Request for Proposal (RFP)

Selection of Agency for Procurement, Supply, Installation and Maintenance of IP Based CCTV Surveillance System at four (04) Universities under Higher Education Department (HED), Government of Odisha.

Tender Ref. No. : OCAC-SEGP-INFRA-0087-2025/ENQ/26039, Dated 08.07.2026

Odisha Computer Application Centre

[Technical Directorate of E & I.T. Department, Government of Odisha]
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Tender Reference :

Date	**08/07/2026**
Tender Reference Number	**OCAC-SEGP-INFRA-0087-2025/ENQ/26039**
Title	**Selection of Service Provider for Procurement, Supply, Installation and Maintenance of IP Based CCTV Surveillance System at four (04) Universities under Higher Education Department (HED), Government of Odisha**

Tender Schedule :

Event	**Date & Time**
Date of Publication	08/07/2026
Availability of RFP Document	**08/07/2026**
Last date for receiving queries	**14/07/2026 by 3:00 PM**
Date of Pre-Bid Meeting	**17/07/2026, 04:00 PM**
Issue of Corrigendum if any	**23/07/2026**
Last date & Time of Bid Submission	**07/08/2026 by 3:00 PM**
Opening of General & Technical Bid	07/08/2026 at 4:00 PM
Presentation on Proposed Solution	To be intimated later
Opening of Commercial bid	To be intimated later

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Disclaimer

The information contained in this Request for Proposal (hereinafter referred to as "RFP") document provided to the Bidders, by the Odisha Computer Application Centre (OCAC) Odisha, or any of its employees, is provided to the Bidder(s) on the terms and conditions set out in this RFP document and all other terms and conditions subject to which such information is provided.

The purpose of this RFP document is to provide the Bidder(s) with information to assist in the formulation of Proposals. This RFP document does not aim to hold all the information each Bidder may require. This RFP document may not be appropriate for all persons, and it is not possible for the Odisha Computer Application Centre (OCAC) Odisha and its employees to consider the business/investment objectives, financial situation and particular needs of each Bidder who reads or uses this RFP document. Each Bidder should conduct its own investigations and analysis and should check the accuracy, reliability and completeness of the information in this RFP document and where necessary obtain independent advice from appropriate sources. Odisha Computer Application Centre (OCAC) Odisha and its employees make no representation or warranty and incur no liability under any law, statute, rules or regulations as to the accuracy, reliability or completeness of the RFP document. Client Department also accepts no liability of any nature whether resulting from negligence or otherwise, however, caused arising from reliance of any Bidder upon the statements contained in the Bidding Documents.

Information provided in the RFP Document to the Bidder(s) is on a wide range of matters, some of which may depend upon interpretation of law. The information given is not intended to be an exhaustive account of statutory requirements and should not be regarded as a complete or authoritative statement of law. OCAC/Client Department accepts no responsibility for the accuracy or otherwise for any interpretation or opinion on law expressed herein.

The issue of this RFP Documents does not imply that the OCAC/Client Department is bound to select a Bidder or to appoint the Selected Bidder or Service Provider for the Project and the OCAC/Client Department reserves the right to reject all or any of the Bidders or Bids without assigning any reason whatsoever.

The Bidder shall bear all its costs associated with or relating to the preparation and submission of its Bid including but not limited to preparation, copying, postage, delivery fees, uploading, expenses associated with any demonstrations or presentations which may be required by OCAC/Client Department or any other costs incurred in connection with or relating to its Bid. All such costs and expenses will remain with the Bidder, and the OCAC/Client Department shall not be liable in any manner whatsoever for the same or for any other costs or other expenses incurred by a Bidder in preparation or submission of the Bid, regardless of the conduct or outcome of the Selection process. OCAC may, in its absolute discretion, but without being under any obligation to do so, update, amend or supplement the information in this RFP document.

1. SECTION-I (Instructions to Bidders for Online Bid Submission)

e-Nivida is the complete process of e-Tendering, from publishing of tenders online, inviting online bids, evaluation and award of contract using the system. You may keep a watch of the tenders floated under **https://enivida.odisha.gov.in**

Bidder Enrolment can be done using "**Bidder Enrolment".**

The instructions given below are meant to assist the bidder's in registering on the e- Nivida Portal and submitting their bid online on the portal as per uploaded bid. More useful information for submitting online bids on the eNivida Portal may be obtained at:

https://enivida.odisha.gov.in

GUIDELINES FOR REGISTRATION:

a. Bidders are required to enroll themselves on the e-Nivida Portal https://enivida.odisha.gov.in or click on the link "Bidder Enrollment" available on the home page of e-tender Portal by paying the Registration fee of Rs. 2,500/- + Applicable GST.
b. As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts.
c. Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication with the bidders.
d. Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Only Class III Certificates with signing + encryption key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify/TCS /nCode/eMudhra etc.) with their profile.
e. Only valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSC's to others which may lead to misuse.
f. Bidder then logs in to the site through the secured log-in by entering their user ID/password and the password of the DSC/e-Token.
g. The scanned copies of all original documents should be uploaded in pdf format on e-tender portal.
h. After completion of registration payment, bidders need to send their acknowledgement copy on our help desk mail id ***odishaenivida@gmail.com***, for activation of the account.

SEARCHING FOR TENDER DOCUMENTS

a. There are various search options built in the e-tender Portal, to facilitate bidders to search for active tenders by several parameters.
b. Once the bidders have selected the tenders they are interested in, then they can pay the Tender fee and processing fee (NOT REFUNDABLE) by net-banking/Debit/Credit card then you may download the required documents/tender schedules, Bid documents etc. Once you pay both fee tenders will be moved to the respective 'requested' Tab. This would enable the e- tender Portal to intimate the bidders through SMS/e-mail in case there is any corrigendum issued to the tender document.

PREPARATION OF BIDS

a. Bidder should take into account any corrigendum published on the tender document before submitting their bids.
b. Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid.
c. Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document/schedule and generally, they can be in PDF formats. Bid Original documents may be scanned with 100 dpi with Color option which helps in reducing size of the scanned document.
d. To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g., PAN card copy, GST, Annual reports, auditor certificates etc.) has been provided to the bidders. Bidders can use "My Documents" available to them to upload such documents.
e. These documents may be directly submitted from the "My Documents" area while submitting a bid and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process. Already uploaded documents in this section will be displayed. Click "New" to upload new documents.

SUBMISSION OF BIDS

a. Bidder should log into the website well in advance for the submission of the bid so that it gets uploaded well in time i.e., on or before the bid submission time. Bidder will be responsible for any delay due to other issues.
b. The bidder has to digitally sign and upload the required bid documents one by one as indicated in the tender document as a token of acceptance of the terms and conditions laid down by Department.
c. Bidder has to select the payment option as per the tender document to pay the tender fee/ Tender Processing fee & EMD declaration as applicable and enter details of the instrument.
d. In case of BG bidder should prepare the BG as per the instructions specified in the tender document. The BG in original should be posted/couriered/given in person to the concerned official before the Online Opening of Financial Bid. In case of non-receipt of BG amount in original by the said time, the uploaded bid will be summarily rejected.
e. Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. If the price bid has been given as a standard BOQ format with the tender document, then the same is to be downloaded and to be filled by all the bidders. Bidders are required to download the BOQ file, open it and complete the yellow Coloured (unprotected) cells with their respective financial quotes and other details (such as name of the bidder). No other cells should be changed. Once the details have been completed, the bidder should save it and submit it online, without changing the filename. If the BOQ file is found to be modified by the bidder, the bid will be rejected.
f. The server time (which is displayed on the bidders' dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc.

g. The bidders should follow this time during bid submission.

h. The uploaded bid documents become readable only after the tender opening by the authorized bid openers.

i. Upon the successful and timely submission of bid click “Complete” (i.e. after Clicking “Submit” in the portal), the portal will give a successful Tender submission acknowledgement & a bid summary will be displayed with the unique id and date & time of submission of the bid with all other relevant details.

j. The tender summary has to be printed and kept as an acknowledgement of the submission of the tender. This acknowledgement may be used as an entry pass for any bid opening meetings.

For any clarification in using eNivida Portal:

a. Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a tender or the relevant contact person indicated in the tender.

b. Any queries relating to the process of online bid submission or queries relating to e-tender Portal in general may be directed to the Helpdesk Support.

Please feel free to contact eNivida Helpdesk (as given below) for any query related to e-tendering.

Phone No. 011-49606060

Mail id: - odishaenivida@gmail.com

2. SECTION-II (NOTICE INVITING TENDER)

Sealed tenders are invited from reputed bidders to undertake the work for Selection of Agency for Procurement, Supply, Installation and Maintenance of IP Based CCTV Surveillance System at four (04) Universities under Higher Education Department (HED), Odisha. The RFP document can be downloaded from the web site https://www.ocac.in and www.odisha.gov.in, **from 08-07-2026 to 07-08-2026, Time: 03:00 P.M**. ***The authority reserves the right to accept/reject any and part thereof or the entire tender without assigning any reason thereof.***

General Manager (Admn.)

Odisha Computer Application Centre

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3. SECTION – III (INVITATION FOR BIDS)

3.1 INTRODUCTION

The Higher Education Department (HED), Odisha has been playing the pivotal role in improving the quality of education in the State, establishing a value based society and mounding the youth to meet the challenges of 21st Century. The opening up of institutions of national repute like IIT, IIIT, NIT & NISER in the State has not only made the State of Odisha an educational hub but also thrown open some challenges and opportunities before the Higher Education Department. To meet those challenges and make the best use of opportunities, the Higher Education Department has all out efforts to strengthen the existing educational system and simultaneously taken innovative steps to open up new avenues for the students by imparting need based market oriented education.

Odisha Computer Application Centre (OCAC), Bhubaneswar on behalf of the Higher Education Department (HED), Odisha invites competitive bid proposals from interested bidders who have experience in Selection of Agency for Procurement, Supply, Installation, and Maintenance of IP Based CCTV Surveillance System at four (04) Universities under Higher Education Department (HED), Odisha. Evaluation of bids shall be carried out following the Quality and Cost Based Selection (QCBS) methodology, with 70% weight assigned to the technical (quality) score and 30% weight assigned to the financial (cost) score.

3.2 BACKGROUND

Ensuring a safe, secure, and conducive learning environment has become a critical priority for higher education institutions across India. Colleges and universities today face increasing challenges related to campus safety, including incidents of ragging, vandalism, theft, unauthorized access, and other forms of disruptive or criminal behavior. To address these challenges and strengthen institutional governance, the Government of Odisha has initiated a comprehensive plan to deploy holistic, integrated, CCTV based surveillance systems across State Government Universities and Colleges.

The initiative aims to leverage modern surveillance technologies to enhance the overall security posture of educational campuses. By providing real-time monitoring, evidence-based investigation capabilities, and technology-enabled rapid response mechanisms, the project seeks to protect students, faculty, staff, and institutional assets.

In the initial phase, 4 universities under Higher Education Department (HED) of Odisha State have been identified for implementation of the integrated CCTV based video surveillance system. Subsequent phases will cover remaining higher education institutions in a structured, scalable manner. The system architecture includes deployment of CCTV cameras across all critical indoor and outdoor locations, classrooms, common areas, laboratories, libraries, staff rooms, entry/exit points, hostels, sports grounds, corridors, lobbies, and auditoriums assuring proper surveillance in the university campus.

To support effective operation and oversight, each institution will have a local server farm area for on-campus monitoring and storage.

This RFP is issued by OCAC, which is the sole point of contact during selection process. The officer responsible for entire process is General Manager (Admin). The purpose of this RFP is to provide interested System Integrator (SI) / Implementation Agency (IA) / Bidders with information to enable them to prepare and submit a proposal for Selection of Agency for Procurement, Supply, Installation, and Maintenance of IP Based CCTV Surveillance System at four (04) Universities under Higher Education Department (HED), Odisha. The selected bidder shall be responsible to provide operation & maintenance support of all the supplied items for a period of five (05) years from the date of Final Acceptance Test or Go-Live of the project, whichever is earlier. The list of detailed locations is mentioned in **SECTION–IX** of this RFP. The tentative Bill of Quantity (BOQ) for the 04 numbers of universities are mentioned in **Section 3.3.**

3.3 BILL OF QUANTITY (BOQ)

3.3.1 BOQ of Product

SL. No.	Item Description/ Functionality	Units	Universities				Total Qty
			Maa Manikeshwari	Rama Devi University	Sambalpur University	Utkal Univ.	
			Qty.	Qty.	Qty.	Qty.	
1.	5MP IP Fixed Bullet Camera and Mounting Accessories with 512GB SD Card from day1.	Nos	243	130	325	910	**1608**
2.	5MP IP Fixed Dome Camera and Mounting Accessories with 512GB SD Card from day1.	Nos	346	75	377	716	**1514**
3.	5MP IP PTZ Camera and Mounting Accessories with 512GB SD Card from day1.	Nos	7	3	4	10	**24**
4.	Surge protection devices for cameras	Nos	243	130	325	910	**1608**
5.	Video Management System (VMS) Software Channel License	Nos	596	208	706	1636	**3146**
6.	Video Management System (VMS) Application/Management Server with Operating System and necessary Database as per application requirement	Nos	1	1	1	1	**4**
7.	Video Management System (VMS) Recording Server with 100TB usable Storage with Operating System as per application requirement	Nos	3	1	3	6	**13**
8.	12-Port Giga PoE+ L2 Managed Switch with 1G SFP Uplink	Nos	9	8	4	30	**51**
9.	24-Port Giga PoE+ L2 Managed Switch with 1G SFP Uplink	Nos	41	27	109	125	**302**
10.	24-Port L3 Full Managed Core Switch with 1/10G SFP+ Ports	Nos	2	2	2	0	**6**
11.	48-Port L3 Full Managed Core Switch with 1/10G SFP+ Ports	Nos	0	0	0	2	**2**
12.	24-Port L2 Managed Switch with 4× 10/25G SFP+ Uplink	Nos	6	6	6	6	**24**
13.	6 Core Single Mode OFC Cable	Mtr.	6180	2640	17500	21000	**47320**
14.	UTP CAT-6 Cable (Armoured for outdoor cabling & Non- Armoured for indoor cabling)	Mtr.	30100	10600	35600	82200	**158500**
15.	UTP CAT-6 Patch Cable (2m)	Nos	10	10	10	10	**40**

SL. No.	Item Description/ Functionality	Units	Universities				Total Qty
			Maa Manikeshwari	Rama Devi University	Sambalpur University	Utkal Univ.	
			Qty.	Qty.	Qty.	Qty.	
16.	OFC Patch Cord LC-LC (1m)	Nos	156	111	345	471	**1083**
17.	PVC Insulated 3 Core 2.5 sq. mm Power Cable	Mtr.	1750	1250	2820	9390	**15210**
18.	PVC Insulated 3 Core 4 sq. mm Power Cable	Mtr.	50	50	50	50	**200**
19.	HDMI Cable (20m)	Nos	2	2	2	2	**8**
20.	RJ-45 Male Connector	Nos	1582	649	1842	3872	**7945**
21.	12-Port Rack Mount LIU Fully Loaded with ALL Accessories (LC Type)	Nos	78	56	173	236	**543**
22.	Single Mode 1G SFP Module Pair (10KM)	Nos	174	130	364	490	**1158**
23.	Single Mode 10G SFP+ Module Pair (10KM)	Nos	24	24	24	24	**96**
24.	CAT-6 Patch Panel equipped with RJ- 45 Connector	Nos	2	2	2	2	**8**
25.	Single Port Faceplate with Keystone and Gang Box	Nos	10	10	10	10	**40**
26.	9U Outdoor Vandal and Weather-proof Rack with PDU suitable for Pole Installation along with Patch panel, etc.	Nos	10	6	30	70	**116**
27.	9U Indoor Wall Mount Rack with PDU & All Accessories along with Patch panel, etc.	Nos	38	26	83	95	**242**
28.	Weather-proof PVC Junction Box (100mm X 100mm) for Camera Installation	Nos	595	209	708	1634	**3146**
29.	Galvanised Octagonal Hot DIP 8 Mtrs Pole along with Lightning Arrestor	Nos	10	6	39	80	**135**
30.	PVC Rigid Conduct Pipe with all Accessories (38mm)	Mtr.	12040	4240	14240	32880	**63400**
31.	High-Density Polyethylene (HDPE) Pipe	Mtr.	6180	2640	17500	21000	**47320**
32.	PVC Coated GI Flexible Pipe (38mm)	Mtr.	360	148	419	880	**1807**
33.	VMS Workstation with 24" FHD Monitor	Nos	3	3	3	3	**12**
34.	Wireless Mouse & Keyboard Set	Nos	2	2	2	2	**8**
35.	Video wall with Controller and Accessories	Nos	1	1	1	1	**4**

SL. No.	Item Description/ Functionality	Units	Universities				Total Qty
			Maa Manikeshwari	Rama Devi University	Sambalpur University	Utkal Univ.	
			Qty.	Qty.	Qty.	Qty.	
36.	10KVA Online UPS with 2 Hours Backup	Nos	1	1	1	2	**5**
37.	1KVA Offline UPS with 2 Hours Backup	Nos	38	26	83	95	**242**
38.	600VA Offline UPS with 2 Hours Backup	Nos	10	6	30	70	**116**
39.	42U Floor Standing Server Rack with Dual PDU & All Accessories	Nos	1	1	1	1	**4**
40.	Chemical Earthing System	Nos	49	33	114	166	**362**
41.	Anti-Virus for Workstation	Nos	3	3	3	3	**12**
42.	Firewall	Nos	1	1	1	1	**4**
43.	Electrical MCB 16A with Box	Nos	48	32	113	165	**358**
44.	Electrical MCB 32A with Box	Nos	2	2	2	2	**8**
45.	Electrical 6/16A Socket Multi Plug	Nos	50	34	115	167	**366**
46.	Electrical 16A switch	Nos	50	34	115	167	**366**
47.	Electrical Board (6x4) PVC	Nos	50	34	115	167	**366**
48.	Industrial Socket 32A	Nos	2	2	2	2	**8**
49.	Single Core 6 sq. mm Earthing Cable	Mtr.	735	495	1710	2490	**5430**
50.	Furniture (one set of Table and Chair)	Lot	1	1	1	1	**4**
51.	Air Conditioners (AC) 2 Ton	Nos	2	2	2	2	**8**
52.	One Time Delivery Cost	Lot	1	1	1	1	**4**

3.3.2 BOQ of Services

Universities			Maa Manikeshwari	RD Univ.	Sambalpur University	Utkal University	Total Qty.
Sl.	Item Description/ Functionality	Units	Qty.	Qty.	Qty.	Qty.	
1	Site Survey of Individual University	Nos	1	1	1	1	**4**
2	Assembling & fixing of 9U Rack (indoor)	Nos	38	26	83	95	**242**
3	Assembling & fixing of 9U rack(Outdoor)	Nos	10	6	30	70	**116**
4	Assembling & fixing of 42U rack	Nos	1	1	1	1	**4**
5	Digging of Hard soil (road cutting, concrete cutting) with back filling with laying of HDPE Pipe	Mtr.	1854	792	5250	6300	**14196**

Universities			Maa Manikeshwari	RD Univ.	Sambalpur University	Utkal University	Total Qty.
Sl.	**Item Description/ Functionality**	**Units**	**Qty.**	**Qty.**	**Qty.**	**Qty.**	
6	Digging of Soft Soil with back filling with laying of HDPE Pipe	Mtr.	4326	1848	12250	14700	**33124**
7	Laying of UTP - Cat 6 Cable (Armoured)	Mtr.	30100	10600	35600	82200	**158500**
8	Laying of OFC Cable	Mtr.	6180	2640	17500	21000	**47320**
9	Laying of power and earth cable	Mtr.	2535	1795	4580	11930	**20840**
10	Laying of PVC Conduit	Mtr.	13705	13712	13713	13715	**54845**
11	Laying of HDMI Cable	Mtr.	40	40	40	40	**160**
12	Laying of PVC Coated GI Flexible Pipe	Mtr.	385	392	393	395	**1565**
13	Fixing & Termination of 12 Port LIU including marking & splicing	Nos	78	56	173	236	**543**
14	Erection of pole 8m with RCC Foundation Along with Lightning Arrestor Installation	Nos	10	6	39	80	**135**
15	Chemical Earthing with Termination to Network rack/CCTV rack/ Server room.	Nos	49	33	114	166	**362**
16	Fixing, Termination, Testing and Commissioning of IO Box Including Back box & Face plate	Nos	10	10	10	10	**40**
17	Fixing, Termination, Testing and Commissioning, Crimping and Testing of RJ 45 Connector	Nos	1582	649	1842	3872	**7945**
18	Installation and Configuration of Dome Camera	Nos	346	75	377	716	**1514**
19	Installation and Configuration of Bullet Camera	Nos	243	130	325	910	**1608**
20	Installation and Configuration of PTZ Camera	Nos	7	3	4	10	**24**
21	Installation and Configuration of L2 Switch	Nos	56	41	119	161	**377**
22	Installation and Configuration of L3 Switch	Nos	2	2	2	2	**8**

Universities			Maa Manikeshwari	RD Univ.	Sambalpur University	Utkal University	Total Qty.
Sl.	**Item Description/ Functionality**	**Units**	**Qty.**	**Qty.**	**Qty.**	**Qty.**	
23	Installation of 1 KVA UPS	Nos	38	26	83	95	**242**
24	Installation of 600VA UPS	Nos	10	6	30	70	**116**
25	Installation 10 KVA UPS	Nos	1	1	1	2	**5**
26	Installation and configuration of Server	Nos	4	2	4	7	**17**
27	Installation and configuration of VMS software	Nos	719	295	837	1760	**3611**
28	Mounting and configuration of video wall display with accessories	Nos	1	1	1	1	**4**
29	Installation and configuration of Client PC/ Workstation with antivirus	Nos	3	3	3	3	**12**
30	Installation and configuration of Firewall	Nos	1	1	1	1	**4**
31	Fixing of MCB	Nos	50	34	115	167	**366**
32	Fixing of electrical 6/16 AMP socket with box with accessories (Power switch, socket, DP, etc.)	Nos	50	34	115	167	**366**
33	Site Readiness and Control Room Preparation	Lot	1	1	1	1	**4**
34	Configuration, testing and commissioning of CCTV system with 5 years onsite support	Lot	1	1	1	1	**4**
35	Integration of existing Camera with newly Installed VMS	Nos	117	83	125	116	**441**
36	Submission of As- built drawing, installation documents, training, manuals etc.	Lot	1	1	1	1	**4**

4. SECTION-IV (GENERAL TERMS & CONDITIONS)

1. Scope of Work

a. The scope of work is to supply, install, testing, commission and maintain CCTV surveillance system and associated hardware for Five (05) Years Comprehensive Onsite Maintenance on turnkey basis through selected Implementation Agency in at various university campus.

b. The CCTV system is to be installed in four (04) university campuses under Higher Education Department (HED) in Odisha State as per enclosed SECTION–VI.

c. The Scope of work is categorized as follows –

A. Site Assessment
B. Establishment of Control Room / Server Room at University Campus
C. Supply, Install and Commission of CCTV System at University Campus
D. Technical Support
E. Testing and Training
F. Comprehensive Maintenance of the CCTV System for Five (05) years

A. Site Assessment

I. The Implementation Agency has to assess the Site to identify and finalize the location for CCTV Cameras, control room, Rack etc. in order to finalize the item wise actual requirement in consultation with the concerned authorized official.

II. The Implementing Agency shall assess the site to identify and finalize the locations for the deployment of the equipment at the respective university in consultation with the concerned authorized officials.

III. Also, the Implementation Agency would assess the Status of Site Readiness and provide the report for the same and document any hindrances for executing work on site in terms of site readiness, Power supply availability at the university campus etc.

IV. The Successful Implementation Agency must provide camera layout on map of each location for CCTV installation. The layout by Implementation Agency shall include marking for camera positioning and locations for Control room, Cable route, Cable Type, Pole positioning, Rack positioning, Switch Positioning etc. to be installed in the universities.

V. The Detail Site Assessment Report should be signed by the concerned authorized official of the university and submitted to the OCAC specifying the number of cameras, switches, etc. at each university and actual required qty. of other BOQ items.

VI. Right of Way (RoW) charges if any shall be borne by University.

VII. The Implementation Agency should also provide the project implementation plan along with the site assessment report covering –

- Approach and Methodology to execute the project
- Team members assigned to the project and deployment schedule
- Detailed Project Plan along with deliverables and dependencies

B. Establishment of Control/Server Room at University Campus

I. A dedicated CCTV control room is to be established at each university for viewing and monitoring of CCTV System.

II. The Control Room should have following provisions –

- Dedicated Control room of approx. 100-200 sq. ft. in each university to host the proposed IT and non-IT systems. The Control Room area is to be allocated with complete civil and electrical works to be provided by the respective university. Control Room's wall should be properly bricks wall for video wall installation. In case of issues and challenges in allocation of Control room by the university official, the hindrances must be documented by the Implementation Agency and submitted to OCAC.
- Control Room should have equipment and components like Rack, Switches, Server, UPS, Workstation, Video wall, Networking connectivity components etc. The Monitoring Workstation may be installed in the Control room or in the university official's cabin as designated/finalized by the respective university.
- The University Authority shall arrange and provide continuous and uninterrupted primary power supply at all designated locations, including the Control Room, and network rooms.
- Uninterruptible Power Supply (UPS) systems at the Control Room and network switch locations at each university campus, with a minimum power backup duration of two (2) hours at full load, as per site requirements which is to be ensured by the Implementation Agency.
- The UPS systems provided by the Implementing Agency shall be intended solely for short-duration power backup and shall not substitute the requirement for continuous power supply to be provided by the University Authority.
- Dust free and waterproof environment which is to be ensured by the respective university.
- Adequate no. of Power points for connection of UPS power system and CCTV system equipment's, Workstations etc. which is to be ensured by the respective university.
- Enough light provision and Emergency Light provision which is to be ensured by the respective university.
- Air Conditioner (AC is required to maintain adequate temperature for Servers and Hard disks etc.) which is to be ensured by the Implementation Agency.
- Dedicated chemical earthing, and UPS to be ensured by the Implementation Agency.
- Table and Chair for workstation which is to be ensured by the Implementation Agency.
- Fire protection equipment like Fire Extinguisher which is to be ensured by the respective university.
- Lock and key provision for control rooms which is to be ensured by the respective university.
- Physical security of equipment which is to be ensured by the respective university.

