

REQUEST FOR PROPOSAL

FOR

**DESIGN, SUPPLY, ERECTION, INSTALLATION,
INTERFACING, TESTING & COMMISSIONING OF**

ACTIVE LED VIDEO WALL DISPLAY SYSTEMS



June 2024

**VIKRAM SARABHAI SPACE CENTRE
INDIAN SPACE RESEARCH ORGANISATION
THIRUVANANTHAPURAM - 695 022**

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ABBREVIATIONS

FAT	Factory Acceptance Test
SAT	Site Acceptance Test
BOM	Bill Of Materials
QAP	Quality Assurance Plan
LED	Light Emitting Diode
CAMC	Comprehensive Annual Maintenance Contract

1.SCOPE OF TENDER & INFORMATION TO BIDDERS

1.1 Introduction

Vikram Sarabhai Space Centre, Thiruvananthapuram is realizing an Active LED Video Wall Display Systems (2 Nos). The scope of this tender is to design, supply, erect, install, interface, test and commissioning of the system as per technical specifications detailed in Section-3 of the document.

1.2 Pre-Bid Meeting and Site Visit

A Pre-Bid meeting shall be scheduled by VSSC on a convenient date once the tender is floated. The Bidder must visit VSSC Thiruvananthapuram and acquaint by themselves with the requirements before submitting the bid. Bidder is deemed to have clearly understood and satisfied by themselves regarding the work and services & all conditions liable to be encountered during the execution. Clarifications in any regard are to be communicated during the Pre-bid meeting and site visit. The Pre-Bid meeting and Site visit are mandatory without which the bid will be summarily rejected.

1.3 Validity of Offer

Bid shall remain valid for acceptance for a period of 12 (Twelve) months from the due date of submission of the Bid. The Bidder shall not be entitled during the said period to revoke or cancel their bid or to vary the Bid except and to the extent required by Purchaser and communicated in writing. Bid shall be revalidated for extended period as required by Purchaser in writing. In such cases, unless otherwise specified, it is understood that validity is sought and provided without varying either the quoted price or any other terms and conditions of Bid finalized till that time.

1.4 Cost of Bidding

All direct and indirect costs associated with the preparation and submission of Bid (including clarification meetings and site visit, if any), shall be to Bidder's account and the Purchaser will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the Bid process.

1.5 Schedule of Prices

The schedule of prices shall be read in conjunction with all the sections of proposal document. For lump-sum contract, the lump-sum prices quoted by the Bidder shall be firm and fixed for the completion of the work, unless stated otherwise. The price must be filled in the bid with the 'Schedule of Prices' and shall add the price split-ups in the Bill of material (ANNEXURE IX). The price bid format is given in Annexure – IV.

1.6 Documents Comprising the Bid

PART – I TECHNICAL AND UNPRICED COMMERCIAL PART

Technical bid shall be submitted and the following documents shall be attached along with the technical bid. If sufficient space is not available for online submission, the same in hard copy form shall be sent to Department by courier/ post to reach before the tender opening date, failing of which the online bid will not be considered for evaluation.

No attachment with price information shall be given along with the technical bid.

Any bids/offers with price details in Techno-Commercial Offer (Part –I) will summarily be rejected.

- i. Submission of bid letter along with one set of proposal document duly signed and stamped on each page as token of acceptance.
- ii. All the annexure and scope enclosed in the proposal duly filled, signed and sealed.
- iii. Un-priced copy of schedule of prices with all other commercial terms and conditions duly filled (**Prices to be kept blank**), signed and stamped.
- iv. Checklists enclosed in proposal duly filled, signed & stamped.
- v. Technical details, Bill of Materials, data sheets, catalogues etc. as applicable and any other drawing, document as mentioned in the proposal.
- vi. Audited balance sheet including profit and loss account for the last three financial years showing annual turnover.
- vii. Latest income tax clearance certificate.
- viii. List of projects in hand & completed during the last 5 financial years indicating the name of client, contact person, contract value, nature of work, work completed, work balance, name of Consultant, month & year of commencement & completion etc.
- ix. Execution Plan.
- x. Any other relevant document, Bidder desires to submit.
- xi. The bidder shall furnish a list of all critical items / sub-assemblies along with offer which are bought out by the bidder and proposed to be used, along with necessary details such as manufacturer's name, brand, model no etc.
- xii. The bidder should fill in the details mentioned in the ANNEXURE I MINIMUM QUALIFICATION CRITERIA, ANNEXURE II EVALUATION CRITERIA, ANNEXURE III VENDOR EVALUATION FORMAT, ANNEXURE V EXCEPTIONS AND DEVIATIONS, ANNEXURE VI CHECK LIST FOR BIDDER, ANNEXURE VII CERTIFICATE TO BE FURNISHED BY THE VENDOR, ANNEXURE VIII STATEMENT COMPLIANCE TO

TECHNICAL SPECIFICATION, ANNEXURE IX BILL OF MATERIAL, ANNEXURE X ACCEPTANCE OF TERMS AND CONDITIONS BY THE VENDOR.

PART – II PRICED COMMERCIAL BID

Commercial bid shall be filled and no scanned copy should be attached along with the technical bid. No deviations, terms and conditions, assumptions, conditions, discounts etc. shall be stipulated in price bid. Purchaser will not take cognizance of any such statement and may at their discretion reject such bids.

Unit rate for each of the item shall be indicated separately. The rate quoted shall be on **FOR DESTINATION BASIS** i.e., FOR VSSC Thiruvananthapuram basis. Even unloading of the material at our site shall be bidders responsibility at bidders cost. Thus, transportation of material from the work site to VSSC and unloading at VSSC site shall be the responsibility of Bidder.

1.7 Bid Evaluation

- 1.7.1** The bidder shall submit Annexure I, Annexure II, and Annexure III with the details in their technical and un-priced commercial bid to evaluate the same.
- 1.7.2** The offer shall be for complete scope of work as specified in tender document. Part/Split offer is NOT acceptable.
- 1.7.3** During evaluation, purchaser may request bidder for any clarification on the bid upon additional documents which is to be complied with; otherwise offer will be deemed incomplete.
- 1.7.4** Techno-commercial discussion shall be arranged with Bidder, if needed. Bidder can depute his authorized representatives for attending discussions. The representatives attending the discussions shall produce authorization from his organization to attend the discussion and sign minutes of meeting on behalf of his organization if required. The authorized representative must be competent and empowered to settle/decide on all technical and commercial issues.
- 1.7.5** The complete scope of work is defined in the proposal document. Only those bidders who undertake total responsibility for the complete scope of work as defined in the Proposal document shall be considered.
- 1.7.6** In case bid does not fully comply with the requirement of proposal document and the bidder stipulates deviations to the clauses of the proposal in exemptions and deviations, Annexure-V, which are unacceptable to the Purchaser, the Bid will be rejected.

- 1.7.7** Purchaser reserves the right to visit bidder's site for verification/validation.
- 1.7.8** Bidder should arrange the visit to their sites to oversee the deployed solutions for the verification/validation if necessary.
- 1.7.9** Bidder's offer is liable to be rejected if they don't upload any of the certificates / documents sought in the bid document, corrigendum if any and based on the technical committee decision.
- 1.7.10** The time schedule for completion is given in the proposal document. Bidder is required to confirm the completion period unconditionally.
- 1.7.11** Purchaser reserves the right to accept or decline any bid without assigning any reason. Such decisions by the Purchaser shall bear no liability on the purchaser whatsoever consequent upon such decision.
- 1.7.12** Purchaser shall not be obliged to furnish any information / clarification to unsuccessful bidders regarding the non-acceptance of their bids.

SCOPE OF WORK & GENERAL TERMS AND CONDITIONS OF THE CONTRACT**2.1 Scope of work**

2.1.1 *Supply, Erection, Installation, Interfacing, Testing and Commissioning of ACTIVE LED VIDEO WALL DISPLAY SYSTEM* which involves the following,

- a) Design the video wall system as per technical specifications and drawings.
- b) Supply of items as per technical specifications.
- c) Erection and installation of all the supplied equipment.
- d) Commissioning, documentation, Site acceptance test, & handing over of systems.

2.1.2 The details of the LED video wall display system, video wall controller, video wall processor, interfacing modules are mentioned in the Technical Specification section.

2.1.3 Bidder shall inform to purchaser at identified stages to carry out inspection and the copies of such reports after inspection shall be forwarded to Purchaser.

2.1.4 The original copies of test certificates shall be submitted along with other documents at the time of site acceptance testing.

2.1.5 The bidder shall execute the works in compliance with the contract, good engineering practices and code requirements.

2.1.6 The molded cables and connector assemblies shall be branded and of professional grade for the required length and should be supplied by the bidder for required quantity.

2.1.7 All components involved in the video wall system such as converters, expansion modules, power supply modules, power cables assemblies and accessories are the scope of the bidder.

2.1.8 The price of each component / item in the configuration should be listed separately in the quotation along with the original specification / data sheet of the model offered from the OEM. Offers without make and model number and data sheets are liable to be rejected without any notice.

2.1.9 All accessories for fitting hardware such as bracket with associated civil, architectural and masonry works are included in the scope of work of the bidder.

- 2.1.10** The party has to work out the required Power budget for the LED video wall system and submit it along with the bid. Power to the equipment is to be tapped from nearby power supply point.
- 2.1.11** The bidder should provide aluminum ladder/scaffolding for Installation, Operation and Maintenance works on the LED wall up to 3 meter height with a loading capacity of 500 Kg minimum.
- 2.1.12** The accessories and tools necessary for servicing the LED video wall display unit must be supplied.
- 2.1.13** The bidder must fill the compliance against each technical specification of the items mentioned in the section 3. A separate column for the same has been added.

2.2 General Terms & Conditions

- 2.2.1** The bidder should provide detailed project execution plan and schedule within 2 weeks of award of the Purchase Order.
- 2.2.2** The bidder should obtain clearance for drawings for mounting structure, schematics, configuration, engineering drawings, wiring schemes and technical specifications of all the items from Department during the design review.
- 2.2.3** The bidder should incorporate the minimum modifications suggested by Purchaser during the design review, FAT and SAT phases, without any additional charges.
- 2.2.4** Much care has been taken in arriving the list of equipment and quantities, however if any equipment or components which is not mentioned explicitly but essential for the completion of system is in the scope of the bidder and shall be added to the bill of material.
- 2.2.5** The configuration of major bought out items like Controller, Video wall processor, HDMI2.0 switcher, and HDMI2.0 Distribution Amplifier shall be reviewed and vetted by original equipment manufacturer (OEM). If any of the item supplied as part of this contract is not meeting the system requirement or any compatibility/ interface issues with other systems are found at any stage of the project, same shall be replaced with suitable items without any additional cost.
- 2.2.6** The mounting structure shall be machined to provide seamless integration of LED video wall tiles with multi axis alignment.
- 2.2.7** The mounting structure shall be designed as per OEM approved drawing and shall be certified by the OEM engineers. So as to withstand the entire weight of the video wall to be mounted on the wall at a height of meters minimum from the floor ground level of the control.
- 2.2.8** Supply and laying of required communication cable is in the scope of the bidder.

2.2.9 Suitable earthing provision & Surge Protection device is to be provided.

2.2.10 All cables including power, UTP, HDMI cables must be tagged with appropriate tagging from both the ends.

2.2.11 All structural design will be verified by the civil department of VSSC and clearance must be obtained for the installation at the site. Purchaser will co-ordinate to take necessary action .

2.3 Technical documentation and drawings

2.3.1 Bidder shall provide soft copy (in pdf format) and hard copy (2 No's) of the catalogues, and manuals of all the components and systems and as built diagrams.

2.3.2 List of documents to be submitted:

2.3.2.1 Design and drawing of LED video wall display, Schematic diagram of the total system, wiring and electrical cable layout.

2.3.2.2 Software related documents: User manuals for all the softwares should be provided.

2.3.2.3 Final BOM with make & model number.

2.3.2.4 All technical catalogues and datasheets of all items.

2.3.2.5 Warranty certificates.

2.3.2.6 Passwords/ Licenses/ Operating keys etc.

2.3.2.7 Software license should be perpetual from day 1.

2.3.2.8 Any other relevant document not listed above.

2.4 Supply of items

2.4.1 Bidder shall carry out the supply of the equipment in accordance with the scope, technical specifications and terms & conditions of contract.

