

KOLLAM DISTRICT COOPERATIVE HOSPITAL SOCIETY LTD Q 952 Palathara, Kollam

Pin: 691020

TENDER DOCUMENT

for

SUPPLY, INSTALLATION, TESTING &
COMMISSIONING, SUPPORT OF ELV
INFRASTRUCTURE COMPONENTS
AT NS MEMORIAL HOSPITAL CAMPUS.

(A Unit of Kollam District Co-operative Hospital Society) -

Tender No: NSMIMS/IT/2020-21/NOV/ACTIVE/109

Dated: November 8, 2020



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(A Un	It of Kollam District Co-operative Hospital Society) 📥	



INTRODUCTION

We are happy to announce that the N. S Memorial Institute of Medical Sciences has been awarded the best hospital in 2020 amongst the co-operative hospitals by the Kerala Government.

N.S Memorial Institute of Medical Sciences (NSMIMS) is a prestigious multispecialty hospital located in N.H bypass, Palathara, Kollam. We are committed to bringing back the 'care' into healthcare. Ours is the first specialty co-operative hospital in Southern Kerala. NSMIMS is one of the first ventures of Kollam District Co-operative Hospital Society.

Our hospital is a tribute to Co-operative movements and the late leader, N Sreedharan. The hospital started functioning since February 2006, built in memory of the renowned politician and humanitarian, Com. N. Sreedharan - popularly known as N.S, the hospital tries to live up to his values. N.S was a great propagator of the Communist Movement in Kerala, an idol in the socio-political field and a favorite leader among the masses. He died in an accident while serving as the State Secretariat Member of the party on February 17th, 1985 at Kottarakkara.

OBJECTIVE.

In an era of ever-increasing healthcare costs, new treatments must not only improve outcomes and quality of care, but also be cost-effective. This is most challenging for emergency and critical care. 'Care' into healthcare has been the mantra of NS hospital for decades. Recent advances focused on our new implementation processes for NS hospital to ensure that it is sensibly protecting the confidentiality, availability, and integrity of assets from threats and vulnerabilities and to reduce workload of health professionals, allowing them to spend little time on the processing of patient information operative Hospital Society

We outline recent advances in e-health medical practice that have positively affected both the quality of care and its cost-effectiveness by the implementation of advanced IT infrastructure. Future medical care must be smarter and more effective if we are to meet the increasing demands of patients. Management has entrusted IT consultant Santhosh Kumar J, Caretel IT Solution, who is familiar with existing infrastructure to prepare the detailed project requirement as per the global practices, to analyze hospital's IT infrastructure requirements.

This changes the significant part of the hospital's operation which involves acquisition, management, and timely retrieval of great volumes of information involving patient medical records, medical history, staff, rooms, operation theatre and ward schedules and information.



SECTION 1 INVITATION FOR TENDER

KOLLAM DISTRICT COOPERATIVE HOSPITAL SOCIETY LTD Q 952, Palathara, Kollam inviting Sealed Tenders on behalf of President of NS Hospital (Two Bid System) for SUPPLY, INSTALLATION, TESTING & COMMISSIONING, SUPPORT OF ELV INFRASTRUCTURE COMPONENTS AT NS MEMORIAL HOSPITAL CAMPUS. The Bidder scope is limited to the supply, installation testing and commissioning, configuration testing training of all the products as per the BOM. The bidder shall be responsible for managing the entire project from commencement to final handing over of the facility to NS Hospital management's satisfaction. Also, Bidder shall coordinate with Hospital maintenance team for the work dependent like civil and electrical.

The interested Bidder can be downloaded the Tender documents from the hospital website www.nshospital.org from 08.11.2020 to against a payment of non-refundable fee of Rs. 5000/- (Five Thousand Only) in the form of crossed Demand Draft drawn in favour of the Secretary, Kollam District Cooperative Hospital Society Ltd, Q 952 payable at Kollam. The qualified Bidder can submit their BID as per tender schedule. For more information about this invitation please contact nsmimskollam@gmail.com.

BRIEF SCHEDULE

SL NO	DESCRIPTION TIVE	EMD	COMPLETION PERIOD	TENDER FEES
1	Supply, Installation, Testing tive Commissioning, Support of ELV Infrastructure Components at Ns Memorial Hospital Campus	Rs. 2 Lakhs	4 Months	Rs.5000

Secretary
NS MEMORIAL INSTITUTE OF MEDICAL SCIENCE



SECTION II SCOPE & DESCRIPTION OF CONTRACT

2.1. GENERAL DEFINITIONS.

THE FOLLOWING GENERAL DIRECTIONS SHOULD BE OBSERVED WHEN USING THE DOCUMENT.

- **2.1.1 Society** means Kollam District Cooperative Hospital Society Ltd Q 952, represented by the Secretary.
- 2.1.2 Purchase Committee is a Sub Committee of the Board of Directors authorized to decide on the purchase of the drugs, equipment's and other stores procured by the Society.
- **2.1.3 Tender Inviting Authority** is the Secretary, Kollam District Cooperative Hospital Society Ltd, Q 952 who calls for tenders and ensures supply, installation and after sales service of the items procured under this tender document.
- 2.1.4 Blacklisting/debarring In the event of violation of any conditions of the tender document, more specifically those mentioned in the Specific Conditions of Contract (Section V) and General Conditions of Contract. (Section VI) of this tender document, the bidders will be prevented for a period of 5 to 10 Years from participating in the future tenders of Tender Inviting Authority, the period of debarring being decided on the basis of the number of violations in the tender conditions and the loss/hardship caused to the Tender Inviting Authority on account of such violations.
- 2.1.5 Participants / Bidder This Tender invitation has been prepared for use by public entities in India.
- 2.1.6. **NSMIMS** means N.S Memorial Institute of Medical Sciences

A Unit of Kollam District Co-operative Hospital Society)

- **2.1.7 CMC** means Comprehensive Maintenance Contract.
- **2.1.8 SLA** Service Level Agreement.
- **2.1.9 AMC** Annual Maintenance Contract



2.2. SCOPE OF SUPPLY INSTALLATION OF ELV COMPONENTS.

- 2.2.1 Scope of the work is to provide Turnkey Solutions that includes but is not limited to supply and installation only. It should cover Supply, Installation, Implementation, Commissioning, Training, providing user manual, providing 36 months Warranty for the total solution including all hardware, software, materials, services, and support etc. Which should provide an Integration solution for TV and Signage Displays with Digital signage software, CCTV System, PA System, Wi-Fi System, Nurse Calling System, Access Control System, Firewall, Server Storage / Server and Workstations, Information Kiosks, Thermal Screening System, Presentation and Video Conferencing System, ICU Patient Video Interaction Solution, Nurse Station Tabs, Passive Cabling for Voice / EPBX System. All necessary cabling / wiring / sockets and allied infrastructure conforming to respective quality / standard norms are also included in the scope of this job. The bidders are advised to visit the mentioned sites before quoting bid in the tender.
- 2.2.2 The maintenance services to be provided by the bidder under this contract shall be for entire system, in accordance with the terms and conditions laid down in the contract, of the active equipment's / system, all accessories and attachments of the equipment's / systems installed as per standard. Providing of all additional spare parts, repair of the defective equipment or units / parts thereof the tender during the warranty period and imparting training to the IT officers / executives about operation, repair, and maintenance of the active components.
- 2.2.3 The Bidder shall be responsible for providing all materials, equipment, installation / Amaintenance tools and services, specified or otherwise, which are required to fulfill the intent of ensuring operation-ability / maintainability and reliability of total materials covered under these specifications. The work and materials shall follow all applicable, statutory regulations and safety requirements applicable.



SECTION III TENDER SCHEDULE

3.1. TENDER DETAILS

1	Tender No	NSMIMS/IT/2020-21/NOV/ACTIVE/109
2	Cost of Tender Document	Rs. 5000/-
3	Earnest Money Deposit	Rs. 2 Lakhs.
4	Performance Security	5% of The Offered Price (For Successful Tenders)
5	Validity of Performance Security	3 years after the date of completion of the contractual obligations.
6	Tender Validity	The tender shall be valid for a period of 90 days from the date of opening of the tender.
7	Tender Document Delivery Mode	Through speed post / registered post/ courier or either by person.

3.1. 3 PREBID QUARIES

- 3.1.3.1 Bidder's request for Clarification to be send at nsmimskollam@gmail.com to the minimum of one day before the pre-bid meeting.
- 2.1.3.2 All questions received at least one day before the pre-bid meeting will be formally responded via mail to all participating bidders if required. Alternatively, NSMIMS may at its discretion, answer all such queries in the pre-bid meeting.
- **2.1.3.3** All technical clarification shall be sent via formal email communication only. During the Prebid meeting only necessary topics will be discussed.
- **2.1.3.3** The queries must be submitted in the following format only. Indefinable queries without reference to the tender section numbers, paragraph numbers and page number will not be replied.

2.1.3.4 PRE-BID QUERY RESPONSE FORMAT

#	ORGANIZATION	PAGE NO	SECTION		CLARIFICATION SOUGHT	QUERY RESPONSE	
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3.2. IMPORTANT DATES.

SL NO	PARTICULARS	DATE & TIME	
1	Date of Release of Tender	08.11.2020 10AM	
2	Prebid Quarries	10.11.2020 .8AM	
3	Prebid Meeting	16.11.2020 11AM	
4	Tender Submission Start Date	23.11.2020 10.30AM	
5	Tender Submission End Date	24.11.2020 5PM	
6	Date of Technical Bid Opening	25.11.2020 11AM	
7	Date of Demonstration of the Equipment	To be informed to qualified bidders qualifying after opening of technical bids	
8	Date of Opening of the Price Bid	10.12.2020 11AM	

SECTION IV 4. DETAILS OF IT EQUIPMENT TENDERED

- 4.1 Structured list of solutions required at NSMIMS for the supply, installation, implementation, commissioning etc.
 - (a) TV and Signage Displays with (i) Server and Workstations.

 Digital signage software. (j) Information Kiosks.
 - (A(b) nit of CCTV System, ict Co-operative H(k) pital Thermal Screening System.
 - (c) PA System,
 (l) Presentation and Video
 (d) Wi-Fi System.
 (e) Nurse Calling System,
 (m) ICU Patient Video Interaction
 - (f) Access Control System. Solution,
 (g) Firewall. (n) Nurse Station Tabs.
 - (g) Firewall.(h) Server Storage(n) Nurse Station Tabs.(o) Passive Cabling for Voice / EPBX System.
- 4.2 The detailed technical specifications and other quality parameters of the above equipment may be seen at the Appendix in Section VIII-Technical Specifications.



SECTION V 5.1 SPECIFIC CONDITIONS OF CONTRACT

SL NO	ACTIVITY	TIME LIMIT
5.1.1	Installation / Delivery period	Tender Inviting Authority
5.1.2	Completion of installation	3 – 4 Months from the date of supply
5.1.3	Comprehensive warranty period	3 Years for all items supplied and installed.
5.1.4	Frequency of visits to NSMIMS during Warranty	Two minimum visits in every quarter for periodic / preventive maintenance and any time for attending repairs/break down calls.
5.1.5	Submission of Performance Security and entering contract	30 days from the date of issuance of Letter of Intent
5.1.6	Payment Installments of Price of equipment's and ratio	cost will be paid. Further 25% will be paid on
5.1.7	Time for making payments by Tender Inviting Authority	
5.1.8	Maximum time to attend Periodic / Repair call	Within 4 hours during warranty period. (If not response within the hours, penalty will be induced).
5.1.9	Uptime in a year	99.8%

5.2. PREQUALIFICATION OF OEM.

- **5.2.1** OEM shall be global player with list of enterprise class customers. (Details should be furnished)
- **5.2.2** They should have large installation base in India with well distribution system to support the clients (List of National / Regional distributors details to be furnished).
- **5.2.3** OEM shall propose their premium line of global products. Region specific products shall not be proposed which will result in rejection
- **5.2.4** Each solution should be from one OEM make only. Mix and match integration will not be approved, and OEM should have at least one Service / Repair / Spare unit in India.



- (Relevant address and contact details of the Service unit to be attached along with the submission)
- **5.2.5** All proposed products shall be available in OEM authorised website with quoted product ID to download the product data sheet with all technical information
- **5.2.6** All Components should be RoHS (Restriction of Certain Hazardous Substances) complied. Declaration –RoHS Compliant should clearly be mentioned on datasheets of each Passive Components.
- **5.2.7** OEM should provide 3 Years onsite Warranty and Application Assurance for post installation.
- **5.2.8** Must provide ISO Certification of OEM.
- **5.2.9** OEM shall provide the online verification system to verify the Genuity of the products which they offer. This will make sure all proposed products are origin from OEM and qualify all technical and performance parameters as per global standard.

PREQUALITIFACTION CRITERIA OF BIDDER.

- 5.2.10 The bidder should be either an Original Equipment Manufacturer (OEM) or Authorized Dealer / Distributer of the OEM of the offered products. A valid certificate of Manufacturers Authorization Form (MAF) should be enclosed.
- 5.2.11 A letter stating that the products quoted is not end of life should be produced from the OEM.
- The bidder must have an affiliated support center in Trivandrum / Kollam / Kochi (Attach Proof of Registered Office) and should have 24/7 call logging facility. Details of call logging procedure, support center and escalation matrix should be provided in the bid.
- **5.2.13** The bidder should provide a single point of contact and email address for seeking clarification regarding the bid.
- **5.2.14** Bidder should have expertise of having successfully completed similar hospital works and supplies during the last five (5) years, supporting documents of two purchase orders and installation reports for similar works or larger supplies/setup should be enclosed. The work execution should be either one of the following:
 - a) One similar order costing not less than Rs 5 Crore
 - b) Two similar orders each costing not less than Rs 3 Crores.
- **5.2.15** [Similar order means "Supply, installation and commissioning of ELV Infrastructure Network components". (Bidder to submit self-attested copy of PO and Completion



- Certificate from the Client] Completion certificate is mandatory for two hospital projects with reference letter.
- **5.2.16** The Bidder should have been in this business for a period not less than ten years as on tender publication date. (Supporting documents should be enclosed).
- **5.2.17** The Bidder should not have been blacklisted by any of the Government / Private agencies for any corrupt or fraudulent practices and he shall give a declaration to that effect. Self-declaration enclosed.
- **5.2.18** The Bidder must have a turnover of Rs 50 Crore, in at least two of the last three Financial Years ending on 31.03.2020. Relevant documents should be enclosed.
- **5.2.19** The Bidder is required to quote for the complete BOQ. Partial quotes are liable to be rejected.
- **5.2.20** The Services offered by the Bidder should have ISO Certification.
- **5.2.21** The Bidder should be ready with the deliverables (hardware and software environment) within 30 40 working days from the date of purchase order.
- 5.2.22 If any complaint is lodged by NSMIMS the same must be attended to and resolved within four / six hours.
- **5.2.23** NSMIMS reserves the right to purchases of additional resources during the time of purchase order or later.
- 5.2.24 A Detailed Network Flow Chart of Connectivity Schematic Diagram (A1) and Solution document (A4) of the offered system should be attached along with the final invoice with PDF document. Upon request drawings original (PSD, Corel & AutoCAD) soft copy should be submitted for future alteration.
- 5.2.25 The Bidder shall have Company Registration Certificate with CIN under the Company's Act, valid PAN, PF registration, Professional Tax, ESI, Sales tax Registration Certificate and any other statutory required registration. Copies of the above valid certificate (Code, Name of Company, Expiry Date, etc...) must be submitted as evidence. The bidder shall enclose Income Tax Returns and the audited Balance Sheet for the last Five years.



5.4. FORMAT AND SIGNING OF BID.

- 5.4.1 The Bidder shall prepare three copies of the bid (Both Technical and Commercial) clearly making each "Original Bid" and "Copy of Bid" and Soft Copy (USB Storage) as appropriate. In the event of any discrepancy between them, the original shall govern.
- 5.4.2 The original and copy of the bid shall be typed or written in indelible ink and shall be signed by the bidder or a person or persons duly authorized to bind the bidder to the contract. Written power-of-attorney accompanying the bid shall indicate the letter of authorization. The person or persons signing the bid shall initial all pages of the bid, except for unlamented printed literature.
- 5.4.3 The bid shall contain no interlineations, erasures or overwriting except as necessary to correct errors made by the bidder, in which case the person or persons signing the bid shall initial such corrections.
- **5.4.4** Hard copies of all tender technical (Prequalification) documents shall be submitted as a spiral binding book, properly indexed, proper blank cover heading, page numbered and signed and sealed. Others will be rejected.

5.5 SUBMISSION OF BIDS

- The tender documents should be page numbered and contain the list of contents with page numbers. The deficiency in documentation may result in the rejection of the Bid.
- 5.5.2 Bidders are advised to go through the Tender document carefully to understand the documents required to be submitted as part of the bid (Technical Bid, Price Bid).

 Please note the number of covers in which the bid documents must be submitted, the number of documents including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.
- **5.5.3** Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document / schedule and generally, they can be in PDF formats for soft copy of the bid. Bid documents may be scanned with 100 dpi.
- **5.5.4** The bidder shall ensure to submit the following details in their bid. Omission of items mentioned mandatory shall lead to rejection of the bid.
 - (a) OEM Customer details. (b). OEM National Distributors details. (c). OEM Service center details. (d). OEM ISO Certificate. I. Tender fee. (f). EMD. (g). OEM MAF for each solution wise. (h). Letter from OEM products are not end of Life and post-sales support activities SLA. (i). Service Level Escalation Matrix. (j). Single Point contact details. (k). Self-attested Copy of the purchase orders. (l). Proof of 10 Years of existing. (m). Financial Turnover details. (n). Bidder ISO certification. (o).



Original Bid signed and sealed. (p). Copy of the Bid. (q). Soft Copy of the Technical Bid. I. Delivery Schedule. (s). Certificate of company Registration with CIN details. (t). Valid PAN. (u). PF registration details. (v). Professional Tax details. (w). Sales tax registration certificate. (x). Income Tax Returns. (y). Balance sheet for the last 5 Years.

5.5.5 Sealing and Marking of Bids.

The bidders shall seal the original and the copy of the bid in an inner and an outer envelope, duly marking the envelopes as 'Original Bid' and 'Copy of Bid'. Soft Copy must be kept inside the original bid within an envelope.

- **5.5.6** The Inner and outer envelopes shall be: -
 - (a) Addressed to the purchaser at the following address: -

"The Secretary, Kollam District Cooperative Hospital Society Ltd Q 952,NS Memorial Institute of Medical Sciences (NSMIMS), Palathara, Kollam, Kerala – Pin: 691020

- (b) Bear the Invitation for Tender number and the words "DO NOT OPEN BEFORE....." (Here insert the time and date of Bid opening).
- **5.5.7** The inner envelopes shall indicate the name and address of the bidder.
- 5.5.8 If the outer envelope is not sealed and marked as required herein, the purchaser will assume no responsibility for the bid's misplacement or premature opening.
- **5.5.9** Bidders shall submit their bids in two parts as under:
 - a) Technical bid, in duplicate, consisting of technical details bringing out clearly in A Unital separate sheet, the deviations in specifications, if any, from that of 'Technical Specifications' and also clause-by-clause compliance of specifications along with the commercial terms and conditions and bid security.
 - **b) Price bid** showing only item wise prices in a separate sealed cover inside the main cover.
 - c) It may be noted that when the main cover is opened on the date and time scheduled for tender opening, only the technical bids will be opened.
 - d) Only those bidders whose technical bids are found to be substantially responsive and demonstration of the functioning of the equipment found satisfactory will be informed of the date and time of opening of their price bids. Price bids of others will not be opened.
- **5.5.10** Any deviation from the tender specifications of the items, shall be clearly indicate highlighted with part number, model and make.



- **5.5.11** The bidder shall submit only one option, which is best suitable to meet NS Hospital requirements. The bids submitted with more options shall be liable to be rejected.
- **5.5.12** Quotation should clearly specify delivery schedule.
- 5.5.13 The bidder may quote the items, which meets the requirements and specification. In such case, the bidder must provide the layout, make, model, material specifications, dimensions, brochures, photo catalogues of items quoted along with the bid, if available. But accepting the product is sole discretion of NSMIMS.
- **5.5.14** Bidders are advised to visit with prior appointment and familiarize themselves with the site conditions and concerned areas before submission of tender documents.
- **5.5.15** Split-up part numbers of each item of the BoQ is to be shown in the financial bid with line item cost.
- **5.5.16** Bidder must submit the detailed BOM (Bill of Material) along with the part nos. for all quoted products inclusive of all licenses.
- **5.5.17** Bidder has to submit the OEM compliance letter showing line by line compliance with tender specification.

5.6. DEADLINE FOR SUBMISSION OF BIDS.

- 5.6.1 Bids must be received by the purchaser at the address specified at para 5.5.6 not later than the time and date specified in the invitation for bids. In the event of the specified date for the submission of bids being declared a holiday for the purchaser, the bids will be received up to the appointed time on the next working day.
- 5.6.2 The purchaser may, at its discretion, extend this deadline for the submission of bids by amending the bidding documents, in which case all rights and obligations of the purchaser and bidders which were subject to the previous deadline will thereafter be subject to the deadline as extended.
- 5.6.3 It is the responsibility of the bidders to ensure that the completed bidding documents are delivered to the Tender Inviting Authority before the closing date and time stipulated above for receipt of bid, failing which the bid would be considered late and rejected.

5.7. LATE BIDS

5.7.1 Any bid received by the purchaser after the deadline for submission of bids prescribed by the purchaser, will be summarily rejected.

5.8. SINGLE BID

5.8.1 Any bid received by the purchaser in the form of a single bid incorporating both technical details and quoted price will be summarily rejected.



SECTION VI GENERAL CONDITIONS OF CONTRACT

- **6.1** Contents of The Tender Document (See Table of Content Page 2)
- **6.2.** The general guidelines on the tender process are as below.

6.3. RESPONSIBILITY FOR VERIFICATION OF CONTENTS OF TENDER DOCUMENT.

- **6.3.1** The purchasers of the tender form shall examine all instructions, forms, terms and conditions and specifications in the Tender Document and verify that all the contents mentioned under clause 6.1, are contained in the 'Tender Document'.
- **6.3.2** Failure to furnish any information required by the tender documents and submission of an offer not substantially responsive to it in every respect shall be at the bidder's risk and may result in the rejection of the bids, without any further notice.

6.4 GUIDELINES FOR PREPARATION OF TENDER.

- 6.4.1 The Bidder shall bear all costs associated with the preparation and submission of its bid and the Kollam District Cooperative Hospital Society Ltd, Q 952, hereinafter referred to as the "Tender Inviting Authority", will in no case be responsible or liable for these costs, regardless of the conduct or outcome of the bidding process.
- In the event of documentary proof as required not being enclosed, the Tender shall be liable to be rejected. All pages of the bid, except for unamendable printed literature, shall be signed by the authorized person or persons signing the bid along with the stamp of the bidder.
- Language of Bid: The Bid prepared by the bidder and all correspondence and documents relating to the bid exchanged by the Bidder and the Tender Inviting Authority, shall be in English language only. Supporting documents and printed literature furnished by the Bidder may be written in another language provided that they are accompanied by an authenticated accurate translation of the relevant passages in the English language in which case, for purposes of interpretation of the Bid, the English translation shall govern.
- 6.4.5 The documentary evidence (other than those regarding supply and past performance) submitted along with the Tender shall be produced duly attested by the bidder on every page and serially numbered. Any interlineations, erasures or overwriting shall be valid only if they are initialed by the person (s) signing the offer.
- **6.4.6** Bidder shall submit a declaration letter as per the format given as Annexure 10 and copy of amendments published, if any, signed by the bidder or the authorized



- representative shall be enclosed as part of the technical bid as a proof of having read and accepted the terms and conditions of the tender document.
- **6.4.7** An offer submitted in vague /ambiguous financial terms and the like, shall be deemed to be non-responsive and shall be summarily rejected.
- **6.4.8** Clarifications to specific requests shall be responded through e-mail and general clarifications, affecting all the bidders shall be published in the official website of the Tender Inviting Authority.

6.5 EARNEST MONEY DEPOSIT (EMD)

- **6.5.1** EMD of unsuccessful bidders will be discharged /returned promptly after the formalities of the NSMIMS.
- **6.5.2** The successful bidder's EMD will be discharged upon the bidder signing the contract and furnishing the performance security.
- **6.5.3** No interest will be paid for the EMD submitted.
- **6.5.4** The EMD will be forfeited, if a bidder,
 - (a)Misrepresents facts or submits fabricated / forged / tampered / altered / manipulated documents.
 - (b) Withdraws its bid after the opening of technical bid.
 - (c) Fails to sign the contract after issuance of Letter of Intent
 - (d) Fails to furnish performance security after issuance of Letter of Intent

6.6 DEADLINE FOR SUBMISSION OF TENDER

- Tenders shall be submitted before the last date & time prescribed and the Tender Inviting Authority shall not be held liable for any delay whatsoever.
- 6.6.2 The Tender Inviting Authority may, at its discretion, extend the deadline for submission of tender by amending the Tender Document, in which case, all rights and obligations of the Tender Inviting Authority and the bidders previously subjected to the deadline shall thereafter be subjected to the deadline so extended.

6.7 MODIFICATION AND WITHDRAWAL OF BIDS.

6.7.1 The bidder can modify or withdraw bids submitted before the last date & time for submission.

6.8 PERIOD OF VALIDITY OF TENDER

6.8.1 The tender must remain valid for minimum 180 days (six months) from the date of opening of price bid. A bid valid for a shorter period shall be rejected by the Tender Inviting Authority as non-responsive.



6.8.2 Withdrawal or non-compliance of agreed terms and conditions after the execution of agreement or issuance of Supply Order will lead to invoking of penal provisions and may also lead to blacklisting/debarring of the successful bidder.

6.9 ACCEPTANCE / REJECTION OF TENDERS:

- **6.9.1** It is not necessary that the offer of the firm quoting the lowest rates shall be accepted.
- 6.9.2 At any point of time, the Tender Inviting Authority reserves the right to cancel or modify the supply order even after it is awarded to the successful bidder, in the event of the firm deviating from the agreed terms and conditions or as mutually agreed.

6.10 NOTICES.

- **6.10.1** The Tender Inviting Authority shall publish the following information on its website at the appropriate time as part of ensuring transparency in the tender process.
 - a) The tender notices, documents, corrigendum, addendum etc., if any.
 - b) Amendments to the tender conditions if any
 - c) Results of the responsiveness of the technical bids and minor infirmities / clarifications sought.
 - d) List of bidders qualified for demonstration of equipment
 - e) Results of the demonstration of the equipment and provisional list of bidders qualified for price bid opening.
 - f) Final List of technically qualified bidders.
- Notice, if any, relating to the contract, given by one party to the other shall be sent in writing or by email and confirmed by post. The procedure will also provide the sender of the notice, the proof of receipt of the notice by the receiver. The addresses of the parties for exchanging such notices will be the addresses as incorporated in the contract.
- 6.10.3 The effective date of a notice shall be either the date when delivered to the recipient or the effective date specifically mentioned in the notice, whichever is later.

6.11 OTHER TERMS AND CONDITIONS

- **6.11.1** All the terms and conditions in respect of warranty/guarantee, Training of Staff etc. mentioned herein shall be complied with.
- **6.11.2** Technical Specifications and Standards: The Goods & Services to be provided by the successful bidder under this contract shall conform to the technical specifications and quality control parameters mentioned in this document.
- **6.11.3** The bidder shall be responsible for payment of any charges due to any statutory authorities such as Income Tax, GST, and Customs Duties etc.



6.11.4 If at any point of time it is found out that there is a responsibility to affect some statutory deduction at the source, the Tender Inviting Authority will have the authority to do so.

6.12. TENDERING SYSTEM.

- **6.12.1** The tenders / bids are to be submitted in two covers.
- **6.12.2** PART-I is titled as **TECHNICAL BID**. The technical bid shall contain the complete technical specification, details on competency and financial stability of the bidder, delivery and after sales conditions.
- 6.12.3 PART II is titled as PRICE BID (BOQ) must be submitted.

6.14. AMENDMENT OF TENDER DOCUMENTS.

- **6.14.1** At any time prior to the deadline for submission of tender, the Tender Inviting Authority may, for any reason, modify the tender document by amendment.
- 6.14.2 The amendments shall be published in the website, and the bidder shall submit copy of amendments published, if any, signed by the bidder or the authorized representative as part of the technical bid as a proof of having read and accepted the terms and conditions of the tender document.
- 6.14.3 The Tender Inviting Authority shall not be responsible for failure to inform the prospective bidders for any notices published related to each tender. Bidders are requested to browse website of the Tender Inviting Authority for information/general notices/amendments to tender document etc. on a day to day basis till the tender is concluded.

6.15. CONTENTS OF BID SUBMISSION.

- **6.15.1** Tender Document duly signed and sealed.
- **6.15.2** Tender Document cost (in case Tender document is downloaded from the website)
- **6.15.3** Earnest Money Deposit
- **6.15.4** Company profile / General Information about the bidder
- **6.15.5** Annual turnover statement for last five years certified by the auditor.

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- **6.15.6** Offer form as prescribed in the Annexure-VI.
- **6.15.7** The documents proving that the bidder is an Original Equipment Manufacturer or their principal dealer/importer for Kerala/ South India/India (Annexure I/II)
- **6.15.8** Declaration Letter as per Annexure X and copy of amendments, if any, duly signed in all pages by the bidder or the authorized signatory.



- **6.15.9** Price Bid
- **6.15.10** Power of Attorney as per format in Annexure VIII.
- **6.15.11** Notary attested documents such as articles of association/partnership deed etc., proof of incorporation, proving the registration of place of business and showing the details of partners/promoters/board of directors etc.
- **6.15.12** Notarized audited copies of the P& L Accounts, Balance Sheet, and annual report for the last five completed years certified by the auditors.
- **6.15.13** Notary attested copy of IT returns filed for the last five completed years.
- **6.15.14** Details of Service centers as per Annexure VII
- **6.15.15** Documents showing service Centre facilities in Kerala/South India.
- **6.15.16** Technical literature, product data sheet. (Original brochure and other documents proving that the equipment tendered meets all the technical parameters laid down herein).
- **6.15.17** Comparative statement of the technical specifications and compliance with the supplier's offered model, deviations, and justifications.
- 6.15.18 The documents such as supply orders, performance reports showing that the bidder and manufacturer is having previous experience in the business of the supply and installation of the equipment offered.
- 6.15.19 List of Installations of the offered model in Kerala and South India (institutions with name/designation of the contact person, phone, number/email)
- **6.15.20** Copy of Quality Certificate requested.
- **6.15.21** Complete Price BoQ with part number and specification only (without price)

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6.15.21 As listed in the submission of bids section 5.5.4

6.16. OPENING OF TENDER

- 6.16.1 The date of technical bid opening is published in advance. However, the date of opening of price bid will be decided only after demonstration / obtaining clarification(s) from those who qualify in the technical bid and shall be conveyed to the qualified bidders from time to time.
- 6.16.2 The opening of the technical bid and the price bid shall be done by the Tender Inviting Authority or his authorized representatives. The prospective bidders or his/her representative who choose to attend the bid opening can attend the office of the Tender Inviting Authority for the opening of the bids.



- 6.16.3 In the event of the specified date for opening of Tender being declared holiday, the Tender shall be opened at the appointed time and venue on the next working day.
- 6.16.4 In the event of a tender (a) wherein the claims in the documents are materially missing or (b) if there is substantial error or (c) if the bidder is unqualified for want of required qualifications, the tender shall stand disqualified and rejected. However, minor infirmities in the submission of documents will be allowed to be rectified to ensure qualification of maximum number of competitive offers to the final round.
- 6.16.5 The bidder shall be responsible for properly uploading the relevant documents in the formats specified in the specific location and the Tender Inviting Authority shall not be held liable for errors or mistakes done while submitting the bid.
- **6.16.6** The date and time of opening the Price Bid will be announced only after the opening of the Technical Bid and demonstration of the features, operation etc. of the equipment by the bidders.

6.17. EVALUATION OF TENDER

- **6.17.1** Bid Evaluation Committee:
- 6.17.1.1 The commercial terms and documents submitted as part of the technical bid shall be scrutinized by a Bid Evaluation Committee constituted by the Tender Inviting Authority.
- 6.17.1.2 The Bid Evaluation Committee may also verify the veracity of claims in respect of the known performance of the equipment offered, the experience and reputation of bidder in the field, the financial solvency etc.
- 6.17.2 (A Unit of Kollam District Co-operative Hospital Society)
- 6.17.2.1 Evaluation of the technical bid shall be conducted by a Committee called the 'Technical Committee'. The demonstration of the machinery / equipment shall be conducted before the technical committee.

6.17.3. PURCHASE COMMITTEE

- **6.17.3.1** The recommendations of the Bid Evaluation Committee/Technical Committee will be further scrutinized by the Purchase Committee.
- 6.17.4 A bidder, at any stage of tender process or thereafter, in the event of being found after verification by the Tender Inviting Authority, to indulge in concealment or misrepresentation of facts, in respect of the claims of the offer, shall be debarred/black listed.



- 6.17.5 The Tender Inviting Authority's decisions on the tender submitted shall be based on the decisions taken by the various committees and otherwise as per the clauses as mentioned above.
- 6.17.6 Arithmetical errors shall be rectified on the following basis: If a discrepancy occurs between words and figures, the amount in words shall prevail and the offer shall stand corrected to that effect. If the bidder does not accept the correction of errors, his offer shall be rejected. The Tender Inviting Authority may waive any minor infirmity or non -conformity or irregularity in an offer, which does not constitute a material deviation, provided that the same shall not prejudicially affect the interest of the other bidders.

6.18 CLARIFICATION OF BIDS

- 6.18.1 During evaluation of bids, the Tender Inviting Authority may, at its discretion, give opportunity to the bidder(s) for clarification of points raised by the bid evaluation committee or technical committee, as the case may be, on its bids submitted
- 6.18.2 The request for clarification and the response shall be in writing, either through email or by post.

6.19 DEMONSTRATION OF TECHNICAL SPECIFICATIONS AND PERFORMANCE: -

- Before the opening of the Price Bid, immediately after the opening of Technical Bid, the bidder shall arrange for demonstration of the machine at own cost, either directly or through authorized Dealer / Distributors, as the case may be, for verification by the Tender Inviting Authority.
- 6.19.2 If it is not possible for the successful bidder to provide the model offered which conforms to the exact specifications as per section IV, then it shall be open to the bidder to submit a model with similar specifications for the demonstration, if agreed by the Tender Inviting Authority. The purpose of this exercise is to satisfy the Tender Inviting Authority about the ability of the bidder to manufacture and supply those items of specified specifications of good quality. However, the successful bidder will have to satisfy the Tender Inviting Authority during the installation of the first piece of accessories at any location specified that it conforms to the requirements of the Section IV and failure to supply the equipments as per the requirements will lead to forfeiture of performance security and may also lead to blacklisting/debarring the bidder for a period of 5 to 10 Years.
- **6.19.2** Failure to demonstrate the technical specification or performance of the items to the satisfaction of the technical committee or the Tender Inviting Authority will lead



- to automatic rejection of the tender and the price bid of such bidders shall not be considered for opening of Price bids.
- 6.19.3 The Tender Inviting Authority's contractual right to inspect, test and, if necessary, reject the goods after the goods' arrival at the final destination shall have no bearing of the fact that the goods have previously been inspected and cleared by Tender Inviting Authority's inspector during demonstration as mentioned above.
- 6.19.4 Goods accepted by the Tender Inviting Authority at initial inspection and in final inspection in terms of the contract shall in no way dilute Tender. Inviting Authority's right to reject the same later, if found deficient in terms of the warranty clause of the contract.

