

झारखण्ड लोक सेवा आयोग,
सर्कुलर रोड, राँची।
प्रेस विज्ञप्ति

झारखण्ड लोक सेवा आयोग, राँची में “Selection of System Integrator (SI) for Supply, Installation, Commissioning of CCTV Surveillance System, Visitor Management System & Related IT Infrastructure at Jharkhand Public Service Commission (JPSC) Campus” हेतु निविदा आमंत्रित सूचना

झारखण्ड लोक सेवा आयोग, राँची में “Selection of System Integrator (SI) for Supply, Installation, Commissioning of CCTV Surveillance System, Visitor Management System & Related IT Infrastructure at Jharkhand Public Service Commission (JPSC) Campus” हेतु प्रतिष्ठित कम्पनी/एजेसी/प्रतिष्ठानों से निम्नवत् निविदा आमंत्रित की जाती है :-

1.	Name of Work	Selection of System Integrator (SI) for Supply, Installation, Commissioning of CCTV Surveillance System, Visitor Management System & Related IT Infrastructure at Jharkhand Public Service Commission (JPSC) Campus
2.	Availability of Tender Document On JPSC Website (www.jpssc.gov.in)	05.05.2026 (Tuesday)
3.	Last Date for sending Pre-Bid Query	09.05.2026 (Saturday)
4.	Pre-bid meeting	12.05.2026 (03:00 P.M.) (Tuesday)
5.	Start date of bid submission	15.05.2026 (Friday)
6.	Last date and time of Bid Submission at JPSC Office.	26.05.2026 (05:00 P.M.) (Tuesday)
7.	Date and Time of Technical Bid Opening	28.05.2026 (03:00 P.M.) (Thursday)
8.	Date and Time of Commercial Bid Opening	To be informed later.
9.	Place of Pre-Bid Meeting/ Communication/Bid Submission/ Bid Opening	Jharkhand Public Service Commission, Circular Road, Deputy Para, Ranchi-834001
10.	Contact/Pre-Bid Query e-mail ID	Tel: -9431301419 Email:- jpssc1@jpssc.gov.in

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सचिव (प्रभारी)
झारखण्ड लोक सेवा आयोग, राँची।

Request for Proposal for
Selection of System Integrator for Supply,
Installation, Commissioning of CCTV Surveillance
System and Visitor Management System at
Jharkhand public Service Commission (JPSC),
Ranchi (Jharkhand)

Tender Reference No. – 1496 Date-05/05/2026

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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 Jharkhand Public Service Commission Ranchi, hereinafter referred to as JPSC, or any of their employees or advisors, 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 purport to contain all the information each Bidder may require. This RFP document may not be appropriate for all persons, and it is not possible for the JPSC, 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.

JPSC, make no representation or warranty and shall incur no liability under any law, statute, rules or regulations as to the accuracy, reliability or completeness of the RFP document.

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. JPSC 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 JPSC is bound to select a Bidder or to appoint the Selected Bidder or Service Provider for the Project and the JPSC 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 JPSC 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 JPSC 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. JPSC 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. Notice Inviting Tender (NIT)

Jharkhand Public Service Commission (JPSC) invites online bid through procurement portal for “Selection of System Integrator (SI) for Supply, Installation, Commissioning of CCTV Surveillance System & Related It Infrastructure at Jharkhand Pubic Service Commission (JPSC) Campus”.

1.	Tender Reference number	1496 Date-05/05/2026
2.	Name of Work	Selection of System Integrator (SI) for Supply, Installation, Commissioning of CCTV Surveillance System, Visitor Management System & Related It Infrastructure at Jharkhand Pubic Service Commission (JPSC) Campus.
3.	Earnest Money Deposit (EMD)	INR 400000/- (Rupees Four Lakh Only)
4.	Purchase of Tender document	INR 5000/- through Demand Draft In Favor of Jharkhand Public Service Commission, Ranchi
5.	Availability of Tender document	05/05/2026
6.	Last Date for sending Pre-Bid Query	09/05/2026
7.	Pre-bid meeting	12/05/2026, 03:00 PM
8.	Start date of bid submission	15/05/2026
9.	Last date and time of Bid Submission	26/05/2026, 05:00 PM
10.	Technical Bid Opening	28/05/2026, 03:00 PM
11.	Commercial Bid Opening	To be informed later.
12.	Place of Pre-Bid Meeting/ Communication/ Bid Submission/ Bid Opening	Jharkhand Public Service Commission Circular Road, Deputy Para, Ranchi - 834001
13.	Contact/ Pre-Bid query e-mail ID	Tel: 9431301419 Email: jpsc1@jpsc.gov.in

Note:

1. JPSC reserves the right to change the conditions or cancel the tendering process at any stage without assigning any reason thereof. Please visit the portal regularly for the same.
2. The Bidders are advised to submit the Bids well in advance as JPSC will not be responsible for non-submission of the bids because of any technical glitches.
3. Financial bid quantity will freeze after Pre – Bid meeting through purchase committee/ department.

2. Project Introduction:

The JPSC, headquartered on Circular Road in Ranchi, requires a robust and modern CCTV security framework and Visitor Management System to safeguard its premises, personnel, and sensitive data. The project involves the design, supply, installation, configuration, commissioning, and maintenance of an integrated, CCTV high-security surveillance system, Visitor Management System and a complementary IT infrastructure. This upgrade is essential for ensuring a secure, reliable, and efficient environment for all campus activities, including the secure conduct of administrative functions.

3. Project Objectives

The primary objectives of this project are focused on enhancing safety, security, and administrative efficiency:

- **Enhance Security and Deterrence:** To establish a CCTV surveillance system and Visitor Management System that provides continuous, high-quality monitoring to deter unauthorized access, theft, and other security threats.
- **Improve Situational Awareness:** To utilize modern technology, such as remote monitoring, to increase awareness of security situations and enable a rapid, optimized response to incidents like intrusions events.
- **Modernize IT Infrastructure:** To create a robust and scalable IT backbone, including high-speed networking, data storage solutions, and an online monitoring system, that supports the security system for the administrative operations.
- **Ensure Data Integrity and Accessibility:** To implement secure data management protocols, potentially using storage, to ensure the integrity and reliable storage of surveillance footage and other essential data.
- **Promote an Integrated Campus Environment:** To seamlessly integrate hardware and software components for a unified command and control system that can adapt to new threats and diverse operational requirements.
- **Establish a Model for High-Security Government Facilities:** To implement a state-of-the-art solution that can serve as a benchmark for other government and public service institutions in the region seeking similar security and IT infrastructure upgrades.

4. Scope of Work

This section provides indicative (not exhaustive) scope of work for successful System Integrator. The Scope of Work covered in this RFP includes “Supply, Installation, Commissioning of CCTV Surveillance System & Related It Infrastructure at Jharkhand Public Service Commission, Ranchi Campus

IP CCTV System is the combination of Dome, Bullet and PTZ Cameras, Server based with VMS, and other related items. A Control room has to establish for centralized monitoring of the feed of each CCTV Camera. Entire IP CCTV System should be remain functional in 24*7*365 days without any interruption.

Details Scope of work is as follows –

The indicative broad scope of work is as under: -

- I. This project Supply, Installation, Commissioning & Go Live network of CCTV cameras with proper storage at JPSC Campus.
- II. It should include design of an IP network-based CCTV surveillance system along with the requisite hardware and software for the CCTV surveillance system to connect the Control Room.
- III. High availability of the system is extremely important. The proposed solution should be work in such a way that System should remain 99% functional on 24x7x365 basis.
- IV. Following are key aspects must be covered by the selected accordingly.
 - a. CCTV Cameras should be installed at defined location by department.
 - b. CCTV Cameras should be installed at all entry and exit points, main gate of the campus, all corridors, Lobby/the reception area, outside washrooms /toilets etc.
 - c. System that has to be installed must be equipped with the night vision and must necessarily consist of **audio as well as video footage**.
 - d. Recording data of CCTV system shall be preserved for a period of 1 months.
- V. The successful Service Provider should have the overall responsibility to Supply, Install and maintain the entire IP CCTV System and associated active and passive items during contract period. The IP CCTV System along with UPS system should be maintained by the Service Provider on as is where is basis stage for three years (03 yr.) from date of signing of the agreement.
- VI. The following works to be done by SI quarterly after Installation, commissioning and Go Live of Supplied equipment’s.
 - i. Check history of CCTV system
 - ii. Visual inspection of entire Installed CCTV system components including cabling & connections where accessible for signs of deterioration or damage , accordingly

- corrective measure/replacement to be taken by the service provider.
- iii. Check all CCTV control equipment (monitors, UPS & Battery etc.)
 - iv. Check UPS is providing required back.
 - v. Check and clean cameras, lenses and housings as necessary.
 - vi. Check lenses for correct field of view and adjust as necessary.
 - vii. Check pictures for correct field of view and adjust as necessary.
 - viii. Check recording and playback quality.
 - ix. Check the satisfactory transmission of images to remote control room and where applicable.

VII. The successful SI has to ensure uninterrupted recording of CCTV camera covering all location.

VIII. It shall be the responsibility of the successful SI to make all the IP CCTV System and equipment working satisfactorily throughout the project period and to handover the system in working Condition. For maintaining the entire CCTV System infrastructure at campus for any type of requirement will be meet by the SI without any additional cost to the tendering authority.

IX. Based on the requirement, repeat orders for one or more of additional items could be asked for during the contract period.

X. Scope of work - VMS (Video Management System) :

- 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. The Video Management System shall offer centralized management of all devices, servers and users and must empower a flexible rule-based system driven by schedules and events.
- 2 The supplied Video Management System (VMS) will be a highly scalable, enterprise level software solution.
- 3 VMS should support ONVIF - S, T, M Profile supported by IP Devices.
- 4 VMS should have metadata plug in from cameras supplied by bidder for central video search by attributes like motion & line crossing.
- 5 VMS shall have the possibility to integrate external Video Analytics systems.

- 6 VMS system shall cluster the processing & memory load across several machines. The failure of any one server in the solution shall not cause a failure in the entire system.
- 7 VMS system device drivers should be stored separately to the central core application to ensure any instability in 3rd party SDKs do not affect the core application.
- 8 VMS system shall support device firmware upgrade of single and multiple devices in bulk
from within the VMS Management Interface.
- 9 Video Management System shall contain recording servers used for recording video feeds
and for communicating with cameras and other devices. The recording servers shall process the recordings and playback the video streams.
- 10 The management server shall allow access to a system manager from where the administrator can configure and manage all servers, cameras, and users.
- 11 The system shall allow the management server to be installed on multiple servers within a cluster of servers ensuring that another server in the cluster automatically takes over in case the first server fails.
- 12 Video Management System shall support installation and ability to run on Physical/
virtual servers.
- 13 Video Management System shall allow an unlimited number of cameras to be connected
to each recording server and an unlimited number of recording servers to be connected to each management server across multiple sites, if required.
- 14 Video Management System shall support high availability of recording servers. A failover option shall provide standby support for recording servers with automatic synchronization to ensure maximum uptime and minimum risk of lost data.
- 15 Video Management System shall support a versatile rule system including scheduled or event-driven actions with numerous options including support to time profiles.
- 16 Video Management System software should support multi-streaming of cameras where 1st stream as 8MP/25fps can be used for live, 2nd stream as full HD/25fps for recording and 3rd stream 720p for video analytics.
- 17 Video Management System shall include automatic camera discovery.

- 18 Video Management System shall support AES-128/256-bit or better (like captcha authentication, etc.) encryption of video for export purposes.
- 19 Video Management System software shall provide fast evidence export by exporting video to various formats, including video from multiple cameras in encrypted native database format with an included viewer.
- 20 Video Management System shall show full awareness of the system through audit logs and shows user activity through comprehensive logs.
- 21 Video Management System shall include support for a framework data module designed to integrate multiple third-party video content analysis (VCA) solutions seamlessly into client viewer environments.
- 22 VMS should support centralized search which enables users to apply multiple search categories and filters to find recording sequences, bookmarks, recordings with motion, alarms, events, vehicles, people, location and data from third-party systems. Logical operators shall enable users to match any or all the search categories.
- 23 Video Management System ONVIF Out: Optional server, plus 64-bit plug-in for management client. This is to enable private-to-public video integration.
- 24 Video Management System shall include support for active directory to allow users to be added to the system. Use of active directory requires that a server running active directory, acting as a domain controller, to be available on the network.
- 25 Edge storage shall ensure that when a lost or broken connection is back up, the data stored on the camera's internal storage shall be retrieved and stored in the media database.
- 26 Edge storage shall ensure that after recovery from a malfunction it shall be possible to play back and view the video, and audio recorded by the device, while the malfunction persisted
- 27 VMS shall support video and audio retrieval: Retrieving video and audio recordings across low-bandwidth connections based on time profiles, events, or manual requests.
- 28 A bookmarking feature shall be included in the video management system, allowing the client viewer users to mark incidents on live and/or playback video streams.
- 29 Administrators shall be able to select a storage container for each device and move a device from one storage container to another or move all recordings inclusive archives to the new storage container or delete them all.