2.4.2 Unloading of the material at site is bidder's responsibility at bidder's cost. Thus, transportation of material from bidders work site to VSSC and unloading at our site shall be the responsibility of the bidder.

2.4.3 List of bought out items shall be as mentioned in the technical bid.

2.4.4 All these goods or material shall be supplied or used shall be of new and of first quality.

2.4.5 Where imported or partly imported goods or material are offered or intended to be used, it must be specifically stated and brought to the notice of purchaser.

2.5 Design Reviews

The following documents shall be submitted as a part of design review for the LED video wall system.

a) LED video wall display Design for the required wall and its front view diagram.

- b) Schematic diagram for the system.
- c) Wiring diagram for data and electrical connections.
- d) Power calculations for the LED display and other units and the required backup during the peak power.

2.6 QAP

2.6.1 Bidder shall prepare Quality Assurance Plan (QAP) for LED video wall display, controller, processor units and all its additional supporting units supplied. Purchaser can add or alter the test procedures as deemed fit.

2.6.2 Site Acceptance Test Procedure (SAT) shall be submitted to department for approval.

2.7 Inspection – Pre-Fabrication inspection, FAT & SAT

2.7.1 Purchaser reserves the right to inspect any stage of Bidder's operations.

2.7.2 It is the responsibility of the bidder to provide the necessary support and equipment for the inspection agency and get works inspected at all stages of work as identified in Quality Assurance Plan. The Bidder shall carry out required supervision and inspection as per Quality Assurance Plan.

2.7.3 Bidder shall inform the Purchaser for the pre fabrication inspection at the factory site.

2.7.4 The LED display module would be inspected during manufacturing to ensure the quality and configuration of LED display module for dual power and data redundancy by the VSSC team and would give clearance (based on report) for the production of the LED display tile as per BOM.

2.7.5 Bidder shall inform Purchaser, the readiness for pre-delivery inspection at least 10 days in advance. All necessary test results / inspection reports / certificates as per the QAP and any other test results mutually agreed by Department and bidder shall be made available to the Purchaser after conducting tests as mentioned above in pre-dispatch inspection for obtaining the dispatch clearance.

2.7.6 After delivery of items to site, the installation works shall be taken up after obtaining clearance from purchaser.

2.7.7 Site Acceptance Test (SAT) procedure for the following tests shall be submitted for the approval prior to inspection,

- a. Functional checks, compliance to specifications, make and model verification of all items.
- b. Trial runs up to 72 hours of continuous runs after installation.

2.7.8 After completion of installations, testing and commissioning, Site Acceptance Test will be carried out.

2.7.9 Site Acceptance Test Plan shall include the followings tests

Site Acceptance Test (SAT)

1. LED Cabinet:
 - a) Power on test
 - b) Brightness adjustment test
 - c) Brightness uniformity test
 - d) Brightness level test
 - e) Operating Voltage and Current measurement test
 - f) Viewing angle test
 - g) Calibration of LED display
 - h) Flicker free test
 - i) Colour adjustment
 - j) Signal test
 - k) Real time monitoring and diagnostics test for
2. LED video wall processor:
 - a) Power on test
 - b) Network control test
 - c) Signal interface test for all types of signals
 - d) Port test
 - e) Failure mode test
 - f) Video wall management software test
3. LED video wall controller:
 - a) Power on test
 - b) Network control test
 - c) Signal test
 - d) Port test
4. LED video wall software:
 - a) Configuration check
 - b) Diagnostic check
5. Power supply:
 - a) Power on test
 - b) Signal test
 - c) Load test

- d) Failure mode tests
 - 6. HDMI2.0 cables and other converters
 - a. Power on test
 - b. Network control test
 - c. Signal test
 - d. Port test
 - 7. Touch screen control panel
 - a) Power on test
 - b) Signal test
 - c) Configuration and operation of the video wall using touch screen
 - d) Web control and access of Video wall controllers, Video processors
- Operation of video wall with HDMI2.0 from Operator station.
- 8. AV streaming check.

Any other test if required on mutual agreement.

2.8 Training

2.8.1 Training should be provided by the bidder at the site for 5 persons deputed by Department on the following topics:

- a) Operations of all application softwares related to controller and processor.
- b) Schematic diagram, cable layouts and other relevant information regarding the wiring.
- c) Real time monitoring of display familiarization and fault detection methods.
- d) Ageing process and how to use after long periods of non-usage of LED displays.
- e) De humidification of LED display if necessary.
- f) Registering the support for the Maintenance of product.
- g) Other relevant training from the bidder.

2.8.2 The training shall be for a minimum duration of 2 days.

2.8.3 The quoted price shall be inclusive of the cost of training.

2.9 Schedule of Prices

2.9.1 The quoted price shall include all costs of "SUPPLY, ERECTION, INSTALLATION, INTERFACING AND COMMISSIONING OF ACTIVE LED VIDEO WALL DISPLAY SYSTEM" – packing, forwarding, transportation to site, unloading, all risk coverage, software development, erection, installation, interfacing with equipment's, cable laying, training, testing & evaluation and commissioning of equipment and any other cost for proper and

complete execution of the CONTRACT.

2.9.2 Price shall be firm & fixed.

2.9.3 Bidder shall quote the prices as per the price bid format enclosed as Annexure-IV

2.9.4 The price of each shall be added to the Annexure IX -Bill of Materials in the PART – II PRICED COMMERCIAL BID for better understanding.

2.9.5 The taxes applicable for supply and erection & commissioning shall be indicated separately in terms of percentage in the price bid.

2.9.6 If the offers submitted by the bidders are silent on taxes, it will be presumed that quoted rates are inclusive of taxes & duties and no claim in this regard will be entertained later.

2.10 Delivery Terms

2.10.1 The rate quoted shall be on FOR VSSC, Thiruvananthapuram basis.

2.11 Terms of Payment

2.11.1 60% of item cost with associated taxes, 100 % Packing and Forwarding charges and 100% Transportation charges as milestone payment against receipt at site, after Factory Acceptance Test and delivery clearance at the site.

2.11.2 40% of item cost along with its taxes, 100% of Commissioning& Erection charges and associated taxes after successful commissioning & acceptance by purchaser, against submission of performance bank guarantee of 3% of contract value.

2.12 Mode of Payment

Bidder can submit the banker details and payments will be made through RTGS.

2.13 Delivery Schedule

Sl. No	Mile Stone	Expected date of completion
T1	Purchase order date	T
T2	Submission of finalized specification, Quality Assurance plan, GA Drawing plan, configuration schematic, wiring schematic with Bill of materials and other required documents for design review	T1+2 week
T3	Clearance of finalized specification, Quality Assurance plan, GA Drawing plan, configuration schematic, wiring schematic with Bill of materials and other	T2 + 2 week

	required documents for design	
T4	Supply of items at Purchaser's site after Pre-Fabrication inspection, FAT and pre-delivery inspection.	T3 + 12weeks
T5	Erection and Installation of LED video wall Display.	6 weeks from T4 and after date of *Site clearance.
T6	Interfacing, Testing, Commissioning and Handing Over LED video wall Display System.	2 weeks from T5.

(*Site clearance will be provided after T3 before T4)

2.14 Sub-contract

2.14.1 The whole of the work shall not be subcontracted.

2.14.2 The portion of the work for which the bidder is not an expert shall be sub-contracted to a reputed OEM in that field. Such subcontract if any shall be given with prior approval from purchaser including selection of sub-bidder.

2.15 Delivery and Storage

2.15.1 Despatch Instructions given in the Contract shall be strictly followed. Failure to comply with the instructions may result in delay in payment apart from imposing any other charges as may be deemed to fit.

2.15.2 The Bidder shall be responsible for transporting all the system to site, unloading and storage. No equipment shall be delivered without obtaining despatch clearance from purchaser. All the equipment shall be properly packed to avoid any damage during transportation / handling / storage.

2.15.3 Bidder shall undertake the responsibility of the items during transportation to VSSC Thiruvananthapuram and during erection, testing and commissioning of the same at suitable location identified by VSSC and until handing over the commissioned system to VSSC after its acceptance.

2.15.4 VSSC will provide sheltered area for storage of the items. Bidder shall take proper care while storing the equipment.

2.16 Installation

2.16.1 Bidder's staff shall include adequate number of competent engineers with proven experience on similar works to supervise the works. Sufficient skilled, unskilled and semi-skilled labour shall be aided to ensure completion of work in time.

2.16.2 The services of Material handling equipment available at the building will be provided subjected to availability & approval.

2.16.3 Special equipment / Material handling equipment required for erection work shall be arranged by the bidder.

2.17 Liquidated Damages

In the event of the bidder failing to complete the work within the delivery period specified in the contract agreement or any extension agreed thereto, the Purchaser shall reserve the right to recover from the bidder as liquidated damages, a sum of 0.5 percentage per week or part thereof for the undelivered portion of the total contract price of equipment or work. The total liquidated damages shall not exceed the 10.0 percentage of the total Contract price.

2.18 Delivery Extension

2.18.1 If the completion of deliveries of equipment or work is delayed, Bidder shall, without delay give notice to the purchaser in writing of their claim for an extension of time. The Purchaser on receipt of such notice may agree to extend the Contract period or delivery date as may be reasonable but without prejudice to other terms and conditions of the Contract.

2.18.2 Both parties shall keep a record of the circumstances referred to above which are responsible for causing delays in the execution of the services for final extension of original delivery time.

2.19 Taxes

2.19.1 GST

The bidder has to clearly indicate the % of GST applicable, against each case in their tenders.

2.19.2 Income tax

Income tax at the prevailing rate as applicable and if applicable from time to time shall be deducted from the bidder's bills as per Income Tax Act and a certificate issued (TDS Certificate).

2.20 Risk Coverage

Department will not pay for any insurance taken by the bidder. The bidder shall at his own cost cover the value of equipment including transportation to the site from manufacturer's works, safe delivery, storage at site, fabrication, erection, testing and commissioning at site. The period of such coverage shall be up to contractual completion period or any extension granted by Purchaser thereof.

2.21 Security Deposit

2.21.1 The bidder whose tender is accepted will be required to furnish by way of Security Deposit for the due fulfilment of the contract such a sum as will amount to 3% of the contract price of the work awarded in the form of Bank Guarantee valid till the satisfactory execution of the

contract and acceptance.

2.21.2 The security deposit (bearing no interest) shall be held by the purchaser as security till satisfactory completion, testing and handing over of all the system and for the due performance of all bidders' obligations under the contract as per delivery period or extension granted thereof by the Purchaser.

2.21.3 Within 10 days from the date of receipt of Letter, bidder shall deposit the security deposit to the Accounts officer, VSSC.

a. Security shall be obtained through Bank Guarantee or fixed deposit receipt from any of the Scheduled Banks executed on non-judicial stamp paper of appropriate value (Rs.200/-), and shall be valid for a period of sixty days beyond the date for completion of the Purchase Order/Contract. The Bank guarantee or fixed deposit receipt submitted by the bidder shall be verified immediately from the issuing bank.

b. The bank guarantee shall be from a reputed international/nationalized/schedule bank.

2.21.4 In case of breach of contract, the Security deposit shall stand forfeited.

2.22 Packing and Forwarding

2.22.1 The Bidder shall arrange to have all the material suitably packed as per the standards & statutes and as specified in the contract. Unless otherwise provided for in the contract, all containers (including packing cases, boxes, tins, drums, and wrappings) used by the Bidder shall be non-returnable.

2.22.2 All packing and transport charges, transit handling costs, transit risk coverage and transport fees of agents employed at the place of delivery or elsewhere, shall be deemed included in the price to be paid to the Bidder.

2.23 Warranty

The bidder shall provide minimum five years OEM warranty for LED video wall display & LED video wall controller. The bidder shall provide minimum three years OEM warranty for video wall processor and for all other system components mentioned in the bid for a defect liability, after final official handing over. Warranty certificate for each item must be submitted. During this period bidder must provide and adhere to the following:

2.23.1 This period shall include maintenance and replacement of defective/failed parts at free of cost.

2.23.2 Bidder has to attend to unlimited breakdown calls.

2.23.3 Purchaser will not provide any transport/accommodation for this purpose.

2.23.4 Upon oral or written notification of defects in or malfunctioning of the goods during the

warranty period which require corrective action, Bidder shall send the necessary personnel to job site to supervise and assume responsibility for repairs and/or replacement, if necessary, of the defective goods or material at his own cost. If Bidder does not, within two (2) days after receipt of notification, take steps to correct the breach, Purchaser may do so at the cost and expense of Bidder. Bidder shall reimburse Purchaser all expenses incurred by Purchaser to repair or replace malfunctioning or non-conforming goods.

