Surat Municipal Corporation

ADDENDUM & CORRIGENDUM-1

REQUEST FOR PROPOSAL

FOR

SELECTION OF IMPLEMENTATION AGENCY FOR INTEGRATED COMMAND AND CONTROL CENTER (ICCC) AND OUTDOOR DIGITAL DISPLAY BOARD(ODDB) IN SURAT CITY

RFP No.: SSCDL-ICCC-RFP-02-2020

Last date for Price Bid Submission: 24.12.2020

Surat SMART CITY

Invited by

Surat Smart City Development Limited

1st Floor, South Zone Office, Surat Municipal Corporation, Opp. Satyanagar, Udhna, Surat-394210, Gujarat, India

Surat Smart City Development Limited
ADDENDUM AND CORRIGENDUM-1
RFP Notification No.: SSCDL-ICCC-RFP-02-2020

The Bidder are requested to take note of the following changes made in the RFP documents, which are to be taken in to account while submitting the RFP. They shall be presumed to have done so and submitted the RFP accordingly.

- This Addendum and Corrigendum shall be the part of the RFP documents.
- All items specified in this Addendum and Corrigendum supersede relevant items to that effect as provided in the original RFP documents. All other specifications, terms and conditions of the original RFP document shall remain unchanged.
- Bidder shall read and consider following points, which shall be a part of the RFP documents.
- All the changes mentioned in this document should be read across the RFP, Addendum & Corrigendum, wherever applicable.
- **The queries raised and given by bidders, but the clarifications are not made in this Addendum and Corrigendum shall be considered to remain unchanged as per the terms and conditions mentioned in the original RFP documents.**

Changes with respect to RFP Schedule
Please note that with respect to tendering schedules, the following changes have been effected. Bidders are requested to take note of the same and adhere to the dates specified hereunder with regards to Price Bid Submission and Technical Bid Submission:

Particular	Current Dates	Proposed Dates
Online Price Bid Submission Date	14.12.2020 up to 18:00 hrs	24.12.2020 up to 18:00 hrs.
Technical Bid Submission (in Hard Copy) Filled-in Technical Bid along with Bid Fee, EMD and other documents	In sealed envelope strictly by RPAD/Postal Speed Post On or before 21.12.2020 up to 18:00 hrs. To the Chief Accounts, Surat Municipal Corporation, Muglisara, Surat – 395003, Gujarat by RPAD or Speed Post Only.	In sealed envelope strictly by RPAD/Postal Speed Post On or before 31.12.2020 up to 18:00 hrs. To the Chief Accounts, Surat Municipal Corporation, Muglisara, Surat – 395003, Gujarat by RPAD or Speed Post Only.

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Other Changes

#	Section	Page No.	Tender Reference	Existing Clause	Amended/New Clause
1.	3.4	12	Project Background	SSCDL intends to select a System Integrator (SI) by following competitive bidding process to design, develop, implement and maintain the • Integrated Control and Command Centre (ICCC) for a period of 7 (seven) years after Go Live. • Smart Digital Display Board for a period of 7 (seven) years after Go Live.	SSCDL intends to select a System Integrator (SI) by following competitive bidding process to design, develop, implement and maintain the • Integrated Control and Command Centre (ICCC) for a period of 5 (five) years after Go Live. • Smart Digital Display Board for a period of 5 (five) years after Go Live.
2.	4.3.2.7	27	Procurement, Supply, Installation and Commissioning of IT and non-IT infrastructure for Outdoor Digital Display Boards	**Point no 10** The SI shall be responsible for digging, trenching, ducting, cable laying (electrical, fibre, network cable etc.), cable termination and any other ancillary work wherever requited as per scope mentioned in this RFP document. The SI is also responsible for termination of LAN cable/ last mile connectivity of Smart Digital Display Board to the existing network infrastructure at respective site to integrate the Digital Display Board with data centre. In case existing network connectivity of SSCDL/SMC is already available at nearby location to the location of Digital Display Boards, selected bidder is responsible to carry out necessary trenching, ducting and cabling from Digital Display Board location to the point of existing network for establishment of the network connectivity including termination of cable as per the approved rate under this RFP	**Point no 10** The SI shall be responsible for digging, trenching, ducting, cable laying (electrical, fibre, network cable etc.), cable termination and any other ancillary work wherever requited as per scope mentioned in this RFP document. The SI is also responsible for termination of LAN cable/ last mile connectivity of Smart Digital Display Board to the existing network infrastructure at respective site to integrate the Digital Display Board with data centre. In case existing network connectivity of SSCDL/SMC is already available at nearby location to the location of Digital Display Boards, selected bidder is responsible to carry out necessary trenching, ducting and cabling from Digital Display Board location to the point of existing network for establishment of the network connectivity including termination of cable as per the approved rate under this RFP. During the course of installation, if any utility services or roads or other SMC assets or

#	Section	Page No.	Tender Reference	Existing Clause	Amended/New Clause
					third-party assets etc. are damaged, then the SI has to repair and reinstate the same at his own cost.
3.	4.3.2.7	27	Procurement, Supply, Installation and Commissioning of IT and non-IT infrastructure for Outdoor Digital Display Boards	**Point no 23** The SI shall ensure that all the supplied items are properly fixed as per Indian Standards applicable to Wind Zone for Gujarat. SI shall also ensure mounting of equipments at appropriate height considering the HFL of respective site. SI shall be responsible for any mishappening, casualty, damage, loss of lives, goods and shall get the Video wall repaired & reinstalled in its original working condition at its cost.	**Point no 23** The SI shall ensure that all the supplied items are properly fixed as per Indian Standards applicable to Wind Zone for Gujarat. SI shall also ensure mounting of equipment's at appropriate height considering the HFL of respective site. SI shall be responsible to SMC or third party for any mishappening, casualty, damage, loss of lives, goods attributable to SI during the contract period and SI shall also be responsible to get the respective components repaired & reinstalled in its original working condition at its cost during the contract period.
4.	4.3.2.7	27	Procurement, Supply, Installation and Commissioning of IT and non-IT infrastructure for Outdoor Digital Display Boards	**Point no 24** The SI shall be responsible to Supply, Installation, Testing and Commissioning (end-to-end) • IP based CCTV cameras, Outdoor Speakers and Amplifier on ODDB structure with all related accessories including but not limited to following components: - Active and passive networking components including structured cabling and LAN - Any other components like Mounting infrastructure, PVC Conduit, HDPE/DWC Pipes etc. as per project requirements	**Point no 24** The SI shall be responsible to Supply, Installation, Testing and Commissioning (end-to-end) · IP based CCTV cameras, Outdoor Speakers and Amplifier on ODDB structure with all related accessories including but not limited to following components: - Active and passive networking components including structured cabling and LAN - Any other components like Mounting infrastructure, PVC Conduit, HDPE/DWC Pipes etc. as per project requirements

#	Section	Page No.	Tender Reference	Existing Clause	Amended/New Clause
					For each ODDB, two CCTV Cameras will be installed, one with front view and the other with back view (to capture the outdoor cabinet and ODDB rear and its access).
5.	4.3.2.7	29	Procurement, Supply, Installation and Commissioning of IT and non-IT infrastructure for Outdoor Digital Display Boards	New Points added	**New Point no. 26** In case SMC/SSCDL's existing network connectivity is available at nearby location then SI shall be responsible for cable laying(CAT6/Fiber), trenching, ducting, Piping(conduiting), Splicing, including all other accessories(including but not limited to fiber termination box/compass) for termination of LAN cable/last mile connectivity for Outdoor Digital Display Board. The cost for relevant activity and material will be paid as per approved rate during the contract period on actuals. **New Point no. 27** **RoW and Restoration Charges** • SI is required to carry out complete process as per SMC guidelines including taking permission. SSCDL/SMC will provide necessary support to expedite the permission. • The security deposit required to be paid at the time of Road Digging Permission will be waived off by SMC. • The Road Reinstatement Charge (RI Charge) will be reimbursed on quarterly basis as per actuals on submission of bills.

#	Section	Page No.	Tender Reference	Existing Clause	Amended/New Clause
					• In case of HDD, the Road Reinstatement Charges will be calculated considering the actual road that has been dug (the pit area). • Annual Rentals as per SMC policy will be waived off by SMC. • The SI shall inform all concerned authorities and obtain NOC or permissions as required before starting work. • In case of the permission is required from any other authority apart from SMC, the SI is required to coordinate. SMC/SSCDL will facilitate and provide necessary support to expedite the same.
6.	4.3.2.15	33	Earthing System	New Point	**Point no 5** SI is required to submit Earthing Test Report from Government approved electrical contractor/auditor clearly indicating compliance of relevant parameters as per the norms/ rules & regulation set by Chief Electrical Inspector, Gujarat for all installations pertaining to ODDBs and Data Center. SI is required to submit this report each year (pre-monsoon) at its own cost during the contract period.
7.	4.3.2.17.1	33	Factory Acceptance	The SI shall have to submit **Factory Test Certificate for the pole/mounting structure of Outdoor Digital Board System before the actual supply of the items**. Authorized representative from SSCDL/SMC may visit the manufacturing plant	The SI shall have to submit **Factory Test Certificate for the pole/mounting structure of Outdoor Digital Board System before the actual supply of the items**. Authorized representative from SSCDL/SMC may visit the manufacturing plant of the product and will check the testing process. SI is required to bear all the

#	Section	Page No.	Tender Reference	Existing Clause	Amended/New Clause
				of the product and will check the testing process.	expenses including lodging and boarding expense of Authorized representatives (2 officials) from SSCDL/SMC.
8.	4.3.3.4	49	Application Support and Maintenance Support	**Point no 7** **Maintain System Documents**	The revised clause is as under: **Point no 7** **Maintain System Documents**: SI shall maintain at least the following minimum documents with respect to the proposed solution/system: • High level design of whole system • Low Level design for whole system / Module design level • System requirements Specifications (SRS) • Any other explanatory notes about system • Traceability matrix • Compilation environment • SI shall also ensure updating of documentation of software system ensuring that: - Source code for customization is documented - Functional specifications are documented - Application documentation is updated to reflect on-going maintenance and enhancements including FRS and SRS, in accordance with the defined standards - User manuals and training manuals are updated to reflect on-going changes/enhancements - Standard practices are adopted and followed in respect of version control and management

#	Section	Page No.	Tender Reference	Existing Clause	Amended/New Clause
					• All the project documents need to follow version control mechanism. SI will be required to keep all project documentation updated and should ensure in case of any change, the project documents are updated and submitted to SSCDL/SMC by the end of next quarter.
9.	4.4.2	60	Design Considerations for ICCC	15. **Infrastructure Security**	The revised clause is as under: **15. Infrastructure Security -** The following focused initiatives to discover and remedy security vulnerabilities of the IT systems of SSCDL/SMC Smart City should be considered to proactively prevent percolation of any threat vectors - • Deploy anti-virus software to all workstations and servers to reduce the likelihood of security threats. • The server and other system /application software should be regularly patched/updated to ensure protection from vulnerabilities. • Perform periodic scanning of the network to identify system level vulnerabilities • Establish processes for viewing logs and alerts which are critical to identify and track threats and compromises to the environment. The granularity and level of logging must be configured to meet the security management requirements
10.	5.1	70	Bidder's Eligibility Criteria		Please refer to Annexure I for revised Bidder's Eligibility Criteria

#	Section	Page No.	Tender Reference	Existing Clause	Amended/New Clause
11.	5.2	75	OEM's Eligibility Criteria	**B — Outdoor Digital Display Board OEM** **1** OEM must have supplied at least 500 Digital Display Boards (indoor and or outdoor) with minimum 150 Out-door Digital Display Boards during the last 7 years from the date of bid submission of which minimum 40% quantity must be supplied in India. The size of boards must be minimum 10 sq.mt area with at least 2 X 2 matrix in India (excluding Rental orders) for consideration under this criterion.	**B — Outdoor Digital Display Board OEM** **1** OEM must have supplied at least 300 Digital Display Boards (indoor and or outdoor) with minimum 125 Out-door Digital Display Boards during the last 7 years from the date of bid submission of which minimum 40% quantity must be supplied in India. The size of boards must be minimum 6 sq.mt area with at least 2 X 2 matrix in India (excluding Rental orders) for consideration under this criterion.
12.	6.22	89	Technical Evaluation Criteria		Please refer to Annexure II for revised Technical Evaluation Criteria
13.	6.24	97	Evaluation of Commercial Bids and Selection Method	5. Total Estimated Commercial Bid of a bidder would be calculated based on quantities given in Section 12. The quantities in this table are estimated quantity and the actual quantity will be determined at the time of project execution based on the feasibility report and actual requirements considering site situation.	5. Total Estimated Commercial Bid of a bidder would be calculated based on quantities given in Section 12. The quantities in this table are estimated quantity and the actual quantity will be determined at the time of project execution based on the feasibility report and actual requirements considering site situation. The payment will be made as per actual executed quantity as per tender rates for entire duration of contract.
14.	6.27	98	Quantity Variation	1. The quantity defined in the RFP are estimated and the actual quantity will be executed based on the actual site survey by the selected bidder at the time of project implementation. The quoted rate will remain	1. The quantity defined in the RFP are estimated and the actual quantity will be executed based on the actual site survey by the selected bidder at the time of project implementation. The quoted rate will remain firm and same for such variation in quantity.

