices in the form of Primary & Secondary Storage Drive.
		It must also have the Option of Storage Drive Redundancy, wherein if the Primary Drive is Unavailable then the VMS Application/Recording Server must Automatically Start Recording in the Secondary Configured Drive.
		In Case of Recording has been done in Secondary Storage Drive, during the Failure of Primary Drives then after the Primary is restored the Recording that took place in the Secondary Drive shall be Synchronized in the Primary Drive.

22	VMS Web Client	The VMS Web Client shall have Dash boarding Capabilities, such that the Dashboard should Support for Drawings/Maps GIS Layer, OSM Layer, Autocad.dwg File, .JPEG file format, .PDF file format, Customized Video Grid for Live & Playback of Video & Events Table The VMS Web Client shall have a Reporting functionality in the form Camera Uptime, Downtime. The VMS Web Client shall also show the Recording server status Report, Storage Space Available status & Reports. The VMS Web Client must support for H.265, H,264 Codec Live & Playback Streaming.
23	Systems Management & Administration	The software MUST come as one unit and not multiple loadable units, the Management Server shall be loaded on a Single Machine, from which all the Cameras, Additional Recording Servers, Video Analytics Servers & Viewing Clients, shall be managed Centrally. The IP Video Management Software should allow Live Viewing, Recording and Management solution of Network Video surveillance systems & shall not have any Limit on the Number of Cameras to be Connected & shall be Scalable to Unlimited IP Cameras in Future by Augmentation of Camera channel Licenses & server Hardware Components. The Video Management Software shall be Client-Server based IP Video security solution that shall provide seamless management of Digital Video, Audio and data across an IP network. The video management Software shall provide full virtual matrix switching and control capability. Video from sites shall be possible to view from single or numerous workstations simultaneously at any time. Cameras, recorders, and viewing stations may be placed across the terminal in the IP network. The Video Management System shall allow an unlimited number of cameras to be connected to each recording server and an unlimited number of recording servers to be connected to each management server across multiple sites, if required. The VMS shall be based on a true open architecture that shall allow the use of non-proprietary workstation and server hardware, non-proprietary network infrastructure and non-proprietary storage. The VMS should not be Pre-Installed on Embedded Linux Platforms. The Video Management System shall be a fully distributed solution, designed for limitless multi-site and multiple server installations requiring 24/7 surveillance with support for devices from different vendors. The Video Management System shall offer centralized management of all devices, servers and users and must empower a flexible rule-based system driven by schedules and events.

24	Video Management Software (VMS) OEM Competency	The Open Platform Video Management Software (VMS) Application, should be Brand Agnostic, should support various third Party ONVIF IP Cameras, this is Compulsorily required so that the Same VMS Applications can be scaled up in future by just Adding third Party IP Cameras & Additional Software Licenses.
25	Cyber Security Features	The offered CMS/VMS must be cyber security certified with FIPS- 140-2 encryption/STQC / CERTIN from Indian body for mitigating cyber security risk. A Valid Certificate for FIPS 140-2 / STQC / CERT-IN for the CMS/VMS Application to be submitted as a Proof. The FIPS 140-2 / STQC / CERT-IN Certification should be done on or before the Bid Publishing Date. The CMS/VMS OEM should have Performed Benchmark Appraisal & Achieved CMMI V2.0 Maturity Level - 3. Appraisal Certificate of CMMI V2.0 Level - 3 to be Submitted as a Proof. The OEM should be in the Possession of the Appraisal Certificate on or before the Bid Publishing Date The FIPS 140-2 Certification should be done on or before the Bid Publishing Date. The CMS/VMS OEM should have Performed Benchmark Appraisal & Achieved CMMI V2.0 Maturity Level - 3. Appraisal Certificate of CMMI V2.0 Level - 3 to be Submitted as a Proof. The OEM should be in the Possession of the Appraisal Certificate on or before the Bid Publishing Date.