2.23.5 Where defects items are replaced by new ones, the full warranty period stipulated in the contract shall apply to such replacement items as from the date of their delivery.

2.23.6 The real time calibration for LED video wall display should be carried out within every 6 months from the date of commissioning. The bidder is responsible to keep track of the same and necessary servicing of LED modules must be ensured as and when required.

2.24 Comprehensive Annual Maintenance Contract (CAMC)

2.24.1 Comprehensive AMC for LED video wall display, LED video wall controller, LED video wall processor coming under this contract should be provided against payment, beyond expiry of warranty period.

2.24.2 The total coverage period for CAMC shall be minimum 3 years.

2.24.2.1 Minimum of 3 years for LED video wall display & LED video wall controller. This can be a combination of 5-year warranty plus 3-year AMC OR 6-year warranty plus 2-year AMC OR 7-year warranty plus 1-year AMC OR 8-year warranty.

2.24.2.2 Minimum of 3 years for LED video wall processor. This can be a combination of 3-year warranty plus 3-year AMC OR 4-year warranty plus 2-year AMC OR 5 year warranty plus 1-year AMC OR 6 year warranty.

2.24.3 To arrive at L1 the Comprehensive AMC rates will be included in the total cost.

2.24.4 All software, firmware updates and patches for the system shall be provided free of cost during the CAMC period. The annual CAMC charges for the above period should be indicated in the price bid [ANNEXURE IV Schedule of prices]. The CAMC charges will also be considered to decide the merit of the offer.

2.24.5 During the AMC period, the bidder should attend any number of breakdown calls and preventive maintenance as per the schedule finalized on mutual agreement with the department on completion of the work.

2.24.6 In case the vendor fails to undertake the AMC from the date of expiry of warranty, the department will have the right to release new order for the same.

2.24.7 In the event of the supplier's failure to supply & provide allied services within a reasonable period, The Department on its own will get the defects rectified through another agency at the risk and cost to the supplier and deduct the same from the PBG.

2.24.8 Down time compensation during CAMC: penalty deduction will be linked with up-time of the system (in percentage) and shall be deducted from CAMC charges/bank guarantee as below:

(i.) If up-time is below 99.99%

(ii.) Penalty @ 3% of the CAMC order value. If up-time is above 99.99%, no penalty.

2.25 Guarantees

2.25.1 The Bidder shall guarantee that the equipment furnished is in conformance with the requirement of the specifications.

2.25.2 Goods covered by the contract shall be free from defects in design, materials or workmanship for a period of 3 year from the date of successful commissioning & acceptance by Purchaser.

2.26 Performance Bank Guarantee

2.26.1 The bidder shall guarantee for the performance of the contract by providing bank guarantee in favour of the Purchaser for an amount equivalent to 3 % of the total value of this contract valid till the warranty period of the contract.

2.26.2 The performance bank guarantee shall be submitted by the bidder with in fifteen days from the date of accepting the equipment as per the CONTRACT.

2.26.3 The format for the performance bank guarantee shall be obtained.

2.27 Disclosure and use of information by the bidder

Bidder shall take all necessary steps to ensure that the requirements of the contract or any

specification, plan, drawing, pattern, sample or information supplied by, or on behalf of, the Purchaser in connection therewith shall not be disclosed to any person other than a person employed or engaged by the Bidder, whether under sub-contract or otherwise, for the performance of the contract.

2.28 Arbitration

In the event of any question, dispute or difference arising under any condition in the purchase order or in connection with this contract, (except as to any matters the decision of which is specially provided for by these conditions) the same shall be referred to the sole arbitration of the Director VSSC Thiruvananthapuram. The arbitration shall be conducted within India as per Arbitration & Conciliation Act 1996 and the applicable language shall be English. The arbitrator may be a Retired Judge or a Government Servant or any other responsible person, that he had to deal with matter to which the contract is related or that in the course of his duties, he has expressed views on all or any of the matters in dispute or differences. The award of the Arbitrator shall be final and binding on the parties of this contract.

2.9 Applicable law and Jurisdiction

The laws of India shall govern this contract for the time being in force. The Courts of Kerala, India only shall have jurisdiction to be with and decide any legal matters or disputes what so ever arising out of the contract.

2.30 Force Majeure

Should a part or whole work covered under this agreement be delayed due to reasons of Force Majeure which shall include legal lockouts, strikes, riots, civil commotion, fire accident, quarantines, epidemic, acts of God and Government, embargoes, the completion period for work, equipment referred to in this agreement shall be extended by a period not in excess of the duration of such Force Majeure. The occurrence shall be notified by either bidder within reasonable time.

2.31 Safety and security

2.31.1 Bidder shall follow the safety regulations / codes or safety instructions issued by purchaser and shall take necessary measures at his own cost.

2.31.2 The bidder personnel should undergo security checks by security force i.e. CISF

2.31.3 All the working personnel shall comply with code of conduct during the stay inside the VSSC campus.

2.31.4 Bidder must provide all Basic PPE (Helmet, Shoes and Harness for work at heights) to all the working persons at site.

2.32 General

2.32.1 Site details

2.32.1.1 The location of installation is located at TERLS Area, VSSC, Thumba, THIRUVANANTHAPURAM, Kerala.

2.32.1.2 The bidder may have to transport working personnel on day to day basis by his own arrangement.

2.32.2 Power supply

2.32.2.1 Electrical power will be provided by the purchaser during installation and commissioning and is NOT chargeable subjected to availability & approval.

2.32.2.2 All electrical installation by the bidder shall be as per safety regulation & standard and will be subjected to purchaser inspection & approval.

2.32.3 Work rules

2.32.3.1 Generally, no work shall be carried out during night or public holidays unless a written permission is obtained from Purchaser.

2.32.3.2 Working hours are usually from 8.45 AM to 5.15 PM and further extension in timing needs purchaser's written permission.

2.32.4 Site clearance

2.32.4.1 Upon completion of work, Bidder shall remove all his equipment and material from the site within 2 weeks or time mutually agreed upon. Bidder shall always keep the site clean and remove all unwanted material at regular intervals. In case bidder fails to remove all his equipment and material within the mutually agreed time it is deemed that purchaser will arrange to remove the same at the bidder's cost besides imposing penalty for failure.

2.32.5 Accommodation

2.32.5.1 Bidder shall make his own arrangement for accommodation & canteen facility for all its staff, technicians, labor & workers. Transportation shall be arranged by Bidder at his own expenses for entire staff.

2.32.6 Plan of work execution

2.32.6.1 The bidder shall give a preliminary program schedule for executing the contract as per the scope of work, along with proposal. Upon award, bidder shall prepare a detailed program schedule for review / approval by purchaser. Bidder as per exigencies of work shall revise and update program periodically.

2.32.6.2 Biweekly progress review meeting will be conducted alternatively at purchaser / bidder site to discuss progress changes and modification on design, drawings and qualitative / quantitative requirements.

2.32.7 Quality and Workmanship

2.32.7.1 Materials used in the installation should be new and exclusively developed, fabricated/produced and supplied to meet our site requirements.

2.32.7.2 Workmanship shall be suitable for the purpose intended and in accordance with the highest standards and practices in the industry.

2.32.8 Changes and Modifications to the Specifications, Designs, Drawing and Qualitative / Quantitative Requirements

2.32.8.1 Bidder shall obtain approval for the designs and drawings from the purchaser before initiating the action for procurement / fabrication.

2.32.8.2 Purchaser is free to modify the designs or drawings with minimum variations during design review. Bidder has to carry out one time modification without any extra cost and obtain the approval from purchaser.

2.32.8.3 Any amendment to the contract, which may be necessary in this respect, will be established within a reasonable time in the form of an Amendment to Contract to be signed by both parties.

2.33 Acceptance and rejection

Following test shall be conducted after installation for acceptance: -

- i. The bidder must successfully demonstrate all the functionalities as specified by the User
- ii. The bidder must perform Site acceptance tests as specified in the QAP
- iii. Additional tests as found necessary for satisfactory performance of supplied equipment after installation.
- iv. Individual test of components as per Test & Evaluation plan of purchaser.
- v. Integrated performance demonstration of system along with auxiliary systems.
- vi. On completion of tests, the members of the Inspection team appointed by Purchaser shall prepare a report, which must be countersigned by the Bidder.

2.34 Cancellation

2.34.1 The Purchaser shall have the right at any time to cancel a contract either wholly or in part by giving one month written notice. From the time of receipt of the written notice the bidder

shall undertake to observe the instructions of the Purchaser as to the winding up of the contract both on his own part and on the part of his sub-bidders.

2.34.2 In the event of such cancellation, the Purchaser shall only pay unless otherwise specified in the contract.

2.34.3 In the case of a fixed-cost contract for the supply of equipment or material: The contractual value of items delivered and accepted under the contract before receipt of notification of cancellation, or to be accepted under the special conditions of cancellation.

2.34.4 In the other cases, a fair and reasonable price in respect of such work as has been carried out prior to the receipt by the Bidder of notification of cancellation.

3. TECHNICAL SPECIFICATIONS

3.1 Introduction to Active LED Video Wall System

The proposed video wall is a large-scale visual display consisting of multiple direct LED modules that are tiled to form a single, expansive display surface with the seamless visual experience for the viewer. The video wall display system should be based on LED technology which must have a LED display, a controller unit, a processor unit and other monitoring functionality which is planned to be deployed in an indoor facility. The schematic diagram is provided in Figure.3.0.

- The front and top view of the room with the dimensions (in mm) is provided in Figure.3.1 for the better understanding for the bidder.
- System shall comprise of two sets of active LED video wall systems. Systems in each set shall comprise of video wall display, 2 video wall display hardware controllers (from same OEM as video wall) with its software (1 as hot redundant to the system), 1 video processor unit with its software, all additional cables, and connectors as per requirement.
- Video wall must have data and power redundancy.
- System should be able to monitor the temperature of each cabinet, its open/closed status, pixel level health in real time which can also track any faults and anomalies of display unit.
- System should be able to turn ON/OFF the display unit by a physical remote or through a remote software.
- The system must have the capability to protect the display from surge voltage, over current, short circuit, overheating etc. and report it to the integrated software for monitoring purpose.
- All the additional items (Power cables, interface cables, connectors, Ethernet cables, conduits, HDMI2.0 distribution amplifiers, HDMI2.0 switchers, HDMI2.0 cables, HDMI2.0 to UTP extenders etc.) as per requirements which are not mentioned should be added to the solution by the bidder.
- The list of components must include 10% spares for Display Modules, Power Supplies, Receiver Cards, cables connectors, Power and Data cables.