#	Section	Page No.	Tender Reference	Existing Clause	Amended/New Clause
				firm and same for such variation in quantity. The successful bidder shall not object to the upward or downward variation in quantities (including locations).	The successful bidder shall not object to the upward or downward variation in quantities (including locations). The payment will be made as per actual executed quantity as per tender rates for entire duration of contract.
15.	6.36	102		New Clause Added	Please refer to Annexure III for 6.36 General Clause related to Any Bidders/Sub-Contractor from a Country Which Shares a Land Border with India
16.	8.1	112	Project Milestone Point No. 2		Please refer to Annexure IV for revised point no.2
17.	10.7	126	PQ_6: Affidavit		Please refer to Annexure V for revised PQ_6: Affidavit
18.	10.12	136	PQ_11: Format for Specifying the Make & Model		Please refer Annexure VI for revised PQ_11 Format for Specifying the Make & Model
19.	12.3	163-	Commercial Bid Format		Please refer Annexure VII for revised Commercial Bid Format
20.	13.1.2	189	Functional and Technical specification for CCC Software	75. Authentication - Should have ability to respond to real-time data with intelligent & automated decisions	75. Real Time Data Analysis: Should have ability to respond to real-time data with intelligent & automated decisions
21.	14	209-296	Annexure II-Technical		Please refer to Annexure VIII for revised Annexure II- Technical requirements for ICT Components

#	Section	Page No.	Tender Reference	Existing Clause	Amended/New Clause
			requirements for ICT Components		
22.	14.48	286	Outdoor Cabinets with Air-Conditioned Cooling System		Air-Conditioned Cooling System proposed with Outdoor Cabinets stands deleted. This must be read across the RFP. Please refer Annexure VIII for revised specifications of Outdoor Cabinet. Please refer revised Annexure II- Technical requirements for ICT Components for the same.
23.	14.51	290	Annexure II- Technical requirements for ICT Components	2 Megapixel Full HD IR IP Vandal proof Dome Camera with Varifocal Lens	This must be read across the RFP as "2 Megapixel Full HD IR IP Vandal proof Bullet Camera with Varifocal Lens" Please refer revised Annexure II- Technical requirements for ICT Components for the same.
24.	14	296	Annexure II- Technical requirements for ICT Components	New Components added	Technical Specification of the following new components are added in Annexure VIII Please refer the same. 14.58 Laptop 14.59 Media Converter 14.60 Optical Fiber Cable 14.61 UTP Cat 6 Cable with rodent resistant jacket 14.62 UTP Cat 6 Cable

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#	Section	Page No.	Tender Reference	Existing Clause	Amended/New Clause
					Please refer revised Annexure II- Technical requirements for ICT Components for the same.
25.	19	342	Annexure VII- Master Service Agreement	**11.Third Party Claims** a. Subject to Sub-clause (b) below, the System Integrator (the "Indemnified Party") from and against all losses, claims litigation and damages on account of bodily injury, death or damage to tangible personal property arising in favor or any person, corporation or other entity (including the Indemnified Party) attributable to the Indemnifying Party's performance or non-performance under this Agreement or the SLAs.	**11.Third Party Claims** a. Subject to Sub-clause (b) below, the System Integrator (the Indemnifying Party) shall indemnify and hold harmless SSCDL and all its employees and authorised agents (the "Indemnified Party") from and against all losses, third party claims, litigation and damages on account of bodily injury, death or damage to tangible personal property arising in favor or any person, corporation or other entity (including the Indemnified Party) attributable to the Indemnifying Party's performance or non-performance under this Agreement or the SLAs.
26.	19	349	Annexure VII- Master Service Agreement	**22 Exit Management** **Point iii – Employees** Promptly on reasonable request at any time during the exit management period, the Successful Bidder shall, subject to applicable laws, restraints and regulations (including in particular those relating to privacy) provide to SSCDL a list of all employees (with job titles and communication address) of the Successful Bidder, dedicated to providing the services at the commencement of the exit management	This clause stands deleted

#	Section	Page No.	Tender Reference	Existing Clause	Amended/New Clause
				period; To the extent that any Transfer Regulation does not apply to any employee of the Successful Bidder, SSCDL or Replacing Vendor may make an offer of contract for services to such employee of the Successful Bidder and the Successful Bidder shall not enforce or impose any contractual provision that would prevent any such employee from being hired by the SSCDL or any Replacing Vendor.	

ANNEXURE -I

5.1 Revised Bidder's Eligibility Criteria

The bidder must possess the requisite experience, strength and capabilities in providing services necessary to meet the requirements as described in the RFP document. Keeping in view the complexity and volume of the work involved, following criteria are prescribed as the eligibility criteria for the bidder interested in undertaking the project. The bidder must also possess technical know-how and financial ability that would be required to successfully provide System Integration, Operation and Maintenance services sought by SMC/SSCDL for the entire contract duration. The bids must be complete in all respect and should cover entire scope of work as stipulated in the bid document. This invitation to bid is open to all bidders who qualify the eligibility criteria as given below:

The Pre-Qualification Criteria for the selection of the vendor or consortium are given below. In case of Consortium, please refer the section 6.6

Note: For evaluation following definition is considered

1. The total Project value shall be considered as Capex Cost + Operation & Maintenance Cost.
2. OEM experience will not be considered for Pre-Qualification Criteria and Technical Evaluation as bidder's experience unless bidder is also an OEM.
3. **Integrated Command & Control Centre (ICCC)/ Command Control Centre (CCC):** ICCC/CCC Project is defined as those projects where Command Centre Application is implemented. ICCC Application at such installation should not only be a viewing platform but should be used for SOP creation and triggering for specific event/incident. Project only pertaining to NOC and/or Data Center Monitoring will not be considered.
4. In case of Consortium only 2 partners are allowed including Prime Bidder. For more details on Consortium please refer to the section 6.6.
5. R&R refers to roles & responsibilities mentioned in Consortium Agreement.

#	Eligibility Criteria	Proof Document Required	Applicable to Sole Bidder	Applicable to Consortium
1.	The Prime Bidder / Sole Bidder should be registered under the Companies Act 1956 and should be in operation in India for a period of at least 5 years as on publication of bid. In case of Consortium, the Consortium Partner should be registered under the Companies Act 1956 Or a partnership firm registered under LLP Act, 2008	Copy of certification of incorporation issued by competent authority/ Registration Certificate	Yes	Yes
2.	Bidder (consortium)/ Sole Bidder jointly should have a minimum average annual turnover of **Rs. 150 Cr.** from ICT based business for last	Copy of the Audited Profit and Loss statement and statutory auditor / CA certificate from a regarding turnover.	Yes	Yes

#	Eligibility Criteria	Proof Document Required	Applicable to Sole Bidder	Applicable to Consortium
	three financial years i.e. FY 2019-20, FY 2018-19, 2017-18. In case of consortium, each partner should have minimum average annual turnover of Rs. 50 Cr. The copies of Audited Annual Accounts for last three years to be submitted along with the bid [FY 2019-20, FY 2018-19, 2017-18]. If 2019-20 Financial Statements of any bidder is unaudited then the Audited Financial Statements of 2016-17 along with an undertaking letter from the bidder that the 2019-20 Statements are not audited is to be submitted.	The certificate should be originally signed or notarized.		
3.	Bidder/ Consortium should have a positive net worth as on 31st March 2020 If 2019-20 Financial Statements of any bidder is unaudited then Bidder should have a positive net worth as on 31st March 2019. Moreover, an undertaking letter from the bidder that the 2019-20 Statements are not audited is to be submitted	Certificate from the statutory auditor / CA towards positive net worth of the company. The certificate should be originally signed or notarized	Yes	Yes (All Members of Consortium)
4.	Sole Bidder / Bidder (Any member in case of Consortium as per R&R defined in Consortium Agreement) should have an experience in implementation of Integrated Command & Control Centre (ICCC) / Command Control Center (CCC) in India in last 7 years from the date of publishing this RFP One project costing not less than the amount equal to INR 20 Cr. with ICCC application solution component worth minimum INR 2.5 Cr. OR	1. Copy of completion certificate issued by client 2. In case of an ongoing project, the project must have achieved the respective value in terms of entire project cost and ICCC application respectively from financial perspective. The Certificate to this effect from the client on client's letter head to be provided. If Go-Live certificate is to be submitted, the same must clearly specify	Yes	Yes (Any member of Consortium)

#	Eligibility Criteria	Proof Document Required	Applicable to Sole Bidder	Applicable to Consortium
	Two projects costing not less than the amount equal to INR 12 Cr. each with ICCC application solution component worth minimum INR 1.5 Cr. OR Three projects costing not less than the amount equal to INR 10 Cr. each with ICCC application solution component worth minimum INR 1.25 Cr. *Note: ICCC Application cost component shall include:* ○ *Licenses cost for ICCC Applications* ○ *SITC cost* ○ *Integration cost* ○ *Operation & Maintenance cost*	the information that help ascertain the compliance to the respective evaluation criteria in terms of domains integrated / achievement of value in terms of project cost and ICCC application Solution component respectively from financial perspective. 3. Copy of Work order / Contract 4. PQ_12: Format for Use Case Submission from OEM		
5.	Sole Bidder / Bidder (Any member in case of Consortium as per R&R defined in Consortium Agreement) should have supplied & installed at least 60 Digital Display Boards (indoor and or outdoor) with minimum 25 Out-door Digital Display Boards during the last 7 years in India from the date of bid submission. The size of boards must be minimum 6 sq.mt. area with at least 2 X 2 matrix (excluding Rental orders) for consideration under this criterion.	• Copy of completion certificate issued by client • Copy of Work order / Contract	Yes	Yes (Any member of Consortium)
6.	Bidder should be registered for GST number in India.	GST Registration Certificate PAN Card	Yes	Yes (All Members of Consortium)
7.	Bidder should not be blacklisted or debarred by any Government / PSU in India at the time of submission of the bid.	Declaration letter by bidder as per format given in the RFP document	Yes	Yes (All Members of Consortium)

ANNEXURE -II

6.22 Revised Technical Evaluation Criteria

The bidder's technical solution proposed in the Technical Evaluation bid shall be evaluated as per the evaluation criteria in the following table:

Section	Evaluation Criteria	Marks
A	Bidders Financial Competence & Organizational Strength	15
B	Project Experience of Bidder	65
C	Proposed IT Products and Solution	20
	Total	**100**

The following sections explain how the bidders shall be evaluated on each of the evaluation criteria:

#	Technical Evaluation Criteria	Technical Evaluation parameter	Marks
A	**Bidders Financial Competence & Organizational Strength**		**15**
1	Bidder's Competence – Turnover	• Bidder (consortium)/ Sole Bidder jointly should have a minimum average annual turnover of **Rs. 150 Cr.** from ICT based business for last three financial years i.e. FY 2019-20, FY 2018-19, 2017-18. In case of consortium, each partner should have minimum average annual turnover 50 Cr. <table><tr><td>Average Turnover (in crores)</td><td>Marks [Maximum: 8]</td></tr><tr><td>>= INR 400 Cr.</td><td>8</td></tr><tr><td>>= INR 350 Cr and < INR 400 Cr.</td><td>7</td></tr><tr><td>>= INR 300 Cr and < INR 350 Cr.</td><td>6</td></tr><tr><td>>= INR 250 Cr and < INR 300 Cr.</td><td>5</td></tr><tr><td>>= INR 200 Cr. and < INR 250 Cr.</td><td>4</td></tr><tr><td>>= INR 150 Cr. and < INR 200 Cr.</td><td>3</td></tr></table> • Bidder to submit the Certificate from the statutory auditor / CA clearly specifying the annual turnover from ICT for the specified years. Original or Notarized copy of the certificate should be submitted • The copies of Audited Annual Accounts for last three years to be submitted along with the bid [FY 2019-20,FY 2018-19, 2017-18].If 2019-20 Financial Statements of any bidder is unaudited then the Audited Financial Statements of 2016-17 along with an undertaking letter from the bidder that the 2019-20 Statements are not audited is to be submitted	8