III. **Control Room Readiness:** Minimal site readiness, including the provision and installation of essential equipment required to make the location operationally fit for IT and non-IT deployment, will be carried out by the Implementation Agency.

IV. No civil works whatsoever, including but not limited to construction, masonry, carpentry, flooring, ceiling work, painting, core cutting, or structural modifications, shall be part of the Implementation Agency's scope of work. All civil works, if required, to be ensured by the respective university. All cables, conduits, etc will be installed on surface.

Note: - The basic infrastructure will be provisioned by the concerned university. However, the adequate earthing should be provisioned by the Implementation Agency. The Main Power Supply from Distribution Board will be provided by respective university in the Control room, however, as per the requirement additional power points and power connection for successful installation of CCTV Systems would be the responsibility of the Implementation Agency.

C. Supply, Install and Commission of CCTV System at University Campus

I. After the Site Assessment and as per the approval the Implementation Agency has to install the CCTV Surveillance System along with other associate infrastructure.

II. Implementation Agency are required to note that while installing/executing the project, Implementation Agency shall finalize the actual location for placement of cameras at each university campus and fixation of height & angle for the cameras after deliberations with officials (Competent Authority) of University.
   - Ensure surveillance objective is met while positioning the camera, create the required field of view
   - Carry out proper adjustments to have the best possible image
   - Implementation Agency should use the industry best practice while positioning and mounting the cameras.

III. Video Management System (VMS) will be installed at every Universities to capture and process the Surveillance Data. The solution is conceptualized with a software-based video surveillance system in Client-Server Centralized architecture for recording, controlling and monitoring.

IV. A local storage system with a minimum retention capacity of **30 days** shall be deployed at each university to store surveillance video data. Video recordings shall be maintained at minimum 1080p resolution @ 25 FPS, with continuous recording enabled for 24x7. The storage infrastructure shall include built-in RAID 5 to ensure fault tolerance and secure retention of video footage.

V. The video feed for sufficient days will also be stored in 512GB SD card within the camera in case of network failure.

VI. In near future, all University may be connected to the Higher Education Department (HED) HQ via VPN over internet connectivity. At any given time, the HQ will monitor live streams of 4 to 5 cameras from each university at 5 MP resolution and 25 FPS, along with receiving critical alarm events. Therefore, a minimum of 30 Mbps high speed internet connectivity is required at each university. Sufficient Internet bandwidth connection is to be ensured by the respective university.

VII. Alarm Categorization in VMS system and other details will be executed during project initiation and project execution time.

VIII. A firewall is provisioned to secure the surveillance network from outside threat.

IX. Workstations will be installed for live viewing, monitoring alerts and extraction of archive video footage.

X. The University Authority shall arrange and provide continuous and uninterrupted primary power supply at all designated locations, including the Control Room, network rooms and field device locations.

XI. Uninterruptible Power Supply (UPS) systems at the Control Room and network switch locations at each university campus, with a minimum power backup duration of two (2)

hours at full load, as per site requirements which is to be ensured by the Implementation Agency.

The UPS systems provided by the Implementing Agency shall be intended solely for short-duration power backup and shall not substitute the requirement for continuous power supply to be provided by the University Authority.

XII. Video wall will be installed for display the live viewing, monitoring alerts and extraction of archive video footage. The viewing of the camera feeds shall be done on Video wall screen in each Control room at university itself.

XIII. The camera system shall have 24X7 operation.

XIV. The CCTV Surveillance System should be secured enough and ensure only legal access.

XV. The feeds from the camera system shall be available for viewing at the university control room and other university official's cabin within the university premises.

XVI. The video feeds will be recorded, stored, retrieved and viewed at optimized quality resolution.

XVII. However, in order to take video as an evidence, there must be a secure system restricted with login credentials so that only authentic official could have the access of the same.

XVIII. The Video Management System (VMS) Server and Storage Server shall have the capability to store and retain the camera feeds for a period of **30 days.**

XIX. The Cameras will be connected to the Video Management System (VMS) via Power Over Ethernet (PoE) L2 Network Switch, L2 Access Switch and L3 Core Network Switch.

XX. A Robust, reliable and scalable LAN network shall be deployed for efficient and effective surveillance. All the required equipment (active and passive both) for establishing such connectivity will be deployed as a part of the overall networking solution.

XXI. The LAN architecture is required to be robust and reliable so that no latency and freezing in live and recorded footage of the CCTV.

XXII. The Implementation Agency shall install, configure the items at the identified locations and then undertake necessary work towards their commissioning. Successful Implementation Agency will have to supply, install & configure all required components for operational of the system including LAN etc. to fulfil the requirement of the RFP. The equipment needs to be updated with latest version of software wherever applicable.

XXIII. The Successful Implementation Agency shall also be responsible to laying down the power cable to necessary equipment as per standard procedure.

XXIV. For the successful commissioning & operationalization of the cameras and to provide the video feeds at university control room, the successful bidder will be required to provide electricity to the cameras through PoE switches. Successful Implementation Agency will have to install UPS and provide power to PoE Switches, server etc. Implementation Agency shall undertake necessary electrical works which include but are not limited to:

- Installation of UPS systems at the central location and within the network rack to ensure uninterrupted power to the switches.
- Electrical wiring to all switches etc. from nearest power points. All electrical wires to run through PVC/HDPE pipe. Power points which are to be ensured by the respective university. and electricity recurring expenses shall be borne by university.
- Proper earthing for UPS.

XXV. All the equipment shall be supplied with the relevant interface cables, connectors and necessary standard accessories.

XXVI. All CAT-6 cables, OFC cables, and power cables shall be neatly laid and run through PVC conduits or HDPE pipes in accordance with site conditions, with adequate excavation and backfilling.

XXVII. Supply any other items (like screws, clamps, fasteners, ties, anchors, supports, grounding strips, wires, termination kits etc.) required for installation of all the required items for smooth implementation of CCTV Surveillance System apart from that if it is felt that any other items are required to complete the installation and to make the System operational shall be provided by the Implementation Agency without any additional cost.

XXVIII. The equipment/goods must conform to the specifications given and of desired quality brand new and without any damages.

XXIX. Consistency in delivery shall be maintained for the entire lot of products ordered. All the required quantity of equipment/s as per requirement shall be of the same brand and model number.

XXX. The Implementation Agency must provide the detailed camera layout on map of each location for CCTV installation. The university Map will be provided by concerned person of the university or Google Maps can be used to be provisioned by university. The layout by Implementation Agency shall include marking on map of cabling route, Cable type, for camera positioning, Rack positioning, Pole positioning, Switch positioning etc. and locations for Control room and Workstation to be installed in the university.

XXXI. The requirement/installation of CCTV Cameras/accessories items may increase or decrease by up to 10% as per the needs at the time site survey/implementation and the Implementation Agency should have the capacity to provide more CCTV cameras/accessories as and when required for installation in case of increase. The payment for additional CCTV Cameras / accessory items will be made as per quoted unit rate by the Implementation Agency. The installation charges for additional CCTV cameras will be paid on Pro-rata basis as per cameras quoted Misc. & installation service charges.

XXXII. The Implementation Agency should ensure that all communication between cameras, server, and viewing devices is encrypted. This prevents unauthorized individuals from intercepting and accessing sensitive information.

XXXIII. The bidder shall take the responsibility of integration of existing cameras with support of ONVIF feature (if any). If the camera support is out of warranty, then the bidder should not discover the same on newly proposed VMS. If the warranty support exists, the discovery of camera cost to the new VMS system will be taken based on the license cost along with network integration cost per camera discovered through this open tender.

D. Technical Support

I. Implementation Agency are advised to depute qualified Project team for ensuring timely and good quality project execution so that the project SITC can be completed in a timely manner, as per the SLA mentioned in this RFP.

II. Implementation Agency shall provide Single Point of Contact (SPoC) contact list to all the universities for complaint/problem registration, and resolution as per the SLA.

III. In addition to this, the successful Implementation Agency should provide the complaint redressal mechanism and the escalation matrix. However, it would be the responsibility of the Implementation Agency to meet the SLA requirement.

E. Testing and Training

I. After the confirmation by Implementation Agency towards successful Installation and Commissioning of the System, the concerned official of the University will conduct a testing for at least 5 days to ensure smooth functioning of the system towards continuous functioning, recording, retrieving, viewing and monitoring of the system.

II. The Implementation Agency has to provide one-time training to concerned university officials, the personnel nominated by university administration and an operator/ employee for monitoring, operation and basic maintenance of the system along with troubleshooting of some minor issues.

III. Upon completion of the installation & commissioning and Testing the Implementation Agency has to take signoff for SITC and training completion from respective university on the site completion report.

IV. The Implementation Agency has to provide the Standard Operating Procedure (SOP) for operation and maintenance of the system along with Grievance Management / Escalation Matrix details.

F. Maintenance of the CCTV System

I. The Implementation Agency will have to provide the comprehensive on-site Warranty for all equipment supplied for Five (05) years period of the Project which include to ensure maintenance and management of the entire project for end-to-end services as per the SLA.

II. The Implementation Agency shall be responsible to keep the system remain functional on 24x7 basis during that period.

III. The Implementation Agency shall ensure continuous running of cameras and recording of video from all cameras at each location. In case any Camera is down due to some problem, the same shall be got rectified as per SLA terms.

IV. After Go-Live of the project any re-installation and If any system or equipment failure, cable cut, pole installation and failure or damaged due to force measure, natural calamity or any mishap, will be comes under extra cost.

V. The relevant Firmware/Software/OS/Patches etc. should be upgraded free of cost during the project period.

VI. Implementation Agency to meet Service Level Agreement (SLA) requirement shall keep at least 1 to 2% standby equipment/spares (Active and passive components etc.) at centrally located warehouse in Bhubaneswar, Odisha or at OEM/Bidder's premises.

VII. The Successful Implementation Agency, from the date of work order shall deploy a person for supervision, monitoring, support, co-ordination and complaint redressal of project and will act as a single point of contact (SPOC) for all stakeholders till entire contract period. The Successful Implementation Agency shall provide the contact numbers, e-mail id and other relevant details of the SPOC to all Stakeholders.

VIII. The Implementation Agency shall bear the cost for one-time packing, transport, and delivery of all the goods as applicable for this project at all locations identified by the Purchaser. Any relocation and re-delivery not under bidder scope which comes with extra cost.

2. Eligibility Criteria- Bidder

Sl. No.	Components	Specific Requirements	Documents Required
1	**Legal Entity**	(i) The bidder must be a company registered in India under the Indian Companies Act 1956/2013, for the last 07 years as on 31st March 2026. The bidder must have GST registration & an up-to-date Income Tax Return and a PAN Number as of 31st March 2025. (ii) The bidders should have a Local office in Odisha. However, if the presence is not there in the State, the bidder should give an undertaking for the establishment of an office within one month of the award of the contract.	i. Certificates of incorporation ii. PAN copy iii. GST Certificate iv. Income Tax return for the year ended 31st March 2025.
2	**Turnover**	The average annual turnover of the Bidder during the last 3 financial years i.e. FY 2022-23, FY 2023-24 & 2024-25 must not be less than ₹80 Crores, out of which INR 40 Cr should be from IT/ITeS/System Integration, as per the last published audited balance sheets incurred in India.	- Audited Balance Sheets - CA Certificate
3	**Net Worth**	The Net Worth of the bidder must not be negative and must not have eroded by more than 30% in the last (3) financial years i.e., FY 2022-23, FY 2023-24 and FY 2024-25.	- Certificate from the Statutory Auditor
4	**Technical Capability**	Proof of successful execution of similar nature of work in India during the last Seven Years ending with 31st March 2025. "Similar Nature" work means a project involving the procurement, supply, installation, and implementation of a CCTV surveillance system along with other IT infrastructure components such as, servers, storage systems, and networking equipment. The project must have been executed for any Government Department, Public Sector Undertaking (PSU), or Autonomous Body in India during the last seven (7) years and must satisfy any one of the following criteria: - a) **One completed or ongoing similar work** with a project value of not less than **₹30 Crore**, of which at least **₹12 Crore** must pertain to CCTV and related components like servers, storage systems, and networking equipment. • If the work order or completion certificate does not specifically indicate the value of CCTV and related components, a separate work order specifically for CCTV and related components valued at not less than **₹12 Crore** shall be submitted along with the IT	- Satisfactory Work completion certificate/ongoing certificate from the client + Copy of the Work order

Sl. No.	Components	Specific Requirements	Documents Required
		Infra work order/completion certificate of **₹30 Crore**. b) **Two completed or ongoing similar works**, each with a project value of not less than **₹24 Crore,** of which at least **₹10 Crore** in each work must pertain to CCTV and related components. • If the work order or completion certificate for any such work does not specifically indicate the value of CCTV and related components, a separate work order for CCTV and related components valued at not less than ₹10 Crore for each work shall be submitted along with the IT Infra work order/completion certificate of ₹24 Crore. c) **Three completed or ongoing similar works**, each with a project value of not less than **₹16 Crore**, of which at least **₹8 Crore** in each work must pertain to CCTV and related components. • If the work order or completion certificate for any such work does not specifically indicate the value of CCTV and related components, a separate work order for CCTV and related components valued at not less than **₹8 Crore** for each work shall be submitted along with the IT Infra work order/completion certificate of **₹16 Crore**.	
5	**Quality Certifications**	The bidder must possess a valid ISO 9001:2015, ISO/IEC 20000-1:2018 and ISO/IEC 27001:2022 Certifications.	Copies of the valid certificates.
6	**OEM Authorization**	The Bidder must have a Manufacturer's Authorization Certificates (MAF) against the respective equipment specific to this tender and must submit a Standard OEM Warranty Certificate after the equipment has been commissioned at the site. • Camera • VMS • Server & Workstation • Switch • Video wall • UPS • Firewall • Passive (Cable)	A copy of the OEM's authorization letter, as mentioned in the RFP, should be enclosed, duly stamped and signed.
7	**End of Life Certificate and Warranty Certificate**	The Bidder shall be required to submit an End-of-Life (EOL) certificate against the product issued by the Original Equipment Manufacturer (OEM) along with a warranty certificate ensuring comprehensive support and coverage for a minimum period of five (05) years for the quoted products.	Copy the valid certificates
8	**Authorised Service Centre**	The bidder's OEM should have authorized service centres in Odisha to ensure prompt after-sales support and	Documentary evidence of the

Sl. No.	Components	Specific Requirements	Documents Required
		maintenance services.	authorized service centers shall be submitted along with the bid.
9	**Blacklisting**	The bidder should not be under a declaration of ineligibility for corrupt and fraudulent practices issued by Government of India or any State Government/PSU in the country of India. A self-declaration certificate to this effect should be enclosed.	A Self-certified letter by an authorized signatory.

Note: Necessary supporting documents on fulfillment of eligibility criteria should be attached for authentication along with a signed copy of the tender document to indicate acceptance of all terms and conditions set forth in the tender. Organizations failing to provide complete information on any of the requirements are liable to be rejected.

3. Pre-Bid Conference / Meeting: -

A pre-bid meeting will be schedule by Odisha Computer Application Centre (OCAC) virtually, to clarify the doubts (if any) of the potential bidders in respect to this RFP and the records of such meeting shall be published on the websites as Pre-Bid Clarifications/Corrigendum.

The web-link of Pre-bid meeting shall be shared through the mail to the prospective bidders those who have submitted the pre-bid queries, as per the schedule date and time mentioned in this RFP. The Bidders will have to ensure that their queries for Pre-Bid meeting should reach to the department email id on or before the prescribed date as mentioned in "Important Dates and information" section of this RFP.

However, to address the queries of the prospective bidders, they may submit their queries by e-mail (One Mail-ID Per Bidder is allowed to submit the query only), to *gm_ocac@ocac.in* and mark a copy to sudha.mohanty@ocac.in, sourav.dash@odisha.gov.in and chandan.pradhan@semt.gov.in as per the format attached in **Annexure: G12**, in excel format only on or before **14/07/2026 till 3.00 PM**. Failure to submit the queries in the asked format or receipt of queries after the prescribed date & time will result in non-consideration of the queries. If same bidder submits the query in multiple mail ids, then the bidder's query will be rejected.

Tendering authority shall respond to the queries of only those bidders who have submitted the queries before the schedule date & time, mentioned in this RFP.

Based on the queries received, if any modifications to the tender document or the specifications of the goods are considered necessary, the same will be issued by OCAC through an addendum/corrigendum. The addendum/corrigendum, along with the final bidding document, will be made available on the designated websites.

The Tendering Authority reserves the right, at its sole discretion, not to respond to any or all queries raised or clarifications sought if it deems such responses inappropriate or finds no merit in the requests. Furthermore, the Tendering Authority reserves the right to amend, modify, or supplement the RFP document suo motu, if considered necessary for the effective implementation of the project.

4. Submission of Proposals:

a) The bidder is required to submit the bids online through **eNivida portal (www.enivida.odisha.gov.in) only** with both General & Technical bid in one folder and Financial bids in another folder. Financial bid of those bidders who qualify in General i.e. (Eligibility Criteria) & Technical evaluation shall be opened. **Submission of bid through any mode other than aforesaid eNivida portal shall not be accepted**.

b) As eNivida portal does not allow submission of bids after due date & time, the bidders are advised to submit their bids much before the prescribed date and time.

c) The name, address of the bidder, Mobile Number/Telephone number, E-mail ID and Fax number of the bidder should have been clearly mentioned for official communication.

d) All the pages of the bid documents including RFP/Corrigendum must be sequentially numbered and must contain the list of contents with page numbers and Flag Marks. Any deficiency in the documentation may result in the rejection of the bid.

e) The original bid shall be prepared in indelible ink. It shall contain no interlineations or overwriting, except as necessary to correct errors made by the bidder itself. Any such corrections must be initialed by the person (or persons) who sign(s) the tender paper.

f) All pages of the bid shall be marked and stamped by the person who signs the bid.

g) The bidder shall attach a content page to the bid document highlighting the page numbers/ Flag Marks where each document is available without which the bid will be rejected.

h) *Opening of General, Technical and Commercial Bids shall be through online. It is important to note that while submitting the Bids, Mail ID and Mobile Number (with WhatsApp) of the Authorized person of the bidder should be written appropriately in bold letters so that while opening the bids in virtual mode, the web link will be issued to the Mail ID mentioned in the outer envelope.*

5. Timeline for the Completion of Project:

The project is to be executed with timelines as follows:

Sl. No.	Project Activities	Location	Timeline
1	Submission of Site Survey Report at OCAC, along with Item wise actual requirements, the layout plan, and other details. (The bidder to ensure that site survey is as per the requirement to fulfill the objective of CCTV Surveillance System)	At all locations	T1= T0 + 15 days
2	Delivery of CCTV System	At all locations	T2= T1 + 60 days
3	Installation and Commissioning of CCTV Surveillance System	At all locations	T3= T2 + 60 days
4	Testing (Final Acceptance Test) and Training	At all locations	T4= T3 + 15 days
5	Go-Live & Monitoring of uninterrupted service	At all locations	T5= T4 + 15 days
6	Comprehensive Onsite Warranty (from Go-Live) of all equipment's along with Maintenance as per the SLA	At all locations	T5 + 05 years

Note: -

1. T0 stands for Date of Agreement Signing with the successful Bidder/Implementation Agency (IA).

2. Go-Live date will be decided after successful testing and would be common for all locations.
3. In the event of any delay attributable to the University Authority, the Comprehensive Onsite Warranty and Maintenance period for all supplied equipment shall commence from the actual date of delivery of the equipment at the designated site.
4. For the time extension for execution, if any relaxation is demanded by the Bidder/Implementation Agency (IA) with mentioning genuine reasons, the same may be provided only after approval from Odisha Computer Application Centre (OCAC), Odisha.

6. Earnest Money Deposit (EMD):

a) EMD is to be furnished by the bidder as mentioned below.

Sl. No.	Category Description	EMD Amount
1	Procurement, Supply, Installation and Maintenance of IP Based CCTV Surveillance System at four (04) Universities under Higher Education Department (HED), Odisha.	**₹ 1,00,00,000/- (Rupees One Crore Only)**

b) The EMD shall be only in the form of Demand Draft (DD)/Bank Guarantee (BG) in favour of **Odisha Computer Application Centre (OCAC)**, payable at Bhubaneswar drawn in any schedule bank. The validity of DD/BG should be at least three months from the date of floating of tender.

c) Bidder should write the organization name at the back side of the DD.

d) The demand draft shall be submitted along with General bid envelope. Bids without EMD shall be rejected.

e) If the EMD is in the form of Bank Guarantee (BG), then the Format for Bank Guarantee for Earnest Money Deposit is mentioned in **Annexure: G-9** of this RFP.

f) The EMD shall be forfeited if a bidder withdraws its bid during the period of bid validity.

g) The EMD of unsuccessful bidders will be returned to them within a month of selection of vendors.

h) In case of a successful bidder the EMD may be forfeited if the bidder fails to accept the Purchase Order.

7. Performance Bank Guarantee (PBG)

The selected bidder shall furnish a Performance Bank Guarantee (PBG) of 5% (Five Percent) of the total Contract Value excluding tax, on or before the signing of the subsequent contract, typically within 15 days from the notification of award, unless specified to the contrary (Performance Bank Guarantee). The Performance Guarantee should be valid for a period of 5 Years & 3 Months (63 months) and shall be kept valid till completion of the Project and Warranty period. The Bidder shall be responsible for extending the validity date and claim period of the Performance Guarantee as and when it is due on account of non-completion of the project contract period. The PBG must be from the nationalized bank only in India. The format for the Performance Bank Guarantee is mentioned in **Annexure: G-11** of this RFP document. In case the successful Bidder fails to submit Performance Bank Guarantee within the time stipulated, the Purchaser may at its sole discretion cancel the letter of intent without giving any notice and encase the EMD furnished by the Bidder, in addition to any other right available to it under this RFP.

8. Payment Term & Schedule

(i) The RFP is floated by Odisha Computer Application Centre (OCAC) and the request of Higher Education Department (HED), Odisha. Payment to the bidder will be released upon receipt of funds from Higher Education Department (HED).

(ii) Payment Schedule: -

Sl. No.	Project Milestone	Payment (%)	Documents Required
1	Delivery of Equipment & Verification	50% of the contract value	1. Original Delivery Challan received signed by head of the institution. 2. Original Invoice (In triplicate) **Note:** In case the site is not ready or there is any dependency on the department/client site for which installation cannot be done, then the bidder will get 60% of the contact value pertaining to that site towards delivery of the materials at site.
2	Installation of equipment	20% of the contract value	1.Installation and Commencement Certificate from university authority and counter signed by officer in charge. In case, 60% payment has already been made due to the reasons cited above, then 10% of the payment will be released on installation & commissioning.
3	Integration (VMS), Training & UAT	20% of the contract value	1. Training - Training certificate to be signed by head of the department/ institute/competent authority. 2. Warranty Certificate for 5 years.
4	Satisfactory completion of day-to-day operation, maintenance and support services on a half-yearly basis.	1% of the contract value x 10 Nos of Payable on a Half Yearly Basis (Total 10% of the contract value)	1. Certification from user department/ Institute.

9. Offer Validity Period

The tender offer must be valid for a minimum period of one year (01) from the date of opening of Financial bid. Odisha Computer Application Centre (OCAC) reserves the right to place the repeat order up to 50% of the total contract value within the price validity period of 1 year, if required, as per the rates finalized through this tender along with terms & conditions.

10. Service Level Standards & Support

The prime objective of the service levels is to ensure high quality of services from the selected bidder. The service levels defined below indicate the target level of services required, measurements parameter with penalties. Additional Roles & Responsibilities of the SI under the Service Level Agreement (SLA) is below: -

a) Perform preventive maintenance of the CCTV Surveillance System on quarterly basis to ensure optimal performance, reliability and uninterrupted operation and submit preventive maintenance reports and system health status reports to the competent authority.

b) Maintain comprehensive service records, including preventive maintenance reports, breakdown maintenance reports, complaint logs, attendance records, spare replacement details, uptime reports and other relevant documentation.

c) Ensure compliance with all applicable safety, security and statutory requirements while carrying out maintenance work at the 4 universities.

Sl. No.	Measurement Parameter	Service Level	Penalty
1	Time to resolve complaints after lodging the complaint	Within next 48 hours of lodging the complaint	No Penalty
		> 48 Hours of lodging the complaint	A penalty of Rs. 200 for every day, subject to maximum 10% of the cost of the equipment.
2	Absence of Video Recording	100% (365 x 24 hours) Excluding power cut duration	A penalty of Rs. 500/- per day per camera shall be levied in case of continuous absence of Video Recording for 24 hours, subject to maximum 5% of the cost of the equipment.