- 30 Administrators shall be provided with an overview of the defined storage containers, their archives with path, and free and used space on the drives for each device, including the used storage space in the recording database, and in archives.
- 31 The system should support automatic failover for recording servers. This functionality must be accomplished by a redundant server that shall work as a standby unit, which takes over in the event that one of a group of designated recording servers fails. Recordings shall be synchronized back to the original recording server once it is back online.
- 32 The system should support multiple failover servers for a group of recording servers.
- 33 The system should provide monitoring of all servers from the graphical alarm management module.
- 34 The system should provide seamless access to recordings on the redundant server for all clients through the same client views once the services are fully started.
- 35 The system shall support multicasting of video feeds to client workstations in order to conserve network resources. Multicasting should be enabled from the recording servers and not directly from the cameras. Thus, the IGMP network would be necessary only for the switches where servers and clients are connected.
- 36 Multicasting shall send a single stream of video to multiple clients, where the stream may be decoded and displayed on all clients simultaneously. This functionality shall support virtual matrix configurations.
- 37 The recording server must accept, display and record individual streams of video from each camera that supports it, for example, display a stream in H.264 & H.265 format. The intent of this functionality shall be providing independent streams of video from the camera to the server with different resolutions, encoding and frame rate.
- 38 The management server provides a resilient system solution based on Windows Server Clustering or Native, to secure maximum uptime.
- 39 The alarm support shall allow for continuous monitoring of the operational status and event-triggered alarms from servers, cameras and other devices.
- 40 The alarm support shall provide a real-time overview of alarm status, or technical problems, while allowing for immediate visual verification and troubleshooting.

- 41 HTTPS connections from devices to recording servers that support HTTPS connections.
- 42 Encrypted communication between the recording server and services that retrieve streaming data.
- 43 Encrypted communication between the management server and the recording server.
- 44 Seamless integration of video analytics algorithms and other third-party applications in full viewing client and management client.
- 45 Multiple User Can be Created and user rights can be assigned based on time, Date and rights.
- 46 VMS should have direct access on mobile app.
- 47 Major brands should be compatible with OEM protocol.

XI Scope of work Visitor Management System Software

A. Regular Employees:

All regular Employees will have to have a smart card for entry into the campus. These pre-printed smart cards will be issued to all the existing employees. While making entry in the campus these smart cards shall be scanned using an RFID reader by the Guard and only after verification the entry shall be allowed.

B. Temporary Passes:

The system shall support a structure of temporary passes in for short term for visits by persons like 1 week of 1 month etc. This temporary pass once generated can be printed on a smart card which shall be used by that pass holder to make entries in the facility.

C. General Visitor:

QR code shall be available at the reception area. This QR once scanned shall take the visitor to an online web page through which the visitor can request an entry in the campus after entering his details and photograph. Once this entry is done, the visitor details shall be populated on the Guard terminal for verification and authorised entry.

Once visitor entries are done in the system, a popup shall be generated on the system of the person to whom the visitor is going to meet. The details of this pop up shall be customized as per the facility requirement and should happen in real time. This pop up shall have the option for the person to either approve or reject the visit.

5. Project Timeline

The project to be executed with timelines as follows:

S.N.	Project Activities/Milestone	Timelines
1.	Supply, Installation, Testing, Commissioning and Go Live	T0+02 Months i.e. (60 Days)
2.	Maintenance of All supplied item	T0+ 36 Month

T0= Date of Signing of Agreement

6. Penalty Terms :

The service levels and penalty terms are defines as follows –

Activities	Description	Service Level	Penalty
Incident Availability of all devices including UPS on 24x7x365 basis	If camera(s) are down/not recording due to any reason (VMS Server, camera, switch failure, cable cut etc.)	Within 3 days (72 hours) of lodging complaint	No Penalty
		After 3 days (> 72 hrs) of lodging of complaint	penalty would be levied Rs 500/day/Camera/location
	Display Monitor (TV)	Within 3 days (72 hours) of lodging complaint	No Penalty
		After 3 days (> 72 hrs) of lodging complaint	penalty would be levied Rs 500/day/TV/location
	If UPS is not working or not providing required backup	Within 3 days (72 hours) of lodging complaint	No Penalty
		After 3 days (> 72 hrs) of lodging complaint	penalty would be levied Rs 1000/day/UPS/location

7. Eligibility Criteria

A. (a) Technical Bid to be submitted in separate envelope mark as "Technical Bid" containing documents mentioned below:-

Sr. No	Description	Document Required
1	The bidder should be a registered company under Indian Companies Act,1956 or 2013 or a partnership firm or a Proprietorship firm for at least 3 years in the field of manufacturing or Supply and installation or Sales & Services of IT-Hardware.	Company's / Organization's Registration Details like- Certification of Registration/ Registered Partnership Deed / Registration Certificate etc. (Annexure- II)
2	Pan Card	Copy of PAN Card
3	G.S.T. Registration Paper	Copy of GST Registration
4	Bidder should have at least 2 Crore average turnover in last Three F.Y. 2022-23, 2023-24 2024-25, 2025-26	Copy of Audited Balance sheet and Profit Loss document should be attach
5	Income Tax Return (F.Y. 2022-23, 2023-24, 2024-25, 2025-26)	Copy of ITR
6	Enclose Product Compliance sheet on OEM Letter head Annexure- I, along with datasheet.	Compliance with datasheet
7	The OEM has to provide Tender Specific MAF CCTV, VMS, Server, Storage, Switch and UPS	Manufacturer Authorization
8	The bidder must have successfully executed/executing project of Supply, Installation and Maintenance or Sales & Services of IT Hardware for any Indian Government Department / Ministry / State / District / PSU during last five FY from 01.04.2020 onwards of following value- a. Single (01) Work order of Value not less than Rs.1 Crore. or b. Two (02) Work order of Value not less than Rs. 55 Lakh Each or c. Three (03) Work order of Value not less than Rs.40 lakh each	Copy of Work Order, Agreement confirming the Value / Quantity of order along with Satisfactory Performance / Work Completion Certificate from the client or proof of receipt of payment against work done or CRAC raised from GeM.
10	The bidder should not have been blacklisted by any State/Central Government / Government Department/Ministry/State/District/PSU etc. in India for corrupt, fraudulent or any other unethical business practices or for any other reason.	A notarized affidavit certificate on the Bidder's Letter head stating that not been blacklisted by any State/Central Government /Government Department/ Ministry/State/District/PSU etc. in India for corrupt, fraudulent or any other unethical business practices or for any

		other reason must be submitted along with technical bid.
11	Consortium and Subletting is not allowed at any stage.	Declaration on Bidders Letter Head
12	The bidder should have presence in Jharkhand state. or A commitment from the bidder that they will open their office & Set up Support Service in Jharkhand within 30 days of the work allotment.	Details of the bidder's existing Or A commitment letter on company's letter head regarding opening of their office & Setting up their Service Support in Jharkhand within 30 days of the work allotment.

b. OEM Eligibility Criteria:

S No.	OEM Criteria
CCTV	
1	Bidder shall ensure compliance to the Office Memorandum for insertion of Rule 144 (xi) in the General Finance Rules (GFR)-2017 bearing reference number F.No. 6/18/2019-PPD dated 23 July 2020 or latest, by the Public Procurement Division, Department of Expenditure, Ministry of Finance. Non-compliant bid(s) will be summarily rejected
2	CCTV OEM should have direct Manufacturing in India from last 10 years. (not as joint venture, partnership firms or through any association) and R&D unit registered with Department of Scientific and Industrial Research (DSIR) in India. OEM should submit Manufacturing and DSIR certificates.
3	CCTV OEM should have full member of ONVIF Website https://www.onvif.org/conformant-products/
4	OEM should not be blacklisted or barred by any Ministry of Government of India or globally or any of the Government / PSUs or any other government department at the time of bidding. The OEM should not have any common directors who are also on the board of blacklisted companies
5	CCTV OEM should have ISO 9001, 14001, 20000, 27001, 45001, ISO/IEC 27032:2012 (Cyber Security), 39001, ISO 50001:2018, WEEE.
6	The bidders are required to make sure that the offered products are in compliance with OM No. No. IV-24011/22/2020-Prov-I/270 dated 26.04.2024 of Ministry of Home Affairs, Govt of India forwarding thereby MeitY's communications regarding CCTVs. This includes the followings: (i) Gazette Notification dated 06 March, 2024 on the amendments to Public Procurement Order (PPO)-2017 for CCTV/ Video Surveillance Systems for Security, Ministry of Electronics and Information Technology (IPHW DIVISION), Camera should be Cyber Security Certified by STQC ER.

7	CCTV OEM should be GDPR Complaint (certificate to be attached) and have supplied minimum 1,00,00 no.s of IP Cameras in last 05 years to any state Govt/central Govt./Public sector in India undertaking should be provided by bidder in this regard
Server and Storage	
8	BIS certificate for the specific quoted model to be submitted.
9	Country of Origin of the quoted server must be India. This must be verifiable physically & through documentary evidence. Binding declaration from the OEM for the same must be submitted.
10	Product datasheets, certification, benchmark or references verifiable from publicly available data sources must be submitted along with bill of material. Links for certifications to be submitted.

Note: Bidders are advised to prepare the technical bid and mark the page numbers in submitted documents and mention the same in the INDEX as per **Annexure-III**.

8. Financial Bid:

Financial Bid to be submitted in separate envelope mark as "Financial Bid" as per **Annexure-IV**.

9. Security Deposit:

1. Within fifteen (15) days of the award of Work order/Purchase order, the vendor shall furnish a security deposit amounting to 3 % of the purchase order value in the form of Bank Guarantee favoring the Jharkhand Public Service Commission, Ranchi. The security deposit should be valid for 36 Month.
2. All Bank details like Name, address, phone/fax No., e-mail etc. should be mentioned clearly.
3. The security deposit will be forfeited in the case of non-execution of the order and non-compliance of the terms and conditions provided in the tender document.

10. Payment Terms

- a) The offer should include the cost of equipment and all required accessories inclusive of all taxes and statutory levies. Labor/ installation charges if any should be mentioned separately (inclusive of taxes livable on them).
- b) Bidders shall indicate their rates in clear/visible figures as well as in words and shall not alter/overwrite/make cutting in the quotation. In case of a mismatch, the rates written in words will prevail.
- c) Discount, if any, should be indicated prominently.
- d) 100% Payment will be made after delivery, installation and Go-Live of their scope mentioned in respective work/purchase order.
- e) Payment will be made after deduction of I. Tax, TDS and GST, TDS as per applicable rule.

11. TERMS & CONDITIONS OF CONTRACT

1. Notification of award

- a. Notification to Bidder - Before the expiry of the period of validity of the proposal, LoI will be issued to the successful bidder. The Bidder shall send his acceptance to enter into an agreement along with PBG within 15 working days of receiving the notification.
- b. Signing of Contract - Within 20 days of receipt of the notification, the successful Bidder shall sign the Contract.
- c. Expenses for the Contract - The incidental expenses of execution of agreement/contract shall be borne by the successful bidder.
- d. Forfeiture of Bid Security - On non-submission of PBG or failure to successfully sign the agreement, the bid security of the successful bidder will be forfeited.

2. Performance Bank Guarantee (PBG) and Execution of Agreement

- a. Successful Bidder will be issued LoI after being declared L1.
- b. After acknowledgement of the LoI by the selected bidder, a Performance Bank Guarantee (PBG) of 3% of contract value has to be deposited within 15 working days in the form of Bank Guarantee (BG) of any nationalized /Scheduled Bank in the name of Jharkhand Public Service Commission, Ranchi, with validity period of six months beyond the contract period.
- c. The performance bank guarantee shall be released without any interest after the completion of service/obligation with regard to the issued work order, subject to conditions and recoveries as per the agreement, if any.
- d. This PBG may be forfeited in case of non-compliance with the terms and conditions of the contract.

3. Earnest Money Deposit (EMD) Return and Forfeit

- a) **EMD without any interest accrued will be refunded in any of the following eventual situations: -**
 1. In case of non-selected Bidders, EMD will be refunded without any interest accrued on finalization of the bidding process.
 2. The EMD of the successful bidder will be refunded on submission of Performance Bank Guarantee after signing of contract/Agreement.
- b) **Earnest Money Deposit and/or Performance Bank Guarantee may be forfeited if a Bidder:**

1. Withdraws its bid during the period of bid validity.
2. Does not accept, and / or violates the tender terms and conditions of the contract after submission of the bid.
3. Fails to sign the contract within the stipulated time frame.
4. After the signing of the contract, if the selected System Integrator (SI) fails to accept the work orders, Performance Bank Guarantee (PBG) will be forfeited.

4. Corrupt or Fraudulent Practices

1. The Tendering Authority requires that the Bidders under this tender observe the highest standards of ethics during the procurement and execution of such contracts. In pursuance of this policy, the Tendering Authority:
 - a. Defines for the purposes of this provision, the terms set forth as follows:
 1. "Corrupt practice" means the offering, giving, receiving or soliciting of anything of value to influence the action of the public official in the procurement process or in contract execution; and
 2. "Fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or an execution of a contract to the detriment of the Tendering Authority, and includes collusive practice among Bidders (prior to or after bid submission) designed to establish bid prices at artificial non- competitive levels and to deprive the Tendering Authority of the benefits of the free and open competition.
 - b. The tendering Authority will reject a proposal for award if it determines that the Bidder recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question.
 - c. The tendering Authority will declare a firm ineligible, either indefinitely or for a stated period of time, if it at any time determines that the firm has engaged in corrupt and fraudulent practices in competing for, or in executing, a contract.
 - d. The past performance of the Bidder will be crosschecked if necessary. If the facts are proven to be dubious, the Bidders tender will be ineligible for further processing.

5. Interpretation of the clauses in the Tender Document / Contract Document

- a. In case of any ambiguity in the interpretation of any of the clauses in the Tender Document or the Contract Document, the Tendering Authority's interpretation of the clauses shall be final and binding on all parties.

6. Decision Taken

The decision taken by the Tender Committee in the process of Tender evaluation will be full and final.

7. Right to vary the scope of the work at the time of Award/issuing of work order

The tendering authority reserves its right to make changes to the scope of the work/quantity of items at the time of execution of the Agreement/issuing of the work order.

8. Delays in the Successful Bidder/SI performance

- I. Performance of the Contract shall be made by the successful Bidder/SI in accordance with

the service level agreement as indicated in the tender document.