#	Technical Evaluation Criteria	Technical Evaluation parameter	Marks
2	People in organization	• The prime bidder having at least 250 FTE (full time employees) on the payroll of organization working on ICT projects. **Note:** Full time Employees defined as employees on the Payroll of organization. Moreover, the employees of the Group companies will not be considered. The employees count of bidding entity will only be considered for evaluation. Bidder to submit the Certificate from the HR or Company Secretary clearly specifying the total no of employees within the organization. Original or Notarized copy of the certificate should be submitted	3
3	Bidder's Certification	Certification with the Sole Bidder or any member of consortium (valid as on date of issuance of the bid): a. ISO 9001:2008 b. ISO 20000:2011 for IT Service Management c. ISO 27001:2013 for Information Security Management System d. CMMi Level 3 e. CMMi Level 5	4
B	**Project Experience of Bidder**		**65**
1	Bidder Experience – Executing Command Control Center Project	Experience of Sole Bidder / Bidder (Any member in case of Consortium as per R&R defined in Consortium Agreement) in implementation of Integrated Command & Control Centre (ICCC) /Command Control Center (CCC) in India in last 7 years from the date of publishing this RFP	25

Table within criteria 2:

Number of FTE	Marks [Maximum: 3]
> 500	3
> 250 FTE to =<500 FTE	2
= 250 FTE	1

Table within criteria 3:

Certification	Marks [Maximum: 4]
Any one ISO certificate	1
Any two ISO certification or CMMi Level 3	2
All ISO certification or CMMi Level 5 Certification or Any two ISO certification & CMMi Level 3 Certification	3
Any two ISO certification & CMMi Level 5 Certification or All ISO Certification & CMMi Level 3 Certification	4

#	Technical Evaluation Criteria	Technical Evaluation parameter		Marks
		Number of Projects	**Marks [Maximum: 25]**	
		For satisfying PQ criteria	10	
		Additional project over and above the projects submitted under PQ criteria		
		Every additional project costing not less than the mount equal to INR 20 Cr. with ICCC application worth minimum INR 2.5 Cr.	7.5	
		Every additional costing not less than the amount equal to INR 12 Cr. each with ICCC application worth minimum INR 1.5 Cr.	5	
		Every additional project costing not less than the amount equal to INR 10 Cr. each with ICCC application worth minimum INR 1.25 Cr.	2.5	
		Bidder is required to submit: 1. Copy of completion certificate issued by client 2. In case of an ongoing project, the project must have achieved the respective value in terms of entire project cost and ICCC application Solution component respectively from financial perspective. The Certificate to this effect from the client on client's letter head to be provided. If Go-Live certificate is to be submitted, the same must clearly specify the information that help ascertain the compliance to the respective evaluation criteria in terms of domains integrated / achievement of value in terms of project cost and ICCC application Solution component respectively from financial perspective. 3. Copy of Work order / Contract 4. PQ_12: Format for Use Case Submission from OEM		
2	Bidder Experience – Executing Command Control Center Application	Experience of Sole Bidder / Bidder (Any member in case of Consortium as per R&R defined in Consortium Agreement) in implementation of ICCC Solution integrating domains/systems in the last seven (7) years in India. 1. Adaptive/Intelligent Traffic Control System (ATCS Signals with or without ANPR, RLVD, Wrong side, Speed detection, etc.) 2. Intelligent Transit Management System / Vehicle Tracking System with minimum 100 VTS Units 3. SCADA System for drinking Water Treatment Plant / Water Distribution Plant		15

#	Technical Evaluation Criteria	Technical Evaluation parameter	Marks
		4. SCADA System for Sewage Treatment Plant / Sewage Pumping Station 5. Solid Waste Management integrating smart components like GPS and RFID 6. Grievance Redressal System based on ERP/Custom/Third Party Application 7. CCTV/ Surveillance Network cameras (Excluding Camera considered under Point 1) 8. Sensor/IoT based Smart Street Lighting System to monitor and control on/off and timer controller, etc. 9. Revenue Collection Systems (Property Tax, Water Meter Billing, Other Utility Meter Reading, AFCS etc.) based on ERP/Custom/Third Party Application 10. Electricity/Gas SCADA for utility company or power/gas generation company 11. Network monitoring for large scale WiFi service / dedicated OFC network 12. Sensor/IoT based Smart Parking 13. Public Announcement System / PIS / VMS / Outdoor Digital Display **Note:** Project components considered under one domain will not be considered under other domain. E.g. VTS installation under Sr. No. 5. Smart Solid Waste Management will not considered again under Sr. No. 2. Intelligent Transit Management System / Vehicle Tracking System with minimum 100 VTS Units.	

Particular	Marks
One project integrating any 5 domains/ systems mentioned above	7.5
One project integrating any 4 domains/ systems mentioned above	5
One project integrating any 3 domains/ systems mentioned above	2.5
Maximum Marks: 15	

Bidder is required to submit:

1) Copy of Work order / Contract

2) Copy of completion certificate issued by client

3) In case of an ongoing project, the claimed domains/systems must have been integrated. The Certificate to this effect

#	Technical Evaluation Criteria	Technical Evaluation parameter	Marks
		from the client on client's letter head to be provided. If Go-Live certificate is to be submitted, the same must clearly specify the information that help ascertain the compliance in terms of domains integrated 4) PQ_12: Format for Use Case Submission from OEM.	
3	Bidder Experience – No of Outdoor LED Display Board Implemented	Relevant experience of Sole Bidder / Bidder (Any member in case of Consortium as per R&R defined in Consortium Agreement) in SITC of Digital Display Boards in last 7 years in India from the date of publishing the RFP. The size of boards must be minimum 6 sq.mt area with at least 2 X 2 matrix (excluding Rental orders) for consideration under this criterion. | Particular	Marks
---	---
One project for SITC of minimum 30 Digital Display Boards (indoor and/or outdoor)	7.5
One project for SITC of minimum 20 Digital Display Boards (indoor and/or outdoor)	5
One project for SITC of minimum 10 Digital Display Boards (indoor and/or outdoor)	2.5
One project for SITC of minimum 5 Digital Display Boards (indoor and/or outdoor)	1
Maximum Marks: 15		 Bidder is required to submit: • Copy of Work Order/ Contract • Copy of completion certificate issued by client • In case of an ongoing project, the project must have achieved the respective count in terms of Display Boards installed and commissioned. The Certificate to this effect from the client on client's letter head to be provided. • The supporting documents must clearly specify the information that help ascertain the compliance to the respective evaluation criteria.	15
4	Bidder Experience – Outdoor LED Display Board Projects	Relevant experience of Sole Bidder / Bidder (Any member in case of Consortium as per R&R defined in Consortium Agreement) in SITC of Digital Display Boards in last 7 years in India from the date of publishing the RFP. | Particular	Marks
---	---
One project costing not less than the amount equal to INR 10 Cr.	5
One project costing not less than the amount equal to INR 7.5 Cr.	4
One project costing not less than the amount equal to INR 5 Cr.	3
One project costing not less than the amount equal to INR 2.5 Cr.	2
Maximum Marks: 10			10

#	Technical Evaluation Criteria	Technical Evaluation parameter	Marks
		Bidder is required to submit: • Copy of Work Order/ Contract • Copy of completion certificate issued by client • In case of an ongoing project, the project must have achieved the respective value in terms of Display Board solution components installed and commissioned from financial perspective. The Certificate to this effect from the client on client's letter head to be provided. • The supporting documents must clearly specify the information that help ascertain the compliance to the respective evaluation criteria.	
C	**Proposed IT Products and Solution**		**20**
1	Active Network Equipment (Network Switches)		4

Particular	Marks
Proposed OEM listed in **Leaders Quadrant** of the latest Gartner Magic Quadrant for **Wired and Wireless LAN Access Infrastructure**	4
Proposed OEM listed in **Challengers Quadrant** of the latest Gartner Magic Quadrant for **Wired and Wireless LAN Access Infrastructure**	2
Proposed OEM listed in **Visionaries Quadrant** of the latest Gartner Magic Quadrant for Wired and Wireless LAN Access Infrastructure	1
Proposed OEM for **Wired and Wireless LAN Access Infrastructure doesn't belong to above Gartner Magic Quadrant** as per the latest published report	0

#	Technical Evaluation Criteria		Marks
2	Servers		6

Particular	Marks
Proposed OEM listed in **Leaders Quadrant** of the latest Gartner Magic Quadrant for **Modular Servers**	6
Proposed OEM listed in **Challengers Quadrant** of the latest Gartner Magic Quadrant for **Modular Servers**	4
Proposed OEM listed in **Visionaries Quadrant** of the latest Gartner Magic Quadrant for **Modular Servers**	2
Proposed OEM for **Modular Servers doesn't belong to Gartner Magic Quadrant** as per the latest published report	0

#	Technical Evaluation Criteria	Technical Evaluation parameter	Marks
3	Storage		6

Particular	Marks
Proposed OEM listed in **Leaders Quadrant** of the latest Gartner Magic Quadrant for Primary storage	6
Proposed OEM listed in **Challengers Quadrant** of the latest Gartner Magic Quadrant for Primary storage	4
Proposed OEM listed in **Visionaries Quadrant** of the latest Gartner Magic Quadrant for Primary storage	2
Proposed OEM for Primary storage **doesn't belong to Gartner Magic Quadrant** as per the latest published report	0

#	Technical Evaluation Criteria	Technical Evaluation parameter	Marks
4	Enterprise Security Solution for Servers		4

Particular	Marks
Proposed OEM listed in **Leaders Quadrant** of the latest Gartner Magic Quadrant for Endpoint Protection Platforms	4
Proposed OEM listed in **Challengers Quadrant** of the latest Gartner Magic Quadrant for Endpoint Protection Platforms	2
Proposed OEM listed in **Visionaries Quadrant** of the latest Gartner Magic Quadrant for Endpoint Protection Platforms	1
Proposed OEM for Endpoint Protection Platforms **doesn't belong to Gartner Magic Quadrant** as per the latest published report	0

ANNEXURE -III

6.36 General Clause related to Any Bidders/Sub-Contractor from a Country Which Shares a Land Border with India

I. Any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority(Registration committee constituted by the Department for Promotion of Industry and Internal Trade (DPIIT)).

II. "Bidder" (including the term 'tenderer', 'consultant' or 'service provider' in certain contexts) means any person or firm or company, including any member of a consortium or joint venture (that is an association of several persons, or firms or companies), every artificial juridical person not falling in any of the descriptions of bidders stated hereinbefore, including any agency branch or office controlled by such person, participating in a procurement process.

III. "Bidder from a country which shares a land border with India" means:

    a. An entity incorporated, established or registered in such a country; or

    b. A subsidiary of an entity incorporated, established or registered in such a country; or

    c. An entity substantially controlled through entities incorporated, established or registered in such a country; or

    d. An entity whose beneficial owner is situated in such a country; or

    e. An Indian (or other) agent of such an entity; or

    f. A natural person who is a citizen of such a country; or

    g. A consortium or joint venture where any member of the consortium or joint venture falls under any of the above

IV. The beneficial owner for the purpose of (iii) above will be as under:

    1. In case of a company or Limited Liability Partnership, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has a controlling ownership interest or who exercises control through other means.

        a. Explanation—

        b. "Controlling ownership interest" means ownership of or entitlement to more than twenty-five per cent. of shares or capital or profits of the company;

        c. "Control" shall include the right to appoint majority of the directors or to control the management or policy decisions including by virtue of their shareholding or management rights or shareholders agreements or voting agreements;

    2. In case of a partnership firm, the beneficial owner is the natural person(s) who, whether acting alone or together, or through one or more juridical person, has ownership of entitlement to more than fifteen percent of capital or profits of the partnership;

    3. In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has ownership of or entitlement to more than fifteen percent of the property or capital or profits of such association or body of individuals;

    4. Where no natural person is identified under i or ii or iii above, the beneficial owner is the relevant natural person who holds the position of senior managing official;

    5. In case of a trust, the identification of beneficial owner(s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership.

V.   An Agent is a person employed to do any act for another, or to represent another in dealings with third person.

VI.   The successful bidder shall not be allowed to sub-contract works to any contractor from a country which shares a land border with India unless such contractor is registered with the Competent Authority(Registration committee constituted by the Department for Promotion of Industry and Internal Trade (DPIIT))..