Fig.3.0

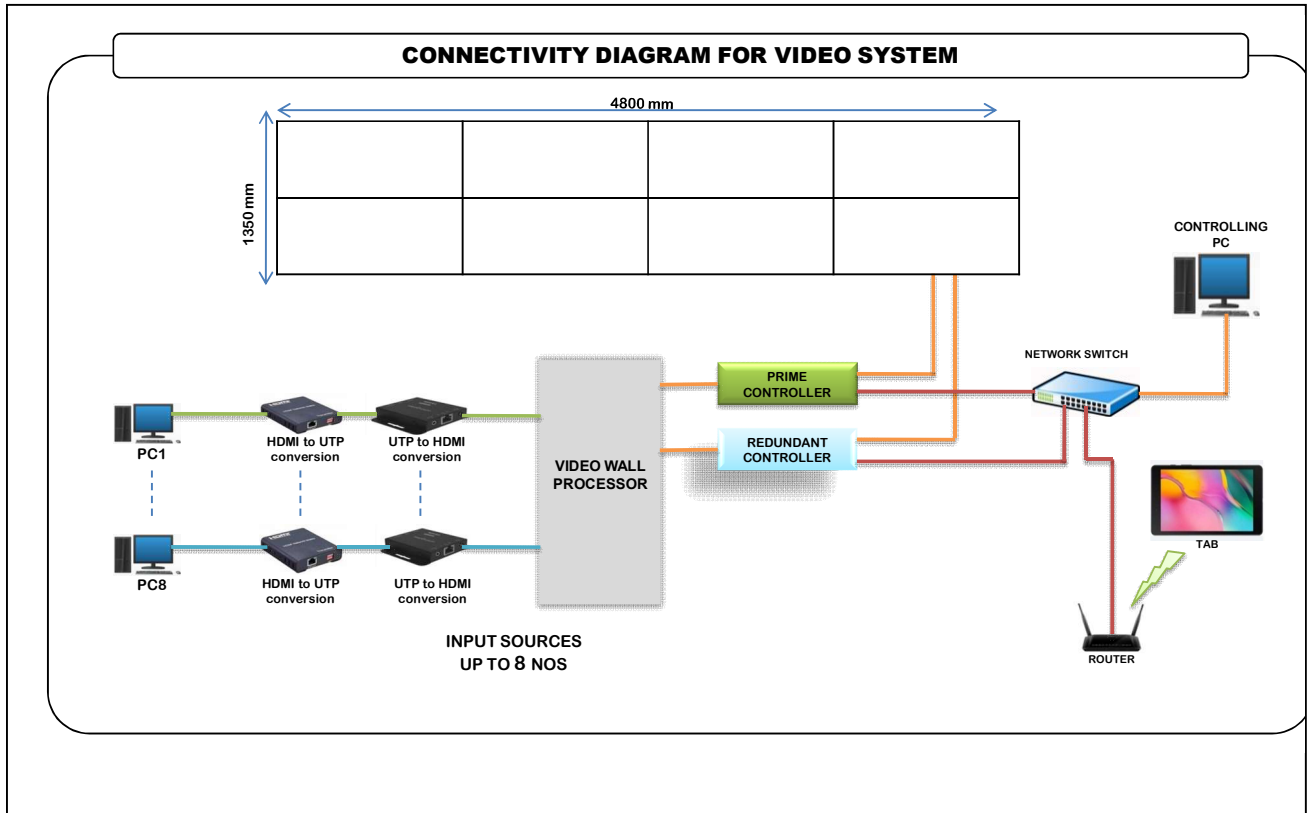
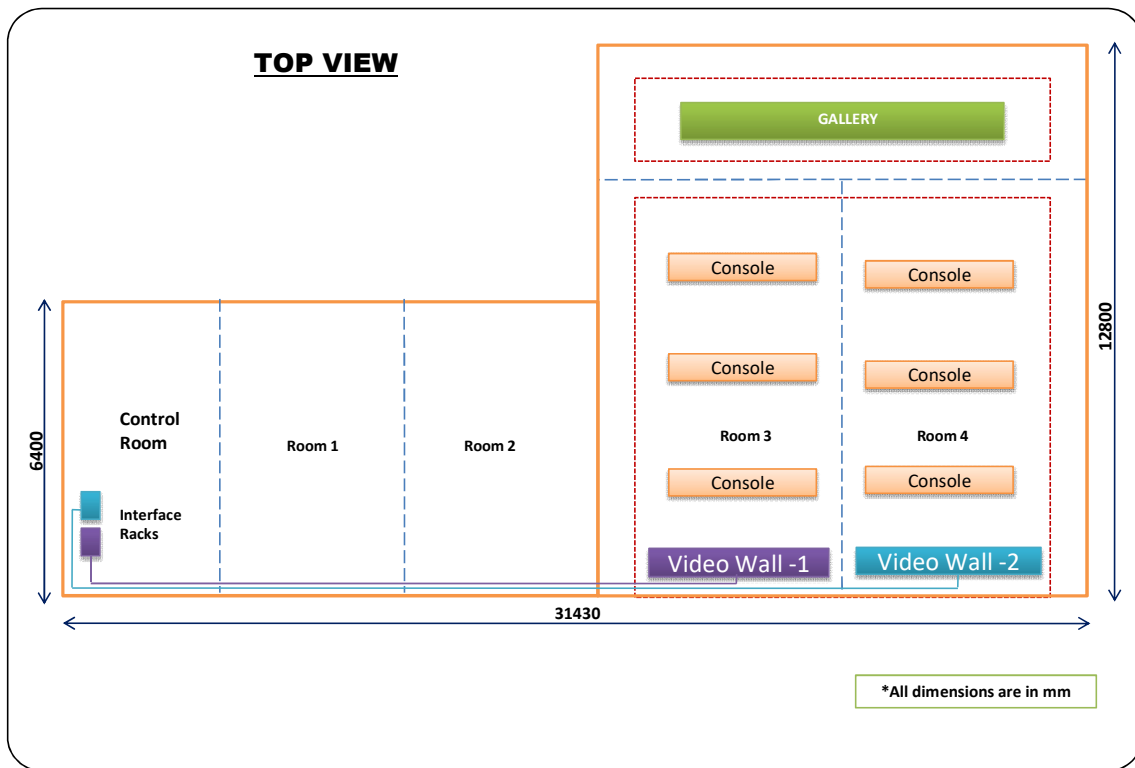
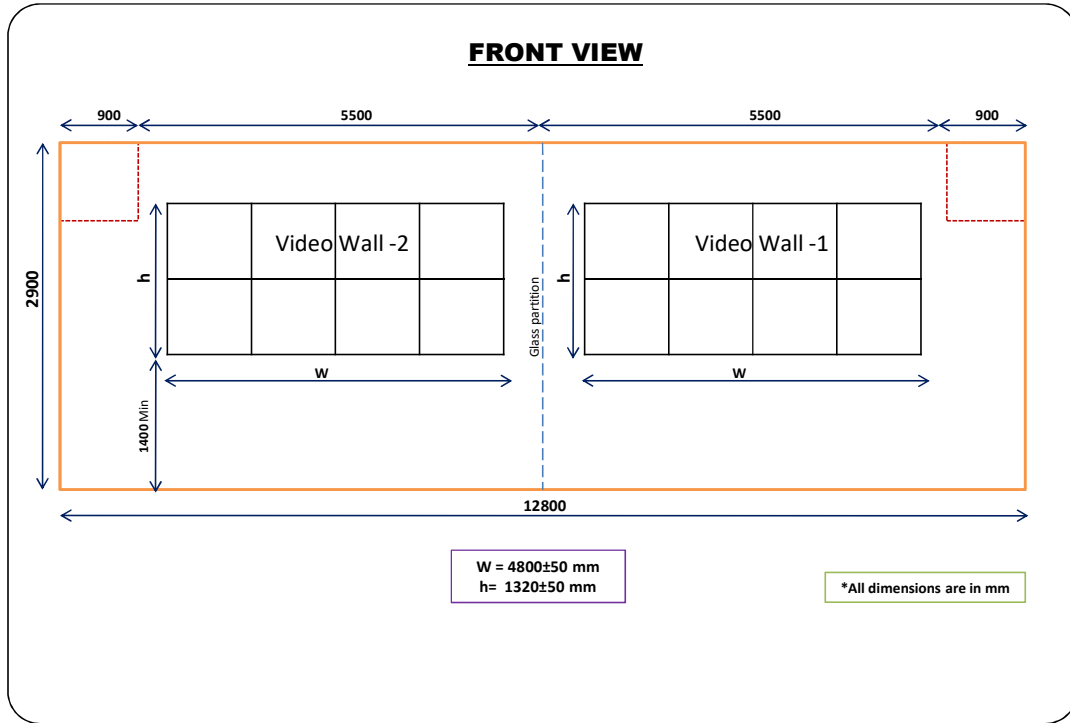


Fig.3.1



3.2 System requirements & features

Sl.No	Description
1	The Video wall displays cabinets shall be made in India and should be of pixel pitch less than or equal to 0.90mm with built in power supply and data redundancy. The required Certifications/ Regulatory mentioned in the technical specification should be submitted along with the bid.
2	The video interface from PC's and other interface shall be in base band level.
3	The video wall display system should handle all the inputs and outputs as mentioned in the configuration.
4	The video wall system should include the required hardware and software to realize the video wall display.
5	The video wall system should accept user inputs from Personal Computer/Workstation /Laptop which are running on Linux/Windows operating system.
6	The Control Software/Interface should be user friendly and configurable with all the options needed to control the entire video wall system with provision for future expansion.
7	Each component or module shall have in built fault identification and diagnosis with proper logging of data. Reports shall be available for fault diagnosis and rectification.
8	As part of power on self-test, the entire components / items / system health should be checked, and a report should be generated with date and time. The log shall be appended to previous log file to identify any component degradation over time.
9	The Configuration software and application should load automatically during system Power ON.
10	The maintenance procedure should be described in detailed in the system document and shall be certified by the OEM. A copy of the procedure shall be given in pdf format and a hardcopy document.
11	The bidder should take care of all the interfaces from the PCs interfacing with the LED video wall system.
12	The video wall system shall display any input at any location on the video wall without any degradation in picture quality, color tone and picture depth in any aspect ratio and resolution.
13	The video wall management system should take care of all the video processing, switching of all the required I/P channels. The image and texture on the video wall should not degrade during any option selection while configuring the Video wall.

14	The video wall display system should handle all types of aspect ratios and display the image in native or expanded or reduced resolution without degrading the quality and shape of the image. Suitable video processing equipment shall be ensured for scaling the video signals of other video formats.
15	The bidder should provide two touch screen control panels of minimum 10 inch that communicates over local Wi-Fi/Ethernet for managing the video wall display from the control room. A provision for GUI interface through LAN network to a local controlling PC should be also included.
16	The minimum viewing distance is 1m from the surface of the video wall. The depth of video wall should be less than 200 mm inclusive of mounting structure.
17	The System should be designed to comply with EMI/EMC specifications.
18	The LED video wall System & associated video equipment's should be BIS, CE, UL, CB& FCC certified or Indian Equivalent certificates.
19	The System should be capable of operation continuously on 24 X 7 basis.
20	The configuration of LED video wall shall ensure that there is no total blackout of the video wall display due to a failure of any component.
21	Magnetic and vacuum tools must be supplied for the maintenance activities of LED video wall display.
22	The power and data cables between cabinets must be connected inside, without adding up extra space outside the cabinets.
23	Each module and cabinet must be easily adjusted in Z-direction in order to optimize the flatness for the screen. The tolerance between each module must be less than 0.01mm.

3.3 System functional objective and specifications

S.No	Description
1	Active LED Video Wall displays: The illumination level planned for the proposed area is 350-400 Lux. The LED displays are to be operated under the fully lit ambient conditions in the control centre, hence the displays should be bright enough and have high contrast levels, wide color gamut to give life like visual experience without hindrance to the data displayed. The display must be in the same plane with zero degree curving from one end to the other. The video wall display shall be HDR 10 or higher version compliant. The LED modules must be moisture proof.

2	<p>Video controller and Processor: The hardware video controller (with redundancy) from same OEM and processor combined perform video routing for multi-window areas, allowing any input to be sent to any window with flexible windowing. These components must use dedicated bus for transferring video and separate bus for inter-system communication. As these components are used in critical environment, they should have redundant and hot-swappable components like power supplies and fans etc. The up/down scaling of images during the processing should not compromise on image integrity. The color processing should be done at full color depth to preserve video quality without introducing noise & color bands. The processor should have option for preview output of the video wall. The latency of the controller and processors should be minimal in the order of less than tens of milliseconds. They should be accessed through GUI software running on other PC or controller with controls and functions grouped into a logical organization of essential tasks, such as configuring the inputs for incoming source signal formats, defining the Video Wall configuration and setting up the displays, and creating and saving window layouts. The application software should have provision to visualize the window layout as it is being created and drag and drop windows onto or off the virtual canvas representing video wall. These systems must also have the capability of modular expansion in channels by adding extra add-on cards and for replacing them for future up-gradation.</p>
3	<p>Management System: The video wall displays along with video controller and processor should have centralized management system with flexible accessibility using touch panel display and through a controlling PC through a GUI. The control processor should be a versatile, high performance featuring advanced security standards over IR, serial ports and Gigabit manageable Ethernet switch for compatibility with multiple touch panels over standard network protocols.</p>
4	<p>Real Time monitoring system: System must be able to monitor and log the data for video wall controller, video wall display and its module. Overall health parameters covering temperature, fan status, signal, current, voltage, power consumption, smoke status, door status etc. System should be able to Conduct Root-Cause Analysis For Display Issues In pixel level LEDs. System must be able to see the status of primary and redundant power supply in the cabinet. Warning messages must be displayed for any of the critical faults related to the video wall. The software must be an application or a web based GUI for easy access. All software and firmware must be perpetual and must be operational from Day1</p>
7	<p>Additional Requirements: All the additional requirements mentioned must be supplied</p>

3.3.1 Specifications of Display unit of LED video wall system

The unit must be capable of displaying eight individual screens arranged in 2 X 4 grid(ie. 2 rows & 4 Columns).The overall aspect ratio of video wall shall be 32:9. The unit should also be capable of displaying a single & double screen.