Note: -

a) If the call is not resolved and the value of penalty for any supplied item reaches value of the item, a NOTICE shall be issued. If two such notices are issued during a year then the department will take step for recommendation of imposing appropriate penalty and forfeit the remaining payable amount along with the Performance security deposit.

b) Maximum applicable penalty shall not exceed 5% of the total contract value. If the penalty exceeds maximum applicable penalty, Odisha Computer Application Centre (OCAC) Bhubaneswar at its discretion may terminate the contract and forfeit the remaining payable amount along with the Performance security deposit.

c) Power Dependency & Exclusions:

i. The Implementing Agency's responsibility for system uptime and performance shall be limited to the availability of primary power supply and UPS backup up to a maximum of two (2) hours.

ii. The Implementing Agency shall not be held responsible for any system downtime, data loss, equipment malfunction or service degradation caused due to power failure, voltage fluctuation or power outages exceeding the UPS backup period of two (2) hours.

iii. Any SLA breaches arising due to power interruptions beyond the UPS-supported duration shall

be excluded from SLA calculations and shall not attract penalties or service credits to the Implementing Agency.

11. Rejection

Before acceptance of the items if the equipment supplied by the vendor is found defective in materials or workmanship or otherwise not in conformity with the requirements of the contract, the purchaser shall have the right to either reject or to request in writing for rectification of the defects. Then the vendor shall with utmost diligence, at his own expense, make good the defects so specified or replace the defective equipment if the vendor fails to do so, the purchaser either.

i) May at its option to replace or rectify such defective equipment and charge to the vendor the excess cost incurred by the purchaser plus 15% (Fifteen percent) extra as administrative charges. OR

ii) Terminate the contract for default. Further, in the event, the vendor is not able to rectify or replace the faulty equipment within reasonable time, the decision of the Odisha State Warehousing Corporation, Bhubaneswar shall be final.

12. Delay in Completion of the Project and Penalty

The time schedule for completion of the project as mentioned in Clause-5 above is very important and the bidder must take utmost care to complete the delivery, installation and integration within scheduled time. If the work is delayed for any reason for which the client Odisha Computer Application Centre (OCAC) Bhubaneswar/client universities/client department, is not responsible, a penalty @2% of the cost of the purchase order will be charged to the bidder for a delay of one week or part thereof, subject to maximum 10% of the cost of the purchase order.

The purchaser reserves the right to cancel the order if it is not executed within the prescribed completion time and forfeit the entire EMD amount. Delay in supply / installation / Commissioning in the part of the supplier for materials/equipment shall be treated as delay in the delivery/ installation of the goods. The purchaser reserves the right to cancel the order in full or in part. In the event of such cancellation, the purchaser shall have the right to collect penalty from the performance bank guarantee. However, for valid reasons (like any unavoidable situation at the client site) duly notified in advance and considered by the purchaser, revised delivery schedule may be accepted at the sole discretion of the purchaser.

13. Force Majeure Condition

If the execution of the contract/supply order is delayed beyond the period stipulated in the supply order as result of outbreak of hostilities, declaration of an embargo or blockade of fire, flood, acts of God, then Odisha Computer Application Centre (OCAC) Bhubaneswar, may allow such additional time by extending the project execution timeframe as considered to be justified by the circumstances of the case and its decision will be final. If additional time is granted by the Odisha Computer Application Centre (OCAC) Bhubaneswar, the supply order shall be read and understood as if it had contained from its inception the execution date as extended.

14. Pre-Qualification Eligibility Criteria for OEMs

14.1 Pre-Qualification Eligibility Criteria for Camera OEM

Pre-Qualification Eligibility Criteria for Camera OEM			
5 MP IP Fixed Bullet Camera / Fixed Dome Camera/PTZ Camera/ Vari-focal Bullet			
Sl. No.	**Selection Criteria**	**Documents Required**	**Compliances (Yes/No)**
1	CCTV System & Components OEM should have its own registered office in India for more than 10 years (not as joint venture, partnership firms or through any other association).	Certificate of Incorporation; Sales Tax/VAT Registration Copy; Copy of PAN Card; Registered Office addresses & contact details.	
2	The CCTV OEM for CCTV shall have its own / authorized CCTV service/ repair facility inlisted in India's two metropolitan regions for last 5 years The OEMs must also have its own R&D Centre; Six Sigma; CMMI level 5 quality standards in India.	Addresses of Service Centres & R&D Centres in India; Service Support Escalation Matrix with details of contact address & nos.	
3	Proposed software/application – Camera Firmware; VMS; API/SDK; Recording Software/Application; etc. Software / Application & Licenses should be developed under CMMI Level quality control as per CMMI Level 5 guidance & manuals. All proposed software/application should be licensed in the name of end-customer. No free / demo software for this project	Copy of Certificate from CCTV System OEMs confirming CMMI Level 5 Quality Control compliance. Bidder & IP CCTV System OEM Undertaking Letter pertaining to the compliance of Licensed & latest versions of Software/Application aspects.	
4	CCTV System OEMs should own the MAC Address of the proposed components or network devices	Self-Declaration sealed & signed by competent Authority confirming & validating they own MAC ID compliance.	
5	The offered IP CCTV system shall mandatorily comply with certification requirements of Bureau of Indian Standards (BIS-CRS/ER) or STQC Directorate wherever applicable. Valid certificates shall be submitted along with the bid.	Documentary evidence, certificates & Declaration from OEMs duly sealed & signed	
6	The CCTV OEM should have its toll free number in India for any technical support query from the SI or end customer which is very much required for such a big project.	Toll free nos should be mentioned in the manufacturer's authorization letter and submitted along with the bid.	

Pre-Qualification Eligibility Criteria for Camera OEM			
5 MP IP Fixed Bullet Camera / Fixed Dome Camera/PTZ Camera/ Vari-focal Bullet			
Sl. No.	**Selection Criteria**	**Documents Required**	**Compliances (Yes/No)**
7	CCTV System OEM need to confirm in their letterhead that any component/ hardware / parts / assembly / software including firmware used in the offered solution (hardware / software) do not comply to GB28181, GB/T 28181-2011; GB/T28181-2011; GBT 28181-2011; GBT28181-2011 standards. Also, the IP CCTV System doesn't have CCC.	Documentary evidence and declaration from IP CCTV System OEM	
8	Data Sheets of all proposed products should be available on the OEM public website. The data sheets provided on the OEM public website and submitted data sheets should be the same.	OEM undertaking required	
Note: Failing to comply with any of these terms and conditions will lead to rejection of the offer			

14.2 Pre-Qualification Eligibility Criteria for Network Switch OEM

Pre-Qualification Eligibility Criteria for Network Switch OEM			
• 12-Port Giga PoE+ L2 Managed Switch with 1G SFP Uplink • 24-Port Giga PoE+ L2 Managed Switch with 1G SFP Uplink • 24-Port L3 Full Managed Core Switch with 1/10G SFP+ Ports • 48-Port L3 Full Managed Core Switch with 1/10G SFP+ Ports • 24-Port L2 Managed Switch with 4 × 10G SFP+ Uplink			
Sl. No.	**Selection Criteria**	**Documents Required**	**Compliances (Yes/No)**
1	The proposed OEM must have an independently registered legal entity and direct operational presence in India for at least 10 years as on the date of bid publication. Presence through dealers, partners, joint ventures, distributors or any other indirect association shall not be considered eligible.	Relevant document to be submitted	
2	The OEM shall have an authorized spare depot/service spare inventory facility in the State of Odisha.	Details of the same to be provided	
3	OEM must provide Their Escalation Matrix	To be shared in OEM letter head	
4	OEM should have ISO Certificate of ISO9001, ISO-14001 & ISO-27001	Relevant document to be submitted	
Note: Failing to comply with any of these terms and conditions will lead to rejection of the offer			

15. Insurance of Equipment

The materials to be supplied should be insured by the bidder on behalf of the purchaser from his warehouse to the respective installation site. The insurance coverage should cover the transport of materials by Rail/Road to the destination and till handing over the same to the client after successful installation. The materials/equipment found lost or damaged in transit or during installation and commissioning should be immediately replaced to avoid delay in commissioning of the equipment.

16. Replacement

If the material/ equipment or any portion thereof gets damaged or lost during the transit and installation, the bidder shall effect the replacement of such materials/ equipment within a reasonable agreed time or **15 days whichever is earlier** to avoid delay in commissioning the equipment.

17. Purchaser's Procurement Rights

Without incurring any liability, whatsoever to the affected bidder or bidders, the Purchaser reserves the right to:

i) Amend, modify, or cancel this tender and to reject any or all proposals without assigning any reason.

ii) Change any of the scheduled dates stated in this tender.

iii) Reject proposals that fail to meet the tender requirements.

iv) Should the Purchaser be unsuccessful in negotiating a contract if required with the selected bidder, the Purchaser will begin contract negotiations with the next best value bidder in order to serve the best interest.

v) Make typographical correction or correct computational errors to proposals

vi) Request bidders to clarify their proposal.

18. Inspections

i) Project in charge of Odisha Computer Application Centre (OCAC) and/or representatives of Odisha Computer Application Centre (OCAC) shall have the right to make inspection during the execution of work at the site.

ii) The items of supply/installation shall be verified by the authorized representatives of Odisha Computer Application Centre (OCAC) Bhubaneswar, during final inspection and the bills shall be submitted by the bidder after such inspection.

19. Other Instructions

a) The bidder must organize the bid in accordance with the format specified in the tender document.

b) The tenders not submitted in the prescribed format or incomplete after due date in any sense are liable to be rejected.

c) OCAC is not responsible for non-receipt of tenders within the specified date and time due to any reason including postal delay or holidays.

d) The rates should be valid for a minimum period of one year from opening of Financial bids.
e) All taxes would be paid on actuals as per applicable laws.
f) OCAC reserves the right to accept or reject any bid without assigning any reason thereof and its decision in this regard will be treated as final.
g) OCAC reserves right to cancel the Purchase Order, on the recommendation of client in the event of one or more of the following situations: -
    i. Delay in delivery and installation beyond the specified period for delivery.
    ii. Major discrepancy in hardware & other components noticed during any stage of the project
h) OCAC reserves the right to ask for any type of technical clarification and make technical presentation /Proof of concept (POC) before the technical committee members failing which it may leads to CANCEL the bid.
i) OCAC reserves the right to verify the equipment's as per the specifications asked in the RFP.
j) Un-signed & un-stamped bid shall not be accepted.
k) Undertaking for subsequent submission of any of the document asked in the tender will not be entertained under any circumstances. However, OCAC reserves the right to seek fresh set of documents or seek clarifications on the already /submitted documents.
l) Upon verification, evaluation / assessment, if in case any information furnished by the bidder is found to be false/incorrect, their total bid shall be summarily rejected and no correspondence on the same, shall be entertained.
m) No deviations from tender terms and conditions will be accepted. Any violation thereof will lead to the rejection of the bid.
n) OCAC will not be responsible for any misinterpretation or wrong assumption by the vendor.
o) OCAC reserves the right to alter / increase / decrease the quantity of items, as the case may be, to meet the requirements at any point of time.
p) OCAC is not responsible for non-receipt of tenders within the specified date and time due to any reason including postal delay or holidays.
i) Over-writing/over-typing or erasing of the figures are not allowed and shall render the tender invalid.

20. Detailed Evaluation

Initial Proposal scrutiny will be held to confirm that Proposals do not suffer from the infirmities detailed below. Proposals will be treated as non-responsive, if a Proposal is found to have been: -

- Submitted in manner not conforming with the manner specified in the RFP document
- Submitted without appropriate EMD as prescribed herein
- Received without the Letter of Authorization
- Containing subjective/incomplete information
- Submitted without the documents requested in the checklist
- Non-compliant with any of the clauses stipulated in the RFP
- Having lesser than the prescribed validity period.

The EMD of all non-responsive bids shall be returned to the bidders. All responsive Bids will be considered for further processing as below:

i. OCAC will prepare a list of responsive bidders, who comply with all the Terms and Conditions of the Tender. All eligible bids will be considered for further evaluation by the Committee according to the evaluation process defined in this RFP document. The decision of the Committee will be final in this regard.
ii. Only the bids considered to be substantially responsive shall be considered for detailed evaluation.
iii. The Evaluation Committee will carry out a detailed evaluation of the proposals, only those who qualify in Eligibility Criteria, in order to determine whether the technical aspects are in accordance with the requirements set forth in the RFP Documents. In order to reach such a determination, the Evaluation Committee will examine and verify the technical aspect of the proposals on the basis of information provided by the bidder.
iv. Quality cum Cost Based Selection (QCBS) method shall be adopted to select the bidder.
v. The bids shall be evaluated using the Quality and Cost Based Selection (QCBS) methodology, with a weightage of 70% assigned to the Technical Proposal (Quality Score) and 30% assigned to the Financial Proposal (Cost Score). The final ranking of bidders shall be determined based on the composite score derived from the combined technical and financial evaluations. OCAC shall award the contract to the bidder achieving the highest composite score, representing the best value proposal.
vi. The purchaser shall evaluate each bid in detail in respect of RFP Criteria, Technical specifications & Price quoted by the bidder.
vii. The purchaser reserves the right to negotiate prices with the selected bidder(s) if necessary.

21. Jurisdiction of High Court of Odisha

Suites, if any arising out of the contract shall be filed by either party in a court of Law to which the jurisdiction of the High Court of Odisha extends.

22. Right to Reject/Accept the Tender

The purchaser reserves the right either to reject or accept any or all tenders. The purchaser has exclusive right to alter the quantities of materials at the time of placing the final purchase order. After placing the purchase order, the purchaser may order to defer the delivery of the material. It may be clearly understood by the tenderer that the purchaser need not assign any reason for the above action.

23. Final Authority

The final authority for payments will be the consignee except otherwise specifically stated and if the vendor/supplier desires to appeal against any matter he shall appeal to Odisha Computer Application Centre (OCAC), whose decision on such matters shall be final and conclusive.

24. Dispute Resolution

Any dispute or difference, whatsoever, arising between the parties to this agreement arising out of or in relation to this agreement shall be amicably resolved by the Parties through mutual consultation, in good

faith and using their best endeavors. Parties, on mutual consent, may refer a dispute to a competent individual or body or institution or a committee of experts appointed by Odisha Computer Application Centre (OCAC) for such purpose and abide by the decisions thereon.

On non-settlement of the dispute, same shall be referred to the Secretary to Government, E&IT Department, Government of Odisha for his decision and the same shall be binding on all parties, unless either party makes a reference to arbitration proceedings, within sixty days of such decision.

Such arbitration shall be governed in all respects by the provision of the Arbitration and Conciliation Act, 1996 or later and the rules framed thereunder and any statutory modification or re-enactment thereof. The arbitration proceeding shall be held in Bhubaneswar, Odisha.

25. Exit Management

a) The bidder shall submit a systematic Exit Management Plan, Six (6) months prior to the end of the contract period.
b) The Exit Management Plan should be discussed with Project in charge of Odisha Computer Application Centre (OCAC) and finalized prior to its execution.
c) In case of termination, the Exit Management Plan will be executed within the minimum period to transfer the knowledge till the next successor has been selected to operate the Contact Centre without affecting its services.
d) The bidder needs to submit the following deliverables as part of the Exit Management Process.

- Exit Management Plan
- Updated Status of the Project with entire equipment details.
- Knowledge transfer and handover/takenover of documents and other relevant materials between the outgoing and the new bidder.

Accepted all above terms and conditions.

5. SECTION – V (Technical Evaluation Criteria)

Sl. No	Description of the Criteria Eligibility		Max Marks
1	Average annual turnover in last 3 financial years covering. FY 2022-23, FY 2023-24 and FY 2024-25)		**10**
	a. More than 120 Cr.	10 Marks	
	b. > 100 Cr. & <= 120 Cr.	07 Marks	
	c. >= 80 Cr. <= 100 Cr.	05 Marks	
2	**Technical Capability:** i. IT/ITES Projects each with value >= INR 16.00 Cr to be considered only (the projects may also include CCTV related components along with IT Infra) **Proof of document :** *Relevant Work Order(s) must be attached as proof of experience.*		**12**
	a. Total value of Projects >= INR 80 Cr	12 Marks	
	b. Total value of Project(s) >= 60 Cr & < 80 Cr	10 Marks	
	c. Total value of Project(s) >= 40 Cr & < 60 Cr	08 Marks	
	d. Total value of Project(s) >= 30 Cr & < 40 Cr	06 Marks	
	ii. CCTV Surveillance System Projects each with value >= INR 8.00 Cr to be considered only (IT/ITES projects reflecting the value of CCTV related components shall also be considered) **Proof of document :** *Relevant Work Order(s) must be attached as proof of experience.*		**12**
	a. Total value of Projects >= INR 40 Cr	12 Marks	
	b. Total value of Projects >= INR 30 Cr < 40 Cr	10 Marks	
	c. Total value of Projects >= INR 20 Cr < 30 Cr	08 Marks	
	d. Total value of Projects >= INR 12 Cr < 20 Cr	06 Marks	
3	The bidder must have prior IT/ITeS service experience, with at least one end customer being an educational institution or a government education department. **Proof of document:** *Relevant Work Order(s) must be attached as proof of experience.*		**6**
	Each project will carry 2 marks subject to maximum 6 marks.	6 Marks	
4	The bidder must have prior experience in executing multi-location projects for any Government Department, Public Sector Enterprise (PSE)/Public Sector Undertaking (PSU), or Autonomous Body. **Proof of document :** *Relevant Work Order(s), Completion Certificate(s) or Client Certificate(s) must be submitted as documentary evidence.*		**6**
	a. Successfully implemented a multi-location project covering a minimum of twelve (12) locations.	06 Marks	
	b. Successfully implemented a multi-location project covering a minimum of six (6) locations.	04 Marks	
	c. Successfully implemented a multi-location project covering a minimum of three (3) locations.	02 Marks	
5	Bidder should have adequate technical manpower strength to support project implementation and maintenance.		**09**

	Proof of document : *HR Certificate indicating technical manpower strength, supported by the latest EPF/ESIC records.*		
	a. More than 50 resources	09 Marks	
	b. > 40 & <= 50	07 Marks	
	c. > 30 & <= 40	04 Marks	
6	The bidder must have an operational presence in Odisha. **Proof of document :** *GST Certificate (Odisha) or Lease Agreement.*		**05**
7	The bidder must possess the following valid certifications. **Proof of document :** *Copies of the certificates, valid as on the date of bid submission, must be enclosed with the bid.*		**10**
	a. ISO 9001	1 Mark	
	b. ISO 20001	2 Marks	
	c. ISO 27001	2 Marks	
	d. CMMI L3 or Higher	5 Marks	
8	Presentation on the proposed solution capturing the major features: - a. Understanding of the project. b. Detailed work-plan and methodology. c. Architecture d. Proposed Mechanism of Project Monitoring. e. Operation & Maintenance Support plan.		**30**
		Total Marks	**100**

Note: All the bidders who secure 70% of total marks or more will be declared as technically qualified and are eligible for financial bid opening.

6. SECTION-VI (TECHNICAL SPECIFICATION)

6.1 5MP IP Fixed Bullet Camera and Mounting Accessories, with 512 GB SD Card from day1 to be provided along with Camera.

Parameter	Minimum Specification Requirement	Compliance (Yes/No)	Remarks
Make & Model:			
Type	IP Fixed Lens IR Rugged Bullet Camera		
Resolution (No of Pixels)	5 MP or Better		
Image sensor	1/2.8 - inch CMOS, Progressive Scan or Better		
Focal length	3.6mm/4mm, F1.4/F1.6 or Better		
Lens	Fixed Lens		
Iris	Fixed IRIS / DC-IRIS		
Removable IR-Cut Filter	Auto ICR		
Minimum illumination	Color: 0.005 Lux @F1.6 B/W: 0Lux (IR on) or better		
IR distance	Smart IR 50m or better, Day and Night mode switching based on IR sensor or schedule.		
Electronic Shutter	Auto/Manual, 1/3 s–1/100,000 s or Better		
Wide Dynamic Range	120dB True WDR or higher		
Back Light Compensation	Supported		
High Light Compensation	Supported		
Noise Reduction	2D-3D DNR		
Signal to Noise ratio	52 dB or better		
Video compression	H.265 HEVC, H.264, MJPEG		
Compliance on Video Compression	The camera OEM Should have valid H.265 HEVC Certificate and should be listed on HEVC website at the time of submitting bid. Listed CCTV OEMs shall not be acceptable sharing land board with India. https://accessadvance.com/hevc-advance-patent-pool-licensees/ OR https://via-la.com/licensing-programs/hevc-vvc/#licensees OR https://www.mpegla.com/programs/hevc/licensees/		
Angle of View	As per quoted OEM		
Protocols supported	IPv4, IPv6, TCP/IP, SSL, HTTP, HTTPS, HTTP-Digest, RTSP, RTP, RTSPS. RTCP, Multicast, , SNMP, DHCP, NTP, DNS, ICMP, TLS.		
Number of Streams supported	Quad Video Streams @ H.265; Each stream independently configurable with different resolution and frame rate		

Parameter	Minimum Specification Requirement	Compliance (Yes/No)	Remarks
Stream Resolution	Main Stream: 5MP or higher resolutions Second Stream: 2MP or higher resolutions Third Stream: VGA or higher resolutions Fourth Stream: VGA or lower resolutions		
Frame rate	Mainstream: 5MP@25 fps or better Second Stream: Max@25fps or better Third Stream: Max@10fpsor better Fourth Stream: Max@1-10fps or better		
Features	Color, Brightness, Sharpness, Contrast, Automatic white balance, Gain control, Fine tuning of behaviour at low light, Rotation, Character overlay and all other Image Settings in Web UI		
Built-in Video Analytics	Motion Detection, Scene Change, Tamper Detection, Face Detection, Object Detection and Crowd gathering.		
Defog	Supported		
Event Type	Analytics alarm, Disk alarm, Recording alarm, Tampering		
Event Linkage	SD card recording		
Security	Firmware encrypted & Signed, User account and password protection, HTTPS, IP Filter, Digest authentication, Device Certificate, TLS 1.2 & 1.3, Stream encryption, AES128/256, SSH/Telnet closed, Secure boot, Prevent brute-force attack, Audit User Access/System/Event log management / AES 256-bit Encryption, Configuration encryption, trusted execution, Digest, security logs, WSSE, account lockout, syslog, video encryption, IP/MAC filtering, HTTPS, trusted upgrade, trusted boot, TEE		
Prohibited Protocols	Port 21 (FTP), Port 23 (Telnet), GB/T 28191, SSH. There should not be any provision to enable or disable these protocols in the default firmware from manufacturer. Any special firmware developed to disable these features will not be allowed.		
Privacy masking	4 or higher, definable areas		
Region of Interest	4 or higher, definable regions		
Local Storage Support	Micro SD/SDHC/SDXC card slot (512 GB or higher), SD card encryption with AES-256		
Max. User Access	10 users		
Network	RJ45 (10 Base-T/100 Base-TX); Ingress protection cover for RJ45 connector		

Parameter	Minimum Specification Requirement	Compliance (Yes/No)	Remarks
Reset	Hardware Reset: Secure with Reset button within Housing. Reset provision outside housing shall not be acceptable Software Reset of cameras with ability to retain UN/PW/Network IP/Cameras Zoom		
Environmental Protection	IP66, IP67		
Impact protection	IK10		
Condensation Compensation	Breathable membrane to minimize condensation		
Housing Material	Aluminium + Polycarbonate/ Metal		
Earthing	Physical Earthing terminal housing/Standard		
Input voltage	12 VDC/24 VAC, PoE (IEEE 802.3 af)		
Power Consumption	Max 11W		
Surge Protection	Support		
Operating Temperature	10°C to 60°C (IR OFF)		
Operating Humidity	less than 95% (non-condensing)		
Certifications (All the certificates / Compliancees required in Tender to be submitted along with the technical bid)	ONVIF: Profile S, G, M, T, Proposed models shall be listed on ONVIF website. There should be no ONVIF membership restrictions on CCTV OEMs		
	Cyber Security: BIS-ER/STQC		

6.2 5MP IP Fixed Dome Camera and Mounting Accessories, with 512 GB SD Card from day1 to be provided along with Camera.