ANNEXURE -IV

8.1 Project Milestone

2. SMC / SSCDL shall issue subsequent Request Orders (ROs) as & when required indicating the number of units of hardware & software as per below to be supplied based on actual requirements during contract period.

#	Component	SITC Time Limit
1	Video wall solution for 3rd Floor	60 days
2	Integration for additional 25 Uses cases in ICCC Application	90 days
3	Desktop PC, Workstations, 49" Curved screens for Operators, Printers, LAN equipment, etc.	45 days
4	**Additional Outdoor Digital Display Boards**	
4.1	Additional Outdoor Digital Display Boards up to 10 quantities	90 days
4.2	Additional Outdoor Digital Display Boards up to 5 quantities	60 days

ANNEXURE -V

Revised PQ_6: Affidavit

The affidavit format as indicated below to be furnished on non-judicial stamp paper of Rs. 300 (duly notarized) by bidder (or each member of consortium, in case of consortium)

Name of work: Selection of Implementing Agency for Integrated Command and Control Center (ICCC) and Outdoor Digital Display Boards (ODDB) in Surat.

1. I, the undersigned, do hereby certify that all the statements made in the required attachments are true and correct.

2. The undersigned also hereby certifies that neither our firm M/s .... nor any of its constituent partners have abandoned any work in India nor any contract awarded to us for such works has been rescinded during last five years, from the date of this bid submission. I hereby certify that presently our Company is not blacklisted or debarred by any Government / PSU on the date of Bid Submission.

3. The undersigned hereby authorize(s) and request(s) any bank, person, authorities, government or public limited institutions, firm or corporation to furnish pertinent information deemed necessary and requested by the SSCDL/SMC to verify our statements or our competence and general reputation.

4. The undersigned hereby declares that I have read clause regarding restriction on procurement from a bidder of a country which shares a land border with India and on sub-contracting to contractors from such countries.
     I certify that M/s <<name of Company>> is not from such a country.
                    OR
     I certify that M/s <<name of Company>> belongs to such a country and has been registered with the Competent Authority (i.e. Registration committee constituted by the Department for Promotion of Industry and Internal Trade (DPIIT)) and the copy of valid registration from competent authority has been attached in this regard.

I on behalf of M/s <<name of Company>> further undertake that we will not sub contract any work to a contractor from such countries unless such contractor is registered with the Competent Authority.

I hereby certify that M/s <<name of Company>> fulfils all requirements in this regard and is eligible to be considered.

5. The undersigned understands and agreed that further qualifying information may be requested and agrees to furnish any such information at the request of the SSCDL/SMC.

6. The SMC/SSCDL and its authorized representative are hereby authorized to conduct any inquiries or investigations to verify the statements, documents, and information submitted in connection with this application and to seek clarification from our bankers and clients regarding any financial and technical aspects. This Affidavit will also serve as authorization to any individual or authorized representative of any institution referred to in the supporting information, to provide such information deemed necessary and requested by you to verify statements and information provided in the tender or with regard to the resources, experience and competence of the Applicant.

7. My/ our offer shall not be considered in case of fake/ forged document(s) found during verification at any stage or at any stage of contract. I/ We are agreed to whatever action (s) taken by competent authority of corporation in the aforesaid circumstances such as forfeiture of security deposit and debarring from

Sign

Stamp

participation in future tenders for the period/ years as deemed fit by the corporation and informing the same to all other state/ central level Government/ semi government organizations.

Signed by the Authorized Signatory of the firm   _____

Title of the office: _____

Name of the firm: _____

Date: _____

ANNEXURE -VI

PQ_11: Format for Specifying the Make & Model

The bidder must clearly mention the hardware (IT & Non-IT) and software components proposed as part of the solution along with the OEM & Model and units for the same. Bidder is required to submit the, Bidder Compliances, OEM Compliances, MAF (Authorization Letter from OEMs – PQ_10) and datasheets as per below tables.

H1. IT HARDWARE WITH 3 YEARS OF WARRANTY SUPPORT FROM THE DATE OF GOLIVE

1. It is mandatory to provide the details pertaining to OEM and Model/Version No. for all components. i.e. wherever it is mention as "Specify"
2. The Bidder and OEM compliances wherever it has mentioned "Yes" must be duly signed and stamped and same must be submitted in original or notarized. The Bidder and OEM compliances must be submitted for all components whose specifications are mentioned in Annexure I,II & III of the RFP
3. The OEM Authorization Letter wherever it has mentioned "Yes" must be duly signed and stamped and same must be submitted in original or notarized. as per PQ_10 format
4. NA stands for Not Applicable
5. The quantity mentioned hereinunder are indicative in number. SSCDL/SMC may or may not procure the listed components in mentioned quantities. SSCDL/SMC has the rights to delete/ vary the quantities of any of the component before final implementation. Also, SSCDL/SMC reserves the right to remove any of the line components (as per BOQ provided)
6. The details specified hereinunder as part of BOQ should be exactly same as those specified in the price bid in terms of OEM & Model/Version No.

#	Description	Unit of Measurement	Quantity	Warranty Period (Years)	Proposed Make	Proposed Model/Version	Bidder's Compliance as per Annexure I / II/ III on Letter Head and Datasheets submission	OEM's Compliance as per Annexure I / II/ III on OEM's Letter Head	OEM's Authorization Letter as per PQ_10
H1. IT HARDWARE WITH 3 YEARS OF WARRANTY SUPPORT									
SITC of IT Hardware Components for ICCC									
1	Projector-1 (6000 lumens)	Number	2	3	Specify	Specify	Yes	Yes	Yes
2	Projector-2 (3000 lumens)	Number	1	3	Specify	Specify	Yes	Yes	Yes
3	Projector Screen 1 (200 Inch)	Number	2	3	Specify	Specify	Yes	NA	NA
4	Projector Screen 2 (100 Inch)	Number	1	3	Specify	Specify	Yes	NA	NA
5	65" LED Display Screen	Number	15	3	Specify	Specify	Yes	Yes	Yes
6	Wired and Wireless Presentation Solution for Conference Room	Number	2	3	Specify	Specify	Yes	Yes	Yes

#	Description	Unit of Measurement	Quantity	Warranty Period (Years)	Proposed Make	Proposed Model/Version	Bidder's Compliance as per Annexure I / II/ III on Letter Head and Datasheets submission	OEM's Compliance as per Annexure I / II/ III on OEM's Letter Head	OEM's Authorization Letter as per PQ_10
H1. IT HARDWARE WITH 3 YEARS OF WARRANTY SUPPORT									
7	8-Port HDMI Cat 5/6 Splitter	Number	2	3	Specify	Specify	Yes	Yes	Yes
Civil and Non IT for Data Center										
8	Access Control System	Number	1	3	Specify	Specify	Yes	NA	NA
9	Fire Detection and Alarm System	Number	1	3	Specify	Specify	Yes	Yes	Yes
10	Fire Suppression System	Number	1	3	Specify	Specify	Yes	Yes	Yes
11	Data Center Management System	Number	1	3	Specify	Specify	Yes	Yes	Yes
12	Aspirating Smoke Detector System	Number	1	3	Specify	Specify	Yes	Yes	Yes

Sign

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H2. IT HARDWARE WITH 3 YEARS OF WARRANTY SUPPORT (Bidder to specify the Quantity) FROM THE DATE OF GOLIVE

1. It is mandatory to provide the details pertaining to OEM, Model/Version No and exact Quantity for all components. i.e. wherever it is mention as "Specify"
2. The Bidder and OEM compliances wherever it has mentioned "Yes" must be duly signed and stamped and same must be submitted in original or notarized. The Bidder and OEM compliances must be submitted for all components whose specifications are mentioned in Annexure I,II & III of the RFP
3. The OEM Authorization Letter wherever it has mentioned "Yes" must be duly signed and stamped and same must be submitted in original or notarized. as per PQ_10 format
4. NA stands for Not Applicable
5. The details specified hereinunder as part of BOQ should be exactly same as those specified in the price bid in terms of OEM & Model/Version No.

#	Description	Unit of Measurement	Quantity	Warranty Period (Years)	Proposed Make	Proposed Model/Version	Bidder's Compliance as per Annexure I / II/ III on Letter Head and Datasheets submission	OEM's Compliance as per Annexure I / II/ III on OEM's Letter Head	OEM's Authorization Letter as per PQ_10
H2. IT HARDWARE WITH 3 YEARS OF WARRANTY SUPPORT (Bidder to specify the Quantity)									
Civil and Non IT for Data Center and ICCC									
1	Water Leak Detection System	Number	To be specified by bidder as per requirement	3	Specify	Specify	Yes	Yes	Yes
2	Rodent Repellent System	Number	To be specified by bidder as per requirement	3	Yes	Yes	Yes	Yes	Yes

H3. IT HARDWARE WITH 5 YEARS OF WARRANTY SUPPORT FROM THE DATE OF GOLIVE

1. It is mandatory to provide the details pertaining to OEM and Model/Version No. for all components. i.e. wherever it is mention as "Specify"
2. The Bidder and OEM compliances wherever it has mentioned "Yes" must be duly signed and stamped and same must be submitted in original or notarized. The Bidder and OEM compliances must be submitted for all components whose specifications are mentioned in Annexure I,II & III of the RFP
3. The OEM Authorization Letter wherever it has mentioned "Yes" must be duly signed and stamped and same must be submitted in original or notarized. as per PQ_10 format
4. NA stands for Not Applicable
5. The quantity mentioned hereinunder are indicative in number. SSCDL/SMC may or may not procure the listed components in mentioned quantities. SSCDL/SMC has the rights to delete/ vary the quantities of any of the component before final implementation. Also, SSCDL/SMC reserves the right to remove any of the line components (as per BOQ provided)
6. The size of Outdoor Digital Display board mentioned 7 mt x5 mt is indicative. The actual size will be finalised at the time of feasibility study of locations proposed for ODDB. In case of change in size of the ODDB as per SMC/SSCDL requirement, the per square meter price will be derived based on the awarded price to the bidder and the same will be used to calculate the price for respective ODDB.
7. The quantities mentioned for below mounting structures for Outdoor Digital Display Boards (ODDB) are based on assumptions. The structure design and quantity will be finalized at the time of feasibility study of locations proposed for ODDB. Further, payment will be made in accordance to the quantity and type of mounting structure finalised
   a) Unipole Mounting Structure of GI Pole (Class B) having 5.5 mt of minimum vertical clearance under the Digital Display Board from the ground surface
   b) Bipole Mounting Structure of GI Pole (Class B) having 5.5 mt of minimum vertical clearance under the Digital Display Board from the ground surface
   c) Gantry across road of 100ft, 150 ft and 200 ft of GI (Class B) material. The gantry must be closed using ACP (Aluminium Composite Plate) sheet or Non-corrosive, water resistant or better sheet.
8. The quantity mentioned for SFP module, **"1G SFP Transceiver Module for 8 Port PoE/PoE+ network switch"** for Outdoor Digital Display Board is indicative in nature. The SSCDL/SMC may or may not procure this SFP module in mentioned quantities. The final quantity will be finalized at the time of feasibility study of locations proposed for ODDB
9. The quantities mentioned for below components are based on assumptions. The quantity will be finalized at the time of feasibility study. However, the payment will be made as per actual utilization of below items
   a. SLTC of 3 core 1.5 sq. mm armoured Power cable with complete accessories
   b. 32 mm DWC & HDPE Pipe
   c. Open Digging, Trenching and Ducting
   d. Horizontal Directional Drilling (HDD)

10. The details specified hereinunder as part of BOQ should be exactly same as those specified in the price bid in terms of OEM & Model/Version No.