6.20. PRICE BIDS

- 6.20.1 The Price bids (BOQ) of the short-listed technically qualified bidder(s) will be opened only after evaluation of Technical Bids. The short-listing of the bidder(s) will be carried out based on the technical evaluation and demonstration.
- 6.20.2 The opening of the price bid shall be done by the Tender Inviting Authority or his authorized representative and only the Price Bids of those firms qualified in the detailed scrutiny and evaluation of the Technical bid and successful pre delivery inspection / demonstration, conducted by the Technical Committee/Tender Inviting Authority shall be opened in the second round.
- 6.20.3 Price offered shall be all inclusive and in Indian Rupees. Price should be quoted for the supply, installation, training and successful commissioning of the accessories and fulfilment of warranty and aftersales service to the satisfaction of the NSMIMS.

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- **6.20.4 Fixed price:** Prices quoted by the Bidder shall be fixed during the period of the contract and not subject to variation on any account.
- **6.20.5** Price variation due to statutory changes including excise/customs duty or GST may be considered during contract period before releasing the Letter of Intent/supply order on receipt of proper documents.
- **6.20.6** There shall be no hidden costs.
- 6.20.7 Basic Price: The price of the equipment, accessories quoted shall be inclusive of ex-factory, ex-show-room, ex-warehouse, or off-the-shelf, or delivered, as applicable, all accessories / additional accessories / spares mentioned in the technical specification section IV, safe storage, on site assembly if any of the supplied goods, installation, testing and commissioning of the equipment, accessories, furnishing of detailed operations manual, service manual with circuit diagram and maintenance manual for each appropriate unit of supplied goods. Basic



- price shall also include loading unloading & stacking, all other taxes, duties & levies and incidental services if applicable.
- **6.20.8** Customs duty payable on the goods, if applicable, shall be indicated separately. The bidder shall indicate the value of import items on which customs duty is payable.
- **6.20.9** Tax (GST): Applicable Tax (GST) shall be quoted in numeric values and in Rupees
- **6.20.10** The packing, forwarding freight and insurance charges applicable shall be quoted separately in numeric values and in Rupees.
- **6.20.11** The total amount will be calculated and will be taken for evaluation and bid ranking.
- **6.20.12** The bidders shall offer prices of the accessories inclusive of all the accessories mentioned in the technical specification under and under no circumstances offer the essential equipment's, without which the accessories cannot function properly, as optional or left un-quoted.
- 6.20.13 The price shall be firm and shall include all applicable taxes and charges. Any variation in the duties, levies etc. during the period of services shall be charged to the bidder account. The rates quoted shall be all inclusive, with the delivery, up to destination i.e. NSMIMS, Kollam. Taxes not quoted shall not be paid to the Bidder...

6.22. AWARD OF CONTRACT.

- 6.21.1 Criteria: The contract will be awarded to the lowest evaluated responsive bidder qualifying to the final round after scrutiny of the technical bids and demonstration of the accessories, i.e. after price bid opening. However, the Tender Inviting Authority reserves the right to reject the claims of the lowest evaluated bidder for enough (A reasons: Ollam District Co-operative Hospital Society)
- **6.21.2** The details such as rates, the model of the accessories selected for award of the contract and the details of successful bidders etc. will be published during the period of price firmness on the website of the Tender Inviting Authority

6.23. NOTIFICATION OF AWARD/LETTER OF INTENT (LOI).

6.23.1 Before expiry of the tender validity period, the Tender Inviting Authority will notify the successful bidder(s) in writing, by registered / speed post or by email (to be confirmed by registered / speed post immediately afterwards) that its tender for accessories, which have been selected by the Tender Inviting Authority, has been accepted, also briefly indicating therein the essential details like description, specification and quantity of the goods & services and corresponding prices accepted. This notification is undertaken by issuing a Letter of Intent (LOI) by the Tender Inviting Authority.



- 6.23.2 The successful bidder, upon receipt of the LOI, shall furnish the required performance security and submit an agreement in the prescribed format within ten days, failing which the EMD will forfeited and the award will be cancelled.
- **6.23.3** The Notification of Award shall constitute the conclusion of the Contract.

6.24. SIGNING OF CONTRACT.

- 6.24.1 The successful tender shall execute an agreement in the format as given under AFTER SALES SERVICE CONDITIONS for ensuring satisfactory supply, installation, commissioning and the aftersales service/support during the warranty period.
- The successful bidder shall submit bank guarantee in the format as per Annexure IV as performance security.
- Promptly after notification of award, within ten days from the date of the letter of intent, the successful bidder shall return two copies of the contract (as per agreement Annexure III), both on `Rs 200/- stamp paper purchased in the name of the successful bidder, duly signed and dated, to the Tender Inviting Authority by registered / speed post or in person.
- The successful bidder shall later extend the contract converting it as Comprehensive Maintenance Contract/Annual Maintenance Contract with the Tender Inviting Authority/three months prior to the completion of Warranty Period if the Tender Inviting Authority desires so. The CMC will commence from the date of expiry of the Warranty Period.
- Assignment: -The successful bidder shall not assign, either in whole or in part, its contractual duties, responsibilities, and obligations to perform the contract, except with the Tender Inviting Authority's prior written permission
- 6.24.6 Subcontracts: The successful bidder shall not subcontract the execution of the contract. Such action, if done without the knowledge of the Tender Inviting Authority prior to the entering of the contract, shall not relieve the successful bidder from any of its liability or obligation under the terms and conditions of the contract.
- 6.24.7 Modification of contract:- If necessary, the Tender Inviting Authority may, by a written order given to the successful bidder at any time during the currency of the contract, amend the contract by making alterations and modifications within the general scope of contract in any one or more of the following.
- **6.24.7.1** Specifications, drawings, designs etc. where goods to be supplied under the contract are to be specifically manufactured for the Tender Inviting Authority.



- 6.24.7.2 Mode of Demonstration:- Live, Classroom experiments, Classroom surveys, Data analysis, Simulations methods should be used for the training and teaching of our IT staffs
- **6.24.7.3** Incidental services to be provided by the successful bidder
- **6.24.7.4** Mode of Installation:- GUI, Console and Silent Mode should be the mode of installation and given proper training to our staff. During the installation integration of new devices, there should not be a trouble for the existing devices / software.
- 6.24.7.5 In the event of any such modification/alteration causing increase or decrease in the cost of goods and services to be supplied and provided, or in the time required by the successful bidder to perform any obligation under the contract, an equitable adjustment shall be made in the contract price and/or contract delivery schedule, as the case may be, and the contract amended accordingly.
- 6.24.7.6 If the successful bidder does not agree to the adjustment made by the Tender Inviting Authority, the successful bidder shall convey its views to the Tender Inviting Authority within ten days from the date of the successful bidder's receipt of the Tender Inviting Authority's amendment / modification of terms of the contract.

6.25. PERFORMANCE SECURITY

- There will be a performance security deposit amounting to the total value as mentioned in Section III excluding taxes, which shall be submitted by the successful bidder to the Tender Inviting Authority within 30 days from the date of issuance of 'Letter of Intent'.
- 6.25.2 The contract duly signed and returned to the Tender Inviting Authority shall be accompanied by a demand Draft or Bank Guarantee in the prescribed format.
- 6.25.3 Upon receipt of such contract and the performance security, the Tender Inviting Authority shall issue the Supply Orders containing the terms and conditions for the execution of the order.
- **6.25.4** Failure of the successful bidder in providing performance security mentioned in Section III and/or in returning contract copy duly signed in time shall make the bidder liable for forfeiture of its EMD.
- **6.25.5** The Performance security shall be denominated in Indian Rupees as detailed below:
- **6.25.5.1** It shall be in any one of the forms namely Account Payee Demand Draft or Bank Guarantee issued by a Scheduled bank in India, endorsed in favour of the Tender Inviting Authority.



- **6.25.5.2** In the event of any failure / default of the successful bidder with or without any quantifiable loss to the Society including furnishing Bank Guarantee for CMC security, the amount of the performance security is liable to be forfeited.
- **6.25.5.3** In the event of any amendment issued to the contract, the successful bidder shall, within ten (10) days of issue of the amendment, furnish the corresponding amendment to the Performance Security (as necessary), rendering the same valid in all respects in terms of the contract, as amended.
- **6.25.5.4** Tender Inviting Authority will release the Performance Security without any interest to the successful bidder on completion of the successful bidder's all contractual obligations including the warranty obligations and after confirming that all the contractual obligations have been successfully complied with.
- **6.25.5.5** The Bank Guarantee submitted in the place of EMD/Security deposit shall be in the prescribed format; Bank Guarantee in no other form will be accepted and will lead to rejection of tenders.

6.26 MATERIAL DELIVERY AND INSTALLATION

- 6.26.1 The successful bidder shall visit the NSMIMS and recommend preinstallation requirements. If the supplier fails to communicate any of such instances before delivery of equipment and cannot complete the installation within the stipulate period, Tender Inviting Authority shall deduct liquidated damages as per the tender conditions.
- The successful bidder will have to arrange transportation of the ordered goods as per its own procedure and pay necessary insurance against loss or damage incidental to Amanufacture or acquisition, transportation, storage and delivery and pay all necessary charges incidental till it is installed in the NSMIMS. It shall be ensured that the equipment arrive at the destination in good condition within the delivery period mentioned and as per the other requirements of the Tender Document.
- 6.26.3 If at any time during the currency of the contract, the successful bidder encounters conditions hindering timely delivery of the goods and performance of services, the successful bidder shall inform the Tender Inviting Authority in writing within a week about the same and its likely duration and make a request to the Tender Inviting Authority for extension of the delivery schedule accordingly. On receiving the successful bidder's communication, the Tender Inviting Authority shall examine the situation as soon as possible and, at its discretion, may agree to extend the delivery schedule, with or without liquidated damages for completion of successful bidder's contractual obligations by issuing an amendment to the contract.



- 6.26.4 The successful bidder is required to deliver the equipment and install the equipment at the site within time specified from the date of issue of the 'Supply Order' and demonstrate the specification/features as well as operation / performance of the product to the satisfaction of the Tender Inviting Authority.
- **6.26.5** A proper material delivery schedule should be included in the Technical Bid.

6.27. PAYMENT

- 6.27.1 The payment of the first installment of the price agreed will be made within thirty days from the date of installation of the equipment with its all necessary accessories specified in the supply order.
- **6.27.2** The original invoice submitted shall be in the name of the Tender Inviting Authority and the name of the consignee shall also be mentioned in it.
- 6.27.3 Requests for advance payment, payment against delivery or payment. Through Bank against dispatched documents will not be considered. Part Payment at the agreed rate as per cl.5.1.6 Shall be considered in respect of equipment installed and the necessary Installation Certificate obtained.
- 6.27.4 The retained remaining (second) installment will be released on submission of the 'One-month performance certificate' subject to recoveries, if any, either on account of non-rectification of defects/ deficiencies by the successful bidder.
- 6.27.5 The successful bidder shall not claim any interest on payments under the contract.
- Where there is a statutory requirement for tax deduction at source, such deduction towards income tax and other taxes as applicable will be made from the bills payable to the successful bidder at rates as notified from time to time.
- 6.27.7 The successful bidder shall send its claim for payment in writing, when contractually due, along with relevant documents etc., duly signed with date, to the Tender Inviting Authority.
- 6.27.8 While claiming reimbursement of duties, taxes etc. (like sales tax, excise duty, custom duty) from the Tender Inviting Authority, as and if permitted under the contract, the successful bidder shall also certify that, in case it gets any refund out of such taxes and duties from the authorities concerned at a later date, it (the successful bidder) shall refund the same to the Tender Inviting Authority forthwith.

6.28 AFTER SALES SERVICE CONDITIONS OF SOLUTIONS OFFERED.

6.28.1 The Tender Inviting Authority gives paramount importance to the aftersales service of the machinery/equipment installed to ensure smooth operation afterwards. The



- successful bidder is required to undertake preventive maintenance and attend all repairs, if any, that may arise during the warranty period free of cost.
- 6.28.2 The aftersales terms and conditions will be strictly enforced and those bidders who are willing to support the Tender Inviting Authority in its endeavor to provide trouble free operation/performance of the equipment for the prescribed period need only participate in the tender.
- **6.28.3** Failure to provide satisfactory after sales services during or after the warranty period and Comprehensive Maintenance Contract / Annual Maintenance Contract will lead to blacklisting/debarring of the bidders, but after issuing due notice and provide opportunity for being heard.
- 6.28.4 Supply, install, operate, maintain and provide warranty & related support services for hardware and upgrade/update/enhancement for system software, as detailed out in technical specifications, including related software, firmware etc. for a period of 3 Years from the date of commissioning for all supplied items at NSMIMS site including additional material / hardware / software / services as may be required to be supplied without any additional cost.
- 6.28.5 Any software and firmware upgrade / enhancement / engineering changes applicable to the hardware and software supplied should be provided for the warranty period within a period of one month from the date of release.
- Providing detailed architecture diagram of Test & Development, Quality and Production environment setup for optimum performance, security, scalability, and desired uptime requirement. Should include all other supporting material as per the requirement to ensure smooth implementation. In that context, it is a "turn key" A Unit of Kollam District Co-operative Hospital Society assignment.
- 6.28.7 The Bidder / System Integrator will need to provide a detailed implementation plan including the architecture diagram, strategy, approach, and delivery of materials, specific issues, and their resolutions. Detailed implementation and post implementation processes and procedures.
- 6.28.8 Bidder has to provide the services for configuring and installing the hardware, deploying and installing the system software as per the requirements (porting of the application) / testing / Integration of various hardware and software, as may be needed at NSMIMS Site without any additional cost for the period of 3 Years from the date of installation for all supplied items
- **6.28.9** Bidder has to collaborate, coordinate and deploy manpower to ready the entire project setup. Bidder must build in the cost for the same, if any under implementation services.



- 6.28.10 Bidder should have a back-end / back-to-back support contract / agreement / arrangement for services including supply of spare parts, expertise requirements etc. with the Original Equipment Manufacturers (OEMs) of all the hardware and peripherals which includes the post-sales support activities to meet the Service Level Agreement (SLA) mentioned for the entire solution period. The OEM undertaking letter on OEM Letter Head in this regard should be submitted along with the bid.
- **6.28.11** Costs must include cost of delivery at NSMIMS, transit handling and insurance, custom duties etc. as may be applicable
- **6.28.12** Provide on-site warranty support for all the hardware and software supplied for three years as per the tender Warranty Clause.
- 6.28.13 Bidder has to ensure seamless integration of quoted Hardware & software product with applications and also has to provides the material / services which are not mentioned in NSMIMS tender specification but required to complete the turnkey solutions without any additional cost invariably.
- 6.28.14 The installation must be done directly by OEM or directly by through their authorized partner / reseller / system integrator, but the overall responsibility lies with OEM only.

 Note that all quoted products must be configured for 3 Years Hardware and 3 Years

 Software warranty taken from OEM by bidder.
- 6.28.15 The server and storage products used in virtualized environment for video management software necessary Installation / reinstallation of VMS, configuration and implementation support in future if required shall be provided by successful bidder.
- 6.28.16 Preparation of Functional Design Specifications, Documents, Factory Acceptance

 Test Procedures, Site Acceptance Test & Final Acceptance Testing Procedures etc.

 and obtain prior approval from the NSMIMS.
- 6.28.17 On completion of the works and before issue of certificate of completion, the bidder shall provide inbuilt documents including manuals and operating instructions, software, software keys / passwords and training to NSMIM's personnel in all aspects of system design, theory of operation of equipment, functional details, trouble shooting and familiarization with systems as per scope of work etc.
- 6.28.18 During Site Acceptance Tests the performance of each equipment and system shall be measured and documented. Any failure / equipment switchover shall be documented. List of all equipment, spares / components etc. shall be prepared. If during 'Site Acceptance Test' any defect is noticed in the system, the Bidder shall rectify / replace the same to the satisfaction of NSMIMS at no extra cost.



6.28.19 Bidder should have their own technical team to provide installation, testing and configuration of the products specified in the tender. Subcontracting the works will be resulted in blacklisting / termination of contract.

6.29 GUARANTEE / WARRANTY TERMS.

- 6.29.1 The successful bidder must warrant that the Goods supplied under this Contract are new, unused, of the most recent or current models and incorporate all recent improvements in design and materials unless provided otherwise in the Contract.
- 6.29.2 The successful bidder further must warrant that the Goods supplied under this Contract shall have no defect arising from design, materials or workmanship or from any act or omission of the successful bidder that may develop under normal use of the supplied goods.
- 6.29.3 All the equipment including the accessories supplied as per the technical specification in clause 4.2 should carry comprehensive warranty for a period mentioned under cl.5.1.3 in the first instance. During this period, the successful bidder shall replace all defective parts and attend to all repairs/breakdowns and undertake stipulated number of preventive maintenance visits to every user installation site. The cost of spare parts for all replacements must be borne by the successful bidder during the period of comprehensive warranty.
- The prospective bidders, who are manufacturers, shall submit an undertaking from the Original Equipment Manufacturers (OEM) that they are willing to provide spare parts for the period of warranty as mentioned d, if awarded. The OEM shall also assure continuity of service to their product, in the event of change in dealership of the bidders their existing dealers could not provide service during the warranty period. The undertaking from OEM is an essential document forming part of the Technical Bid, without which the tenders will be rejected summarily in the first round itself.
- 6.29.5 After sales service center in Kerala preferably or at least in South India should be available as part of the pre-qualification criteria under cl.5.2.6 and the bidder shall provide proof of their capability to undertake such maintenance/repair within the stipulated time.
- 6.29.6 Site Visits: The successful bidder shall visit the Institution as part of preventive maintenance as per the frequency mentioned under cl.5.1. during the warranty period. The bidder shall attend any number of break down/repair calls as and when informed by the Tender Inviting Authority.
- 6.29.7 Complaints should be attended properly, maximum within the time mentioned in clause 5.1.9. In case, the repair/fault duration is likely to exceed 72 hours, the



successful bidder shall arrange a standby equipment of the same make and model within next 48 hours (total down time should not exceed 5 days) as a stop-gap arrangement till the repair/fault is rectified and the stand by equipment shall perform in the same manner as regards a new equipment.

- 6.29.8 Upon receipt of such notice for repair/breakdown from the Tender Inviting Authority, the successful bidder shall, within the period specified under cl.5.1.9, and with all reasonable speed, repair or replace the defective goods or parts thereof, without cost to the Tender Inviting Authority.
- 6.29.9 If the successful bidder, having been notified, fails to rectify the defect(s) within the period specified in cl.5.1.9, the Tender Inviting Authority may proceed to take such remedial action as may be deemed necessary at the successful bidder's risk and cost and without prejudice to any other rights which the Tender Inviting Authority may have against the successful bidder under the contract.
- 6.29.10 Failure to attend the repairs in time or failure to attend the stipulated preventive maintenance visit or failure to replace the defective equipments or to provide standby equipment if the fault/down time exceeds the stipulated period or to ensure the stipulated up-time in an year shall lead to imposition of a fine of Rs.1000 for each day exceeding the stipulated period and / or forfeiture of the performance security and/or may lead to blacklisting/debarring of the defaulting bidder.
- A warranty certificate duly signed and with proper stamp of the institution concerned and also signed by the authorized signatory with the stamp of the successful bidder shall be submitted to the Tender Inviting Authority for keeping it under safe custody along with the Installation Certificate.
- 6.29.12 The equipment which requires quality assurance test shall be so tested free of cost immediately after installation, during the comprehensive warranty period, during the CMC / AMC period, by the demand of the Tender Inviting Authority and when major spares are replaced.
- **6.29.13** Any mandatory approval required for installation shall be obtained by the successful bidder in liaison with the respective authorities.
- **6.29.14** The bidder shall submit the activities to be carried out during the preventive maintenance visit.
- **6.29.15** The bidder shall submit the parameters which require calibration and the frequency of calibration required. (*If applicable*)
- **6.29.16** The bidder shall submit the details of all major spares in the price bid cover.



- 6.29.17 The bidder shall undertake on-site calibration of the equipment every year as part of the aftersales service during the period of comprehensive warranty and submit a 'calibration certificate' to the Tender Inviting Authority afterwards. (*If applicable*)
- **6.29.18** The offered warranty includes: -
- **6.29.18.1** Visits to NSMIMS at frequencies prescribed under cl.5.1. as part of preventive maintenance.
- **6.29.18.2** Testing & calibration as per technical/service/operation manual of the manufacturer or as per the period specified or as per the demand of the Tender Inviting Authority.
- 6.29.18.3 Quality Assurance tests (if applicable). The exclusion of warranty of any vital equipment parts will be compared with offers of other bidders during evaluation of the bids and this may be taken into consideration in deciding the successful bidder based on expert advice
- **6.29.19.5** The bidder shall provide up-time warranty of complete equipment as mentioned in clause 5.1.10, the uptime being calculated on 24 (hrs.) X 7 (days) basis failing which the extension of Warranty period will be extended by double the downtime period.

6.30 SPARE PARTS

- 6.30.1 The tenders shall offer prices for all the spares/reagents mentioned in the technical specifications separately in the price bid form.
- 6.30.2 Successful bidder shall carry enough inventories to assure ex-stock supply of consumable spares for the goods so that the same are supplied to the Tender Inviting Authority promptly on receipt of order from the Tender Inviting Authority.
- **6.30.3**(AThe successful bidder shall take over the replaced parts/goods after providing their replacements and no claim, whatsoever shall lie on the Tender Inviting Authority for such replaced parts/goods thereafter.
- 6.30.4 Inviting The Tender additional Authority orders for may place spares/consumables/reagents which are needed for the smooth performance/operation of the equipment and the successful bidder shall be willing to supply the same in time at the cost offered in the price bid forms, failing which, such instances will be construed as a breach of tender conditions and lead to penal provisions.
- **6.30.5** The method of evaluation and comparison of prices will take into consideration the cost of the reagents as well.



6.31. TRAINING.

- **6.31.1** The successful bidder must impart on-site training to IT Staffs / Doctors/ Technicians/Para-medical staff on the operation and preventive maintenance of the equipment at the time of installation and anytime during warranty period to the satisfaction of the Tender Inviting Authority.
- **6.31.2** The training details shall be recorded in the installation certificate for enabling the Tender Inviting Authority to make the first 60% payment.

6.33. IMPORTED EQUIPMENTS.

- 6.33.1 The Tender Inviting Authority shall in no way involve in the import of the equipments from foreign countries, if such equipments are manufactured outside the country. It shall be the solemn duty of the bidder to import the equipments offered by paying the requisite consideration in foreign currency and following the stipulations issued by the Government of India, from time to time, in the import of equipments.
- 6.33.2 The bidders shall inform any advantages in prices to the Tender Inviting Authority because of reductions/exemptions in customs duty in case of imported equipments at the time of pre-tender meeting and the tender document shall be modified by amendment to that extent.
- 6.33.3 The Tender Inviting Authority will not interfere in any manner with the import process and the successful bidder shall be solely responsible for supply and installation of any equipment at the time and locations stipulated/agreed to in the bids.
- 6.33.4 Successful bidder shall carry enough inventories to assure ex-stock supply of consumable spares for the goods so that the same are supplied to the Tender Inviting Authority promptly on receipt of order from the Tender Inviting Authority.

6. 34. INTELLECTUAL PROPERTY RIGHTS (IPR).

6.34.1 The successful bidder shall, at all times, indemnify and keep indemnified the Tender Inviting Authority, free of cost, against all claims which may arise in respect of goods & services to be provided by the successful bidder under the contract for infringement of any intellectual property rights or any other right protected by patent, registration of designs or trademarks.

6. 35. CORRUPT OR FRAUDULENT PRACTICES.

6.35.1. It is required by all concerned to observe the highest standard of ethics during the procurement process. In pursuance of this policy, the Tender Inviting Authority prescribes the following conditions:



- **6.35.2** "Corrupt practice" means the offering, giving, receiving or soliciting of anything of value to influence in the procurement process or in contract execution; and
- 6.35.3 "fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Tender Inviting Authority, and includes collusive practice among Bidders (prior to or after Tender submission) designed to establish Tender prices at artificial non-competitive levels and to deprive the Tender Inviting Authority of the benefits of free and open competition;
- 6.35.4 Tender Inviting 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; will declare a firm ineligible, either indefinitely or for a stated period of time, to be awarded a contract by the Tender Inviting Authority if it at any time determines that the firm has engaged in corrupt or fraudulent practices in competing for, or in executing the contract.
- 6.35.5 No bidder shall contact the Tender Inviting Authority or any of its officers on any matter relating to its bid, other than communications for clarifications and requirements under this tender in writing, with an intention to influence the members of various committees or officials of Tender Inviting Authority. Any such effort by a bidder to influence the Tender Inviting Authority in the Tender Inviting Authority's bid evaluation committee, bid comparison or contract award decisions may result in rejection of the bidders bid.

6.36. FORCE MAJEURE

- 6.36.1 For purposes of this clause, Force Majeure means an event beyond the control of the successful bidder and not involving the successful bidder's fault or negligence and which is not foreseeable and not brought about at the instance of the party claiming to be affected by such event and which has caused the non–performance or delay in performance. Such events may include, but are not restricted to, acts, wars or revolutions, hostility, acts of public enemy, civil commotion, sabotage, fires, floods, explosions, epidemics, quarantine restrictions, strikes excluding by its employees, lockouts excluding by its management, and freight embargoes.
- 6.36.2 If a Force Majeure situation arises, the successful bidder shall promptly notify the Tender Inviting Authority in writing of such conditions and the cause thereof within twenty-one days of occurrence of such event. Unless otherwise directed by the Tender Inviting Authority in writing, the successful bidder shall continue to perform its obligations under the contract as far as reasonably practical and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.



- 6.36.3 If the performance in whole or in part or any obligation under this contract is prevented or delayed by any reason of Force Majeure for a period exceeding sixty days, either party may at its option terminate the contract without any financial repercussion on either side.
- 6.36.4 In case due to a Force Majeure event the Tender Inviting Authority is unable to fulfill its contractual commitment and responsibility, the Tender Inviting Authority will notify the successful bidder accordingly and subsequent actions taken on similar lines described in the above sub-paragraphs

6.37. RESOLUTION OF DISPUTES.

- **6.37.1** If dispute or difference of any kind shall arise between the Tender Inviting Authority and the successful bidder in connection with or relating to the contract, the parties shall make every effort to resolve the same amicably by mutual consultations.
- 6.37.2 If the parties fail to resolve their dispute or difference by such mutual consultation within twenty-one days of its occurrence, then, unless otherwise provided in the tender document, either the Tender Inviting Authority or the successful bidder may give notice to the other party of its intention to commence arbitration, as provided the applicable arbitration procedure will be as per the Arbitration and Conciliation Act, 1996 of India.
- 6.37.3 In the case of a dispute or difference arising between the Tender Inviting Authority and a domestic Successful bidder relating to any matter arising out of or connected with the contract, such dispute or difference shall be referred to the sole arbitration of the Board of Directors whose decision shall be final.
- 6.37.4(A Venue of Arbitration: The venue of arbitration shall be the place from where the contract has been issued, i.e., Kollam, Kerala State, India.

6.38. APPLICABLE LAW & JURISDICTION OF COURTS.

- **6.38.1** The contract shall be governed by and interpreted in accordance with the laws of India for the time being in force.
- 6.38.2 All disputes arising out of this tender will be subject to the jurisdiction of courts of law in Kollam

6.39. GENERAL/ MISCELLANEOUS CLAUSES

6.39.1 Nothing contained in this Contract shall be construed as establishing or creating between the parties, i.e. the successful bidder/its Indian Agent/CMC Provider on the one side and the Tender Inviting Authority on the other side, a relationship of master and servant or principal and agent.



- **6.39.2** Any failure on the part of any Party to exercise right or power under this Contract shall not operate as waiver thereof.
- **6.39.3** The Successful bidder shall notify the Tender Inviting Authority of any material change that would impact on performance of its obligations under this Contract.
- 6.39.4 Each member/constituent of the Successful bidder in case of consortium shall be jointly and severally liable to and responsible for all obligations towards the Tender Inviting Authority for performance of contract/services including that of its Associates/ Sub Bidders under the Contract.
- 6.39.5 The Successful bidder shall, at all times, indemnify and keep indemnified the Tender Inviting Authority against any claims in respect of any damages or compensation payable in consequences of any accident or injury sustained or suffered by its employees or agents or by any other third party resulting from or by any action, omission or operation conducted by or on behalf of the successful bidder/its associate/affiliate etc.
- **6.39.6** All claims regarding indemnity shall survive the termination or expiry of the contract.
- End-of-Life Products. Bidders are to note that, only "active / in-force / current†products listed under their OEM websites are to be offered and shall be accepted by the Buyer. No Products offered or supplied under the project shall be end of life (EoL), till the day of our acceptance. Due to rapid electronic obsolesces, models/versions of IT hardware and software offered shall not be older than 24 months and products introduced in the open market for over two years as on date of the bid submission, may be asked to either upgrade or renew or change to a later generation product, at no additional cost to the Buyer.

 (A unit of Kollam District Co-operative Hospital Society)

6.40. PENALTIES FOR NON-PERFORMANCE.

- **6.40.1** The penalties to be imposed, at any stage, under this tender are.
- **6.40.1.1** Imposition of liquidated damages,
- **6.40.1.2** forfeiture of EMD/performance security
- **6.40.1.3** Termination of the contract
- **6.40.1.4** Blacklisting/debarring of the bidder
- **6.40.2** Failure to produce the requisite certificates after claiming to possess such certificates or concealment or misrepresentation of facts will not only lead to rejection of tenders in the first round itself and/or may lead to forfeiture of EMD or performance security as well as result in black listing/debarring of the bidder.
- **6.40.3** The penalties to be imposed on the bidder, at any stage, will be decided on the basis of the violations of number of tender conditions specifically mentioned in the tender



- document as that leading to forfeiture or EMD/ Performance Security or leading to black-listing/ debarring .
- 6.40.4 Any unexcused delay by the successful bidder in maintaining its contractual obligations towards delivery of goods and performance of services shall render the successful bidder liable to any or all the following sanctions:
- 6.40.5 Liquidated damages:- If the successful bidder fails to deliver any or all of the goods or fails to perform the services within the time frame(s) prescribed in the contract, the Tender Inviting Authority shall, without prejudice to other rights and remedies available to the Tender Inviting Authority under the contract, deduct from the contract price, as liquidated damages, a sum equivalent to 0.5% of the equipment to be supplied per week of delay or part thereof on delayed supply of goods and/or services until actual delivery or performance subject to a maximum of 15% of the contract price. Once the delivery period is exceeded, Tender Inviting Authority may consider termination of the contract. During the above-mentioned delayed period of supply and / or performance, the conditions incorporated shall also apply and Tender Inviting Authority shall seek alternate measures at the risk and cost of the successful bidders.
- 6.40.5.1 The penalties imposed by the Tender Inviting Authority will be published on the website of the Tender Inviting Authority for a period as decided as appropriate by it.
- The decision to impose penalties and finally to blacklist the defaulting firm will be final and shall be binding on all bidders participating in this tender.

6.41. TERMINATION OF CONTRACT.

- 6.41.1 (ATermination for default: The Tender Inviting Authority, without prejudice to any other contractual rights and remedies available to it (the Tender Inviting Authority), may, by written notice of default sent to the successful bidder, terminate the contract in whole or in part, if the successful bidder fails to deliver any or all of the goods or fails to perform any other contractual obligation(s) within the time period specified in the contract, or within any extension thereof granted by the Tender Inviting Authority.
- 6.41.2 In the event of the Tender Inviting Authority terminating the contract in whole or in part, the Tender Inviting Authority may procure goods and/or services similar to those cancelled, with such terms and conditions and in such manner as it deems fit and the successful bidder shall be liable to the Tender Inviting Authority for the extra expenditure, if any, incurred by the Tender Inviting Authority for arranging such procurement.
- **6.41.3** Unless otherwise instructed by the Tender Inviting Authority, the successful bidder shall continue to perform the contract to the extent not terminated.



- 6.41.4 Termination for insolvency: If the successful bidder becomes bankrupt or otherwise insolvent, the Tender Inviting Authority reserves the right to terminate the contract at any time, by serving written notice to the successful bidder without any compensation, whatsoever, to the successful bidder, subject to further condition that such termination will not prejudice or affect the rights and remedies which have accrued and / or will accrue thereafter to the Tender Inviting Authority.
- 6.41.5 Termination for convenience:- The Tender Inviting Authority reserves the right to terminate the contract, in whole or in part for its (Tender Inviting Authority's) convenience, by serving written notice on the successful bidder at any time during the currency of the contract. The notice shall specify that the termination is for the convenience of the Tender Inviting Authority. The notice shall also indicate inter alia, the extent to which the successful bidder's performance under the contract is terminated, and the date with effect from which such termination will become effective. Further details could be obtained from the office of the Secretary, Kollam District Cooperative Hospital Society Ltd Q 952

6.42. FALL CLAUSE.

6.42.1 The prices charged for the equipment supplies under the contract by successful bidder shall in no event exceed the lowest price at which the successful bidder sells the equipments of identical description to any other persons during the period of contract. If any time, during the contract, the bidder reduces the sales price chargeable under the contract, he shall forthwith notify such reduction to the Tender Inviting Authority and the price payable under the contract of the equipments supplied after the date of coming into force of such reduction or sale shall stand A correspondingly reduced. Co-operative Hospital Society

6.43. COMPLIANCE STATEMEMNT.

- 6.43.1 The Bidder shall only use complied products as per the specification mentioned in the tender document. Any variation from "fully-complied" shall be mentioned as "partially complied" and the variation shall be mentioned clearly in a separate "Remarks".
- 6.43.2 If no compliance is stated for a clause, the good will be assumed not to comply with that specification item, contract and standard commercial terms and Conditions

6.44. BIDS REJECTION CRITERIA.

6.44.1 At any stage of this tender evaluation, the NS Hospital shall be fully entitled to disqualify any bidder or for any reason whatsoever including but not limited to the following general reasons:-



- a) Incomplete submittals. Failure to submit the requisite information (including any additional information requested by us) and supporting documents within the required timeframe. Or bids submitted with insufficient documentary proofs.
- b) Bids submitted without or with improper EMD and/or tender cost.
- c) Bids received after the prescribed time & date for receipt of bids.
- d) Material or documentary inconsistencies in the information submitted.
- e) Willful misrepresentation in any document provided.
- f) Bids without signature of person (s) duly authorized on required pages of the bid;
- g) Bids without power of attorney or its certified true copy.
- h) Any effort on the part of a Bidder to influence the bid evaluation, bid comparison or evaluation results or decisions.
- i) If the information provided by the Bidder is found to be incorrect / misleading / fraudulent at any stage / time during the evaluation process
- independently or as a part of different Consortium, Partnership Firm etc.
- k) Hand-written Documents, Erasures or Alterations. The offers containing erasures or alterations shall not be considered. All hand-written material, corrections or alterations as part of the submittals shall be rejected outright.

In the event NS Hospital disqualifies any bidder or applicant on above conditions, it shall not be required to disclose the reason for such disqualification.

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6.44.2 TECHNICAL REJECTION CRITERIA

- i. Incomplete submittals
- ii. Bids submitted with insufficient documentary proofs.
- iii. Information provided by the Bidder is found to be incorrect / misleading at any stage or time during the tendering process.
- iv. Technical Bid containing commercial details or its indications.
- v. Revelation of prices in any form or by any reason before opening the commercial bid.
- vi. Failure to furnish all information required by the tender document or submission of a bid not substantially responsive to the tender document in every respect.