REQUEST FOR PROPOSAL FOR ACTIVE LED VIDEO WALL SYSTEM

- Suitable number of cabinets and its modules should be connected to satisfy the graphical resolution requirements mentioned above.
- The Video wall dimension should be 4800±50mm (width) X 1320±50 mm (height)
- The video wall display must be within the minimum and maximum spacing as indicated in Fig.3.1.
- LED display should be symmetric in width to the room and should be placed at least 1400 mm above the floor level.
- LED display must have built in dual Power and Data path as redundancy.
- The design and the schematic diagrams, connection diagrams of the cabinet placement, number of cabinets and tiles used, power and data path with redundancy must be submitted along with the technical bid.
- Mounting blocks or structure should be perfectly alignment on multi axis among tiles and connected to the support frame. This should have integrated cable management tie-block for routing of necessary power and data cables and converting accessories, which meets our required configuration.

The following is a consolidation of specifications that must be adhering to. The bidder is expected to issue compliance statements against each specification.

Quantity: 2 numbers.

SL. No	Description	Specification	Vendor Compliance (YES*/NO) along With Supporting Documents. REMARKS if any must be notified. Mandatory if answer is No
1	Display type	LED	
2	Pixel pitch	Less than or equal to 0.90mm	
3	Dimension	4800±50mm (width) X 1320±50 mm (height)	
4	Cabinet Type	Die Cast Aluminum	
5	Pixel Configuration	Micro LED	
6	Resolution (pixels)	Higher than 5270 (width) X 1400 (Height)	
7	LED Lifetime	1,00,000 hours (with 50% Brightness) or higher	
8	Brightness (Max)	500 nits or higher (Which should be adjustable through software)	
9	Brightness uniformity	95% or higher	
10	Contrast Ratio	10000:1 or higher	
11	HDR compatibility	Should support HDR10 or HDR10+ or higher	
12	Refresh Rate	3840Hz or higher	
13	Frame Rate	120 Hz or higher	
14	Number of Screens	8 Individual Screens arranged in 2 X 4 grid (ie. 2 rows & 4 Columns)	
15	Over all Aspect ratio	32:9	
16	Horizontal Viewing angle	160° or higher	
17	Vertical Viewing angle	160° or higher	
18	Data Processing	16 Bit or higher bit	

19	Display Colors	4.398 trillion (16-bit min) or better	
20	Color Temperature	3000 – 10000 K, which should be adjustable through software as and when required	
21	Drive Mode	Common Cathode Constant Current Drive	
22	Ingress Protection	IP20 or higher	
23	Operational temperature	10-40 degree Celsius	
24	Operational humidity	10-80% RH	
25	Input voltage	230 VAC at 50 Hz	
26	Power supply	Input AC power: 230 ± 10% VAC, 50Hz ± 5% with redundant power and Data for LED cabinet.	
27	Maintenance	100% Front Service access only	
28	Warranty	Minimum 5 years	
29	Total service coverage	Minimum 8 years (including AMC & warranty)	
30	Run Time	Suitable for continuous operation on 24x7 basis	
31	Certifications/ Regulatory	CE, FCC class A including EMC/EMI compliance, UL, RoHS, Or Indian equivalent certifications for the above BIS, ISO Certifications, Eye Protection: TUV Eye comfort or equivalent	
32	Spares	10% spares for video wall display to be supplied	

3.3.2 Specifications of video wall mounting fixture

Quantity: 2 numbers.

Sl.No	Description	Vendor Compliance (YES*/NO) along With Supporting Documents. REMARKS if any must be notified. Mandatory if answer is No
1	The video wall fixture configuration shall be as per OEM's approved drawing and material. It shall be fabricated using CNC machine to provide perfect alignment in all axis. Mounting blocks should provide perfect alignment among tiles and connectivity to the support frame. OEM has to certify the compliance of the Fabricated Structure. Department clearance should be obtained before installation is started at our site.	
2	The fixture shall be made up of rolled steel angles, shall conform to E250C as per IS: 2062-2011 or high tensile steel corresponding to the same code or its equivalent conforming to national/international standards	
3	The mounting steel frame shall be made from virgin steel only, it shall not be from recycled steel. Steel shall be procured exclusively from the main producers of steel like SAIL/IISCO/TISCO/RINL/ISPAT/VSP/JINDAL	
4	The rolled steel angles shall be hot dip galvanised as per IS4759:1196 and mass of zinc coating shall confirm to IS4759:1196.	
5	The zinc used for galvanisation shall conform to IS 209:1992 'Zinc ingot' or IS 13229 : 1991 'Zinc for Galvanising'	
6	In case certain steel sections are not available in the market in the designed thickness, the next better thickness available should be used with the approval of the Department	
7	The material shall be of tested quality, recent manufacture, free from scales, slag intrusions, pitting, flake, rusts etc. Recycled steel shall not be used in making any structure. The metrological test report of the Steel shall be submitted to Department for verification before starting fabrication works.	
8	All bolts, nuts and lock nuts shall conform to IS: 1367-2002. Washers shall conform to IS:2016-2001	

9	Covered electrodes for arc welding shall conform to IS: 814-2004. Coding of electrodes shall be ER421'c'X	
10	Description	Thickness
	Ignorance zinc silicate (Primer paint)	65 microns
	Inhibitive polyamide epoxy (Intermediate paint	100 microns
	Aliphatic acrylic polyurethane (Enamel finish paint) (Non-fading colour due to UV radiation)	40 microns
	The paints used in painting shall be of best quality from reputed paint manufacturer such as British, Asian, Berger, Shalimar paints in accordance with relevant BIS codes.	

3.3.3 Specifications of Video wall Controller and its software Unit

Quantity: 2 numbers for each video wall, 1 as hot redundant to the system (Total 4 units).

Sl. No	Description	Specifications	Vendor Compliance (YES*/NO) along With Supporting Documents. REMARKS if any must be notified. Mandatory if answer is No
1	LED Controller	LED Controller possesses powerful video signal receiving, splicing and processing capacities, and supports multiple signal inputs. Controller and Video wall display should be from same OEM.	
2	Input port	Supports 4 × HDMI2.0	
3	Input Resolution	Up to 4096 x 2160 @60Hz	
4	Maximum Width	4096 pixels or higher	
5	Maximum Height	4096 pixels or higher	
6	Output	8/16/32 or higher Gigabit Ethernet or Optical output as per requirement.	
7	HDCP	Support HDCP 2.2	
8	Transmission Distance	Up to 80 meters	
9	LAN	Network control (communication with PC, or access network)	
10	Cascading feature	Support for high-speed configuration & cascading with the next controller	
11	Genlock feature	Genlock signal input ensures synchronism of display image, Genlock synchronous signal loop out	

12	Input Voltage	230 V at 50 Hz (Indian Standard)	
13	Power Supply	<ul style="list-style-type: none"> • 230 ± 10% VAC, 50Hz ± 5% • MTBF shall be better than 50,000 Hour or better 	
14	Compatibility	<ul style="list-style-type: none"> • The LED controller units should be compatible with the LED cabinet/tiles. • LED controller should be compatible with the proposed video wall processor. 	
15	Licensing	All software and firmware must be perpetual and must be operational from Day1	
16	Mount	Rack mountable with the provided rack.	
17	OEM warranty	At least 5 years	
18	Total service coverage	Minimum 8 years (including AMC & warranty)	

3.3.4 Specifications of Video wall Processor and its software Unit

Quantity: 1 number for each video wall (Total 2 numbers).

Sl.No	Description	Specifications	Vendor Compliance (YES*/NO) along With Supporting Documents. REMARKS if any must be notified. Mandatory if answer is No
1	System	An embedded software running on a dedicated hardware. (Should not be a PC based architecture) Modular design with Dual redundant hot swappable power supply.	
2	Architecture	Shall be of modular architecture which accommodates variety of input and output.	
3	Bandwidth	Shall have dedicated high bandwidth video bus that delivers unparalleled real-time performance; video bus should not be shared with any of the other internal processes.	
4	Configuration	Configurable video wall processor with scaling that must support the real-time windowed display of multiple video and graphic input sources on a single or tiled video display.	
5	Compliant	HDCP-compliant on all inputs and outputs.	
6	Inputs	Processor shall support minimum 8 Inputs to connect HDMI2.0 from video sources.	

7	Other Features (Inputs)	Capable of taking inputs of 4k/60fps, 4k/30fps and lesser	
8	Outputs	Minimum 4 HDMI2.0 Outputs with future modular expansion slots. Outputs should support multiple resolution individually based on the native resolution.	
9	Multi Canvas	The video wall processor should support multiple Video wall canvas at its output without disturbing the other one.	
10	Data rate	Support minimum of 18Gbps or better video data rate for data transmission at inputs & Outputs	
11	Resolution Capability	The system should be capable to process 4K resolution.	
12	Scaling	Each output of the Video Wall Processor should have built-in scaling	
13	Resolution	Should be able to support output resolutions from 1080p up to 3840 x 2160 and should support custom resolutions and aspect ratios.	
14	Control	Ethernet	
15	Chroma Sampling	10-bit or better processing with Chroma sampling 4:2:2 or better	
16	Color Bit Depth	16 bits per color (minimum)	
17	Power Supply	<ul style="list-style-type: none"> • 230 ± 10% VAC, 50Hz ± 5% Redundant hot swappable power supplies with two AC inlets • MTBF shall be better than 50,000 Hour or better 	
18	Regulatory Compliance	CE, FCC class A including EMC/EMI compliance, UL, RoHS, or Indian equivalent certifications for the above, ISO Certifications	
19	Additional Features	<ul style="list-style-type: none"> • Input / output cards should be modular & field upgradable. • Should have Redundant & Hot swappable power supplies. • The Processor should support for 24x7 operations. • The video wall processor should provide features like scaling, window customization, image processing, accurate input detection, support multiple output resolutions, should have unrestricted source window positioning, including overlay and overlap& allow source windows to be sized to any aspect ratio without any image degradation. • Allow the display for customizable borders and titles surrounding source windows with 	

		<p>different colouring. Should allow user control for Source window size, Source window position, Source window layer, Source window contents and Source zoom.</p> <ul style="list-style-type: none"> • Video wall processor should interface LED controllers as per the required configuration to fit to desired resolution 1920 x 1080 to 3840 x 2160 (pixel to pixel) and other parameters. • Video wall processor should include all the cable and converting accessories, which meet our required configuration (without compromising quality of signals). • Video wall processor Control software should be able to operate from a PC, dedicated controller and webGUI • The switching between the layouts (pre-sets) should be seamless to achieve fast and glitch free transitions. • Output overlap, custom output formats, and image rotation 	
20	Mounting	19-inch Rack mountable with dual power	
21	Cooling	Fan cooled /fan less cooling	
22	Communication	<ul style="list-style-type: none"> • Ethernet ports female RJ-45 with auto detecting for Link speed and duplex level • Ethernet data rate 10/100/1000Base-T, half/full duplex with auto detect Protocols ARP, DHCP, ICMP (ping), TCP/IP, Telnet, HTTP, SMTP 	
23	Licensing	All software and firmware must be perpetual and must be operational from Day1	
24	OEM Warranty	At least 3 years	
25	Total service coverage	Minimum 6 years (including AMC & warranty)	

3.3.5 **Additional requirements**

Minimum number of items must be provided in the list of additional requirements and as per requirements bidder can add the number in order to have the complete solution.

1. HDMI2.0 Distribution Amplifier (1x4).
2. VGA to HDMI2.0 converter.
3. DP to HDMI2.0 converter.
4. HDMI2.0 to UTP transmitter.