#	Description	Unit of Measurement	Quantity	Warranty Period (Years)	Proposed Make	Proposed Model/Version	Bidder's Compliance as per Annexure I / II/ III on Letter Head and Datasheets submission	OEM's Compliance as per Annexure I / II/ III on OEM's Letter Head	OEM's Authorization Letter as per PQ_10
H3. IT HARDWARE WITH 5 YEARS OF WARRANTY SUPPORT									
SITC of IT Hardware Components for ICCC									
1	Desktop PC	Number	75	5	Specify	Specify	Yes	Yes	Yes
2	Laptop	Number	3	5	Specify	Specify	Yes	Yes	Yes
3	Workstations for ICCC Operators	Number	100	5	Specify	Specify	Yes	Yes	Yes
4	49" Curved Monitor for ICCC Operators	Number	100	5	Specify	Specify	Yes	Yes	Yes
5	Monochrome Printer	Number	20	5	Specify	Specify	Yes	Yes	Yes
6	Multi Function Printer - 1	Number	5	5	Specify	Specify	Yes	Yes	Yes
7	Multi Function Printer -2 (Heavy Duty)	Number	2	5	Specify	Specify	Yes	Yes	Yes
8	Colour Laser Printer	Number	1	5	Specify	Specify	Yes	Yes	Yes
9	Indoor Wifi Access Points	Number	30	5	Specify	Specify	Yes	Yes	Yes

#	Description	Unit of Measurement	Quantity	Warranty Period (Years)	Proposed Make	Proposed Model/Version	Bidder's Compliance as per Annexure I / II/ III on Letter Head and Datasheets submission	OEM's Compliance as per Annexure I / II/ III on OEM's Letter Head	OEM's Authorization Letter as per PQ_10
	H3. IT HARDWARE WITH 5 YEARS OF WARRANTY SUPPORT								
10	Video Wall Cubes-70/72" DLP (2 video walls of 14 X 4 matrix)	Number	112	5	Specify	Specify	Yes	Yes	Yes
11	Network based Video Wall Controller (for 60 inputs and 60 outputs)	Number	2	5	Specify	Specify	Yes	Yes	Yes
12	Video Wall Monitoring Software	Number	1	5	Specify	Specify	Yes	Yes	Yes
13	8 ports Unmanaged PoE+ Switch	Number	20	5	Specify	Specify	Yes	Yes	Yes
14	24 ports (1G/1G) Web Managed Switch	Number	10	5	Specify	Specify	Yes	Yes	Yes
15	24 ports (1G/10G) Web Managed Switch	Number	10	5	Specify	Specify	Yes	Yes	Yes

							Bidder's Compliance as per Annexure I / II/ III on Letter Head and Datasheets submission	OEM's Compliance as per Annexure I / II/ III on OEM's Letter Head	OEM's Authorization Letter as per PQ_10
#	**Description**	**Unit of Measurement**	**Quantity**	**Warranty Period (Years)**	**Proposed Make**	**Proposed Model/Version**			

(H3. IT HARDWARE WITH 5 YEARS OF WARRANTY SUPPORT)

#	Description	Unit of Measurement	Quantity	Warranty Period (Years)	Proposed Make	Proposed Model/Version	Bidder's Compliance	OEM's Compliance	OEM's Authorization Letter
16	48 ports (1G/10G) Web Managed Switch	Number	5	5	Specify	Specify	Yes	Yes	Yes
17	1G SFP LX Transceiver Module for above 24 Port Web Managed Switches	Number	20	5	Specify	Specify	Yes	Yes	Yes
18	10G SFP+ LR Transceiver Module for 24 Port/48 Port Web Managed Switches	Number	30	5	Specify	Specify	Yes	Yes	Yes
SITC of IT Hardware Components for Data Center									
19	DC Core Switch	Number	2	5	Specify	Specify	Yes	Yes	Yes
20	10G DAC (10M Length) for DC Core Switch	Number	12	5	Specify	Specify	Yes	Yes	Yes
21	10G SFP+ LR Transceiver Module for DC Core Switch	Number	40	5	Specify	Specify	Yes	Yes	Yes

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ADDENDUM & CORRIGENDUM-1: Selection of Implementing Agency for Integrated
Command Control Center (ICCC) and Outdoor Digital Display Board (ODDB) in Surat
[RFP No.: SSCDL-ICCC-RFP-02-2020]

H3. IT HARDWARE WITH 5 YEARS OF WARRANTY SUPPORT									
#	Description	Unit of Measurement	Quantity	Warranty Period (Years)	Proposed Make	Proposed Model/Version	Bidder's Compliance as per Annexure I / II/ III on Letter Head and Datasheets submission	OEM's Compliance as per Annexure I / II/ III on OEM's Letter Head	OEM's Authorization Letter as per PQ_10
22	40G QSFP+ LR4 Transceiver Module for DC Core Switch	Number	22	5	Specify	Specify	Yes	Yes	Yes
23	DC Aggregation/TOR Switch Type 1	Number	6	5	Specify	Specify	Yes	Yes	Yes
24	40G QSFP+ LR4 Transceiver Module for DC Aggregation/TOR Switch Type 1	Number	12	5	Specify	Specify	Yes	Yes	Yes
25	DC Aggregation/TOR Switch Type 2	Number	4	5	Specify	Specify	Yes	Yes	Yes
26	10G SFP+ LR Transceiver Module for DC Aggregation/TOR Switch Type 2	Number	70	5	Specify	Specify	Yes	Yes	Yes

							Bidder's Compliance as per Annexure I / II/ III on Letter Head and Datasheets submission	OEM's Compliance as per Annexure I / II/ III on OEM's Letter Head	OEM's Authorization Letter as per PQ_10
#	**Description**	**Unit of Measurement**	**Quantity**	**Warranty Period (Years)**	**Proposed Make**	**Proposed Model/Version**			
27	40G QSFP+ LR4 Transceiver Module for DC Aggregation/TOR Switch Type 2	Number	8	5	Specify	Specify	Yes	Yes	Yes
28	DC Application & Delivery Controller with Global Server Load Balancing	Number	2	5	Specify	Specify	Yes	Yes	Yes
29	Wireless LAN controller (Hardware/Software with server) with necessary licenses	Number	1	5	Specify	Specify	Yes	Yes	Yes
30	Rack Servers for SMC Own Requirement	Number	10	5	Specify	Specify	Yes	Yes	Yes
31	Storage with 2 no. of SAN Switches &	Number	1	5	Specify	Specify	Yes	Yes	Yes

The table has title row: **H3. IT HARDWARE WITH 5 YEARS OF WARRANTY SUPPORT**

H3. IT HARDWARE WITH 5 YEARS OF WARRANTY SUPPORT								
#	Description	Unit of Measurement	Quantity	Warranty Period (Years)	Proposed Make	Proposed Model/Version	Bidder's Compliance as per Annexure I / II/ III on Letter Head and Datasheets submission	OEM's Compliance as per Annexure I / II/ III on OEM's Letter Head	OEM's Authorization Letter as per PQ_10
	Complete mounting accessories								
Civil and Non IT for Data Center and ICCC									
32	PAC system of 20 tons each	Number	4	5	Specify	Specify	Yes	Yes	Yes
33	42U Rack for Server	Number	12	5	Specify	Specify	Yes	Yes	Yes
34	42U Rack for Network Devices	Number	4	5	Specify	Specify	Yes	Yes	Yes
35	IP KVM Switch	Number	2	5	Specify	Specify	Yes	Yes	Yes
IT & Non-IT Hardware Components for Digital Display Boards									
36	Outdoor Digital Display Board (7mt x 5mt)	Number	60	5	Specify	Specify	Yes	Yes	Yes
37	SITC of 8 Port PoE/POE+ network Switch with	Number	60	5	Specify	Specify	Yes	Yes	Yes

ADDENDUM & CORRIGENDUM-1: Selection of Implementing Agency for Integrated
Command Control Center (ICCC) and Outdoor Digital Display Board (ODDB) in Surat
[RFP No.: SSCDL-ICCC-RFP-02-2020]

#	Description	Unit of Measurement	Quantity	Warranty Period (Years)	Proposed Make	Proposed Model/Version	Bidder's Compliance as per Annexure I / II/ III on Letter Head and Datasheets submission	OEM's Compliance as per Annexure I / II/ III on OEM's Letter Head	OEM's Authorization Letter as per PQ_10
	Complete mounting accessories as required								
38	1G SFP Transceiver Module for 8 Port PoE/PoE+ network switch	Number	60	5	Specify	Specify	Yes	Yes	Yes
39	SITC of 2 Megapixel Full HD IR IP vandal proof Bullet Camera (2.8mm to 12mm Varifocal lense) with Complete mounting accessories as required	Number	60	5	Specify	Specify	Yes	Yes	Yes
40	SITC of 2 Megapixel IR IP Bullet Camera (Fixed Lens) with	Number	60	5	Specify	Specify	Yes	Yes	Yes

#	Description	Unit of Measurement	Quantity	Warranty Period (Years)	Proposed Make	Proposed Model/Version	Bidder's Compliance as per Annexure I / II/ III on Letter Head and Datasheets submission	OEM's Compliance as per Annexure I / II/ III on OEM's Letter Head	OEM's Authorization Letter as per PQ_10
	Complete mounting accessories as required								
41	Outdoor Speakers for Digital Display Boards	Number	60	5	Specify	Specify	Yes	Yes	Yes
42	Amplifier	Number	60	5	Specify	Specify	Yes	Yes	Yes
43	Outdoor Cabinets	Number	60	5	Specify	Specify	Yes	Yes	Yes
44	Media Player	Number	60	5	Specify	Specify	Yes	Yes	Yes
45	Media Converter	Number	60	5	Specify	Specify	Yes	NA	NA
Mounting Structures for Digital Display Boards									
46	Unipole Mounting Structure of GI Pole (Class B) having 5.5 mt of minimum vertical clearance	Number	30	NA	NA	NA	Yes	NA	NA

							H3. IT HARDWARE WITH 5 YEARS OF WARRANTY SUPPORT		
#	Description	Unit of Measurement	Quantity	Warranty Period (Years)	Proposed Make	Proposed Model/Version	Bidder's Compliance as per Annexure I / II/ III on Letter Head and Datasheets submission	OEM's Compliance as per Annexure I / II/ III on OEM's Letter Head	OEM's Authorization Letter as per PQ_10
	from the ground surface								
47	Bipole Mounting Structure of GI Pole (Class B) having 5.5 mt of minimum vertical clearance from the ground surface	Number	10	NA	NA	NA	Yes	NA	NA
48	Cantilever Mounting Structure of GI Pole (Class B) having 5.5 mt of minimum vertical clearance from the ground surface	Number	10	NA	NA	NA	Yes	NA	NA
49	Gantry across the 100 feet road of GI (Class B) material	Number	6	NA	NA	NA	Yes	NA	NA

Sign

Stamp

H3. IT HARDWARE WITH 5 YEARS OF WARRANTY SUPPORT									
#	Description	Unit of Measurement	Quantity	Warranty Period (Years)	Proposed Make	Proposed Model/Version	Bidder's Compliance as per Annexure I / II/ III on Letter Head and Datasheets submission	OEM's Compliance as per Annexure I / II/ III on OEM's Letter Head	OEM's Authorization Letter as per PQ_10
50	Gantry across the 150 feet road of GI (Class B) material	Number	2	NA	NA	NA	Yes	NA	NA
51	Gantry across the 200 feet road of GI (Class B) material	Number	2	NA	NA	NA	Yes	NA	NA
Civil for Digital Display Boards									
52	SLTC of 3 core 1.5 sq. mm armored Power cable with complete accessories	Rmt	3000	5	Specify	Specify	Yes	NA	NA
53	SLTC of 6 Core Armoured Optical fiber cable with all accessories required for termination	Rmt	4000	5	Specify	Specify	Yes	NA	NA
54	SLTC of UTP Cat 6 Cable with rodent	Rmt	2000	5	Specify	Specify	Yes	NA	NA

							Bidder's Compliance as per Annexure I / II/ III on Letter Head and Datasheets submission	OEM's Compliance as per Annexure I / II/ III on OEM's Letter Head	OEM's Authorization Letter as per PQ_10
H3. IT HARDWARE WITH 5 YEARS OF WARRANTY SUPPORT									
#	Description	Unit of Measurement	Quantity	Warranty Period (Years)	Proposed Make	Proposed Model/Version			
	resistant jacket with all accessories required for termination								
55	SLTC of UTP Cat 6 Cable with all accessories required for termination	Rmt	1500	5	Specify	Specify	Yes	NA	NA
56	32 mm DWC Pipe	Rmt	4000	NA	Specify	Specify	Yes	NA	NA
57	32 mm HDPE Pipe	Rmt	2000	NA	Specify	Specify	Yes	NA	NA
58	Open Digging, Trenching and Ducting	Rmt	4000	NA	NA	NA	NA	NA	NA
59	Horizontal Directional Drilling (HDD)	Rmt	2000	NA	NA	NA	NA	NA	NA

H4. BLADE SERVER /RACK SERVER, BLADE CHASIS FOR ICCC & ODDB REQUIREMENTS (WITH 5 YEARS OF WARRANTY SUPPORT FROM THE DATE OF GOLIVE)

1. It is mandatory to provide the details pertaining to OEM, Product Name, Version, Part Code and exact Quantity for all components. i.e. wherever it is mention as "Specify"
2. The Bidder and OEM compliances wherever it has mentioned "Yes" must be duly signed and stamped and same must be submitted in original or notarized. The Bidder and OEM compliances must be submitted for all components whose specifications are mentioned in Annexure I,II & III of the RFP
3. The OEM Authorization Letter wherever it has mentioned "Yes" must be duly signed and stamped and same must be submitted in original or notarized. as per PQ_10 format
4. NA stands for Not Applicable
5. The details specified hereinunder as part of BOQ should be exactly same as those specified in the price bid in terms of OEM & Model/Version No.