- vii. Failure to provide adequate technical proofs for the compliance statements with their pages tagged marked and highlighted or attempts to dump large details that have no consequence to our procurement process.
- viii. Any effort on the part of a Bidder to influence the bid evaluation, bid comparison or evaluation results or contract award decisions.
- ix. Any attempts to hide the technical deviations or conceal design compromises may invite either total rejection of whole bid or may carry negative scoring for those components.
- x. Bidders not complying with the technical and general terms and conditions as stated in the tender documents.
- xi. Failure to submit UNPRICED bid format with their OEM and Product details such as part codes.
- xii. Bids with terms and conditions that cannot be accepted by NS Hospital/buyer.
- xiii. Bids that does not confirm or conform to our project timelines indicated, or failure of the bidder to appear before the evaluation committee or failure to conduct TEP or POC or Demo as demanded by the technical evaluators
- xiv. If the information provided by the Bidder is found to be incorrect / misleading / fraudulent at any stage / time during the evaluation process
- xv. Any effort on the part of a Bidder to influence the bid evaluation, bid comparison or evaluation results or contract award decisions.

6.44.3 Commercial Rejection Criteria.

- i. (Ancomplété price bidistrict Co-operative Hospital Society)
- ii. Any attempts to alter our promulgated price bid format or Bids that do not conform to the tender's price bid format.
- iii. Bundled pricing
- iv. Overwriting or white ink corrections if any
- v. Price bids with bidder's own terms and conditions
- vi. Any attempts to mislead the evaluators or bids with blank GST or levies as applicable.
- vii. If the information provided by the Bidder is found to be incorrect / misleading / fraudulent at any stage / time during the evaluation process

6.45.4 BIDDER'S RESPONSIBILITY FOR PROJECT SAFETY

6.45.1 Bidder recognizes the importance of performing the Work in a safe and responsible manner so as to prevent damage, injury, or loss to individuals, the environment, and the Work, including materials and equipment incorporated into the Work or stored on-



- site or off-site. Bidder assumes responsibility for implementing and monitoring all Environment, Health & Safety (EHS) precautions and programs related to the performance of the Work
- 6.45.2 Bidder shall comply with all legal and Owner-specific reporting requirements relating to EHS set forth in the Contract Documents. Bidder will immediately report orally, and in writing within two (2) days, any EHS related injury, loss, damage, or accident arising from the Work to Owner's Representative and, to the extent mandated by legal requirements, to all government or quasi-government authorities having jurisdiction over safety-related matters involving the Project or the Work. Bidder will immediately report to the Owner's Representative all non-incidental spills, and all other significant impacts to the environment (soil, water, air) in performance of the Work. Bidder will also immediately notify the Owner of any failure to comply with state and environmental laws, rules, and regulations.
- **6.45.3** Safety and protection of the environment are of the utmost concern on this Contract. Safety in this context refers to the health and safety of people and the protection of the environment. Nothing contained herein relieves the Bidder from complying with all applicable standards and regulations.
- 6.45.4 The Contractor shall have an EHS Representative (also known as Safety Officer or SO), approved by the Owner, present on the Project at all times when Work is physically being performed.
- 6.45.5 Bidder shall provide all common Personal Protective Equipment (PPE) required for the Work (hard hats, safety toe boots, safety glasses) unless otherwise stated in the Scope of Work.
- 6.45.6 In the event of an incident, Bidder will conduct an incident investigation in accordance with the NSMIMS' policies. The investigation will include preparing a written report summarizing the results of the investigation, corrective actions taken to prevent a reoccurrence, and any lessons learned. The NSMIMS may at its discretion participate in and facilitate the incident investigation. Time and expense incurred by NSMIMS performing an incident investigation will be at the Bidder's expense.
- **6.45.7** NSNIMS reserves the right to restrict or deny access of any Bidder's employee to the work location.



ANNEXURE -1 MANUFACTURERS OFFER FORM

(To be submitted by manufacturers)

No.	Dated:
То	
	The Secretary, Kollam District Cooperative Hospital Society Ltd Q 952
Sir,	
	Tender No Equipment Name :
1.	We
2.	No company or firm or individual has been authorized to bid, negotiate and conclude the contract regarding this business against this specific tender.
3.	We hereby declare that we are willing to provide guarantee /warranty and after sales
4.	We also hereby declare that we have the capacity to manufacture and supply, install and commission the quantity of the equipments tendered within the stipulated time.
(Nam	e) for and on behalf of M/s
Date:	(Name of manufacturers)
Place	

Note: This letter of authority should be on the letter head of the manufacturing concern and should be signed by a person competent and having the power of attorney to bind the manufacturer.



ANNEXURE-2 MANUFACTURER'S AUTHORISATION FORM

(to be submitted by authorized dealers/representatives/importers)

Ref N	No :Dated :
То	
(Ten	Secretary der Inviting Authority) am District Cooperative Hospital Society Ltd Q 952
Sir,	Tender No : Equipment Name :
1.	We
2.	No company or firm or individual other than M/s are authorized to bid, negotiate and conclude the contract regarding this business against this specific tender.
3.	We also hereby undertake to provide full guarantee/ warrantee /CMC/AMC as agreed by the bidder in the event the bidder is changed as the dealers or the bidder fails to provide satisfactory after sales and service during such period of Comprehensive warranty/CMC/AMC and to supply all the spares/reagents during the said period.
4.	We also hereby declare that we have the capacity to manufacture and supply, install and commission the quantity of the equipments tendered within the stipulated time.
(Nan	ne) for and on behalf of M/s
Date	: (Name of manufacturers)
Place	e:

Note: This letter of authority should be on the letterhead of the manufacturing concern and should be

signed by a person competent and having the power of attorney to bind the

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N.S. Co-operative Hospital (A Unt of Klotalin Tableta Co-operative Visignal Scorely)

ANNEXURE-3 AGREEMENT

THIS AGREEMENT made on theDay of2020 between(Name and
Address of <i>Purchaser</i>) represented by the Secretary (Hereinafter "the <i>Purchaser</i> ") on the one part
and(Name and Address of Supplier)(Hereinafter "the Supplier")
represented by (Name of the Authorized Signatory and Designation), Aged
years, residing at (Full Residential Address of the Signatory) on the other
part: WHEREAS the <i>Purchaser</i> has invited tenders for the supply of(brief description
of goods and services vide tender nodatedThe supplier has submitted technical
and price bids and also demonstrated the technical specifications / features / other quality
requirements as contained in the tender document. The <i>Purchaser</i> has finalized the tender in favor
of the Supplier for the supply of the said goods and services for a total cost of Rs
(Contract Price in Words and Figures) (Hereinafter "the Contract Price") and issued Letter of Intent
/ Supply Order No dated

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

- In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the tender document referred to.
- 2. The following documents shall be deemed to form and be read and constructed as part of this Agreement, viz.:
 - a. all the documents submitted by the bidder as part of technical bid and price bid.
 - the Schedule of Requirements.
 - the Technical Specifications and other quality parameters.
 - d. the clarifications and amendments issued / received as part of the tender document A Unit of Kollam District Co-operative Hospital Society)
 - e. the General Conditions of Contract.
 - f. the Specific Conditions of Contract; and
 - g. the Purchaser's Letter of Intent
- 3. In consideration of the payments to be made by the Purchaser to the Supplier as hereinafter mentioned, the Supplier hereby covenants with the Purchaser to supply, install and commission the Goods and Services and to remedy defects therein in conformity in all respects with the provisions of the Contract.
- 4. The *Purchaser* hereby covenants to pay the Supplier in consideration of the provision of the Goods and Services and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

N.S. Co-operative Hospital (Alufi of Kollim District Co-operative Hospital Society)

ANNEXURE – 4 BANK GUARANTEE FORM

To,

The Secretary	
Kollam District Cooperative	
Hospital Society Ltd Q 952	
Tiospital Godiety Ltd & 552	
WHEREAS(Name	and address of the supplier) (Hereinafter
called "the supplier") has undertaken, in	pursuance of Tender / Contract
no dated	_ (herein after called "the contract") to
supply the Kollam District Co-operative Hospital Li	
(Description of goods and supplies).	
AND WHEREAS it has been stipulated by you in the said	contract that the supplier shall furnish you
with a bank guarantee by a scheduled commercial bank	recognized by you for the sum specified
therein as security for compliance with its obligations in a	- 7
AND WHEREAS we have agreed to give the supplier such	ch bank guarantee.
NOW THEREFORE we hereby affirm that we are guaranteed to the second seco	ntors an <mark>d responsible</mark> to you, on behalf of
the supplier, up to a total	amount of Rs/-
(Amount of the guarantee in words and figures), and we u	ndertake to pay you, upon your first written
demand declaring the supplier to be in default under the	e contract and without cavil or argument,
any sum or sums within the limits of (amount of guarant	ee) as aforesaid, without your needing to
prove or to show grounds or reasons for your demand or	the sum specified therein.
·	
We hereby waive the necessity of your demanding the sa	id debt from the supplier before presenting
us with the demand.	
We undertake to pay you any money so demanded notw	ithstanding any dispute or disputes raised
by the supplier(s) in any suit or proceeding pending bef	ore any Court or Tribunal relating thereto
our liability under these presents being absolute and une	quivocal.
We agree that no change or addition to or other modif	ication of the terms of the contract to be
performed there under or of any of the contract documer	nts which may be made between you and
the supplier shall in any way release us from any liability u	under this guarantee and we hereby waive
notice of any such change, addition or modification.	

No action, event, or condition that by any applicable law should operate to discharge us from liability ospital hereunder shall have any effect and we hereby waive any right we may have to apply such law, so that in all respects our liability hereunder shall be irrevocable and except as stated herein, unconditional in all respects.



ANNEXURE-5 GENERAL INFORMATION ABOUT THE BIDDER

	Name of the Bidder	
	Registered Address of the Firm	
1	State	
	District	
	Telephone	
	Email Address	
	Official Website	

ESCALATION MATRIX					
SL NO	LEVEL	NAME	DESIGNATION	CONTACT	EMAIL
1	LEVEL 1				
2	LEVEL 2	opor	otivo	LIO	anital
3 (LEVEL 3 A Unit of K	ollam District (Co-operative Hos	TTU spital Societ	spitai
4	LEVEL 4				
5	LEVEL 5				

	KEY	PERSONNELS OF THE COM	PANY
SL NO	NAME	DESIGNATION	CONTACT NUMBER
1			
2			
3			
4			

BUSINESS LOCATIONS OTHER THAN REGISTERED ADDRESS		Co-operative Hospii (A Unit of Kollum District Co-operative Hospital Septety)
Address -1		
Address – 2		
Address – 3		

TYPE OF THE FIRM	
Private Ltd	
Partnership	
Public Ltd	Carlo L
Proprietorship	
Society	8
Others (Specify)	

NATURE OF BUSINESS OF THE BIDDER (A Unit of Kollam District Co-operative Hospital Society)			
Original Equipment Manu	facturer		
Authorized	Dealer	/	
Representative			
Direct Importer			
Others, Specify			



ANNEXURE-6 OFFER FORM

Having examined and accepting the conditions of the tender document
We here by submit this offer for the
supply & installation of
conforming the detailed technical specification mentioned in section IV of the tender document. The
details of the equipment offered are as follows.

SL NO	NAME OF THE SOLUTION	BRAND	NAME OF OEM
1	Television		
2	Signage software		
3	CCTV System		
4	PA System		
5	Wi-Fi System		
6	Nurse Calling System		
7	Access Control System		1.
8	Firewall		C
9	Server		
10	Storage		X I
11	Workstations		* /
12	Information Kiosks		
13	Thermal Screening System		. 1
14	Video Conferencing System	IVA HO	snital
15	ICU Patient Video Interaction Solution of Kollam District Co-op	erative Hospital Societ	
16	Nurse Station Tabs		
17	Passive Cabling for Voice / EPBX System		
18	Software Server		
19	Network Switch		
20	Audio Conference System		

Date Office Seal Authorised Signatory



ANNEXURE-7 SERVICE CENTRE DETAILS

TOLL	FREE NUMBER IF ANY	
SL NO	NAME AND ADDRESS OF THE SERVICE CENTRE	CONTACT DETAILS
		Telephone No
1		Fax No
'		Email Id
		Service Engineer
		Telephone No
2		Fax No
2		Email Id
		Service Engineer
		Telephone No
3	AT	Fax No
3		Email Id
		Service Engineer
	Co-opera	Telephone No
4 (/	Unit of Kollam District Co	Fax No p-operative Hospital Society)
4		Email Id
		Service Engineer
		Telephone No
5		Fax No
5		Email Id
		Service Engineer

Date Office Seal Authorised Signatory



ANNEXURE-8 POWER OF ATTORNEY

(On A Stamp Paper of Relevant Value)

I / We				(Nam	e and ad	dress of the re	egistered offi	ice)
do hereby	/ constitut	e, appoint,	and authori	ze Sri /	Smt			
	(name	and address)	who is prese	ntly employ	yed with ι	us and holding	g the positior	n of
				a	as our at	torney, to a	ct and sign	on
my/our	behalf	to partici	pate in	the t	tender	no		
for		(Equipment na	me). I/ We	hereby a	lso undertake	that I/we will	l be
responsible	for all acti	on of Sri / Sr	nt			Underta	aken by him/	her
during the	tender prod	ess and ther	eafter on awa	rd of the c	ontract. F	lis / her signa	ature is attes	ted
below.								
For								
		nd Address)	(Signat			8		
		ess of the Att	Lati	ve]	Ho	spit	tal	
	Unit of Ko	ollam Distric	t Co-operati	ve Hospit	tal Socie	ety)		
Date:								



/

ANNEXURE-9 DECLARATION FORM

I/We N	/l/s				re	present	ted by	its	Proprietor	/
Managin	g Partner	1	Managing	Director	having	its	Registe	ered	Office	at
				do h	ereby decl	are tha	at I / We	have	carefully re	ad
all the co	nditions of te	nder o	dated	For S	Supply, Ins	tallatio	n, Testin	g & C	ommission	ing
& Suppo	rt of IT Infra	structı	ure Equipmer	nts. Floated	by the Ko	ollam D	istrict Co	oper	ative Hosp	ital
Society L	.td Q 952 and	d acce	pts all conditi	ons of Tend	er.		- ^			
						37				
	-			S	ignature o	f the Bi	dder		\	
				S N	lame in ca	pital let	ters with	Desi	gnation	
(CO-(OI ollam	District Co-	tive-operative	e H Hospital	O Societ	sp y)	it	al	



ANNEXURE-10 WARRANTY CERTIFICATE

Name of the Supplier	Name of the Secretary
Signature	Signature
Seal of the company	Seal of NSMIMS
	tive Hospital Society)

N.S. Co-operative Hospital (A Unit of Kollain Distract Co-operative Hospital Society)

WARRANTY CERTIFICATE

(to be filled jointly by the Bidder, & Representative of the Tender Inviting Authority individually for every equipment)

			Date:
Supply	order No:	dated.	The instrument
	(I	tem Name / Tender No) N	Nodel No
Bearing	serial, no	was installed	successfully at NSMIMS
	is	•	
	s starting from	to	including all the following
accessorie	S.		
SL NO	NAME OF THE EQUIPMENT	YEAR OF WARRANTY	ADDITIONAL WARRANTY
1	Television		
2	Signage software	Par	
3	CCTV System		8
4	PA System		
	lo-opera	tive Ho	snital
5 (A	Wi-Fi System Unit of Kollam District Co-	operative Hospital Soci	ety)
6	Nurse Calling System		
7	Access Control System		
8	Firewall		
9	Servers		
10	Storage		

			N.S.
11	Workstations		Co-operative Hospital (A Unit of Vollam Dates Co-operative Hospital Godery)
12	Information Kiosks		
13	Thermal Screening System		
14	Video Conferencing System		
15	ICU Patient Video Interaction Solution		
16	Nurse Station Tabs		
17	Passive Cabling for Voice / EPBX System		
18	Network Swiches		
	O-opera Unit of Kollam District Co-o	tive Hospital Social	
(\(\)	Offic of Rollant District Co-C	Sporative Hospital Godie	, ty /



SECTION VII DETAILED BILL OF QUANTITIES

SL NO	PRODUCT DESCRIPTION	UNIT	QTY
Α	TELEVISIONS		
1	Supplying, Installing, fixing of 43-inches Full HD IPS LED Smart TV with panels suitable for 18x7 operations, 450 nits brightness along with 3HDMI / 1DP / Lan/ Wi-Fi with all mounting accessories as required at site and as per the specifications The system shall be compatible with Signage and IPTV Software	Nos	12
2	Supplying, Installing, fixing of 32-inches Full HD IPS LED Smart TV with panels suitable for 18x7 operations, 450 nits' brightness along with 3HDMI / 1DP / Lan/ Wi-Fi with all mounting accessories as required at site and as per the specifications. The system shall be compatible with Signage and IPTV Software	Nos	147

В	IP TV SERVER / WORKSTATIONS & SIGNAGE SOFTWARE		
1	Supply, Installation, Testing and Commissioning of Rack Mountable Server with Intel® Xeon® Gold Processor E5-2650 v4, 30M Cache, 2.20 GHz (12 Core/24 thread) - 32GB 2666MT/s DDR4 ECC UDIMM RAM, -4 X 1.2 TB Enterprise SAS Drive, RAID5 - Intel I350-T4V2 Ethernet Server Adapter - 1 x DVD Combo Drive, - 2 x USBV2.0, Built in VGA Port, - 1 x PCI or 1 x PICe socket, with Licensed Windows Server® 2019 Standard - 21" LED Monitor, Keyboard and Mouse (The Servers will act as Digital Signage Server and Cache Server)	ta	2
2	Supply, installation, testing and commissioning of All in One PC with Intel® Core i3-9100 (4Cores/6MB/4T/3.6GHz to 4.2GHz/65W) Processor, supports Windows 10/Linux, 1x 2.5 inch 1TB 5400rpm SATA HDD, 8GB (1X8GB) 2666MHz DDR4 RAM, Dedicated VGA, 1 x Gib LAN Port, DVD / Combo Drive, key board, mouse and 21"	Nos	1

	LED monitor. The system shall have the licensed pre-installed Microsoft Windows 10 64 Bit Pro operating system with antivirus. (Considered for1 x Signage)	Co-op (A Unit of Kollam I	erative H Austrict Co-operative Hospital So	ospita elety)
3	Supply, installation, testing and commissioning of Digital Signage software and integration with IPTV solution	Lot	1	

С	CCTV SYSTEM		
1	Supply, installation, Testing, and commissioning of 2MP (1920x1020) IR IP Dome camera with 1/28" CMOS Image Sensor, 2.8mm Fixed Lens, Smart IR Up to 30M distance and necessary mounting fixtures as per the specification	Nos	226
2	Supply, installation, Testing and commissioning of 2MP (1920x1020) IR IP Bullet camera with 1/28" Progressive Scan CMOS Image Sensor, 2.8 to 8mm Motorized Zoom Lens, Smart IR, Up to 30Mtr distance and necessary mounting fixtures as per the specification	Nos	116
3	Supply, installation, Testing, and commissioning of 4MP (2592x1520) IR IP Bullet camera with 1/28" Progressive Scan CMOS Image Sensor, 2.8 to 12 mm Motorized Lens, Smart IR, Up to 50M distance and necessary mounting fixtures as per the specification	Nos	2
4 ()	Supply, installation, Testing and commissioning of 2MP (1920*1080) IR IP PTZ camera with 4.5 to 135 mm Lens, 1/2.8", progressive scan,2MP, CMOS, Smart IR, Up to 150M distance, ANR Support and necessary mounting fixtures as per specification.	ta	2
5	Supply, installation, Testing and commissioning of ANPR Software for the Letter & Number Recognition with the customization feature based on the client requirements and as per the specifications. The rate shall include the Per Channel / Camera License, Server Application and license and the client training.	Channel	2
6	Supply, installation, Testing and commissioning of 19" IP 3U 64 Channel Network Video Recorder supporting 4K Cameras, Min of 350 Mbps incoming bandwidth, HDD Hot swappable, Supports Redundant power supply on Operating Conditions and as per the specification	Nos	7

			S.
	(Quantity to be considered with N+1 Redundancy and RAID 5 for 30 Days Backup with 1 MP Resolution @ 25 FPS on H.265+ Compression)	CO-OP	erative Hospital Sept
7	Supply, installation, Testing and commissioning of 8 TB or higher Surveillance HDD with 7200 RPM. (Quantity to be considered for RAID 5 for 30 Days Backup with 1 MP Resolution @ 25 FPS on H.265+ Compression)	Nos	35
8	Supplying, Installing, fixing of 55" bezel free Full HD (1920 x 1080) Video wall signage displays arranged in 3 x 3 matrix suitable for 24x7 operations with minimum 450 nits brightness along with 2 x HDMI and 1x DP, RJ45, Audio Ports and Media Player for data. The maximum power consumption shall be of 130W with all accessories, including fixing arrangement as required at site	Set	1
9	Supply and Fixing of Push Pull Type Mounting Bracket for Video Wall Fixing Arrangements	Nos	9
10	Supply of HDMI Cable 15 m, as per specification	Nos	9
11	Supply, Installation, Testing and Commissioning of 12 HDMI Output Embedded Video Decoder with 2 DVI-D and 2 HDMI input interfaces and 4K resolution	Nos	1
12	Supply, installation, Testing and commissioning of Desktop Workstation with Intel i7 processor, 8 GB Ram, 1 TB HDD, DVD / Combo Drive, Keyboard & Mouse, dedicated 2MB Graphics card with 2 HDMI Port 21" Monitor. The system shall include Pre-installed original Latest Windows Professional operating system	ta Nos	_ 1
13	Supply, installation, testing and commissioning of All in One PC with Intel® Core i3-9100 (4Cores/6MB/4T/3.6GHz to 4.2GHz/65W) Processor, supports Windows 10/Linux, 1x 2.5 inch 1TB 5400rpm SATA HDD, 8GB (1X8GB) 2666MHz DDR4 RAM, Dedicated VGA, 1 x Gib LAN Port, DVD / Combo Drive, key board, mouse and 21" LED monitor. The system shall have the licensed pre-installed operating system with antivirus. (Considered for 2 x ANPR Monitoring)	Nos	2
14	Supply and eruption of 75mm Día, 4Mtr Gl Camera Mounting Pole with Camera Mounting Bracket. The Pole shall have suitable cable	Nos	15

	entry and exit point as required and fixing base plate to mount in the	Co-or	erative Hos
	platform. The rate shall include the suitable basement at 2 feet depth		
	below surface and one feet height above surface with suitable anchor		
	bolts to mount the camera pole. The necessary cable route and entry		
	to the pole shall be considered while constructing the basement		
15	Supply and Laying (Including Civil Digging and Route Marking) of 32 MM ISI Marked, HDPE Pipe with nylon rope, minimum 4KG pressure or higher including all necessary accessories as per the given specifications.	Mtrs	300
16	Supply, installation, Testing and Commissioning of 4-pair, Outdoor Double jacketed cable, PE & FRLSZH, Cat6A UTP Cable, roll of 305m	Box	1
17	Supply, Installation, Testing and Commissioning of Category 6A U/UTP Cord, LSZH, RJ45 to Field mountable Termination Module	Nos	290
18	Supply and installation of Cat 6A 24-port loaded, Patch Panel, 1U	No	13
19	Supply, Installation, Testing and Commissioning of Cat 6A-Patch Cords - 1 Mtr - Gray, LSZH	Nos	290

D	PA SYSTEM		
1 (Supply, installation, and commissioning of EN Complied 6 Watts Metal Grill ceiling speaker for full range sound application including for Emergency Evacuation and BGM as per the specifications	Nos	264
2	Supply, installation, and commissioning of EN Complied 6 Watts wall mount Cabinet speaker for full range sound application including for Emergency Evacuation and BGM as per the specifications	Nos	30
3	Supply, installation, testing and commission of EN Certified 2x 500W Class D, high efficiency amplifier. with 4 automatic selectable audio inputs on RJ45 / local input as per the specifications	Nos	2
4	Supply, installation, testing and commission of EN Certified Gooseneck microphone with Keypad and LED indications for zone selection up to 12 Zones as per the specification	Nos	3

5	Supply, installation, testing and commissioning of EN Certified EVAC Compliant PA Router for 24 zones as per the Technical Specification	Co-or (A Unit of Kollam Nos	erative Hos latrici Co-operative Hospital Scoots 1
6	Supply, installation, testing and commissioning of EN Certified EVAC Compliant PA controller capable of adding Minimum of 24 zones in the system with 14x 4 Audio matrix with full DSP functionality. 8 audio inputs, 4 audio outputs, 4 channel output matrix, Built in message manager for 100 emergency/business calls up to 85 minutes and as per Technical Specifications	Nos	1
7	Supply, Installation, testing and commissioning of Flush-mounted wall attenuator Input Range: 0.5 - 30 W, as per the technical specifications.	Nos	5
8	Supply and laying of 2C 2 Sqmm multistrand, Armoured, pvc insulated shielded FRLS cable	Mtrs	1000

E	Wi-Fi SYSTEM		
1	Wi-Fi Controller		
1.1	Supply, installation, testing and commission of 19" Rack Mountable, Network Controller for Wireless Management for deploying, monitoring & troubleshooting access points with capacity to handle up to 1000 Access Points, along with appropriate licenses & support with Min 4 X 1 Gig (SFP) ports Product support and other accessories required for full system functional and as per the specification (Primary & Redundancy)	Nos	2
2	Access Point		
2.1	Supply, installation, testing and commission of Indoor Dual-band 802.11abgn/ac Wave 2 Wireless Access Point, MU-MIMO 3x3:3 streams or higher, dual ports, 802.3af/at PoE support, Integrated Antenna, with Limited Lifetime Warranty and other mounting accessories required for full system functional as per the specification	Nos	198

F	NURSE CALLING SYSTEM		
1	Supply, installation, testing and commission of VDE 0834 / UL 1069 certified/ approved Nurse station Touch Display Terminal Module	Nos	24

2	32" IP Based TV for displaying Nurses Calling	Co-or	erative Ho
3	Supply, installation, testing and commission of 'VDE 0834 / UL 1069 certified / approved Connection / bed module for Patient Terminal-without speech:	Nos	364
4	Supply, installation, testing and commission of VDE 0834 / UL 1069 certified/ approved, IP65/IP 67 rated Patient Handset - Without Speech	Nos	364
5	Supply, installation, testing and commission of 'VDE 0834 / UL 1069 certified/ approved Pull Cord with cancel Button - For WC	Nos	226
6	Supply, installation, testing and commission of 'VDE 0834 / UL 1069 certified / approved Lamp Module	Nos	216
7	Supply, installation, testing and commission of 'Software- Event Database Software: Software pack installed on the system server for automatically logging all events in the entire communications system, such as, e.g., calls, presence markings, call acknowledgements, reminders	Unit	1
8	Supply and installation of all required cabling and active devices / Switches / IP Based Controller to communicate and for the full functions of Nurse Calling System	Nos	18

G	ACCESS CONTROL SYSTEM		
1	Supply, installation, testing and commissioning of Network Access Management Software with 2 clients capable of addition, deletion, door access level addition, time zones. Etc with Time attendance system module with Audit Trail facility. Attendance S/W should be customizable at site as per customer requirement of reports and should able to give data to any third-party S/W. The S/W should be able to display the floor layout with ACS doors marked and also should able to control the doors (open and close) from S/W.	Nos	1
2	Supply, installation, Testing and commissioning of PoE Based 2 Door Access Controller for Door Reader interface input Monitor or output control with enclosure and Lock & Key and accessories as per the specifications	Nos	15

3	Supply, installation, Testing, and commissioning of Contactless Smart Card Reader	Co-op (A Unit of Rollam I	erative Ho Matrict Co-operative Hospital Sci 29
4	Supply, installation, Testing, and commissioning of Exit Button	Nos	29
5	Supply, installation, Testing, and commissioning of ERS Button	Nos	29
6	Supply, installation, Testing, and commissioning of 600lbs Single Door Electromagnetic Lock with Magnetic door contact, Door LED & Necessary Mounting Brackets	Nos	6
7	Supply, installation, Testing and commissioning of 600lbs Double Door Electromagnetic Lock with Magnetic door contact, Door LED & Necessary Mounting Brackets	Nos	23
8	Supply, Installation, Testing and Commissioning of DOTL Door Buzzer as per the specifications	Nos	29
9	Supply of iCLASS 2K 2 Smart Card	Nos	500
10	Supply, Installation, Testing and Commissioning of 2C 1 Sqmm multistrand pvc insulated shielded FRLS cable with for Cable from Lock / ERS to Controller	Mtrs	200
11	Supply, Installation, Testing and Commissioning of 4C 1 Sqmm multistrand pvc insulated shielded FRLS cable with for Cable from electromagnetic lock / Reader to Controller	Mtrs	300
12 (/	Supply and Concealed Laying of 25mm PVC Conduits Ciety	Mtrs	250
13	Supply, Installation, Testing and Commissioning of 3 x 3" PVC Back Box for Reader Installation with Concealed installation	Nos	147



Н	FIREWALL SYSTEM		
1	Supply, installation, Testing, and commissioning of Firewall with minimum 2x GE RJ45 WAN Ports together with Minimum 12x GE RJ45 Ports & 4x GE SFP Slots as per the specification (3 Years Warranty & Support)	Nos	2
2	10GbE Direct Attach SFP+ to SFP+ Passive copper cable, 1 m	Nos	2

I	INFORMATION KIOSK		
1	Supply, installation, testing and commission of Information Kiosk with 15" Screen as per the specification	Nos	6

J	THERMAL SCREENING SYSTEM		
1	Supply, installation, testing and commission of 4MP IP Dual Sensor Body Temperature Detection Bullet Camera with 4mm Fixed visible lens and Thermal camera with 256x192 Resolution in thermal channel, high sensitivity sensor, 2560×1440@25fps Optical Resolution, PoE, Built in Mic WDR, Smart Analytics as required for the full function of the system	Nos	2
2 ()	Supply, installation, testing and commission of Tripod / stand with Adapter for Fixing the Camera perative Hospital Society)	Nos	2
3	Supply, installation, testing and commission of 10Ch Embedded Network Video Recorder With 4 TB HDD Supports 8 PoE Ports, 4K cameras, HDMI and VGA including the necessary Thermal screening and identifying software	Nos	1
4	Supply, installation, testing and commission of Temperature and Metal Detection security Gate with Face Recognition Terminal, Dual camera and LCD Display.as per the specifications	Nos	2
5	Supply, installation, testing and commissioning of All in One PC with Intel® Core i3-9100 (4Cores/6MB/4T/3.6GHz to 4.2GHz/65W) Processor, supports Windows 10/Linux, 1x 2.5 inch 1TB 5400rpm SATA HDD, 8GB (1X8GB) 2666MHz DDR4 RAM, Dedicated VGA, 1 x Gib LAN Port, DVD / Combo Drive, key board, mouse and 21"	Nos	2



LED monitor. The system shall have the licensed pre-installed operating system with antivirus. (For Thermal Scanner / Monitoring)

K	VIDEO CONFERENCING / PRESENTATION SYSTEMS		
Α	Screening		
1	Supply, installation, testing and commission of Ultra Short Through Projector as per the specification	Nos	2
2	Supply, installation, testing and commission of Wall or Ceiling Mountable, 115" Diagonal, non-tensioned Projector Screen with an auto lock mechanism	Nos	2
3	Supply, installation, testing and commission of HDMI Cable: 1.8-meter HDMI male to male cable	Nos	2
4	Wireless Presenter: Wireless Presenter with following specification Up to 2 users can present simultaneously in fixed screen mode, BYOD Platform, Support iOS, Android, Chromebook, PC, and Mac users instant wireless connectivity with advanced presentation capabilities,1024-bit encryption for secure use on the internal network, Share HD wireless video streaming, Connectivity HDMI & DP, Ethernet	No	1
В	AUDIO & VIDEO CONFERENCING (External / Internal Theotre Live View / Internation)	ta	
1	Supply, installation, testing and commission of HD Video Conferencing System with 2 MP PTZ Camera (1080p/60), Video Codec and Conferencing Microphone and all its Connection cables and accessories.	Set	3
2	Supplying, Installing, fixing of 55" FHD IPS LED Professional display suitable for 18x7 operations with minimum 450 nits brightness along with 3 x HDMI, 1x DP, 1 x Lan / Wi-Fi connectivity and maximum power consumption of 115W with all accessories including fixing arrangement as required at site	No	3
3	Supply, Installation, testing and commissioning of 60 W Mixer Amplifier for the VC Audio input / Output	No	1
4	Supply, installation, testing and commissioning of Wireless Handheld Mic: With Transmitter & Receiver , Audio Frequency Response 50	No	1

	to 15,000 Hz ,Total Harmonic Distortion 0.5%, Dynamic Range 100		erative Hoselital Society
	dB, Working Range 91 m, Gain Adjustment Range 10 dB, RF		
	Transmitter Output 10 MW, RF Sensitivity -105 dBm for 12 dB SINAD		
	,Image Rejection >50 dB, typical or better		
5	Supply and installation of 9 U AV Rack with 1 x 6 Socket PDU, 1 x	No	1
J	Cantilever Shelf, Ventilation fan and all other mounting accessories		
6	Supply, installation, testing and commission of HDMI Cable: 1.8-	Nos	3
0	meter HDMI male to male cable	NOS	3
	Supply, installation, testing and commission of RJ45 to HDMI / HDMI		
7	Male to Male Cable or Connectors for connecting third party camera	Nos	2
	on codec		
С	Board Room		
1	Switching Section		
	Cable Cubby: Supply Installation Testing & Commissioning of Flip		
1.1	open type covered Cable cubby with 2 x Universal Power, 2 x RJ45	Nos	2
	Network, 1 x HDMI, 1 x USB		
	Supplying, Installing, fixing of 65" FHD IPS LED Professional display		
	suitable for 18x7 operations with minimum 450 nits brightness along		
1.2	with 3 x HDMI, 1 x DP, 1 x Lan / Wi-Fi connectivity and maximum	No	1
	power consumption of 115W with all accessories including fixing		
	arrangement as required at site	ta	
1.3	10 Mtc HRMI Cable strict Co-operative Hospital Society)	No	1

L	SERVER STORAGE SOLUTION		
1	Supplying, Installation, Testing and Commissioning of Rack Mountable Hyper-Converged Infrastructure with 64 Core Processor, 512GB RAM and 15TB Usable storage in SSD (Distributed across all Nodes) Virtualization with VMWare and Backup software as per the specifications. Guest VMs will be using MS Windows Server 2019-Licensed software Standard. Backup Node will be an X86 node at the DR Site This server Space also considered to utilized for the following Services through VM: a. ANPR	Set	1
	b. NCS		

	c. Access System d. Kiosk	Co-op	erative Hospital Schiety
2	Supply, installation, testing and commission of 19" Rack Mountable 8 Port USB KVM Console with 19" LCD Screen	Set	1
3	Supply, Installation, and configuration of Microsoft Windows Server® 2019 Standard operating system software.	Nos	10
4	Supply of Microsoft Windows 10 64 Bit Pro operating system software.	Nos	5

М	ICU PATIENT VIDEO INTERACTION SOLUTION		
1	Supply, installation, testing, and commission of HD Video Conferencing System with 2 MP PTZ Camera (1080p/60), Video Codec and Conferencing Microphone and all its Connection cables, accessories and three-years on-site warranty support	Set	4
2	Supplying, Installing, fixing of 32" FHD IPS LED Professional display suitable for 18x7 operations with minimum 400 nits' brightness along with 3 x HDMI, 1x DP, 1 x Lan / Wi-Fi connectivity with all accessories including fixing arrangement as required at site	No	2
3 (Supplying, Installing, fixing of 43" FHD IPS LED Professional display suitable for 18x7 operations with minimum 450 nits brightness along with 3 x HDMI, 1x DP, 1 x Lan /e Wi-Fi connectivity and maximum power consumption of 115W with all accessories including fixing arrangement as required at site	ta	2
4	Supply, installation, testing and commission of HDMI Cable: 1.8-meter HDMI male to male cable	Nos	4
5	Supply, installation, testing and commission of Mobile Cart for TV and VC System at ICU Unit	Unit	2
6	Supply, installation, testing and commission of TV Mounting accessories for TV and VC system fixing at Bystander waiting area near ICU.	Unit	2



N	NURSE STATION TABS		
1	Supply, Install, Testing and Commissioning of 8" TFT Tab with 2 GHz Qualcomm processor, 2 GB RAM, 32 GB internal memory expandable to 512 GB, 5100 mAH lithium-ion battery	Nos	104

0	PASSIVE CABLING FOR VOICE / EPBX SYSTEM		
1	Integration and Revamping of Voice Cabling with the New IPBX System (128 Old Extensions)	Lot	1
2	Supply and Laying and termination of 50 Pair unarmoured CMR rated Raiser Cable (305 Mtrs/Box)	Box	2
3	Supply and Laying and termination of 25 Pair unarmoured CMR rated Raiser Cable (305 Mtrs/Box)	Box	8
4	Supply, installation, and termination of 24 Port fully loaded Cat6A Patch Panel	Nos	10
5	Supply, Installation, and termination of 50 Port Voice Jack Panel	Nos	10
6	Supply and installation of 1 Mtr Cat6 UTP Patch Cord	Nos	300
7	Supply and installation of 600 x 1000mm 42U Network Rack with Perforated Door, Side Panels, 2 No of Rack Air Circulation module, 1 No of Rack mountable Vertical PDU with 12 Sockets, 15 No of Horizontal Cable Manager with Lock & Key and Mounting Accessories	No	1
8	Supply, installation, Testing and Commissioning of 3U Frame Krone with 3U space and mounting accessories	Nos	7
9	Supply, installation, Testing and Commissioning of 10 Pair Krone Module	Nos	120
10	Supply, installation, Testing and Commissioning of Jumper Cables	Coil	1



Р	NETWORK SWTICHES		
1	Supply, Install, Testing and Commissioning of 48 Port Network Switches	Nos	2
2	Supply Installation, configuration, testing of 10G SFP+ Multimode Transceiver	Nos	4

Q	SOFTWARE SERVER		
1	'Supply, Installation, Testing and Commissioning of 10th Gen Server with Intel® Xeon® Processor 5218R, 27M Cache or more, 2.1 GHz (1 or 2 Core / 20 thread)	Nos	1





SECTION VIII TECHNICAL SPECIFICATIONS

1. SMART / SIGNAGE TV

The LED backlighting display should be super-slim depth of maximum 1.7" and should be a low power consumption. It should be a premium industrial-grade bezel free panel with internal temperature sensors and integrated cooling fans to use in robust 24/7 and 18/7 environments respectively

43" SMART TV DISPLAY

SL. NO	SPECIFICATION REQUIRED	COMPLIANCE YES / NO	REMARKS
1.0	General Requirements		
1.1	The TV shall have the viewable Image Size of 43" and 1920 x 1080 Full HD Resolution		
1.2	The TV shall be with Minimum operating hours of 18 x 7 or better	S	
1.3	Display Technology shall be Direct LED IPS Panel with 450 nits or better Brightness	× A	
1.4	The TV shall have 1100:1 or better typical Contrast Ratio with the aspect ratio of 16:9, Original, 4:3, Vertical Zoom, All-Direction Zoom	Hosl	oital
1.5	The TV shall have the Viewing Angle (H/V) of 178/178 and the feature of Landscape/Portrait Orientation		
1.6	The TV System shall be PAL/ SECAM & DVB T2/C with Progressive Scanning		
1.7	The system shall have 20W/ 2.0 Ch Sound output and built in Digital decoder		
1.8	The system shall be compatible with Signage and IPTV Software		
1.8.1	Hospitality & General Features		

		N.S.
1.8.2	The TV shall have the compatibility with Hospitality features such as Hotel Mode, Lock Mode & Welcome Screen	Co-operative Hos (A Unit of Kollum District Co-operative Hospital Selectly)-
1.8.3	The TV shall have the management features such as WOL, Self-Diagnostics, IR Out, Multi IR Remote, HDMI / HTNG - CEC	
1.8.4	The TV shall also have the Security features of Kensington Lock, HDMI/USB Lock	
1.8.5	The system shall be built in with Min 2 x HDMI, 1 x USB, Composite AV, LAN, RF, RGB and the Component operate with the power of 230 V AC, 50 Hz	
1.8.6	The package shall include the Fully functional Remote Controller with battery and mounting accessories such as Wall mounting kit, power cables etc.	