- II. Any delay by the Bidder in the performance of its contract obligations shall render the Bidder liable to any or all of the following sanctions:
 - a. Penalty as per SLA
 - b. Forfeiture of its performance Bank Guarantee
 - c. Termination of the contract for default
 - d. Blacklisting

9. Force Majeure

- i. Neither party shall be responsible to the other for any delay or failure in performance of its obligations due to any occurrence commonly known as Force Majeure which is beyond the control of any parties, including, but without limited to, flood, explosion, lightening, thundering, acts of God or any Governmental body, public disorder, riots, embargoes, or strikes, acts of military authority, epidemics, lockouts or other labour disputes, insurrections, civil commotion, war, enemy actions.
- ii. If a Force Majeure arises, the Bidder shall promptly notify GoJ in writing of such condition and the cause thereof. Unless otherwise directly by GoJ, the bidder shall continue to perform his obligations under the contract as far as is reasonably practical and shall seek all reasonable alternative means for performance not prevented by Force Majeure event.
- iii. The bidder shall be excused from performance of his obligations in whole or in part as long as such cases, circumstances or events shall continue to prevent or delay such performance. Neither party shall have any liability to the other party in respect of the termination of this contract as a result of an event of Force Majeure. System Integrator shall be paid for supply and services till the last date of termination in case of force majeure.

10. Intellectual Property Rights

All Intellectual Property Rights for the work performed under this RFP as far as data is concerned shall lie with the concerned court. This clause is applicable to all data in any form or format designed and developed under this RFP by the bidder. The bidder shall not use such data for any other purpose during and after the terms of the contract.

11. Termination of Contract

- i. **Termination on Default**
 - a) JPSC reserves the right to cancel the order(s) and to terminate the contract in the event of short performance or non-performance by the Selected System Integrator (SI).
 - b) JPSC may without prejudice to any other remedy for breach of contract, by written notice of default with a notice period of 15 days, sent to the selected System Integrator (SI), to terminate the contract in whole or part, (i) if the System Integrator (SI) fails to deliver any goods/service within the time period(s) specified in the Contract, or fails to supply the items as per the Delivery Schedule or within extension period, if any thereof granted by JPSC; or (ii) if the System Integrator (SI) fails to perform any of the obligation(s) under the contract; or (iii) if the System Integrator, in the judgment of JPSC, has engaged in fraudulent and corrupt practices in competing for or in executing the Contract, may terminate the contract in whole or part and forfeiture of performance Bank Guarantee (PBG).
 - c) System Integrator will be blacklisted if the contract is terminated due to breach of contract and forfeiture of the performance Bank Guarantee (PBG).
- ii. **Termination for Insolvency**

JPSC may at any time terminate the Contract by giving written notice with a notice period of 15 days to the selected System Integrator (SI), if the System Integrator (SI) becomes bankrupt

or otherwise insolvent. In such an event, termination will be without compensation to the System Integrator provided that such termination will not prejudice or affect any right of action or remedy that has accrued or will accrue thereafter to JPSC.

iii. Termination for Convenience

JPSC may by written notice, with a notice period of 30 days sent to the System Integrator (SI), may terminate the Contract, in whole or in part, at any time for its convenience. The notice of termination shall specify that termination is for JPSC convenience, the extent to which performance of work under the Contract is terminated, and the date upon which such termination becomes effective. On termination, the selected System Integrator (SI) is not entitled to any compensation whatsoever.

12. Exit Management

i. Preamble

- a. The word 'parties' procuring entity include and selected the bidder.
- b. This Schedule sets out the provisions, that will apply on expiry or termination of the Project Implementation and Operations and Management of SLA.
- c. In the case of termination of the Project Implementation and/ or Operation and Management SLA due to illegality, the Parties shall agree at that time whether, and if so during what period, the provisions of this Schedule shall apply.
- d. The Parties shall ensure that their respective associated entities carry out their respective obligations set out in this Exit Management Schedule.

ii. Transfer of Assets

- a. The selected bidder may continue work on the assets for the duration of the exit management period which may be a 60 day period from the date of expiry or termination of the agreement, if required by JPSC to do so. During this period, the selected bidder will transfer all the assets in good working condition and as per the specifications of the bidding document including the ones being upgraded to the department/ designated agency. The security deposit/ performance security submitted by the selected bidder will only be returned after the successful transfer of the entire project including its infrastructure (if any).
- b. The selected System Integrator, if not already done, will transfer all the Software Licenses under the name of the concerned court as desired by the procuring entity during the exit management period.

- iii. JPSC during the project implementation phase and the operation and management phase shall be entitled to serve notice in writing to the selected bidder at any time during the exit management period requiring the selected bidder to provide JPSC or its nominated agencies with a complete and up-to-date list of the assets within 30 days of such notice.

iv. Upon service of a notice, as mentioned above, the following provisions shall apply:

- a) In the event, if the assets which to be transferred to JPSC mortgaged to any financial institutions by the selected bidder, the selected bidder shall ensure that all such liens and liabilities have been cleared beyond any doubt, prior to such transfer. All documents regarding the discharge of such lien and liabilities shall be furnished to JPSC or its nominated agencies.
- b) All title of the assets to be transferred to JPSC or its nominated agencies pursuant to

- clause(s) above shall be transferred on the last day of the exit management period. All expenses occurred during transfer of assets shall be borne by the selected bidder.
- c) That on the expiry of this clause, the selected bidder and any individual assigned for the performance of the services under this clause shall handover or cause to be handed over all confidential information and all other related material in its possession, including the entire established infrastructure (if any) supplied by selected bidder to JPSC.
 - d) That the products and technology delivered to JPSC during the contract term or on expiry of the contract duration should not be sold or re-used or copied or transferred by selected bidder to other locations apart from the locations mentioned in this bidding document without prior written notice and approval of JPSC. Supplied hardware (if any), software & documents etc., used by selected bidder for JPSC shall be the legal properties of JPSC.
- v. Cooperation and Provision of Information during the exit management period
- a. The selected bidder will allow JPSC or its nominated agencies access to the information reasonably required to define the current mode of operation associated with the provision of the services to enable JPSC or its nominated agencies to assess the existing services being delivered.
 - b. The selected System Integrator shall provide access to copies of all information held or controlled by them which they have prepared or maintained in accordance with the Project Implementation, the Operation and Management SLA and SOWs relating to any material aspect of the services provided by the selected bidder. JPSC shall be entitled to copy all such information comprising of details pertaining to the services rendered and other performance data. The selected bidder shall permit JPSC or any replacement operator to have reasonable access to its employees and facilities as reasonably required by JPSC agencies to understand the methods of delivery of the services employed by the selected bidder and to assist appropriate knowledge transfer.

13. Confidential Information, Security and Data

The selected bidder will promptly on the commencement of the exit management period supply to JPSC or its nominated agencies the following:

- a. Documentation relating to Intellectual Property Rights
- b. Project related data and confidential information.
- c. All current and updated data as is reasonably required for purposes of JPSC or its nominated agencies transitioning the services to its replacement selected bidder in a readily available format nominated by JPSC or its nominated agencies; and
- d. All other information (including but not limited to documents, records and agreements) relating to the services reasonably necessary to enable JPSC or its nominated agencies, or its replacement operator to carry out due diligence in order to transition the provision of the services to JPSC or its nominated agencies, or its replacement operator (as the case may be).
- e. Before the expiry of the exit management period, the selected bidder shall deliver to JPSC or its nominated agencies all new or up-dated materials from the categories set out above and shall not retain any copies thereof, except that the selected bidder shall be permitted to retain one copy of such materials for archival purposes only.

14. Transfer of certain agreements

- a. On request by Procuring entity or its nominated agencies, the selected bidder shall effect such assignments, transfers, innovations, licenses and sub-licenses as Procuring entity or its nominated agencies may require in favor of procuring entity or its nominated

agencies, or its replacement operator in relation to any equipment lease, maintenance or service provision agreement between selected bidder and third party leaders, operators, or operator, and which are related to the services and reasonably necessary for carrying out of the replacement services by JPSC or its nominated agencies, or its replacement operator.

- b. Right of Access to Premises: At any time during the exit management period and for such period of time following termination or expiry of the SLA, where assets are located at the selected bidder's premises give reasonable rights of access to (or, in the case of assets located on a third party's premises, procure reasonable rights of access to) JPSC or its nominated agencies, and/ or any replacement operator in order to inventory the assets.

15. General Obligations of the selected bidder

- a. The selected bidder shall provide all such information as may reasonably be necessary to effect as seamless during handover as practicable in the circumstances to JPSC or its nominated agencies or its replacement operator and which the operator has in its possession or control at any time during the exit management period.
- b. The selected bidder shall commit adequate resources to comply with its obligations under this Exit Management Clause.

16. Exit Management Plan

- a. The selected bidder shall provide JPSC or its nominated agencies with a recommended exit management plan ("Exit Management Plan") which shall deal with at least the following aspects of exit management in relation to the SLA as a whole and in relation to the Project Implementation, the Operation and Management SLA and SOWs
- b. A detailed program of the transfer process that could be used in conjunction with a replacement operator including details of the means to be used to ensure continuing provision of the services throughout the transfer process or until the cessation of the services and of the management structure to be used during the transfer; and
- c. Plans for the communication with such of the selected bidder's, staff, suppliers, customers and any related third party as are necessary to avoid any material detrimental impact on JPSC operations as a result of undertaking the transfer; and
- d. If applicable, proposed arrangements and Plans for the provision of contingent support in terms of business continuance and hand holding during the transition period, to JPSC or its nominated agencies, and Replacement Operator for a reasonable period, so that the services provided continue and do not come to a halt.
- e. The selected Bidder shall re-draft the Exit Management Plan annually after the signing of the contract to ensure that it is kept relevant and up to date.
- f. Each Exit Management Plan shall be presented by the selected bidder to and approved by JPSC or its nominated agencies.
- g. In the event of termination or expiry of SLA, Project Implementation, Operation and Management SLA or SOWs each party shall comply with the Exit Management Plan.
- h. During the exit management period, the selected bidder shall use its best efforts to deliver the services.
- i. Payments during the Exit Management period shall be made in accordance with the Terms of Payment Clause.

17. Training, hand-holding and knowledge transfer

- a. The selected bidder shall hold technical knowledge transfer sessions with

- designated technical team of JPSC in the last 3 months of the project duration.
- b. The selected bidder shall hold operational hand-holding sessions with the designated officers / staff members.

18. Taxes and Duties

The rates quoted shall be in Indian Rupees exclusive of Taxes. Any taxes and duties will be as applicable during the currency of Contract/Agreement.

19. Binding Clause

All decisions taken by The Tendering Authority regarding the processing of this tender and award of contract shall be final and binding on all concerned parties.

The Decision regarding acceptance of Tender by the Tendering Authority will be full and final.

20. Conditional tenders shall be summarily rejected.

21. The Tendering Authority is free to phase out the work if it feels it is necessary
22. The selected SI should be in a condition to fulfill the repeat orders, if asked to do so.
23. JPSC also reserves the right to suspend the entire tendering process at any point of time without assigning any reason whatsoever.

12. Annexure – I, Technical Specification:

Annexure - I Technical Specification

(1) 4MP Bullet Camera

Make :

Model :

S No.	Specifications	Features	Complied (Yes / No)
1	Image sensor	1/2.8", 4MP Low Illumination Progressive Scan CMOS Sensor	
2	Effective Pixels	2560(H)X1440(V)	
3	Min. Illumination	Color: 0.001Lux @ (F1.2, AGC ON), 0.014 Lux @ (F1.4, AGC ON), 0 Lux with IR	
4	S/N Ratio	≥58dB (AGC OFF)	
5	IR Distance	30Mtr	
6	Shutter Speed	(1/1 sec ~ 1/100,000 sec Adjustable)	
7	WDR	Up to 120 dB	
8	Lens Type	3.6mm	
9	Resolution	4MP	
10	Streams	Mainstream: 4MP(2560x1440)/ 1080P(1920x1080)@25/30fps With H.265 Sub Stream: 720P(1280x720)@25/30fps With H.265 Third Stream: VGA(640x480)@15fps With H.265 Fourth Stream: VGA(640x480)@15fps With H.265	
11	Frame Rate	1~ 30fps	
12	White Balance	Auto, Manual, Warm light, Natural light, Incandescent lamp, fluorescent lamp, Locked WB	
13	Gain Control	Low, MID-Low, MID, MID- HIGH, High	
14	Motion Detection	Yes	
15	Temper Detection	Yes	
16	Compression	G.711U/A	
17	Audio Bit Rate	8 – 64 Kbps	
18	Network Port	RJ45 10M, 100M Network Self Adjustable	
19	Protocol	TCP/IP, IPv4, IPv6, SSL, TLS, UDP, HTTP/HTTPS, HTTP-Base64, HTTP-Digest, DHCP, DNS, RTP, RTSPS, RTCP, ICMP, NTP, SMTP, IGMP, Multicast	
20	System Compatibility	ONVIF Profile S, G & T	
21	Max. User Access	20 Users	
22	General Function	User Authentication, Watermark, IP address filtering	

23	Security Features	Authorized username and password, HTTPS with password, HTTPS digest authentication, Watermark, RTSPS, AES 256 encryption, SHA256 and RSA2048, OTP, Signed Firmware, Firmware Anti-rollback, TEE (Trusted Execution Environment), TRNG, User Authentication, and encrypted firmware, Hardware Secure Boot	
24	ANR	Support	
25	SD Card Supported	Up to 2 TB	
26	Operating Conditions	-40 °C ~ 70 °C Humidity 95%	
27	Ingress Protection	IP67 Compliant & IK10	
28	Power Consumption	<12W	
29	Certification	CE,FCC,BiS, RoHS,Cyber Secured By STQC.	
30	Warranty	3 Years	

(2) 4MP Dome Camera

Make :

Model :