H4. BLADE SERVER /RACK SERVER, BLADE CHASIS FOR ICCC & ODDB REQUIREMENTS (WITH 5 YEARS OF WARRANTY SUPPORT)										
#	Product Name	Make/OEM	Version/Model	Part Code	Unit of Measurement	Quantity	Warranty (years)	Bidder's Compliance as per Annexure I / II/ III on Letter Head and Datasheets submission	OEM's Compliance as per Annexure I / II/ III on OEM's Letter Head	OEM's Authorization Letter as per PQ_10
SITC of IT Hardware Components for Data Center										
1	Specify	Specify	Specify	Specify	Number	Specify	5	Yes	Yes	Yes
2	Specify	Specify	Specify	Specify	Number	Specify	5	Yes	Yes	Yes
3	Specify	Specify	Specify	Specify	Number	Specify	5	Yes	Yes	Yes

H4. BLADE SERVER /RACK SERVER, BLADE CHASIS FOR ICCC & ODDB REQUIREMENTS (WITH 5 YEARS OF WARRANTY SUPPORT)										
#	Product Name	Make/OEM	Version/Model	Part Code	Unit of Measurement	Quantity	Warranty (years)	Bidder's Compliance as per Annexure I / II/ III on Letter Head and Datasheets submission	OEM's Compliance as per Annexure I / II/ III on OEM's Letter Head	OEM's Authorization Letter as per PQ_10
...	Specify	Specify	Specify	Specify	Number	Specify	5	Yes	Yes	Yes

S1. ICCC SOFTWARE WITH PERPETUAL LICENSES AND UNLIMITED SENSORS (WITH 5 YEARS OF ATS FROM THE DATE OF GOLIVE)

1. It is mandatory to provide the details pertaining to OEM, Product Name, Version, Part Code and exact License Quantity for all components. i.e. wherever it is mention as "Specify"
2. The Bidder and OEM compliances wherever it has mentioned "Yes" must be duly signed and stamped and same must be submitted in original or notarized. The Bidder and OEM compliances must be submitted for all components whose specifications are mentioned in Annexure I,II & III of the RFP
3. The OEM Authorization Letter wherever it has mentioned "Yes" must be duly signed and stamped and same must be submitted in original or notarized. as per PQ_10 format
4. NA stands for Not Applicable
5. The details specified hereinunder as part of BOQ should be exactly same as those specified in the price bid in terms of OEM & Model/Version No

S1. ICCC SOFTWARE WITH PERPETUAL LICENSES AND UNLIMITED SENSORS

#	Product Name	Make/OEM	Version/Model	Part Code	Unit of Measurement	Quantity	ATS (years)	Bidder's Compliance as per Annexure I / II/ III on Letter Head and Datasheets submission	OEM's Compliance as per Annexure I / II/ III on OEM's Letter Head	OEM's Authorization Letter as per PQ_10
ICCC Software with perpetual license and unlimited sensors										
1	Specify	Specify	Specify	Specify	Number	Specify	5	Yes	Yes	Yes
2	Specify	Specify	Specify	Specify	Number	Specify	5	Yes	Yes	Yes
...	Specify	Specify	Specify	Specify	Number	Specify	5	Yes	Yes	Yes

S2. CALL CENTER MANAGEMENT SOFTWARE SOLUTION FOR 50 USER LICENSES (WITH 5 YEARS OF ATS FROM THE DATE OF GOLIVE)

1. It is mandatory to provide the details pertaining to OEM, Product Name, Version, Part Code and exact License Quantity for all components. i.e. wherever it is mention as "Specify"
2. The Bidder and OEM compliances wherever it has mentioned "Yes" must be duly signed and stamped and same must be submitted in original or notarized. The Bidder and OEM compliances must be submitted for all components whose specifications are mentioned in Annexure I,II & III of the RFP
3. The OEM Authorization Letter wherever it has mentioned "Yes" must be duly signed and stamped and same must be submitted in original or notarized. as per PQ_10 format
4. NA stands for Not Applicable
5. The details specified hereinunder as part of BOQ should be exactly same as those specified in the price bid in terms of OEM & Model/Version No

S2. CALL CENTER MANAGEMENT SOFTWARE SOLUTION FOR 50 USER LICENSES										
#	**Product Name**	**Make/OEM**	**Version/Model**	**Part Code**	**Unit of Measurement**	**Quantity**	**ATS (years)**	**Bidder's Compliance as per Annexure I / II/ III on Letter Head and Datasheets submission**	**OEM's Compliance as per Annexure I / II/ III on OEM's Letter Head**	**OEM's Authorization Letter as per PQ_10**
Call Center Management Software solution for 50 user licenses										
1	Specify	Specify	Specify	Specify	Number	Specify	5	Yes	Yes	Yes
2	Specify	Specify	Specify	Specify	Number	Specify	5	Yes	Yes	Yes
...	Specify	Specify	Specify	Specify	Number	Specify	5	Yes	Yes	Yes

S3. SOFTWARE LICENSES FOR VIRTUALISATION, SERVER OS, DATABASE, ENTERPRISE SECURITY & ANTIVIRUS SOFTWARE (WITH 5 YEARS OF ATS FROM THE DATE OF GOLIVE)

1. Bidder is required to clearly list each item that is licensed separately and required as part of proposed solution w.r.t. Server OS, Database, Antivirus, Virtualization License, etc. for Data Center
2. It is mandatory to provide the details pertaining to OEM, Product Name, Version, Part Code and exact License Quantity for all components. i.e. wherever it is mention as "Specify"
3. The Bidder and OEM compliances wherever it has mentioned "Yes" must be duly signed and stamped and same must be submitted in original or notarized. The Bidder and OEM compliances must be submitted for all components whose specifications are mentioned in Annexure I,II & III of the RFP
4. The OEM Authorization Letter wherever it has mentioned "Yes" must be duly signed and stamped and same must be submitted in original or notarized. as per PQ_10 format

5. NA stands for Not Applicable
6. The details specified hereinunder as part of BOQ should be exactly same as those specified in the price bid in terms of OEM & Model/Version No

S3. SOFTWARE LICENSES FOR VIRTUALISATION, SERVER OS, DATABASE, ENTERPRISE SECURITY & ANTIVIRUS SOFTWARE										
#	Product Name	Make/OEM	Version/Model	Part Code	Unit of Measurement	Quantity	ATS (years)	Bidder's Compliance as per Annexure I / II/ III on Letter Head and Datasheets submission	OEM's Compliance as per Annexure I / II/ III on OEM's Letter Head	OEM's Authorization Letter as per PQ_10
Software Licenses for Virtualisation, Server OS, Database, Enterprise Security & Antivirus Software										
1	Specify	Specify	Specify		Number	Specify	5	Yes	Yes	Yes
2	Specify	Specify	Specify		Number	Specify	5	Yes	Yes	Yes
...	Specify	Specify	Specify		Number	Specify	5	Yes	Yes	Yes

S4. VM BASED NETWORK ACCESS CONTROL SOLUTION (WITH 5 YEARS OF ATS FROM THE DATE OF GOLIVE)

1. It is mandatory to provide the details pertaining to OEM, Product Name, Version, Part Code and exact License Quantity for all components. i.e. wherever it is mention as "Specify"
2. The Bidder and OEM compliances wherever it has mentioned "Yes" must be duly signed and stamped and same must be submitted in original or notarized. The Bidder and OEM compliances must be submitted for all components whose specifications are mentioned in Annexure I,II & III of the RFP
3. The OEM Authorization Letter wherever it has mentioned "Yes" must be duly signed and stamped and same must be submitted in original or notarized. as per PQ_10 format
4. NA stands for Not Applicable

5. The details specified hereinunder as part of BOQ should be exactly same as those specified in the price bid in terms of OEM & Model/Version No

S4. VM Based Network Access Control Solution										
#	Product Name	Make/OEM	Version/Model	Part Code	Unit of Measurement	Quantity	ATS (years)	Bidder's Compliance as per Annexure I / II/ III on Letter Head and Datasheets submission	OEM's Compliance as per Annexure I / II/ III on OEM's Letter Head	OEM's Compliance as per PQ_10
VM Based Network Access Control Solution										
1	Specify	Specify	Specify	Specify	Number	Specify	5	Yes	Yes	Yes
2	Specify	Specify	Specify	Specify	Number	Specify	5	Yes	Yes	Yes
...	Specify	Specify	Specify	Specify	Number	Specify	5	Yes	Yes	Yes

S5. DIGITAL DISPLAY BOARD APPLICATION (WITH 5 YEARS OF ATS FROM THE DATE OF GOLIVE)

1. It is mandatory to provide the details pertaining to OEM, Product Name, Version, Part Code and exact License Quantity for all components. i.e. wherever it is mention as "Specify"
2. The Bidder and OEM compliances wherever it has mentioned "Yes" must be duly signed and stamped and same must be submitted in original or notarized. The Bidder and OEM compliances must be submitted for all components whose specifications are mentioned in Annexure I,II & III of the RFP
3. The OEM Authorization Letter wherever it has mentioned "Yes" must be duly signed and stamped and same must be submitted in original or notarized. as per PQ_10 format
4. NA stands for Not Applicable

5. The details specified hereinunder as part of BOQ should be exactly same as those specified in the price bid in terms of OEM & Model/Version No

#	Product Name	Make/OEM	Version/Model	Part Code	Unit of Measurement	Quantity	ATS (years)	Bidder's Compliance as per Annexure I / II/ III on Letter Head and Datasheets submission	OEM's Compliance as per Annexure I / II/ III on OEM's Letter Head	OEM's Compliance as per PQ_10
S5 Digital Display Board Application										
Digital Display Board Application										
1	Specify	Specify	Specify	Specify	Number	Specify	5	Yes	Yes	Yes
2	Specify	Specify	Specify	Specify	Number	Specify	5	Yes	Yes	Yes
...	Specify	Specify	Specify	Specify	Number	Specify	5	Yes	Yes	Yes

O1. SOFTWARE & OTHER ONE TIME COST

#	Product Name	Part Code	Unit of Measurement	Quantity
1	MS Office Business 2019 standard (one-time purchase) License	Specify	Number	100
2	VMware vSphere 7 Enterprise Plus for 1 processor	VS7-EPL-C	Number	10
3	Production Support/Subscription for VMware vSphere 7 Enterprise Plus for 1 processor for 3 years	VS7-EPL-3P-SSS-C	Number	10
4	WinSvrSTDCore 2019 OLP 2Lic NL Gov CoreLic	9EM-000671	Number	220
5	SQLSvrStdCore 2019 OLP 2Lic NL Gov CoreLic Qlfd	7NQ-01581	Number	11
6	Azure DevOps Server AzureDevOpsServer LicSAPk OLP NL Gov	125-00162	Number	1
7	Visual Studio Professional VSPro 2019 OLP NL Gov	C5E-01388	Number	20

ANNEXURE -VII

12.3 Commercial Bid Format

[Note: Price Bid is to be submitted online only. The Price Bid if submitted physically along with Technical Bid leading to revelation of prices before the due date of opening of the Price Bid will lead to disqualification.]