Price Bid

Sr. No.	Requirement	Total Qty.	Unit Price with 5 years warranty (with tax)	Total Price with 5 years warranty (with tax)
1	2MP Dome Camera	19		
2	4MP Bullet Camera	31		
3	2MP PTZ Camera 30X	4		
4	64 Channel NVR with 8 SATA Interface Loaded with 64TB Storage Capacity	1		
5	8 Port Network PoE Switch	9		
6	CAT6 8 Port Patch Panel	9		
7	CAT6 Patch Cord -1Mtr	54		

8	55" Display	3		
9	12U Network Rack	1		
10	9U Network Rack	8		
11	1KVA Online UPS with 30Min Back-up	1		
12	CAT6 Information Outlet and Face Plate	54		
13	Surge Protection Device	9		
14	CAT6 Cable Indoor 1 mtr. With Laying	3780		
15	25 MM PVC PIPE with Laying	1890		
16	Monitoring Workstation	2		
17	VMS License bank for Camera	54		
18	VMS Licenses for workstations	1		
19	Technical Manpower Requirement	1		
Total				

Note:

1. All the above-mentioned line items should comply to Technical specifications and Scope of work including all applicable Licenses, Active and passive Cabling and Accessories, Installation, Commissioning and Configuration with 5 Year Warranty and onsite Support.
2. Above mentioned quantities are indicative and for evaluation purposes only, actual quantities may vary at the time of placing the order. The Quoted rates remain valid throughout the project contract period.
3. Bidder needs to upload detailed priced BOQ along with and pricing of all the line items
4. The Successful bidder needs to account for all Out of Pocket expenses due to Boarding, Lodging and other related items.
5. The Purchaser reserves the right to increase or decrease the quantity to be ordered up to 25 percent of the bid quantity at the time of placement of the contract. The purchaser also reserves the right to increase the ordered quantity by up to 25% of the contracted quantity during the currency of the contract at the contracted rates. Bidders are bound to accept the orders accordingly.
6. Bidder has to submit the Financial Document Indicating Price Break Up (in the above-said prescribed format only) under the financial section of the GeM.

Bidder Information

Name	
Designation	
Company Address	
Telephone No	
Mobile No	
E-mail	

On Letterhead of Bidder

Please submit the undertaking letter as per Ministry of Finance Memorandum No.: F. No.6/18/2019-PPD dated 23.07.2020 & Office Memorandum No.: F.18/37/2020-PPD dated 08.02.2021 as per Performa given below on OEM letterhead as well as on bidder's letterhead.

Sub: Undertaking as per Office Memorandum No.: F. No.6/18/2019-PPD dated 23.07.2020 & Office Memorandum No.: F.18/37/2020-PPD dated 08.02.2021 & 23.02.2023 published by Ministry of Finance, Dept. of Expenditure, Public Procurement division

Ref: Bid Number: _____

I have read the clause regarding restriction on procurement from a bidder of a country that shares a land border with India. I certify that we as a bidder and quoted product from the following OEMs are not from such a country or if from such a country, these quoted products OEM has been registered with the competent authority. I hereby certify that these quoted product & its OEM fulfills all requirements in this regard and is eligible to be considered for procurement for Bid number_____.

No.	Item Category	Quoted Make & Model

No.	Item Category	Quoted Make & Model

In case I'm supplying material from a country which shares a land border with India, I will provide evidence for valid registration by the competent authority, otherwise GIL/End user Dept. reserves the right to take legal action on us.

(Signature)

Authorized Signatory of M/s <<Name of Company>>

On Letterhead of OEM

Sub: Undertaking as per Office Memorandum No.: F. No.6/18/2019-PPD dated 23.07.2020 & Office Memorandum No.: F.18/37/2020-PPD dated 08.02.2021 & 23.02.2023 published by Ministry of Finance, Dept. of Expenditure, Public Procurement division

Ref: Bid Number: _____

Dear Sir,

I have read the clause regarding restriction on procurement from a bidder of a country that shares a land border with India. I certify that our quoted product and our company are not from such a country, or if from such a country, our quoted product and our company have been registered with the competent authority. I hereby certify that these quoted products and our company fulfills all requirements in this regard and is eligible to be considered for procurement for Bid number _____.

No.	Item Category	Quoted Make & Model

In case I'm supplying material from a country which shares a land border with India, I will provide evidence for valid registration by the competent authority; otherwise GIL/End user Dept. reserves the right to take legal action on us.

(Signature)

Authorized Signatory of **M/s <<Name of Company>>**