S No.	Specifications	Features	Complied (Yes / No)
1	Image sensor	1/2.8", 4MP Low Illumination Progressive Scan CMOS Sensor	
2	Effective Pixels	2560(H)X1440(V)	
3	Min. Illumination	Color: 0.001Lux @ (F1.2, AGC ON), 0.014 Lux @ (F1.4, AGC ON), 0 Lux with IR	
4	S/N Ratio	≥58dB (AGC OFF)	
5	IR Distance	30Mtr	
6	Shutter Speed	(1/1 sec ~ 1/100,000 sec Adjustable)	
7	WDR	Up to 120 dB	
8	Lens Type	3.6mm	
9	Resolution	4MP	
10	Streams	Mainstream: 4MP(2560x1440)/ 1080P(1920x1080)@25/30fps With H.265 Sub Stream: 720P(1280x720)@25/30fps With H.265 Third Stream: VGA(640x480)@15fps With H.265 Fourth Stream: VGA(640x480)@15fps With H.265	
11	Frame Rate	1~ 30fps	
12	White Balance	Auto, Manual, Warm light, Natural light, Incandescent lamp, fluorescent lamp, Locked WB	
13	Gain Control	Low, MID-Low, MID, MID- HIGH, High	
14	Motion Detection	Yes	
15	Temper Detection	Yes	
16	Compression	G.711U/A	
17	Audio Bit Rate	8 – 64 Kbps	

18	Network Port	RJ45 10M, 100M Network Self Adjustable	
19	Protocol	TCP/IP, IPv4, IPv6, SSL, TLS, UDP, HTTP/HTTPS, HTTP-Base64, HTTP-Digest, DHCP, DNS, RTP, RTSPS, RTCP, ICMP, NTP, SMTP, IGMP, Multicast	
20	System Compatibility	ONVIF Profile S, G & T	
21	Max. User Access	20 Users	
22	General Function	User Authentication, Watermark, IP address filtering	
23	Security Features	Authorized username and password, HTTPS with password, HTTPS digest authentication, Watermark, RTSPS, AES 256 encryption, SHA256 and RSA2048, OTP, Signed Firmware, Firmware Anti-rollback, TEE (Trusted Execution Environment), TRNG, User Authentication, and encrypted firmware, Hardware Secure Boot	
24	ANR	Support	
25	SD Card Supported	Up to 2 TB	
26	Operating Conditions	-40 °C ~ 70 °C Humidity 95%	
27	Ingress Protection	IP67 Compliant & IK10	
28	Power Consumption	<12W	
29	Certification	CE,FCC,BiS, RoHS,Cyber Secured By STQC.	
30	Warranty	3 Years	

(3) PTZ Camera

Make :

Model :

SNo.	Specifications	Features	Compliance (Yes / No)
1	Image sensor	1/2.8" Progressive SCAN CMOS Sensor	
2	Min. illumination	Colour: 0.001Lux@F1.6; B/W: 0.0001Lux@F1.6, 0 Lux at IR ON	
3	Resolution	1920(H)x1080(V)	
4	Optical zoom	30X Optical Zoom Lens	
5	Digital zoom	16X	
6	Focal length	4.5mm~135mm	
7	S/Nratio	> 58dB	
8	Electronic shutter	(normal: 1/1 ~ 1/30000s; illumination mode: 1/5 ~ 1/30,000s)	
9	Autoslow shutter	On/Off	
10	Gain control	Lower/Low/Middle/High/Higher	
11	BLC	On/Off	
12	Streaming	Mainstream: 1080P(1920x1080)@25/30fps With H.265 Sub Stream: 720P(1280x720)@25/30fps With H.265 Third Stream: VGA(640x480)@15fps With H.265 Fourth Stream: VGA(640x480)@15fps With H.265	
13	Output format	PAL/NTSC adjustable	
14	Audio compression	G.711U and G.711A	

	Pan/Tilt range	Pan: 0° ~ 360° endless; Tilt: 185° (-5° ~ 180°)	
15	Manual Control Speed	Pan: 0.1° ~ 350° /s; Tilt: 0.1° ~ 350° /s	
16	Preset speed	400°/s	
17	Preset accuracy	±0.1°	
18	Preset	300	
19	PTZ watch	Off/Preset/Cruise/Pattern	
20	Auto flip	Mechanical Flip	
21	Power off memory	Support	
22	IR distance	250M	
23	Network protocol	TCP/UDP, IPv4, IPv6, SSL, TLS, HTTP, HTTPS, HTTP-Base64, HTTP-Digest, DHCP, DNS, RTP, RTSP, RTSPS, RTCP, ICMP, NTP, SMTP, IGMP, SNMP (V1, V2, V3), Multicast	
24	Access protocol	ONVIF Profile S, ONVIF Profile G, ONVIF Profile T, PSIA, CGI	
25	Discovery Interface	ONVIF, Tool to Detect & Configure Device	
26	Web Server	Internal Web Server	
27	Max. User Access	20 Users	
28	Streaming	Unicast/Multicast	
29	Security Mode	Authorized username and password, HTTPS with password, HTTPS digest authentication, Memory Protection controls, Watermark, RTSPS, AES 256 encryption, SHA256 and RSA2048, OTP, Signed Firmware, Firmware encryption, Firmware Antirollback, TEE (Trusted Execution Environment), TRNG, User Authentication, and encrypted firmware, Hardware Secure Boot, security logs; IP/MAC filtering; generation and importing of X.509 certification; syslog	
30	Audio	1CH input/1CH output, monitoring or bidirectional talk	
31	Alarm Input	2 CH inputs	
32	Alarm Output	1CH output, support alarm linkage	
33	SD card	Support Max 1TB	
34	Protection Level	IP67 Compliant, IK10 Compliant, TVS 6,000V Lightning Protection, Surge Protection and Voltage Transient Protection	
35	Operating Temperature/ Humidity	-50°C ~ 70°C (-40°F ~ +158°F) / 10–95% RH	
36	Power supply	DC24V/1.5A (±10%)	
37	POE	PoE+ (802.3at)	
38	Certification	CE, FCC, BIS, STQC ER certificate	

(4) VMS (Video Management System)**Make :****Model :**

Sl.No	Minimum Specification	Compliance (Yes / No)
1	<p>Licensing, Scalability & Compliance</p> <p>Licensing Type - Perpetual, central & multi-server/multi-client</p> <p>Clients Supported - Unlimited</p> <p>Cyber security Compliance - AES-128/256 encryption, Two-factor authentication, CIAM Oauth (Apple, Google, Microsoft,</p> <p>Multi-Monitor Instant Playback support for 'Go to Playback' button send to Playback</p> <p>Snapshot Export</p> <p>Map Support: eMaps, Geo-Maps (Linked Mobile GPS Meta Data), Visual Indicators, Action Links, Visual Camera Marker Live Preview pop-up</p> <p>Playback speed controls: regular, slow and fast (Up to 8x speed)</p> <p>Search by Single Channel, Tag, Date/Time, Person's Name, Image (Browse to Image, Send from Playback)</p> <p>Search by text entry, Date/Time</p> <p>Video Analytics: Computational Neural Network Engine (CNNE) offering server side support for Nvidia GPU (CUDA)</p> <p>Video Analytics Support: Server, Edge, Meta Data (Device Specific Support)</p> <p>Virtual Machine Environment support</p> <p>Encryption: Server/Client Communications 128-bit and 256-bit AES encryption</p> <p>NAS Support: Network & Remote Storage</p> <p>NTP Server support. Ability to synchronize Windows time settings</p> <p>Password Protection: Proprietary Archive</p> <p>RTSP/SMTP/NTP/RTP</p> <p>Server Side Multi-Cast Support</p> <p>Web & Mobile Client Connections Supported</p> <p>AI Box: Event notification upon AI event action</p> <p>Analogue PTZ protocols (via RS-232,422,485 ports</p> <p>Video Wall Group: Group Selection of Video Walls</p> <p>Video Wall Management Assignable to Recording Server</p> <p>MQTT Certificate supported</p>	
2	<p>System Architecture & Client Features</p> <p>1 Interface & Display Functions</p> <ul style="list-style-type: none"> ● Multi-monitor support (no hardware limit) ● Supports video wall configurations (up to 100 channels per screen) ● GPU hardware decoding for H.264 & H.265 ● Automatic stream selection for archive playback ● Multi-window layout support from 1×1 to 20×5 	

	<p>3.2 Search & Navigation Tools</p> <ul style="list-style-type: none"> ● Smart search by metadata, event type, text, or time ● Instant playback and time-based video jump ● Map and geo-map representation with live preview pop-up ● Advanced bookmarks with severity tagging 	
	<p>3.3 Export Capabilities</p> <ul style="list-style-type: none"> ● Export single/multi-channel video ● Metadata overlay support ● Export formats: JPEG, VP8, and proprietary encrypted archive ● Motion blur export for identity protection ● Export to PDF, CSV, MP4, and portable archive player 	
3	<p>Recording and Media Management</p> <p>Multi-stream recording- Yes – Primary/Substream/Supplementary</p> <p>Edge recording sync -Yes – ONVIF profile G supported</p> <p>Archive redundancy -Yes – multi-device replication</p> <p>Recording profiles - Continuous, Motion-Triggered, Scheduled</p> <p>Storage Architecture- Server local, LAN/NAS, external share, cloud optional</p> <p>Additional features include</p> <ul style="list-style-type: none"> ● Failover clustering (1:1 and 1:Many) ● Automated backup scheduling ● Archive search with calendar and metadata filters 	
4	<p>Integration Protocols and Device Support</p> <ul style="list-style-type: none"> ● ONVIF Profile S & G compliance ● RTSP / HTTP(S) / SMTP / NTP / RTP streaming compatibility ● Integration support for >140 camera manufacturers ● RS485, PTZ control protocols, and joystick control support ● Individual Mobile to be attached over VMS and can be used as body worn camera 	
5	<p>Security and Authentication Framework</p> <ul style="list-style-type: none"> ● Two-factor authentication (Email/SMS) ● OAuth & SSO support with Microsoft, Apple, Google, Okta ● Complex password policy support ● Full audit log with event tracking (server, user, resource, device) ● Communication encryption using AES-128/256 ● Dedicated cybersecurity dashboard with exportable reports 	
6	<p>Video Analytics (AI-Enabled)</p>	

	<p>1 Server-Side Analytics Capabilities</p> <ul style="list-style-type: none"> ● CNN-based (Computational Neural Network Engine) analytics ● AI metadata support for live and playback display ● Analytics categories include: <ul style="list-style-type: none"> ● Intrusion Detection ● Loitering Detection ● People Counting ● Vehicle Counting ● Zone Counting ● Multi Zone Counting ● Virtual Fence-Stopping ● Stay & Go <ul style="list-style-type: none"> ● Enter/Exit Detection ● Face recognition (top 10 NIST rated performance software) ● People tracking through clothes ● Occupancy Counting ● Occupancy Car Counting 	
7	<p>AI Edge Hardware – AI Box Support</p> <p>Input Channels - 8ch modes</p> <p>Input Resolution - Up to 4K @ 60fps</p> <p>Video Format- H.264 / H.265</p> <p>Output - Annotated RTSP (8ch mode)</p> <p>Integration Protocol - ONVIF, RTSP, RTSP over HTTPS</p> <p>Analytics Packs - STD (Intrusion, Heatmap, Counting), PRO (Crowd, Threat, Fall)</p> <p>Add-on Modules - LPR, PPE Detection, Illegal Dumping, Violence Detection, PTZ Auto-Tracking</p> <p>Certificate - CE, FCC, KC, UKCA</p>	
8	<p>Alerts, Rules & Event Actions</p> <p>The platform supports conditional rule-based automation, including:</p> <ul style="list-style-type: none"> ● Trigger actions: email, SMS, pop-up, HTTP push, alarm relay ● Event response actions: PTZ auto-focus, stream switching ● Intelligent queue-based alarm review panel ● Mobile and web event notifications 	
9	<p>Client & Mobile Access</p> <ul style="list-style-type: none"> ● Web client (Chrome & Firefox supported) ● Mobile app (Android, Android TV, iOS, iPadOS) ● Features include: <ul style="list-style-type: none"> ○ Two-way audio ○ PTZ control ○ Cloud sync bookmarks ○ Remote playback and live analytics streaming 	

(5) Professional Large Format Display (55 inch or above)

Make :		Model :	
Sl. no	Features	Specifications	Compliance (Y/N)
1	Make :	Model:	
2	Screen Size	55 Inch or Higher LED Back Lit.	
3	Panel Technology	IPS	
4	Native Resolution	3840 x 2160 (UHD)	
5	Brightness	300 cd/m2	
6	Contrast Ratio	1,100 : 1 or more	
7	Dynamic CR	500,000 : 1 or higher	
8	Orientation	Landscape	
9	Viewing Angle(H x V)	178 x 178	
10	Operation Hours	16 Hrs	
11	Connectivity		
12	Input Ports		
3	Digital	HDMI(3),	
14	External Control	RS232C(1), RJ45(1)	
15	USB	USB x 1	
16	Output Ports		
17	Digital	Optical /Digital out -1	
18	Audio Power	20W(10W x 2)	
19	Additional feature	Inbuilt : Wi-Fi, Screen Sharing feature, Web Link, Built in Signage Media Player, Signage software from the same OEM as display	
20	Power Supply	100 – 240 V, 50/60 Hz	
21	Certifications(Safety/EMC/E RP)	BIS,CE,FCC	
22	Warranty	3 years	
23	Wall mount	Required	