32" SMART TV DISPLAY

SL. NO	SPECIFICATION REQUIRED	COMPLIANCE YES / NO	REMARKS
2.0	General Requirements		nital
2.1	The TV shall have the viewable Image Size of 32" and 1920 x 1080 or better Full HD Resolution	tal Society)	Jitai
2.2	It shall have the Pixel Pitch of 0.46mm or better and 55 Pixels per Inch @ native resolution or higher		
2.3	The TV shall be with Minimum operating hours of 18 x 7 or better		
2.4	Display Technology shall be Direct LED IPS Panel with 400 nits or better Brightness		
2.5	The TV shall have 1100:1 typical Contrast Ratio and 16:9 of Aspect Ratio		

			N.S.
2.6	The TV shall have the Viewing Angle (H/V) of 178/178 and the feature of Landscape/Portrait Orientation		Co-operative Ho (A Unit of Kollam District Co-operative Hospital Select
2.7	The TV System shall be PAL/ SECAM & DVB T2/C with Progressive Scanning		
2.8	The system shall have 20W/ 2.0 Ch Sound output and built in Digital decoder		
2.9	The TV shall have the management features such as WOL, Self-Diagnostics, IR Out, Multi IR Remote, HDMI / HTNG - CEC		
2.10	The TV shall also have the Security features of Kensington Lock, HDMI/USB Lock		
2.11	The system shall be built in with Min 2 x HDMI, 1 x USB, Composite AV, LAN, RF, RGB, Component operate with the power of 230 V AC, 50 Hz		
2.12	The package shall include the Fully functional Remote Controller with battery and mounting accessories such as Wall mounting kit, power cables etc.	Hos	oital
2.13	The system shall be compatible with Signage and IPTV Software	tal Society)	

55" SIGNAGE / VIDEO WALL DISPLAY

SL. NO	SPECIFICATION REQUIRED	COMPLIANCE YES / NO	REMARKS
3.0	General Requirements		
3.1	The TV shall have the viewable Image Size of 55" and 1920x1080 Full HD Resolution		
3.2	The TV shall be with maximum operating hours of 24 x 7		
3.3	Display Technology shall be Direct LED IPS Panel with 500 nits or better Brightness		

3.4	The TV shall have the aspect ratio of 16:9, Original, Contrast Ratio of 1,200:1		Co-operative Ho
3.5	The TV shall have the Viewing Angle (H/V) of 178/178 and the feature of Landscape/Portrait Orientation		
3.6	The TV System shall be PAL/ SECAM & DVB T2/C with Progressive Scanning		
3.7	The TV shall have the ultra-narrow bezel width of 2.25mm (T/L) / 1.25mm (B/R) or better		
3.8	Hospitality & General Features		
3.8.1	The TV shall have the Hospitality features such as Hotel Mode, Lock Mode & Welcome Screen		
3.8.2	The TV shall have the management features such as WOL, Self-Diagnostics, IR Out, Multi IR Remote, HDMI / HTNG - CEC		
3.8.3	The TV shall also have the Security features of Kensington Lock, HDMI/USB Lock	800	
3.8.4	The system shall be built in with Min 2 x HDMI, 1 x USB, Composite AV, LAN, RF, RGB, Component operate with the power of 230 V AC, 50 Hz of Kollam District Co-operative Hospi	Hos tal Society)	pital
3.8.5	The package shall include the Fully functional Remote Controller with battery and mounting accessories such as Wall mounting kit, power cables etc.		
3.8.6	The integrator shall consider the media player suitable for the TV proposing to create the video wall.		



65" VIDEO DISPLAY

SL. NO	SPECIFICATION REQUIRED	COMPLIANCE YES / NO	REMARKS
3.0	General Requirements		
3.1	The TV shall have the viewable Image Size of 65"		
	and 3840 x 2160 (UHD) Resolution		
	The TV shall be with maximum operating hours		
3.2	of 24 x 7		
	Display Technology shall be Direct LED IPS		
3.3	Panel with 350 Nits or better Brightness		
	The TV shall have the aspect ratio of 16:9,		
3.4	Original, Contrast Ratio of 1,200:1		
	The TV shall have the Viewing Angle (H/V) of		
3.5	178/178 and the feature of Landscape/Portrait		
	Orientation		
	The TV System shall be PAL/ SECAM & DVB	- 0/	
3.6	T2/C with Progressive Scanning		
	The TV shall have the ultra-narrow bezel width of	(300	
3.7	2.25mm (T/L) / 1.25mm (B/R) or better		
3.8	Hospitality & General Features		
3.8.1	The TV shall have the Hospitality features such	0	
3.0.1	as Hotel Mode, Lock Mode & Welcome Screen		
	The TV shall have the management features		
3.8.2	such as WOL, Self-Diagnostics, IR Out, Multi IR	T	:1.1
	Remote, HDMI / HTNG - CEC	HOST	Itai
000	The TV shall also have the Security features of	tal Society) 👢	
3.8.3	Kensington Lock, HDMI/USB Lock	,	
	The system shall be built in with Min 2 x HDMI, 1		
0.0.4	x USB, Composite AV, LAN, RF, RGB,		
3.8.4	Component operate with the power of 230 V AC,		
	50 Hz		
	The package shall include the Fully functional		
	Remote Controller with battery and mounting		
3.8.5	accessories such as Wall mounting kit, power		
	cables etc.		

N.S. Co-operative Hospital (A Unit of Kolain Daked Co-operative Hospital Society).

SERVERS AND PERSONAL COMPUTER

The Minimum Specification for the Signage and IPTV Server shall comprise as follows.

a. SERVER SPECIFICATION

SL. NO	SPECIFICATION REQUIRED	COMPLIANCE YES / NO	REMARKS
4.0	General Requirements		
4.1	The Server shall be Rack Mountable type with dual power supply.		
4.2	The Server mother board should be with intel chipset		
4.3	The Server Processor shall be Intel Xeon Gold with E5-2650 v4, 30M cache, 2.20 GHz 12C/24T or better		
4.4	The Server shall be bundled with 32GB 2666MT/s DDR4 ECC UDIMM and an optical DVD Combo Drive		
4.5	The Server shall have 1.2 TB X 4 Enterprise SAS Drive Hard Disk storage, RAID 5 with Intel I350- T4V2 Ethernet Server Adapter or better		
4.6	The VGA shall be built-in with 2 x RJ45, 2 x USBV2.0, 1 x PCI or 1 x PICe socket and 4 x USB Connectivity District Co-operative Hospi	Hos tal Society)	pital
4.7	The Server shall be equipped with Duel/Redundant115/230 VAC		
4.7	The Server shall be supplied with 101-key keyboard and an Optical mouse		
4.8	The Server shall be pre-loaded with Licensed Microsoft Windows Server 2019 Standard and bundled with Startup Installation CDs		
4.9	The supply shall include with 22: LED Monitor and necessary power cables		

N.S. Co-operative Hospital

b. PERSONAL COMPUTER

The Proposed Personal Computer / Workstations are to be utilized for the client management of the IPTV and Digital Signage Applications. The basic / indicative Configuration requirement for the Client PCs are as follows:

SL. NO	SPECIFICATION REQUIRED	COMPLIANCE YES / NO	REMARKS
5.0	General Requirements		
5.1	The PC type shall be either Small form factor or all in one PC		
5.2	The PC mother board should be with intel chipset		
5.3	The System processor shall be with intel 8 th Generation Core i3 or better		
5.4	The system shall be bundled with 16 GB RAM and an optical DVD Combo Drive	~0/	
5.6	The system shall have 1 TB Storage Hard Disk capacity		
5.7	The VGA shall be built-in with integrated sound,1 x RJ45 and 4 x USB Connectivity	8	
5.8	The System shall be bundled with 10-key keyboard and an Optical mouse	Hogi	nital
5.9	The system shall have pre-loaded Microsoft Windows 10 64-bit Original Operating System and bundled with Startup Installation CDs	tal Society)	ortar
5.10	The supply shall include with 22: LED Monitor and necessary power cables		

C.DIGITAL SIGNAGE SOFTWARE

The digital signage software shall have Minimum following features:-

- (a) Upload and Show the Media files such as image on signage screen.
- (b) Add, Delete, Edit, and upload Video Files on signage displays.
- (c) Display Webpages (Internal or External) with configurable browser zoom in / out and auto refresh webpage.
- (d) Upload and playback audio files including live audio streaming (From Internet or LAN).
- (e) Upload and display PDF, Power Point, Excel, and Word files.
- (f) Add or change media, playlists, widgets, texts and shapes.



- (g) Full screen playback on portrait and landscape screen orientation with the support of Min 1080P resolution.
- (h) Broadcast Emergency Alerts on Screens.
- (i) Media Playlists with Preview, Sub-playlists, Tags and drag-and-drop editor
- (j) Content scheduling with schedule repeating events (Daily, weekly, monthly etc.), Screen on/off hours, download hours, volume level scheduling etc.
- (k) Upload local or own widgets such as Scrolling Texts, countdowns, Social widgets, and quotes.
- (I) Networking support.
- (m) Security features such as Multiple User Accounts, Custom password policy, Security lockdown for players, User IP address whitelist, player storage encryption etc.
- (n) Management and Monitoring features such as Remote management through web, playback reports, different time zone per player etc.
- (o) Option to expand the storage to cloud platform

2. CCTV (IP VIDEO SURVEILLANCE)

The purpose is to monitor & supervise the entire Hospital area for security purpose, as well as record and inform/alert officials on unwanted, untoward incidents. It is also essential to have recorded images to be stored for at least 30 days of all critical area's to facilitate investigations of a reported incidents.

The specification of Video Surveillance System covers technical specification and requirement of IP Video Surveillance Systems consisting of IP Indoor dome cameras, IP Fixed bullet camera's, IP PTZ camera, video management & recording system, Decoder and Client PC for monitoring etc for surveillance of the facility from a centralized location.

(A Unit of Kollam District Co-operative Hospital Society) — Video Surveillance System shall be an IP system. It shall have an option to integrate the Access Control System Platform.

2MP 30M DOME CAMERA

SL. NO	SPECIFICATION REQUIRED	COMPLIANCE YES / NO	REMARKS
6.0	General Requirements		
6.1	Shall have 1/ 2.8" or better image sensor with 2.8mm fixed lenses and Resolution should be 1020P or higher at 25 fps		
6.2	Camera Shall be of Indoor Dome type with 30 Mtr IR distance		

			N.S.
6.3	Shall have True day/Night feature with IR cut filter. Minimum Sensitivity should be Colour: 0.003Lux (F2.0, AGC ON), 0 Lux with IR		Co-operative Hospiti (AUni of Kollain District Co-operative Hospital Society)
6.4	Shall have configurable Wide Dynamic Range up to 120 dB		
6.5	Shall have H.265+ Compression to minimize storage and bandwidth.		
6.6	Shall have Dual Encoding feature		
6.7	Shall have Digital Noise Reduction mechanism with the feature		
6.8	Should also have one alarm in and alarm out options	~! (
6.9	Shall support various protocols like HTTP, TCP/IP, RTSP, RTP, RTCP, FTP, SNMP, DNS, DHCP etc		
6.10	Shall have feature like Back light compensation, Automatic white balance , Digital Wide Dynamic Range etc		
6.11	Shall have feature Like Video Motion detection, Camera Tampering Detection etc.	Iosp	ital
6.12	Shall have the feature of Corridor Mode	Society)	
6.13	Shall support digital defog		
6.14	Shall have Power over Ethernet feature. It should support IEEE802.3af.		
6.15	Recommended Power Consumption Shall be less than 4W		
6.16	Camera should be ONVIF compliant		
6.17	Camera shall have Edge Storage Slot Capable of Min 128 GB SD / microSD Card		
6.18	Camera shall be Vandal resistant (IK10)		

		N.S.
6.19	Camera shall be IP 67 rated ingress protection	Co-operative Hospita (A Unit of Kollum Dissiric Co-operative Hospital Society)
6.20	Camera shall be EN Compliant / CE Certified / UL Listed	
6.21	The bidder shall Consider all the mounting accessories as required	

2MP 50M BULLET CAMERA

SL. NO	SPECIFICATION REQUIRED	COMPLIANCE YES / NO	REMARKS
7.0	General Requirements		
7.1	Shall have 1/2.8" or higher image sensor Resolution should be 1020P or higher at 25 fps		
7.2	Shall have 2.8 mm to 12 mm or better DC auto Iris, Motorized zoom Lens	3%	
7.3	Shall be of outdoor type bullet camera with 50 Mtr IR distance		
7.4	Shall have True day/Night feature with IR cut filter. Minimum Sensitivity shall be Colour: 0.01Lux (F1.6, AGC ON) 0Lux with IR on or better		
7.5	Shall have H.265+ or better compression to minimize storage and bandwidth. Unit of Kollam District Co-operative Hospital	losp	ıtal
7.6	Shall have Dual Encoding feature (H.265+ and MJPEG) to have the optimum utilization of network		
7.7	Shall have Digital Noise Reduction mechanism with the feature of Vandal Resistant		
7.8	Shall support one way audio and one alarm in and alarm out options		
7.9	Shall support various protocols like HTTP, TCP/IP, RTSP, RTP, RTCP, FTP, DNS, DHCP etc		
7.10	Shall have feature like Back light compensation, Automatic white balance , Digital Wide Dynamic Range etc		

7.11	Shall have feature Like Video Motion detection, Camera Tampering Detection etc.
7.12	Shall have Power over Ethernet feature. It should support IEEE802.3af.
7.13	Shall be compliance to IP67 rating
7.14	Power Consumption shall be less than 6W
7.15	Operating Temperature: -10°C ~ 50°C
7.16	Operating Humidity: 0% ~ 80% (non-condensing)
7.17	Camera should be ONVIF compliant and UL certified
7.18	The bidder shall consider all the mounting accessories as required
7.19	The Cameras shall be compliance to CE-EN 55032:2015, EN 55024:2010+A1:2015 and UL Listed

4MP 50M LICENSE PLATE RECOGNITION CAMERA

SL. NO	SPECIFICATION RECOURED	OMPLIANCE ES / NO	REMARKS
8.0	General Requirements of Co-operative Hospital Se	Society)	
8.1	Shall have 1/2.8" or higher image sensor Resolution should be 1520P or higher at 25 fps	7 /	
8.2	Shall have 2.8 mm to 12 mm or better DC auto Iris, Motorized zoom Lens		
8.3	Shall have the shutter time of 1s to 1/100000s		
8.4	Shall be of outdoor type bullet camera with 50 Mtr IR distance		
8.5	Shall have True day/Night feature with IR cut filter. Minimum Sensitivity shall be Colour: 0.001Lux (F1.4, AGC ON) 0Lux with IR on or better		

8.6	Shall have H.265+ or better compression to minimize storage and bandwidth.		Co-operative Hospital (AUnt of Kollum Dialect Co-operative Hospital Society)
8.7	Shall have Dual Encoding feature (H.265+ and MJPEG) to have the optimum utilization of network		
8.8	Shall have Digital Noise Reduction mechanism with the feature of Vandal Resistant		
8.9	Shall support one-way audio and one alarm in and alarm out options		
8.10	Shall support various protocols like HTTP, TCP/IP, RTSP, RTP, RTCP, FTP, DNS, DHCP etc		
8.11	Shall have feature like Back light compensation, Automatic white balance , Digital Wide Dynamic Range etc	36	
8.12	Shall have feature Like Video Motion detection, Camera Tampering Detection etc.		
8.13	Shall have Power over Ethernet feature. It should support IEEE802.3af.		
8.14	Shall be compliance to IP67 rating Power Consumption shall be less than 6W Unit of Kollam District Co-operative Hospital	Iosp:	ital
8.16	Operating Temperature: -10°C ~ 50°C		
8.17	Operating Humidity: 0% ~ 80% (non-condensing)		
8.18	Camera should be ONVIF compliant and UL certified		
8.19	The bidder shall consider all the mounting accessories as required		
8.20	The Cameras shall be compliance to CE-EN 55032:2015, EN 55024:2010+A1:2015 and UL Listed		



2MP PTZ CAMERA

SL. NO	SPECIFICATION REQUIRED	COMPLIANCE YES / NO	REMARKS
9.0	General Requirements		
9.1	Shall have 1/2.8" or higher image sensor Resolution should be 1080P or higher at 25 fps		
9.2	Shall have 4.5 mm to 135 mm or better DC auto Iris, Lens		
9.3	Shall have the shutter time of 1s to 1/100000s		
9.4	Shall be of outdoor type PTZ camera with 150 Mtr IR distance		
9.5	Shall have True day/Night feature with IR cut filter. Minimum Sensitivity shall be Colour: 0.001Lux (F1.5, AGC ON) 0Lux with IR on or better	36	
9.6	Shall have H.265+ or better compression to minimize storage and bandwidth.		
9.7	Shall have Dual Encoding feature (H.265+ and MJPEG) to have the optimum utilization of network		
9.8	Shall have Digital Noise Reduction mechanism with the feature of Vandal Resistant	Iosp	ital
9.9	Shall support one way audio and one alarm in and alarm out options	Society) -	
9.10	Shall support various protocols like HTTP, TCP/IP, RTSP, RTP, RTCP, FTP, DNS, DHCP etc		
9.11	Shall have feature like Back light compensation, Automatic white balance , Digital Wide Dynamic Range etc.		
9.12	Shall have feature Like Video Motion detection, Camera Tampering Detection etc.		
9.13	Shall have Power over Ethernet feature. It should support IEEE802.3af.		

9.14	Shall be compliance to IP67 rating	Co-operative Hospita (A Unit of Kollam District Co-operative Hospital Society)
9.15	The Maximum Power Consumption shall not exceed 60W, with external power provision	
9.16	Operating Temperature: -10°C ~ 50°C	
9.17	Operating Humidity: 0% ~ 80% (non-condensing)	
9.18	Camera should be ONVIF compliant and UL certified	
9.19	The bidder shall consider all the mounting accessories as required	
9.20	The Cameras shall be compliance to CE-EN 55032:2015, EN 55024:2010+A1:2015 and UL Listed	

NETWORK VIDEO RECORDER AND VMS SOFTWARE

SI. No	Specification Required	Compliance Yes / No	Remarks
10.0	General Requirements		
10.1	The NVR Shall be 19" Rack Mountable with 64 Channel with Minimum 8 HDD Bays	Jogn	ital
10.2	NVR Shall be with 350 Mbps or better bandwidth A Unit of Kollam District Co-operative Hospita	Society)	Ital
10.3	Shall have the ability to preview of up 12 MP camera or better		
10.4	Shall have H265+ or better compression for HDD space management		
10.5	The system should support RAID 0/1/5/6/10		
10.6	Shall be capable for HDD hot swappable		
10.7	HDD controller shall have Minimum 10TB HDD management capacity or better		
10.8	Shall have support features for Fisheye de- warping and Corridor Mode Screen		

10.9	Shall support direct NAS attachment		Co-operative Hospital (A Unit of Kollam District Co-operative Hospital Society)
10.10	Shall have Redundant power supply		
10.11	NVR shall Record and store the real-time streaming on 720P resolution@24 fps. Each individual camera can be set a different preset recording frame rate		
10.12	Should be able to monitor and manage the uptime status of cameras and associated network accessories remotely.		
10.13	NVR shall allow the user to playback and download video records from NVR-Client. It shall also allow the user to configure the storage locations.		
10.14	NVR shall be capable to cache the real-time streaming for a certain time (no longer than 10 minutes). When there is an event or alarm triggering recording, prerecording can help trace the situation before the event or alarm occurs.		
10.15	NVR shall be capable to cycle overwrite video records. The HDD quantity shown on BoQ is for reference only and the bidder shall consider HDD quantity based on their calculation for the backup of 30 days	Hosp Society)	ital
10.16	NVR shall allows the user to monitor the running status of NVR via GUI. The following health statuses need to be monitored: System overload (CPU, Network), Hard disk error, Data accumulation to an unstable level, Power supply failure Fan failure.		

			N.S.
	NVR Health status abnormal shall be able to be		Co-operative Hospital
	reported out to VMS-Client as alarm information.		
	The information shall contain		
10.17	a. Total connected device number b. Working device number c. Receive BPS (KB/S) d. Storage device e. Storage BPS (KB/S) f. Historical Relay number g. Storage locations h. All space (MB) i. Remain space (MB)		
	Video Management software shall be ONVIF		
10.18	Certified with Camera Licenses including Client		
	License.		
10.19	Storage device shall be capable as per Camera / VMS OEM specification to support the recording of entire camera at full Resolution		
10.20	The storage Unit should support Muti RAID Levels and stripe size		
10.21	The Bidder shall provide the HDD based on the storage as required and RAID Level they supports		
10.22	The VMS Platform Shall have the capability to record and playback various compression devices including H.265+, MPEG-4 and MJPEG video streams along with audio	Hosp Society)	ital
10.23	The VMS Platform shall support Virtual matrix operation with CCTV keyboards or remote control		
10.24	The VMS Platform shall be able to configure tours and patrols on workstation monitors or video walls		
10.25	The VMS Platform shall Maintain database of all system functions for report out by request including devices error, alarms, and user action		
10.25	The VMS Platform shall Continuously monitor system health status of encoder, decoder and database with notification to users		

			N.S.
10.26	The VMS platform shall have option to link video and intrusion devices for actions when emergency happens		Co-operative Hospit (A Unit of Kollum Distric Co-operative Hospital Society)
10.27	VMS shall have the capability to receive alarms & events from multiple videos, access and alarm devices.		
10.28	Log Report shall be used to search the device alarm events, device operations, user login, and web operation. It shall also be used to set queries to get results quickly. Log reports shall be exported in XML, CSV, TIFF, PDF, Web Archive and Excel file formats.		
10.29	VMS shall manage investigation, post-recording motion detection, motion detection-based recording, Alarm (from any of integrated solution CCTV, Access Control and Intrusion Detection) Based recording and search tools with advanced search capabilities of the recording devices.		
10.30	System shall provide multi-level user access rights for viewing and managing access to the recorder functions.	Hospi	/ ital
10.31	System shall support recording modes of continuous, scheduled, manual, event and alarmbased recording.	Society)	
10.32	System shall support for both multicast and unicast network topologies and communication protocols.		
10.33	The Bidder shall consider the NVR on N+1 with RAID to minimize the down time and failover circumstances		
10.34	The NVR shall be compliance to CE-EN 55032:2015, EN 55024:2010+A1:2015 and UL Listed		



AUTOMATIC NUMBER PLATE RECOGNITION SYSTEM (ANPR)

SL. NO	SPECIFICATION REQUIRED	COMPLIANCE YES / NO	REMARKS
11.0	General Requirements		
11.1	The System should automatically detect a vehicle in the camera view using video detection and activated license plate recognition		
11.2	The System shall support both on Windows and Linux Operating System.		
11.3	The System shall be designed to work for 24x7 unattended operations		
11.4	The System shall automatically detect the license plate in the captured video feed in real-time.		
11.5	The System shall automatically search for similar plates across multiple cameras.	CARL.	
11.6	The system shall perform OCR (optical character recognition) of the license plate characters (English alpha-numeric characters in standard fonts).		
11.7	The System shall store JPEG image of vehicle and license plate and enter the license plate number into DBMS database along with date time stamp and site location details.	Hospi Society)	ital
11.8	The system should be able to handle multiple vehicles simultaneously i.e. if there are more than one vehicle in the camera view the system should be able to detect all of them, extract their license plate numbers and perform OCR on the license plate characters		
11.9	System should be able to detect and recognize the English alphanumeric License plate in standard fonts and formats of all vehicles including cars, HCV, LCV and two wheelers.		

			N.S.
11.10	The system shall be robust to variation in License Plates in terms of font, size, contrast, and color and should work with good accuracy.		Co-operative Hospital (A Unit of Kollum District Co-operative Hospital Society)
11.11	The success rate should be minimum 85%+ in Day and 70%+ Night		
11.12	Software Features(<u>Graphical User_Interface)</u>		
11.12.1	The system Graphical User Interface should have the following features:		
11.12.2	Web based GUI to be accessible from any system		
11.12.3	Auto discovery of ONVIF camera		
11.12.4	Image of the vehicle		
11.12.5	Image of the number plate		
11.12.6	Text conversion of number plate after using OCR (Optical Character Recognition) technology		
11.12.7	Date, Time and location of offending vehicle	8	
11.12.8	Import vehicle database in excel form		
11.12.9	Event/images/chart of ANPR		. 1
11.13	Alert Generation:	LOSD	IT2
()	The system should have option to input certain license plates according to the hot listed	Society)	· CCCI
11.13.1	categories like "Wanted", "Suspicious", "Stolen" unauthorized, VIP etc. by authorized personal.		
11.13.2	The system should have Open architecture and easy integration of alerts via http/XML		
11.14	Vehicle Detection and Video Capture Module:		
11.14.1	The system should be able to generate automatic alarms to alert the control room personnel for further action, in the event of detection of any vehicle falling in the Hot listed categories		
11.14.2	The system should have Rule based actions for example SMS, Email should be sent to authorized personnel on alert		

			N.S.
11.15	Report:		Co-operative Hospita
11.15.1	The report should be in Graphical and Tabular form.		
11.15.2	System should have ability to give camera ID / Camera Location etc on report page		
11.15.3	System should have ability to give vehicle image with license plate image		
11.15.4	System should have ability to give OCR Image/License plate Image		
11.15.5	System should have ability to give Watch list ("Wanted", "Suspicious", "Stolen", "Authorized", "Lost") on report page		
11.16	Vehicle Status Alarm Module		
11.16.1	On successful recognition of the number plate, system should be able generate automatic alarm to alert the control room for vehicles which have been marked as "Wanted", "Suspicious", "Stolen", "Expired". (System should have provision/expansion option to add more categories for future need). The Instantaneous and automatic generation of alarms. In case of identity of vehicle in any category which is define by user.	IOSP Society)	ital
11.17	Vehicle Log Module:		
11.17.1	The system shall enable easy and quick retrieval of snapshots and other data for post incident analysis and investigations. For example a database could be searched using criteria like date, time, location and vehicle number		
11.17.2	The system should be able to generate suitable MIS reports that will provide meaningful data to concerned authorities and facilitate optimum utilization of resources. These reports shall include.		

			N.S.
11.17.3	Report of vehicle flow at each of the installed locations for Last Day, Last Week and Last Month.		Co-operative Hospit (A Unit of Kollain District Co-operative Hospital Society.)
11.17.4	Report of vehicles in the detected categories at each of the installed locations for Last Day, Last Week and Last Month.		
11.18	Vehicle Detection and Video Capture Module:		
11.18.1	The system shall have Search option to tune the reports based on license plate number, date and time, site location as per the need of the authorities.		
11.18.2	The system shall have option to save custom reports for subsequent use. The system shall have option to export report being viewed to common format for use outside of the ANPR or exporting into other systems.		
11.18.3	The system should provide advanced and smart searching facility of License plates from the database. There should be an option of searching number plates almost matching with the specific number entered (up to 1 and 2 character distance).	Hospi	ital
11.19	Storage:		LCCLI
11.19.1	The System shall store JPEG/MJPEG images of vehicle as well as of thumbnail of the license plate for each vehicle	Society) -	
11.19.2	The system shall store the vehicle license number into a relational database (MySQL/PostgreSQL) along with date timestamp and site location details. The necessary license/ subscription/support services of the database software should be bundled with the ANPR software.		
11.20	Vehicle Category Editor:		
11.20.1	The system should have option to input certain license plates according to category like		

			N.S.
	"Wanted", "Suspicious" "Stolen", "Expired" etc. by		Co-operative Hospita
	Authorized personnel.		
11.20.2	System should have option to specify maximum time to retain vehicle records in specific categories.		
11.20.3	The system should have option to update vehicle status in specific category by authorized personnel. e.g. on retrieval of stolen vehicle, system entry should be changed from "Stolen" to "Retrieved".		
11.21	Extra Integration and more features:		
11.21.1	ANPR OEM should have registered office in India from last 5 Years.		
11.21.2	ANPR Application can support more than one IP camera.		
11.21.3	ANPR Application shall be able to integrate with Boom barrier, E challan, RLVD, Vahaan app.		
11.21.4	integrated with any other alerting system.	Hospi	ital
11.21.5	Rest based API & SDK should be available	Society)	
11.22	Users:		
11.22.1	ANPR application should support two types of login support as:		
11.22.1	Regular user		
	Admin user		
11.23	Central Management Module:		
11.23.1	The Central Management Module shall run on the ANPR's Central Server in control booth.		
11.23.2	It should be possible to view records and edit hotlists from the Central Server.		



12 CHANNEL VIDEO DECODERS

SL. NO	SPECIFICATION REQUIRED	COMPLIANCE YES / NO	REMARKS
12.0	General Requirements		
12.1	The Video Decoder shall be a High Definition with Min of 12 Channels Out put		
12.2	The Decoder shall have the 2 x DVI-D and 2 x HDMI input interface		
12.3	The Single Port shall have the decoding capability of 16 Channel or better at 1080P Resolution		
12.4	The Decoder shall be capable to decode up to 12MP resolutions		,
12.5	The Decoder shall support Picture in Picture and multicast features		
12.6	The Decoder shall stream Min H.265 or better video formats	8	
12.7	The Decoder shall be capable to support 12 or more video wall display units		. 1
12.8	The Decoder shall have 2 x RJ 45 Ethernet Interface, 2 x USB, Audio input and Output ports	HOST oital Society)	oital ——

HDMI Cable Specifications.

- It should be 4K@50/60, (2160p), should support 4 times of 1080p/60 video resolution and support audio 1536 kHz audio frequency for the highest audio fidelity.
- Cable Should Simultaneous deliver dual video streams to multiple users on the same screen.
- Cable should support for the wide-angle theatrical 21:9 video aspect ratio.
- It should dynamically synchronize video and audio streams.



LED VIDEO PANEL SPECIFICATION (TV)

The LED backlighting display should be super-slim depth of maximum 1.7" and should be a low power consumption. It should be a premium industrial-grade bezel free panel with internal temperature sensors and integrated cooling fans to use in robust 24/7 environments.