5. HDMI2.0 to UTP receiver.
6. Network Switch.
7. Network Rack.
8. Desktop PC.
9. Wi-Fi router.
10. Display management processor.
11. Touch panel display.
12. HDMI2.0 cables (2 meter, 3 meter, 5 meter, 10 meter) as per requirement.

3.3.5.1 HDMI2.0 Distribution Amplifier

Quantity: 10 Numbers

Sl. No.	Description	Specification	Vendor Compliance (YES*/NO) along With Supporting Documents. REMARKS if any must be notified. Mandatory if answer is No
1	Inputs	1 HDMI2.0: on female HDMI2.0 Connector	
2	Outputs	4 HDMI2.0: on female HDMI2.0 Connectors	
3	Resolution	4K@60HZ (4:4:4)	
4	Video	HDMI2.0 Support Deep Colour,3D,up to 7.1 Uncompressed Audio channel as specified in HDMI2.0 Content Protection HDCP 2.2	
5	EDID management	Yes	

3.3.5.2 VGA to HDMI2.0 converter

Quantity: 10Numbers.

Sl. No.	Description	Specification	Vendor Compliance (YES*/NO) along With Supporting Documents. REMARKS if any must be notified.

			Mandatory if answer is No
1	Video Input	1 x HDB-15 Female	
2	Video Output	1 x HDMI2.0 Type A Female	
3	Video Resolution	1080p or better	
4	Audio Connectors	1 x Mini Stereo Jack Female	
5	Power	1 x DC Jack	

3.3.5.3 DP to HDMI2.0 Converter

Quantity:4 Numbers

Sl. No.	Description	Specification	Vendor Compliance (YES*/NO) along With Supporting Documents. REMARKS if any must be notified. Mandatory if answer is No
1	Input - Display port (2.0)	1male and 1 female	
2	Output -HDMI2.02.0 port (Female)	2 or more	
3	Supported Resolution	4K@60Hz	
4	Power	1 x DC Jack	

3.3.5.4 HDMI2.0 to UTP transmitter

Quantity: 20 Numbers

Sl. No.	Description	Specification	Vendor Compliance (YES*/NO) along With Supporting Documents. REMARKS if any must be notified. Mandatory if answer is No
1	Inputs	1 HDMI2.02.0: on a	

		female HDMI2.0connector	
2	Outputs	1 HDBT: on an RJ-45 female connector	
3	IR port on a 3.5 mm connector	1 or more	
4	RS-232 port on a 3-pin terminal block connector	1 or more	
5	Video resolution	Upto 4K UHD @ 60 Hz	
6	Video (Max data rate)	Upto 18 Gbps	
7	HDCP 2.2 content protection	Yes	
8	Extension Line (at 4K @60Hz)	40m or more	
9	Extension Line (at Full HD - 1080p @60Hz)	70m or more	

3.3.5.5 HDMI2.0 to UTP receiver

Quantity: 20 Numbers

Sl. No.	Description	Specification	Vendor Compliance (YES*/NO) along With Supporting Documents. REMARKS if any must be notified. Mandatory if answer is No
1	Inputs	1 HDBT: on an RJ-45 female connector	
2	Outputs	1 HDMI2.02.0: on an HDMI2.0 connector	
3	IR port on a 3.5 mm connector	1 or more	
4	RS-232 port on a 3-pin terminal block connector	1 or more	
5	Video resolution	Upto 4K UHD @ 60 Hz	
6	Video (Max data rate)	Upto 18 Gbps	
7	HDCP 2.2 content protection	Yes	
8	Extension Line (at 4K @60Hz)	40m or more	
9	Extension Line (at Full HD - 1080p @60Hz)	70m or more	

3.3.5.6 Network Switch

Quantity: 1 Number for each video wall (Total 2 Numbers)

Sl. No.	Item description	Specifications	Vendor Compliance (YES*/NO) along With Supporting Documents.

			REMARKS if any must be notified. Mandatory if answer is No
1	Type	Layer 2 Managed switch with SFP	
2	Mounting & size	19" Standard Rack mount width, 1U Height	
3	SFP wavelength & range	1310nm & 10 km range	
4	No of ports	24 x 1000Mbps, & 4 x 10 G SFP+	
5	MAC address Table	16K, 512 Static	
6	Switching capacity	128 Gbps or better	
7	Forwarding Rate	95.00 Mbps or better	
8	Cooling Fans	2 or more Smart fans	
9	Management Protocols	Telnet, CLI/Console, HTTP, SNMPv1/v2/v3, RADIUS, TACACS+, SSH, SSL, ZModem, LLDP, RMON	
10	L2 Protocols	:Syslog, Port Mirroring, TFTP, 802.1d/s/w Spanning Tree, STP loopback detection, 802.1p Priority Tags, 802.1q VLANs, STP, 802.3ad Link Aggregation, 802.3x Flow Control, Web GUI Traffic Monitoring, Web MAC address Browsing, Dual Image, Port Description, IGMP snooping, MLD Snooping, QoS, ERPS, L2PT	
11	Security	SSH, SSL, Access Control List, 802.1x Port-based /MAC based control, IP-MAC-Port Binding, Port Security, Broadcast/Multicast/Unicast Storm Control, Traffic Segmentation, EAP, DoS Attack Prevention	

12	RFC Standards	<ul style="list-style-type: none"> • RFC791 IP • RFC768 UDP • RFC793 TCP • RFC792 ICMPv4 • RFC2463, RFC4443 ICMPv6 • RFC826 ARP • RFC1321, RFC2284, RFC2865, RFC2716, RFC3580 Extensible Authentication Protocol (EAP) • RFC2573 SNMP Applications • RFC2461, RFC4861 Neighbor Discovery for IPv6 • RFC2462, RFC4862 IPv6 Stateless Address Auto-configuration (SLAAC) • RFC2464 IPv6 over Ethernet and definition • RFC4291 IPv6 Addressing Architecture • RFC2893, RFC4213 IPv4/IPv6 dual stack function 	
13	Operating Temperature	10to 50degC (Operating)	
14	MTBF (Hours)	> 5,00,000 hours	
15	Power supply	230 V + 10%AC, 50 Hz	
16	EMI/EMC	FCC Class A, CE, VCCI – Class A, IC, C-Tick, or Indian Equivalent for the same.	
17	Safety	CE, LVD, UL/cUL, CB, or Indian Equivalent for the same.	

3.3.5.7 Network Rack

Quantity: 1 Number for each video wall (Total 2 numbers)

S. No	Specifications	Description	Vendor Compliance (YES*/NO) along With Supporting Documents. REMARKS if any must be notified. Mandatory if answer is No
1	Type	42U	
2	Structure	Steel folded basic frame CKD/welded construction	
3	Top and bottom cover	Bolted to frame with cable entry / exit cut outs. All cut outs blanked with plastic caps.	
4	Front door	Toughened Glass with lockable mechanism	
5	Rear door	Lockable steel door - perforated - 83% or more for higher cooling efficiency	
6	Side panels	Pair of side panels with lock with perforation for cooling efficiency	
7	19" mounting angle:	Required number of 19" sliding extrusions, Steel and zinc plated shall be provided to accommodate for video wall processor, LED controller, display management system, remote power supplies and other components	
8	Finish	Frame, front door, rear door and panels powder coated. 19" verticals: powder coated with U marking	
9	Features	Cable access overhead or beneath Ventilated front and rear doors Adjustable mounting rails Adjustable leveling feet Integrated electrical grounding	
10	Accessories	<ul style="list-style-type: none"> ➤ Earth kit - 1 no. ➤ Set of 4 fans 230V/90 CFM mounted at top with thermostat - 1 no. ➤ Temperature sensor with display shall be 	

S. No	Specifications	Description	Vendor Compliance (YES*/NO) along With Supporting Documents. REMARKS if any must be notified. Mandatory if answer is No
		<p>provided for each rack.</p> <ul style="list-style-type: none"> ➤ Set of 4 fans 230V/90 CFM mounted at bottom with thermostat - 1 no. ➤ Captive hardware - 1 no. ➤ Vertical cable organizer -1 no. ➤ Vertical fiber organizer -1no. ➤ Horizontal cable manager of 1U - 6 nos. ➤ Hook and loop straps -6 No's ➤ Blank panels for ventilation openings ➤ One basic rack PDU with 230V input voltage, 16A input current, and 12 numbers output sockets -2 nos. ➤ Rack mountable Lighting unit with automatic function ensured by motion sensor -1no. 	
11	Mounting	Heavy duty Caster wheels (2 with brake and 2 without brake)	
12	Standard	EIA-310	
13	Static Load capacity	1000 kg or more	
14	Color	Black	

3.3.5.8 Desktop PC

Quantity: 1 Number for each video wall (Total 2 numbers)

S. No	Specifications	Description	Vendor Compliance (YES*/NO) along With Supporting Documents. REMARKS if any must be notified. Mandatory if answer is No
1	Processor	12th Generation Intel Core i7,16MB cache, 8 core, 2.9 GHz or better	

2	Chipset	Intel Q570 chipset or better	
3	Memory	16 GB DDR4 or better	
4	OS	Windows 11 Professional or better Microsoft office license must be added.	
5	Storage	256 GB SSD + 1TB HDD or better	
6	Monitor	22" Monitor with IPS technology	
7	Keyboard & Mouse	USB Based Optical Mouse & QWERTY Keyboard	
8	Audio	Inbuilt Speakers	
9	Interfaces	2 x Gigabit Ethernet port , USB 2.0(4)-Rear & front, USB 3.0 (2), HDMI2.0(1), DP(1), 3.5mm Audio jack(2)-Rear & front,	
10	Form factor	Tower/Mini Tower	
11	Power supply	Indian standard power supply 230V AC 50Hz	
12	Accessories	Mouse pad, installation guide	

3.3.5.9 Wi-Fi router

Quantity: 1 Number for each video wall (Total 2 numbers)

S. No	Specifications	Description	Vendor Compliance (YES*/NO) along With Supporting Documents. REMARKS if any must be notified. Mandatory if answer is No
1	Standards	IEEE 802.11ac/n/a 5 GHz, IEEE 802.11n/b/g 2.4 GHz	
2	WiFi Speeds	5 GHz: 600 Mbps or better (802.11ac), 2.4 GHz: 300 Mbps or better (802.11n)	
3	Antenna	4 or higher Fixed Antennas	
4	WiFi Capacity	Dual-Band , 2×2 MU-MIMO	
5	Ethernet Ports	1× 10/100 Mbps WAN Port, 4× 10/100 Mbps LAN Ports	
6	Working Modes	Router Mode, Access Point Mode, Range Extender Mode	
7	Processor	Single-Core/Dual core CPU	
8	Buttons	WPS/Wi-Fi Button, Power On/Off	

		Button, Reset Button	
9	WiFi Encryption	WEP, WPA, WPA2, WPA/WPA2-Enterprise (802.1x)	
10	Network Security	SPI Firewall, Access Control, IP & MAC Binding, Application Layer Gateway	
11	Guest Network	1× 5 GHz Guest Network, 1× 2.4 GHz Guest Network	
12	Protocols	IPv4, IPv6	
13	WAN Types	Dynamic IP, Static IP, PPPoE, PPTP, L2TP	
14	Quality of Service	QoS must be ensured	
15	NAT Forwarding	Port Forwarding, Port Triggering, DMZ, UPnP	
16	DHCP	Address Reservation, DHCP Client List, Server	
17	DDNS	NO-IP, DynDNS	
18	Management	Web based GUI	
19	System Requirements	Internet Explorer 11+, Firefox 12.0+, Chrome 20.0+, Safari 4.0+, or other JavaScript-enabled browser	
20	Certifications	FCC, CE, RoHS or Indian Equivalent for the same.	
21	OEM Warranty	3 Year	

3.3.5.10 Display management processor

Quantity: 1 Number for each video wall (Total 2 numbers)

Sl. No	Description	Specifications	Vendor Compliance (YES*/NO) along With Supporting Documents. REMARKS if any must be notified. Mandatory if answer is No
1	Memory	SDRAM: 1 GB or better	

		Flash: 4 GB or better	
2	Data rate for Ethernet Control	100/1000Base-T, half/full duplex with auto detect	
3	Serial Control	Minimum of 2 bidirectional RS-232, RS-422, RS-485 Minimum of 6 bidirectional RS-232	
4	Digital I/O Control	4 analog input or digital input/output (configurable)	
5	IR/Serial Control	Minimum 8 programmable: unidirectional RS-232 (± 5 V), or TTL level (0 to 5 V) infrared (carrier and non-carrier) up to 300 kHz	
6	Relay Control	Minimum of 8 normally open relays	
7	Other Features	Support secure industry standard communications protocols	
8		Should support iPad /web browser as secondary Control Interface	

3.3.5.11 Touch panel display

Quantity: 2 Numbers for each video wall (Total 4 numbers)

Sl. No	Description	Specifications	Vendor Compliance (YES*/NO) along With Supporting Documents. REMARKS if any must be notified. Mandatory if answer is No
1	Application	To be used as control interface	
2	Display size (diagonal)	10" or higher	
3	Resolution	1920x1080 or higher	
4	Video Input	HDMI2.0(HDCP compliant) that allows Full-motion video preview	
5	Communication	Wireless communication (Wi-Fi) or Ethernet	
6	Touch	Capacitive	
7	Energy-saving features	Adjustable sleep timer Motion detector that wakes touch panel	

8	Mounting	Tabletop with Kensington locks support. Weighted base should allow min 40° of tilt	
9	Other Features	Should be compatible with the proposed video wall controller, processor, Wi-Fi router and Display management processor.	