(6) 24 Port Layer 2 Switch

Make :		Model :	
SI No	Specification		Compliance (Yes/No)
1	Physical Ports	24 x 10/100/1000 Mbps Rj45 PoE+	
		Ethernet Ports with 2 Gig combo ports (RJ45/SFP) and 2 x Gig SFP Ports.	
2	Management Interface	1xRJ45 Console port	
3	LED Indicators	Power, Link/Act, PoE	
4	Switching Capacity	56 Gbps	
5	Forwarding Capacity	41.7 Mpps	
6	CPU	500 Mhz	
7	Flash	16 MB	
8	DRAM	128 MB	
9	Packet buffer memory	4.1Mbit	
10	Operating Humidity	5 to 95% Non-condensing	
11	Temperature	0°C -40°C	
12	Power supply	AC Power 100-240VAC, 50/60Hz and 6Kv input Surge Protector	
13	Forwarding Mode	Store and Forward	
14	MAC Address Table : 8K	8k	
15	Max. Jumbo Frame size	16k	
16	VLAN Quantity	4k	
17	ACL Table	512	
18	L3 Interface	32	
19	Port Queues	8	
20	PoE Budget	270 Watt and standard compliant IEEE802.3af, IEEE802.3at	
21	L2 Features	Switch should support Auto-Negotiation for port speed	
		and duplex mode	
		Switch should support Flow Control, Support IEEE802.3x, full-duplex and half-duplex, backpressure	
		Switch should support Storm Control, broadcast, multicast and DLF package rate limit	
		Switch should support Port Mirroring & Rate Limit	
		Switch should support Link Aggregation, Up to 8 maximum aggregation groups	

		Aggregation Strategy: Source/Destination MAC / Source Destination MAC Source/ Destination IP / Source Destination IP	
		Switch should support Port Protection and Port Loop Detection	
		Switch should support EAPS Protocol, ERPS Protocol	
		Switch should support LLDP Protocol, UDLD Protocol	
		Switch should support STP / RSTP / MSTP	
		Switch should support Loopback Detection, BPDU Filter, BPDU Guard	
22	Multicast	Switch should support Static multicast MAC address, IGMP Snooping, IGMP Querier IGMP Proxy, MVR, GMRP	
23	MAC Configuration	Switch should support IVL transfer Mode, Static MAC Address, MAC binding, MAC Address Filter	
24	VLAN Configuration	Switch should support VLAN Based on 802.1Q	
		Switch should support IP-Based VLAN, MAC-Based VLAN, Protocol-Based VLAN	
		Switch should support Voice VLAN, Guest VLAN and Private VLAN	
		Switch should support 1:1 VLAN Mapping and Double VLAN Markup: basic QinQ	
25	Access Control List (ACL)	Switch should support Based on Standard IP/ Extend IP/MAC IP/ MAC ARP, Based on time and Port Filtering	
26	QoS Features	Switch should support Scheduling Mode: WRR, SP, WFQ. QoS features Based on Port and Based on 802.1p	
		Switch should support DSCP(DiffServ)	
		Switch should support COS and DSCP	
27	Security	Switch should support IP and MAC ACL, 802.1x, RADIUS, AAA	
		Switch should support MAC-based 802.1X authentication	
		Switch should support Support 802.1x guest VLAN	
		Switch should support MAC Address binding	
		Switch should support Broadcast storm control	

		Switch should support Port Security, Protected Port	
		Switch should support Prevent ARP Spoofing	
28	IPv6 features	Switch should support ICMPv6, IPV6 Neighbor Discovery, IPv6 MLD Snooping and IPV6 Telnet	
29	Management	Switch should support CLI/ WEB/ SNMP Management	
		Switch should support multi-user Management	
		Switch should support TACACS+, RADIUS, AAA	
		Switch should support Configuration Download/Upload	
		Switch should support Upgrade Firmware	
		Switch should support Timer Management	
		Switch should support OAM: Support 802.3ah and Support 802.1ag	
		Switch should support DHCP Server/Client	
		Switch should support Log Management	
		Switch should support RMON 1,2,3,9	
30	Regulatory compliance	1. The product must be " Make in India ". The OEM must be operation in India for a minimum of 25 years and should have over 5 years of experience in manufacturing networking equipment.	
		2. The OEM must possess a valid GST number and a trade license for the Eastern Region.	
		3. The OEM must have a service center and a local representative in the state of the end customer to ensure a quick response.	
		4. The OEM must hold valid certifications for ISO 9001:2015, ISO 14001:2015, ISO 27001:2022 and ISO 45001:2018 .	
		5. The OEM's average annual turnover must not be less than Rs. 150 crores over the past three financial years (FY 2022–23, 2023–24 and 2024–25).	
		6. All switches should be from same make for better compatibility and management.	

32	Certification	The switch must be TEC-certified under the Mandatory Testing and Certification of Telecom Equipment (MTCTE) program.	
33	Warranty	3 Years	

(7) 8 Port Layer 2 Switch

Make :

Model :

SI No	Specification		Compliance (Yes/No)
1	Physical Ports	8x 10/100/1000 Mbps Rj45 PoE+ Ethernet Ports with 4 Gigabit Combo (RJ-45/SFP) Ports	
2	Switching Capacity	24 Gbps	
3	Forwarding Capacity	17.86 Mpps	
4	Flash	128 Mbit	
5	DRAM	128 Mbit	
6	CPU	RTL 8382M	
7	Packet buffer memory	4.1Mbit	
8	Operating Humidity	10% ~ 90% non-condensing	
9	Temperature	0°C -40°C	
10	Power supply	AC Power: 100 to 240 V, 50-60 Hz and 6Kv input Surge Protector	
11	PoE Power Budget	140 Watt, Support IEEE802.3af and IEEE802.3at standard	
12	LED Indicators	Power, Link/Act	
13	Forwarding Mode	Store and Forward	
14	MAC Address Table	8K	
15	Max. Jumbo Frame size	10K	
16	L2 Features	Switch should support Auto-Negotiation for port speed and duplex mode	
		Switch should support STP / RSTP / MSTP	
		Switch should support Loopback Detection	
		Switch should support BPDU Filter and BPDU Guard	
		Switch should support LLDP, MVR	
		Switch should support IGMP v2/v3 Snooping: IGMP Querier, Immediate Leave	
		Switch should support 256 IEEE 802.1q tag based VLAN with 4K VLAN ID	

		Switch should support MAC Based VLAN, Voice VLAN, Guest VLAN, Management VLAN	
		Switch should support LACP: 8 Groups, 8 Ports/Group and static trunk	
17	QoS Features	Switch should support Each port supports 8 queues	
		Switch should support Queueing Mechanism: SP and WRR	
		Switch should support Flow Control	
		Switch should support Classifications based on - COS, COS DSCP, IP Precedence	
		Switch Each port supports 8 queues	
18	Security	Switch should support MAC address Binding	
		Switch should support broadcast/Multicast/Unicast storm control	
		Switch should support IP and MAC ACL (Ipv4)	
		Switch should support RADIUS, 802.1x based Authentication	
		Switch should support Port Security, Protected Port	
		Switch should support DOS	
		Switch should support Management ACL	
		Switch should support DHCP Snooping, DHCP Snooping option 82, IP Source Guard, IP-MAC-Port-VLAN Binding	
19	Management	Switch should support Port Mirroring	
		Switch should support traffic statistics	
		Switch should support Provide IPv4 Web-based management	
		Switch should support IPv4 DHCP Client	
		Switch should support Configuration Backup and Recovery	
		Switch should support Dual firmware images and Configuration files	
		Switch should support Error Disabled, Bandwidth Utilization	
		Switch should support SNMP v1/v2c/v3 and Remote Server	

		Switch should support Telnet, SSH, HTTP, HTTPS	
		Switch should support RMON, SNMP	
		Switch should support EEE, Port Statistics	
		Switch should support Ping, Traceroute	
		Hardware Factory Reset button	
20	Regulatory compliance	<p>1. The product must be "Make in India". The OEM must be operation in India for a minimum of 25 years and should have over 5 years of experience in manufacturing networking equipment.</p> <p>2. The OEM must possess a valid GST number and a trade license for the Eastern Region.</p> <p>3. The OEM must have a service center and a local representative in the state of the end customer to ensure a quick response.</p> <p>4. The OEM must hold valid certifications for ISO 9001:2015, ISO 14001:2015, ISO 27001:2022 and ISO 45001:2018.</p> <p>5. The OEM's average annual turnover must not be less than Rs. 150 crores over the past three financial years (FY 2022–23, 2023–24 and 2024–25).</p> <p>6. All switches should be from same make for better compatibility and management.</p>	
21	Warranty	3 Years	

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(8)24 Port Patch Panel

Make :

Model :

Sl.No	Minimum Specification	Compliance (Yes / No)
1	The Cat-6 transmission performance is in compliance and Exceeds ANSI/TIA/EIA-568-C.2 Standard. Supports 1000-Base-T.	
2	90 Degree (Top Entry) Punch Down Design for Convenient Network Terminations.	
3	Ease of Installation with built in Rear Cable Management.	
4	Removable Module Design	
5	6x4 Module Specially Designed Jack Configuration	

6	Contacts pins and IDC mountings assembled in PCBs by Solderless Press-fit process. PCB: FR4, 1.6mm Thickness 2 Layers	
7	Jack Wire: 30μgold plating over 40μ ~ 80μ nickel plating (Square Wire, 360°plated)	
8	IDC Conductor : 0.5 mm Phosphor Bronze (Base Material), 100μ Tin Plating	
10	Contact Compatibility : 22~26 AWG Stranded and Solid Wires	
11	1U Patch Panel to Mount In any Standard Rack. Panel Frame : SPCC Powder Coating In Matt Finish Black Color.	
12	Housing : High Impact Flame Retardant Plastic, UL 94V-0 Rated	
13	Easy Port Labeling Identification Provision	
14	Electrical Characteristics:	
a	Current Rating : 1.5amps	
b	Insulation Resistance : $\geq 500\text{m}\Omega$	
c	Contact Resistance : $\leq 10\text{m}\Omega$	
d	DC Resistance : $\leq 0.1\Omega$	
e	DC/AC Volt Endurance : DC 1000V/AC 750V 1 Min	
15	Mechanical Characteristics:	
a	Plug Insertion Life : ≥ 750 Cycles with FCC Compliant RJ-45 Plug	
b	Plug & Jack Contact : ≥ 100 Grams with FCC Compliant RJ-45 Plug Force	
c	Plug Retention Force : ≥ 11 LBF	
d	Durability : 200 Termination Cycles	
e	Operating Temperature : -10 Degree ~ 60 Degree	
f	Operating Humidity : 10% ~ 90% RH	
g	Storage Temperature : -40 Degree ~ 68 Degree	
16	Standard Verification:	
a	ANSI/TIA-568-C.2	
b	ISO/IEC 11801:2002/AMMD.2:2010	
d	ISO/IEC 60603-7 Compliant	
e	RoHS Directive 2002/95/EC/Compliant	
f	UL LISTED	

(9) Information Outlet Box

Make :

Model :

Sl.No.	Minimum Specification	Compliance (Yes / No)
	Face Plate	
1	Single, Dual Face Plate Square (86 x 86mm) x 12 mm	
2	One Piece design : Mounting Frame with screw caps, Screw Size : M4 x 25mm	
3	Shutter on Face Plate for closing ports to prevent from dust entry	
4	Port labeling with paper label and transparent plastic window to hold paper label	
5	Ease in snap in and out of RJ45 keystone connector,	
6	Cover Material : ABS-UL94-V2, Base Material : ABS-UL94-V2, Dust Cover Material : ABS-UL94-V2	
7	Plug Retention Force : 14Kgf (140N)	
8	Supports UTP and STP Jacks Cat5e, Cat6 and Cat6A	
9	Suitable for 86 x 86 mm Square type Back box	
10	Installation Temperature: -20°C to +70°C Operating Temperature: -20°C to +70°C	
11	Standards : ANSI/TIA-568-C.2, ISO/IEC 11801:2002 AMMD.2:2010, ISO/IEC 60603-7 Compliant, RoHS Directive 2002/95/EC/Compliant	
	Keystone	
12	Category 6 Keystone is Tool less Design 30 Micron Gold Plating Suitable for 23~24 AWG Solid Copper Wire, Easy For Termination and Compliant to T568A and T568B Wiring Schemes, UL Listed.	
13	Efficient rotation design tool free, press with click to terminate wires	
14	Cable holder with strain relief function for better termination and transmission	
15	Fast, Easy, Reliable Termination	
16	Reliable IDC contacts with color coding for better contact resistance and transmission	
17	Removable Shutter Option	
18	Keystone Jack Can Be Easily Terminated by Hand, Optional Termination by Hand Tool	
19	Backward compatible with both RJ11/RJ12 Plug	
20	Physical Specification:	
20.1	Housing : High impact flame retardant plastic, Polycarbonate UL 94V-0 rated	
20.2	PCB : FR4, 1.6mm Thickness	

20.3	Jack Wire Terminals: Phosphor bronze base, gold over nickel plating Gold Plating : 30μ, Nickel Plating Base(Ni) : 40μ~80μ	
20.4	IDC Terminals: Insulation displacement connector: Phosphor bronze base, Tin Plated 100μ	
20.5	(IDC) Accept #23~24 AWG solid copper wire	
21	Electrical Specification:	
21.1	Current Rating : 1.5 Amps	
21.2	Insulation Resistance : 500 MΩ minimum	
21.3	Contact Resistance : 10 mΩ maximum	
21.4	DC Resistance : 0.1 Ω maximum	
22	Mechanical Specification:	
22.1	Plug Insertion Life : 750 Cycles minimum using FCC-approved plug	
22.2	Plug & Jack Contact Force :100 Grams minimum using FCC-approved plug	
22.3	Plug Retention Force : 11.0 lbf minimum	
22.4	Durability : 200 Termination cycles	
22.5	Storage Temperature : -40°F to 150°F (-40°C to 68°C) Operating Temperature : -10°C to 60°C	
22.6	ETL Verified 4 connector channel performance Certificate	
22.7	Keystone UL listed certified.	
23	Standard Verification:	
23.1	Qualified unscreened Class E/Cat.6.	
23.2	Permanent Link & Channel ANSI/TIA-568-C.2	
23.3	IEC 60603-7-4 2 nd Edition	
23.4	ISO/IEC 11801 2.2 Edition	
23.5	CENELEC EN 50173-1:2011	
23.6	RoHS Directive 2002/95/EC/Compliant	
SMB (Surface Mount Box)		
24	Should have Robust and installer friendly design Surface Mount Boxes for Face Plates for a variety of media including voice and data, Audio, video and CATV distribution to the work area.	
25	Should secure and protect wire with durable wall box	
26	Material : ABS	
27	Shape : Square Size : 86 x 86	
28	Color : White	