SL. NO	SPECIFICATION REQUIRED	COMPLIANCE YES / NO	REMARKS
13.0	General Requirements		
13.1	The TV shall have the viewable Image Size of 43" and 1920 x 1080 or better Full HD Resolution		
13.2	It shall have the Pixel Pitch of 0.46mm or better and 55 Pixels per Inch @ native resolution or higher		
13.3	Display Technology shall be Direct LED IPS Panel with 450 nits or better Brightness		
13.4	The TV shall have 16:9 or 4: 3 selectable Aspect Ratio		
13.5	The TV shall have the Viewing Angle (H/V) of 178/178 and the feature of Landscape/Portrait Orientation	Hogi	oital
13.6 (/	The TV System shall be PAL/ SECAM & DVB T2/C with Progressive Scanning	tal Society)	Jitai
13.7	The system shall have 20W/ 2.0 Ch Sound output and built in Digital decoder		
13.8	The TV shall have the management features such as WOL, Self-Diagnostics, IR Out, Multi IR Remote, HDMI / HTNG - CEC		
13.9	The TV shall also have the Security features of Kensington Lock, HDMI/USB Lock		
13.10	The system shall be built in with 2 x HDMI, 1 x USB, Composite AV, LAN, RF, RGB, Component operate with the power of 230 V AC, 50 Hz		



	The package shall include the Fully functional	Co-operative Hospital Society I
13.11	Remote Controller and mounting accessories	
	such as Wall mounting kit, power cables etc.	

CLIENT WORKSTATION

CCTV Client Workstation shall require following minimum hardware and operating system configuration:

SL. NO	SPECIFICATION REQUIRED	COMPLIANCE YES / NO	REMARKS
14.0	General Requirements		
14.1	The Workstation shall be either Desktop or Tower Type		
14.2	The System mother board should be with intel chipset	~ 0/	
14.3	The System processor shall be with intel latest Generation Core i7 Processor	01	
14.4	The system shall be bundled with Min 8 GB RAM and an optical DVD Combo Drive	8	
14.5	The system shall have 1 TB Storage Hard Disk capacity	Logi	oital
14.6	The System shall be bundled with a dedicated graphics adapter from nVIDIA GeForce family with Min 2 GB GDDR or better and 2 x HMDI out	tal Society)	Jitai
14.7	The System shall have integrated sound card,1 x RJ45 and 4 x USB Connectivity		
14.8	The System shall be bundled with 10-key keyboard and an Optical mouse		
14.9	The system shall have pre-loaded Microsoft Windows 10 64-bit Original Operating System and bundled with Startup Installation CDs		
14.10	The supply shall include with 22: LED Monitor and necessary power cables		

Note: All the Mounting accessories to install the entire system, is on the Bidder scope-diperational Software shall be installed at the VM Server.

3. PUBLIC ADDRESSING SYSTEM

The PA system is for a combination of emergency evacuation / General-purpose broadcasting usage, capable to handle minimum 24 Zones. It shall be fully modular and cater for future expansion requirements. It shall have the capability to automatically broadcast emergency evacuation messages to areas linked to automatic fire alarm systems, as well as manually making emergency broadcasts to specifically selected areas, either via fireman microphone or remote microphones. It shall be possible to use the system with or without a PC connected to the System Manager.

The PA system shall also be able to broadcast pre-recorded or normal broadcasts of routine, events and emergency announcements, Background Music broadcasting from the PA system, can go to specific individual zone or multiple zones. Individual zones can also be grouped into groups.

OBJECTIVE OF THE SYSTEM

The primary objective of the system is to provide clear announcements during public addressing and one-way voice communication during an emergency; the secondary function shall be to provide background music where required.

The system shall be capable of fulfilling the following requirements:

- Clear, un-distorted announcements to selected areas during public addressing
- Clear, un-distorted paging to all zones; either individually or collectively. Selection of groups
 of zones shall be programmable from time to time
- Background music to selected areas when the other functions are not selected.

SYSTEM FEATURES

The system shall provide new and unique features such as:

- Easy configuration, but without losing the ability to solve complex requests by providing a basic and advanced mode configuration wizard.
- The system shall be designed to ensure a system-wide intelligent power management architecture

The PA Systems comprises of the following components:

VOICE ALARM CONTROLLER

The system controller shall be an EN54-16 compliant and certified device in a 2 RU, 19"-cabinet. The TCP/IP capable network device shall contain all controlling and monitoring functions of a voice evacuation system.

SL. NO	SPECIFICATION REQUIRED	COMPLIANCE YES / NO	REMARKS perative Hotel
15.0	General Requirements	1207110	
15.1	The Controller shall be Based on a fully digital platform with Internal sounder		
15.2	The controller shall be capable to manage the supervision of its own operation and that of the connected devices		
15.3	It shall control and activate the connected amplifiers		
15.4	It shall be able to replace the amplifier routing and channel that has reported a fault, if spare provided and configured		
15.5	A failsafe mode shall ensure that emergency calls are passed through to the amplifiers even if the controller itself fails		
15.6	The controller shall support single line switching or redundant group A/B switching		
15.7	Network connectivity status and fault conditions shall be displayed via LEDs on the front panel	Hogy	nital
15.8 (/	Warning and event conditions shall be logged internally ollam District Co-operative Hospi	tal Society)	Jitai
15.9	It shall have an option to have multiple calls in parallel in a 2 channel operation mode.		
15.10	In case of high amplifier power, it shall be possible to transfer overrun amplifier power to additional system routers		
15.11	The controller shall be able to operate as a four- channel output matrix.		
15.12	The controller shall have an internal 16 x 4 Audio matrix with full DSP functionality		

			N.S.
15.13	A built-in message manager shall be able to store up to Min 100 emergency or business-calls		Co-operative Ho (A Unit of Kallalli District Co-operative Hospital Solve)
15.14	It shall be possible to send two different messages simultaneously to individual destinations.		
15.15	License free spoken word EVAC sound files shall be provided with tools to replace non-EVAC messages at any time without system interruption or system restart		
15.16	Loudspeaker supervision shall be fully controlled by the controller and executed from the router.	20/	
15.17	Zones outputs shall be able to handle a load from 2-500 Watt.		
15.18	The controller shall be able to handle up to 2000 Watt load		
15.19	The System access shall have password protection	Hogy	oital
15.20()	The Controller shall be compliance to all different standards like VDE0833 & NEN2575		Jitai
15.21	Controller Specifications:		
15.21.1	16x4 DSP matrix mixing Gain adjustment in the in- and outputs Compressor and Limiters on the inputs Cross point matrix level adjustment with ducking level		
15.21.2	4 separate call station RJ45 input busses, each can be daisy chained up to 4 call stations		
15.21.3	4 output channels for daisy chaining amplifiers via RJ45		

15.21.4	2mic/line inputs, 2x Euro Style		Co-operative Hospital Solvy)
15.21.5	Desirably 12 input contacts (6x voltage free + 6x Supervised) and 12 output contacts; 1x Relay + 12 Open Collector		
15.21.6	Four input channels (100V, 70V) + 2 spare channel inputs (100V, 70V)		
15.21.7	Real time clock with summertime and wintertime switching		
15.21.8	Event scheduler & Operating Power with 24V DC Input		
15.21.9	6 High power output contacts		
15.21.10	2x 2ch x 6zone (2 separate channels can be provided on each 6 zones. Blocks can be daisy chained)		
15.22	Compliance standards	8	
15.22.1	EVAC compliance acc. to IEC 60849 EMC emission acc. to EN 55103-1 EMC immunity acc. to EN 55103-2 Safety acc. to EN 60065 Co-operative Hospi	HOS tal Society)	pital
15.22.2	Restriction of Hazardous Substances (RoHS compliance)		
15.22.3	Electro - Magnetic Compatibility (EMC standard)		



CALL STATION KEYPAD

The call station shall be an EN54-16 compliant and certified user interface. It shall be designed in a modern and robust chassis with a graphical display.

SL. NO	SPECIFICATION REQUIRED	COMPLIANCE YES / NO	REMARKS
16.0	General Requirements		
16.1	The call station shall have a gooseneck microphone with pop shield and permanent monitoring, an illuminated LC-display		
16.2	The Unit shall have the option to supervise the operation status by the system controller		
16.3	It shall be possible to modify the call station to suit the user's requirements by connecting up to five remote call station extensions		
16.4	It shall be possible to extend the call station extension at the right and at the left side		
16.5	It shall be possible to mount a maximum of 3 additional emergency buttons on the Call station		
16.6	Button functions shall be programmable such as: Zone select, source select, level control, emergency on/off, message on/off, failure acknowledge/reset. Switching output trigger on/off or 0 to 10V, select scheduled events, scheduled event on/off.	HOS tal Society)	pıtal
16.7	The device shall be supervised electret microphone, with limiter and a speech filter for excellent speech intelligibility.		
16.8	It shall be possible to daisy chain 4 call stations.		
16.9	It shall have the Internal monitoring with error logging		
16.10	The Unit shall have following Specifications		
16.10.1	Five menu/function keys (pre-programmed)		

16.10.2	Green led on the microphone which is active during a call	Co-operative Hospi (A Unit of Kollum District Co-operative Hospital Scorely)
16.10.3	Supply Voltage between 15–58 V DC	
16.11	Compliance standards	
16.11.1	UL Listed	
	CE Certified	

VOICE ALARM ROUTER SYSTEM

The system Router shall be an EN54-16 certified device in a 2 RU, 19"cabinet. The device shall extend the number of zones in a system and shall contain all the necessary controlling and monitoring functions.

SL. NO	SPECIFICATION REQUIRED	COMPLIANCE YES / NO	REMARKS
17.0	General Requirements		l.
17.1	The Router shall support single line assignment or redundant group A/B switching.		
17.2	The internal supervision system shall monitor the functions and operation of both itself and the connected devices.		
17.3	Connectivity status and fault conditions shall be displayed via LEDs on the front panel, including a zone status LED strict Co-operative Hospi	Host	oital
17.4	It shall be capable of rerouting a spare amplifier channel and shall replace an amplifier channel that has reported a fault.		
17.5	Fault conditions shall also be reported to the connected system controller for operational control and logging purposes.		
17.6	A failsafe mode shall ensure that emergency calls are passed to the loudspeakers, even if the unit itself fails.		

			N.S.
17.7	It shall be possible to route up to 4 channels into eight 100V audio inputs to 24 speaker line outputs.		Co-operative Ho (A Unit of Kollum District Co-operative Hospital Sound
17.8	The router loudspeaker outputs shall be divided in blocks of 6 loudspeaker line outputs.		
17.9	Each block of 6 zones shall allow the same or a different two-channel operation mode to ensure continuous and/or different business music into different zone blocks.		
17.10	The router shall operate as a four in two out matrix (4 channel input matrix to 2-channel zone block output).		
17.11	Zone outputs shall be able to handle a load from 2-500 Watt.		
17.12	Max. 500 Watt per 6 zones shall be provided.		
17.13	The Router shall be able to handle up to a 4000 Watt load.	8	
17.14	Integrated loudspeaker supervision shall eliminate the need of amplifier power for supervision, which shall result in very low power consumption.	Host tal Society)	oital
17.15	The Unit shall have following Specifications		
17.15.1	24 input contacts; 12x voltage free (isolated) + 12x Supervised		
17.15.2	24 output contacts; 24 Open Collector outputs		
17.15.3	2 Relay switched outputs		
17.15.4	Eight 100V input channels + 4 spare 100V channel inputs		
17.15.5	24 zone status LED (active – green, fault – yellow, alarm – red)		

17.15.6	Internal router pcb: 4x 2ch x 6zone, were each block can be daisy chained	Co-operative Ho (AUnt of Kollah District Co-operative Hospital Solen
17.15.7	12 A/B zones or 24 single zones	
17.15.8	CAN bus between system components	
17.15.9	24V DC Input	
17.15.10	Safety: Internal supervision, system monitoring, watchdog, fault output	
17.16	Compliance standards	
17.16.1	VDE0833 & NEN2575	
17.16.2	UL Listed & CE Certified	

AMPLIFIER

The 2x 500W Class D, high efficiency amplifier shall be an EN54-16 compliant and certified system device in a 2 RU, 19"cabinet.

SL. NO	SPECIFICATION REQUIRED	COMPLIANCE YES / NO	REMARKS
18.0	General Requirements	X X	
18.1	The Amplifier shall provide 70/100V loudspeaker output voltages that are galvanically separated	Hos	oital
18.2	The amplifier shall be permanently monitored by the system controller	ital Society)	
18.3	A special standby mode shall be provided for saving energy during the time the amplifier is not in use with respect to all economical and supervision aspects		
18.4	System control and audio interconnections shall be done via RJ45 connectors		
18.5	The amplifier shall be used as a system amplifier, but it shall also be possible to use the amplifier standalone		

The local input shall be configurable in a way that it can be used in as source input for in an installed system 18.7 The System shall have following Specifications 18.7.1 • 2x 500-Watt Class D amplifier	
installed system 18.7 The System shall have following Specifications	-operative Hospi of Kollam District Co-operative Hospital Society)
18.7 The System shall have following Specifications	
Specifications	
18 7 1 • 2x 500-Watt Class D amplifier	
1 10.7.1	
18.7.2 • 4 channel input on RJ45 connector	
18.7.3 • Local input on amplifier	
18.7.4 • Amplifier efficiency >= 78%	
18.7.5 • Audible distortion prevention	
18.7.6 • Ac Power Switch and 24V DC Input	
18.7.7 • Front to rear air ventilation	

CEILING SPEAKER

The ceiling speaker shall be flush mount type. It shall come with matching transformer and spring catch for easy installation. It shall comply with BS5839 or EN54 standard. The dia of the speaker shall be not more than 105mm. The ceiling speaker shall come with the following specification

SL. NO	SPECIFICATION REQUIRED	COMPLIANCE YES / NO	REMARKS
19.0	General Requirements	X	
19.1	Speaker Type shall be Ceiling flush mounted		
19.2	Maximum Power with 9W	Hos	oital
19.3 (/	Rated power with 6W / 3W / 1.5W rative Hospi	tal Society)	
19.4	Sound pressure level at 6 W / 1 W (1 kHz, 1 m) have 95 dB / 87dB (SPL)		
19.5	Effective frequency range (-10 dB) shall be 65 Hz to 20 kHz		
19.6	Max Rated voltage of 100 V		
19.7	Max Rated impedance of 1667 Ω		
19.8	Dimension of 105mm x 90mm		
19.9	Color shall be white		

CABINET (WALL MOUNT) LOUDSPEAKER

A wall-mounting loudspeaker shall be full range loudspeaker suitable for both speaker assembly shall consist of a single piece, 6 W loudspeaker and frame with a 100 V matching transformer mounted on the back.

SI. No	Specification Required	Compliance Yes / No	Remarks
20.0	General Requirements		
20.1	Speaker Type shall be Ceiling flush mounted		
20.2	Maximum Power with 9W		
20.3	Rated power with 6W / 3W / 1.5W		
20.4	Sound pressure level at 6 W / 1 W (1 kHz, 1 m) have 95 dB / 87dB (SPL)		
20.5	Effective frequency range (-10 dB) shall be 200 Hz to 15 kHz	~0/	
20.6	Max Rated voltage of 100 V	(30 R	
20.7	Max Rated impedance of 1667 Ω		
20.8	Opening angle at 1 kHz/4 kHz (-6 dB) 150° / 70°	8	
20.9	Color shall be white		

4. WIFI SYSTEM

The Wi-Fi system is to provide the internet facility to the Hospital stake holders / the Patients, based on set of rules created by the Hospital IT Departments. The System shall be with a hardware-based Controller to manage the entire Wireless Access Points. There shall be two controllers for redundancy. The desired technical specifications of the Wi-Fi Controller and the Access Points are as follows:



WIRELESS CONTROLLER

SL. NO	SPECIFICATION REQUIRED	COMPLIANCE YES / NO	REMARKS
21.0	General Requirements		
21.1	Controller should be 19" Rack mountable 1U/2U height.		
21.2	Each WLC should have minimum of 2x 10/100/1000 RJ45 Ethernet Ports or more		
21.3	Controller/solution should support 198 Access points from day one and be scalable to support up to 1024 APs or more with single hardware or with clusters of hardware, WLC should also support seamless roaming access over L2/L3 network.		
21.4	Support for 100% redundancy for primary controller i.e. N: N for hardware as well all Licenses. In case primary controller goes down all features should be supported by redundant controller.		
21.5	Controller should have capacity to handle minimum 20,000 or more Concurrent devices and 1500 Wlan	lospi	ital
21.6	Controller should support integrated user authentication capability of minimum 20,000 users without the need for any external database servers (AD/LDAP).	Society) -	
21.7	Controller should provide air-time fairness between these different speed clients – slower clients should not be starved by the faster clients and faster clients should not adversely affected by slower clients.		
21.8	Ability to map SSID to VLAN and dynamic VLAN support for same SSID.		

21.9	External Captive Portal Integration - Web-services based API for external web-portals to integrate with the controller		Co-operative Hospit
21.10	Controller Should be scalable to support network analytics engine which uses Artificial intelligence-based Machine learning algorithm to pro-actively notify administrators about network issues. The ML and Al based solution should support client troubleshooting feature that allows an administrator to focus on a specific client device and its connectivity status. The tool should track the step-by-step progress of the client's connection, through 802.11 stages, RADIUS, EAP authentication, captive portal redirects, encryption key setup, DHCP, roaming, and more (depending on WLAN type).	300	
21.11	WLAN Solution must support an ability to dynamically adjust channel and power settings based on the RF environment. Quoted Acess point must support necessary spectrum analysis functionality to achieve this.		
21.12	The controller should support the ability to create different zones in which AP can be grouped logically or physically based on location e.g. different buildings in a campus can be configured as different zones so that each zone will have different configuration and policies.	Society)	ltai
21.13	WLC should support Hotspot 2.0 (passpoint) and WISPr.		
21.14	When Wireless Mesh is enabled the controller should be able to show the mesh topology on floor plans in a graphical format.		
21.15	WLAN Solution should have failover mechanism where if central system goes down user session,		

			N.S.
	application should not be disconnected it should be seamless failover.		Co-operative Hospit (A Unit of Kollum District Co-operative Hospital Society)
21.16	Access points can discover controllers on the same L2 domain and Layer 3 domain without requiring any configuration on the access point.		
21.17	Controller should support following for security & Authentication: WIRELESS SECURITY & Authentication: Open, 802.1x/EAP, PSK, WISPr, WPA, WPA2-AES, WPA-TKIP, WEP,EAP-SIM, EAP-AKA over WLAN for 802.1x, Authentication through external Radius /Directory services.		
21.18	WLC should support WIDS/WIPS for security including Evil-twin, Rogue AP detection and prevention, AP spoofing detection and Ad-Hoc network detection. Licenses for this functionality to be included in the solution.		
21.19	Support for Walled garden "Walled Garden" functionality to allow restricted access to select destinations by unauthorized wireless users.		
21.20	WLC should support OS/Device finger printing, Bandwidth rate limit, VLAN mapping.	Lospi	tal
21.21	WLC should support Mesh with both bands. Unit of Kollam District Co-operative Hospital	Society)	
21.22	The Solution Should provide a dashboard of spectrum quality in terms of the performance and impact of interference on the wireless network identifying the problem areas, channel utilization. Quoted Access Point should support this feature to send necessary data to controller.		
21.23	WLC should be able to raise critical alarms by sending an email. The email client on the controller should support SMTP outbound authentication and TLS encryption.		

21.24	WLC or integrated solution should provide customized reporting with minimum 2 weeks of historical WLAN information.		Co-operative Hospit
21.25	Solution should support application visibility and control which allows for applying QOS, rate limiting based on applications.		
21.26	Controller or integrated solution should support Wireless heat maps to show coverage areas and holes. It should also provide functionality to track wireless clients in heat map. Controller also should support Google maps integration.		
21.27	Controller or integrated solution should support per user PreShared keys to each user separately. Should support atleast 4000 unique keys.	36	
21.28	The WLAN solution should provide differentiated access for Guests and staff group on same SSID, Guests should have restricted access like not able to telnet & SSH to servers while connecting on same SSID. Similarly other ROLE BASED ACCESS policy support should be available for differentiated access.	lospi	ital
21.29	Controller should support Firewall Features including L2/L3/L4 Access Control profiles, Application Control profiles, Deep packet inspection, Device based policies etc.		
21.30	WLC should support per-SSID or dynamic per- user bandwidth Rate Limiting.		
21.31	System must support Band Steering where 5 Ghz clients are forced to connect over 5Ghz Radio to provide better load balancing among 2.4Ghz and 5Ghz Radios.		
21.32	WLC shall support Quality of Service features like 802.11e based QoS enhancements, WMM or equivalent and U-APSD to provide best performance on Video applications.		

21.33	WLC should be able to provide a web-based application that allows non-technical staff to create Guest accounts with validity for fixed duration like hours or days.
21.34	Administrative users should have account security features such as session idle timer, account lockout, password expiration, password reuse, two factor authentications. Should have option to enable captcha to make sure a human is logging into the system.
21.35	WLC should have library of well-documented REST-APIs to allow integration with 3rd party apps.
21.36	Controller should have Mobile App for Smartphone to provision APs.
	Mandatory Compliance :
21.37	All categories of Controller and Access Point should be from same OEM. If any of the features above require separate license, hardware, software, it should be quoted along with controller.
()	Warranty Warranty
21.20.9	Controller solution should be quoted with TAC Support and Warranty for 3 years with NBD Hardware Replacement.

INDOOR ACCESS POINT, WITH 3X3 MIMO

SL. NO	SPECIFICATION REQUIRED	COMPLIANCE YES / NO	REMARKS
22.0	General Requirements		
22.1	The APs should support the 802.11a, 802.11b, 802.11g and 11n and ac standards. It should also support 802.11ac Wave 2 standard in the 5 GHz band.		

22.2	Must support minimum 23 dBm EIRP and max within TRAI regulations for both radios. Should be WiFi certified; WiFi certificate to be enclosed, Should be WPC approved; ETA certificate to be enclosed		Co-operative Hospit (A Unit of Kollum District Co-operative Hospital Society)
22.3	Should support minimum 3x3:3 or higher MIMO on both radio bands for an aggregate capacity of 1740 Mbps or more. AP's to have 6 antennas for MU-MIMO (3x3 in 2.4GHz and 3x3 in 5 GHz) for good performance.		
22.4	The Access points should be Centrally Managed by a full-fledged controller. In some small isolated environments, the AP should be able to function as a full-fledged stand-alone access point without the requirement of a controller.		
22.5	Security mechanisms should be in place to protect the communication between the Access Point controller and the Access Points.		
22.6	Since most radio interference come from the WLAN network itself the vendor should specify what mechanisms such as beam steering/ adaptive antenna technology/ beamforming are available in combination to focus the energy on the destination STA and minimize radio interference with the surrounding of the AP.	IOSPI Society)	ital
22.7	The access point should be able to detect clients that have dual band capability and automatically steer those clients to use the 5GHz band instead of the 2.4GHz band.		
22.8	The access point should have minimum 2 x 1 Gigabit Ethernet port and support LACP		
22.9	The access point should have the option to support IOT based technologies such as Bluetooth, zigbee either inbuilt or using an external usb module and		

	should have option of external power adaptor as well.		Co-operative Hospita (A Unit of Kollam District Co-operative Hospital Society)
22.10	Must operate as a sensor for wireless IPS. AP model proposed must be able to be both a client serving AP and a monitor-only AP for Intrusion Prevention services.		
22.11	The access point should support WPA2 and WPA3 enterprise authentication and AES/CCMP encryption. AP should support Authentication via 802.1X and Active Directory.		
22.12	Implement Wi-Fi alliance standards WMM, 802.11d, 802.11h and 802.11e		
22.13	Should support the following channelization - 20MHz, 40MHz, 80MHz, 80+80/160 MHz		
22.14	Support RF auto-channel selection by the following three methods: a) measuring energy levels on the channel; b) monitoring for 802.11 signal structures and; (c) detecting radar pulses. Other similar forms of smart selection shall also be accepted.	S Cospi	tal
22.15	The access point should support application A Unit of Kollam District Co-operative Hospital recognition and control	Society)	tai
22.16	The peak power consumption should not be greater than 21W with all radios powered on and all features enabled.		
22.17	Should support up to 500 clients per AP		
22.18	Should support location based services		
22.19	Should support tunneling such as Layer 2 Tunnelling protocol and Generic routing Encapsulation and support meshing technologies where cable infrastructure may not be available		

		1	N.S. (*)
22.20	For troubleshooting purposes, the administrator should have the ability to remotely capture 802.11 and / or 802.3 frames from an access point without disrupting client access.		Co-operative Hospital (A Unit of Kotalin Datrict Co-operative Hospital Boosty))
22.21	Shall support 30 SSID's per AP and the AP shall support DHCP and NAT		
22.23	Access point to support- Flash - 256MB and RAM - 512MB and 1 USB port also.		
22.24	Operating Temperature: 0°C - 40°C, Operating Humidity: 10 % - 95% non-condensing.		
22.25	Should support the following standards - WEEE & RoHS, EN 60950, EN 61000 and be UL 2043 Plenum Rated	34	

5. NURSE CALLING SYSTEM

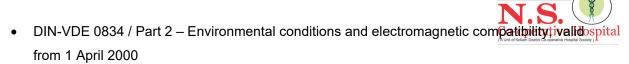
A Nurse Calling communications terminals for the hospital, shall be future-oriented with RFID and this platform must be created using IP technology, and must completely support the TCP/IP, UDP and FTP protocols. In its basic structure, the overall system must contain with a comprehensive range of signaling and speech connections between patients and nursing staff as well as among nursing staff members and capability to integrate with third party medical equipments such as Syringe Pumps, Infusion Pumps, Vital Signs Monitors in individual IP room areas etc.. The system shall be Capable to integrate with Hospital Information System also.

The complete system must satisfy the criteria of the standards VDE0834 part 1 and part 2 / UL 1069 in full that apply for call systems and all other standards and regulations mentioned therein. As proof of this, the issuing party must supply on request a valid certificate obtained from an independent and accredited testing center.

APPLICABLE STANDARDS

The system components, functional procedures and data relevant for ensuring the security of the entire system must all conform to the relevant applicable regulations and standards:

- DIN-VDE 0834 Call systems in hospitals, care homes and similar establishments, valid from 1 April 2000
- DIN-VDE 0834 / Part 1 Device specifications, installation and operation, valid from 1 April 2000



- UL 1069 Standard for Hospital Signaling and Nurse Call Equipment
- Provision of electricity in accordance with EN60950, EN61000-4-2 to -4-6 as well as EN61000-3-2 and EN55011 (Class B), Discharge current and isolation voltage in accordance with EN60601-1 (DIN750 part 1)

SYSTEM ARCHITECTURE

Superordinate and / or centralized controller devices are not permitted for safety reasons. In the event of a system component failing, all other system components and functions must remain available in their entirety. The network must guarantee a data transfer rate of 100/1000Mb/s to end devices when a conventional network topology is used. Data packets must be prioritized to ensure the safe and rapid transfer of critical data e.g. call or alarm messages.

THE MINIMUM SYSTEM SPECIFICATIONS

SL. NO	SPECIFICATION REQUIRED	COMPLIANCE REMARKS
23.0	Functional Requirements	
23.1 (A	The server connected to the nurse call network must automatically recognize the system components that are connected such as system switches, patient, communications, and ward terminals as well as all connected call and cancellation buttons	Iospital Society)
23.2	System devices must communicate with one another via the network and make the relevant functional decisions autarchic ally.	
23.3	Light signals, call signs and intervals between signals etc. must conform to the currently applicable VDE standards. In the explanation of functions and system parts, the terms mentioned therein are to be observed	
23.4	In the event that system extensions or modifications are made, the entire system must not need to be reconfigured in full, and software	

	and firmware upgrades must be carried out in a centralized manner over the network		Co-operative Hospital (A Unit of Kollum District Co-operative Hospital Society)
23.5	Faults or failures which may occur must be automatically recognized by this technological platform and indicated and automatically forwarded.		
23.6	Patient terminals must be supplied in a splash resistant version		
23.7	The plug and socket connections between the patient terminal and the accompanying connection sockets in the wall or in the media duct must be done in such a way, that the plug is automatically released regardless of which direction the cable is pulled in		
23.8	The membrane keypads of the communications terminals and the patient terminals as well as the plastic case of the patient terminal must be fitted with anti-microbial surfaces		
23.9 _A	Automatic forwarding of fire alarms using TCP/IP protocol. These messages must be forwarded to specific parts of the system in the entire system depending on the location in which they were triggered.	lospi Society)	ital
23.10	Presence marking		
23.10.1	Rooms where members of the nursing staff are present are to be indicated using light signals in the corridor and at the location of the query		
23.10.2	The marking must be carried out by using presence keys on the communications terminal		
23.10.3	The presences are to be indicated by the presence key pressed being permanently lit, in the accompanying room signal lights in the		

relevant colour on the corridor on the ward terminal and on the control panel It must be possible to differentiate between up to three possible presence indications - namely for: Nurse green Service / Staff yellow Doctor blue By pressing the presence buttons, calls and reminders are also cancelled and emergency calls, doctor calls, calls forwarded, and secondary queries initiated by the same process The optional integrated Mifare smartcard reader in the patient terminal described herein must also be fitted in such a way that this can also be used for personalized presence marking. This option must be included as an obligatory part of the system and should be activated at a later point in time through the system software. 23.11.1 Logging of care data The system shall have the option to keep a record of care measures administered Init of Kollam District Co-operative Hospital Society This option must be included as an obligatory part of the system, and should be activated at a later	ve Hospital Society)
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23.11.1 of care measures administered (A Unit of Kollam District Co-operative Hospital Society) This option must be included as an obligatory part	
This option must be included as an obligatory part	
point in time through the system software	
23.12 Call types and priorities	
All types of calls listed are to be ranked according to priority within the entire system. The ranking is based on the wishes of the customer, and it must be possible to change this order at any time using the system configuration.	
Fire alarm to entire nursing staff. It can only be cancelled via the fire Alarm system. The display text for the event to be displayed	

				N.S.
	•	In which ward(s) it should be indicated		Co-operative Hospit
	•	Whether the indication should occur only		
		where there is staff presence marked or		
		always		
	Hea	nrt alarm - code blue team		
	•	A call made by the nurse to the code blue		
		team in an emergency, where nurse presence		
		has been marked on the communications		
		terminal and is indicated optically and		
		acoustically on other terminals where code		
		blue presence is marked		
23.12.3	•	The call shall be signaled using a blue flashing		
		light and an acoustic signal with a fast call		
		rhythm (alarm call conforming to VDE0384 /		
		UL 1069).		
	•	The heart alarm (Code Blue) can be cancelled		
		by pressing the doctor presence key on the	-3 M	
		terminal at which the called was triggered	X	
			X	
	Em	ergency call (Help) - nurse		
	•	A call made by a nurse from a sanitary room		
	١ _	(WC, shower etc.), Room or Beds with		1_1
		marked presence.	LOSDI	llai
(A	Uni	The call cannot be queried and must be	Society)	
		followed up by the nurse directly.		
23.12.4	•	The call shall be signaled using a red and		
		white flashing light and an acoustic signal with		
		a fast call rhythm (emergency call conforming		
		to VDE0384 /UL 1069).		
	•	The call can be cancelled either using the		
		accompanying presence button at the		
		communications terminal.		
	Bat	hroom or WC call - nurse		
		A made by the patient from a sanitary unit		
23.12.5		(toilet, shower, etc.).		
Z3. IZ.5		,		
	•	The call cannot be queried and must be		
		followed up by the nurse directly.		

		N.S.
	The call shall be signalled using a red and	Co-operative Hospit
	white constantly lit light and an acoustic signa	1
	with a slow call rhythm (call conforming to	
	VDE0384 / UL 1069).	
	All system displays must recognize this call.	
	and must make details known about the roon	n
	its generated.	
	The call can be cancelled either using a	a
	separate cancellation button or by using the	e
	accompanying presence button at the	9
	communications terminal	
	Enhanced Patient call from his bed - Nurse	
	A call made a patient from their bed who is	s
	severely ill or has just undergone a	
	operation.	
	The call shall be indicated at other terminals	
	with nurse presence set both optically on the	
	display (with information about the precise ca	
23.12.6	locati <mark>o</mark> n includ <mark>ing bed number) and</mark>	
	acoustically.	
	The ward sister shall be responsible for	
	making the decision to upgrade individua	
	patients, with the programming being carried	lospitai
(A	out via th <mark>e</mark> ward terminal or the control panel	Society)
	This type of call has a higher priority than	1
	standard patient calls.	
	Disconnection call - nurse	
	Disconnection call - nurse	
	This call has to be triggered automatically	
	when the plug of a patient terminal is	5
	disconnected from its connection module.	
	This call shall be indicated at other terminals	
23.12.7	with nurse presence set both optically on the	
	display (with information about the precise ca	
	location including bed number) and	
	acoustically.	
	The call has to be signalled using a red light	
	and an acoustic signal with a normal ca	

			N.S.
	rhythm (call conforming to VDE0384 / UL		Co-operative Hospital
	1069).		
	Service call - Service staff		
	A call made by a patient from their patient bed using a special service call button on the		
	patient terminal.		
	This call shall be indicated at other communications, staff and ward terminals		
	with service staff presence set optically on the		
23.12.8	display (with information about the precise call		
	location including bed number) and		
	acoustically.		
	The call has to be signaled using a red light		
	and an acoustic signal with a normal call		
	rhythm (call conforming to VDE0384 / UL		
	1069).	100	
	Fault - In house technician		
	The fault message shall be automatically	8	
	detected by the communications system in		
	the event of wire breaks or similar events and		_
C	is indicated immediately on all ward terminals and control panels that are configured and	ospit	tal
(A	unit can be reached, both optically and acoustically, as well as being forwarded to	ciety)	
23.12.9	other systems such as mobile end devices /		
	central management systems / alarm servers		
	via various interfaces.		
	All buttons within the system that trigger calls		
	must be fitted with a so-called finder light in		
	accordance with VDE0834 / UL 1069, so that		
	the call buttons are easy to locate in darkened		
	rooms.		
23.13	Announcements		
	Presence-related announcements only go to the		
23.13.1	communications terminals of the ward being		

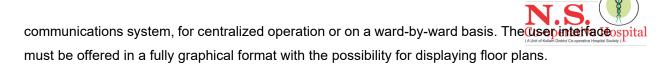
	called, at which members of the relevant staff		Co-operative Hospita
	category have marked their presence.		
	Collective announcements must reach all		
	communications terminals and patient terminals		
23.13.2	within the ward, regardless of whether presence		
	has been marked or not.		
23.14	Manual ward interconnection		
	This shall permit the manual formation of care		
23.14.1	areas, which consist of two or more wards		
	The indication, call forwarding and possibility to		
	query every call must then be extended in		
23.14.2	accordance with the priorities set to all ward		
	terminals and communications terminals in this		
	area	~0/	
		- 1/1	
23.15	Automatic Call Forwarding	30/0	
	If calls have not been able to be dealt with in a		
	pre-configured time due to the fact that staff	Φ	
	members are all busy, it must be possible to	Q	
	forward a call to one or more other pre-configured		
23.15.1	care groups. This must continue to take place		
	until all calls have been dealt with. All other	Inan	+01
	functions are identical to those for manual	LUSD	lai
(A	Unit of Kollam District Co-operative Hospital	Society)	
(A	Unit of Kollam District Co-operative Hospital	Society)	
(A	Unit of Kollam District Co-operative Hospital	Society) -	
23.15.2	The System should be quoted with Warranty for Five (3) years.	Society)	

MANAGEMENT SERVER

The Nurse Calling System Software Management Server to be provided for uploading the firmware and the system configuration, for operating interfaces to foreign systems, for logging of all system events and as a central location for system configuration and remote maintenance and is an interface to all other foreign systems

CONTROL PANEL - GUI SOFTWARE

The NCCS Software pack for the use, as a multitasking application on client that is connected to the communications network with Windows 7 or higher for visualization and operation of the entire



All events are displayed on the monitor on 2 levels:

Directly on the floor plan of the ward using icons that are clear to recognize

In 4 different windows with detailed text display of the respective events with date and time, ordered by internal and external calls, reminders, staff-based presence indications as well as faults and failures. These functions correspond to those of the ward terminal, but are, however, based on the entire system.