Parameter	Minimum Specification Requirement	Compliance (Yes/No)	Remarks
Make & Model:			
Type	IP Fixed Lens IR Rugged Dome Camera		
Resolution (No of Pixels)	5 MP or Better		
Image sensor	1/2.8 -inch CMOS, Progressive Scan or Better		
Focal length	2.8mm or higher, F1.4 or better		
Lens	Fixed Lens		
Iris	Fixed IRIS / DC-IRIS		
Removable IR-Cut Filter	Auto ICR		
Minimum illumination	Color: 0.005 Lux @F1.4 or higher B/W: 0Lux (IR on)		

Parameter	Minimum Specification Requirement	Compliance (Yes/No)	Remarks
IR distance	Smart IR 30m, Day and Night mode switching based on IR sensor or schedule.		
Electronic Shutter	Auto/Manual, 1/100000s ~ 1/3s		
Wide Dynamic Range	120dB True WDR or higher		
Back Light Compensation	Supported		
High Light Compensation	Supported		
Noise Reduction	2D-3D DNR		
Signal to Noise ratio	52 dB or higher		
Video compression	H.265 HEVC, H.264, MJPEG		
Compliance on Video Compression	The camera OEM Should have valid H.265 HEVC Certificate and should be listed on HEVC website at the time of submitting bid. Listed CCTV OEMs shall not be acceptable sharing land board with India. https://accessadvance.com/hevc-advance-patent-pool-licensees/ OR https://via-la.com/licensing-programs/hevc-vvc/#licensees OR https://www.mpegla.com/programs/hevc/licensees/		
Angle of View	As per OEM		
Protocols supported	IPv4, IPv6, TCP/IP, SSL, HTTP, HTTPS, HTTP-Base64, HTTP-Digest, RTSP, RTP, RTSPS. RTCP, Multicast, SNMP, DHCP, NTP, DNS, ICMP, TLS.		
Number of Streams supported	Quad Video Streams @ H.265; Each stream independently configurable with different resolution and frame rate.		
Stream Resolution	Main Stream: 5MP or higher resolutions Second Stream: 2MP or higher resolutions Third Stream: VGA or higher resolutions Fourth Stream: VGA or higher resolutions		
Frame rate	Mainstream: 5MP@25 fps or better Second Stream: Max@25fps or better Third Stream: Max@10fps or better Fourth Stream: Max@1-10fps or better		
Features	Color, Brightness, Sharpness, Contrast, Automatic white balance, Gain control, Fine tuning of behaviour at low light, Rotation, Character overlay and all other Image Settings in Web UI		
Built-in Video Analytics	Motion Detection, Scene Change, Tamper Detection, Face Detection, Object Detection and Crowd gathering.		
Defog	Supported		
Event Type	Analytics alarm, Disk alarm, Recording alarm, Tampering		
Event Linkage	Email, SD card recording		

Parameter	Minimum Specification Requirement	Compliance (Yes/No)	Remarks
Security	Firmware encrypted & Signed, User account and password protection, HTTPS, IP Filter, Digest authentication, Device Certificate, TLS 1.2 & 1.3, Stream encryption, AES128/256, SSH/Telnet closed, Secure boot, Prevent brute-force attack, Audit User Access/System/Event log management, TEE		
Prohibited Protocols	Port 21 (FTP), Port 23 (Telnet), GB/T 28191, SSH. There should not be any provision to enable or disable these protocols in the default firmware from manufacturer. Any special firmware developed to disable these features will not be allowed.		
Privacy masking	4, definable areas or higher		
Region of Interest	4, definable regions or higher		
Local Storage Support	Micro SD/SDHC/SDXC card slot (512 GB or higher), SD card encryption with AES-256		
Max. User Access	10 users		
Network	RJ45 (10 Base-T/100 Base-TX); Ingress protection cover for RJ45 connector		
Reset	Hardware Reset: Secure with Reset button within Housing. Reset provision outside housing shall not be acceptable Software Reset of cameras with ability to retain UN/PW/Network IP/Cameras Zoom		
Environmental Protection	IP66, IP67		
Impact protection	IK10		
Housing Material	Aluminium + Polycarbonate/Metal		
Earthing	Physical Earthing terminal housing		
Input voltage	12 VDC/24 VAC, PoE (IEEE 802.3 af). While using dual power, if any power input fails, the camera should not reboot.		
Power Consumption	Max 10W		
Surge Protection	Support		
Operating Temperature	10°C to 60°C (IR OFF)		
Operating Humidity	less than 95% (non-condensing)		
Certifications (All the Certificates/Compliances required in Tender to be submitted along with the Technical Bid)	ONVIF: Profile S, G, M, T Proposed models shall be listed on ONVIF website. There should be no ONVIF membership restrictions on CCTV OEMs		
	Cyber Security: BIS-ER/STQC		

6.3 5MP IP PTZ Camera and Mounting Accessories with 512 GB SD Card from day1 to be provided along with Camera.

Parameter	Minimum Specification Requirement	Compliance (Yes/No)	Remarks
Make & Model:			
Type	IP PTZ Camera		
Video Format	PAL		
Resolution	5MP or Better		
Image Device	1/2.8" Progressive CMOS sensor or Better		
Minimum Illumination	Color: 0.005 Lux @ F1.6; 0 Lux - IR On		
Shutter Speed	1/1s to 1/10,000s Sec or better		
ONVIF	ONVIF S, G, M, T (Can be verified from onvif Website, T profile must have secure streaming)		
WDR	Minimum 120 dB True WDR		
Local Storage Support	Micro SD/SDHC/SDXC card slot (512 GB or higher), SD card encryption with AES-256		
Focal range	30x Optical Zoom or higher		
Angle of View	As per OEM		
Video			
Video Encoder	H.265 HEVC, H.264, MJPEG dual stream		
Main Stream	2592 x 1944/2592 x 1520/1920 x 1080/1280 x 720 @ 15/20 fps or better		
Second Stream	704 x 576/640 x 480/ 352 x 288(PAL) @ 25 fps or better		
3rd Stream	640 x 480/352 x 288/ 320 x 240 @ 15 fps or better		
Protocols	IPv4, IPv6, TCP/IP, SSL, HTTP, HTTPS, HTTP-Base64, HTTP-Digest, RTSP, RTP, RTSPS. RTCP, Multicast, SNMP, DHCP, NTP, DNS, ICMP, TLS.		
Security	User account and password protection, HTTPS, IP Filter, Digest authentication, TLS1.2 only, Stream encryption, AES128 / 256, SSH / Telnet closed, PCIDSS compliance, TEE		
Region of Interest	4 ROI or higher		
Defog	Yes		
EIS	Yes		
S/N Ratio	> 50dB		
Mechanical			
Pan Angle	360° Rotation Capability		
Tilt Angle	5° ～90°		
Pan Speed	0. 1°~180°/Sec		
Tilt Speed	0. 1°~90°/Sec		
Preset Accuracy	0. 25°		

Parameter	Minimum Specification Requirement	Compliance (Yes/No)	Remarks
Preset Positions	256		
Power failure auto resume	Yes		
Tours/Patrols	8		
Bit rate	20k to 8mbps		
Auto Pan Scan	Yes		
Privacy Mask	4		
Alarm Input / Output	2 In / 01Out		
Alarm Events	Video motion detection, Alarm input, Recording notification, Tampering		
Audio	1 channel input, 1 channel output, G.711A/G.711U		
Interface	Line In/Out		
Ethernet	10/100M		
Housing	IP67 & IK10		
In-built IR range	150m or higher		
In-built IR illuminator	Smart-IR		
IR light control	On (Zoom priority/Manual)/Off		
Electrical			
Power Supply	12V DC/ 24 VAC		
PoE	High PoE (Class 5)/PoE+		
Operating Humidity	0% ~ 90% (non-condensing)		
Operating Temperature	10°C ~ 60°C		
Minimum Users	10		
Certifications (All the Certificates/Compliances required in Tender to be submitted along with the Technical Bid)	ONVIF: Profile S, G, M, T Proposed models shall be listed on ONVIF website. There should be no ONVIF membership restrictions on CCTV OEMs		
	Cyber Security: BIS-ER/STQC		

6.4 Video Management System (VMS) Software

Video Management Software Specifications			
Sl. No.	**General Parameters**	**Compliance (Yes/No)**	**Remarks**
1	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. It shall offer centralized management of all devices, servers, and users and must empower a flexible rule-based system driven by schedules and events. The VMS shall have a flexible, open architecture built on accepted industry standards that supports bi-directional forest support for Microsoft Windows authentication between a customer AD forest and the VMS AD forest environment.		
2	The Open Platform Video Management Software (VMS) application should be brand-agnostic and should not be from the same camera OEM. It should support various third-party ONVIF IP cameras, third-party recorders, and software. The bidder shall submit an undertaking from the Video Management Software (VMS) OEM confirming that all new or existing IP cameras will be certified individually and integrated with 100% of features, even without ONVIF.		
3	The VMS shall allow organizations to configure their IT Group Policy (GPO) to enforce FIPS 140-2 on all VMS servers to ensure security.		
4	The proposed VMS software should be ONVIF S, G, T, and M Profile compliant. Alternatively, in the absence of only M Profile, an undertaking from the Video Management Software (VMS) vendor shall be required stating that all metadata (under M Profile) shall be seamlessly integrated with any brand of IP cameras without any additional cost throughout the contract period.		
5	The video management Software shall provide full virtual matrix switching, pre-integrated with Active Directory Domain Environment along with Secured LDAP(LDAPS) and control capability. Video from local and remote sites shall be possible to view from single or numerous workstations simultaneously at any time from any location on to a single screen. The VMS multisite system shall have the ability to simultaneously view multiple cameras (live or recorded), alarms, bookmarks, and investigations, from any site, with a single sign-on for authorized users.		
6	The IP Video Management Software shall be Licensed & Perpetual Licenses to be Provided, such that they are Valid for Lifetime. The VMS Management Server shall support at least 3000 cameras and/or encoder channels on a single recommended Server and at least 100 recorders and unlimited Client stations.		
7	The VMS shall store user passwords using a strong hashing algorithm which is well known and recognized in the market, like PBKDF2/SHA512		
8	The VMS management server shall be able to intelligently scan an IP network for new devices (cameras or servers) along with automatic model detection.		
9	The VMS shall support multicast capability to allow client applications to receive live streams from multicast groups through router instead of from camera or Recorder to provide live streaming continuously even when Recorders or the Server become unavailable, and to offload both cameras and recorders		

10	The recorder shall offer a redundancy solution using a Recorder Failover feature, with distributed architecture that allows each subsystem to operate independently, without affecting video recording or live viewing		
11	VMS should support Unicast mode only and/or Multicast/IGMP mode – Shall allow client applications to receive live streams from multicast groups through the router instead of from a camera or recorder, to provide live streaming continuously even when a recorder or server becomes unavailable, and to offload both cameras and recorders. The VMS should also support Unicast to Multicast mode – Shall allow simple and secured unicast streaming from the camera to the recorder, and from there shall use multicast to offload the network from multiple video streams to the clients.		
12	The VMS shall support multisite deployments; a multisite directory shall store information for all sites. A copy of the multisite directory shall also reside on each site in the multisite configuration, avoiding any single point of failure. In the event of a multisite directory disconnection, each user shall still be able to execute multisite functionality.		
13	Recording Parameters: The VMS should record H.265+ and/orH265, H.264, MPEG4 or MJPEG in at minimum 1 fps to 30 FPS at minimum CIF to 4K resolution including 360 deg. Cameras. It should also support		
14	VMS should support recordings on NAS, iSCSi, DAS, local or network drive. Defining different drive for each individual camera. An undertaking by the VMS OEM is required with respect to seamless support of virtualization from 3rd. party vendors like VMware, Hyper-V and others.		
15	The VMS Server component shall support software designed for the Microsoft, Windows 2022 and Windows 2019 server platforms since existing systems should be easily integrated. The VMS shall allow the encryption of exported video and investigations using password protection. Encryption will be using AES256.		
16	The VMS should have ability record audio along with video and motion detection which can be executed by the edge device, the IP Camera or the server. Enabling motion detection shall be performed either on a continuous basis, scheduled for particular times, dates, days, months, etc., for defined areas of interest and at a defined sensitivity level.		
17	The VMS shall have an Option to define multiple recording paths. The VMS Recorder shall support streaming encryption with SRTP to enhance the security of video data in transit. This cryptographic protection ensures the privacy and integrity of video streams, reducing the risk of unauthorized access or manipulation during transmission.		
18	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 and the same shall be demonstrated		
19	Playback option for frame-by-frame. The VMS shall support Adaptive Video Streaming where administrators can configure 2 different profiles (resolution and frame rate) for Live streams from the camera, and the VMS client can automatically select the best fit resolution, based on screen resolution and video tile size. This helps to save on bandwidth and decoding resources on the client workstation.		
20	Pre-buffer and Post buffer recordings up to 10 minutes and more configurable		
21	Encryption: Ability to encrypt video while exporting. Options of 56 bit, 128 bit and 256 bit encryption.		

22	Ability to view live video on iOS and Android phones or devices with or without installing proprietary Apps but the mobile device application shall have secure login and authentication (RSA encryption).		
23	Generate logs, audit trails, Network Management reports & reports in Graphical & Tabular form and export in pdf, excel or more format		
24	Failover- Automatic switch of user selected cameras to back-up server in case of failure.		
25	Control Systems: The Video Management Software (VMS) Application shall support Integration with 3rd Party Devices like Physical Perimeter Intrusion Detection Systems (PIDS), Radars, iOT Sensors/Modules & Various 3rd Party Applications.		
26	**Network Management System Module** • The system shall present health monitoring data in the following layouts: tree, health alert list, and dashboard. • The system shall support health monitoring of both physical servers and system components (e.g., services, plug-ins) including CPU/Memory/Disk utilization and network connectivity performance. • The system shall present the different components status using standard color codes showing the health of each component, along with the system administrative alerts list. • The system shall support dashboard representation of its components' health indicators. • The system shall support showing the system administrator an alert list, per component, detailing the source of the alert, its status, description, time of occurrence. • The system shall present health status based on hardware indicators.		
27	**Health Check** The VMS shall provide a system health monitoring application for live monitoring and detailed system performance metrics on system components, including all server-side software applications, including video recorder software, edge devices, and IP cameras. The VMS shall offer a user interface designed to enable the management of System logs, System alerts, Audit trails along with capturing real-time performance analysis.		
28	**Camera Tampering Detection:** The VMS shall support the Camera Tampering Detection resident on the edge devices.		
29	**Supervisor Dashboard** • The system shall provide supervisors with a KPI driven dashboard that measures the performance of the control room • The dashboard should include performance visualization related to alarm handling and follow alarm response time KPI, number of active alarms. • The dashboard should include performance visualization related to incident handling and follow average incident response time KPI, active incident resolution time KPI. The dashboard should include counters and graphs displaying number of alarms and incidents and also by severity and by type distribution graphs.		

30	**Integration Module:** The Video Management Software should include Incident Management system inbuilt into the application. It shall be deployed as a single application capable of doing both video management as well as command and control. It shall be capable of getting integrated with any make of already deployed IP Cameras, Network Video recorders, License Plate recognition system, Face recognition system, Student attendance management system, Staff attendance management system, RFID tracking Systems, Mass Notification systems, Social Media feeds etc.		
31	**Map Management:** The system shall allow definition of multiple maps which are layered using service sources like Open street, ArcGIS online and ArcGIS servers. The GIS maps should be easily searchable for events and devices. The system shall allow editing device's GIS location by locating it on the map or by inputting its exact GIS coordinates. The system shall enable a visual representation of the device operational state, as reported by the integrated system.		
32	**Incident Response Planning** When any incident is reported locally or centrally as a result of Analytics deployment, the system shall allow the management (Add, Delete, Modify and Rename) of incident types included but not limited to KPIs per incident type, management of response procedures. The system shall enable indicating a task as mandatory. Such mandatory tasks must be executed prior to enabling the closure of the incident. The system shall allow importing checklist response plans from files. The system shall allow selecting which device to apply the command to. Automatic device selection (based on event that triggered the incident) or manual selection should be supported. The system shall support adding automatically initiated system command tasks in the response procedures. System command tasks should include sending e-mail as well as Mobile alerts to Security official.		
33	**Mobile Application:** The Incident management system shall be also available as a dedicated Mobile Application allowing to view, dispatch and the system shall allow mapping incident/mission dispatch. The system shall update incident and alarm records on all dispatch system reports, including dispatch ongoing status, responder allocation and ongoing mission-handling reports. The Application shall allow the viewing of live and recorded stream video coming from responders.		
34	It shall be possible to assign existing encoders and IP cameras to recording manager/Server		
35	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. For multisite deployments, a multisite directory shall store information for all sites. A copy of the multisite directory shall also reside on each site in the multisite configuration, avoiding any single point of failure. In the event of a multisite directory disconnection, each user shall still be able to execute multisite functionality.		
36	Should record H.265+ and/orH265, H.264, MPEG4 or MJPEG in at minimum 5 fps to 30 FPS at minimum CIF to Full HD (1080p) and 4K resolution.		

37	Export the desired portion of video in mp4, avi and asf formats in DVD/USB or any external device. Viewing of this recording must be playable on authorized player which shall be provided by software manufacturer or in media player on OS Windows, Linux/Unix or Apple Mac. The VMS Server component shall support software designed for the Microsoft, Windows 2022 and Windows 2019 server platforms since existing systems should be easily integrated. The VMS shall allow the encryption of exported video and investigations using password protection. Encryption will be using AES256.		
38	Export recording possible in client and remote PC also with proper authentication.		
39	Option for Window-Pop up, Email, Sound alarm, Phone call, SMS on recording/ video loss or any event. A media gateway application shall be inbuilt which shall properly packetize video to transverse NAT's and firewalls using IP, with a maximum of 2 ports		
40	Storage and Bandwidth calculation: Recoding size estimation for each hard disk attached to the server. Option to check disk size of individual camera.		
41	A third party tool for Image Enhancement on recorded videos shall be supplied. The image enhancement should be able enhance videos of fog, rain and low light conditions.		
42	The option of email and SMS(Through SMS Gateway) as well as mobile alerts is needed.		
43	Automatic archiving after set number of days and automatic recording deletion after disk full.		
44	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 and the same shall be demonstrated		
45	Encryption: Ability to encrypt video while exporting. Options of 56 bit, 128 bit and 256 bit encryption		
46	Live View possible for minimum 256 cameras simultaneously on 1 screen or multiple monitors using software video wall.		
47	Dual Streaming and Automatic Switching from Low to High Quality on Full screen mode.		
48	Option to change Live View directly from cameras or from VMS server using RTSP and HTTP options		
49	It should support live view and Playback from minimum 80 clients- Both local and remote		
50	It should support event based playback.		
51	Ability to search based on Date/Time/Camera, Name, ID and Location for more than one camera simultaneously.		
52	Software should allow creation of multiple camera sequences. It should be possible to set the dwell time for the cameras within the sequence.		
53	Software should allow sequences control (pause/play, skip forwards, skip backwards).		
54	Live view and Playback available at the same time with Playback window running side by side with live view window.		
55	Event window with specific snapshot of that event should be shown simultaneously in Live view screen. Clicking on the event should play recording of that event time.		

56	Image Enhancement available in Playback. Option to sharpen the video image through scrollbar using any third party tool		
57	Playback Navigation Tree View with Recording server, camera list, year/months list and the date wise play list.		
58	Playback option for frame-by-frame. The VMS shall support Adaptive Video Streaming where administrators can configure 2 different profiles (resolution and frame rate) for Live streams from the camera, and the VMS client can automatically select the best fit resolution, based on screen resolution and video tile size. This helps to save on bandwidth and decoding resources on the client workstation.		
59	Playback should have Video lock feature.		
60	Option of Common Timeline for syncing of multiple cameras while playback.		
61	Ability to make bookmark of any portion of video and view list of all bookmarks		
62	Instant Playback and Quick Search of event based recordings.		
63	Event based search: Event based Time line to quickly show colored dots in Timeline and view recorded videos at the event time.		
64	Playlist with files listed for each date. User can click on a date to play recordings.		
65	E-map client should show icon blink and voice alert of the event. Should be able to take snapshots from Google Map if connected to internet. It should be possible to click on icon in a map to initiate PTZ camera preset, run PTZ pattern, view camera.		
66	Two-way audio communication between camera and VMS. Option to send/broadcast Audio to multiple cameras		
67	Mobile Surveillance & Remote Viewing Parameters: Ability to view live video on iOS and Android phones or devices with or without installing proprietary Apps but The mobile device application shall have secure login and authentication (RSA encryption).		
68	VMS and Mobile App support for multiple sites spread across WAN to be controlled and viewed from central location and Remote Administration over internet.		
69	Ability to make a Phone call/IVR on any alert or alarm along with The Mobile App must also Support for Audio Streaming along with Video Streaming.		
70	Streaming Parameters: Option for RTSP, HTTP, RTSP over HTTP streaming or both simultaneously at individual camera level.		
71	**Other Features:** • Add all cameras with single click. Apply settings to multiple cameras of same model with single click. • Generate logs & reports in Graphical & Tabular form and export in pdf, excel or more format • Failover- Automatic switch of user selected cameras to back-up server in case of failure. • User role based cameras and feature access. Define users with passwords and access to only specific cameras. • Complete server logs including login access, system settings change, archiving events, video or recording loss and all activity done by administrator or any other user in the system.		

72	**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.		
73	**VMS Web Client based Monitoring System** • 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. Configurable playback speed in multiple increments up to 100x shall be available and demonstrated. • The VMS Web Client shall show the Camera details with Key Performance Indicators like, Total Cameras connected, Total Cameras Disconnected, Status Visualization in the form of Pie Chart • 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 shall support the following actions on a report: print report, export report to a PDF/Microsoft Excel/CSV file, and automatically email a report based on a schedule and a list of one or more recipients. • The VMS Web Client shall support comprehensive data filtering for most reports based on entity type, event type, event timestamp, custom fields, and more.		
74	**Integrated Systems Management Assets for University** • The system shall enable the management of integration servers from a central administration application also as an Option. • The system shall support multiple integration servers working with the same application and database servers. • The system shall allow configuring system adaptors in integration server from a central administration application. • The system shall allow configuring the system adaptor connection information (IP, user, password) from a central administration application. • The system shall allow discovering the devices of the integrated system and allow the administrator to define/select which devices should be monitored by the system. • The system shall have a clear indication of monitored devices placed on maps. • The system shall allow the organization of integration servers, system adaptors, and devices into a tree-like structure.		

	• The system shall support the sorting and filtering of the device list by any of its attributes. • The system shall support a text search on the device list attributes.		
75	**Map Management:** • The system shall allow definition of multiple maps in a hierarchal tree structure and multiple layers inbuilt. • The system shall provide the maps administrator with a feature-rich map control and browsing capabilities including geo-coding and reverse geo-coding. • The system shall allow adding layers from service sources including Open Street Map, ArcGIS online and ArcGIS servers. • The system shall allow search capabilities on registered file formats. • The system shall allow adding monitored devices layers and place devices on them. • The system shall enable searching for a device by name or type in order to select it for placing. • The system shall allow interacting with the device (play video for cameras) from the map management module and removing, export or import in bulk. • The system shall allow editing device's GIS location by locating it on the map or by inputting its exact GIS coordinates. • The system shall allow viewing the layer that the device is included in from the device icon on the map. • The system shall enable a visual representation of the device operational state, as reported by the integrated system. • The system shall enable fast switch between maps while maintaining the map extent.		
76	**Incident Response Planning** a) The system shall allow the management (Add, Delete, Modify and Rename) of incident types. b) The system shall allow the management of KPIs per incident type. c) The system shall support the management of response procedures. d) The system shall support adding to-do tasks in the response procedures. e) The system shall support adding decision tasks with multiple options in the response procedures. f) The system shall support adding automatically initiated system command tasks in the response procedures. System command tasks should include sending e-mail. g) The system shall enable associating response procedures to incident types. The associated procedures should be available for selection to operators upon manual incident creation. h) The system shall allow configuring and executing incident triggering rules. i) The system shall allow setting up multiple triggering rules per incident type. j) The system shall allow setting up rules with complex triggering conditions, including multiple occurrences of an event within a timeframe and dependencies between occurrences of events.		

77	**Audit Trails:** • The system shall retain/store all user activity audit records. • The system shall provide an application for searching these records. • The system shall provide audit record search capability based on time, username, user full name, action description and IP address. • The system shall display audit records search results in a tabular structure that supports sorting, grouping and searching within results. • The system shall allow exporting the audit search results into a tabular file format (e.g. XML).		
78	**Mobile Application:** • The system shall allow mapping incident/mission dispatch. • The system shall allow different dispatch missions based on incident severity. • The system shall allow automatic and manual system-initiated dispatch requests. • The system shall report upon successful dispatch request. • The system shall allow the request of dispatch mission abort. • The system shall update incident and alarm records on all dispatch system reports, including dispatch ongoing status, responder allocation and ongoing mission-handling reports. • The system shall allow the manual dispatch of responders to an active incident. • The system shall automatically close the dispatch mission upon closure from all responders and fulfillment of the dispatch rule. • The system shall validate the completion of an active dispatch upon incident closure or alarm acknowledgement. • The system shall allow the viewing of live and recorded stream video coming from responders. • The system shall allow the bi-directional collaboration of incidents (e.g., through creation, synchronization, and closure) with the dispatch systems.		
79	**Alarm Management:** • The system shall visually and audibly notify operators upon receiving new alarms in a non-blocking manner. The visual notifications can be turned on\off per operator's preference. • The system shall allow clearing alarms. Cleared alarm should be visually different from active alarms. • The system should update the alarm record on all operator workstations when an operator clears an alarm. • The system should log and display the time and the user name of the operator that cleared the alarm. • The system should enable the operator to set a closure reason, from a predefined list, upon acknowledging an alarm. • The system shall support the bi-directional synchronization of an alarm status. • The system shall allow zooming in on the alarm location. • The system shall allow viewing recorded video from the time of the alarm. System should deduce the relevant camera based on the alarmed device and its related cameras.		