(10) CAT6 UTP Patchcord**Make :****Model :**

Sl. No.	Minimum Specification	Compliance (Yes / No)
1	Category 6 patch cords with four pair twisted stranded copper wire cable terminated with RJ45 modular plugs at both the ends.	
2	Patch Cords 100% factory tested for better quality and suitable for the high speed data transmission.	
3	Complies with the ANSI/TIA/EIA-568-C.2, ISO/IEC 11801, RoHS compliant Standard. Supports Data Networks Speeds Up to 10/100-Base-T and 1000-Base-T.	
4	Patch cord with LSZH jacket to reduced toxic/corrosive gasses emitted during combustion	
5	Transparent modular plugs with transparent slip on boot and cable assemblies	
6	T568B wiring scheme crimped at both connector ends.	
7	Available in different colors and different length on request	
8	Patch cord conductor: 24 AWG, Stranded copper wires, Insulation : HDPE	
9	Connector Plug: 30μ" Gold plated contact, Phosphor Bronze base material	
10	Jacket Diameter : 5.8 ± 0.1mm	
11	Plug Insertion/Extraction Life: 750 Cycles min. using FCC approved plug &	
12	Plug & Jack Contact Force : 100 Grams min. using FCC approved plug	
13	Plug Retention Force : 11 lbf min.	
14	Current Rating: 1.5 amps, Voltage Rating: 72 Vdc max.	
15	Insulation Resistance : 500MΩ min, Contact Resistance : 20mΩ max, DC Resistance: 0.1Ω max.	
15	Need to submit ETL Verified 4- Channel Performance Certificate along with the bid	
16	Need to submit Zero Bit Error Channel Performance Certificate along with the bid	
17	Operating Temperature : -20 °C to +70° C and Installation Temperature : -20 °C to +70° C	

(11) CABLE CAT6 UTP**Make :****Model :**

Sl. No.	Minimum Specification	Compliance (Yes / No)
1	The 4 pair Unshielded Twisted Pair cable shall be ULØ Listed and ETL verified	
2	This cable well exceeds the requirements of ANSI/TIA-568-C.2 and ISO/IEC 11801 Class E	
3	Nominal Outer Diameter of Cable should be 5.8 ± 0.2 mm and Conductor Diameter 23 AWG	

4	Construction: 4 twisted pairs separated by internal PE Cross Separator. Full separator. Half shall not be accepted. Rip Cord is must.	
5	Conductor: Solid bare Copper, Outer jacket sheath: FRPVC with UL approved CM/CMR rated cable. Jacket color: Grey	
6	Insulation Material: High Density Polyethylene (HDPE) with Insulation Diameter : 0.89 ± 0.01 mm	
7	Dielectric Strength of cable should be 2.5 KVDC for 2 seconds	
8	Bending Radius : $< 4X$ Cable Diameter at $-20^{\circ}\text{C} \pm 1^{\circ}\text{C}$ Pulling Force: 25.35 lbs	
9	Electrical Parameters: Insertion loss (Attenuation), NEXT, PSNEXT, ELFEXT (ACRF), PSELFEXT (PSACRF), Return Loss, ACR and PS ACR.	
10	Insertion Loss of 32.8 db/100m at 250 MHz	
11	Cable should support operating temperature from -20° to $+70^{\circ}\text{C}$	
12	Cable support Conductor Resistance $\leq 9.38 \Omega/100\text{m}$ Max.	
13	Mutual Capacitance of cable should be < 5.6 nF/100m Max.	
14	Resistance Unbalance of cable should be 5% Max.	
15	Capacitance Unbalance of cable should Max. 330 pF/100m	
16	Cable support Delay Skew: < 45 ns/100m, Operating Voltage: 72V	
17	Nominal Voltage of Propagation (NVP): 69% and Current Rating: 1.5 A Max.	
18	Impedance: $100 \pm 15 \Omega$ @100 MHz. and Propagation Delay @250 MHz : 536 ns/100m	
19	ETL Verified 4-Connector Channel performance certificate	
20	Need to submit complete and satisfactory type test Report from Central Government NABL accredited laboratory to conformity of the specification along with bid.	
21	Need to submit Zero Bit Error Channel Performance Certificate along with the bid	
22	RoHS Compliant	
23	Printed sequential Length Counter of each meter on Outer Jacket	
24	Category 6 UTP cables shall Supports Gigabit Ethernet (1000 base-T) verified upto 600 Mhz	

(12) Server for VMS

Make :

Model :

Sl.	Parameters	Minimum specification	Compliance (Yes/No)
1	Form Factor	Rack mount server with rail kit and accessories	
2	CPU configured	2 x Intel Xeon 6, 6737P, 32-core, 2.90GHz processor	
3	Memory configured	16 x 64GB RDIMM, 6400MT/s	
4	RAID Controller	12Gbps, 8 GB cache, RAID support 1, 5, 6, 10	
5	Disks configured	2 x 960GB hot-plug SSD	

6	Ethernet ports	4 x 10/25G SFP28 ports with transceiver	
7	FC ports	2 x 32Gb FC ports	
8	OS certification	Certified for latest version of Red Hat Enterprise Linux 10, SUSE Linux Enterprise Server 15, Microsoft Windows Server 2025, Ubuntu 24.04 LTS & VMWare ESXi 8.0 U3	
9	EPEAT certification	Certified for Silver category, location of use - India (Certificate / web page information to be submitted)	
10	Power Supply	80Plus Platinum rated dual, hot plug, redundant power supply (1+1)	
11	Power & temperature	Real-time power meter, graphing, thresholds, alerts & capping with historical power counters. Temperature monitoring & graphing	
12	Pre-failure alert	Predictive failure monitoring & alerts of actual or impending component failure for fan, power supply, memory, CPU, RAID, NIC, HDD	
13	Managemnt	Support for virtual media, virtual folders, remote file share, virtual console. Directory services (AD, LDAP), two-factor authentication	
14	Server security	Silicon-based Hardware Root of Trust	
		Automatic BIOS recovery	
		Firmware drift detection & alerting	
		Cryptographically signed firmware updates	
		Cryptographically verified trusted booting standards meeting NIST SP 800-147B, NIST SP 800-155, protection standards meeting NIST SP 800-193 standards & secure media sanitization standards meeting NIST SP 800-88	
		System lockdown support protecting the server from inadvertent or malicious changes	
		Secure default passwords during transit	
		Persistent event logging including user activity	
		Drive security, including secure system erase for HDD, SSD & NVMe	
		Protection against compromised firmware execution	
		UEFI secure boot with custom certificates	
Intrusion alert in case chassis being opened			
15	BIS certificate	BIS certificate for the specific quoted model to be submitted.	
16	Country of origin	Country of Origin of the quoted server must be India. This must be verifiable physically & through documentary evidence. Binding declaration from the OEM for the same must be submitted.	

17	Certifications & benchmarks	Product datasheets, certification, benchmark or references verifiable from publicly available data sources must be submitted along with bill of material. Links for certifications to be submitted.	
18	Warranty	3 years comprehensive warranty with 24x7x365 remote hardware support & next business day on-site support.	

(13) Workstation for VMS

Make :

Model :

Sl. No.	Minimum Specification		Compliance (Yes/No)
1	Processor	Intel Core Ultra 7 265 or latest processor	
2	Chipset	Intel Q series Chipset	
3	RAM	Minimum 32GB or Higher, DDR5 , 6400 MT/s or higher clock frequency , minimum 1 free DIMM Slots and support upgradability 64 GB or more	
4	Hard Disk	1 TB PCIe M.2 NVMe SSD drive , support option for another 1 TB PCIe M.2 NVMe SSD Drive for future upgradability .	
5	Graphics Card	Minimum NVIDIA RTX A400, 4 GB GDDR6 or above and 27" Display FHD Display with Minimum 1 x Display , 1 x HDMI & 1 x VGA ports option. Minimum 100 Mz Refresh rate . Monitor Power supply must integrated with the monitor without any external power adaptor , monitor must TCO 9 and Energy Star 8.0 certified (Same Desktop OEM make Monitor)	
6	Expansion Slots	Minimum 3 nos. PCIe Gen 3.0 slots	
7	Networking Port	Integrated Gigabit Ethernet	
8	Chassis	Tool Less Chassis with chassis intrusion switch / sensor , not more than 10L in volume .	
9	I/O Ports	Minimum 1 x USB 3.2 Type-C Port	
		Minimum 2 x USB 3.2 Type-A Gen1	
		Minimum 3 x USB 2.0 Type-A	
10	Keyboard and Mouse	Minimum 104 keys USB Keyboard and USB Optical Scroll mouse - Same make of the Desktop	
11	Audio	High-Definition Integrated Audio with internal speaker	
12	Power Supply	Minimum 350W with 90% Energy Efficient Power supply	
13	Operating System	Windows 11 Professional 64 bit installed.	
14	Manufacturer Criteria	Product Country of Origin : India , Desktop OEM Minimum 10 Years presence in INDIA.	
15	Warranty	3Years OEM on site Warranty supports.	

(14) Client Workstation**Make :****Model :**

Sl. No.	Minimum Specification		Compliance (Yes/No)
1	CPU	Intel Core i7 with latest generation (33 MB cache, 20 Cores, 28 threads, up to 5.4 GHz)	
2	Chipset	Intel B /Q Series Chipset	
3	Memory	16 GB DDR5 , 4400 Mhz RAM with 64 GB expandability and One DIMM slot should be Freely available	
4	Hard Disk Drive	1 TB PCIe M.2 NVMe SSD or higher	
5	Display	Minimum 21.5" FHD Monitor , Minimum 1 x HDMI , 1 x Display Port , 1 x VGA Port , Monitor Stand Must be Height adjustable and with Internal Speakers . Monitor Power supply must integrate , without any external power adaptor	
6	Graphics & Audio	Intel HD Graphics	
7	Keyboard	104 keys or higher OEM USB Keyboard	
8	Mouse	Optical Scroll with USB interfaces. OEM Mouse	
9	Ports	Minimum 8 USB Ports (Including 1 x USB 3.2 Type C Port and 2 x USB 3.2 Ports), 1 x HDMI Port , 1x Display Port / 1 x VGA Port , 1 x Ethernet Port and 1 x Universal Audio Port	
11	Networking facility	integrated Ethernet controller (10/100/1000 Mbps) , Wi-Fi 6 and Bluetooth	
12	Pre-Loaded OS	Genuine Windows 11 Professional 64 Bit or higher. Factory OS	
		preloaded with documentation.	
13	Power Management	180 Watt with 85 % Power efficiency	
15	Certificate	FCC , CE,UL, Energy Star, EPEAT India, Rohs, Window 11 and Ubuntu (Certificate must be available in the public domain against the Quoted model name), TCO 9.0 and Energy star 8.0 Certificate for quoted Monitor Model	
16	Warranty	3 Year comprehensive onsite warranty.	

(15) Storage**Make :****Model :**

Sl.No.	Minimum Specification		Compliance (Yes / No)
1	SAN 100 TB Storage for Full HD Recording @ 15FS with 30 days recoding backup as per minimum specification with 3 years support from OEM		
2	Controllers	Storage Array should be configured in a No-Single-Point-of-Failure Architecture with Dual active hot-swappable controllers.	
3	Host interface	8 x 16Gbps FC ports (4 per controller).	
4	Host connection	The storage shall be provisioned with at least Four (4) nos of 32 Gbps FC ports per controller with a provision to directly connect HBAs of servers without need of any FC	
		SAN Switch.	
5	Disk interface	2 x 12Gbps SAS	
6	System memory	32GB (16GB per controller, mirrored)	
7	Storage capacity	100TB usable disk space in RAID-5 using NL-SAS drives with at least 1 additional hot spare drives	
8	Storage scalability	Should be scalable to min 260 disks using additional enclosures. Storage firmware should support to min 2PB raw storage capacity for future upgrade when higher capacity drives are available	
	Management ports	Minimum 1 per controller (1Gb Base-T)	
9	Disk intermix	Support for mixing different SAS, NLSAS, SSD disk types, transfer rates & rotational speeds in the same system	
10	Array configuration	Should support all-flash, hybrid flash, HDD only arrays	
11	Auto data tiering	Support at least three primary (media-based) tiers	
12	RAID support	RAID 1, 5, 6, 10 , or distributed erasure coding to reduce rebuild times when drive failures occur; any combination of RAID levels should exist in single array	
	Thin provisioning	Should be active by default on all volumes & operate at full performance across all features	
13	Read caching	Support SSD read cache to increase execution speed of applications by caching previously read data	
14	Snapshots	redirect-on-write snapshots per array	
15	Volume copy	Complete copy of standalone volumes	
16	Replication	Include support for asynchronous replication with one-to-many or many-to-one target / source relationships	

	Encryption	Should support data-at-rest encryption at drive level, self-encrypting drives (SEDs) in SSD or HDD formats, Full Disk Encryption (FDE) based on AES-256 & support for drives certified to FIPS 140-2 Level 2	
17	OS Support	Windows 2022, 2019, 2016; RHEL 8.2, 7.8; SLES 15.2, 12.5; VMware 7.0, 6.7; Citrix XenServer 8.x, 7.x	
18	Virtualization integration	VMware vSphere (ESXi), vCenter, SRM, Microsoft Hyper-V	
19	Global hot spare	Allow designation multiple global hot spares for automatic replacement of a failed drive in a disk group	
20	Other software & features support included	- Thin provisioning	
		- Remote replication (with switched environment)	
		- Volume copy	
		- Encryption with self-encrypting drives support	
		- SSD read cache support	
21	Array management	Manageable from a web-based single, secure interface without using a separate management device or server.	