FIELD DEVICES (STAFF TERMINAL { NURSE STATION)}

For use as a communications and information center within a ward and for use in the relevant staff area or Nurse Stations. Its Range of functions shall be as follows:

SL. NO	SPECIFICATION REQUIRED	COMPLIANCE YES / NO	REMARKS
24.0	General Requirements		
24.1	Displays date and time	~ 0/	
24.2	Permanent indication of the quantity of calls, reminders and occurring faults, outstanding at the time		
24.3	Displays all presences that are marked, depending on staff category listed on a desk (in the corresponding colours in accordance with VDE 0834 / UL 1069 and with a unique symbol)	Hos	oital
24.5	Displays all calls with their relevant colours in accordance with VDE 0834 / UL 1069 and clear symbols for each type of call	tal Society)	
24.6	Displays events from foreign systems which are sent to the nurse call system via the communications control panel		
24.7	All call indications are automatically shown in accordance with the priorities for indication which are stored in the system, starting with the highest priority call		
24.8	It might have been assigned to, for calls across more than one ward the relevant ward name must also be indicated		

24.9	Emergency calls must always be shown flashing	Co-operative Hospi (A Unit of Kollain District Co-operative Hospital Solety)
24.10	TFT colour touchscreen graphic display with 6.5" / 7" diagonal screen size and 800 x 480-pixel resolution, for displaying all details describe	
24.11	Interactive function keys and function fields on the screen for operating the system	
24.12	Microphone and loudspeaker for hands-free speaking (incl. volume adjustment)	

COMMUNICATIONS TERMINAL / BED MODULE

For installation in all important rooms and in the ward in which the possibility to communicate is desired or required, with integrated functional components It should consist of:

SL. NO	SPECIFICATION REQUIRED	COMPLIANCE YES / NO	REMARKS
25.0	General Requirements		
25.1	Controller circuit board with integrated DSP to connect the Patient terminal and the Medical Equipments	No.	
()	Anti-microbial membrane keypad for operation consisting of 3 interactive function keys such Unit of Kollam District Co-operative Hospi as:	HOS tal Society)	oital
25.2	Call key with control LED Doctor call with control LED Presence key with control LED		
25.3	2 RJ45 sockets for connecting the data circuits		



PATIENT TERMINAL / NURSE CALL BUTTON

For installation in all important rooms in the ward in which the staff should be able to recognize all calls made in the ward, with integrated room controller and an operating membrane keypad with colored panels and symbols. It shall have Controller circuit board with flash prom.

SL. NO	SPECIFICATION REQUIRED	COMPLIANCE YES / NO	REMARKS
26.0	General Requirements		
26.1	Call key (red with nurse symbol) with integrated finder and reassurance light		
26.2	Doctor call key (blue with doctor call symbol) with integrated reassurance light		
26.3	Presence key (Green for Ward Sister) with control LED		
26.4	Presence key (Blue for the Doctor) with control LED		
26.5	Screw-free attachment of the terminal to a double installation case		
26.6	Functional Requirements		
26.6.1	Nurse call with Voice (For Voice Enabled Patient Terminals)	Hogi	oital
26.6.2	Speech Service call with speech (For Voice Enabled Patient Terminals) - operative Hospi	tal Society)	Jitai
26.6.3	Equipped for receiving IR control signals from peripheral control devices, which have been specially designed for severely disabled people. (For Voice Enabled Patient Terminals)		
26.6.4	Automatic volume level toggling when the patient terminal is used in the cradle (For Voice Enabled Patient Terminals)		
26.6.5	Anti-microbial and waterproof construction		
26.6.6	Measures to prevent damage to the connector plug		
26.6.7	Antimicrobial plastic case		

26.6.8	Call button with nurse symbol with integrated finder and reassurance light on the top end of the unit	Co-operative Hospi (A Unit of Kollam District Co-operative Hospital Society)
26.6.9	2.80 Mtr connection cable with auto- disconnecting plug	

PATIENT HANDSET PUSH BUTTON TYPE:

SL. NO	SPECIFICATION REQUIRED	COMPLIANCE YES / NO	REMARKS
27.0	General Requirements		
27.1	It should consist of a plastic case in antimicrobial finish		
27.2	Call button with nurse symbol with integrated finder and reassurance light on the top end of the unit		
27.3	Membrane keypad in antimicrobial finish with integrated LEDS for operation, consisting of: 1 call key 2 lighting keys		
27.4	2.80 Mtr connection cable with autodisconnecting RJ45 connector plug Unit of Kollam District Co-operative Hospi	Hos tal Society	oital

PULL BUTTON

Consisting of mounting rail with circuit board, on which there are the functional and monitoring electronic circuits with:

SL. NO	SPECIFICATION REQUIRED	COMPLIANCE YES / NO	REMARKS
28.0	General Requirements		
28.1	Integrated finder lights or reassurance light		
28.2	Micro switch with a 2-meter pull cord and a luminous grip with a nurse symbol printed on it		
28.3	Pull cord characteristics: max. force at break: 120N (ca. 12 kg)		

28.4	2 RJ45 sockets for connecting the data circuits with a plastic cover	Co-operative Hosp (A Unit of Kollain Dates: Co-operative Hospital Survey)
28.5	For hygiene reasons it must also be possible to change the pull cord very easily using a snap hook	

PRESENCE BUTTON

Consisting of, mounting rail with circuit board with on-board function and monitoring circuits as well as a membrane keypad with:

SL. NO	SPECIFICATION REQUIRED	COMPLIANCE YES / NO	REMARKS
29.0	General Requirements		
29.1	1 presence key (green) including a control LED		
29.2	1 presence key (yellow) including a control LED	7 /	<u> </u>
29.3	2 RJ45 sockets for connecting the data circuits with a plastic cover		
29.4	Including a mounting frame for screw less attachment to an installation case	X	

LIGHT MODULE-OPERATIVE Hospital

For optical indication of calls, presences and reminders in the relevant colours conforming to VDE0834 / UL 1069. It can be used as room call lamps, direction lamps or floor lamps depending on system configuration and consisting of:

SL. NO	SPECIFICATION REQUIRED	COMPLIANCE YES / NO	REMARKS
30.0	General Requirements		
30.1	5 light chambers with light reflectors for homogeneous illumination		
30.2	1 light chamber fitted with 3 ultra-bright red LEDs		
30.3	1 light chamber fitted with 3 ultra-bright white LEDs		

	1.5.
30.4	1 light chamber fitted with 3 ultra-bright green LEDs Co-operative Hospata for
30.5	1 light chamber fitted with 3 ultra-bright yellow LEDs
30.6	1 light chamber fitted with 3 ultra-bright blue LEDs
30.7	Every light chamber conforms to the light strength set out by VDE0834 / UL 1069
30.8	The LED life expectancy should be approximately 100,000 operating hours
30.9	Plastic base with controller circuit board, Opal-colored & translucent lamp cap
30.10	2 RJ45 sockets for connection to the data circuit.

TEXT TERMINAL

12-character large screen display for wall mounting in corridors or stairwells, mainly for signaling calls and reminders; in principle the highest-ranking call is always displayed, with it having to be possible to communicate the following content in this case:

SL. NO	SPECIFICATION REQUIRED	COMPLIANCE YES / NO	REMARKS
31.0	General Requirements	iai occioty /	
31.1	The exact location of the call including the individual description of the room and information about the bed number		
31.2	For calls across more than one ward then the ward descriptor must also be indicated		
31.3	The corresponding call type such as WC call etc.		
31.4	Emergency calls must always be shown as flashing		

			N.S.
	In the event that there are no calls to display, then all reminders are to be shown based on the following priorities:		Co-operative Ho (A Unit of Kollum Dietric Co-operative Hospital Serie
31.5	Doctor Nurse Service		
31.6	The staff category and the precise location of the triggered reminder (as described above)		
31.7	An integrated loudspeaker is used on the one hand for acoustic call forwarding, and on the other hand for ward announcements within the communications system		
31.8	The Terminal Features		
31.8.1	Aluminum cover with coverings on both ends		
31.8.2	Electronic circuit board with microcontroller and flash prom		
31.8.3	12 matrix LED modules (10x8, for improved readability) each with a character height of 8 cm	N N	
31.8.4	DIL switches for configuration and addressing	Hogi	nital
31.8.5	One RS232 / RS485 / RJ45 interface for permanent connection to Text terminal Interface module	tal Society)	Jitai
31.8.6	1 loudspeaker		

6. ACCESS CONTROL SYSTEM

Networked Access Controller / Door Interface provided shall be a TCP/IP interface device that provides a complete and fully functional hardware / firmware infrastructure for access control software host systems. The controllers shall communicate with the host system by using industry standard TCP/IP protocol, over 10/100/1000 Mbps Ethernet connectivity.



DOOR CONTROLLER

SL. NO	SPECIFICATION REQUIRED	COMPLIANCE YES / NO	REMARKS
32.0	General Requirements		
32.1	The Networked Door Access Controller shall be a 32-bit Controller		
32.2	The networked controller shall be capable of supporting cardholder databases of 250,000 cardholders and 100,000 transaction buffer		
32.3	The networked controller shall supports Reader, Input or Output		
32.4	The family of products shall provide a flexible architecture with TCP/IP connections		
32.5	The Controller shall Provide fully functional offline operation when not actively communicating with a host application, performing all access decisions and event logging		
32.6	A reader interface module that supports two Wiegand or Clock and Data card / PIN readers.		oit al
32.7	Applicable family products shall have communications Indicator LEDs, which flash whenever communications occur between the interface unit and an upstream device.	tal Society)	Jitai
32.8	Output and input interfaces shall be capable of providing visual feedback via LED when communicating with the Networked Controller.		
32.9	The reader interfaces shall be capable of using beepers in the connected readers to indicate door held/forced, PIN Retry Error, Tamper Alarm, Communications Failure, AC Power Failure, Battery Failure, etc.		

			N.S.
32.10	The family of products shall include a dedicated input for enclosure tamper configurable to be supervised or unsupervised.		Co-operative Hooptal So (A Unit of Mollain District Co-operative Hooptal So
32.11	The family of products shall have configurable inputs for AC Failure and Low Battery/ Battery Presence, which are compatible with Supervised DC supplies, which monitor the AC Input Voltage and Battery Voltage and report status using two dry contact relay outputs.		
32.12	The family of products shall be compatible with Microsoft Windows all the current versions and any other Host System supporting TCP/IP networked interface and Wiegand Standard or Long Formats	~0/	
32.13	The family of products shall be designed to have a lifetime of minimum ten years based on Normal usage levels and environmental conditions.		
32.14	The family of products shall be capable of mounting on any flat wall surface, using the appropriate fasteners.	Hos	oital
32.15	The reader interfaces shall be capable of supplying 12VDC power to most card readers and other auxiliary devices	tal Society)	
32.16	The family of products shall provide input monitoring and reporting functions shall meet applicable UL 1076 Proprietary Burglar Alarm System standards as a UL Recognized system component, including specific requirements for speed of reporting time, verifying communications with field hardware, detection of substitution of similar field hardware device, four-state alarm monitoring.		
32.17	The family of products shall provide shall meet applicable UL294 Access Control standards as		

			N.S.
	a UL Recognized system component, including criteria for false accepts/rejects, attack resistance and electrical safety.		Co-operative Ho (A Use of Kollah Dalanci Co-operative Hospital Sol
32.18	Controller shall meet European CE Mark standards for electrical safety and RF emissions.		
32.19	General / Functional Requirements		
32.19.1	The family of products shall control cardholder access to secured areas, monitor and report access control activity.		
32.19.2	The family of products shall monitor and report the integrity of all network devices, circuits and communications.		
	The family of products shall enable a host system to allow a human operator to:		
32.19.3	-Acknowledge and respond to alarm conditions.- configure the network and obtain configuration and historical reports		
	- Manually unlock and lock doors, and to shunt or Un-shunt input points. Unit of Kollam District Co-operative Hospi	Host	oital
32.19.4	The family of products shall provide access control-based Schedules and Holidays by individual and by groups		
32.19.5	The family of products shall allow a list of Holiday calendar dates and types to be entered into the networked controller.		
32.19.6	The reader interface products shall provide configurable inputs to monitor and report door position to the host.		
32.19.7	The reader interface products shall interpret Door Forced and Door Held Open as two distinct alarm conditions.		

			N.S.
32.19.8	The reader interface products shall send status change data to the Host in real time, if the Door Monitor senses a forced door		Co-operative Ho (A Unit of Kalain Dated Co-operative Hospital General
32.19.9	The reader interface products shall maintain a forced door alarm until cancelled by the host.		
32.19.10	The reader interface products shall send a Door Held status change to the Host, if the Door Monitor senses a door held open beyond the relay + shunt time + reporting delay time		
32.19.11	The reader interface products shall be capable of causing or certain other readers to beep upon detecting a door forced / door held condition / denial of access /invalid PIN.		
32.19.12	The family of products shall perform parity checking on card data and shall notify the network device on parity failure.		
32.19.13	The family of products shall allow any or certain other Card/PIN readers to be configurable to require Card + PIN, PIN only, Card or PIN, or Card only.		
32.19.14	The family of products shall allow Anti-Pass Unit of Kollam District Co-operative Hospi back to be implemented in one of two modes: Real and Timed.	tal Society)	Ital
32.19.15	The family of products shall provide Area Control, such that readers, which control cardholder access or egress to a contiguous area and/or perimeter, are logically associated in software.		
32.19.16	The family of products shall keep track of which cardholders have entered or left an area.		
32.19.17	The family of products shall be capable of denying access based on incorrect progression of cardholders through controlled areas.		

			N.S.
32.19.18	The family of products shall be capable of accepting multiple card formats, allowing multiple existing card populations to be merged into the same network.		Co-operative Ho (A Unit of Kollum District Co-operative Hospital Soci
32.19.19	The family of products shall allow cardholders to be designated as visitor cards		
32.19.20	The family of products shall provide Elevator Control by using a Card/PIN reader to control relays, which in turn can enable or disable elevator floor call buttons.		
32.19.21	The family of products shall allow all networked controllers to be synchronized with the Host. Time Sync shall sent automatically at regular intervals.		
32.19.22	The family of products shall be able to execute operator or system commands received via the Network from the Host, including: -Open / Lock Door /Open a Group or list of doors /Open all Doors		
32.19.23	The family of products shall report the current state of each input and output upon query from the host. Collam District Co-operative Hospi	HOSI tal Society)	oital
	The family of products shall be capable of sending the following event messages to the host system:		
32.19.24	 Types of Access Granted Types of Access denied Door Forced / Held Tamper / Battery / AC Failure & Alarm 		
	- REX Door Bit / REX Door Alarm		



CARD READER

Readers shall directly connect to access control unit and shall be of Smart card allowing use of durable operating devices/cards. The typical read ranges for the short- and long-range readers shall be not less than 50 mm and 450mm, respectively.

SL. NO	SPECIFICATION REQUIRED	COMPLIANCE YES / NO	REMARKS
33.0	General Requirements		
33.1	Smart Card Reader shall be MI fare type		
33.2	Read range shall not be less than 75 mm for door & Flap barriers and minimum 450mm for boom barrier.		
33.3	Readers shall sealed in a rugged, weatherized polycarbonate enclosure, to provide reliable performance and high degree of resistance to withstand harsh environment.		
33.4	On reader power up, an internal self-test routine shall check and verify the setup configuration, determine the internal and external control LED and beeper, and Initialize reader operation.		
33.5	The reader shall be able to provide multicolor LED, compatibility with all standard access control. Systems and internal or host control of LED and beeper.	Hos tal Society)	oital
33.6	The operating voltage or power shall be between 12V to 24 V DC		
33.7	The reader shall be UL listed and shall have the CE /EN Canada certifications		





The Electro Magnetic Lock (EML) shall mean a locking mechanism that works on the principle of electromagnetic attraction.

SL. NO	SPECIFICATION REQUIRED	COMPLIANCE YES / NO	REMARKS
34.0	General Requirements		
34.1	The Magnetic Locks shall be with 600 lbs holding force and Fail-safe type		
34.2	The Magnetic Locks Operating voltage shall be 12 / 24 V DC		
34.3	Single EM Lock shall be installed on single leaf doors and double EM lock shall be installed for double swing doors. Also, the lock shall be suitable for fixing with Glass door/flush doors. Suitable bracket shall be included for Glass doors		
34.4	The lock should be provided with Green / Red Color LED for showing Open/Close status.	8	
34.5	The Lock shall have built-in magnetic contact		
34.6	The contacts shall be corrosion resistant and completely hermetically sealed	Hos	oital
34.7	3 million cycles of operation shall not affect the contact (Manufacturer certificates shall be produced)	iai Society) =	
34.8	The Lock shall be CE Approved & UL Listed		

SMART CARD

SL. NO	SPECIFICATION REQUIRED	COMPLIANCE YES / NO	REMARKS
35.0	General Requirements		
35.1	The frequency of a MIFARE card shall be of 13.56 MHz		
35.2	Cards shall be strong, flexible and resistant to cracking and breaking.		

35.3	Card shall be Designed to accept direct PVC printing of text, photos and Graphics	Co-operative Hospi (A Unit of Kollain Distric Co-operative Hospital Seway)
35.4	Its Dimension shall be 85 x 54 x 0.8mm	
35.5	Operating distance shall up to 10 cm	

EXIT PUSH BUTTON

SL. NO	SPECIFICATION REQUIRED	COMPLIANCE YES / NO	REMARKS
36.0	General Requirements		
36.1	The Exit Push Button shall be produced by an ISO 9001 certified manufacturer		
36.2	Material shall be Stainless Steel Grade 304		
36.3	Standard Structure shall be Stainless Steel Plate/Button		
36.4	Dimensions : (L)85 x (W)85 x (T)35 mm		
36.5	Current Rating shall be 4Amp@125VAC; 2Amp@250VAC	× ×	

EMERGENCY RELEASE SWITCHES

SL. NO	SPECIFICATION REQUIRED	COMPLIANCE YES / NO	REMARKS
37.0	General Requirements	lai oddiety) =	
37.1	The ERS shall be produced by an ISO 9001 certified manufacturer		
37.2	The ERS shall be a in the of Size: 88 x 88 x 55 mm		
37.3	Connections Terminal-Max 0.2mm Cable		
37.4	The ERS shall be with the color of Green with Transparent Cover		
37.5	The ERS shall be with the Current ratings of 12 / 24 VDC 10A.		



DOTL EXTERNAL DOOR BUZZER

SL. NO	SPECIFICATION REQUIRED	COMPLIANCE YES / NO	REMARKS
38.0	General Requirements		
38.1	The buzzer shall have the operating voltage of 1.5 to 12 VDC		
38.2	The sound output of the buzzer shall have 95db @12 VDC		
38.3	The Maximum Current draw shall be 10mA @ 12 VDC		
38.4	The Buzzer Material shall be with high impact plastic		

ACCESS MANAGEMENT SOFTWARE

The software shall comprise of the multi-tasking, multi-user software system and shall have password restricted access for each individual operator.

SL. NO	SPECIFICATION REQUIRED	COMPLIANCE YES / NO	REMARKS
39.0	General Requirements		
	The system control at the central computer		
(location shall be under a single software, shall provide full integration of all components, and	HACI	oital
39.1 (shall be alterable at any time, depending upon	ital Society)	_
	the facility requirements. Reconfiguration shall		
	be accomplished by system programming,		
	without any hardware changes.		
	The software program shall be a true 32-bit,		
	client/server, ODBC compliant application		
	based on Microsoft tools and standards. The		
39.2			
	application shall operate in one of the following		
	32-bit or 64-bit environments		
	The software shall provide multi-level password		
39.3	protection, with user-defined operator		
	name/password combinations.		

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39.4	The Security Management System shall support the use of an anti-pass back mode, in which cardholders are required to follow a proper in/out sequence within the assigned area		Co-operative Hoo (A Unit of Hollam District Co-operative Hospital So
39.5	The software shall be fully compliant with Microsoft graphical user interface standards		
39.6	The software shall include a feature where alarm events with defined priorities shall be able to pop-up automatically in an Alarm event window for operator attention. The pop-up shall display the name of the event (reader, alarm point, cardholder, or system alarm), time, date, site, account, if a card event the card number, type of event and cardholder name.		
39.7	It shall support real-time alarm/event monitoring, 99 Priority Levels, Control and Response, including acknowledge, clear, annotate, live video, recorded video. Manual Override, Lock and Unlock Doors, Shunt/Bypass Zones and Input Points. System shall have inbuilt dynamic report	Hos	oital
39.8	manager which shall configure predefined reports, Customized reports, report templates, schedule the reports to run automatically, hourly, daily or weekly email or printed reports ,card Frequency report, attendance report like present /absent / early going / late coming / outdoor duty / man-hours worked/ overtime calculation / half day , export reports in open formats.	tal Society)	
39.9	The software shall include the following access control functions: validation based on time of day, day of week, holiday scheduling, and card number verification, automatic or manual retrieval of card holder photographs, and		

	access validation based on positive verification	Co-operative Hospit
	of card, card and PIN, card or pin, and pin only	Co-operative Hospital Solemy)
39.10	The System shall allow the user to define the minimum and maximum occupancy allowed in a designated area. If the occupancy falls below this minimum amount, or the occupancy goes above this maximum amount, the system shall designate the selected procedure.	
39.11	The software shall support concurrent client workstation licensing.	

COMMUNICATION CABLES FOR ACCESS CONTROL SYSTEM

The cables shall be manufactured/tested as per the latest IS standards and confirming to EN 50288-7.

MINIMUM SPECIFICATION OF 2 CORE SIGNAL CABLES

- The Cable type shall be Electrolytic Grade Copper Stranded
- The Cable Size shall be of 1.5sqmm, 7 strands
- The Cable shall have Two (one pair) No. of conductors
- The Cable shall have overall bled foil Aluminum polyester shield
- The Construction shall be with Chrome PVC Jacket
- The Nominal DCR of the cable shall be 17.6 ohm/km for conductor, 57.0 ohm/km for shield (A Unit of Kollam District Co-operative Hospital Society)

4CORE COMMUNICATION CABLES

- The Cable type shall be Electrolytic Grade Copper Stranded
- The Cable Size shall be of minimum 22AWG, stranded cables
- The Cable shall of have Four (Two pair) No. of conductors
- The Cable shall have overall bled foil Aluminium polyester shield
- The Construction shall be with Chrome PVC Jacket
- The Nominal DCR of the cable shall be 78.7 ohm/km for conductor, 57.0 ohm/km for shield

8 CORE COMMUNICATION CABLES

- The Cable type shall be Electrolytic Grade Copper Stranded
- The Cable Size shall be of minimum 22AWG, stranded Cables
- The Cable shall of have Eight (Four pair) No. of conductors
- The Cable shall have overall bled foil Aluminum polyester shield



- The Construction shall be with Chrome PVC Jacket
- The Nominal DCR of the cable shall be 78.7 ohm/km for conductor, 57.0 ohm/km for shield

7. FIREWALL SPECIFICATIONS

SL. NO	SPECIFICATION REQUIRED	COMPLIANCE YES / NO	REMARKS
40.0	General Requirements		
40.1	The Firewall shall be appliance based, rack mountable and it should have internal or external redundant Power Supply.		
40.2	The Proposed Firewall Vendor shall be in the Leaders/ Challenger in Quadrant of Gartner Magic Quadrant for Enterprise Network Firewall.		
40.3	The proposed NGFW shall have built in GUI and CLI to make on the go changes to Firewall policies without any dependency to management and troubleshoot any issue related to network outage.		
40.4	NGFW must support Secure SD - WAN feature along with advance routing protocols such as BGP	Hogy	oital
(A 40.5	SD-WAN must be able to link and failover between various connections such as Internet, MPLS, leash line and even Routed based VPN interfaces.	tal Society)	Jitai
40.6	Built-in SDWAN must be able to do load balancing of various links based on source address, User group , protocol and/or applications		
40.7	SLA for SDWAN must be defined based on packet loss or latency or jitter. Even combination of all 3 option must be possible		
40.8	Central management solution for the next generation Firewall must be able to Manage all the SDWAN link centrally and should give		

			N.S.
	clear dashboard showing which links are down and which are up . This help the NOC to take action accordingly		Co-operative Ho (A Unt of Kollulin Deleted Co-operative Hospital Solver
40.9	NGFW must support multicast routing as well as firewalling		
40.10	The proposed solution should also support policy routing. Policy routing should work along with SD-WAN and ISP load-balancing.		
40.11	The proposed solution must also support identity based routing option allowing traffic to be forced out of specific Internet/MPLS gateway based on authentication rather than IP address		
40.12	The proposed system should have integrated Traffic Shaping functionality this feature should have option to be configured on same firewall policy along with option to configure it separately if required.		
40.13 (A	Build-in GUI on the NGFW should have option to display logical topology of the network the NGFW is protecting. The display should also be able to give security recommendation for the NGFW.	Hos tal Society)	pital
40.14	Device should support Static routing, RIP, OSPF,BGP, IS-IS, RIPng, OSPFv3 and BGP4+		
40.15	<u>Performance</u>		
40.15.1	The solution should support a minimum of at least 2 Gbps IPS throughput & Minimum 1.5 Gbps NGFW throughput on real-world / enterprise mix traffic test condition		
40.15.2	The solution should support minimum 1 Gbps threat protection throughput on real-world / enterprise mix traffic test condition		

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40.15.3	The solution should support 5 Gbps IPSec VPN throughput and 1500 Tunnels		Co-operative Ho (A Unit of Kollullin District Co-operative Hospital Series
40.15.4	The Firewall must support at least 1,500,000 concurrent connections and 130,000 new sessions per second		
40.15.5	The platform must have minimum of 12 interfaces with auto sensing 10/100/1000 capability and 4 Gigabit SFP ports		
40.16	Firewall Features		
40.16.1	Firewall policy shall be single policy where all the feature get applied such as IPS, application control, URL filtering, antivirus, SSL inspection, logging and even NAT		
40.16.2	Firewall shall support Zoning option along with User based authentication. It must have automatic option to group all the same zone policy		
40.16.3	There must be option to configure the said Firewall policy from GUI of the NGFW appliance without requiring any Management solution. This is in the case of emergency where management solution is no available and policy needs to be changed.	Hos tal Society)	oital
40.16.4	Firewall must support NAT46, NAT66 and NAT64 along with policy for such NAT along with option to configure DNS64.		
40.16.5	Firewall must support NAT policy for multicast traffic for both IPv4 and IPv6		
40.16.6	Firewall must support option to configure FQDN server rather than IP address in case server have dynamic IP address or site have multiple IP addresses for single domain.		
40.16.7	There must be option to even configure wildcard FQDN		

			N.S.
40.16.8	Firewall should allow policy based on port or service to protect attack at L3 not just application-based policy which might be vulnerable to L3 attacks.		Co-operative Ho (AUnit of Kollum District Co-operative Hospital Section 1)
40.16.9	Firewall must support Geo-based IP address blocking option.		
40.16.10	DNS translation option must be available in Firewall to change only the specific DNS reply from public to private IP. This is required for allowing user to access local resources using Private IP rather than there public IP address		
40.16.11	Build-in GUI/CLI must support option to configure firewall policy which allow packet capture for troubleshooting purposes	\ •/	
40.16.12	The security appliance shall have configurable option to quarantine attack generating source address		
40.17	<u>Virtualization</u>		
40.17.1	The proposed solution should support Virtualization (Virtual Firewall, Security zones and VLAN). Minimum 5 Virtual Firewall license should be provided.	Hos tal Society)	pital
40.17.2	Virtualization must be for every feature which are IPS , Application control, Antivirus/Antimalware , URL filtering , SSL inspection , SSL VPN , IPSec VPN , Traffic shaping and user authentication.		
40.17.3	Enabling Virtualization shouldn't require any kind of downtime or reboot. It must be done seamless even if the NGFW is live in the network.		
40.17.4	Global option of virtualized NGFW shouldn't take much of CPU and memory		

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40.17.5	When creating virtualized NGFW it should give mode option to configure each virtualized system such as first system can work in NAT/route mode and second system can work in transparent mode.		Co-operative H (A Unit of Kollam District Co-operative Hospital So-
40.17.6	Each virtualized NGFW system must have option to configure various parameter to limit the resources utilization such as number of session, etc.		
40.18	VPN Features		
40.18.1	NGFW shall have built in support IPSec VPN and SSL VPN. There shouldn't be any user license restriction		
40.18.2	IPSec VPN must include gateway to gateway and gateway to client vpn. In case of gateway to client the administrator must have option to assign private IP address to remote user without requiring any additional license		
40.18.3	Route based IPSec VPN must be supported along with SD-WAN in case of two or more ISP's.	Hos	nital
40.18.4	IPSec VPN must support SHA-1 and SHA-2 (SHA 256, 386 and 512) along with DH group 2,5,14,15,16,17,18,19,20,21,27,28,29,30 and 31.	tal Society)	
40.18.5	SSL VPN must support high level algorithm along with TLS v1.2		
40.18.6	SSL VPN must not have any user license and should have option to integrate with local AD or RADIUS server		
40.18.7	Both VPN must support 2-factor authentication with option to have locally imported tokens on the NFGW appliance itself, if required.		
40.19	Intrusion Prevention System		

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40.19.1	The IPS capability shall minimally attain NSS Certification		Co-operative Ho (A Unit of Kollum Datrict Co-operative Hospital Co-
40.19.2	The IPS detection methodologies shall consist of:		
40.19.3	Signature based detection using real time updated database		
40.19.4	Anomaly based detection that is based on thresholds		
40.19.5	The IPS system shall have at least 7,000 signatures		
40.19.6	IPS Signatures can be updated in three different ways: manually, via pull technology or push technology. Administrator can schedule to check for new updates or if the device has a public IP address, updates can be pushed to the device each time an update is available		
40.19.7 (A	In event if IPS should cease to function, it will fail open by default and is configurable. This means that crucial network traffic will not be blocked, and the Firewall will continue to operate while the problem is resolved	Hos tal Society)	pital
40.19.8	IPS solution should have capability to protect against Denial of Service (DOS) and DDOS attacks. Should have flexibility to configure IPv4 and IPv6 Rate based DOS protection with threshold settings against TCP Syn flood, TCP/UDP/ port scan, ICMP sweep, TCP/UDP/ SCTP/ICMP session flooding. Threshold settings must be customizable for different sources, destinations & services		
40.19.9	IPS signatures should have a configurable action like terminate a TCP session by issuing TCP Reset packets to each end of the		

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	connection, or silently drop traffic in addition to	Co-operative Ho
	sending a alert and logging the incident	
	Signatures should a severity level defined to it	
	so that it helps the administrator to understand	
40.19.10	and decide which signatures to enable for	
40.19.10	what traffic (e.g. for severity level: high	
	medium low)	
	,	
40.20	<u>Antivirus</u>	
40.20.1	Firewall should have integrated Antivirus	
40.20.1	solution	
	The proposed system should be able to block,	
	allow or monitor only using AV signatures and	
	file blocking based on per firewall policy based	
40.20.2	or based on firewall authenticated user groups	
	with configurable selection of the following	
	services:	(300)
40.20.3	HTTP, HTTPS	
40.20.4	SMTP, SMTPS	8
40.20.5	POP3, POP3S	
40.20.6	IMAP, IMAPS PETATIVE	Hospital
40.20.7	புர்ந்of หัறுam District Co-operative Hospi	tal Society)
	The proposed system should be able to block	
	or allow oversize file based on configurable	
40.20.8	thresholds for each protocol types and per	
	firewall policy.	
40.21	Web Content Filtering	
	The proposed system shall have integrated	
40.21.1	Web Content Filtering solution without	
40.21.1	external solution, devices or hardware	
	modules.	

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			Co operative II
40.21.2	The proposed solution should be able to enable or disable Web Filtering per firewall policy or based on firewall authenticated user groups for both HTTP and HTTPS traffic.		Co-operative He (A Ust of Kolum District Co-operative Hospital So
40.21.3	The proposed system shall provide web content filtering features:		
40.21.4	Which blocks web plug-ins such as ActiveX, Java Applet, and Cookies.		
40.21.5	Shall include Web URL block		
40.21.6	Shall include score-based web keyword block		
40.21.7	Shall include Web Exempt List		
40.21.8	The proposed system shall be able to queries a real time database of over millions+ rated websites categorized into 75+ unique content categories.		
40.21.9	Update of local Database based on malicious category discovered by Sandboxing solution from same vendor		oitol
40.21.10			Jitai
40.22	Application Control	ral Society	
40.22.1	The proposed system shall have the ability to detect, log and take action against network traffic based on over 4000 application signatures	tal Society) =	
40.22.2	The application signatures shall be manual or automatically updated		
40.22.3	The administrator shall be able to define application control list based on selectable application group and/or list and its corresponding actions		
40.22.4	Application control and URL filtering must work independent of each other.		

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40.23	High Availability		Co-operative H
40.23.1	The proposed system shall have built-in high availability (HA) features without extra cost/license or hardware component		
40.23.2	The device shall support stateful session maintenance in the event of a fail-over to a standby unit.		
40.23.3	High Availability Configurations should support Active/Active or Active/ Passive		
40.24	OEM should be having the following certifications/Ratings		
40.24.1	Firewall module should be ICSA Labs or EAL 4 certified		
40.24.2	Network Intrusion Prevention System (NIPS) and should be ICSA Labs certified.		
40.25	Centralized Logging & Reporting Solution		
40.25.1	The solution should deliver complete security oversight with granular graphical reporting	8	
40.25.2	The solution should provide centralized security event analysis, forensic research, reporting, content archiving, data mining and malicious file quarantining.	Hos tal Society)	pital
40.25.3	The solution should provide detailed data capture for forensic purposes to comply with policies regarding privacy and disclosure of information security breaches.		
40.25.4	The solution should provide network event correlation to allow administrators to quickly identify and react to network security threats across the network.		
40.25.5	The solution should provide streamlined graphical network-wide reporting of events, activities and trends occurring on UTM / NGFW		

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40.25.6	The solution should provide centralized logging of multiple record types including traffic activity, system events, viruses, attacks, Web filtering events, and messaging activity/data		Co-operative Ho (A Unit of Kollum District Co-operative Hospital Sov
40.25.7	The solution be able to provide real-time and historical logs with filtering and search capabilities		
40.25.8	The solution should be able to displays a map of the world that shows the top traffic destination country by colour		
40.25.9	The solution should provide predefined templates for building / generating reports	~ 0/	
40.25.10	The solution should be able to collect logs from multiple devices		
40.25.11	The solution should be able to support threshold values to generate alerts.	8	
40.25.12	The solution should be able to send alert emails	Hos	nital
40.25.13	The solution should be able to manually generate the report or schedule the same	tal Society)	
40.25.14	The solution should be able to generate report based on user names		
40.25.15	The solution should be able to cater to 2500 logs per second from all locations		
40.25.16	The solution should be able to process 90 Gb logs per day		
40.25.17	The solution should be having minimum 2 TB storage capacity		



40.25.17	The Centralized Management, Logging & Reporting architecture shall be hardware or software-based appliance/ VM based solution	Co-operative Hos (A Unit of Krishim Dissect Co-operative Hospital Solely)

8. KIOSKS

The Proposed Information Kiosks shall be used for the various Patient information and taking the printout of the reports etc. The Kiosks shall have the following features / specifications

SL. NO	SPECIFICATION REQUIRED	COMPLIANCE YES / NO	REMARKS
41.0	General Requirements		
41.1	The system shall be with 15" Capacitive Touch screen		
41.2	The Screen shall have min of 16K x 16K touch screen resolution bare	~0/	
41.3	The Screen shall be fan free model with IP 64 Water Proof & Aluminum casing		
41.4	The Screen shall be an Anti-rust, anti-acid, anti- dust	386	
41.5	The system shall have the minimum Memory of 4 GB RAM or better	Hosi	oital
41.6 (/	The system storage shall be with 128 GB SSD	tal Society)	
41.7	The system shall have an integrated 10/100/1000 Mbps Ethernet and USB connectivity		
41.8	The Body /Mainframe shall be with Min 1.5mm thick steel plate & Powder Coat painted		
41.9	The Body / Mainframe shall have a lock and key facility		
14.10	The kiosk shall be included and integrated 200 dpi or better quality, 4" Thermal Printer		

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	The Proposed shall be included with all the
41.11	Software and tools to diagnosis and integrate
	with the Hospital Information System

9. THERMAL SCREENING SYSTEM

The thermal screening system is supposed to implement at 2-entry location of the hospital building. The system consists of the Dual Sensor Body Temperature Detection Camera and the storage system along with the workstation for the analytics. Temperature detection security Gate with Face Recognition is provided for the real time monitoring of people passing through the gate. Following are the minimum specifications required for the solution proposal.