3.3.5.12 HDMI2.0 Cables

Quantity: Tentative numbers (0.5meter: 40 numbers, 1 meter: 20 numbers, 3 meter: 10 numbers, 5 meter: 20 numbers, 10 meter: 20 numbers)

Additional cables needs to be provided as per requirement.

Sl. No	Description	Specifications	Vendor Compliance (YES*/NO) along With Supporting Documents. REMARKS if any must be notified. Mandatory if answer is No
1	Connector Type	Male type A HDMI2.0 to male type A HDMI2.0	
2	Contacts &	Gold plated & 4K Premium	
3	Material	Conductors: tinned copper, 30 AWG Drain wire: tinned copper, 32 AWG Jacket: PVC	
4	Chroma Sampling	4:4:4	
5	Color Bit Depth	8 bits per color	
6	Video Data Rate	18.0 Gbps (6.0 Gbps per color)	
7	Resolution	Full HD to Up to 4K (4096x2160) @ 60 Hz, UHD(3840x2160) @ 60 Hz 8-bit color depth or better , max. 18.0 Gbps data rate	

The above list and quantity is only indicative. If any items are required for completion of the Commissioning activity, it shall be brought out in bill of material clearly. Department shall approve the same if it is feels it is essential for successful commissioning of the video wall system.



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4.ANNEXURE I

MINIMUM QUALIFICATION CRITERIA

The pre-Qualification criteria shall be filled by Bidder, duly signed and submitted along with technical bid with necessary documents of proof for review by purchaser.

Sl. No	CRITERIA	Vendor Compliance (YES*/NO) along With Supporting Documents	REMARKS (if any must be notified. Mandatory if answer is No)
1	The Bidder shall have prior experience in the field of design, supply, erection, installation, interfacing and commissioning of indoor Active LED Video wall Display and its controlling system with fine pitch less than or equal to 0.90mm.		
2	The Bidder Should have Supplied, installed & Commissioned a LED Video wall Display and its controlling system with fine pitch less than or equal to 1.8 mm at least for values not less than Rs.100.00 lakhs in single order or Rs.150.00 Lakhs in two orders or Rs. 200.00 Lakhs in three orders. Proof to be enclosed as Purchase Order/work order copy.		
3	Average annual turnover of the Bidder during the last three financial years, should be at least Rs.2 Crore. Bidder shall enclose audited balance sheet including profit and loss account for the last three financial years showing annual turnover. Shall also enclose income tax certificate.		
4	Vendor must have undertaken Design, Supply, Erection, Testing and Commissioning of similar work in India with Power & Data redundancy Configuration by the party. Purchase order copy and completion certificate, contact person name and designation, contact number must be submitted along with the techno-commercial offer, without which offer will be summarily rejected. Performance certificate shall be produced by the party from the user department or organization.		
5	The bidder shall Confirm compliance to GFR 144 (Xi) rule		
6	The party has to provide Authorized System integrator certificate from OEM of LED video wall system. In case the system integrator and OEM are same, a self-declaration for the same has to be provided.		
	The certifications mentioned in the technical specifications for each product must be submitted along with the technical bid for evaluation.		
7	The OEM has to submit letter supporting the supply and installation of Active LED video wall display and controller		

	unit of pixel pitch less than or equal to 0.90 mm covering the warranty period of minimum 5 Year and CAMC for 3 years. For video wall processor minimum warranty period of 3 years and CAMC for 3 years.		
8	The party shall quote in Indian rupees only.		
9	The bidder shall be Class 1 or Class II bidder with respect to make in India policy of Government of India.		
10	Datasheets of the offered product from the OEM must be provided and must be complied with technical specification.		
11	The OEM should have local service support for after sales & service. Any problems reported by the department should be attended to within 48 hours.		
12	The firm must provide a self-declaration that there is no complaint/vigilance inquiry pending against them in any Govt. /Department /PSU and they have not been black listed by any Govt. Department/PSU.		
13	A Pre-Bid meeting shall be scheduled by VSSC on a convenient date once the tender is floated. The Bidder must visit VSSC Thiruvananthapuram and acquaint himself with the requirements before submitting the bid. Bidder is deemed to have clearly understood and satisfied himself regarding the work and services & all conditions liable to be encountered during the execution. Clarifications in any regard are to be communicated during the Pre-bid meeting and site visit. The Pre-Bid meeting and Site visit are mandatory without which the bid will be summarily rejected.		
14	Technical proposal of the bidder, which is not able to substantiate/satisfy the claims made by it with respect to the technical requirements laid down in this RFP, <i>will be summarily rejected.</i>		
15	Offers of those bidders taking full scope of the work (supply, commissioning and all the optional items) as per the requirements indicated in the RFP only will be considered. Partial quote and part order is not permitted.		
16	No subcontracting of any works is permitted. If it warrants so, it shall be approved by the Department after verification of the subcontractor's capability both technically and financially.		
17	Any technical deviation shall be notified separately or highlighted in the technical compliance statement which should be submitted along with the offer. Offers without technical compliance statement shall be rejected.		
18	The party has to clearly specify the make and model of the equipment's to be used in realizing the video wall system		

19	If any information was found to be false during the evaluation of the offer it is bound to be rejected.		
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Signature of Bidder with Seal

5.ANNEXURE II
EVALUATION CRITERIA

The broad guidelines for evaluation of Bids will be as follows:

S.No	Description	Vendor Compliance (YES*/NO) along With Supporting Documents	REMARKS (if any must be notified. Mandatory if answer is No)
1	In respect of Two part-Bid systems, the technical Bids forwarded by the Bidders will be evaluated by the Department with reference to the technical characteristics of the equipment as mentioned in the RFP. The compliance of Technical Bids would be determined on the basis of the parameters specified in the RFP. The Price Bids of only those Bidders will be opened, whose Technical Bids are cleared by Technical Evaluation Committee.		
2	During evaluation, VSSC may request Bidder for any clarification on the bid, additional documents. If required department will visit the installation of bidder where similar system are installed and are in operational to ascertain the performance of the bidder and their products.		
3	Bidder must provide the point by point compliance to the technical specifications should be provided by the tender along with deviations (in Annexure V). The tender can be rejected if the deviations are not acceptable to the Department.		
4	Performance of Bidder on similar nature of works executed and being under executed shall be taken into consideration before selecting the Bidder for opening his price bid.		
5	The time schedule for completion is given in the Proposal document. Bidder is required to confirm the completion period unconditionally.		
6	VSSC reserves the right to reject any bid if technically/commercially not meeting the requirement/terms & conditions. Such decisions by the VSSC shall bear no liability whatsoever consequent upon such decision.		
7	Total price inclusive of all taxes, duties, and all the optional items inclusive of CAMC charges		

	shall be considered for arriving at L1 and awarding the contract as per the procedures.		
8	Department reserve the rights to include or not to include, CAMC and other optional items in the purchase order. However, the department shall separately issue CAMC award before completion of the warranty period at the rates quoted by the party.		
9	If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price will prevail and the total price will be corrected. If there is a discrepancy between words and figures, the amount in words will prevail for calculation of price.		
10	Splitting of the work order or subcontracting the work is not permitted without the consent of the department.		
11	CAMC charges shall be quoted separately and the CAMC order shall be placed after completion of the warranty period at the rates quoted by the party in the cost price.		

Signature of Bidder with Seal

6.ANNEXURE III

VENDOR EVALUATION FORMAT

VSSC Thiruvananthapuram seeks response to the following questionnaire for assimilating data which would be used for evaluating the capability of the vendor for executing the referred work. Hence, the vendor is requested to provide only genuine data and any discrepancy found at a later point of time may result in rejection of the vendor from purchase process. Furnishing of data cannot be construed as automatic qualification for participation in the tender. Questionnaire should be signed by a responsible and authorized person of the Company / Agency.

S. No	Description	Vendor Response
1.	Name of the company	:
2.	Type of the Company (Proprietary/Pvt.Ltd/Public Ltd/Joint Venture/Consortium)	:
3.	If Company is Consortium please provide the signed copy Consortium Agreement document.	:
4.	Registration number & certificate	:
5.	Name & Address of the Office of the Chief Executive of the Company	:
6.	Contact person for this tender with name & address and contact number	:
7.	Locations of the Branches of Company (if any)	:
8.	From which year the Company is in operation	:
9.	Current Annual turn-over of the company	:
10.	IT returns for the last 3 years	:

S. No	Description	Vendor Response		
11.	The Profit & Loss Account details for the last 3 years which is duly audited and Submitted as part of the Annual Report.			
	In Rs. Lakhs only	2021-22	2022-23	2023-2024
	Total assets (i)	:		
	Current assets (ii)	:		
	Total liabilities (iii)	:		
	Current liabilities (iv)	:		
	Net Worth (i-iii)	:		
	Working capital (ii-iv)	:		
	Turnover in lakhs	:		
	Profit/Loss in Rs. lakhs	:		
12.	The major customers for whom similar works are provided (Enclose copies of the Purchase Orders including Government as well as private industry orders)			
13.	Definitions: A Bidder or service provider, whose goods, services or works offered for procurement, has local content: a)Equal to or more than 50% : Class-I local Bidder. b) More than 20% but less than 50%: Class-II local Bidder. C) Less than or equal to 20%: Non-local Bidder. Mention the Category among Class-I local Bidder,			

S. No	Description	Vendor Response
	Class-II local Bidder and Non-local Bidder.	
14.	Local content means the amount of value added in India (i.e. indigenous items/services added in the offered products/services/works) be the total value of the item offered (excluding net domestic indirect taxes) minus the value of imported content in the item (including all customs duties/IGST) as : a proportion of the total value (excluding net domestic indirect taxes), in percent. Indicate extent of Minimum Local Content in offered product/service and location of such value additions. Indicate the extent of minimum local content (0%-100%).	
15.	The Class-I & II local Bidder should provide a Self-Certification along with the offer in PDF format indicating that the item offered meets the minimum local content as called for in the tender as mentioned above and provide the % of local content along with details of the location(s) at which the local value addition is made. It is mandatory to indicate compliance to MLC (minimum local content) in technical bid itself. Confirm attachment of Self declaration along with the offer. If category mentioned is Class-I or II local Bidder,	

S. No	Description	Vendor Response
	self-declaration for the same must be attached with the technical bid as additional document.	
16.	The Manufacturer's authorization certificate/letter shall be produced by the party. Technical compliance to the specifications shall be vetted by the Manufacturer (OEM) also.	
17.	CAMC charges is quoted separately	

Details of experience in executing similar type of work which are completed

The bidder shall submit the copies of previous purchase orders executed for similar works of values not less than Rs.100.00 lakhs in single order or Rs.150.00 Lakhs in two orders or Rs. 200.00 Lakhs in three orders.

Sl.No	Full postal address of the client with Contact Person with Phone number	Description of the work	Value of the work (Rs. in Lakhs)	Completion Time as per PO	Actual period of completion	Reasons for delay
1						
2						
3						

Total Value of work =

Note: In order to consider as valid experience, all the experience has to be supported with the completion certificate and purchase order copies.