Pre-Qualification Criteria			
80	The Offered VMS Software should be ONVIF S, G, T & M Profile Compliant from Day 1 as on the Bid Publishing Date. The Declaration of ONVIF S, G, T & M Profile shall be available on ONVIF Official Website www.onvif.org in the Conformant Devices. VMS OEM to Submit a Valid Certificate to Substantiate the Proof. Alternatively in case of delay in "M" Profile, the OEM should submit a declaration of adaptor-based integration of all meta data features of cameras free of cost.		
81	The VMS OEM should have Certifications following certifications (Any One) A. ISO 9001:2015 Quality Management Certifications in the name of the OEM B. 27001:2013 Information Security Management Systems Certifications C. ISO 14001:2015 – Environmental Management System D. ISO 45001:2018 – Occupational Health & Safety Management System E. ISO 27017:2015 – Information Security Control for Cloud Services Additionally the Video management Software Company shall be CMMi-Level-3 certified and the certificate shall be available as on the date of bid submission. The Above Certifications are the Minimum requirements to ensure Quality OEM Participation All of these Certificates to be Submitted by the OEM for Evaluation. These Certificates should be from The Video Management Software (VMS) Application OEMs with their Name & Address reflecting in the Certificates.		
82	The VMS, Software OEM shall have a direct Registered Office in India without any Collaboration, Joint Venture, Distributor, Parent Company & should be in Operational in India.		
83	The VMS Software OEM shall also have a Dedicated Support, Research & Development (R&D) Centre in India.		
84	The Video Management Software OEM should have executed a Single Project of at least 5000 cameras outdoor integrations with Video management and Centralized Command center in India with any State Government, Central Government or Public Central Undertaking during past 3 years. A site visit may be arranged for the same. A certificate of deployment shall be submitted in Original		
85	The Intellectual Property Rights & Source Code of Offered Video Management Software (VMS) must not reside in a Country that is sharing Land Border with India. The Video Management Software (VMS) Offered should not be Developed/manufactured by an entity in which the majority shareholding of the entity is from a Country sharing a Land Border with India. OEM shall provide a Declaration about the intellectual property rights & Source Code as a Documentary Evidence & Copyrights Certificate. The OEM who is Claiming to be Make in India OEM with Local Content greater than 50%, then their Intellectual Property Rights (IPR) & Source Code must Reside in India only. Documentary Evidence /Declaration on OEM letter head to be Provided. Any False Declaration can lead to Bid Rejection.		

86	The Offered Video Management Software (VMS) Application should be Indigenously Developed by the OEM & should not be White-labelled Product.		
	Cyber Security Features		
87	The Video Management Software shall have a valid security testing certificate from STQC/CERT-In empaneled lab tested for VAPT or any reputed Global Agency like Veracode etc.		
88	The Video Management Software should support RTSPS or SRTP or RTSP over TLS Encrypted Live Streaming from cameras (If Supported by Cameras) to VMS as well as support streaming of RTSPS or SRTP or RTSP over TLS Encrypted Live Streaming from VMS servers to clients.		

6.5 Video Management System (VMS) Application/Management Server

Parameter	Technical Specifications	Compliance (Yes/No)	Remark
Make & Model:			
Market Position	The OEM for the proposed server must be in one of the top three server vendors (by market share revenue in IDC) in any of the previous 2 quarters		
Form Factor	Max. 1U rack mounted with OEM sliding rails		
Configured CPU	Intel Xeon 6 Performance 3.3G, 8C/16T processor or better		
Memory configured	Min 32GB UDIMM, 5600MT/s ECC		
Disks supported	Up to 4 x 3.5-inch SAS/SATA HDD/ SSD or Up to 8 x 2.5-inch SAS/SATA/NVMe (HDD/SSD)		
RAID Controller	RAID 0,1 & 10, 12Gbps SAS, PCIe 4.0		
Disks Configured	Min 2x 960GB SSD in RAID1 for OS and Applications.		
Network Ports	2x 1G Base T ports LOM 2x 10G SFP ports		
I/O slots	Up to two PCIe Slots		
Ports	Front Ports ● 1 x Dedicated Management micro-USB ● 1 x USB 2.0 Rear Ports ● 1 x USB 2.0 ● 1 x USB 3.0 ● 1 x VGA ● 1 x Dedicated Management Ethernet port		
OS & Hypervisor support	● Canonical Ubuntu Server LTS ● Windows Server with Hyper-V ● Red Hat Enterprise Linux ● SUSE Linux Enterprise Server ● VMware ESXi ● XLOUD AVS		
Power Supply	Dual, hot swap, redundant PSUs		
Management integration	Support for integration with Microsoft System Center, VMware vCenter and vRealize Operations Manager, BMC		

Parameter	Technical Specifications	Compliance (Yes/No)	Remark
	Software, ServiceNow, Red Hat Ansible Modules, and Terraform Providers		
Power & temperature	Real-time power meter, graphing, thresholds, alerts & capping with historical power counters. Temperature monitoring & graphing		
Pre-failure alert	Should provide predictive failure monitoring & proactive alerts of actual or impending component failure for fan, power supply, memory, CPU, RAID, NIC, HDD		
Configuration & Management	• Real-time out-of-band hardware performance monitoring & alerting. • Agent-free monitoring, driver updates & configuration, power monitoring & capping, RAID management, external storage management, monitoring of FC, HBA & CNA & system health. • Out-of-band hardware & firmware inventory. • Zero-touch auto configuration to auto deploy a baseline server configuration profile. • Automated hardware configuration and Operating System deployment to multiple servers. • Zero-touch repository manager and self-updating firmware system. • Virtual IO management/stateless computing		
LCD panel	LCD / Security bezel. Should display system ID, status information and system error code followed by descriptive text. LCD background should light up in different colors during normal system operation & error conditions.		
HTML5 support	HTML5 support for virtual console & virtual media without using Java or ActiveX plugins		
Server security	Should have a cyber-resilient architecture for a hardened server design for protection, detection & recovery from cyber-attacks. Should provide effective protection, reliable detection & rapid recovery using: • Cryptographically signed firmware • Data at Rest Encryption (SEDs with local or external key management) • Secure Boot • Secure Erase • Secured Component Verification (Hardware integrity check) • Silicon Root of Trust • System Lockdown • TPM 2.0 FIPS, CC-TCG certified Configuration upgrades should be only with cryptographically signed firmware and software. Should protect against firmware which executes before the OS boots. Should provide system lockdown feature to prevent change		

Parameter	Technical Specifications	Compliance (Yes/No)	Remark
	(or "drift") in system firmware image(s) & prevent malicious modification of server firmware		
Intrusion alert	Intrusion alert in case chassis cover being opened		
OS and DB	Microsoft Windows Server 2025 OS or Linux		
Certifications	BIS, IEC60950 (UL) certification, and EPEAT registration in India, ISO9001, ISO 27001 and ISO 45001.		
Warranty	5 years On-site Comprehensive Next Business Day warranty with 24x7x365 remote hardware support. The warranty details along with the offered BOM of server should be available online on the support website of the OEM.		

6.6 Video Management System (VMS) Recording Server with 100TB usable Storage

Parameter	Technical Specifications	Compliance (Yes/No)	Remark
Make & Model:			
Market position	The OEM for the proposed server must be in one of the top three server vendors (by market share revenue in IDC) in any of the previous 2 quarters		
Chipset	Intel C741 series chipset		
Form Factor	2U rack mounted with OEM sliding rails		
Configured CPU	Dual Intel 5th Gen Xeon Scalable processors each with min 12 cores 2.4 GHz base frequency or better		
Memory slots	Should have min 16 DDR5 DIMM slots. Should support registered ECC DDR5 DIMMs only.		
Memory configured	Min 64 GB DDR5		
Disks supported	Up to 12 x 3.5-inch SAS/SATA (HDD/SSD) in front bay and Up to 2 x 2.5-inch SAS/SATA/NVMe (HDD/SSD) in rear bay		
RAID Controller	12Gbps 8Gb cache PCIe 4.0 with RAID 0,1,5,6,10,50,60		
Disks configured	2x 480GB SSD in RAID1 for OS and Applications, 8x 20TB SATA/SAS HDD in RAID6		
Network Ports	2x 1GbE ports, 2x 10G SFP ports		
I/O slots	Up to three PCIe Slots		
Ports	Front Ports ● 1 x Dedicated Management micro-USB ● 1 x USB 2.0 ● 1 x VGA Rear Ports ● 1 x USB 2.0 ● 1 x USB 3.0 ● 1 x Dedicated Management Ethernet port		

Parameter	Technical Specifications	Compliance (Yes/No)	Remark
OS & Hypervisor support	● Canonical Ubuntu Server LTS ● Windows Server with Hyper-V ● Red Hat Enterprise Linux ● SUSE Linux Enterprise Server ● VMware ESXi ● XLOUD AVS		
Power Supply	Dual, hot swap, redundant PSUs		
Management integration	Support for integration with Microsoft System Center, VMware vCenter and vRealize Operations Manager, BMC Software, ServiceNow, Red Hat Ansible Modules, and Terraform Providers		
Power & temperature	Real-time power meter, graphing, thresholds, alerts & capping with historical power counters. Temperature monitoring & graphing		
Pre-failure alert	Should provide predictive failure monitoring & proactive alerts of actual or impending component failure for fan, power supply, memory, CPU, RAID, NIC, HDD		
Configuration & management	• Real-time out-of-band hardware performance monitoring & alerting. • Agent-free monitoring, driver updates & configuration, power monitoring & capping, RAID management, external storage management, monitoring of FC, HBA & CNA & system health. • Out-of-band hardware & firmware inventory. • Zero-touch auto configuration to auto deploy a baseline server configuration profile. • Automated hardware configuration and Operating System deployment to multiple servers. • Zero-touch repository manager and self-updating firmware system. • Virtual IO management / stateless computing.		
LCD panel	LCD / Security bezel. Should display system ID, status information and system error code followed by descriptive text. LCD background should light up in different colors during normal system operation & error conditions.		
HTML5 support	HTML5 support for virtual console & virtual media without using Java or ActiveX plugins		

Parameter	Technical Specifications	Compliance (Yes/No)	Remark
Server security	Should have a cyber-resilient architecture for a hardened server design for protection, detection & recovery from cyber-attacks. Should provide effective protection, reliable detection & rapid recovery using: ● Cryptographically signed firmware ● Data at Rest Encryption (SEDs with local or external key management) ● Secure Boot ● Secure Erase ● Secured Component Verification (Hardware integrity check) ● Silicon Root of Trust ● System Lockdown ● TPM 2.0 FIPS, CC-TCG certified Configuration upgrades should be only with cryptographically signed firmware and software. Should protect against firmware which executes before the OS boots. Should provide system lockdown feature to prevent change (or "drift") in system firmware image(s) & prevent malicious modification of server firmware.		
Intrusion alert	Intrusion alert in case chassis cover being opened		
OS and DB	Microsoft Windows Server 2025 OS or Linux		
Certifications	Server should have BIS, IEC60950 (UL) certification. Server should have EPEAT registered in India. Server OEM should have ISO9001, ISO27001 and ISO45001.		
Warranty	5 years On-site Comprehensive Next Business Day warranty with 24x7x365 remote hardware support. The warranty details along with the offered BOM of server should be available online on the support website of the OEM.		

6.7 12-Port Giga PoE+ L2 Managed Switch with 1G SFP Uplink

Minimum Specification Requirement	Compliances (Yes/No)	Remarks
Make & Model:		
Physical Characteristics and Architecture Requirements		
The switch should be 1U 19" Rack Mountable, mounting kit should be included		
The switch should have minimum 12 Port Gigabit (10/100/1000 Mbps) POE+ ports and 2 x 1G SFP uplink ports and 2x1G RJ45 ports. Should have minimum 139W POE power budget.		
The switch should have dedicated console port		
Switch should have integrated trusted platform module (TPM) or equivalent for platform integrity to ensure the boot process is from trusted source		

Minimum Specification Requirement	Compliances (Yes/No)	Remarks
Performance Requirements		
Should have dual Core CPU @1Mhz		
The switch should have minimum 2GB DRAM, 8GB eMMC/Flash Memory and 6 MB Packet buffer.		
The proposed switch should have minimum 28 Gbps switching capacity		
The switch should have minimum 8,000 MAC Address Table size		
The switch should support minimum 500 IPv4/500 IPv6 routes and 500 IPv4 and 256 IPv6 ACL Entries.		
Layer-2, QoS and Security Features		
The switch should support Spanning Tree Protocol (STP/RSTP/MSTP),LACP, Voice VLAN		
The switch should support IEEE 802.1Q VLANs (500 active VLANs) and MVRP or equivalent for automatic learning and dynamic assignment of VLANs		
The switch should support Strict priority (SP) queuing, Traffic prioritization (IEEE 802.1p) for real-time classification, Class of Service (CoS) sets the IEEE 802.1p priority tag based on IP address, IP Type of Service (ToS), Layer 3 protocol, TCP/UDP port number, source port, and DiffServ		
The switch should support Access control lists (ACLs) for both IPv4 and IPv6 traffic.IPv6 ACL/QoS supports ACL and QoS for IPv6 network traffic		
The switch should support concurrent IEEE 802.1X, Web, and MAC authentication schemes per switch port, up to 20 sessions of IEEE 802.1X, Web, and MAC authentications		
The switch should support Control Plane Policing, STP BPDU port protection, DHCP (snooping) protection, dynamic ARP protection and port security.		
Layer-3 Routing and Services Features from day-1		
The switch should support IPv4 and IPv6 Static Routing		
Management Features		
The switch should support SNMP and Remote monitoring (RMON)		
The switch should support sFlow or equivalent for traffic analysis. The switch should support Port mirroring		
The switch should support REST APIs or equivalent; Should support on-prem and cloud based management (if required without changing the firmware/hardware)		
The switch should support TACACS+ and RADIUS		
The switch should have Command Line Interface (CLI) with a hierarchical structure and SSH/telnet, Secure FTP/TFTP support		
The switch should support Network Time Protocol (NTP) or SNTP		
Certifications and Industry Recognition		
The switch should have RoHS compliance and MTCTE/TEC certified.		

Minimum Specification Requirement	Compliances (Yes/No)	Remarks
The switch should have safety/emissions certifications including IEC/EN 62368-1, VCCI-CISPR 32, EN 55032, FCC CFR 47 Part 15		
OEM should be in Gartner® Magic Quadrant™ for Enterprise Wired and Wireless LAN Infrastructure since last 3 years which includes latest 2025 report".		

6.8 24-Port Giga PoE+ L2 Managed Switch with 1G SFP Uplink

Minimum Specification Requirement	Compliances (Yes/No)	Remark
Make & Model:		
Physical Characteristics and Architecture Requirements		
The switch should be 1U 19" Rack Mountable, mounting kit should be included		
The switch should have minimum 24 Port Gigabit (10/100/1000 Mbps) POE+ ports and 4 x 1G SFP Uplink ports. Should have minimum 370W POE power budget.		
The switch should have dedicated console port		
Switch should have integrated trusted platform module (TPM) or equivalent for platform integrity to ensure the boot process is from trusted source		
Should support Stacking functionality		
Performance Requirements		
Should have dual Core CPU @1Mhz		
The switch should have minimum 2GB DRAM, 8GB eMMC/Flash Memory and 8 MB Packet buffer.		
The proposed switch should have minimum 56 Gbps switching capacity		
The switch should have minimum 8,000 MAC Address Table size		
The switch should support minimum 500 IPv4/500 IPv6 routes and 500 IPv4 and 256 IPv6 ACL Entries.		
Layer-2, QoS and Security Features		
The switch should support Spanning Tree Protocol (STP/RSTP/MSTP), LACP, Voice VLAN		
The switch should support IEEE 802.1Q VLANs (500 active VLANs) and MVRP or equivalent for automatic learning and dynamic assignment of VLANs		
The switch should support Strict priority (SP) queuing, Traffic prioritization (IEEE 802.1p) for real-time classification, Class of Service (CoS) sets the IEEE 802.1p priority tag based on IP address, IP Type of Service (ToS), Layer 3 protocol, TCP/UDP port number, source port, and DiffServ		
The switch should support Access control lists (ACLs) for both IPv4 and IPv6 traffic. IPv6 ACL/QoS supports ACL and QoS for IPv6 network traffic		
The switch should support concurrent IEEE 802.1X, Web, and MAC authentication schemes per switch port, up to 20 sessions of IEEE 802.1X, Web, and MAC authentications		
The switch should support Control Plane Policing, STP BPDU port protection, DHCP (snooping) protection, dynamic ARP protection and port security.		

Minimum Specification Requirement	Compliances (Yes/No)	Remark
Layer-3 Routing and Services Features from day-1		
The switch should support IPv4 and IPv6 Static Routing		
Management Features		
The switch should support SNMP and Remote monitoring (RMON)		
The switch should support sFlow or equivalent for traffic analysis. The switch should support Port mirroring		
The switch should support REST APIs or equivalent; Should support on-prem and cloud-based management (if required without changing the firmware/hardware)		
The switch should support TACACS+ and RADIUS		
The switch should have Command Line Interface (CLI) with a hierarchical structure and SSH/telnet, Secure FTP/TFTP support		
The switch should support Network Time Protocol (NTP) or SNTP		
Certifications and Industry Recognition		
The switch should have RoHS compliance and MTCTE/TEC certified.		
The switch should have safety/emissions certifications including IEC/EN 62368-1,VCCI-CISPR 32,EN 55032,FCC CFR 47 Part 15		
OEM should be in Gartner® Magic Quadrant™ for Enterprise Wired and Wireless LAN Infrastructure since last 3 years which includes latest 2025 report".		

6.9 24-Port L3 Full Managed Core Switch with 1/10G SFP+ Ports

Minimum Specification Requirement	Compliance (Yes/No)	Remark
Make & Model:		
Physical Characteristics and Requirements		
The switch should be 1U 19" Rack Mountable, mounting kit should be included		
The switch should have 24 x 1/10G SFP+ Uplink interface and 4x10/25G/50G or 4x40/100G uplink interfaces.		
The switch should be populated with necessary transceivers/cables as per design on Day 1		
The switch should have 1x USB-C/RJ 45 Console Port 1x OOBM port		
Switch should have integrated trusted platform module (TPM) or equivalent for platform integrity to ensure the boot process is from trusted source		
The switch should be based on programmable ASICs purpose-built to allow for a tighter integration of switch hardware and software to optimize performance and capacity		
Switch should support switch virtualization/stacking feature for combining multiple switches into single logical unit and providing Multi-Chassis Link aggregation (MC-LAG) for uplink/downlink connectivity. Should support minimum 200Gbps Stacking bandwidth.		
Performance Requirements		
The switch should have multi-core CPU/processor		

Minimum Specification Requirement	Compliance (Yes/No)	Remark
The switch should have minimum 8GB DRAM, 32GB eMMC/Flash Memory and 8MB Packet buffer memory		
The proposed switch should have minimum 880 Gbps switching capacity		
The switch should have minimum 32,000 MAC Address Table size and 45K ARP table entries		
The switch should support minimum 24K IPv4 routes/12K IPv6 Routes and 4K IPv4/IPv6 Multicast Routes		
The switch should support minimum 8K IPv4 and 4K IPv6 ACL entries		
Operating System Capabilities		
The switch should have modular operating system with micro-services or equivalent architecture providing superior fault tolerance and high availability		
The switch OS should support programmability through REST APIs or equivalent		
All the features mentioned in the specifications shall be enabled/activated. Any licenses required shall be included from Day 1		
Layer-2, QoS and Security Features		
The switch should support Spanning Tree Protocol (STP/RSTP/MSTP)		
The switch should support Uni-directional Link Detection (UDLD) to monitor link connectivity		
The switch should support Link Aggregation Control Protocol (LACP)		
The switch should support IEEE 802.1Q VLANs (1000 active VLANs) and MVRP or equivalent for automatic learning and dynamic assignment of VLANs		
The switch should support Private VLAN (PVLAN) providing traffic isolation between users on the same VLAN		
The switch should provide storm protection to limit unknown broadcast, multicast, or unicast storms with user-defined thresholds		
The switch should support Strict priority (SP) queuing, Deficit Weighted Round Robin (DWRR) or equivalent and large buffers for graceful congestion management		
The switch should support setting IEEE 802.1p priority tag based on IP address, IP Type of Service (ToS), Layer 3 protocol, TCP/UDP port number, source port, and DiffServ		
The switch should support Access control lists (ACLs) for both IPv4 and IPv6 traffic		
The switch should support concurrent IEEE 802.1X, Web, and MAC authentication schemes per switch port, up to 24 sessions of IEEE 802.1X, Web, and MAC authentications		
The switch should support RADIUS authentication and accounting		
The switch should support Control Plane Policing, CPU protection, STP BPDU port protection, STP root guard, DHCP (snooping) protection, dynamic ARP protection and port security		
The switch should support Internet Group Management Protocol (IGMPv1, v2, and v3) and Multicast Listener Discovery (MLDv1 and v2)		

Minimum Specification Requirement	Compliance (Yes/No)	Remark
The switch should support IEEE 802.3az Energy Efficient Ethernet and PoE allocation by usage or class, with LLDP and LLDP-MED		
The switch should support VXLAN encapsulation (tunnelling) protocol for overlay network to enable a scalable virtual network deployment and EVPN.		
The switch should support IPv6 security features like RA guard, dynamic IPv6 lockdown, and ND snooping		
Layer-3 Routing and Services Features-Day-1		
The switch should support IPv4 and IPv6 Static Routing		
The switch should support Open Shortest Path First (OSPF) - OSPFv2 for IPv4 routing and OSPFv3 for IPv6 routing		
The switch should support BGP, VRF, Equal-Cost Multipath (ECMP)		
The switch should support Virtual Router Redundancy Protocol (VRRP)		
The switch should support Multicast routing including PIM Sparse Mode and Dense Mode (DM) for both IPv4 and IPv6		
The switch should support dual IP stack maintaining separate stacks for IPv4 and IPv6 to ease the transition from an IPv4-only network to an IPv6-only network design		
The switch should support Dynamic Host Configuration Protocol (DHCP) client and relay		
Management Features		
The switch should support SNMP and Remote monitoring (RMON)		
The switch should support sFlow or equivalent for traffic analysis		
The switch should support TACACS+ for securing administrative access		
The switch should have Command Line Interface (CLI) with a hierarchical structure and SSH, Secure FTP/TFTP support		
The switch should support Network Time Protocol (NTP)		
The switch should support Port mirroring		
Certifications and Industry Recognition		
The switch should have RoHS compliance; OEM should be in Gartner® Magic Quadrant™ for Enterprise Wired and Wireless LAN Infrastructure since last 3 years which includes latest 2025 report".		
The switch should have safety/emissions certifications including UL/CUL 60950, EN 55024/55032, VCCI Class A or equivalent		
Support and Warranty		
The switch shall be offered with minimum five years hardware warranty with 24x7 Technical support from OEM directly		

6.10 48-Port L3 Full Managed Core Switch with 1/10G SFP+ Ports

Minimum Specification Requirement	Compliance (Yes/No)	Remark
Make & Model:		
Physical Characteristics and Port Requirements		
1U 19" Rack Mountable with mounting kit included		
The switch should have dual, redundant, field-replaceable, hot-swappable power supplies and field-replaceable, hot-swappable fans with airflow		
The Switch should have minimum 48 ports of 1/10GbE SFP+ and 4 ports of 40GbE/100GbE (QSFP+/QSFP28) ports.		
The switch should have RJ-45 serial or USB-C console port, RJ-45 Ethernet Management port and USB Interface		
Switch should have integrated trusted platform module (TPM) to equivalent platform integrity to ensure the boot process is from trusted source		
Performance Requirements		
The switch should have multi-core CPU/processor		
The proposed switch should have minimum 16 GB DRAM, 32 GB Flash/Storage and 32 MB Packet buffer memory		
The proposed switch should have switched performance of 1.7 Tbps		
The switch should support switch virtualization feature for combining dual switches into single logical unit with active-active control planes and providing Multi-chassis Link aggregation (MC-LAG) for uplink/downlink connectivity		
The switch should have minimum 95K MAC Address Table size		
The switch should support minimum 24K IPv4 routes/12K IPv6 Routes and 4K IPv4/IPv6 Multicast Routes		
The switch should Supports powerful ACLs for both IPv4 and IPv6. Supports creation of object groups representing sets of devices like IP addresses. Minimum 16K IPv4 ACL/4K IPv6 ACL entries.		
Operating System Capabilities		
The switch should have modular operating system with micro-services or equivalent architecture providing superior fault tolerance and high availability		
The switch OS should support programmability through REST APIs, and Python scripting/XML .		
The proposed switch should support access to all network state information to allow unique visibility and analytics		
Layer-2, QoS and Security Features		
The switch should support Spanning Tree Protocol (STP/RSTP/MSTP) and Ethernet Ring Protection Switching (ERPS) for rapid protection and recovery. Should support minimum 64 MSTP instances.		
The switch should support Link Aggregation Control Protocol (LACP). Supports minimum 48 LAGs, with up to 8 members per LAG.		