HARDWARE COMPONENTS

H1. IT HARDWARE WITH 3 YEARS OF WARRANTY SUPPORT FROM THE DATE OF GOLIVE

#	Description	Unit of Measurement	Qty	Unit Rate (w/o GST) in INR	Total Capex w/o GST in INR	Applicable GST	Total Capex With GST in INR	Yearly AMC Rate in INR	Total AMC w/o GST in INR for 4th & 5th Year	Applicable GST (G2)%	Total AMC With GST in INR	Total Without GST in INR	Total With GST in INR
			A	B	C=A*B	G1%	D=C*(G1+100)%	E	F =A*E*2	G2%	H =F*(100+G2)%	I = C + F	J = D + H
SITC of IT Hardware Components for ICCC													
1	Projector-1 (6000 lumens)	Number	2										
2	Projector-2 (3000 lumens)	Number	1										

H1. IT HARDWARE WITH 3 YEARS OF WARRANTY SUPPORT														
#	Description	Unit of Measurement	Qty	Unit Rate (w/o GST) in INR	Total Capex w/o GST in INR	Applicable GST	Total Capex With GST in INR	Yearly AMC Rate in INR	Total AMC w/o GST in INR for 4th & 5th Year	Applicable GST (G2)%	Total AMC With GST in INR	Total Without GST in INR	Total With GST in INR
			A	B	C=A*B	G1%	D=C*(G1+100)%	E	F =A* E*2	G2%	H =F* (100+G2)%	I = C + F	J = D + H
3	Projector Screen 1 (200 Inch)	Number	2										
4	Projector Screen 2 (100 Inch)	Number	1										
5	65" LED Display Screen	Number	15										
6	Wired and Wireless Presentation Solution for Conference Room	Number	2										
7	8-Port HDMI Cat 5/6 Splitter	Number	2										
Civil and Non-IT for Data Center														

#	Description	Unit of Measurement	Qty	Unit Rate (w/o GST) in INR	Total Capex w/o GST in INR	Applicable GST	Total Capex With GST in INR	Yearly AMC Rate in INR	Total AMC w/o GST in INR for 4th & 5th Year	Applicable GST (G2)%	Total AMC With GST in INR	Total Without GST in INR	Total With GST in INR
			A	B	C=A*B	G1%	D=C*(G1+100)%	E	F =A* E*2	G2%	H =F* (100+G2)%	I = C + F	J = D + H
8	Access Control System	Number	1										
9	Fire Detection and Alarm System	Number	1										
10	Fire Suppression System	Number	1										
11	Data Center Management System	Number	1										
12	Aspirating Smoke Detector System	Number	1										
Total (INR)- Without GST													

H1. IT HARDWARE WITH 3 YEARS OF WARRANTY SUPPORT

H1. IT HARDWARE WITH 3 YEARS OF WARRANTY SUPPORT												
#	Description	Unit of Measurement	Qty	Unit Rate (w/o GST) in INR	Total Capex w/o GST in INR	Applicable GST	Total Capex With GST in INR	Yearly AMC Rate in INR	Total AMC w/o GST in INR for 4th & 5th Year	Applicable GST (G2)%	Total AMC With GST in INR	Total Without GST in INR	Total With GST in INR
			A	B	C=A*B	G1%	D=C*(G1+100)%	E	F =A*E*2	G2%	H =F*(100+G2)%	I = C + F	J = D + H
Total (INR)- With GST												

H2. IT HARDWARE WITH 3 YEARS OF WARRANTY SUPPORT (Bidder to specify the Quantity) FROM THE DATE OF GOLIVE

H2. IT HARDWARE WITH 3 YEARS OF WARRANTY SUPPORT (Bidder to specify the Quantity)													
#	Description	Unit of Measurement	Qty	Unit Rate (w/o GST) in INR	Total Capex w/o GST in INR	Applicable GST	Total Capex With GST	Yearly AMC Rate in INR	Total AMC w/o GST in INR for 4th & 5th Year	Applicable GST (G2)%	Total AMC With GST in INR	Total Without GST in INR	Total With GST in INR
			A	B	$C=A*B$	G1%	$D=C*(G1+100)$%	E	$F=A*E*2$	G2%	$H=F*(100+G2)$%	$I=C+F$	$J=D+H$
Civil and Non IT for Data Center and ICCC													
1	Water Leak Detection System	Number	To be specified by bidder as per requirement										
2	Rodent Repellent System	Number	To be specified by bidder as per requirement										
Total (INR)- Without GST													

Total (INR)- With GST								

Note: The exact copy of the above table without prices must be submitted as per "PQ_11: Unpriced Bill of Quantity"

H3. IT HARDWARE WITH 5 YEARS OF WARRANTY SUPPORT FROM THE DATE OF GOLIVE

H3. IT HARDWARE WITH 5 YEARS OF WARRANTY SUPPORT							
#	Description	Unit of Measurement	Qty	Unit Rate (w/o GST) in INR	Total w/o GST in INR	Applicable GST	Total with GST in INR
			A	B	C=A*B	G1%	D=C*(G1+100)%
SITC of IT Hardware Components for ICCC							
1	Desktop PC	Number	75				
2	Laptop	Number	3				
3	Workstations for ICCC Operators	Number	100				
4	49" Curved Monitor for ICCC Operators	Number	100				
5	Monochrome Printer	Number	20				
6	Multi Function Printer - 1	Number	5				
7	Multi Function Printer -2 (Heavy Duty)	Number	2				
8	Colour Laser Printer	Number	1				
9	Indoor Wifi Access Points	Number	30				
10	Video Wall Cubes- 70/72" DLP (2 video walls of 14 X 4 matrix)	Number	112				

H3. IT HARDWARE WITH 5 YEARS OF WARRANTY SUPPORT							
#	**Description**	**Unit of Measurement**	**Qty**	**Unit Rate (w/o GST) in INR**	**Total w/o GST in INR**	**Applicable GST**	**Total with GST in INR**
			A	**B**	**C=A*B**	**G1%**	**D=C*(G1+100)%**
11	Network based Video Wall Controller (for 60 inputs and 60 outputs)	Number	2				
12	Video Wall Monitoring Software	Number	1				
13	8 ports Unmanaged PoE+ Switch	Number	20				
14	24 ports (1G/1G) Web Managed Switch	Number	10				
15	24 ports (1G/10G) Web Managed Switch	Number	10				
16	48 ports (1G/10G) Web Managed Switch	Number	5				
17	1G SFP LX Transceiver Module for above 24 Port Web Managed Switches	Number	20				
18	10G SFP+ LR Transceiver Module for 24 Port/48 Port Web Managed Switches	Number	30				
SITC of IT Hardware Components for Data Center							
19	DC Core Switch	Number	2				
20	10G DAC (10M Length) for DC Core Switch	Number	12				
21	10G SFP+ LR Transceiver Module for DC Core Switch	Number	40				

H3. IT HARDWARE WITH 5 YEARS OF WARRANTY SUPPORT							
#	**Description**	**Unit of Measurement**	**Qty**	**Unit Rate (w/o GST) in INR**	**Total w/o GST in INR**	**Applicable GST**	**Total with GST in INR**
			A	**B**	**C=A*B**	**G1%**	**D=C*(G1+100)%**
22	40G QSFP+ LR4 Transceiver Module for DC Core Switch	Number	22				
23	DC Aggregation/TOR Switch Type 1	Number	6				
24	40G QSFP+ LR4 Transceiver Module for DC Aggregation/TOR Switch Type 1	Number	12				
25	DC Aggregation/TOR Switch Type 2	Number	4				
26	10G SFP+ LR Transceiver Module for DC Aggregation/TOR Switch Type 2	Number	70				
27	40G QSFP+ LR4 Transceiver Module for DC Aggregation/TOR Switch Type 2	Number	8				
28	DC Application & Delivery Controller with Global Server Load Balancing	Number	2				
29	Wireless LAN controller (Hardware/Software with server) with necessary licenses	Number	1				
30	Rack Servers for SMC Own Requirement	Number	10				

Sign

Stamp

H3. IT HARDWARE WITH 5 YEARS OF WARRANTY SUPPORT							
#	Description	Unit of Measurement	Qty	Unit Rate (w/o GST) in INR	Total w/o GST in INR	Applicable GST	Total with GST in INR
				A	B	C=A*B	G1%	D=C*(G1+100)%
31	Storage with 2 no. of SAN Switches & Complete mounting accessories	Number	1				
Civil and Non IT for Data Center and ICCC							
32	PAC system of 20 tons each	Number	4				
33	42U Rack for Server	Number	12				
34	42U Rack for Network Devices	Number	4				
35	IP KVM Switch	Number	2				
IT & Non IT Hardware Components for Digital Display Boards							
36	Outdoor Digital Display Board (7mt x 5mt)	Number	60				
37	SITC of 8 Port PoE/POE+ network Switch with Complete mounting accessories as required	Number	60				
38	1G SFP Transceiver Module for 8 Port PoE/PoE+ network switch	Number	60				

#	Description	Unit of Measurement	Qty	Unit Rate (w/o GST) in INR	Total w/o GST in INR	Applicable GST	Total with GST in INR
			A	B	C=A*B	G1%	D=C*(G1+100)%
39	SITC of 2 Megapixel Full HD IR IP vandal proof Bullet Camera (2.8mm to 12mm Varifocal lense) with Complete mounting accessories as required	Number	60				
40	SITC of 2 Megapixel IR IP Bullet Camera (Fixed Lens) with Complete mounting accessories as required	Number	60				
41	Outdoor Speakers for Digital Display Boards	Number	60				
42	Amplifier	Number	60				
43	Outdoor Cabinets	Number	60				
44	Media Player	Number	60				
45	Media Converter	Number	60				
Mounting Structures for Digital Display Boards							
46	Unipole Mounting Structure of GI Pole (Class B) having 5.5 mt of minimum vertical clearance from the ground surface	Number	30				

#	Description	Unit of Measurement	Qty	Unit Rate (w/o GST) in INR	Total w/o GST in INR	Applicable GST	Total with GST in INR
			A	B	C=A*B	G1%	D=C*(G1+100)%
47	Bipole Mounting Structure of GI Pole (Class B) having 5.5 mt of minimum vertical clearance from the ground surface	Number	10				
48	Cantilever Mounting Structure of GI Pole (Class B) having 5.5 mt of minimum vertical clearance from the ground surface	Number	10				
49	Gantry across the 100 ft road of GI (Class B) material	Number	6				
50	Gantry across the 150 ft road of GI (Class B) material	Number	2				
51	Gantry across the 200 ft road of GI (Class B) material	Number	2				
Civil for Digital Display Boards							
52	SLTC of 3 core 1.5 sq. mm armored Power cable with complete accessories	Rmt	3000				
53	SLTC of 6 Core Armoured Optical fiber cable with all accessories required for termination	Rmt	4000				
54	SLTC of UTP Cat 6 Cable with rodent resistant jacket with all accessories required for termination	Rmt	2000				
55	SLTC of UTP Cat 6 Cable with all accessories required for termination	Rmt	1500				
56	32 mm DWC Pipe	Rmt	4000				

H3. IT HARDWARE WITH 5 YEARS OF WARRANTY SUPPORT							
#	Description	Unit of Measurement	Qty	Unit Rate (w/o GST) in INR	Total w/o GST in INR	Applicable GST	Total with GST in INR
			A	B	C=A*B	G1%	D=C*(G1+100)%
57	32 mm HDPE Pipe	Rmt	2000				
58	Open Digging, Trenching and Ducting	Rmt	4000				
59	Horizontal Directional Drilling (HDD)	Rmt	2000				
Total (INR)- Without GST							
Total (INR)- With GST							

Note:

1. The mounting structure for Digital Display Board can be Bipole/ T shaped or cantilever or gantry which will be finalised at the time of feasibility study of the location. The quantities mentioned for item no 44 to 49 under "Mounting Structures for Digital Display Boards" are based on assumption. The quantity will be finalised at the time of feasibility study and payment will be made in accordance to the quantity and type of mounting structure finalised.
2. In case of change in size of the ODDB as per SMC/SSCDL requirement, the per square meter price will be derived based on the awarded price to the bidder and the same will be used to calculate the price for respective ODDB
3. The warranty is not applicable for "Open Digging, Trenching and Ducting" and "Horizontal Directional Drilling (HDD)"
4. The quantity mentioned for SFP module, "1G SFP Transceiver Module for 8 Port PoE/PoE+ network switch" for Outdoor Digital Display Board is indicative in nature. The SSCDL/SMC may or may not procure this SFP module in mentioned quantities. The final quantity will be finalized at the time of feasibility study of locations proposed for ODDB
5. The quantities mentioned for item no 50 to item no 54 are based on assumptions. The quantity will be finalized at the time of feasibility study. However, the payment will be made as per actual utilization of below items

H4. BLADE SERVER /RACK SERVER, BLADE CHASIS FOR ICCC REQUIREMENTS (WITH 5 YEARS OF WARRANTY SUPPORT FROM THE DATE OF GOLIVE)

H4. BLADE SERVER /RACK SERVER ,BLADE CHASIS FOR ICCC REQUIREMENTS (WITH 5 YEARS OF WARRANTY SUPPORT)

#	Product Name	Make/OEM	Version/Model	Part Code	Unit of Measurement	Qty	Unit License Cost (w/o GST) in INR	Total w/o GST in INR	Applicable GST	Total with GST in INR
	A	B	C	D	E	F	H	I=F*H	G1%	J=I*(G1+100)%
SITC of IT Hardware Components for Data Center										
1					Number					
2					Number					
3					Number					
...					Number					
Total (INR)- Without GST										
Total (INR)- With GST										