(16) 42 U Rack

Make :

Model :

Sl. No.	Parameter	Minimum Specifications	Compliance (Yes/No)
1	Standard	EIA/NEMA rails	
2	Mounting rails	Fully Adjustable	
3	Size of Rack	42 U	
4	Built in Fan	Yes	
5	Power socket	Yes	
6	Frame	Should be made of heavy duty, heavy grade aluminium profiles designed to accept front and rear doors and side panels, which close within the frame itself	
7	Door	Front and Rear perforated door for better air movement across the Rack Top Cover and Bottom panels with cable entry facilities Cable entry cut out	
8	Accessories	All Floor Mounting accessories required to set up the rack. Castors with foot brakes	

(17) 9U Rack**Make :****Model:**

Sl. No.	Parameters	Minimum Specifications	Compliance (Yes / No)
1	Size of Rack	9 U	
2	Protection Level	IP 65 rated	
3	Mount Type	Wall mount	
4	Material used for rear door	CRCA Steel	
5	Secure Locks	Front Glass Door with Lock	
6	Support cable entry	Ventilated Top cover and Bottom cover with cable entry facility and power socket	
7	Built in Fan	Yes with cross ventilation feature	

(18) 10 KVA ONLINE UPS**Make :****Model :**

Sl.No	Minimum Specification		Compliance Yes / No
1	Parameters	10KVA (1ph-1ph) IGBT Based Online UPS.	
	Topology	True Online Double Conversion Online UPS.	
2	INPUT		
	Phase	Single Phase	
	Voltage	230V AC	
	Voltage Range	176V - 300V AC	
		110V - 300V AC @ 50% Load	
	Input Power Factor	0.99	
	Current THD	<7%	
	DC Volt	240DC	
	Battery VAH	36000 VAH	
3	OUTPUT		
	Nominal Output voltage	220VAC / 230VAC / 240VAC /± 1%	
	Frequency	50Hz ± 0.1Hz	
	Frequency synchronisation	46 to 54 Hz	
	Voltage THD	<3% Linear Load	
		<5% Non Linear Load	
4	Efficiency		
	AC/AC (Overall efficiency)	Up to 92%	
	ECO mode		

5	Overload capacity		
	105 - 110%	30 Min	
	111 - 130%	5 Min	
6	Communication		
	RS 232	Required RS 232	
	Operating Temperature	0 ~ 50°C Continuous	
7	Electrical		
	Input Terminal	Input Breaker +Terminal	
	Output Terminal	Terminal	
8	Features		
	Convert Mode	UPS Should have Convert Mode	
	Bypass parameters Configurable	Should be available	
	Display	LCD display + LCD Display	
9	Mechanical		
	Ingress Protection	IP 20	
	Standards		
	Safety	EN 62040 - 1	
	EMI / EMC	EN 62040 - 2	
	Performance	IEC 62040 - 3	
	Certification	UPS Should have Certified with ISO 9001,14001 & 45001	
	Compliance	ROHS, CE,PEP & BIS	
	Warranty	3 Years Warranty on UPS & 3 Years on SMF battery, (Warranty Certificate from OEM Mandatory)	
11	Escalation Matrix	Escalation Matrix For Service Support : Bidder / OEM must provide Escalation Matrix of Telephone Numbers for Service Support	
	Toll Free No	OEM must have Dedicated / toll Free Telephone No. for Service Support.	
	Service Center	OEM Should have own service center 6/7 in Jharkhand.	

(19) 6 KVA Online UPS

Make :

Model :

Minimum Specification		Compliance Yes / No
Parameters	6KVA (1ph-1ph) IGBT Based Online UPS.	
Topology	True Online Double Conversion Online UPS.	
INPUT		
Phase	Single Phase	

Voltage	230V AC	
Voltage Range	176V - 300V AC	
	110V - 300V AC @ 50% Load	
Input Power Factor	0.99	
Current THD	<7%	
DC Volt	240DC	
Battery VAH	24000 VAH	
OUTPUT		
Nominal Output voltage	220VAC / 230VAC / 240VAC /± 1%	
Frequency	50Hz ± 0.1Hz	
Frequency synchronisation	46 to 54 Hz	
Voltage THD	<3% Linear Load	
	<5% Non Linear Load	
Efficiency		
AC/AC (Overall efficiency)	Up to 92%	
ECO mode		
Overload capacity		
105 - 110%	30 Min	
111 - 130%	5 Min	
Communication		
RS 232	Required RS 232	
Operating Temperature	0 ~ 50°C Continuous	
Electrical		
Input Terminal	Input Breaker +Terminal	
Output Terminal	Terminal	
Features		
Convert Mode	UPS Should have Convert Mode	
Bypass parameters Configurable	Should be available	
Display	LCD display + LCD Display	
Mechanical		
Ingress Protection	IP 20	
Standards		
Safety	EN 62040 - 1	
EMI / EMC	EN 62040 - 2	
Performance	IEC 62040 - 3	
Certification	UPS Should have Certified with ISO 9001,14001 & 45001	
Compliance	ROHS, CE,PEP & BIS	
Warranty	3 Years Warranty on UPS & 2 Years on SMF battery, (Warranty Certificate from OEM Mandatory)	
Turnover	Minimum 500 Crore Turnover per year for last 3 consecutive Year.	
Escalation Matrix	Escalation Matrix For Service Support : Bidder / OEM must provide Escalation Matrix of Telephone Numbers for Service Support	

Toll Free No	OEM must have Dedicated / toll Free Telephone No. for Service Support.	
Service Center	OEM Should have own service center 6/7 in Jharkhand.	

(20) Single mode 1000Base-LX SFP Transceiver LC Type		
Make :		Model :
Sl no	Specification	Compliance (Yes/No)
1	Architecture	1000 Base LX Single-mode Fiber Transceiver
2	Connector	It should have duplex LC Connector
3	Flow control.	Support 802.3x
4	Mode	9/125 um Single mode Fiber Type up to 20 KM.
5	Support wavelenght	1310nm
6	Case Operating Temperature:	support up to 0°~70°
7	Storage Relative Humidity:	support upto 5% to 95%
8	Warranty	3 Year

(21) LIU 48 PORT

Make :		Model :
Sl. No.	Minimum Specification	Compliance (Yes / No)
1	The Fiber Rackmount LIU loaded having Adapter panel fixed on drawer base frame, with Adapters and with Pigtails and assembled with splice tray as per the Loaded fiber port requirement and their applicable accessories.	
2	Suitable to mount at different positions (depth wise) on standard 1U 19 inch racks. Drawer type to pull out for easy maintenance when assembled in racks.	
3	Cold Rolled Steel material with black powder coating	
4	Three types of cable entry holes for different size cables through cable glands, covered with rubber cable grommets/covers.	
5	Splicing of 24 fibers in each plastic fiber splicing trays with integrated cable spool design.	
6	Non removable top cover and no rear cover. Drawer type to pull out for better access of interior.	

Make :		Model :
Sl. No.	Minimum Specification	Compliance (Yes / No)
7	As per the BOM requirement, 06/12/24/48 LIU Loaded with 03/06/12/24 (LC Duplex) adapters and 06/12/24/48 (LC Simplex) Pigtails on rackmount ports.	
8	As per the Loaded fiber port requirement Accessories kit consists of Cable management rings/Cable saddles, Cable glands (PG13.5, 2 nos), Splice rods, Blanking clips, Velcro ties, Cable ties, Cable inlet/outlet hole covers(2 types, 2 nos each)	
9	Cable management rings/Cable saddles can be mounted inside the rackmount, no provision to mount outside in front of the adapter panel.	
10	Suitable for storing up to 3 meter of 900 μ m tight buffered fiber pigtail per adapter.	
11	Panel Dimensions : 482 x 220 x 44.3 mm (Length x Width x Height)	
12	Splice Tray Dimensions : 220 x 90 x 15 mm (Length x Width x Height)	
13	Port identification numbers printed on the Adapter panel	
14	Standards: Comply as per ANSI/TIA-568-C.3, ISO/IEC 11801, RoHS Compliant.	
15	Operating Temperature : -20 °C to +70° C Installation Temperature : -20 °C to +70° C	

(22) FIBER PATCHCORD SINGLEMODE

Make :		Model :
Sl. No.	Minimum Specification	Compliance (Yes / No)
1	Fiber optic patch cord with two core (Duplex) fiber cable terminated with LC connector at one end and LC connector at other end	
2	The terminated connectors in assemblies are designed and are compatible with industry standards (ANSI/TIA-568-C.3, ISO/IEC 11801).	
3	Have good geometrical characteristics of apex offset & radius of curvature & fiber height	
4	100% factory terminated and tested for optical characteristics & fiber end face finish.	
5	Fiber type G. 652D standard. OS2 (9/125 μ m),	
6	Buffer Diameter : 0.9 ± 0.05 mm, Jacket Thickness : 0.35 ± 0.05 mm, Strength Member as Aramid yarn	
7	Cable Diameter : $2.0 \times 3.8 \pm 0.2$ (Duplex)	

Make :		Model :	
Sl. No.	Minimum Specification		Compliance (Yes / No)
8	Jacket color : Yellow, Jacket Material : LSZH, Length : 3 Mtr		
9	Connector Ferrule : Ceramic, Apex Offset should be <50um, Fiber height should be ±100nm		
10	Connector Repeatability ≤ 0.2dB with 1,000 times mating cycles.		
11	Connector cable retention : 50 N (11.24 lbs), Crush resistance : 100N/100mm, Bend Radius: 20xDiameter of cable		
12	Attenuation : ≤ 0.36 dB/km (@1310 nm), ≤ 0.25 dB/km (@1550 nm)		
13	Chromatic Dispersion : ≤ 3.5 ps/nm.km (@1285 - 1330 nm), ≤ 18 ps/nm.km (@1550 nm)		
14	Zero Dispersion Wavelength : 1300 - 1324 nm		
15	Cut-off Wavelength : ≤ 1260 nm		
16	Mode Field Diameter : 9.2 ± 0.4 μm (@1310 nm) , 10.4 ± 0.5 μm (@1550 nm)		
17	Insertion Loss (@1310 &1550nm) : SM (UPC/PC) Type : SC/LC/ST/FC : ≤ 0.3 dB Return Loss (@1310 &1550nm) : SM (UPC/PC) Type : SC/LC/ST/FC : ≥ 50 dB		
18	Insertion Loss (@1310 &1550nm) : SM (APC) Type : SC/LC/ST/FC : ≤ 0.3 dB Return Loss (@1310 &1550nm) : SM (APC) Type : SC/LC/ST/FC : ≥ 60 dB		
19	Traceability sticker available for product tracking and Interferometry report need to submit		
20	Standards: IEC 60332-1, ANSI/TIA-568-C.3, ISO/IEC 11801 RoHS Compliant		
21	Installation Temperature : -20 °C to +70° C, Operating Temperature : -20 °C to +70° C		

(23) ARMOURED FIBER CABLE

Make ;		Model :
Sr. no.	Specification / qualitative requirement	Compliance (yes/no)
1	06/08/12/24-Core, Singlemode 9/125 micron primary coated buffers, 10G Ethernet OS2, Armoured Loose Tube, ECCS (Electrolytic Chrome Coated Steel) Tape, Jelly Filled Loose Tube.	
2	Two Steel Wires/Rods embedded in outer periphery of the jacket as strength members. UV Stabilised jacket and protected from Rodent attacks	
3	Complying to ANSI/TIA-568-C.3, ISO/IEC 11801, Telecordia GR-20 Core, ITU-T REC G.652D, IEC 60793-1/60794-1, EN 50173, RoHS Compliant	
4	Suitable for use in indoor/outdoor ducts, direct burial and backbone cabling	
5	Loose tube material : Polybutylene Terephthalate (PBT) with Natural/White Colour having Inner Diameter/Outer Diameter 1.7/2.5 ± 0.1 mm	
6	Peripheral strength member as two steel wires/rods having dimensions as 0.6 ± 0.05 mm	
7	Moisture Barrier as Water Swellable Tape, Armouring ≥ 0.150 mm (ECCS Tape), Number of Ripcords as 01 no polyester based yarns.	
8	Outer sheath material as HDPE/LSZH with diameter as 7.5/8.5 ± 0.5 mm having thickness of 1.5mm nominal	
9	Weight of the cable for 04/06/08/12 core (HDPE/LSZH): 65.0/75.0 ± 10 kg/km, for 24 core (HDPE/LSZH): 75.0/95.0 ± 5 kg/km	
10	Fiber colour and Loose tube colour as per ANSI/TIA standards.	
11	Tensile Strength : 1000 N, Crush Resistance : 4000 N/100mm	
12	Minimum bend radius : 20 x Diameter (during installation), Minimum bend radius : 10 x Diameter (during full load)	
13	Fiber Type : G. 652D (OS2)	
14	Attenuation : ≤ 0.38 dB/km (@1310 nm), ≤ 0.25 dB/km (@1550 nm)	
15	Chromatic Dispersion : ≤ 3.5 ps/nm.km (@1285 - 1330 nm), ≤ 18 ps/nm.km (@1550 nm)	
16	Zero Dispersion Wavelength : 1300 - 1324 nm	
17	Zero Dispersion Slope : ≤ 0.092 ps/nm ² .km	
18	Polarisation Mode Dispersion : ≤ 0.2 ps/√km	
19	Cut-off Wavelength : ≤ 1260 nm	
20	Mode Field Diameter : 9.2 ± 0.4 μm (@1310 nm) , 10.4 ± 0.4 μm (@1550 nm)	
21	Core Cladding Concentricity Error : ≤ 0.8 μm	
22	Cladding Diameter : 125 ± 1 μm , Coating Diameter : 245 ± 10 μm	

Make ;		Model :
Sr. no.	Specification / qualitative requirement	Compliance (yes/no)
23	Cladding Non-circularity : $\leq 1\%$	
24	Installation Temperature : -20 °C to +70° C, Operating Temperature : -20 °C to +60° C	

(24) 24 Port Distribution Switch

Make :		Model :	
Sl.No	Minimum Specification		Compliance (Yes / No)
1	Physical Ports	Switch having with 16-Port Gigabit SFP + 8-Port Giga RJ45/SFP Combo + 4-Port 10G SFP+ port	
2	Management port	1 x RJ45 port console port	
3	Switching Capacity	128 Gbps	
4	Throughput	96 Mpps	
5	Flash	16 MB	
6	RAM	256 MB	
7	MAC Address	16k	
8	Routing entries	512	
9	Relative Humidity	10%-90% non-condensing	
10	Temperature	0°C -50°C	
11	Power Supply	It supports Single AC power inputs 100V–240V, 50Hz $\pm 10\%$	
12	VLAN	The switch supports up to 4K active VLANs for flexible network segmentation.	
		The switch supports QinQ and Selective QinQ for extending VLANs across networks.	
		The switch supports GVRP and Private VLAN features help in efficient VLAN management.	
		The switch supports Voice VLAN ensures smooth transmission of voice traffic.	
		The switch supports spanning tree protocols like STP, RSTP, PVST+, and MSTP for loop prevention.	
		The switch supports BPDU Guard, Root Guard, and Loopback Guard for enhanced network stability and protection.	