Minimum Specification Requirement	Compliance (Yes/No)	Remark
The switch should support IEEE 802.1Q VLANs (1000 Active VLANs), should supports MVRP or equivalent to allows automatic learning and dynamic assignment of VLANs.		
The switch should provide storm protection to limit unknown broadcast, multicast, or unicast storms with user-defined thresholds		
The switch should support Data Centre Bridging (DCB) capability supporting Priority Flow Control (PFC), Enhanced Transmission Service (ETS) and DCB Exchange Protocol (DCBX)		
The switch should support Unidirectional Link Detection (UDLD) Monitors link connectivity and shuts down ports at both ends if unidirectional traffic is detected, preventing loops in STP-based networks.		
The switch should support Internet Group Management Protocol (IGMPv1, v2, and v3) and Multicast Listener Discovery (MLDv1 and v2)		
The switch should support Secure port access like 802.1x, Mac-auth, Port-Access Policy, Static Port Filtering, DHCP snooping, RA Guard, ND snooping, Dynamic ARP Inspection, STP root guard, BPDU protection,		
Layer-3 Routing and Services Features		
The switch should support IPv4 and IPv6 Static Routing; Should support RIPv2, RIPng.		
The switch should support Open shortest path first (OSPF) for IPv4 and IPv6		
The switch should support Border Gateway Protocol 4 (BGP) for IPv4 and IPv6		
The switch should support Policy Based Routing (PBR)		
The switch should support Multicast Routing using PIM-SM, SSM and Multicast Service Delivery Protocol (MSDP)		
The switch should support dynamic VXLAN with BGP-EVPN		
The switch should support DHCP Server providing DHCP services (for IPv4 and IPv6)		
The switch should support Equal-Cost Multipath (ECMP), Generic Routing Encapsulation (GRE).		
Management Features		
The switch should support SNMP and Remote monitoring (RMON)		
The switch should support sFlow or equivalent for traffic analysis		
The switch should provide advanced telemetry and automation features for monitoring, troubleshooting and improving network operations		
The switch should support RADIUS and TACACS+ for securing administrative access		
The switch should have Command Line Interface (CLI) with a hierarchical structure and SSH, Secure FTP/TFTP support		
The switch should support Port mirroring		
Certifications and Industry Recognition		
The switch should have RoHS compliance; OEM should be in Gartner® Magic Quadrant™ for Enterprise Wired and Wireless LAN Infrastructure since last 3 years which includes latest 2025 report".		
The switch should have safety/emissions certifications including EN 55024/55032, VCCI Class A,UL62368-1,FCC CFR 47 Part 15		

Minimum Specification Requirement	Compliance (Yes/No)	Remark
Support and Warranty		
All the features mentioned in the specifications shall be enabled/ activated. Any licenses required shall be included from Day 1		
The switch shall be offered with minimum five years hardware warranty with technical support from OEM directly		

6.11 24-Port L2 Managed Switch with 4 × 10/25G SFP+ Uplink

Minimum Specification Requirement	Compliance (Yes/No)	Remark
Make & Model:		
Physical Characteristics and Requirements		
The switch should be 1U 19" Rack Mountable, mounting kit should be included		
The switch should have 24 x 1G SFP downlink ports and 4x10/25G uplink ports		
The switch should be populated with necessary transceivers/cables as per design on Day 1		
The switch should have 1x USB-C/RJ 45 Console Port 1x OOBM port		
Switch should have integrated trusted platform module (TPM) or equivalent for platform integrity to ensure the boot process is from trusted source		
Switch should support switch virtualization/stacking feature for combining multiple switches into single logical unit and providing Multi-Chassis Link aggregation (MC-LAG) for uplink/downlink connectivity. Should support minimum 80 Gbps Stacking bandwidth.		
Performance Requirements		
The switch should have multi-core CPU/processor		
The switch should have minimum 8GB DRAM, 32 GB eMMC/Flash Memory and 8MB Packet buffer memory		
The proposed switch should have minimum 248 Gbps switching capacity		
The switch should have minimum 32,000 MAC Address Table size and 45K ARP table entries		
The switch should support minimum 24K IPv4 routes/12K IPv6 Routes and 4K IPv4/IPv6 Multicast Routes		
The switch should support minimum 8K IPv4 and 4K IPv6 ACL entries		
Operating System Capabilities		
The switch should have modular operating system with micro-services or equivalent architecture providing superior fault tolerance and high availability		
The switch OS should support programmability through REST APIs or equivalent		
All the features mentioned in the specifications shall be enabled/activated. Any licenses required shall be included from Day 1		
Layer-2, QoS and Security Features		

Minimum Specification Requirement	Compliance (Yes/No)	Remark
The switch should support Spanning Tree Protocol (STP/RSTP/MSTP)		
The switch should support Uni-directional Link Detection (UDLD) to monitor link connectivity		
The switch should support Link Aggregation Control Protocol (LACP)		
The switch should support IEEE 802.1Q VLANs (1000 active VLANs) and MVRP or equivalent for automatic learning and dynamic assignment of VLANs		
The switch should support Private VLAN (PVLAN) providing traffic isolation between users on the same VLAN		
The switch should provide storm protection to limit unknown broadcast, multicast, or unicast storms with user-defined thresholds		
The switch should support Strict priority (SP) queuing, Deficit Weighted Round Robin (DWRR) or equivalent and large buffers for graceful congestion management		
The switch should support setting IEEE 802.1p priority tag based on IP address, IP Type of Service (ToS), Layer 3 protocol, TCP/UDP port number, source port, and DiffServ		
The switch should support Access control lists (ACLs) for both IPv4 and IPv6 traffic		
The switch should support concurrent IEEE 802.1X, Web, and MAC authentication schemes per switch port, up to 24 sessions of IEEE 802.1X, Web, and MAC authentications		
The switch should support RADIUS authentication and accounting		
The switch should support Control Plane Policing, CPU protection, STP BPDU port protection, STP root guard, DHCP (snooping) protection, dynamic ARP protection and port security		
The switch should support Internet Group Management Protocol (IGMPv1, v2, and v3) and Multicast Listener Discovery (MLDv1 and v2)		
The switch should support IEEE 802.3az Energy Efficient Ethernet and PoE allocation by usage or class, with LLDP and LLDP-MED		
The switch should support VXLAN encapsulation (tunnelling) protocol for overlay network to enable a scalable virtual network deployment		
The switch should support IPv6 security features like RA guard, dynamic IPv6 lockdown, and ND snooping		
Layer-3 Routing and Services Features-Day-1		
The switch should support IPv4 and IPv6 Static Routing		
The switch should support Open Shortest Path First (OSPF) - OSPFv2 for IPv4 routing and OSPFv3 for IPv6 routing		
The switch should support BGP, VRF, Equal-Cost Multipath (ECMP)		
The switch should support Virtual Router Redundancy Protocol (VRRP)		
The switch should support Multicast routing including PIM Sparse for both IPv4 and IPv6		
The switch should support dual IP stack maintaining separate stacks for IPv4 and IPv6 to ease the transition from an IPv4-only network to an IPv6-only network design		
The switch should support Dynamic Host Configuration Protocol (DHCP) client and relay		

Minimum Specification Requirement	Compliance (Yes/No)	Remark
Management Features		
The switch should support SNMP and Remote monitoring (RMON)		
The switch should support sFlow or equivalent for traffic analysis		
The switch should support TACACS+ for securing administrative access		
The switch should have Command Line Interface (CLI) with a hierarchical structure and SSH, Secure FTP/TFTP support		
The switch should support Network Time Protocol (NTP)		
The switch should support Port mirroring		
Certifications and Industry Recognition		
The switch should have safety/emissions certifications including UL/CUL 60950, EN 55024/55032, VCCI Class A or equivalent		
The switch should have RoHS compliance; OEM should be in Gartner® Magic Quadrant™ for Enterprise Wired and Wireless LAN Infrastructure since last 3 years which includes latest 2025 report".		
Support and Warranty		
The switch shall be offered with minimum five years hardware warranty with 24x7 Technical support from OEM directly		

6.12 Passive Network Equipment

OEM Criteria for below Passive Network Equipment: - • 6 Core Single Mode OFC Cable • UTP CAT-6 Cable • UTP CAT-6 Patch Cable (2m) • OFC Patch Cord LC-LC (1m) • 12-Port Rack Mount LIU Fully Loaded with ALL Accessories (LC Type) • CAT-6 Patch Panel Equipped with RJ- 45 Connector • Single Port Faceplate with Keystone and Gang Box 1. The OEM should have its own registered office in India for 10 years or above. 2. The OEM product quoted for cabling should be ROHS complied. 3. The Cabling product quoted should be in accordance latest global standard to EIA/TIA, IEE, ISO/IEC and should be mentioned the data sheet. 4. All the above LAN cabling systems and associated passive components (Copper & Fibre) must be supplied by a single OEM. 5. The OEM products when installed should carry and provide 25 years of end-to-end performance warranty. 6. Data Sheets of all proposed products should be available on the OEM public website. The data sheets provided on the OEM public website and submitted data sheets should be the same. *Note: All the relevant valid documentary proof to be submitted.*		
Minimum Specification Requirement	**Compliance (Yes/No)**	**Remark**
Make & Model:		
Single Mode OFC Cable		
Armored 6 Core Single mode (OS2) 9/125 Fiber Cable, ITU G.652.D, G.657A1, Outdoor ECCS Armored Fiber Cable with PBT Loose Tube Filled with Thixotropic Jelly, Multi-Tube, Glass Yarn, Water Swellable Tape Under Armor, UV-HDPE Jacket		
Application: The fiber cable should have Bend insensitive features to be installed in Outdoor, Duct, Trenches & Underground application.		
Features: The fiber cable should have excellent features of Tensile, Crush, Water Prevention with Jelly & Moisture Barrier Tape		
Cable Construction		
Uni-tube (Central Loose Tube) with color coded fibers as per EIA/TIA 598		
Loose Tube: PBT Loose Tube filled with Thixotropic Jelly		
Loose Tube Diameter: 2.5mm Nominal		
Armoring: Corrugated ECCS Tape Armoring (0.155 mm Nominal thickness)		
Outer Sheath: UV Resistance HDPE		
Moisture Barrer: Water Blocking Tape Under Armor		
Strength Member over Central Tube: Glass Yarns		
Physical / Mechanical Characteristics		
Outer Diameter: 8.5 ± 1.0 mm		

OEM Criteria for below Passive Network Equipment: -

- 6 Core Single Mode OFC Cable
- UTP CAT-6 Cable
- UTP CAT-6 Patch Cable (2m)
- OFC Patch Cord LC-LC (1m)
- 12-Port Rack Mount LIU Fully Loaded with ALL Accessories (LC Type)
- CAT-6 Patch Panel Equipped with RJ- 45 Connector
- Single Port Faceplate with Keystone and Gang Box

1. The OEM should have its own registered office in India for 10 years or above.
2. The OEM product quoted for cabling should be ROHS complied.
3. The Cabling product quoted should be in accordance latest global standard to EIA/TIA, IEE, ISO/IEC and should be mentioned the data sheet.
4. All the above LAN cabling systems and associated passive components (Copper & Fibre) must be supplied by a single OEM.
5. The OEM products when installed should carry and provide 25 years of end-to-end performance warranty.
6. Data Sheets of all proposed products should be available on the OEM public website. The data sheets provided on the OEM public website and submitted data sheets should be the same.

Note: All the relevant valid documentary proof to be submitted.

Minimum Specification Requirement	Compliance (Yes/No)	Remark
Nominal Jacket Thickness: 1.5 mm		
Tensile Strength: >= 2220 Newton (IEC 60794-1-2-E1)		
Bending Radius: <= 20*OD (IEC 60794-1-2-E11) (OD=Cable Outer Diameter)		
Crush Resistance: >= 2200 Newton/100mm (IEC 60794-1-2-E3)		
Water Penetration: Meets IEC 60974-1-2 (24 Hr, 3Meter Sample, 1Meter Height)		
Weight: <= 85 ± 10 Kg/Km		
Environmental Characteristics		
Operating Temperature: IEC 60794-1-2-F1 @ -30℃ to +70℃		
Storage Temperature: IEC 60794-1-2-F1 @ -10℃ to +60℃		
Installation Temperature: IEC 60794-1-2-F1 @ -30℃ to +70℃		
Safety: ROHS to be mentioned in data sheet		
Optical Characteristics		
Fiber Type: SM (9/125) OS2 as per G.657 A1		
Max. Attenuation: 0.36/km dB @ 1310 nm , 0.23 dB/km @ 1550nm		
Mode Field Diameter @ 1310nm : 8.8 +/- 0.4 µm		
Dispersion: ≤ 3.5 ps/nm.km & ≤ 17.5 ps/nm.km		
Fiber cut of Wavelength: ≤ 1320		
Cable Cut of Wavelength: ≤ 1260		
Zero Dispersion Wavelength: 1300-1324 nm		
Zero Dispersion Slope: ≤ 0.090 ps/nm².km		
Coating Diameter: 250 ± 15 µm		
Cladding Diameter: 125 ± 0.7 µm		

OEM Criteria for below Passive Network Equipment: - • 6 Core Single Mode OFC Cable • UTP CAT-6 Cable • UTP CAT-6 Patch Cable (2m) • OFC Patch Cord LC-LC (1m) • 12-Port Rack Mount LIU Fully Loaded with ALL Accessories (LC Type) • CAT-6 Patch Panel Equipped with RJ- 45 Connector • Single Port Faceplate with Keystone and Gang Box 1. The OEM should have its own registered office in India for 10 years or above. 2. The OEM product quoted for cabling should be ROHS complied. 3. The Cabling product quoted should be in accordance latest global standard to EIA/TIA, IEE, ISO/IEC and should be mentioned the data sheet. 4. All the above LAN cabling systems and associated passive components (Copper & Fibre) must be supplied by a single OEM. 5. The OEM products when installed should carry and provide 25 years of end-to-end performance warranty. 6. Data Sheets of all proposed products should be available on the OEM public website. The data sheets provided on the OEM public website and submitted data sheets should be the same. *Note: All the relevant valid documentary proof to be submitted.*	

Minimum Specification Requirement	Compliance (Yes/No)	Remark
Fiber Curl: ≥ 4 m radius curve		
Cladding non-circularity: ≤ 1%		
Mode Field Concentricity error: ≤ 0.8 um		
Coating/Cladding Concentricity Error: ≤ 12 um		
Packaging: Wooden Spool of Min. 2KM roll		

6.13 UTP CAT-6 Cable (Armoured)

Minimum Specification Requirement	Compliance (Yes/No)	Remark
Make & Model:		
SITC of Cat 6 Armoured Cable, 23 AWG Solid Bare Copper Conductor U/UTP Unshielded, HDPE Insulation with Diameter 0.95 ± 0.05mm, PE Cross (+) Filler Between Pairs, Inner FR-PVC Jacket IEC 60332-1 Rated, Outer FR PVC-UV Resistant Jacket with Anti-rodent & Anti Termite property. 500N Pulling Force, Operating Temperature: -20 to +60Deg, Diameter: 7 ± 0.3 mm, in accordance to ANSI/TIA 568 C.2 / ISO/IEC 11801, 250 Mhz Bandwidth, Propagation Velocity: 69% (nominal), Anti Rodent, Anti Termite Outdoor Double jacket Cable, Cable Roll of 305 Mtr, RoHS Complied.		
Suitable for 1GBASE-T with Min. 250Mhz of Bandwidth		
4 Twisted Pair alongside PE / PVC Cross Separator		
Conductor: 23AWG Solid Annealed Bare Copper		
Insulation: High Density Polyethylene, Diameter 0.95 ± 0.05mm		

Minimum Specification Requirement	Compliance (Yes/No)	Remark
FRPVC Inner Jacket		
UV Resistant FRPVC Outer Jacket Black colour		
Cable Outer Diameter: 10 ± 1.0 mm		
Operating Temperature: -20°C to +60°C		
Bend Radius: 20 X Cable Diameter (Min.) or better		
Conductor Resistance: £ 9.38 Ω /100m		
Resistance Unbalance: 5% Max		
Mutual Capacitance: £ 5.6nF/100m		
Put up: 305M		
RoHS Complied. All Cat 6 and fiber cable and components should be from same OEM.		

6.14 UTP CAT-6 Patch Cable (2m)

Minimum Specification Requirement	Compliance (Yes/No)	Remark
Make & Model:		
SITC of Cat6 Patch Cord U/UTP Unshielded 24AWG Bare Copper, Stranded Flexible Conductor, HDPE Insulation, LSZH Jacket, ANSI/TIA 568C.2 Category 6 Patch Cord, Support 1GBASE-T with Min. 250Mhz Bandwidth, Operating Temperature -20 ℃ to + 60 ℃, Diameter <= 6.0mm Nominal, No Shield or Barrier Tape Inside, Min. 750 Plug Mating Cycles, PC UL94-V-0, Factory assembled with Transparent Remoulded Boots, Length 2 Meter, Blue Colour		
Cable Construction of Patch Cord: U/UTP LSZH		
Number of conductors: 8 (4 Twisted Pairs)		
Conductor Material: Bare Copper (24AWG Stranded)		
Cable Overall Nominal diameter: <= 6.0 mm		
Insulation: HDPE		
Cat 6 patch cord plug to have round cable holder strain relief transparent boot to avoid bending.		
Jacket: LSZH (Low Smoke Zero Halogen) with Flame Rating IEC 60332-1 or better		
Operating Temperature: 10 to + 60 ℃		
Patch cord must be UL Listed and part of ETL 4 connector Channel		
Plug should have high repeatability cross talk performance with Min. 750 Cycles.		

6.15 OFC Patch Cord LC-LC (1m)

Minimum Specification Requirement	Compliance (Yes/No)	Remark
Make & Model:		
SITC of Fiber Patch Cord, LC Duplex - LC Duplex, 9/125µm OS2 Single mode Duplex Zip Cord (<= 2.0mm), IL <= 0.35dB, RL>= 50dB, LSZH Jacket IEC 60332-1, Operating Temperature -40°C to +85°C, Meets ANSI/TIA 568.3-D, Length 3Meter		
Cable: LC/LC or LC/SC or SC/SC, 9/125µm OS2 single mode Duplex Zip Cord (<= 2.0mm). OEM Name shall be mentioned on the patch cord cable.		
Connectors: The optical Fibre patch leads shall comprise of Single mode 9/125µm Fibre		
Connector Insertion loss <= 0.35 dB		
Return Loss >= 55 for UPC and >= 65 for APC		
Jacket Material: LSZH complying to IEC 61034-1, IEC-60332-1, IEC-60754-1 tested by NBAL / BIS lab for LSZH		
Length: 1 Meter. The OEM brand name must be clearly printed on the cord to verify authenticity and ensure it is a genuine product.		
Attenuation: 1310/1550: 0.35/0.20 dB/KM		
Operating Temperature: -40°C to +85°C		
Repeatability: <= 0.2DB 1000 Times Mating Cycles		
OEM Name shall be printed on the Patch Cord Cable.		
RoHS Complied, Meets ANSI/TIA 568.3-D		

6.16 PVC Insulated 3 Core 2.5 sq. mm Power Cable

Minimum Specification Requirement	Compliances (Yes/No)	Remarks
Make & Model:		
PVC Insulated 3 Core 2.5 sq. mm Power Cable: 1.1 kV, Stranded Copper Conductor, XLPE Insulation, Extr. PVC ST-2 Inner Sheathed, G.S Round Wire Armored as per IS, FR-LSH PVC ST-2 Outer Sheathed Cables as per IS 7098 (P-1), 3Cx2.5 Sq.mm.		

6.17 PVC Insulated 3 Core 4 sq. mm Power Cable

Minimum Specification Requirement	Compliances (Yes/No)	Remarks
Make & Model:		
PVC Insulated 3 Core 4 sq. mm Power Cable: 1.1 kV, Stranded Copper Conductor, XLPE Insulation, Extr. PVC ST-2 Inner Sheathed, G.S Round Wire Armored as per IS, FR-LSH PVC ST-2 Outer Sheathed Cables as per IS 7098 (P-1), 3Cx4 Sq.mm.		

6.18 HDMI Cable (20m)

Minimum Specification Requirement	Compliances (Yes/No)	Remarks
Make & Model:		
HDMI Cable as per Industry Standard. Length- 20 Mtr.		

6.19 RJ-45 Male Connector

Minimum Specification Requirement	Compliances (Yes/No)	Remarks
Make & Model:		
Cat6 unshielded RJ45 modular plug supports 4 twisted pairs, 8 positions, 8 connectors of 100pcs/Pack; Housing: PC, UL94V-2, transparent brown color Contact Terminal: Copper Alloy; Finished: 50U" gold plating; Operating temperature: -40^{o}C to +85^{o}C; Use for 23-26AWG stranded wires or solid wires in Cat6, meet wiring scheme T568A/T568B		

6.20 12-Port Rack Mount LIU Fully Loaded with ALL Accessories (LC Type)

Minimum Specification Requirement	Compliance (Yes/No)	Remark
Make & Model:		
12 Port 1U x 19" LIU Loaded with Single mode OS2 LC UPC Adapters & LSZH Pigtails along with Splice Trays, Min. 4 No of Circular Cable Entry with Rubber Grommet/Glands to close any open entry, Cable Holders for Cable Entry Inside Panel, Heat Shrink Tubes for Splices, Tube for open fibers, Ties, Panel shall be Powder Coated with Min. 1.2mm Metal Sheath, 30 Years Channel Warranty. Factory Loaded LC UPC Type LSZH Pigtails should meet IEC 61034-1, IEC-60332-1, IEC-60754-1, Insertion loss <= 0.35 dB, Return Loss >= 50, Attenuation: 1310/1550: 0.3/0.2 dB/KM, Repeatability: <= 0.2DB 1000 Times Mating Cycles, RoHS Complied, Meets ANSI/TIA 568.3-D		
The Fiber Panel shall have Telescopic Sliding Shelf for easy smooth maintenance add/move/changes and must be tested for Shall be tested for Corrosion as per ASTM B117: 2019. (Relevant Document to be shared) by NABL Lab.		
The optical fiber Pigtails shall be factory loaded inside each individual Port of the panel. Pigtails shall be LSZH with Single mode 9/125µm fiber		
Panel shall have Min. 4 No. of Cable Entry Slots at back of the Panel supplied with Cable Holders inside Panel.		
Completely Enclosed without any open area to avoid any Rodent Entry		
Pigtail Parameters Loaded inside Panel shall meet below mentioned requirements: - • Pigtail Buffer Jacket Material: LSZH complying to IEC 61034-1, IEC-60332-1, IEC-60754-1		

Minimum Specification Requirement	Compliance (Yes/No)	Remark
• Connector Insertion loss should be better than 0.35 dB • Return Loss >= 50 for UPC and >= 65 for APC • Attenuation: 1310/1550: 0.3 /0.2 dB/KM • RoHS Complied, Meets ANSI/TIA 568.3-D • Repeatability: <= 0.2DB 1000 Times Mating Cycles		

6.21 Single Mode 1G SFP Module Pair (10KM)

Minimum Specification Requirement	Compliances (Yes/No)	Remarks
Make & Model:		
Single-mode 1G SFP module pair with a transmission distance of up to 10 km, compliant with industry standards, and supplied by the same OEM as the network switch to ensure full compatibility and optimal performance.		

6.22 Single Mode 10G SFP+ Module Pair (10KM)

Minimum Specification Requirement	Compliances (Yes/No)	Remarks
Make & Model:		
Single-mode 10G SFP+ module pair with a transmission distance of up to 10 km, compliant with industry standards, and supplied by the same OEM as the network switch to ensure full compatibility and optimal performance		

6.23 CAT-6 Patch Panel Equipped with RJ- 45 Connector

Minimum Specification Requirement	Compliance (Yes/No)	Remark
Make & Model:		
12-Port 1U Unloaded Universal Modular Straight Patch Panel preloaded with cable support Bar (with slots to tie individual cable properly at the Support Bar (Shuttered IO not recommended, because when shutter gets malfunctioned then entire IO is of no use)		
The Patch panel should be universal (stainless steel rear metal frame) and should be able to support both for UTP & STP Solutions		
Patch panel should be equipped with cable strain relief retention tray (Cable Support Bar) with slots to tie individual cable properly at the Support Bar		
Each port of the panel should have individual transparent labelling point. Jack Panel and Keystone Jack must be part of ETL 4 connector Channel test report		
Panel should be in build transparent spring shutter for dust protection on each port. (Shuttered IO not recommended, because when shutter gets malfunctioned then entire IO is of no use)		
Should be RoHS & UL 94V-0 complied		
Panel should be loaded with Cat 6 UTP information outlet Jacks with appropriate quantity. Both Unloaded Patch panel and Keystone Jack must be UL Listed.		

6.24 Single Port Faceplate with Keys

Minimum Specification Requirement	Compliance (Yes/No)	Remark
Make & Model:		
Style (Square) Keystone-Type Shuttered Faceplates, 1, 2 & 4 port configurations		
UK Style (Square) Keystone-Type Faceplates, 1, 2 & 4 port configurations, White Color		
Should be featured with spring shutter for each port		
Elegant 2 Piece (2 Plate) design for better aesthetics		
Cover and Base Plastic Material to meet Min. ABS-UL94-V2		
Suitable for both Flush and Wall mount gang box		
Dimensions: 86 x 86 x 12.8 (mm)		

6.25 9U Outdoor Vandal and Weather-proof Rack with PDU suitable for Pole Installation

Minimum Specification Requirement		Compliance (Yes/No)	Remark
Make & Model:			
Rack Standard	Confirms to DIN 41494 or Equivalent Standard		
Construction	Welded		
Basic Frame	CRCA powder coated		
Front Door	Lockable Metal Front Door		
Rear Door	All Round Welded Construction Top Bottom Rear and Sides with hood with filter		
Equipment Mounting	DIN Standard 10mm Square Slots		
19" Mounting Angle	CRCA powder coated		
Standard Finish	Powder Coating		
Standard Sizes	9U x600mm W x500mm D		
Standard Mounting Options	Wall or Pole Mounting Brackets		
Static Load OEM Protection Class Certification	35 Kgs. Rack to be form the Same OEM as that of Passive products (Copper and Fiber) IEC 60529 IP65 NABL certification CE, FCC & ROHS		

6.26 9U Indoor Wall Mount Rack with PDU & All Accessories

Minimum Specification Requirement	Compliance (Yes/No)	Remark
Make & Model:		
Wall Mount Steel Racks		
Racks should be made out of CRCA steel, and proceeded with CNC Punching, forming, welding and powder coated.		