4MP THERMAL CAMERA

SL. NO	SPECIFICATION REQUIRED	COMPLIANCE YES / NO	REMARKS
42.0	General Requirements		
	The Camera shall be 4 MP 1/ 1.8" or better duel		
	image sensors with 4mm or better fixed lens,	300	
42.1	resolutions up to 2560 x 1440 @ 25fps or better		
	frames	X	
	The Camera thermal image sensor shall be	X	
42.2	Vanadium Oxide Uncooled Focal Plane Arrays		
	with 256 x 192 effective pixels	Iogn	i+a1
	The camera shall have 50mK@25 , F1.1, 25Hz	1020	Ital
42.3 A	or better thermal sensitivity within 8~14mm	Society)	
	Spectral Range		
	The Camera shall have Measurement Range of		
42.4	30°C to 45°C with average ±0.4°C Measurement		
	Accuracy at 0.5m~3m Measurement Distance		
	The camera shall have the capability to work at		
42.5	the Min illumination of 0.0002Lux@F1.0 in color		
12.0	and 0Lux with IR in B/W		
42.6	The camera shall have Dual IR Cut Filter with		
	Auto Switch for day & night mode		
	, ,		
42.7	Shall have configurable Wide Dynamic Range up		
	to 120 db		

42.8	The camera shall have 1 x Audio In / Out	Co-operative Hospit (A Unit of Kolam District Co-operative Hospital Society)
42.9	The camera shall have the support of Built in Mic and speaker	
42.10	Shall have H.265+ Compression to minimize storage and bandwidth.	
42.11	Shall have Dual Encoding feature	
42.12	Shall have Digital Noise Reduction mechanism with the feature	
42.13	Should also have one alarm in and alarm out options	
42.14	Shall support various protocols like HTTP, TCP/IP, RTSP, RTP, RTCP, FTP, SNMP, DNS, DHCP etc	
42.15	The camera Shall have feature like Abandoned object, Missing Object, Loitering, Running, Video /Audio Abnormality	
42.16	Shall have feature Like Video Motion detection, Camera Tampering Detection etc.	ital
42.17 _A	Shall have the feature of Corridor Mode Unit of Kollam District Co-operative Hospital Society)	Itai
42.18	Shall support digital defog	
42.19	Shall have Power over Ethernet feature. It should support IEEE802.3af.	
42.20	Recommended Power Consumption Shall be less than 9W	
42.21	Camera shall have Edge Storage Slot Capable of Min 128 GB SD / microSD Card	
42.22	Camera shall be Vandal resistant (IK10)	
42.23	Camera shall be IP 67 rated ingress protection	

42.24	Camera shall be FCC / CE Certified RoHS Complied	Co-operative Hospital (A Unit of Kolum Daniet Co-operative Hospital Society)
42.25	The bidder shall Consider all the mounting accessories as required	

NETWORK VIDEO RECORDER FOR THERMAL SCREENING

SL. NO	SPECIFICATION REQUIRED	COMPLIANCE YES / NO	REMARKS
43.0	General Requirements		
43.1	The NVR Shall be with Min 8 Channel IP Camera input with 2 HDD Bays		
43.2	The embedded NVR Shall be with 128 Mbps or better recording bandwidth		
43.3	The NVR shall have the ability to preview of up 8 MP camera or better		
43.4	The system shall have H265+ or better compression for HDD space management		
43.5	The HDD controller shall have Minimum 10TB / HDD management capacity or better		
43.6	The NVR shall support two way audio communication Unit of Kollam District Co-operative Hospita	TOSP Society	ital
43.7	The NVR shall have 1x HDMI, 1 x VGA, 1 x RJ45 and 2 x USB connectivity		
43.8	The NVR Camera interface shall support with PoE Connectivity		
43.9	The NVR shall supports various special function cameras, including thermal camera /fisheye/people counting/heat map/ANPR (automatic number plate recognition)		
43.10	The NVR shall have streaming technology to enable smooth live view and data self-correction even in poor network conditions		

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43.11	The NVR shall Record and store the real-time streaming on 720P resolution@24 fps.		Co-operative Hospita (A Unt of Kollain District Co-operative Hospital Society)
43.12	The NVR shall supports dual-stream recording to save time and bandwidth		
43.13	The NVR shall allow the user to playback and download video records from NVR-Client. It shall also allow the user to configure the storage locations.		
43.14	The Integrator shall consider the HDD capacity for 30 days storage		
43.15	NVR shall be capable to cycle overwrite video records.		
43.16	NVR shall allows the user to monitor the running status of NVR via GUI and through the workstation browser interface		
43.17	The embedded system shall be able to configure tours and patrols on workstation monitors or video walls		
43.18	The System shall have the capability to generate alarm or generate events, if the thermal measurement detect above the configured level	Hosp:	ital
43.19	The System shall support recording modes of continuous, scheduled, manual, event and alarmbased recording.		
43.20	The System shall support for both multicast and unicast network topologies and communication protocols.		
43.21	The System supply shall be including the necessary software / license for the recording and monitoring the Thermal cameras as required		
43.22	The NVR shall be compliance to RoHS / CE / FCC		



THERMAL DFMD

SL. NO	SPECIFICATION REQUIRED	COMPLIANCE YES / NO	REMARKS
44.0	General Requirements		
44.1	The Door Frame Metal Detector shall be with the capability to detect the high temperature people passing through the gate		
44.2	The Door Frame Metal detector shall function for complete security solution in single unit		
44.3	The Gate shall have High accuracy temperature measurement Range between 30°C–45°C or better with the Accuracy of ±0.3°C		
44.4	The Gate shall have Face recognition system with the recognition rate of >99% and False recognition rate of <1%		
44.5	The Gate Face recognition shall have detection speed of 200ms		
44.6	The security gate shall have display LCD screen size of 5.7"		
44.7	The Gate shall have Environmental temperature correction feature for accurate scans	Hosp!	ital
44.8	The Gate shall have Face recognition access control display of 7" touch screen with 600×1024 resolution		
44.9	The Security gate shall have duel camera with 2 MP with 1 set white light illuminator and 1 set infrared illuminator		
44.10	The gate shall have minimum 12 detection zones with 0 -255 levels for each detection zone		
44.11	The gate shall have Simultaneous sound and light alarms		

44.12	The Security gate shall have people Count based on walking through and the number of people that triggers an alarm	Co-operative Hospita (A Unit of Kollaffi District Co-operative Hospital Society)
44.13	The Security gate shall have the storage capacity of Min 4 GB or better	
44.14	The storage shall be capable to save minimum 10,000 face templates	
44.15	The gate shall be an indoor type operating with 220v AC	
44.16	The Device shall be compliance to RoHS / CE / FCC	

MONITORING WORKSTATION

The Thermal detection system shall have a client workstation to monitor the events with the following minimum specifications.

SL. NO	SPECIFICATION REQUIRED	COMPLIANCE YES / NO	REMARKS
45.0	General Requirements		
45.1	The PC type shall be either Small form factor or all in one PC	Hogi	nital
45.2 (/	The PC mother board should be with intel Unit of Kollam District Co-operative Hosp chipset	ital Society)	
45.3	The System processor shall be with intel 8 th Generation Core i3 or better		
45.4	The system shall be bundled with 4 GB RAM and an optical DVD Combo Drive		
45.5	The system shall have 1 TB Storage Hard Disk capacity		
45.6	The VGA shall be built-in with integrated sound,1 x RJ45 and 4 x USB Connectivity		
45.7	The System shall be bundled with 10-key keyboard and an Optical mouse		

45.8	The system shall have pre-loaded Microsoft Windows 10 64-bit Original Operating System and bundled with Startup Installation CDs	Co-operative Hos
45.9	The supply shall include with 22: LED Monitor and necessary power cables	

10. PRESENTATION AND VIDEO CONFERENCING SYSTEMS

The Presentation and Video Conferencing Systems are intended for the communication for the Classroom / Lecturer hall and the VC Communication between the Operation theatres and Live Classroom. The Proposed 2-way audio and video communication shall be an optimal clear solution with the following minimum specifications.

PROJECTOR

SL. NO	SPECIFICATION REQUIRED	COMPLIANCE YES / NO	REMARKS
46.0	General Requirements		
46.1	The Projector shall be an Ultra Short Throw, which shall project a 100" image with in less than 1 Meter		
46.2	The Projector shall have Minimum 3000 ANSI Lumens		
46.3	The Projector shall have the Bright WXGA (1280 x 800) Resolution	HOS tal Society)	oital
46.4	The projector shall be with 16:9 aspect ratio compatible		
46.5	The projector shall have Minimum 80% uniformity		
46.6	The Projector can be with the scalable screen size of 85" to 115" diagonally		
46.7	The projector lamp shall have life of 4000 bright / 12000 Dynamic hours or better		
46.8	The Projector optical through ratio shall be 0.27:1 or better		

46.9	The Projector shall have a Focal length of 3.7 or better		Co-operative Ho (A Unit of Kollam Obstrict Co-operative Hospital Section 1)
46.10	The Projector shall be compatible for full 3D and 2D / 3D Compatibility on side by side at 1080p resolutions		
46.11	The Projector shall have 2 x HDMI with 3D Support, 1 x VGA, 1 x Audio, 2 x USB, 1 x RJ45 Connectivity		
46.12	The Projector shall have the security features of Security bar, Kensington Lock and Password protected interface		
46.13	The Projector shall be bundled with a fully functional remote unit with batteries	\ 0/	
46.14	The Projector shall have the Power supply of 100 to 240V with the max power consumption of 0.5W at standby mode		

PROJECTOR SCREEN

SL. NO	SPECIFICATION REQUIRED	COMPLIANCE YES / NO	REMARKS
47.0	General Requirements	105	
47.1 (/	The Screen shall be Wall or Ceiling Mountable	tal Society)	
47.2	The Screen shall be a Non-Tensioned type with an auto lock mechanism		
47.3	The Screen size shall be with 115" diagonal		
47.4	The Screen shall maintain a 16:9 Aspect Ratio		
47.5	The Screen shall have a Max White Finish		
47.6	The Screen shall have1" left / right masking border		
47.7	The Screen shall include necessary mounting kit		
47.8	The screen casing shall be with Aluminium		



VIDEO CONFERENCING SYSTEM

SL. NO	SPECIFICATION REQUIRED	COMPLIANCE YES / NO	REMARKS
48.0	General Requirements		
48.1	The VC Device shall support the Video Standards of H.261, H.263, H263+, H.263++, H.264 High Profile, H.264 Baseline Profile		
48.2	The Device Should support Video Frame Rate of 60 fps with 1080p resolution from day one		
48.3	The device shall have the ability to send and receive two live simultaneous video sources in a single call, so that the image from the main camera and PC or document camera can be seen simultaneously.		
48.4	The device Should support H.239 and BFCP protocols with 1080p resolution	376	
48.5	The device should have point to point connectivity on SIP/H.323 in 1080p/60fps conference feature enabled from day one. Should have facility to upgrade 1+3 Multiparty		
48.6 _A	The device should support Minimum 1 monitor & upgrade to 2 Monitor for Self View, Remote View and Content all in separate Monitors.	losp Society)	ital
48.7	The device should have at least 1& upgradable to 2 nos. of HDMI / or equivalent (High Definition Multimedia Interface) output to connect Full High Definition display devices such as plasma and projectors for both Video and Content.(Single / Dual Monitor Support)		
48.8	The device should have at least 2 HD video Input to connect full HD cameras.		
48.9	The device should have at least one additional video Input to connect auxiliary full HD camera.		

			N.S.
48.10	The system should have VGA/DVI/HDMI port to connect PC/ Laptop directly to the Video conferencing system and display resolutions upto 1080p		Co-operative Hospit (A Unit of Kollam Desired Co-operative Hospital Society)
48.11	The device should support G.711, G.722,G.722.1, 64 kbps MPEG-4 AAC-LD or equivalent Audio standards		
48.12	The device shall have the Noise Reduction, Automatic Gain control, Acoustic Echo Canceller features		
48.13	The device shall have Echo Cancellation for every input		
48.14	The system shall have the option to Record all the in and out call of the meeting on USB key / disk		
48.15	The device shall have 1 LAN /Ethernet-10/100/1000 Mbps full duplex.	100	
48.16	The device should support IPV4 & IPV6 networks		
18.17 (A	The system shall support Network Protocols of DHCP, DNS, HTTP, HTTPS, RTP/RTCP, SNTP, STUN, TCP/IP District Co-operative Hospital	Iosp Society)	ital
48.18	The system shall have Password protected system menu		
48.19	The system shall provide Embedded encryption as Security Features		
48.20	The System camera shall have 03x optical zoom with 1920x1080p Resolution.		
48.21	The shall have the Pan range of +/-100 degrees and the Tilt range of +/-20 degrees		



	A Minimum of 3 (Three) year warranty should be
48.22	provided for this unit from the date of successful
	commissioning

55" SMART TV DISPLAY

SL. NO	SPECIFICATION REQUIRED	COMPLIANCE YES / NO	REMARKS
49.0	General Requirements		
49.1	The TV shall have the viewable Image Size of 55" and 1920 x 1080 Full HD Resolution		
49.2	The TV shall be with Minimum operating hours of 18 x 7 or better		
49.3	Display Technology shall be Direct LED IPS Panel with 450 nits or better Brightness	~0/	
49.4	The TV shall have 1100:1 or better typical Contrast Ratio with the aspect ratio of 16:9, Original, 4:3, Vertical Zoom, All-Direction Zoom		
49.5	The TV shall have the Viewing Angle (H/V) of 178/178 and the feature of Landscape/Portrait Orientation		
49.6	The TV System shall be PAL/ SECAM & DVB T2/C with Progressive Scanning erative Hospi	TOS tal Society)	oitai
49.7	The system shall have 20W/ 2.0 Ch Sound output and built in Digital decoder		
49.8	Hospitality & General Features		
49.8.1	The TV shall have the Hospitality features such as Hotel Mode, Lock Mode & Welcome Screen		
49.8.2	The TV shall have the management features such as WOL, Self-Diagnostics, IR Out, Multi IR Remote, HDMI / HTNG - CEC		
49.8.3	The TV shall also have the Security features of Kensington Lock, HDMI/USB Lock		

49.8.4	The system shall be built in with Min 2 x HDMI, 1 x USB, Composite AV, LAN, RF, RGB and the Component operate with the power of 230 V AC, 50 Hz	Co-operative Hos (A Unit of Kollaffi Datrict Co-operative Hospital Solety
49.8.5	The package shall include the Fully functional Remote Controller with battery and mounting accessories such as Wall mounting kit, power cables etc.	
49.5.6	The integrator shall consider necessary mounting bracket as required	

WIRELESS DUAL CHANNEL MICROPHONE

SL. NO	SPECIFICATION REQUIRED	COMPLIANCE YES / NO	REMARKS
50.0	General Requirements		A
50.1	The Wireless microphone shall be a combo system with dual-channel receiver		
50.2	The System shall include a body pack transmitter, a handheld transmitter and CVL lavalier microphone		
50.3	The Microphone shall have LCD with battery status and frequency indication	Hos tal Society	oital
50.4	The Minimum System Working Range shall be 90m Line of Sight		
50.5	The Device shall have the Audio Frequency Response of 50 to 15,000 Hz		
50.6	The Device shall meet the Total Harmonic Distortion of 0.5% or better		
50.7	The Device shall have Min Dynamic Range of 100 dB		
50.8	The body pack transmitter shall have the Gain Adjustment Range up to 26 dB Gain		



	The Device shall give minimum battery life of up	
50.9	to 12 hours	

MIXER AMPLIFIER

SL. NO	SPECIFICATION REQUIRED	COMPLIANCE YES / NO	REMARKS
51.0	General Requirements		
51.1	The amplifier shall be high efficiency power amplifier System device in a 2 RU, 19" Cabinet		
51.2	The Amplifier shall have the RMS Power of 60W with the Frequency Response of 70 Hz - 20 kHz		
51.3	The Amplifier Distortion of 1 % or better with S/N Ratio of 60 dB or better		
51.4	The amplifier shall have Min 2 MIC input		
51.5	The Amplifier shall provide 70/100V loudspeaker output voltages that are galvanically separated		
51.6	The Amplifier Power Sourced with 220 – 240 VAC with the Maximum Power Consumption of 238W	× ×	
51.7	The Amplifier shall be EN Complied	Hos	oital
51.8	The Amplifier shall have fan cooling for the proper ventilation	tal Society)	
51.9	The Amplifier shall have ABS resin Panel Finish and Steel Plate Case		

MINIMUM SPECIFICATIONS OF AV RACK

SL. NO	SPECIFICATION REQUIRED	COMPLIANCE YES / NO	REMARKS
52.0	General Requirements		
52.1	The Cabinet Shall be a 9 U Network rack		
52.2	The cabinets shall consist of a welded and assembled steel frame		

52.3	The Cabinet shall be with the Construction of 550mm widths 500mm depths		Co-operative Ho (A Unit of Kollain Datest Co-operative Hospital Solve
52.4	The Vented top cover shall have fan mounting Provision, associated front Glass Door with lock & Key.		
53.5	The Cable opening edges must be protected with plastic grommets or radius edges		
53.6	The Cabinet shall offer roof-mounted cooling fans of Minimum 2 fans		
53.7	The Cabinet shall contain Power strips, containing 6 numbers of 5/15A power sockets, a fuse, Inlet Plug type 16A Indian Round Pin, 16A MCB - PDU Rating 3.6KVA	~ 0/	
53.8	The Cabinet shall conform to DIN 41494 & IEC 60950 /ASTM standards		
53.9	The Cabinet shall have the UL Safety Standards: UL Listed	X	
53.10	Regulatory Compliance: RoHS 2011/65/EU compliant	Hosi	oital

11. SERVER STORAGE SOLUTIONS'e Hospital Society)

The Server Storage Solutions is intended to supply, installation and commissioning for the storage and backup of Hospital Management System and its associated Data Base. The system shall have the following minimum specifications.

SL. NO	SPECIFICATION REQUIRED	COMPLIANCE YES / NO	REMARKS
54.0	General Requirements		
54.1	The Solution must be a Rack mountable Hyper Converged Appliance with the ability to integrate storage, compute, networking, hypervisor, real-time deduplication, compression, and optimization along with powerful data management, data protection,		

			N.S.
	and disaster recovery capabilities in a standard x86-server building block.		Co-operative Hos
54.2	There shall be Minimum 2 (Two) Nodes required to build the solution. The Bidders need to size their solution accordingly.		
54.3	The Solution block shall have Latest Generation Intel® (Cascade Lake) Processors product family, >=2.1 GHz per Core OR Latest Generation AMD® EPYC™ Processor product family, >=2.3 Ghz per Core.		
54.4	The Solution block shall have total 64 Physical Cores including all the nodes		
54.5	The Processor shall have Min 22MB of L3 Cache in case of intel and Min 128 MB L3 Cache in case of AMD		
54.6	The solution block shall have Min 512 GB DDR4 physical RAM with the scalability to double or more of provisioned RAM	3006	
54.7	The Solution block shall have Min 15 TB usable capacity of post deduplication and compression for the entire cluster in HA state. The proposed solution must be able to sustain one node failure	Hos tal Society)	pital
54.8	The Solution block shall have backup functionality as an integrated feature either separate server or software license to be offered.		
54.9	Primary Backup Target to be an x86 Rack Server. Possibility of having a secondary backup target as tape> optional in future. Backup Server to have a minimum of 25TB RAW Space on SATA 7.2k rpm Drives.		
54.10	The proposed solution must be able to provide backup reports for audit purpose		

			N.S.
54.11	The Solution block shall have VMWare ESX Hypervisor needs to be proposed with the HCI Appliance for this requirement.		Co-operative Ho (A Unt. of Kollán Drahat Co-operative Houghal Solen
54.12	The solution block shall have the ability for a single administrator to manage all aspects of the Hyper-convergence from within the Virtualization Manager or server. OEM browser-based software for all sites will be an advantage		
54.13	Backup software proposed should be in Gartner's leader quadrant of the latest Gartner Magic Quadrant report for Data Protection / Backup Software.		
54.14	The proposed Backup software must offer host based / CPU based licensing with no restrictions on type of arrays (protecting heterogeneous storage technologies), frontend production capacity or backup to disk target capacity restrictions. Licenses and associated hardware should be supplied for both primary and DR site. Licenses supplied should have licenses for	Hos	oital
54.15 A 54.16	Primary and DR site workloads. Primary and DR site workloads. The Solution shall be a Minimum 2U or higher rack unit (RU) configuration Appliance with Sliding Rails and Cable Management Arm.	tal Society)	
54.17	The Solution shall have On-site Comprehensive Warranty and Service for 3 Years including all spares, and service offering with NBD on-site for parts as well as telephone support 24 hours.		
54.18	The solution must have an option to provide a simple failover operation. Bidders to provide DR strategy and show the same as an added cost over and above the cost of hardware		

54.19	Data Protection and Recovery		Co-operative H
54.19.1	Backup software should be a Hardware Agnostic software and it should support snapshot integration with hypervisors like VMware, Hyper-V and Nutanix AHV and support de-duplication on any storage target. It should be able to backup data to tapes (like LTO) as well for long-term retention.		
54.19.2	The proposed backup software should provide recovery from physical servers to Virtual and image level recovery.		
54.19.3	Backup software should support file level recovery from any backup of any VM or physical server. It should support a full system recovery in case of a system crash, either on a physical system or as a virtual machine.		
54.19.4 (A	Backup software should have integrated data de-duplication engine with multi-vendor storage support to save space by storing deduplicated copies of data. The de-duplication engine should also facilitate IP base replication of de-dupe data. All necessary hardware and software required to support this functionality should be supplied along with other components	Hos tal Society)	pital
54.19.5	Backup software should provide best RTOs and RPOs through booting of multiple Virtual Machines directly from the Backup to reduce the downtime.		
54.19.6	Backup software should support instant recovery of multiple VMs to support quick application recovery. It should also allow instant recovery of selected VM disks, without having to do instant recovery of all VM disks		

			NS
	for achieving highest levels of RTO for relevant business data		Co-operative Hos (A Unit of Kollam District Co-operative Hospital Solvey)
54.19.7	Backup software must have a feature of data validation, whereby a workload (VM with OS and application) is powered-on, in a sandbox environment and tested for its recoverability.		
54.19.8	Backup software should provide Backup and Replication capabilities in one console only and also allow users to integrate with RBAC capabilities of the hypervisor, so that users can initiate backup and restore only those VMs to which they have access, without administrator intervention, thereby delivering self-serve capabilities.		
54.19.9	The proposed Backup software must Support Seamless Integration with Point-in-time storage snapshots with Major OEM SAN Storages in the environment to perform faster LAN Free backup without any overhead to Hypervisor Compute Layer, allowing recovery at the application level, the file level, and the VM level	Hosi	oital
(A 54.19.10	Proposed software should be able to protect multi-terabyte. Network attached storage shares with the ability to back up the files and folders from one device and restore to another device of any other make. Backup data should be de-duplicated when backed up to a disk target. All necessary software and hardware to achieve this functionality should be supplied.	tal Society)	
54.19.11	High speed backup of NAS shares should leverage Change file tracking mechanism and ensure data to be backed up is identified upfront without the need for the file system to discover changed / new data in the file shares		

			N.S.
54.19.12	The proposed backup software should be able to integrate with anti-virus software and scan before recovery of VMs and ensure that any infected VM is not restored or restore it with disabled network adapters to prevent any infection to spread through the network		Co-operative Ho
54.19.13	The proposed Backup software must allow configuring the maximum acceptable I/O latency level for production data stores to ensure backup and replication activities do not affect storage Availability to production workloads.		
54.19.14	Backup software should provide Recovery of Application Items, File, Folder and Complete VM recovery capabilities from the image level backup within 15Mins RTO.		
54.19.15	Software should be able to restore VMs to a cloud service provider like AWS or Azure directly from the backup copy.	300	
54.19.16 (A	Software should be able to extend the backup repository to a public cloud service provider by moving older files to any S3 Compatible Object storage or Azure BLOB repositories.		pital
54.19.17	Backup software should be an image level backup software supporting popular hypervisors like VMware, Hyper-V and Nutanix AHV Virtual Environments. Provide Block level Incremental and Differential Backup and support Incremental and Differential Imaging.		
54.19.18	Backup software should support agentless backups of applications residing in VMs like SQL, Exchange, SharePoint, Oracle, etc. with non-staged granular recovery of all these applications. It should support crash consistent VM level backup for all other		

			N.S.
	workloads. Backup software should support		Co-operative Ho
	SAP HANA backup integrated with HANA		
	Cockpit		
	Proposed backup software should be able to		
	leverage Immutable Cloud based storage like		
54.19.19	S3-Immutable service to prevent backup		
	copies of data from any corruption or		
	ransomware attacks.		
	Recovery verification should automatically		
	boot the server from backup and verify the		
54.19.20	recoverability of VM image, Guest OS,		
54.19.20	Application Consistency and published		
	automated reports to be used in backup /		
	recovery audits.	~0/	
	Replication should include traffic		
54.19.21	compression, data de-duplication and IP	CBAR	
	shaping.		
	T	Q	
	Proposed backup software should have the	8	
	ability to perform staged restores to enable		
	admins to comply to regulations by selectively		
	deleting files / records which should not be	Hagi	nital
54.19.22	restored from the backup copies. This will help	1100	Jitai
(A	in it complying to stiright to pbe aforgotten;	tal Society)	
	regulations like GDPR, where user data is		
	deleted from restored backup copies in an		
	auditable manner.		
	Backup software should support instant		
	recovery of physical server data as a VMware		
54.19.23	VM without having to move physical server		
	data back to production host and any Vee-am		
	backup as VMware CM		
54.20	Disaster Recovery		
	Replication in the software should be a VM		
54.20.1	level replication and must replicate the VM		
UT.ZU. I	level data with or without backing it up at the		
	source site. It should also include failover and		

			N.S.
	failback capabilities and should be able to		Co-operative Hos (A Unit of Kollam District Co-operative Hospital Society)
	perform automatic acquisition of network		
	addresses at the destination site.		
	Backup and replication software must deliver		
	maximum investment protection by supporting		
	replication of workloads between dis-similar		
	systems like hyper converged infrastructure to		
54.20.2	stand alone servers and storage running		
	similar hypervisors across sites, thereby		
	creating a Disaster recovery environment for		
	production workloads irrespective of the		
	underlying hardware.		
	Backup software should have ability to backup		
	data from one server platform and restore it to		
	another server platform to eliminate		
	dependence on a particular machine and for		
54.20.3	disaster recovery purposes. This bare metal	COM	
	recovery capability should be built in for the	X	
	physical servers and should even work on the	X	
	dissimilar hardware.		
	Backup software should have the ability to	TT	. 1
54.20.4	backing up a Cloud VM running in AWS or	HOSI	oital
/ A	Azure and restore it as a valid VM workload	tal Society	
()	back onto a VMware server farm. ative Hospi	iai Society) =	
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12. ICU PATIENT VIDEO INTERACTION SOLUTION

The solution is intended to provide a communication channel to interact between the ICU Patient and the bystander at outside waiting area. The Proposed 2 way audio and video communication shall be an optimal clear solution with the following minimum specifications.

VIDEO CONFERENCING SYSTEM

SL. NO	SPECIFICATION REQUIRED	COMPLIANCE YES / NO	REMARKS
55.0	General Requirements		
55.1	The System shall be capable to integrate with the existing UC platform and standards-based video infrastructure		

			N.S.
55.2	The system shall supports both Session Initiation Protocol (SIP) and H.323 Protocols		Co-operative Ho (A Unit of Molliam Datests Co-operative Hospital Solve
55.3	The system shall be full HD 1080p video with a 4K camera sensor, and 4K display support.		
55.4	The System shall support up to the 4 Mbps Bit rate with H.323 / SIP Protocols		
55.5	The system shall be MCU compatibility with H.243 and H.231		
55.6	The system shall support 2 simultaneous channels such as camera and content		
55.7	The System shall support the video protocols of H.264 or Higher Profile	~0/	
55.8	The system shall support with the video resolution of 1920 x 1080p @ 25 and 30fps		
55.9	The Min viewable angle shall be with 102°(H) x 68° (V)	8	
55.10	The Camera shall have up to 3x Digital zoom		
55.11 A	The system shall have the audio features with Acoustic echo cancellation, Audio error unit of Kollam District Co-operative Hospi concealment, Automatic Gain Control (AGC) and Automatic noise suppression	HOS all Society)	pital
55.12	The system shall have a Microphone array supporting multiple audio protocols		
55.13	The system shall have 2 x USB Port and 1 x HMDI Audio / Video output at max resolution of 3840 x 2160 @ 25 and 30fps		
55.14	The system shall have 1 x RJ-45, Wi-Fi (802.11a/b/g/n, 802.11ac) Connectivity		
55.15	The System shall support IPv4 and IPv6 simultaneous Network support		

			N.S.
55.16	The system Network adapter shall support QoS, IP Precedence, IP Type of Service (ToS), Differentiated Services (diffserv) etc.		Co-operative Ho (A Unit of Kollum District Co-operative Hospital So
55.17	The system shall support Network Protocols of DHCP, DNS, HTTP, HTTPS, RTP/RTCP, SNTP, STUN, TCP/IP, 802.1q and 802.1p		
55.18	The system shall provide Embedded encryption as Security Features		
55.19	The system shall be configurable through the web browsers such as Internet Explorer, Chrome, Firefox, Safari		
55.20	The system shall be compatible with apple and android user interfaces	~0/	
55.21	The system shall have the option to Record all the in and out call of the meeting on USB key / disk		
55.22	The recommended system power input is as 100-240VAC, 50-60Hz, 2.5A max.		
55.23	The System shall be bundled with a fully functional remote control with batteries	Hos al Society)	oital
55.24	A Minimum of 3 (Three) year warranty should be provided for this unit from the date of successful commissioning		
55.25	The System integrator shall propose suitable Mobile cart and mounting accessories they are quoting to, in line with the BoQ items		

43" SMART TV DISPLAY

SL. NO	SPECIFICATION REQUIRED	COMPLIANCE YES / NO	REMARKS
56.0	General Requirements		
56.1	The TV shall have the viewable Image Size of 43" and 1920 x 1080 Full HD Resolution		

56.2	The TV shall be with Minimum operating hours of 18 x 7 or better		Co-operative Ho (A Unit of Köllim Datrict Co-operative Hospital Sov
56.3	Display Technology shall be Direct LED IPS Panel with 450 nits or better Brightness		
56.4	The TV shall have 1100:1 or better typical Contrast Ratio with the aspect ratio of 16:9, Original, 4:3, Vertical Zoom, All-Direction Zoom		
56.5	The TV shall have the Viewing Angle (H/V) of 178/178 and the feature of Landscape/Portrait Orientation		
56.6	The TV System shall be PAL/ SECAM & DVB T2/C with Progressive Scanning		
56.7	The system shall have 20W/ 2.0 Ch Sound output and built in Digital decoder	376	
56.8	Hospitality & General Features		
56.8.1	The TV shall have the Hospitality features such as Hotel Mode, Lock Mode & Welcome Screen	8	
56.8.2	The TV shall have the management features such as WOL, Self-Diagnostics, IR Out, Multi IR Remote, HDMI / HTNG - CEC	Hos	oital
56.8.3	The TV shall also have the Security features of Kensington Lock, HDMI/USB Lock	tal Society) =	
56.8.4	The system shall be built in with Min 2 x HDMI, 1 x USB, Composite AV, LAN, RF, RGB and the Component operate with the power of 230 V AC, 50 Hz		
56.8.5	The package shall include the Fully functional Remote Controller with battery and mounting accessories such as Wall mounting kit, power cables etc.		



32" SMART TV DISPLAY

SL. NO	SPECIFICATION REQUIRED	COMPLIANCE YES / NO	REMARKS
57.0	General Requirements		
57.1	The TV shall have the viewable Image Size of 32" and 1920 x 1080 or better Full HD Resolution		
57.2	It shall have the Pixel Pitch of 0.46mm or better and 55 Pixels per Inch @ native resolution or higher		
57.3	The TV shall be with Minimum operating hours of 18 x 7 or better		
57.4	Display Technology shall be Direct LED IPS Panel with 400 nits or better Brightness	3/	
57.5	The TV shall have 1100:1 typical Contrast Ratio and 16:9 of Aspect Ratio		
57.6	The TV shall have the Viewing Angle (H/V) of 178/178 and the feature of Landscape/Portrait Orientation	× A	
57.7	The TV System shall be PAL/ SECAM & DVB T2/C with Progressive Scanning	HOS tal Society)	oital
57.8	The system shall have 20W/ 2.0 Ch Sound output and built in Digital decoder		
57.9	The TV shall have the management features such as WOL, Self-Diagnostics, IR Out, Multi IR Remote, HDMI / HTNG - CEC		
57.10	The TV shall also have the Security features of Kensington Lock, HDMI/USB Lock		
57.11	The system shall be built in with Min 2 x HDMI, 1 x USB, Composite AV, LAN, RF, RGB, Component operate with the power of 230 V AC, 50 Hz		

N.S.
Co-operative Hospital (A Unit of Kollam District Co-operative Hospital Soutety.)