13	Multicast	The switch supports multicast routing protocols such as PIM-SM and PIM-DM for efficient traffic management.	
		The switch is compatible with IGMP versions 1, 2, and 3, and includes features like IGMP Snooping and IGMP Fast Leave for optimized multicast control.	
		The switch supports MVR and IGMP filtering to enhance multicast traffic management and network performance.	
14	Routing	The switch supports Ipv4 Static Routing, RIP, OSPF. IS support Ipv4 Dual stack	
		The switch supports IPv6 functions such as ICMPv6, DHCPv6, ACLv6, and IPv6 Telnet for efficient management.	
		The switch supports IPv6 Neighbour Discovery and Path MTU Discovery ensure smooth data transmission.	
		The switch supports MLD v1/v2 and MLD Snooping for IPv6 multicast control.	
		The switch supports IPv6 routing with Static Routing, RIPng, and OSPFv3.	
		The switch supports Tunnelling options include Manual, ISATAP, and 6to4 tunnels for IPv4-to-IPv6 communication.	
15	QoS	The switch supports CAR and HQoS for advanced traffic control.	
		The switch supports QoS based on MAC, IP, TCP, UDP, VLAN, COS, DSCP, and TOS.	
		The switch supports 802.1P and DSCP priority re-labeling with SP, WRR, and SP+WRR scheduling.	
		The switch supports Tail-Drop, WRED, flow monitoring, and traffic shaping for smooth and efficient network performance.	
16	Security	The switch supports port isolation, port security, and IP+MAC+port binding with MAC sticky for safe access control.	
		The switch supports DAI and IP Source Guard for IPv4 to protect against spoofing.	
		The switch supports IEEE 802.1x, AAA, RADIUS, and TACACS+ provide secure user authentication.	

		The switch supports L2/L3/L4 ACLs help filter traffic and defend against DDoS, TCP SYN Flood, and UDP Flood attacks.	
		The switch supports storm control and strong encryption like MD5, SHA-256, RSA-1024, and AES-256 for high security.	
17	DHCP	The switch supports DHCP server, relay, and client functions, along with DHCP Snooping and Option 82 for secure and efficient IP management.	
18	Reliability	The switch supports Static and LACP link aggregation with interface backup for reliable connectivity.	
		The switch supports EAPS and ERPS for fast ring protection and quick network recovery.	
		The switch supports ISSU allows uninterrupted system upgrades without service downtime.	
		The switch supports stacking of up to 4 units. It Support VRRP and UDLD for high availability and link protection.	
19	Management	The switch have Console, Telnet, SSH v1/v2, HTTP, and HTTPS for easy management.	
		The switch supports SNMP v1/v2/v3 and RMON for efficient network monitoring.	
		The switch supports TFTP, FTP, and SFTP are supported for secure file transfers.	
		The switch supports NTP, ZTP, SPAN, and RSPAN for time sync, auto setup, and traffic analysis.	
20	Certification	The switch must be TEC-certified under the Mandatory Testing and Certification of Telecom Equipment (MTCTE) program.	
21	Warranty	3 Years	

(25) Visitor Management System Software

Sl.No	Description	Complied (Yes / No)
1	Scope	
	1. Supply, installation, and commissioning of the Visitor Management System (software + optional hardware).	
	2. Integration with existing infrastructure (ID cards, access control, CCTV, SMS/Email gateways, WhatsApp, etc.).	
	3. Providing mobile apps (Android/iOS) and responsive web portal.	
	4. Customization, configuration, and branding as per institutional needs.	
	5. Training of staff and system administrators.	
	6. Ongoing maintenance, updates, and technical support.	
2	System Architecture Requirements	
	* Cloud-ready with on-premise deployment option.	
	* Modular, microservices-based architecture preferred.	
	* API-first approach with REST/JSON and webhook support.	
	* Responsive UI/UX for desktops, tablets, kiosks, and mobile phones.	
* Support for multi-location, multi-terminal & multi-building deployments from a central dashboard.		
3	Functional Requirements	
	Visitor Pre-Registration	
	Web and mobile app-based pre-registration	
	QR Code-based visitor pass generation	
	Email & SMS/WhatsApp notifications	
	Ability to attach documents (ID, purpose letters, etc.)	
	Host approval workflow (single or multi-level)	
	Predefined approvals from central authorities	
4	Walk-in Registration	
	Self-service kiosk mode option	
	Manual registration by security desk	
	OCR-based ID scanning (Aadhaar*, PAN, DL, Passport, etc.)	
	Auto-capture personal details through document scanning	
	Visitor photo capture via webcam or mobile camera	
	Auto QR-code pass generation and printing	
5	Visitor Categories - System must support:	
	Guests	
	Vendors	
	Contractors	
	Students	

	Staff/Faculty visitors	
	Temporary workers	
	Temporary staff	
	VIP/High-profile visitors	
	Blacklisted visitors (restricted)	
	Each category must have configurable workflows, forms, and approval rules.	
6	Security & Verification	
	OTP verification via mobile number/email	
	Authentication via QR, RFID, Smart Cards, or Face Recognition	
	Integration with Access Control Systems (ACS)	
	Real-time visitor tracking & check-in/check-out logs	
	Optional police verification module for contractors/vendors	
7	Custom Forms & Workflows	
	Custom form builder	
	Institution branding (logo, colors, templates)	
	Customizable approval workflows	
	Conditional rules for data fields	
	Department-wise form variants	
8	Visitor Pass Management	
	Digital pass (QR Code, NFC, PDF, Wallet-ready)	
	Printed badge with custom design	
	Color-coded visitor types	
	Validity control (time, area access, building access)	
9	Mobile Apps	
	For Visitors:	
	Pre-registration	
	Navigation & directions	
	QR card storage	
	Real-time appointment updates	
10	For Hosts/Staff:	
	Approve or reject visitors	
	Get notifications on arrival	
	Visitor summary reports	
11	For Security Personnel:	
	Scan QR codes	
	Manual check-in/out	
	Alerts for blacklisted visitors	
12	Advanced Features - Integration Capabilities	
	LDAP/Active Directory/SSO (Azure AD, Google Workspace, SAML)	
	SMS / WhatsApp and Email gateways	
	CCTV integration (optional)	

	Access control systems	
	Turnstiles/boom barriers	
	Library systems	
	ERP/SIS/IAM platforms	
13	Analytics & Reporting	
	Occupancy dashboards	
	Real-time visitor statistics	
	Daily/Weekly/Monthly dynamic reports	
	Department, building, and host-based analytics	
	Compliance & audit reports	
	Export options (CSV, PDF, Excel)	
14	Emergency Features	
	One-click evacuation report	
	Real-time count of visitors inside premises	
	SMS/WhatsApp alert system	
	Fire drill & event-based reporting	
15	Multi-Lingual Support	
	English + Hindi mandatory	
	Support for regional languages (optional)	
16	Data Security & Compliance Requirements	
	The system must comply with the following:	
	ISO 27001-certified data practices	
	End-to-end encryption for sensitive data	
	Secure API communication using HTTPS/TLS 1.2+	
	Data residency in India (for cloud deployments)	
	Role-based access control	
	Comprehensive audit trails	
	CAPTCHAs & bot protection	
	Regular security patches and updates	
17	Performance Requirements	
	System availability of 99.5% uptime (cloud)	
	Support minimum 500 concurrent users	
	Data retrieval time < 3 seconds	
	Scalability to > 1 million annual visitor logs	
18	Customization Requirements	
	The system must allow:	
	Custom branding (color, logo, institution name)	
	Configurable forms, fields, and data types	
	Editable SMS/WhatsApp/Email templates	
	Custom workflows & approval chains	
	Role-specific dashboards	
	Department-level configurations	

	Integration with institution's website & mobile app	
19	Hardware Support	
	Visitor kiosk	
	QR/Barcode scanners	
	Thermal badge printers	
	RFID/NFC card readers	
	Tablets for security personnel	
	Face recognition terminals (if allowed by policy)	
20	Support & Training	
	The vendor should provide:	
	Admin and user trainings	
	API documentation	
	On-site training for staff/security	
	Online learning content (videos, FAQs, KB articles)	

13. Annexure – II, Bidders Profile

Bidders Profile

S.No.	Particulars	Details to be Furnished
Details of the Bidders		
1.	Name of Company	
2.	Address	
3.	Telephone/Mob :	Fax:
4.	Email:	Website:
Details of Authorized Person		
5.	Name	
6.	Address	
7.	Telephone:	Email:
Information about the company		
8.	Registration Details (Copy of registration to be enclosed)	Date:
		Registration #:
9.	Location and Address of Offices in Jharkhand	
10.	GST Registration Number	

Signature and Seal of Bidder

Date:

14. Annexure – III, INDEX

(On company's Letter Head)

Bidders are advised to prepare the technical bid and mark the page numbers in the bid and mention the same in the INDEX. The INDEX is to be prepared as per the criteria/documents mentioned in the RFP as follows -

S. N.	Description	Required Documents	Details of Submitted Document	Page No.
1.				
2.				

(Authorized signatory) Date:

Name:

Designation:

(Seal/Stamp)

15. Annexure – IV,

Financial Bid Format

Tender RefNo.:

Bidder's Name & Address

To,
The Chairman
Jharkhand Public Service Commission,
Circular Road, Deputy Para, Ranchi – 834001 (Jharkhand)

Subject : Submission of Financial Bids for Supply, Installation, Commissioning of CCTV Surveillance System & Related It Infrastructure at Jharkhand Public Service Commission, Ranchi.

Dear Sir,
We, the undersigned, offer to provide above Supply and Service in accordance with your RFP. Our Financial proposal for project is given as below:

Financial Proposal

S.NO	DESCRIPTION OF ITEMS	UOM	Quantity	Unit Cost including Tax	Total Amount including tax
1	4 MP IR IP Bullet Camera	Nos			
2	4 MP IR IP Dome Camera	Nos			
3	IP PTZ Camera	Nos			
4	VMS (Video Management System)	Nos			
5	55" Inch HD LED TV	Nos			
6	24 Port Layer 2 Switch	Nos			
7	24 Port Distribution Switch	Nos			
8	24 Port Patch Panel with keystone Loaded	Nos			
9	I/O Box	Nos			
10	CAT 6 UTP Patchcord	Nos			
11	CAT 6 Cable with Conduit	Mtr			
12	SFP 1.25	Nos.			
13	OFC Cable 24 Core Armoured with Conduit	Mtr.			
14	LIU 48 Port	Nos.			
15	LIU 6 Port	Nos.			
16	Server	Nos			
17	Workstation for VMS	Nos			
18	Client Workstation	Nos			
19	Storage	Nos			
20	9U Rack	Nos			

21	42U rack with 12 socket	Nos			
22	10 KVA Online UPS minimum 4 Hr. Backup	Nos			
23	6 KVA Online UPS	Nos			
24	Visitor Management System Software	Nos			
25	RFID Card Reader with 10" Tab	Nos			
26	RFID Card	Nos.			
27	Electrical Work (Input/Output for UPS, Rack & Board) with Conduit	Lot			
28	Chemical Earthing	Nos.			
29	One Time Supply Installation Testing and Commissioning (SITC) including all required material Charges and provision of one Resident engineer for 3 Years.	Lot			
Grand Total =					

In Words.....Only.

In Figure Only.

This figure will be used for final financial evaluation

Note:-

- 1. The bidders have to quote for all the items mentioned in the Financial bid . If bidders fail to quote for any item in the commercial proposal in the RFP his proposal will be rejected.**
- 2. The quoted rate for each item to be supplied should include cost for supply, installation, integration and maintenance along with other peripherals / accessories / cables (CAT6, Power etc) and others required for successful installation and maintenance. No additional payment will be done.**
- 3. Price to be quoted with taxes (GST).**
- 4. Payment will be made after Supply, Installation, Commissioning and Go-Live on actual integrated quantity.**

We undertake in competing for and, if the award is made to us, in executing the above services, we will strongly observe the laws against fraud and corruption to force in India namely Prevention of Corruption Act 1988. We understand that you are not bound to accept any proposal you receive.

Yours faithfully,

(Authorized signatory)

Date :

Name :

Designation :

Seal/ Stamp