Minimum Specification Requirement	Compliance (Yes/No)	Remark
Rack Features		
Adjustable 19" equipment mounting verticals provide better mounting flexibility and maximize the usable mounting space		
Depth adjustable mounting slots.		
Top and bottom panel with ventilation and cable entry facility.		
Powder coated finish with pre-treatment process meeting all industry standards.		
100% assured compatibility with all equipment conforming to DIN 41494. General industrial standard for equipment.		
Rack Standard: Conforms to DIN 41494 or equivalent ISO standard		
Construction: Bolted		
Front Door: Lockable Toughened Glass Door		
Basic Frame: CRCA , Mounting rail: 3 mm Side panel:2 mm Top/bottom: 2 mm		
Equipment Mounting: DIN Standard		
Mounting Angle: 19" Mounting angles made of formed steel		
Standard Finish: Powder Coated		
Top and Bottom Cover: Bolted Top and Bottom to Side with ventilation and cable entry cut out		
Static Load: 30 kgs		
Rack to be form the Same OEM as that of Passive products (Copper and Fiber)		
Below mentioned standard accessories shall be supplied with Rack		
Power Distribution Units.		
Cable Manager.		
Fans		
Mounting Hardware		
Rack Dimensions		
09U - 600mm W x 500mm D		
Protection Class: IEC 60529 IP40 NABL certification		
Certification: CE , FCC & ROHS		

6.27 Weather-proof PVC junction box (100mm X 100mm) for camera installation.

Minimum Specification Requirement	Compliances (Yes/No)	Remarks
Make & Model:		
Weather-Proof PVC Junction Box (100mm X 100mm) for Camera Installation as per Industry Standard.		

6.28 Galvanized Octagonal Hot DIP 8 Meters Pole along with Lightning Arrestor

Parameter	Minimum Specification Requirement	Compliances (Yes/No)	Remarks
Make & Model:			
Octagonal Pole			
a) Over all height of Pole (Mtrs)	8 Mtrs.		
b) Sizes i) Top ii) Bottom	100mm or Better		
c) Size of Base Plate & Thickness	As per standard		
d) Foundation Bolts	J Bolt 16 mm X 400 mm		
Metal Protection Treatment of Pole Sections.	Hot Dip Galvanized		
Thickness of Galvanization (mm)	Average 70 Microns as per IS 2629		
Size of Door opening the Base Section	100 X 400mm (500 mm above from base plate)		
Cross Section of Pole	Octagonal		
LIGHTNING ARRESTOR FOR POLE			
Lightning arrestor to be installed on the CCTV poles			
Lightning arrestor should be installed using an insulator on the pole so that there is no direct contact of it with the pole.			
Brash and Body Material: Pure Copper / Copper Coated			
Provides protection for medium height metal structures with high lightning risk			
All specifications to be as per industry standard			

6.29 PVC Rigid Conduct Pipe with all Accessories (38mm)

Minimum Specification Requirement	Compliances (Yes/No)	Remarks
Make & Model:		
PVC Rigid Conduct Pipe with all Accessories (38mm) for cable laying as Industry Standard.		

6.30 High-Density Polyethylene (HDPE) Pipe (40mm)

Minimum Specification Requirement	Compliances (Yes/No)	Remarks
Make & Model:		
High-Density Polyethylene (HDPE) Pipe (40mm) for outdoor underground cable laying as Industry Standard.		

6.31 PVC Coated GI Flexible Pipe (38mm)

Minimum Specification Requirement	Compliances (Yes/No)	Remarks
Make & Model:		
PVC Coated GI Flexible Pipe (38mm) as per Industry Standard.		

6.32 Workstation with 24" FHD Monitor

Workstation with 24" FHD Monitor			
Parameters	**Minimum Specification Requirement**	**Compliance (Yes/No)**	**Remarks**
Make & Model:			
Processor	Intel Core Ultra 7 or better		
RAM	32 GB or better		
HDD	512 GB SSD		
Graphic Card	NVIDIA RTX 4000/A1000		
Network	1G Ethernet		
Expansion Slots	2 – PCIe Gen4 x8 slots		
OS	Factory Preinstalled Windows 11 Pro		
Monitor	Dual 24” FHD monitors should be provided from the same OEM		
Keyboard & Mouse	Wired Keyboard & Mouse from same OEM		
Certification	Energy Star/BEE and EPEAT/EPR		
Warranty	5 years		

6.33 Wireless Mouse & Keyboard Set

Minimum Specification Requirement		Compliances (Yes/No)	Remarks
Make & Model:			
Keyboard	**Mouse**		
Spill-resistant design	Sensor technology: Smooth Optical tracking		
Tilt legs	Number of buttons: 3 (Left/Right-click, Middle click)		
10-Key Number pad	Scrolling: line-by-line		
Special Keys: 15 function keys	Scroll Wheel: Yes, 2D, optical		
Up to 5 million keystrokes	Connect/Power: On/Off power button		
2 AAA/AA batteries	1 AAA/AA batteries		

6.34 Video Wall (3657mm x 2133) mm with Controller and Accessories

Video Wall with Controller and Accessories (3657mm x 2133) mm with Aspect ratio: 16:9		
Make:		**Model:**
OEM Criteria: • The proposed OEM should have in business in India from last 10 years and & should have local GST billing in India. (Certificate of Incorporation to be submitted). • OEM should have its owned manufacturing factory in India. (Relevant copies of the documents) • Video wall and Controller should be from the same OEM • OEM should have valid certificates i.e. BIS for Video wall & Controller, ISO9001, MAC, EPR Certificate, ISO14001, ISO27001 and ISO45001 for OEM. (Documentary evidence of all the certificates shall be submitted) • OEM should have Service centers in Odisha State and must provide escalation matrix of telephone numbers for service support with toll-free number. In case not, successful OEM must establish their support center with adequate manpower within 30 days of award of project. (Relevant copies of the documents)		
Sl. No.	**Parameter**	**Parameter value**
1.	Pixel Pitch	1.25 mm
2.	Pixel density	640,000 pixels/m²
3.	Led Type	Fully flip chip COB
4.	Brightness	≥ 600 CD/M2
5.	Frame Frequency	60Hz
6.	Optimum viewing distance	≥ 1.25 m
7.	Life Span	≥ 100000 hours
8.	Viewing Angel	0~160
9.	Gray scale	Upto 16 bit/2,81 billion
10.	Refresh Rate	≥ 3,840 Hz
11.	Input Voltage	220 －240V AC /50Hz
12.	Operating temperature	10 to 60℃
13.	Working Humidity	10%～95％
14.	Contrast Ratio	12000:1
15.	Video Support	2K HD, 4K , 8K UHD
16.	COB packaging technology	Brings the super strong 9 protections: Anti-Scratch, Anti-Dust, Anti-Moisture, Anti-Collision, Anti-Glare, Anti-Static, Anti-Touch Traces, Anti-Moiré, Front Waterproof.
17.	Cabinet	Die-Cast Aluminum
18.	Cabinet Specification	IP65
19.	Certification	Bureau of Indian Standard (BIS), MAC, ISO 9001-2015, ISO 20000-1 , ISO 14001 , ISO 27001, REACH, FCC, CE, ROHS, OSHAS 45001, EPR Certificate

Controller		
Sl. No.	**Parameter**	**Parameter value**
1.	Input Interfaces	2× HDMI, 1× DP, 1× DVI, 1× USB (for media input)
2.	Output Interfaces	10× Gigabit Ethernet Ports, 2× Optical Fiber Ports
3.	Input Resolution support	Up to 4K@60Hz (DP), 4K@30Hz (HDMI), 1080p@60Hz (DVI)
4.	Video Processing	Scaling, Seamless Switching, PIP, PBP
5.	Audio Output	1× HDMI Audio, 1× 3.5mm Audio Out
6.	Genlock/Sync	Supported for frame synchronization across multiple screens
7.	Redundancy Support	Input and Output Port Redundancy
8.	Cooling system	Intelligent fan cooling
9.	Input Ports	12× HDMI (up to 4K@30Hz)
10.	Output Ports	1× HDMI (up to 4K@60Hz)
11.	Multiview Mode	1/2/3/4/6/9/12 windows layout, customizable
12.	Seamless Switching	Yes (zero latency switching between sources)
13.	PIP / POP Support	Yes (Picture-in-Picture, Picture-on-Picture)
14.	Video Decoding	Supports internal matrix and sync display
15.	Configuration	Available with 16 analog input channels
16.	Input types	Universal analog: mA, 0–1 V, 0–4 V, RTD (Pt100 – 3-wire), Thermocouples (J, K, R, S, T, B, E); factory-set per channel
17.	Display	7-segment red LED: 2-digit channel ID + 5-digit process value (with sign indication)
18.	Scan rate	~125 ms per channel (all 16 channels in ~2 s)
19.	Communication	Built-in RS-232/RS-485 with Modbus and Ethernet/Modbus-TCP
20.	Control output	Optional common alarm relay (230 VAC/1 A); optional per-channel digital outputs via external relay module
21.	Certification	Bureau of Indian Standard (BIS), MAC, ISO 9001-2015, ISO 20000-1 , ISO 14001 , ISO 27001, ROHS, OSHAS 45001 and EPR Certificate

6.35 10KVA Online UPS with 2 Hours Backup

UPS - 10 KVA	
Parameter	**Minimum Specifications**
Capacity	10 KVA (1Øinput/ 1Ø output)
Topology	True Online Double Conversion UPS Floor mount
INPUT	
Input Voltage Range	110~ 300 VAC @50% Load, 160 V ~ 295 VAC @100% Load
Input Frequency Range	45 ~ 55Hz
Input Power Factor	≥0.99
OUTPUT	
Power Factor	0.8/0.9

Nominal Output Voltage & Frequency	220/230/240 VAC , 50/60 Hz ± 1~10% Sync Mode (Configurable), 50/60 Hz ±1 Hz Battery Mode
Voltage regulation	± 1% static, ± 5% for Dynamic Load
Waveform	Sine wave
Total harmonic distortion (THDv)	≤ 3% (linear load); ≤5% (nonlinear load)
Transfer time	Mains mode to battery mode: 0 ms; Inverter mode to bypass mode: <5 ms
Maintenance/Manual Bypass	Automatic & Manual
Efficiency	Overall (AC to AC) : ≥ 88%
Inverter overload capability	upto 100% infinite , < 125%: for 10 mins; >125% ~ 150%: for 1 minute;
Indications (LED/LCD)	Normal, Input & Output Voltage/frequency, Battery Voltage & Load VA and Percentage, Inverter Temperature, On line, ON Battery or ON Bypass, Fault Codes
Alarms	Inverter under/over voltage, UPS over load, Battery low
IP Rating	IP 20
Interfaces	Should support DOS/UNIX/WINDOWS OS, RS 232 Connector should be available
BATTERY BANK	
BATTERY BACK UP & VAH	2 hours backup on System Load with minimum 30000Vah (SMF VRLA Battery)
DC BUS voltage	120V-240 V
Make of Battery	Exide/Quanta/HBL
PHYSICAL	
Operating Temperature & Operating Humidity/Altitude	0-40 degree C , 0-95% RH (non-condensing)/<1500 m.a.s.l
Noise Level	<55 db dBA at 1 meter distance
CERTIFICATIONS OF UPS REQUIRED	
BIS	Valid BIS Certificate to be enclosed for the quoted Model
ISO Certification & Other Certifications and declaration	ISO 9001:2018, ISO 14001: 2018, ISO 45001:2018, ROHS ,CE
Warranty on UPS and Batteries	5 Years

6.36 1KVA Offline UPS with 120 minutes' backup

UPS - 1 KVA	
Parameter	**Minimum Specifications**
Capacity	1 KVA (1Øinput/ 1Ø output)
Topology	Line Interactive UPS
INPUT	
Input Voltage Range	160~ 280 VAC
Input Frequency Range	45 ~ 55Hz
OUTPUT	
Power Factor	0.6

Nominal Output Voltage & Frequency	220/230/240 VAC ±10% on Battery mode, 50/60 Hz ± 1~10% Sync Mode (Configurable), 50/60 Hz ±1 Hz Battery Mode
Waveform	Simulated Sine wave/ Quasi Sine wave
Transfer time	Mains mode to battery mode: 10 ms
Efficiency	Overall (DC to AC) : ≥ 80%
Indications (LED)	Mains Mode, Battery Mode, UPS Fault
Alarms	Inverter under/over voltage, UPS over load, Battery low
Interfaces	RS 232 Connector
BATTERY BANK	
Battery Backup	2 hours backup on Systems Load, LFP battery with min. 700WattHour capacity
DC BUS voltage	24V
PHYSICAL	
Operating Temperature & Operating Humidity/ Altitude	0-40 degree C , 0-95% RH (non-condensing)/<1500 m.a.s.l
Noise Level	<55 db dBA at 1 meter distance
CERTIFICATIONS OF UPS REQUIRED	
BIS	Valid BIS Certificate to be enclosed for the quoted Model
ISO Certification & Other Certifications and declaration	ISO 9001:2018, ISO 14001: 2018, ISO 45001:2018, ROHS , CE
Warranty on UPS and Batteries	5 Years

6.37 600VA Offline UPS with 2 Hours Backup

UPS - 600 VA	
Parameter	**Minimum Specifications**
Capacity in VA	600 VA Line Interactive UPS
Capacity in Watt	360W
INPUT	
Voltage Range	140V~280V AC
Frequency	50 Hz ±5Hz
OUTPUT	
Voltage	220V ±3%
Frequency	50 Hz ±2%
AVR	220V ±10%
Waveform	Stepped Sine wave
Transfer time	≤4ms
Transfer efficiency	85%
Cold Start	Available
Protection	Short circuit, Overload

BATTERY BANK	
BATTERY BACK UP & BATTERY BANK CHARGER	2 hour back up on Systems Load
Batteries Configuration (VAH)	780 VAH
DC BUS voltage	12 V
Batteries Type	SMF VRLA
Make of Battery	HBL/Exide/Quanta
PHYSICAL	
Operating Temperature	0-40 degree C
Operating Humidity/ Altitude	0-95% RH (non-condensing)/<1500 m.a.s.l
Type of Cooling	Forced Air
Noise Level	<60 db dBA at 1 meter distance
CERTIFICATIONS OF UPS REQUIRED	
BIS	Valid BIS Certificate to be enclosed for the quoted Model
ISO Certification	ISO 9001:2018, ISO 14001: 2018, ISO 45001:2018, ROHS
Safety & Compliance	IEC EN 62040-1-1, IEC/EN 62040-1-2, IEC/EN 50091-1, IEC/EN 60950 (Safety), IEC/EM 50091-2, IEC/EN 62040-2 Class A (EMC Emission), IEC/EN 62040-3 (Performance & Design), IEC/EN 61000-4-1 level -4, IEC/EN 61000-4-2 level -4, IEC/EN 61000-4-3 level -3, IEC/EN 61000-4-3 level -4, IEC/EN 61000-4-4 level -4, IEC/EN 61000-4-5 level -4. IEC 61000-4-6, (EMC Immunity), IEC/EN 60146 (Design & Manufacture). All CE Certificate should be model specific.
OEM Criteria	Electrical license (Grade A) of the OEM should be enclosed.
	OEM should have valid EPR Registration Certificate issued from CPCB, Government of India.
	MII undertaking of the OEM of 50% of the local content.
	OEM should be in UPS business at least for a period of last 10 years.
	Incorporation certificate should be enclosed.
	OEM should have their registered office in Odisha (documentary evidence required).
	OEM should have not been blacklisted by any PSU/ Financial Institution/ Education/ Govt. Department during the last three years.

6.38 42U Floor Standing Server Rack with Dual PDU & All Accessories

Sl. No.	Item Description	Specification	Compliance (Yes/No)
1	Item Description	42U 800x1000	
2	front door	Perforated	
3	Rear Door	Perforated/louvered	
4	Side Panel	Detachable dual side panel with ventilation & lock	
5	Height	42U	

6	Width	800 mm	
7	Depth	1000 mm	
8	PDU	15 socket of 5x15 amp with 32 AMP MCB & indicator 2 nos	
9	Fans housing	90CFM 4 Fan	
10	Hardware PKT	pkt of 20	
11	Castor Wheel	2 with brakes & 2 without brakes	
Additional Specification			
12	Two number of PDU consisting 25 socket of 5x15 amp along with MCB & 3 mtrs 2.5sq mm 3Core cable for Power connection	2 numbers vertical on both sides	
13	Earthing Kit	copper bus bar of 25x3, 19" rack mounted on back side of rack - 80x80 mm vertical cable manager running on both side in front	
14	hardware	a kit front panel mounting consisting of 20 hardware	
15	Powder coating	65-85 microns in RAL7035 & 7037 Dual Tone	
16	Load Bearing capacity	800 Kgs	

6.39 Chemical Earthing System

Minimum Specification Requirement	Compliances (Yes/No)	Remarks
Make & Model:		
The electrical earthing system shall comply with IS 3043:2018 and BIS standards. Earth resistance shall be tested and certified. All materials used shall be IS marked. Installation shall be carried out by a licensed electrical contractor and supported with test certificates and as-built drawings.		

6.40 Anti-Virus for Workstation

Minimum Specification Requirement	Compliances (Yes/No)	Remarks
Make & Model:		
Anti-Virus for Workstation as per Industry Standard.		

6.41 Firewall

Sl. No.	Detailed Technical Specifications	Compliances (Yes/No)	Remarks
1	**Architecture:**		
1.1	The appliance based security platform shall be capable of providing firewall, IPS and VPN (IPSec) functionality simultaneously.		
1.2	The Firewall should have Application Security / AVC		

1.3	Should support active/active or active/standby failover		
2	**Sessions**		
2.1	Should support upto 200,000 Concurrent sessions and at least 15,000 sessions per second		
3	**System Throughput**		
3.1	Should provide minimum 3Gbps Firewall throughput		
3.2	Should provide 300 Mbps Ipsec VPN throughput and 2000 Ipsec tunnel. Should support minimum 100 number of remote access/SSL VPN (concurrent) users from day-1.		
3.3	Should provide minimum 500 Mbps IPS throughput		
3.4	Should provide minimum 400 Mbps NextGen firewall throughput including Firewall, Application security/ AVC, IPS and URL Filtering		
4	**Storage -** Should have 8GB RAM and 240 GB internal storage/Flash for keeping the logs		
5	**Support: -** IKE Encryption algorithms: Prime, DES-CBC, 3DES-CBC, AEC-CBC, AES-GCM, SuiteB		
6	**Authentication, Authorization and Accounting (AAA) support:** RADIUS or TACACS+		
7	**Support for:** Network and application level attacks ranging from malformed packet attacks to DoS attacks, Support RSA and Diffie-Hellman, MD-5, SHA-1, SHA-128, SHA-256 **,**SHA-384		
8	**Provides**		
8.1	Static NAT, Dynamic NAT and PAT services		
8.2	Stateful and stateless and Zone-based firewall		
8.3	Denial of service (DDoS) protection		
8.4	Traffic anomaly protection		
9	**Management**		
9.1	Web based management to support for remote monitoring		
9.2	Accessible through variety of methods including: Console Port, SSH		
9.3	Dedicated Out-of-Management interface		
9.4	Support SNMPv1, v2, v3 & Support for syslog		
10	**Software features**		
10.1	Support for IPv4, RIPv2, OSPF, IS-IS, BGP, VLAN, DHCP, Support for IPv6 RIPng, OSPFv3.		
11	**Power Supply**		
11.1	Internal Power supply and Fan		
12	**Minimum Interfaces Required**		
12.1	Minimum 6 x 1G SFP and 8 x 10/100/1000G Baset-T Ports; Should have 1 x Console(RJ45) and 1xOOBM port, additionally 1 USB (Type-A) ports.		
12.2	Firewall Should be NDPP/NDcPP Certified, RoHS 2 Compliant. All the licenses should be included.		

6.42 Electrical MCB 16A with Box

Minimum Specification Requirement	Compliances (Yes/No)	Remarks
Make & Model:		
Electrical MCB 16A with Box as per Industry Standard.		

6.43 Electrical MCB 32A with Box

Minimum Specification Requirement	Compliances (Yes/No)	Remarks
Make & Model:		
Electrical MCB 32A with Box as per Industry Standard.		

6.44 Electrical 6/16A Socket Multi Plug

Minimum Specification Requirement	Compliances (Yes/No)	Remarks
Make & Model:		
Electrical 6/16A Socket Multi Plug as per Industry Standard.		

6.45 Electrical 16A Switch

Minimum Specification Requirement	Compliances (Yes/No)	Remarks
Make & Model:		
Electrical 16A Switch as per Industry Standard.		

6.46 Electrical Board (6x4) PVC

Minimum Specification Requirement	Compliances (Yes/No)	Remarks
Make & Model:		
Electrical Board (6x4) PVC as per Industry Standard.		

6.47 Industrial Socket 32A

Minimum Specification Requirement	Compliances (Yes/No)	Remarks
Make & Model:		
Industrial Socket 32A as per Industry Standard.		

6.48 Single Core 6 sq. mm Earthing Cable

Minimum Specification Requirement	Compliances (Yes/No)	Remarks
Make & Model:		
Single Core 6 sq. mm Earthing Cable as per Industry Standard.		

6.49 Furniture (one set of Table and Chair)

Minimum Specification Requirement		Compliances (Yes/No)	Remarks
Make & Model:			
Table			
Length:	900		
Depth:	600		
Height:	750		
Material			
Table-Top:	25MM Thick Pre-laminated particle Board		
Gable End & Modesty:	18 MM Thick Pre-laminated particle Board		
Finish	Classic Walnut with Black Combination		
Chair			
Armless molded chair, OEM of the product should be Iso certified			

7. SECTION-VII (COMMERCIAL OFFER)

Financial Bid for CCTV Surveillance System (To be in Company letter head)

SL. No.	Item Description/ Functionality	Units	Quantity	Unit Price for the Equipment (INR) including 5 years AMC support	GST as Applicable Per Unit (INR)	Total Unit Price Including GST	Total Cost (INR)
			[A]	[B]	[C]	(B + C)	[D = A x (B+C)]
1	5MP IP Fixed Bullet Camera and Mounting Accessories with 512 GB SD Card from day1	Nos	1608				
2	5MP IP Fixed Dome Camera and Mounting Accessories with 512 GB SD Card from day1	Nos	1514				
3	5MP IP PTZ Camera and Mounting Accessories with 512GB SD Card from day1	Nos	24				
5	Surge protection devices for cameras	Nos	1608				
6	Video Management System (VMS) Software Channel License	Nos	3146				
7	Video Management System (VMS) Application/Management Server with Operating System and necessary Database as per application requirement	Nos	4				
8	Video Management System (VMS) Recording Server with 100TB usable Storage with Operating System as per application requirement	Nos	13				
9	12-Port Giga PoE+ L2 Managed Switch with 1G SFP Uplink	Nos	51				
10	24-Port Giga PoE+ L2 Managed Switch with 1G SFP Uplink	Nos	302				
11	24-Port L3 Full Managed Core Switch with 1/10G SFP+ Ports	Nos	6				
12	48-Port L3 Full Managed Core Switch with 1/10G SFP+ Ports	Nos	2				

13	24-Port L2 Managed Switch with 4 × 10G SFP+ Uplink	Nos	24				
14	6 Core Single Mode OFC Cable	Mtr.	47320				
15	UTP CAT-6 Cable (Armoured)	Mtr.	79250				
	UTP CAT-6 Cable (Non- Armoured)	Mtr.	79250				
16	UTP CAT-6 Patch Cable (2m)	Nos	40				
17	OFC Patch Cord LC-LC (1m)	Nos	1083				
18	PVC Insulated 3 Core 2.5 sq. mm Power Cable	Mtr.	15210				
19	PVC Insulated 3 Core 4 sq. mm Power Cable	Mr.	200				
20	HDMI Cable (20m)	Nos	8				
21	RJ-45 Male Connector	Nos	7945				
22	12-Port Rack Mount LIU Fully Loaded with ALL Accessories (LC Type)	Nos	543				
23	Single Mode 1G SFP Module Pair (10KM)	Nos	1158				
24	Single Mode 10G SFP+ Module Pair (10KM)	Nos	96				
25	CAT-6 Patch Panel equipped with RJ- 45 Connector	Nos	8				
26	Single Port Faceplate with Keystone and Gang Box	Nos	40				
27	9U Outdoor Vandal and Weather-proof Rack with PDU suitable for Pole Installation	Nos	116				
28	9U Indoor Wall Mount Rack with PDU & All Accessories	Nos	242				
29	Weather-proof PVC Junction Box (100mm X 100mm) for Camera Installation	Nos	3146				
30	Galvanized Octagonal Hot DIP 8 Mtrs Pole along with Lightning Arrestor	Nos	135				
31	PVC Rigid Conduit Pipe with all Accessories (38mm)	Mtr.	63400				
32	High-Density Polyethylene (HDPE) Pipe	Mtr.	47320				
33	PVC Coated GI Flexible Pipe (38mm)	Mtr.	1807				

34	VMS Workstation with 24" FHD Monitor	Nos	12				
35	Wireless Mouse & Keyboard Set	Nos	8				
36	Video wall with Controller and Accessories	Nos	4				
37	10KVA Online UPS with 2 Hours Backup	Nos	5				
38	1KVA Offline UPS with 2 Hours Backup	Nos	242				
39	600VA Offline UPS with 2 Hours Backup	Nos	116				
40	42U Floor Standing Server Rack with Dual PDU & All Accessories	Lot	4				
41	Chemical Earthing	Lot	362				
42	Anti-Virus for Workstation	Nos	12				
43	Firewall	Nos	04				
44	Electrical MCB 16A with Box	Nos	358				
45	Electrical MCB 32A with Box	Nos	8				
46	Electrical 6/16A Socket Multi Plug	Nos	366				
47	Electrical 16A switch	Nos	366				
48	Electrical Board (6x4) PVC	Nos	366				
49	Industrial Socket 32A	Nos	8				
50	Single Core 6 sq. mm Earthing Cable	Mtr.	5430				
51	Furniture (one set of Table and Chair)	Lot	4				
52	Air Conditioners (AC) 2 Ton	Nos	8				
53	One Time Delivery Cost	Lot	4				
Services							
1	Site Survey of Individual University	Lot	4				
2	Assembling & fixing of 9U Rack (indoor)	Nos	242				
3	Assembling & fixing of 9U rack (Outdoor)	Nos	116				

4	Assembling & fixing of 42U rack	Nos	4				
5	Digging of Hard soil (road cutting, concrete cutting) with back filling with laying of HDPE Pipe	Mtr.	14196				
6	Digging of Soft Soil with back filling with laying of HDPE Pipe	Mtr.	33124				
7	Laying of UTP - Cat 6 Cable (Armoured & Unarmoured)	Mtr.	158500				
8	Laying of OFC Cable	Mtr.	47320				
9	Laying of power and earth cable	Mtr.	20840				
10	Laying of PVC Conduit	Mtr.	54845				
11	Laying of HDMI Cable	Mtr.	160				
12	Laying of PVC Coated GI Flexible Pipe	Mtr.	1565				
13	Fixing & Termination of 12 Port LIU including marking & splicing	Nos	543				
14	Erection of pole 8m with RCC Foundation Along with Lightning Arrestor Installation	Nos	135				
15	Chemical Earthing with Termination to Network rack/CCTV rack/Server room.	Nos	362				
16	Fixing, Termination, Testing and Commissioning of IO Box Including Back box & Face plate	Nos	40				
17	Fixing, Termination, Testing and Commissioning, Crimping and Testing of RJ 45 Connector	Nos	7945				
18	Installation and Configuration of Dome Camera	Nos	1514				
19	Installation and Configuration of Bullet Camera	Nos	1608				
20	Installation and Configuration of PTZ Camera	Nos	24				
21	Installation and Configuration of L2 Switch	Nos	377				
22	Installation and Configuration of L3 Switch	Nos	8				
23	Installation of 1 KVA UPS	Nos	242				

24	Installation of 600VA UPS	Nos	116				
25	Installation of 10 KVA UPS	Nos	5				
26	Installation and configuration of Server	Nos	17				
27	Installation and configuration of VMS software	Nos	3611				
28	Mounting and configuration of video wall display with accessories	Nos	4				
29	Installation and configuration of Client PC/ Workstation with antivirus	Nos	12				
30	Installation and configuration of Firewall	Nos	4				
31	Fixing of MCB	Nos	366				
32	Fixing of electrical 6/16 AMP socket with box with accessories (Power switch, socket, DP, etc.)	Nos	366				
33	Site Readiness and Control Room Preparation	Lot	4				
34	Configuration, testing and commissioning of CCTV system with 5 years onsite support	Lot	4				
35	Integration of existing Camera with newly Installed VMS	Nos	441				
36	Submission of As- built drawing, installation documents, training, manuals etc.	Lot	4				
						Total Project Cost for 4 Universities =	

Note: -

- All the above price would be in INR only, including GST.
- The above price would include FIVE Years Warranty & Support.
- OCAC will award the Contract to the successful bidder whose proposal has been determined as the best value proposal based on Technical and Financial evaluation using QCBS method.
- The bidder has to compulsorily quote for all items mentioned in the Commercial-bid Tables. In case bidder fails to quote for any of this stage, the bid would be summarily rejected.
- Above is indicative, however the quantity may increase or decrease at the time of placing the purchase order as per actual. The passive items will be billed as per actual consumption.