	The package shall include the Fully functional
	Remote Controller with battery and mounting
57.12	accessories such as Wall mounting kit, power
	cables etc.
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13. NURSE STATION TABLET

Following are the minimum specification required for the Tab given at nursing stations

SL. NO	SPECIFICATION REQUIRED	COMPLIANCE YES / NO	REMARKS
58.0	General Requirements		
58.1	The tab shall have min Quad – Core processor with 2 GHz Speed		
58.2	The tab shall have Min 2 GB RAM with 32 GB ROM and support of external memory up to 512 GB	~ 0/	
58.3	The tab shall have Min 8" Display with 1280 x 800 resolution	O W	
58.4	The tab shall have 802.11 a/b/g/n 2.4+5GHz Wi-Fi and USB Connectivity with an audio out	× ×	
58.5	The tab shall come with 5100 mAH lithium-ion battery	Hos	oital

(A Unit of Kollam District Co-operative Hospital Society) 14. KVM SWITCH

SL. NO	SPECIFICATION REQUIRED	COMPLIANCE YES / NO	REMARKS
59.0	General Requirements		
59.1	The Switch shall be 1U 19" widescreen LCD console drawer		
59.2	The Screen shall have 1440 x 900 native resolution / 16.7M colors with 300 cd/m2 brightness		
59.3	The Screen shall have DVI-D + VGA video input / USB KB / MS Connectivity		
59.4	The Switch shall have 101-key keyboard with touchpad Mouse Point		

59.5	The switch shall have auto sensing input power voltage of 100 to 240 VAC	Co-operative Hospi
59.6	The switch shall have FCC & CE / RoHS / CE Compliance	

15. PASSIVE COMPONENTS

25 & 50 PAIR RAISER CABLE

SL. NO	SPECIFICATION REQUIRED	COMPLIANCE YES / NO	REMARKS
60.0	General Requirements		
	The Cable type shall be Copper, Category 3		
60.1	U/UTP (Unarmored Gel free cable)		
60.2	The Cable shall be 50 or 25 pair as per BoQ		
60.3	The cable shall be Solid Conductor type		
60.4	The Conductor Material shall be Bare copper		
60.5	The Insulation material shall be Polyolefin	8	
60.6	The Jacket Material shall be raiser rated PVC		
60.7	The cable shall meet Transmission Standards of ANSI/TIA-568-C.2 CENELEC EN 50288-6-1 ISO/IEC 11801 Class E	Hos tal Society)	pital
60.8	The Conductor Gauge shall be 24 AWG Singles		
60.9	The Single Cable length shall be 305mtr		
60.10	The Characteristic Impedance of the cable shall be 100 Ohm		
60.11	The Cable shall meet Operating voltage of Maximum 80V		
60.12	The Cable shall meet Operating temperature of -20°C to 60°C		
60.13	The Cable shall be RoHS Compliant		



50 PORT FULLY LOADED VOICE PATCH PANEL

SL. NO	SPECIFICATION REQUIRED	COMPLIANCE YES / NO	REMARKS
61.0	General Requirements		
61.1	Patch Panel shall ANSI/TIA Category 3 Type		
61.2	The Patch Panel shall be 2 U in Size		
61.3	The Material shall be with High-impact, flame retardant, thermoplastic or Steel with powder coating		
61.4	The Panel Front interface shall have RJ45 Connectors		
61.5	The Panel shall have IDC Type Terminations		
61.6	The panel shall meet Transmission standards of ANSI/TIA-568-C.2 ISO/IEC 11801 Class C		
61.7	The Panel shall have 50 Ports in 2U Space	8	
61.8	The Panel shall be ROHS Compliant	\ \\	

19" RECESSED 3U SUB RACK WITH 150 PORT -FULLY LOADED

SL. NO	SPECIFICATION REQUIRED Unit of Kollam District Co-operative Hospi	COMPLIANCE YES / NO	REMARKS
62.0	General Requirements		
62.1	The Frame Krone Module Type shall be with 19" Recessed Sub rack unit for termination of raiser rated cable		
62.2	The panel should meet ANSI/TIA 568C.2 Category 3 Specifications		
62.3	The Rack mount/height shall be of 3 Rack unit		
62.4	The Panel shall be Recessed Sub rack with inbuilt Back Mount Frame (BMF) can be mounted on a 19" rack. A maximum of 15 Nos of 2/10 Disconnection modules can be		

		N.S.
	62.5mounted on this to offer up to 150 pair termination	Co-operative Hos (A Unit of Foliatin Dated Co-operative Hospital Solety
62.5	The system shall have Integrated Back Mount Frame (BMF), Identification numbering system, Provision for UGC Cable tying and Jumper Cable routing as accessories	
62.6	The Panel shall be loaded and accommodates 15 nos of 2/10 original LSA-PLUS disconnection module	
62.7	The Panel Dimensions shall be with Width: 19", Height: 3U, Depth: 108 m	
62.8	The Panel Material shall be CRCA Steel with Yellow Passivation finish	

CAT6 OUTDOOR DOUBLE JACKETED CABLE

62.9

The Panel shall be ROHS Compliant

SL. NO	SPECIFICATION REQUIRED	COMPLIANCE YES / NO	REMARKS
63.0	General Requirements		
	The Cable shall be Unshielded Twisted Pair, Jell	TT	• . 1
63.1	free, Category 6, TIA / EIA 568-C.2 & ISO/IEC	HOS	oital
(/	11801 Unit of Kollam District Co-operative Hospi	ital Society) -	_
	The cable type shall be Double jacketed cable		
63.2	for indoor & outdoor application and crush		
	resistance		
	The Cable shall have 23 AWG solid bare copper		
63.3	Conductors		
63.4	The cable shall have Anti-Rodent Protection		
63.5	The cable shall be with Polyolefin Insulation		
	The cable shall be Outer sheath, Fire Retardant		
63.6	LSZH for Indoor purpose		
	The Cable Inner sheath have Polyethylene, UV		
63.7	Resistant for outdoor purpose		
			Pago 176

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63.8	The cable shall have Pair Separator with Cross-member (+) fluted Spline		Co-operative Ho (A Unit of Hollum Datest Co-operative Hospital See
63.9	The cable shall meet Temperature range of 20 Deg. C to +70 Deg. C		
63.10	The cable shall be Frequency tested up to Minimum 250 MHz		_
63.11	The Cable shall have Outer Diameter of 7.2 mm nominal		
63.12	Delay Skew of cable shall be Max of 45ns		
63.13	The cable shall allow the Bending Radius of Min 28mm		
63.14	Cable shall not have any metal/Armour layer to protect from any conductivity. They could carry the electrical / lighting current directly to switch, if the cable is exposed to environment		
63.15	The cable shall have Min 66.58 Ohms Max / KM Conductor Resistance	*	
63.16	The cable shall have the Impedance of 100 Ohms + / - 15 ohms, 1 to 250 MHz	Hos	oital
63.17	The cable shall have the Mutual Capacitance of 5.6 NF MAX /100 Mtr	tal Society) =	
63.18	Propagation Delay shall be 536 ns/100 Mtrs. MAX @ 250 Mhz		
63.19	The cable shall meet ANSI/TIA-568.2- D, ISO/IEC 11801 Class E Transmission Standards		
63.20	Cable shall be fully complied with the recommendations set forth by IEEE 802.3bt (Type 4) for the safe delivery of power over LAN cable when installed according to ISO/IEC 14763-2, CENELEC EN 50174-1, CENELEC		

		N.S.	
	EN 50174-2 or TIA TSB-184-A for Remote	Co-operative Ho	ospit
	Powering		
63.21	The cable shall be ROHS Compliant		

RJ45 TO FIELD MOUNTABLE TERMINATION MODULE

SL. NO	SPECIFICATION REQUIRED	COMPLIANCE YES / NO	REMARKS
64.0	General Requirements		
	The Field Mountable Termination Modules provides a means to connect UTP horizontal		
64.1	cable to a short, single-ended patch cord assembly or connector in the field, the plug ended link may be used to connect to cameras, access points, and other ceiling-mounted		
	devices	\(0 /	
64.2	The termination module shall support for Category 6A, Category 6 and Category 5E cabling solution		
64.3	The termination module shall be of a universal design supporting T568 A & B wiring.		
64.4	Termination module shall be available with cordage or without cordage	Hos	oital
64.5	Plug Insertion life shall be 750 times as minimum	tal Society) =	
64.6	Electrical Performance: ANSI/TIA-568-C.2 Category 6A / ISO 11801 Class EA performance compliant. Meets or exceeds all ANSI/TIA-568-C.2 Category 6A and ISO 11801 Class EA connector and channel transmission performance requirements. Meets applicable requirements of IEC 60603-7, Supports IEEE 802.3af, 802.3at and proposed 802.3bt* PoE applications		

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	Mechanical Futures : Flammability rating: The Connector is dual rated - Plenum and Low	Co-operati (A Unit of Kollum District Co-opera	ve Ho
64.7	Smoke Zero Halogen, Operating temperature:14°F to 140°F (-10°C to 60°C), Storage temperature: -40°F to 158°F (-40°C to 70°C)		
64.8	Compliance: Safety compliance: ETL Listed; UL 1863 and CAN/CSA-C22.2 (ETL File 3166536CRT-001), RoHS compliant, supports 20 re-termination cycles, Qualified for 22-26 AWG solid or stranded conductors		
64.9	Certifications: UL Listed		

CAT 6A 24-PORT LOADED, U/UTP PATCH PANEL

SL. NO	SPECIFICATION REQUIRED	COMPLIANCE YES / NO	REMARKS
65.0	General Requirements		
65.1	The panel shall be available in 24-port and 48-port configurations with universal A/B labeling and 110 connector terminations on rear of panel allowing for quick and easy installation of 22 to 24 AWG cable	Hogi	oital
65.2	The ganged adapter style patch panel will utilize Unit of Kollam District Co-operative Hospi increments of six RJ-45 style jacks in a common molded component.	tal Society)	·
65.3	The patch panel shall be compliant with IEC 60603-7 for Plug Insertion life test and minimum Plug Insertion life shall be 750 times		
65.4	The ganged adapters shall have RJ45 jack in the front and Insulation Displacement Connector (IDC) at the rear of the module.		
65.5	Panel shall be available in straight and angled style with made of Powder-coated steel		
65.6	Termination managers must be provided with the panel. These termination managers provide		

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	proper pair positioning, control, and strain relief	Co-operative Hos	spi
	features to the rear termination area of the		
	panel.		
	parior.		
	3rd Party Verification test certificates shall be		
	provided to show compliance to ISO/IEC 11801		
65.7	,		
	testing for category 6 components.		
	When configured in worst-case 100-meter		
	channels with full cross-connects and		
65.8	consolidation points with the other products		
	proposed in this tender, the panel shall be		
	capable of delivering the minimum guaranteed		
	channel performance.		

CAT 6A-PATCH CORD U/UTP

SL. NO	SPECIFICATION REQUIRED	COMPLIANCE REMARKS
66.0	General Requirements	
66.1	Patch Cords shall be equipped with 8-pin modular plugs on each end.	
66.2	All cords shall be round, and consist of copper conductors, tightly twisted into individual pairs.	
66.3	Nominal cordage diameter shall not exceed 7.24 mm collam District Co-operative Hospi	tal Society)
66.4	Plugs shall be designed with an anti-snag latch to facilitate easy removal during move, add and change processes.	
66.5	The cordage sheath shall be made of Low- Smoke, Zero Halogen (LSZH)	
66.6	The LSZH version must comply with the following Fire Safety standards:	
66.7	ISO/IEC 60332-3-22: Vertical Flame Spread	
66.8	ISO/IEC 60754-2: Acidity	
66.9	ISO/IEC 61034-2: Smoke Density	

66.10	3rd Party verification of the Fire Safety/ Environmental tests listed above must be provided as part of the bid response.	Co-operative Hos (A Unit of Kollam District Co-operative Hospital Society
66.11	The cordage shall be UTP components that do not include internal or external shields, screened components or drain wires.	
66.12	The patch cords will have insertion life of 750 cycles minimum.	

FLOOR STANDING NETWORK RACKS

SL. NO	SPECIFICATION REQUIRED	COMPLIANCE YES / NO	REMARKS
67.0	General Requirements		
	Shall be a 42U Network Floor Standing rack		
67.1	General Specifications		
	Product Type: Floor Standing rack		
	Rack Units: 42U	COM	
	Color: Black	X	
	Finish: Powder-coated, textured	Ж	
	Rack Type: EIA 19 in	X	
	The cabinets shall consist of a welded and		
67.2	assembled steel frame Construction of 600mm	TT	• . 1
67.2	widths, 1000mm depths, and 42 RU heights.	HOSI	oital
	Widner, 1000mm departs, and 42 to heighte.		Oltai
(/-	Cabinets shall include curved perforated front	iai Society) -	
67.3	Double hinge doors with 69% air flow rate and		
	split rear perforated doors.		
67.4	Cabinet shall have two horizontal side panels		
07.4	on each side or optional as an accessory.		
	The cabinet shall have fully adjustable		
67.5	equipment rails with provision for front (800mm		
67.5	wide) cable management fingers.		
	mae, sabie management inigere.		
	The top of cabinet includes brush cable entry		
67.6	points to prevent air leakage.		

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67.7	Cabinets shall have optional equipment rails, vertical blanking panels and bottom panels for effective air sealing.		Co-operative Ho (A Unit of Kollam District Co-operative Hospital Solve
67.8	The entire cabinet shall be fully electrically bonded, including equipment rails, doors, and side panels.		
67.9	Cabinets shall have static 1200kg (2645 lbs.) load rating and rolling 500kg (1100 lbs.) load rating.		
67.10	Cabinet shall have Cable Runways with the Size of Height: 245 mm Width: 514 Depth: 80		
67.11	Cabinet Supply shall include cable loop 90x85 mm for cable management	~ 0/	
67.12	Shelving -The manufacturer should offer shelves with the ability to Support up to 100 kg of non-rack mount equipment.		
67.13	Safety Standards: UL Listed	*	
67.14	Regulatory Compliance: RoHS 2011/65/EU compliant	Hosi	oital

NETWORK SWICH SPECIFICATION O-operative Hospital Society)

SL NO	SPECIFICATION REQUIRED	COMPLIANCE YES / NO	REMARKS
68.0	General Requirements		
	Architecture		
68.1	Shall be 19" Rack Mountable Enterprise Switch		
	The switch should support Dual hot-swappable power supplies		
	44 RJ-45 autosensing 10/100/1000 ports and 4 Combo 10/100/1000BASE-T or 100/1000Mbps SFP Ports		

			N.S.
	The switch shall have one expansion slots to support up to four 10G SFP+ Ports additionally or 0ne 40G QSFP+ port or 4 smart rate port, 1 Dedicated Stacking Module Slot		Co-operative H (A Unit of Hollum Obserc Co-operative Hospital Size
	The switch support smart Rate (IEEE 802.3bz) protocol		
	1 RJ-45 serial console port		
	1 RJ-45 out-of-band management port		
	1GB SDRAM and 512 MB flash and 12 MB Packet buffer size		
	Shall have switching capacity of 176 Gbps		
	Shall have up to 112 million pps switching throughput		
	The Switch should support 32000 MAC address		
	Software Defined Networking (SDN) Capability		
68.2 (A	OpenFlow protocol capability to enable software-defined networking Unit of Kollam District Co-operative Hosp	HOST tal Society)	oital
	Allows the separation of data (packet forwarding) and control (routing decision) paths, to be controlled by an external SDN Controller, utilizing Openflow protocol		
	Features		
	The switch should support HTTP redirect function		
68.3	The switch should support User role to defines a set of switch-based policies in areas such as security, authentication, and QoS. A user role can be assigned to a group of users or devices, using switch configuration		

			N.S.
	The switch should support Per-port tunneled node		Co-operative Ho (A Unit of Kollum District Co-operative Hospital Seba
	The Switch should automatically configures switch for different settings such as VLAN, CoS, PoE max power, and PoE priority when an wireless access point is detected.		
	Quality of Service (QoS)		
	The switch should support Traffic prioritization allows real-time traffic classification into eight priority levels that will mapped to eight queues		
	Layer 4 prioritization enables prioritization based on TCP/ UDP port numbers		
68.4	The switch should support Class of Service (CoS) to set the IEEE 802.1p priority tag based on IP address, IP Type of Service (ToS), Layer 3 protocol, TCP/UDP port number, source port, and DiffServ		
	The switch should support Rate limiting		
()	The switch should support Large buffers Provide graceful congestion management Unit of Kollam District Co-operative Hosp Connectivity	Hosp tal Society)	oital
68.5	The switch should support Smart Rate (IEEE 802.3bz) connectivity		
	The switch should support Auto-MDIX		
	The switch should support following IPv6 feature		
68.6	The switch should support IPV6 host enables switches to be managed in an IPV6 network		
	The switch should support Dual stack (IPV4 and IPV6) transitions from IPV4 to IPV6, supporting connectivity for both protocols		

			N.S.
	The switch should support MLD snooping forwards IPV6 multicast traffic to the appropriate interface		Co-operative Ho
	The switch should support IPV6 ACL/QoS supports ACL and QoS for IPV6 network traffic		
	The switch should support IPV6 routing supports static and RIPng protocols		
	The switch should support RA guard, DHCPv6 protection, dynamic IPV6 lockdown, and ND snooping		
	Performance		
68.7	The switch should support Selectable queue configurations to allow for increased performance by selecting the number of queues and associated memory buffering that best meet the requirements of the network applications		
	The switch should support Energy-efficient Ethernet (EEE) support reduces power consumption in accordance with IEEE 802.3az	Hosp	ital
(/	Resiliency and high availability erative Hospi	tal Society)	
	The Switch should support stacking up to 10 Switch and support up to 100 Gb/s of stacking throughput per switch.		
68.8	The Switch should support Virtualized switching to provide simplified management as the switches appear as a single chassis when stacked		
	The switch should support Virtual Router Redundancy Protocol (VRRP)		
	The switch should support IEEE 802.3ad Link Aggregation Protocol (LACP) and support		

	minimum 24 trunks, each with up to 8 links (ports) per trunk		Co-operative He (Alter of Kollain District Co-operative Hospital Set
	The switch should support IEEE 802.1s Multiple Spanning Tree		
	The switch should provide easy-to-configure link redundancy of active and standby links		
	Convergence		
	The switch should support IP multicast snooping (data-driven IGMP)		
	The switch should support LLDP-MED (Media Endpoint Discovery)		
68.9	The switch should support IP multicast routing including PIM sparse and dense modes to route IP multicast traffic		
	The switch should support Auto VLAN configuration for voice		
	The switch should support Local MAC Authentication to assign attributes such as VLAN and QoS using locally configured profile that can be a list of MAC prefixes	Hosp tal Society)	oital
	Management		
	The switch should allow assignment of descriptive names to ports		
68.10	The switch should support IEEE 802.1AB Link Layer Discovery Protocol (LLDP)		
	The switch should support Multiple configuration files to store easily to the flash image		
	The switch should support Dual flash images to provide independent primary and secondary		

			N.S.	X
	operating system files for backup while upgrading		Co-operative F (A Unit of Kollaffi District Co-operative Mospilal	[OS]
	The switch should have Out-of-band Ethernet management port to enable management over a separate physical management network and keeps management traffic segmented from network data traffic			-
	The switch should support Zero-Touch ProVisioning (ZTP)			
	The switch should support Unidirectional Link Detection (UDLD)			
	Layer 2 switching			
	The switch should support IEEE 802.1ad QinQ			
	The switch should support VLAN and tagging and support the IEEE 802.1Q (4094 VLAN IDs) and 2K VLANs simultaneously			=
	The switch should support Jumbo packet			
()	The switch should support IEEE 802.1v protocol VLANs to isolate select non-IPv4 protocols automatically into their own VLANs	Hosp tal Society)	ital	
68.11	The switch should support MAC-based VLAN			
	The switch should support Rapid Per-VLAN Spanning Tree (RPVST+)			
	The switch should support VxLAN encapsulation (tunnelling) protocol for overlay network that enables a more scalable virtual network deployment			
	The switch should support IEEE 1588v2 Transparent Clock Mode			
	The switch should support GVRP and MVRP			
	l.	1	ļ	_

68.12	Layer 3 services	Co-operative H
00.12	The switch should support DHCP server	
	Layer 3 routing	
	The switch should support Static IP routing with ECMP capability	
	The switch should support Routing Information Protocol (RIP) provides RIPv1, RIPv2, and RIPng routing	
	The switch should support Access OSPF	
	Security	
	The switch should support Web-based authentication provides a browser-based environment	
	The switch should support MAC-based authentication	
68.13	The switch should support Multiple IEEE 802.1X users per port to provide authentication of multiple IEEE 802.1X users per port and also to prevent a user from "piggybacking" on another user's IEEE 802.1X authentication	Hospital tal Society)
	The switch should support Concurrent IEEE 802.1X, Web, and MAC authentication schemes per port	
	The switch should support Access control lists (ACLs) provide IP Layer 3 filtering based on source/destination IP address/subnet and source/destination TCP/UDP port number	
	The switch should support Source-port filtering to allow only specified ports to communicate with each other	
	The switch should support RADIUS/TACACS+	

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	The switch should support Secure shell encrypts all transmitted data for secure remote CLI access over IP networks		Co-operative Ho
	The switch should support Secure Sockets Layer (SSL) encrypts all HTTP traffic, allowing secure access to the browser-based management GUI in the switch		
	The switch should support Port security allows access only to specified MAC addresses, which can be learned or specified by the administrator		
	The switch should support MAC address lockout to prevent particular configured MAC addresses from connecting to the network		
	The switch should support Secure FTP	(3) (6)	
	Switch management logon security helps secure switch CLI logon by optionally requiring either RADIUS or TACACS+ authentication		
	Custom banner displays security policy when users log in to the switch		; ; t=1
(A	The switch should support STP BPDU port protection to block Bridge Protocol Data Units (BPDUs) on ports that do not require BPDUs and also prevent forged BPDU attacks	tal Society)	Ital
	The switch should support DHCP protection to block DHCP packets from unauthorized DHCP servers and prevent denial-of-service attacks		
	The switch should support Dynamic ARP protection to block ARP broadcasts from unauthorized hosts and prevent eavesdropping or theft of network data		
	The switch should support STP root guard to protect the root bridge from malicious attacks or configuration mistakes		

			N.S.
	The switch should support Identity-driven ACL		Co-operative Hos (A Unit of Kollam District Co-operative Hospital Society
	enables implementation of a highly granular		
	and flexible access security policy and VLAN		
	assignment specific to each authenticated		
	network user		
	The switch should support Per-port broadcast		
	throttling		
	The switch should support Private VLAN		
	Environmental Features		
	Shall support IEEE 802.3az Energy-efficient		
68.14	Ethernet (EEE) to reduce power consumption		
00.14	Operating temperature of 0°C to 55°C	~ o/	
	Safety and Emission standards including EN	3460	
	60950; IEC 60950; VCCI Class A; FCC Class A		
	Warranty and Support	8	
	The below Warranty shall be offered directly	1	
	from the switch OEM.		
68.15	Lifetime warranty with advance replacement	Hogr	ital
()	and next-business-day delivery Unit of Kollam District Co-operative Hosp	tal Society)	rtai
_	Software upgrades/updates shall be included		
	as part of the warranty		
68.16	10GBASE-SR SFP+ Transceiver Module		
00.10	(MMF, 850nm, 300m, LC, DOM)		

SOFTWARE SERVER SPECIFICATION

SL NO	SPECIFICATION REQUIRED	COMPLIANCE YES / NO	REMARKS
69.0	General Requirements		
69.1	<u>Chassis</u>		
	2 U Rack Mountable		

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69.2	СРИ		CO-Operative H (A Unit of Kollam District Co-operative Hospital Se
	One or two numbers of latest generation Intel		
	20Cores 5218R processors		
69.3	Memory		
	24DIMM slots.		
	XX GB DIMMS scalable up to 3.0 TB using		
	DDR4 Load Reduced DIMM (LRDIMM)		
	operating at 2666 MHz (depending on		
	processor model)		
	or		
	XX GB DIMMS scalable up to 768GB using		
	DDR4 Registered DIMM (RDIMM) operating at		
	2666 MHz (depending on processor model)	~ 0/	
	or	260	
	System should support NVDIMM up to 192GB	COM.	
	(12* 16GB)	W W	
	Should be capable of identifying and reporting	X	
	whether genuine OEM memory is installed for	X	
	system reliability		
69.4	Memory Protection Pative	Hosp	oital
(Advanced ECC with multi-bit error protection,	tal Society) 👢	
_	Online spare, mirrored memory and fast fault		
	tolerance		
69.5	HDD Bays		
	Up to 24+6 SFF HDD/SSD		
	or		
	12+4+3 LFF with 2 SFF HDD/SSD		
	or		
	24 NVMe PCIe SSD		
	The drive carrier should have intuitive icon-		
	based display along with "DO NOT REMOVE"		
	caution indicator that gets activated		
]		

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automatically in order to avoid data		Co-operative Ho
loss/downtime due to wrong drive removal.		
69.6 Hard disk drive		
Hot Plug SFF or LFF SATA/SAS/SATA		
SSD/SAS SSD and NVMe drives		
69.7 <u>Controller</u>		
Server should support Onboard SATA software		
RAID controller supporting SSD/HDD and at		
least two M.2 drives.		
In addition, server should support one of the		
below controllers supporting Mixed Mode which		
combines RAID and HBA mode,		
PCIe 3.0 based 12Gb/s SAS Raid Controller		
with RAID 0/1/1+0/5/50/6/60/1 Advanced Data	260	
Mirroring/10 Advanced Data Mirroring (onboard		
or on a PCI Express slot)	W	
or	8	
PCIe 3.0 based 12Gb/s SAS Raid Controller	X	
with RAID 0/1/1+0/5/50/6/60/1 Advanced Data		
Mirroring/10 Advanced Data Mirroring with 4GB		. 1
battery backed write cache (onboard or on a	Hosni	tal
(A PCI Express slot) District Co-operative Hosp	ital Society)	
Storage controller should support Secure	ital oooloty /	
encryption/data at rest Encryption		
31		
69.8 <u>Networking features</u>		
Server should support below networking cards:		
1. 1Gb 4-port network adaptors		
2. 10Gb 2-port Ethernet adaptor		
3. 10GBaseT 4-port Ethernet adaptor		
4. 4x25Gb Ethernet adaptor		
5. 10/25Gb 2-port Ethernet adaptor		
6. 100Gb Ethernet		
InfiniBand Options:		

	40Gb dual port or 100Gb Single or Dual port		Co-operative Ho
	Adapter		
	100Gb Single port Omni path adaptor		
69.9	<u>Interfaces</u>		
	Serial - 1		
	Micro SD slot - 1		
	USB 3.0 support With Up to 5 totals: 1 front, 2		
	rear, 2 internal (secure)		
69.10	Bus Slots		
	Six PCI-Express 3.0 slots, at least two x16 PCIe		
	slots		
69.11	Power Supply		
03.11	Tower Suppry	~0/	
	Should support hot plug redundant low halogen		
	power supplies with minimum 94% efficiency		
69.12	<u>Fans</u>	Š.	
	Redundant hot-plug system fans		
69.13	Industry Standard Compliance		• - 1
	'o-operative	Hogr	1112
	ACPI 6.1 Compliant		/Ital
(/-	PCie 3.0 Compliani strict Co-operative Hospi	tal Society) 🚣	
	PXE Support		
	Energy Star		
	ASHRAE A3/A4		
	UEFI 2.6		
	SMBIOS		
	Redfish API		
	SNMP v3		
	TLS 1.2		
	DMTF Systems Management Architecture		
69.14	System Security		

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		1100
	UEFI Secure Boot and Secure Start support	Co-operative H
	Security feature to ensure servers do not	
	execute compromised firmware code	
	FIPS 140-2 validation	
	Common Criteria certification	
	Configurable for PCI DSS compliance	
	Advanced Encryption Standard (AES) and	
	Triple Data Encryption Standard (3DES) on	
	browser	
	Tamper-free updates - components digitally	
	signed and verified	
	Secure Recovery - recover critical firmware to	
	known good state on detection of compromised	
	firmware	
	Ability to rollback firmware	
	Secure erase of NAND/User data	
	TPM (Trusted Platform Module) 1.2	Cadh!
	TPM (Trusted Platform Module) 2.0	
_	Smart card (PIV/CAC) and Kerberos based 2-	
	factor Authentication	The state of the s
	Configurable for PCI DSS compliance	
	Secure erase of NAND	
	Chassis Intrusion detection	Uggnital
	Operating Systems and Virtualization	nospital
69.15	Software Support istrict Co-operative Hospi	tal Society) 👢
	Microsoft Windows Server	
	Red Hat Enterprise Linux (RHEL)	
	SUSE Linux Enterprise Server (SLES)	
	VMware	
	Clear OS	
69.16	GPU support	
	System should support NVIDIA's latest	
	computational accelerators and graphics	
	accelerators	
69.17	System tuning for performance	
L		

			N.S.
	1. System should support feature for improved		Co-operative Hos
	workload throughput for applications sensitive		
	to frequency fluctuations. This feature should		
	allow processor operations in turbo mode		
	without the frequency fluctuations associated		
	with running in turbo mode		
	2. System should support workload Profiles for		
	simple performance optimization		
69.18	Secure encryption		
	System should support Encryption of the data		
	(Data at rest) on both the internal storage and		
	cache module of the array controllers using		
	encryption keys. Should support local key		
	management for single server and remote key		
	management for central management for		
	enterprise-wide data encryption deployment.	CAR	
69.19	Warranty	8	
	Server Warranty includes 3-Year Parts, 3-Year	X	
	Labour, 3-Year Onsite support with next		
	business day response.		
	'o-onerative	Hogr	nital
69.20	Provisioning PCI attive	La Lobo	rtai
(/	Should support tool to provision server using	tal Society) —	
	RESTful API to discover and deploy servers at		
	scale		
	2, Provision one to many servers using own		
	scripts to discover and deploy with Scripting		
	Tool (STK) for Windows and Linux or Scripting		
	Tools for Windows PowerShell		
69.21	Firmware security		

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	For firmware security, system should support		Co-operative H
	remote management chip creating a fingerprint		
	in the silicon, preventing servers from booting		
	up unless the firmware matches the fingerprint.		
	This feature should be immutable		
	2. Should maintain repository for firmware and		
	drivers recipes to aid rollback or patching of		
	compromised firmware. Should also store		
	Factory Recovery recipe preloaded to rollback		
	to factory tested secured firmware		
69.22	Embedded Remote Management and		
09.22	firmware security		
	System remote management should support		
	browser based graphical remote console along		
	with Virtual Power button, remote boot using		
	USB/CD/DVD Drive. It should be capable of	(Cad la)	
	offering upgrade of software and patches from		
	a remote client using Media/image/folder; It	8	
	should support server power capping and	0	
	historical reporting and should have support for		
	multifactor authentication		
	2. Server should have dedicated 1Gbps remote	ITAGE	1+1
	management port	HUSL	Ital
(/	3. Remote management port should have	tal Society) 🚣	
	storage space earmarked to be used as a		
	repository for firmware, drivers and software		
	components. The components can be		
	organized in to install sets and can be used to		
	rollback/patch faulty firmware		
	3. Server should support agentless		
	management using the out-of-band remote		
	management port		
	4. The server should support monitoring and		
	recording changes in the server hardware and		
	system configuration. It assists in diagnosing		
	problems and delivering rapid resolution when		
	system failures occur		
	5. Applications to access the server remotely		

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	using popular handheld devices based on		Co-operative H
	Android or Apple IOS should be available		
	6. Remote console sharing up to 6 users		
	simultaneously during pre-OS and OS runtime		
	operation, Console replay - Console Replay		
	captures and stores for replay the console video		
	during a server's last major fault or boot		
	sequence. Microsoft Terminal Services		
	Integration, 128-bit SSL encryption and Secure		
	Shell Version 2 support. Should provide support		
	for AES and 3DES on browser. Should provide		
	remote firmware update functionality. Should		
	provide support for Java free graphical remote		
	console.		
	7. Should support managing multiple servers as		
	one via		
	Group Power Control	(3)(0)	
-	Group Power Capping		
	Group Firmware Update	8	
	Group Configuration		
	Group Virtual Media		. 1
	Group License Activation	Hosp	oital
(/	8. Should support RESTful API integration	tal Society) 🖶	
	9. System should support embedded remote		
	support to transmit hardware events directly to		
	OEM or an authorized partner for automated		
	phone home support		
69.23	Server Management		
	Software should support dashboard view to		
	quickly scan the managed resources to assess		
	the overall health of the data centre. It should		
	provide an at-a-glance visual health summary of		
	the resources user is authorized to view.		
	The Dashboard minimum should display a		
	health summary of the following:		

	Server ProfilesServer HardwareAppliance alerts		Co-operative Hos (A Unit of Kollain Dississ Co-operative Hospital benef)
	The Systems Management software should provide Role-based access control		
	Management software should support integration with popular virtualization platform management software like vCenter, and SCVMM		
	Should help provide proactive notification of actual or impending component failure alerts on critical components like CPU, Memory and HDD.		
	Should provide an online portal that can be accessible from anywhere. The portal should provide one stop, online access to the product, support information and provide information to track warranties, support contrasts and status. The Portal should also provide a personalised dashboard to monitor device heath, hardware events, contract, and warranty status. Should provide a visual status of individual devices and device groups. The Portal should be available on premise (at our location - console based) or off premise (in the cloud).	Hosp tal Society)	oital
	Should help to proactively identify out-of-date BIOS, drivers, and Server Management agents and enable the remote update of system software/firmware components.		
	The Server Management Software should be of the same brand as of the server supplier.		
69.24	Cloud Enabled Monitoring and Analytics		



- 1. Offered servers shall have cloud enabled monitoring and analytics engine for proactive management. All required licenses for same shall be included in the offer.
- 2. Cloud Enabled Monitoring and analytics engine shall have capability to provide following:
- a. Providing Firmware upgrade and patch upgrade recommendations proactively.
- b. Providing power and support entitlement status.
- c. Recommendations to eliminate performance bottlenecks and critical events, based on Analytics engine having capability of proactive recommendation for arresting the issues / problems.



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SECTION IX LIST OF APPROVED MAKES

SL NO	EQUIPMENT/ SYSTEM	RECOMMENDED MAKE
1	TV / DIGITAL SIGNAGE DISPLAY SYSTEM	LG, SHARP, PANASONIC, SAMSUNG, SONY
2	CCTV SYSTEM	NORDEN, INFINOVA, SAMSUNG
3	STORAGE HDD	WD, SEAGATE, SAMSUNG
4	PUBLIC ADDRESS & BGM SYSTEM	BOSCH, HONEYWELL, BOSE, DSPPA
5	WIFI SYSTEM	HP ARUBA, RUCKUS, CISCO
6	NURSE CALLING SYSTEM	SCHRACK, HONEYWELL, ASCOM
7	ACCESS CONTROLLER SYSTEM	HID, HONEYWELL, SUPREMA
8	EM LOCK	ALGATEC, EBELCO, SECURITEX
9	EMERGENCY RELEASE SWITCH / EXIT BUTTON	ALGATEC, FARADAYS, AGNI
10	FIREWALL	FORTINET, PALOALTO, CHECKPOINT, SONICWALL
11	SERVER STORAGE, SERVERS, AND PC / WORKSTATIONS	DELL / HP / IBM-LENOVO
12	INFORMATION KIOSKS	STALLION, ESSAE, ADVANTECH
13	THERMAL SCREENING SYSTEM	NORDEN, INFINOVA, SAMSUNG
14 (VIDEO & AUDIO-CONFERENCING tive SYSTEMS	PANASONIC, POLYCOM, AVAYA
15	ICU PATIENT VIDEO INTERACTION SOLUTION	PANASONIC, POLYCOM, AVAYA
16	TAB	APPLE IPAD, SAMSUNG
17	PASSIVE CABLES	PANDUIT, SIEMON, NEXANS, COMMSCOPE,
18	SIGNAL & COMMUNICATION CABLES	VARSHA, FINOLEX, ORBIT, RR KABEL
17	NETWORK RACKS	NETRACK / APW PRESIDENT / RITTAL
18	KVM SWITCH	ATEN / RARITAN / APC
19	NETWORK SWITH	CISCO / HP / JUNIPER