REQUEST FOR PROPOSAL FOR ACTIVE LED VIDEO WALL SYSTEM

Details of present works executed by the party with same specification along with proper Documents and contact person details to be provided by the party for verification and evaluation of the bids by the department

Note: Copy of purchase orders should be enclosed along with quotation, failing to do so, the offer shall be summarily rejected.

Signature of Bidder with Seal

7.ANNEXURE IV
SCHEDULE OF PRICE

S. No	Description	Unit	Cost (In Rupees as applicable.)
1a	Supply of LED video wall display system + mounting fixture	Lump sum	
1.1	GST on items in S.No.1a	%	
2a	Supply of LED video wall controllers + Processor(s) +Miscellaneous items	Lump sum	
2.1	Tax on item 2a	%	
3a	Packing & Forwarding charges	%	
3.1	Tax on item 3a	%	
4a	Transportation charges	Lump sum	
5a	Installation, Testing and Commissioning charges	Lump sum	
5.1	GST on Item in S.No.4a and 4b	%	
Total Cost (Sum of S.No. 1a+1.1+2a+2.1+ 3a+4a+5a+5.1)			

AMC charges

Item NO: 1 Video wall & Controller

S. No.	Description	Unit	Cost(in rupees)
1a	AMC charges – Year 1	Lump sum	
1.1	GST on items in S.No.1a	%	
2a	AMC charges – Year 2	Lump sum	
2.1	GST on items in S.No.2a	%	

3a	AMC charges – Year 3	Lump sum	
3.1	GST on items in S.No.3a	%	
	Total cost (Sum of S. No 1a+1.1+2a+2.1+3a+3.1)		

Item NO:2 Video wall Processor

S. No.	Description	Unit	Cost(in rupees)
1a	AMC charges – Year 1	Lump sum	
1.1	GST on items in S.No.1a	%	
2a	AMC charges – Year 2	Lump sum	
2.1	GST on items in S.No.2a	%	
3a	AMC charges – Year 3	Lump sum	
3.1	GST on items in S.No.3a	%	
	Total cost (Sum of S. No 1a+1.1+2a+2.1+3a+3.1)		

Signature of Bidder with Seal

8.ANNEXURE V**EXCEPTIONS AND DEVIATIONS**

In line with Proposal Document, Bidder may stipulate Exceptions and deviations to the Proposal conditions if considered unavoidable.

SL. NO	Reference in Specification		Dept. Specification	Offered Spécification	DEVIATION
	PAGE NO	CLAUSE NO			

NOTE :

Only deviations are to be written in this Annexure – V.

Any deviations taken by the Bidder to the stipulations of the Proposal document shall be brought out strictly as per this format and enclosed along with the bid.

Any deviations not brought out as per this Performa and written elsewhere in the Proposal document shall not be recognized and the same is treated as null and void.

Any willful attempt by the Bidder to camouflage the deviations by giving them in the covering letter or in any other documents that are enclosed may render the Bid itself non-responsive.

(Signature of Bidder with Seal)

9.ANNEXURE VI

CHECK LIST FOR BIDDER

S.No	Description	Response by Bidder
1.	Has the Bidder attached all the documents mentioned in along with the online technical bid	Yes / No
2.	Has the Bidder filled ANNEXURE I MINIMUM QUALIFICATION CRITERIA ANNEXURE II EVALUATION CRITERIA ANNEXURE III VENDOR EVALUATION FORMAT ANNEXURE VII CERTIFICATE TO BE FURNISHED BY THE VENDOR ANNEXURE VIII STATEMENT COMPLIANCE TO TECHNICAL SPECIFICATION ANNEXURE IX BILL OF MATERIAL ANNEXURE X ACCEPTANCE OF TERMS AND CONDITIONS BY THE VENDOR And supported it with valid documents wherever necessary.	Yes / No
3.	The detailed scope of work and technical specifications are understood and price was quoted accordingly	Yes / No
4.	All the conditions of the contract are acceptable.	Yes / No
5.	In case of some general conditions of the contract are not acceptable, deviation statement is to be enclosed in Annexure - V	Yes / No
6.	Un-priced copy of schedule of prices, payment schedule is enclosed in the techno-commercial bid.	Yes / No
7.	Taxes are quoted in the price bid	Yes / No
8.	Delivery schedule is acceptable. If not, the deviation is brought-out in the deviation statement	Yes / No
9.	Terms of payment are acceptable. If not, the deviation is brought-out in the deviation statement	Yes / No
10.	Liquidate damages clause is acceptable. If not, the deviation is brought-out in the deviation statement	Yes / No
11.	Technical statement compliance to all the items mentioned in the technical specification section must be attached along with the annexure VIII as per the format attached with the specification of item.	Yes / No

Signature of Bidder with Seal

10.ANNEXURE VII**CERTIFICATE TO BE FURNISHED BY THE BIDDER**

1. The equipment once delivered will be subjected to an inspection by the Department inspection panel at the consignee location. The specifications of the equipment will be in conformity with the details provided by the user and as per given specifications. The date of completion of commissioning would be deemed to be the date on which the warranty will commence.
2. We shall provide onsite comprehensive warranty of at least five years for video wall display & video wall controller AND of at least three year warranty for all other items being supplied.
3. We confirm that we abide by the delivery schedule as laid out in tender enquiry.
4. We certify that any cost incurred on additional items/systems/components /accessories required to realize the LED video wall would be borne by us.

Signature of Bidder with Seal

Place: _____

Date: _____

11. ANNEXURE VIII

STATEMENT COMPLIANCE TO TECHNICAL SPECIFICATION

SI No:	Specifications	Compliance (Yes / No)	Remarks (Mandatory if compliance is No)
1	The Video wall displays cabinets shall be made in India and should be of pixel pitch less than or equal to 0.90mm with built in power supply and data redundancy. The required Certifications/Regulatory mentioned in the technical specification should be submitted along with the bid.		
2	The video interface from PCs and other interface shall be in baseband level.		
3	The video wall display system should handle all the inputs and outputs as mentioned in the configuration.		
4	The video wall system should include the required hardware and software to realize the video wall.		
5	The video wall system should accept user inputs from Personal Computer/Workstation/Laptop which are running on Linux/Windows operating system.		
6	The Control Software should be user friendly and configurable with all the options needed to control the entire video wall system with provision for future expansion.		
7	Each component or module shall have in built fault identification and diagnosis with proper logging of data. Reports shall be available for fault diagnosis and rectification.		

8	As part of power-on-self-test, the entire components / items / system health should be checked, and a report should be generated with date and time. The log shall be appended to previous log file to identify any component degradation over time.		
9	The Configuration software and application should be load automatically during system Power ON.		
10	The maintenance procedure should be described in detailed in the system document and shall be certified by the OEM. A copy of the procedure shall be given in PDF format and a hardcopy document.		
11	The bidder should take care of all the interfaces with the LED video wall system.		
12	The video wall system display shall display any input at any location on the video wall without any degradation in picture quality, color tone and picture depth in any aspect ratio and resolution.		
13	The video wall management system should take care of all the video processing, switching of all the required I/P channels. The image and texture on the video wall should not be degraded during any option selection while configuring the Video wall.		
14	The video wall display system should handle all types of aspect ratios and display the image in native or expanded or reduced resolution without degrading the quality and shape of the image. Suitable video processing equipment shall be ensured for scaling the video signals of other video formats.		

15	The bidder should provide two touch screen control panels of minimum 10 inch for each video wall that communicates over local Wi-Fi/Ethernet for managing the video wall from the control room. A provision for GUI interface through LAN network to a local controlling PC should be also included.		
	The minimum viewing distance is 1metre from the surface of the video wall. The depth of video wall should be less than 200 mm inclusive of mounting structure.		
16	The System should be designed to comply with EMI/EMC specifications.		
17	The LED video wall System & associated video equipment's should be, CE, UL& FCC certified or Equivalent Indian standard certifications, BIS, ISO.		
18	The System should be in operation continuously on 24 X 7 basis if required.		
18	The configuration of LED video wall shall ensure that there is no total black out of the video wall display due to a failure of any component.		
19	Magnetic and vacuum tools must be supplied for the maintenance activities of LED video wall display.		
20	The power and data cables between cabinets must be connected inside, without adding up extra space outside the cabinets.		
21	Each module and cabinet must be easily adjusted in Z-direction in order to optimize the flatness for the screen. The tolerance between each module must be less than 0.01mm.		

22	The video wall display system should handle all the inputs and outputs as mentioned in the configuration.		
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NOTE: Technical statement compliance to all the items mentioned in the technical specification section must be attached along with the Annexure VIII as per the format attached with the specification of item.

Signature of Bidder with Seal

12. ANNEXURE IX

BILL OF MATERIAL (UNPRICED)

TO BE SUBMITTED ALONGWITH TECHNICAL BID

(For Two Video Wall System)

Sl. No	Description	Unit	Quantity	Vendor Compliance(YES/NO) with Remarks (Mandatory if compliance is No)	Make & Model with attached Brochure
1	Video wall Display system	2	Lot		
2	Video wall mounting fixture	2	Lot		
3	Video wall Controller	4	No		
4	Video wall Processor	2	No		
5	HDMI 2.0 Distribution Amplifier (1x4).	10	No		
6	VGA to HDMI2.0 converter.	10	No		
7	DP to HDMI Converter	4	No		
8	HDMI to UTP transmitter.	20	No		
9	HDMI to UTP receiver.	20	No		
10	Network Switch.	2	No		
11	Network Rack.	2	No		
12	Desktop PC.	2	No		
13	Wi-Fi router.	2	No		
14	Display management processor.	2	No		
15	Touch panel display.	4	No		
16	HDMI2.0 cables (2 meter, 3 meter, 5 meter, 10 meter) as per requirement.	1	lot		
17	Power cables, Interface Cables and Connectors	1	lot		
18	Installation, Cabling, Termination and coordination with other contractors & Project management.	1	Job		

19	Additional Items (to be listed) envisaged by the Bidder and which are essential to complete the erection and commissioning work to be quoted separately.	1	lot		
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Note: The above list is only indicative. If any items are required for completion of the Commissioning activity, it shall be brought out in your bill of material clearly. Department shall approve the same if it is feels it is essential for successful commissioning of the video wall system.

Signature of Bidder with Seal

13. ANNEXURE X

BILL OF MATERIAL (PRICED)

TO BE SUBMITTED ALONGWITH PRICE BID

(For Two Video Wall System)

Sl. No	Description	Unit	Quantity	Price
1	Video wall Display system	2	Lot	
2	Video wall mounting fixture	2	Lot	
3	Video wall Controller	4	No	
4	Video wall Processor	2	No	
5	HDMI 2.0 Distribution Amplifier (1x4).	4	No	
6	VGA to HDMI2.0 converter.	10	No	
7	DP to HDMI Converter	4	No	
8	HDMI to UTP transmitter.	20	No	
9	HDMI to UTP receiver.	20	No	
10	Network Switch.	2	No	
11	Network Rack.	2	No	
12	Desktop PC.	2	No	
13	Wi-Fi router.	2	No	
14	Display management processor.	2	No	
15	Touch panel display.	4	No	
16	HDMI2.0 cables (2 meter, 3 meter, 5 meter, 10 meter) as per requirement.	1	lot	
17	Power cables, Interface Cables and Connectors	1	lot	
18	Installation, Cabling, Termination and coordination with other contractors & Project management.	1	Job	

19	Additional Items (to be listed) envisaged by the Bidder and which are essential to complete the erection and commissioning work to be quoted separately.	1	lot	
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Note: The above list is only indicative. If any items are required for completion of the Commissioning activity, it shall be brought out in your bill of material clearly. Department shall approve the same if it is feels it is essential for successful commissioning of the video wall system.

Signature of Bidder with Seal



REQUEST FOR PROPOSAL FOR ACTIVE LED VIDEO WALL SYSTEM

14. ANNEXURE - XI

ACCEPTANCE OF TERMS AND CONDITIONS BY THE VENDOR

We hereby agree to all the terms and conditions as given in Tender Notice No.

_____ dated: _____ for Design, supply, erection, installation, testing and

commissioning of Active LED video wall System at VSSC, Thiruvananthapuram.

Signature of Bidder with Seal

Place: _____

Date: _____