- The tax rates will be mentioned as per standards.

7.1 Financial bid Evaluation: Evaluation of bids shall be carried out using the Quality and Cost Based Selection (QCBS) methodology, with 70% weightage assigned to the technical (quality) score and 30% weightage assigned to the financial (cost) score.

The price proposal of the bidders who qualify in the technical evaluation by securing minimum 70% marks will be opened.

Normalized Technical Score of the bidder (Tn) = (Tf / Th) * 100
Tf: Technical score of the bidder
Th: Highest Technical score

Normalized Financial Score of the bidder (Fn) = (Qi / Qf) * 100
Qf: Quoted price of the bidder
Qi: Lowest Quoted price
Total Normalized (composite) score St = Tn * 0.7 + Fn * 0.3

OCAC will award the Contract to the successful bidder whose proposal has been determined as the best value proposal based on Technical and Financial evaluation.

Errors & Rectification- Arithmetical errors will be rectified on the following basis:

i. If there is a discrepancy between the unit price and the total price of any item that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected accordingly.
ii. In case of multiple items, grand total price shall be corrected adding the sub-total costs of each item.
iii. If there is a discrepancy between words and figures in respect of unit price, the amount in words will prevail.

8. SECTION VIII (LIST OF ANNEXURES)

Annexure: G-1 (To be in Company letter head)

Bidder's General Information

Sl. No.	Information	Details
1.	Name of Bidder	
2.	Registered Address of Bidder	
3.	Address for Communication	
4.	Name, Designation and Address of the contact person to whom all references shall be made regarding this Tender	
5.	Telephone no. of contact person:	
6.	Mobile no. of contact person:	
7.	Fax no. of contact person:	
8.	E-mail address of contact person:	
9.	GST Number of the Firm	
10.	PAN No. of the firm	
11.	EPF Registration No	
12.	ESIC Registration No.	
13.	Address of local office in Odisha, if any	
14.	Name and contact details of the contact person in Odisha, if any	
15.	Average Annual Turnover: FY 2022-23 FY 2023-24 FY 2024-25	
16.	Net Worth	

Annexure: G-2 (To be in Company letter head)

Self-Declaration - Not Blacklisted

To,

THE GENERAL MANAGER (ADMN.)
ODISHA COMPUTER APPLICATION CENTER
OCAC BUILDING, PLOT NO. N1/7-D, RRL POST OFFICE
BHUBANESWAR-751013

Subject: Selection of Agency for Procurement, Supply, Installation, and Maintenance of IP Based CCTV Surveillance System at four (04) Universities under Higher Education Department (HED), Odisha.

Sir

In response to the RFP Enquiry No.: **OCAC-SEGP-INFRA-0087-2025/ENQ/26039, Dated 08.07.2026** for RFP titled "Selection of Agency for Procurement, Supply, Installation, and Maintenance of IP Based CCTV Surveillance System at four (04) Universities under Higher Education Department (HED),Odisha ", as an Owner/Partner/Director of (Organization name)___, I/We hereby declare that presently our Company/ firm is not under declaration of ineligible for corrupt & fraudulent practices, blacklisted either indefinitely or for a particular period of time, or had work withdrawn, by any State/Central Government/PSU.

If this declaration is found to be incorrect then without prejudice to any other action that may be taken, my/ our security may be forfeited in full and the tender if any to the extent accepted may be cancelled.

Thanking you,

Signature
(Authorized Signatory)

Seal:
Date:
Place:
Name of the Bidder:

Annexure: G-3 (To be in Company letter head)

Bidder's Authorization Certificate

To,

THE GENERAL MANAGER (ADMN.)
ODISHA COMPUTER APPLICATION CENTER
OCAC BUILDING, PLOT NO. N1/7-D, RRL POST OFFICE
BHUBANESWAR-751013

Subject: - Selection of Agency for Procurement, Supply, Installation, and Maintenance of IP Based CCTV Surveillance System at four (04) Universities under Higher Education Department (HED), Odisha with reference to the RFP Enquiry No.: OCAC-SEGP-INFRA-0087-2025/ENQ/26039, Dated 08.07.2026.

Ms./Mr.

<Name>, <Designation> is hereby authorized to attend meetings & submit pre-qualification, technical & commercial information as may be required by you in the course of processing the above said Bid. S/he is also authorized to attend meetings & submit technical & commercial information as may be required by you in the course of processing above said application. Her/his contact mobile number is _____ and Email id is_____. For the purpose of validation, his/ her verified signatures are as under.

Thanking you,

Signature
(Authorised Signatory)

Verified Signature by
Director/CEO

Seal:
Date:
Place:

Name of the Bidder:

Annexure: G-4 (To be in Company letter head)

Acceptance of Terms & Conditions

To,

THE GENERAL MANAGER (ADMN.)
ODISHA COMPUTER APPLICATION CENTER
OCAC BUILDING, PLOT NO. N1/7-D, RRL POST OFFICE,
BHUBANESWAR-751013

Subject: - Selection of Agency for Procurement, Supply, Installation, and Maintenance of IP Based CCTV Surveillance System at four (04) Universities under Higher Education Department (HED), Odisha.

Sir,

I have carefully and thoroughly gone through the Terms & Conditions along with scope of work contained in the RFP Enquiry No.: **OCAC-SEGP-INFRA-0087-2025/ENQ/26039, Dated 08.07.2026,** regarding "Selection of Agency for Procurement, Supply, Installation, and Maintenance of IP Based CCTV Surveillance System at four (04) Universities under Higher Education Department (HED), Odisha"

I declare that all the provisions/clauses including scope of work of this RFP/Tender Document are acceptable to my company. I further certify that I am an authorized signatory of my company and am, therefore, competent to make this declaration.

Thanking you,

Signature
(Authorised Signatory)

Seal:
Date:
Place:
Name of the Bidder:

Annexure: G-5 (To be in Company letter head)

Bid Document Cover Letter

To

THE GENERAL MANAGER (ADMN.)
ODISHA COMPUTER APPLICATION CENTER
OCAC BUILDING, PLOT NO. N1/7-D, RRL POST OFFICE
BHUBANESWAR-751013

Subject: - Selection of Agency for Procurement, Supply, Installation, and Maintenance of IP Based CCTV Surveillance System at four (04) Universities under Higher Education Department (HED), Odisha.

Sir,

We, the undersigned, offer to provide solution to OCAC, for Selection of Agency for Procurement, Supply, Installation, and Maintenance of IP Based CCTV Surveillance System at four (04) Universities under Higher Education Department (HED), Odisha, in response to the RFP Enquiry No.: **OCAC-SEGP-INFRA-0087-2025/ENQ/26039, Dated 08.07.2026.**

We are hereby submitting our Proposal, which includes the Pre-Qualification Bid, Technical bid and the Commercial Bid sealed in a separate envelope. We hereby declare that all the information and statements made in this Technical bid are true and accept that any misinterpretation contained in it may lead to our disqualification.

We undertake, if our Proposal is accepted, to initiate the implementation services related to the assignment not later than the date indicated in the RFP Document.

We agree to abide by all the terms and conditions of the RFP document. We would hold the terms of our bid valid for 180 days as stipulated in the RFP document.

We understand you are not bound to accept any Proposal you receive. Thanking you,

Signature
(Authorised Signatory)
Seal:
Date:
Place:
Name of the Bidder:

Annexure: G-6 (To be in Company letter head)

Project Citation Format

Relevant CCTV Surveillance System Experience	
General Information	
Name of the project	
Client for which the project was executed	
Name and contact details of the client	
Date of award and date of completion	
Project Details	
Description of the project	
Scope of services	
Service levels being offered	
Technologies used	
Outcomes of the project	
Other Details	
Total cost of the project	
Total cost of the services provided by the respondent	
Duration of the project (no. of months, start date, completion date, current status)	
Other relevant Information	
Copy of Work Order	

Annexure: G-7 (To be in Company letter head)

Undertaking on Pricing of Items of Technical Response

To,

THE GENERAL MANAGER (ADMN.)
ODISHA COMPUTER APPLICATION CENTER
OCAC BUILDING, PLOT NO. N1/7-D, RRL POST OFFICE,
BHUBANESWAR-751013

Subject: - Selection of Agency for Procurement, Supply, Installation, and Maintenance of IP Based CCTV Surveillance System at four (04) Universities under Higher Education Department (HED), Odisha.

Sir,

I/We do hereby undertake that Commercial Proposal submitted by us, against RFP Enquiry No.: **OCAC-SEGP-INFRA-0087-2025/ENQ/26039, Dated 08.07.2026**, is inclusive of all the items in the technical proposal and is inclusive of all the clarifications provided by us on the technical proposal during the evaluation of the technical offer. We understand and agree that our Commercial Proposal is firm and final and that any clarifications sought by you and provided by us would not have any impact on the Commercial Proposal submitted by us.

Thanking you,

Signature
(Authorised Signatory)

Seal:
Date:
Place:
Name of the Bidder:

Annexure: G-8 (To be submitted in OEM letter head)

Manufacturers' Authorization Form (MAF)

To,

THE GENERAL MANAGER (ADMN.)
ODISHA COMPUTER APPLICATION CENTER
OCAC BUILDING, PLOT NO. N1/7-D, RRL POST OFFICE
BHUBANESWAR-751013

Subject: - Selection of Agency for Procurement, Supply, Installation, and Maintenance of IP Based CCTV Surveillance System at four (04) Universities under Higher Education Department (HED), Odisha.

We who are established and reputable manufacturers / producers of_____having factories / development facilities at (address of factory / facility) do hereby authorize M/s
__(Name and address of bidder) to submit a Bid, RFP Enquiry No.: **OCAC-SEGP-INFRA-0087-2025/ENQ/26039, Dated 08.07.2026** and sign the contract with you against the above Bid Invitation. We hereby extend our full guarantee and warranty for the Solution, Products and services offered by the above firm against this Bid Invitation. We also undertake to provide any or all of the following materials, notifications, and information pertaining to the Products manufactured or distributed by the Supplier:

a. Such Products as the Purchaser may opt to purchase from the Supplier, provided, that this option shall not relieve the Supplier of any warranty obligations under the Contract; and
b. in the event of termination of production of such Products:
    i. advance notification to the Purchaser of the pending termination, in sufficient time to permit the Bank to procure needed requirements; and
    ii. Following such termination, furnishing at no cost to the Purchaser, the blueprints, design documents, operations manuals, standards, source codes and specifications of the Products, if requested.

We duly authorize the said firm to act on our behalf in fulfilling all installations, Technical support and maintenance obligations required by the contract.

Yours faithfully, (Name)

(Name of Producers/Manufacturer)

Note: This letter of authority should be on the letterhead of the manufacturer and should be signed by a person competent and having the power of attorney to bind the manufacturer. The Bidder in its Bid should include it.

Annexure: G-9

Format for Bank Guarantee for Earnest Money Deposit (EMD)

To,

THE GENERAL MANAGER (ADMN.)
ODISHA COMPUTER APPLICATION CENTER
OCAC BUILDING, PLOT NO. N1/7-D, RRL POST OFFICE,
BHUBANESWAR-751013

Subject: - Selection of Agency for Procurement, Supply, Installation, and Maintenance of IP Based CCTV Surveillance System at four (04) Universities under Higher Education Department (HED), Odisha.

Whereas <<Name of the bidder>> (hereinafter called 'the Bidder') has submitted the bid for Submission of RFP Enquiry No.: **OCAC-SEGP-INFRA-0087-2025/ENQ/26039, Dated 08.07.2026** for **Selection of Agency for Procurement, Supply, Installation, and Maintenance of IP Based CCTV Surveillance System at four (04) Universities under Higher Education Department (HED), Odisha.**

Know all Men by these presents that we <<Name of the Bidder>> having our office at <<Address>> (hereinafter called "the Bank") are bound unto the <<Nodal Agency>> (hereinafter called "the Purchaser") in the sum of Rs. <<Amount in figures>> (Rupees <<Amount in words>> only) for which payment well and truly to be made to the said Purchaser, the Bank binds itself, its successors and assigns by these presents. Sealed with the Common Seal of the said Bank this <<Date>>

The conditions of this obligation are:

1. If the Bidder having its bid withdrawn during the period of bid validity specified by the Bidder on the Bid Form; or
2. If the Bidder, having been notified of the acceptance of its bid by the Purchaser during the period of validity of bid
   a. Withdraws his participation from the bid during the period of validity of bid document; or
   b. Fails or refuses to participate in the subsequent Tender process after having been short listed;

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

This guarantee will remain in force up to <<insert date>> and including <<extra time over and above mandated in the RFP>> from the last date of submission and any demand in respect thereof should reach the Bank not later than the above date.

NOTHWITHSTANDING ANYTHING CONTAINED HEREIN:

i) Our liability under this Bank Guarantee shall not exceed Rs. <<Amount in figures>> (Rupees <<Amount in words>> only)

ii) This Bank Guarantee shall be valid upto <<insert date>>)

iii) It is condition of our liability for payment of the guaranteed amount or any part thereof arising under this Bank Guarantee that we receive a valid written claim or demand for payment under this Bank Guarantee on or before <<insert date>>) failing which our liability under the guarantee will automatically cease.

(Authorized Signatory of the Bank) Seal:
Date:

Annexure: G-10 (To be in Company letter head)

Financial Bid Letter

To,

THE GENERAL MANAGER (ADMN.)
ODISHA COMPUTER APPLICATION CENTER
OCAC BUILDING, PLOT NO. N1/7-D, RRL POST OFFICE
BHUBANESWAR-751013

Subject: - Selection of Agency for Procurement, Supply, Installation, and Maintenance of IP Based CCTV Surveillance System at four (04) Universities under Higher Education Department (HED), Odisha.

Sir,

We, the undersigned, offer to provide the service **Selection of Agency for Procurement, Supply, Installation, and Maintenance of IP Based CCTV Surveillance System at four (04) Universities under Higher Education Department (HED), Odisha.**, as per RFP Enquiry No.: **OCAC-SEGP-INFRA-0087-2025/ENQ/26039, Dated 08.07.2026** and our Proposal (Technical and Financial Proposals). Our attached Financial Proposal is for the sum of <<Amount in words and figures>> exclusive of taxes and duties.

1) PRICE AND VALIDITY

All the prices mentioned in our Tender are in accordance with the terms as specified in the RFP documents. All the prices and other terms and conditions of this Bid are valid for a period of THREE (03) years from the date of opening of the Bid.

We hereby confirm that our prices do not include any taxes and duties.

We understand that the actual payment would be made as per the existing tax rates during the time of payment.

2) UNIT RATES

We have indicated in the relevant forms enclosed, the unit rates for the purpose of on account of payment as well as for price adjustment in case of any increase to / decrease from the scope of work under the contract.

3) TENDER PRICING

We further confirm that the prices stated in our bid are in accordance with your clauses in RFP/Tender document.

4) QUALIFYING DATA

We confirm having submitted the information as required by you in your RFP. In case you require any other further information/ documentary proof in this regard before/during evaluation of our Tender, we agree to furnish the same in time to your satisfaction.

5) BID PRICE

We declare that our Bid Price is for the entire scope of the work as specified in the <Refer Section No.>. These prices are indicated Commercial Bid attached with our Tender as part of the Tender. In case there is substantial difference between the component wise price approved by OCAC and the price quoted by the bidder, OCAC will have the rights to ask the bidder to realign their cost without impacting the total bid price. We hereby agree to submit our offer accordingly.

6) PERFORMANCE BANK GUARANTEE

We hereby declare that in case the contract is awarded to us, we shall submit the Performance Bank Guarantee as specified in the Clause-7 of this RFP document.
Our Financial Proposal shall be binding upon us subject to the modifications resulting from Contract negotiations, up to expiration of the validity period of the Proposal, i.e., [Date].

We understand you are not bound to accept any Proposal you receive.

We hereby declare that our Tender is made in good faith, without collusion or fraud and the information contained in the Tender is true and correct to the best of our knowledge and belief.

We understand that our Tender is binding on us and that you are not bound to accept a Tender you receive.

Thanking you,

Signature
(Authorized Signatory)
Seal:
Date:
Place:
Name of the Bidder:

Annexure: G-11

Performance Bank Guarantee

To,

THE GENERAL MANAGER (ADMN.)
ODISHA COMPUTER APPLICATION CENTER
OCAC BUILDING, PLOT NO. N1/7-D, RRL POST OFFICE,
BHUBANESWAR-751013

Subject: - Selection of Agency for Procurement, Supply, Installation, and Maintenance of IP Based CCTV Surveillance System at four (04) Universities under Higher Education Department (HED), Odisha.

Whereas, <<name of the supplier and address>> (hereinafter called "the bidder") has undertaken, in pursuance of contract no. <Insert Contract No.> dated. <Date> to provide services for **Selection of Agency for Procurement, Supply, Installation, and Maintenance of IP Based CCTV Surveillance System at four (04) Universities under Higher Education Department (HED), Odisha.** (hereinafter called "the beneficiary").

And whereas it has been stipulated by in the agreement that the bidder shall furnish you with a bank guarantee by a recognized bank for the sum specified therein as security for compliance with its obligations in accordance with the agreement;

And whereas we, <Name of Bank> a banking company incorporated and having its head /registered office at <Address of Registered Office> and having one of its office at <Address of Local Office> have agreed to give the supplier such a bank guarantee.

Now, therefore, we hereby affirm that we are guarantors and responsible to you, on behalf of the supplier, up to a total of <<Cost of Service>> in (words) and we undertake to pay you, upon your first written demand declaring the supplier to be in default under the agreement and without cavil or argument, any sum or sums within the limits of <<Cost of Service>> (in Words) as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

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

We further agree that no change or addition to or other modification of the terms of the agreement to be performed there under or of any of the agreement documents which may be made between you and the Bidder shall in any way release us from any liability under this guarantee and we hereby waive notice of any such change, addition or modification. This Guarantee shall be valid until <<<insert date>>

Notwithstanding anything contrary contained in any law for the time being in force or banking practice, this guarantee shall not be assignable or transferable by the beneficiary i.e. OCAC. Notice or invocation by any person such as assignee, transferee or agent of beneficiary shall not be entertained by the Bank.

NOTHWITHSTANDING ANYTHING CONTAINED HEREIN:

i) Our liability under this bank guarantee shall not exceed <<amount>> (Amt. in words).

ii) This bank guarantee shall be valid up to <<insert date>>.

iii) It is condition of our liability for payment of the guaranteed amount or any part thereof arising under this bank guarantee that we receive a valid written claim or demand for payment under this bank guarantee on or before <<insert date>> failing which our liability under the guarantee will automatically cease.

(Authorized Signatory of the Bank) Seal:
Date:

Annexure: G-12

Pre-Bid Queries Format

RFP-Enquiry No. OCAC-SEGP-INFRA-0087-2025/ENQ/26039, Dated 08.07.2026

Name of the Company/Firm:

_____

_____

Name of Person(s) Representing the Company/ Firm:

Name of Person	Designation	Email-ID(s)	Tel. Nos. & Fax Nos.

Company/Firm Contacts:

Contact Person(s)	Address for Correspondence	Email-ID(s)	Tel. Nos. & Fax Nos.

Query / Clarification Sought:

Sl. No.	RFP Page No.	RFP Clause No.	Clause Details	Query / Suggestion / Clarification

***Note**: - Queries must be strictly submitted only in the prescribed format (.XLS/ .XLSX). Queries not submitted in the prescribed format will not be considered/ responded at all by the tendering authority. Pre-bid queries should send to the email ID – gm_ocac@ocac.in with a copy to sudha.mohanty@ocac.in, Sourav.dash@odisha.gov.in and chandan.pradhan@semt.gov.in*

List of Enclosures

Sl. No.	Enclosure description	Enclosed (Yes / No)	Annexure/Attachment/ Page No./ Envelop No. of the enclosure
1.	Bidder's General Information Annexure: G1		
2.	Copy of Registration Certificate of the bidder		
3.	Organization Profile		
4.	Documents proof for bidder last three years average annual turnover ending with 31st March 2025.		
5.	Documents proof for bidder net worth should positive		
6.	Up-to-date IT Return ending with 31st March 2025		
7.	Copy of PAN no allotted by Income Tax Department		
8.	Copy of GST Registration Certificate		
9.	Copy of valid ISO 9001, 27001 & 20000 Certifications		
10.	Self-Declaration that the bidder hasn't been blacklisted by any Govt./PSU (Annexure-G2)		
11.	Bidder's Authorization Certificate Annexure: G-3		
12.	Acceptance of terms and Condition Annexure-G-4		
13.	Bid Document Cover Letter as per Annexure: G-5		
14.	Experience / Work completion certificates from the client with copy of the work order Annexure: G-6		
15.	Undertaking on Pricing of Items of Technical Response Annexure: G-7		
16.	Tender specific valid OEM authorized letter for all items quoted by the bidder as per Annexure: G-8		
17.	EMD amount in a sealed envelope (Super scribe EMD amount on the top of the sealed envelope) with General Bid	DD No : Amount : Bank:	
18.	If EMD in the form of Bank Guarantee Format for Bank Guarantee Annexure: G-9	BG No: Amount: Bank:	
19.	General bid duly signed (sealed envelope)		
20.	Technical specification with printed technical brochure duly signed (sealed envelope)		
21.	Financial Bid Letter as per Annexure: G-10		
22.	Commercial bid duly signed (sealed envelope)		
23.	RFP Document duly signed on each page with company sealed		
24.	OEM supporting documents as per this RFP.		
25.	All supporting documents related to Eligibility Criteria & Technical condition.		

9. SECTION - IX (List of Universities)

List of Four (04) University's Locations

Sl. No.	University Name	University Location
1	Maa Manikeshwari University, Bhawanipatna	Maa Manikeshwari University At/PO: Bhawanipatna, Dist: Kalahandi Odisha-766001 (India)
2	Rama Devi Women's University, Bhubaneswar (RD)	Rama Devi Women's University Vidya Vihar, PO: Bhoinagar, Bhubaneswar, Odisha-751022 (India)
3	Sambalpur University, Sambalpur	Sambalpur University, Jyoti Vihar, Burla, Sambalpur, Odisha- 768019 (India)
4	Utkal University, Bhubaneswar	Utkal University Vani Vihar, Bhubaneswar, Odisha-751004 (India)