Note:

1. The bidder can propose servers of same or different configuration as per their sizing. Details w.r.t proposed quantity for each server with different configuration to be specified above.
2. The detailed configuration for each server to be provided as per Annexure II, Section 14.35
3. It is mandatory to provide the details pertaining to OEM, Product Name, Version, Part Code and exact Quantity for all components.
4. The exact copy of the above table without prices must be submitted as per "PQ_11: Unpriced Bill of Quantity"

SUMMARY OF CAPEX - HARDWARE	
SUMMARY OF CAPEX	
1	Total (INR)- Without GST (A1=H1+H2+H3+H4)	
2	Total (INR)- With GST (A1=H1+H2+H3+H4)	

SUMMARY OF OPEX- HARDWARE	

	SUMMARY OF OPEX	
1	Total (INR)- Without GST (B1=H1+H2)	
2	Total (INR)- With GST (B1=H1+H2)	

SOFTWARE COMPONENTS

S1. ICCC SOFTWARE WITH PERPETUAL LICENSES AND UNLIMITED SENSORS (WITH 5 YEARS OF ATS FROM THE DATE OF GOLIVE)

#	Product Name	Make/OEM	Version/Model	Part Code	Unit of Measurement	Qty	Unit License Cost (w/o GST) in INR	Total w/o GST in INR	Applicable GST	Total With GST in INR	Yearly ATS Rate (w/o GST) in INR	Total ATS w/o GST in INR for 5 Years	Applicable GST on ATS (G2)%	Total ATS with GST in INR	Total Cost without GST	Total Cost with GST
	A	B	C	D	E	F	H	I=F*H	G1%	J=I*(G1+100)%	K	L =F*K*5	G2%	M =L*(100+G2)%	N=I+L	O=J+M
ICCC Software with perpetual license and unlimited sensors																
1					Number											
2					Number											

...				Number												
Total (INR)- Without GST																
Total (INR)- With GST																

Note:

1. Under table S1, bidder is required to clearly list each and every item that is licensed separately and required as part of proposed solution w.r.t. ICCC application to meet the scope of RFP.
2. The yearly ATS Charge for respective software component should be mentioned in Column-K: ATS Charge. In case, if ATS is not applicable for certain line item then "0" should be mentioned in Column-K.
3. It is mandatory to provide the details pertaining to OEM, Product Name, Version, Part Code and exact Quantity for all license components.
4. The exact copy of the above table without prices must be submitted as per "PQ_11: Unpriced Bill of Quantity"

S2. CALL CENTER MANAGEMENT SOFTWARE SOLUTION FOR 50 USER LICENSES (WITH 5 YEARS OF ATS FROM THE DATE OF GOLIVE)

S2. CALL CENTER MANAGEMENT SOFTWARE SOLUTION FOR 50 USER LICENSES

#	Product Name	Make/OEM	Version/Model	Part Code	Unit of Measurement	Qty	Unit License Cost (w/o GST) in INR	Total w/o GST in INR	Applicable GST	Total With GST in INR	Yearly ATS Rate (w/o GST) in INR	Total ATS w/o GST in INR for 5 Years	Applicable GST on ATS (G2)%	Total ATS with GST in INR	Total Cost without GST	Total Cost with GST
	A	B	C	D	E	F	H	$I=F*H$	G1%	$J=I*(G1+100)\%$	K	$L=F*K*5$	G2%	$M=L*(100+G2)\%$	$N=I+L$	$O=J+M$
Call Center Management Software solution for 50 user licenses																
1					Number											
2					Number											
...					Number											
Total (INR)- Without GST																
Total (INR)- With GST																

Note:

1. All software license components related to Software Licenses for Call Center Management Software solution for 50 users required to meet the scope of RFP must be enlisted above.
2. The yearly ATS Charge for respective software component should be mentioned in Column-K: ATS Charge. In case, if ATS is not applicable for certain line item then "0" should be mentioned in Column-K.
3. It is mandatory to provide the details pertaining to OEM, Product Name, Version, Part Code and exact Quantity for all license components.
4. The exact copy of the above table without prices must be submitted as per "PQ_11: Unpriced Bill of Quantity"

S3. SOFTWARE LICENSES FOR VIRTUALISATION, SERVER OS, DATABASE, ENTERPRISE SECURITY & ANTIVIRUS SOFTWARE (WITH 5 YEARS OF ATS FROM THE DATE OF GOLIVE)

S3. SOFTWARE LICENSES FOR VIRTUALISATION,SERVER OS,DATABASE, ENTERPRISE SECURITY & ANTIVIRUS SOFTWARE																	
#	Product Name	Make/OEM	Version/Model	Part Code	Unit of Measurement	Qty	Unit License Cost (w/o GST) in INR	Total w/o GST in INR	Applicable GST	Total With GST in INR	Yearly ATS Rate (w/o GST) in INR	Total ATS w/o GST in INR for 5 Years	Applicable GST on ATS (G2)%	Total ATS with GST in INR	Total Cost without GST	Total Cost with GST
	A	B	C	D	E	F	H	$I=F*H$	$G1\%$	$J=I*(G1+100)\%$	K	$L=F*K*5$	$G2\%$	$M=L*(100+G2)\%$	$N=I+L$	$O=J+M$
Software Licenses for Virtualisation, Server OS, Database, Enterprise Security & Antivirus Software																
1					Number											
2					Number											
...					Number											
Total (INR)- Without GST																
Total (INR)- With GST																

Note:

1. All software license components related to Software Licenses for Virtualisation, Server OS, Database, Enterprise Security & Antivirus Software, etc. required to meet the scope of RFP must be enlisted above.
2. The yearly ATS Charge for respective software component should be mentioned in Column-K: ATS Charge. In case, if ATS is not applicable for certain line item then "0" should be mentioned in Column-K.
3. It is mandatory to provide the details pertaining to OEM, Product Name, Version, Part Code and exact Quantity for all license components.

Sign

Stamp

4. The exact copy of the above table without prices must be submitted as per "PQ_11: Unpriced Bill of Quantity"

S4. VM BASED NETWORK ACCESS CONTROL SOLUTION (WITH 5 YEARS OF ATS FROM THE DATE OF GOLIVE)

#	Product Name	Make/OEM	Version/Model	Part Code	Unit of Measurement	Qty	Unit License Cost (w/o GST) in INR	Total w/o GST in INR	Applicable GST	Total With GST in INR	Yearly ATS Rate (w/o GST) in INR	Total ATS w/o GST in INR for 5 Years	Applicable GST on ATS (G2)%	Total ATS with GST in INR	Total Cost without GST	Total Cost with GST
	A	B	C	D	E	F	H	$I=F*H$	G1%	$J=I*(G1+100)\%$	K	$L=F*K*5$	G2%	$M=L*(100+G2)\%$	$N=I+L$	$O=J+M$
VM Based Network Access Control Solution																
1					Number											
2					Number											
...					Number											
Total (INR)- Without GST																
Total (INR)- With GST																

Note:

1. All software license components related to Software Licenses for VM based Network Access Control Solution required to meet the scope of RFP must be enlisted above.

Sign

Stamp

2. The yearly ATS Charge for respective software component should be mentioned in Column-K: ATS Charge. In case, if ATS is not applicable for certain line item then "0" should be mentioned in Column-K.
3. It is mandatory to provide the details pertaining to OEM, Product Name, Version, Part Code and exact Quantity for all license components.
4. The exact copy of the above table without prices must be submitted as per "PQ_11: Unpriced Bill of Quantity"

S5. OUTDOOR DIGITAL DISPLAY BOARD APPLICATION (WITH 5 YEARS OF ATS FROM THE DATE OF GOLIVE)

#	Product Name	Make/OEM	Version/Model	Part Code	Unit of Measurement	Qty	Unit License Cost (w/o GST) in INR	Total w/o GST in INR	Applicable GST	Total With GST in INR	Yearly ATS Rate (w/o GST) in INR	Total ATS w/o GST in INR for 5 Years	Applicable GST on ATS (G2)%	Total ATS with GST in INR	Total Cost without GST	Total Cost with GST
	A	B	C	D	E	F	H	I=F*H	G1%	J=I*(G1+100)%	K	L =F*K *5	G2%	M =L* (100+G2)%	N=I+L	O=J+M
Outdoor Digital Display Board Application																
1					Number											
2					Number											
...					Number											
Total (INR)- Without GST																
Total (INR)- With GST																

Note:

1. All software license components related to ODDB Solution to meet the scope of RFP must be enlisted above.
2. The yearly ATS Charge for respective software component should be mentioned in Column-K: ATS Charge. In case, if ATS is not applicable for certain line item then "0" should be mentioned in Column-K.
3. It is mandatory to provide the details pertaining to OEM, Product Name, Version, Part Code and exact Quantity for all license components.
4. The exact copy of the above table without prices must be submitted as per "PQ_11: Unpriced Bill of Quantity"

S6. SI'S SUPPORT COST

#	Description	Measurement Unit	Qty.	Unit Rate / Year in INR w/o GST	Total w/o GST for 5 Years in INR	Applicable GST	Total GST in INR	Total With GST for 5 Years in iNR
S6. SI's Support Cost								
				A	B=A*5	(G)%	C =B*G%	D=B+C
1	ICCC Solution: Annual Support Cost for 5 years (post Go-Live) with required mandatory onsite presence	Years	5					
2	ODDB Solution: Annual Support Cost for 5 years (post Go-Live) with required mandatory onsite presence	Years	5					
Total (INR)- Without GST								
Total (INR)- With GST								

Note: Under table S6 bidder is required to specify the Annual Support Cost for ICCC Solution and ODDB Solution required to meet the scope of RFP.

SUMMARY OF CAPEX-SOFTWARE	
SUMMARY OF CAPEX	

1	Total (INR)- Without GST (A2= S1+S2+S3+S4+S5)	
2	Total (INR)- With GST (A2= S1+S2+S3+S4+S5)	
SUMMARY OF OPEX-SOFTWARE		
SUMMARY OF OPEX		
1	Total (INR)- Without GST (B2=S1+S2+S3+S4+S5+S6)	
2	Total (INR)- With GST (B2=S1+S2+S3+S4+S5+S6)	

ONE TIME COST

O1. SOFTWARE & OTHER ONE TIME COST

O1. SOFTWARE & OTHER ONE TIME COST							
#	**Description**	**Unit of Measurement**	**Qty**	**Unit Rate (w/o GST) in INR**	**Total w/o GST in INR**	**Applicable GST**	**Total With GST in INR**
			A	**B**	**C=A*B**	**G1%**	**D=C*(G1+100)%**
SITC of Software & Other Components							
1	ICCC Software integration & implementation Cost per Use Case	Use Case	50				
2	MS Office Business 2019 standard (one-time purchase) License	Number	100				
3	ODDB Solution: Implementation cost	Lumpsum	1				

O1. SOFTWARE & OTHER ONE TIME COST							
#	Description	Unit of Measurement	Qty	Unit Rate (w/o GST) in INR	Total w/o GST in INR	Applicable GST	Total With GST in INR
			A	B	C=A*B	G1%	D=C*(G1+100)%
4	VMware vSphere 7 Enterprise Plus for 1 processor (Part Code - VS7-EPL-C)	Number	10				
5	Production Support/Subscription for VMware vSphere 7 Enterprise Plus for 1 processor for 3 years (Part Code - VS7-EPL-3P-SSS-C)	Number	10				
6	WinSvrSTDCore 2019 OLP 2Lic NL Gov CoreLic (Part Code - 9EM-000671)	Number	220				
7	SQLSvrStdCore 2019 OLP 2Lic NL Gov CoreLic Qlfd (Part Code - 7NQ-01581)	Number	11				
8	Azure DevOps Server AzureDevOpsServer LicSAPk OLP NL Gov (Part Code - 125-00162)	Number	1				
9	Visual Studio Professional VSPro 2019 OLP NL Gov (Part Code - C5E-01388)	Number	20				
Civil and Non IT for Data Center and ICCC							

O1. SOFTWARE & OTHER ONE TIME COST

#	Description	Unit of Measurement	Qty	Unit Rate (w/o GST) in INR	Total w/o GST in INR	Applicable GST	Total With GST in INR
			A	B	C=A*B	G1%	D=C*(G1+100)%
10	Civil Work for DC (Raised Floor, False Ceiling, Ducting, Access Doors, Painting, Partitioning etc)	sq fst	1419				
Total (INR)- Without GST							
Total (INR)- With GST							

SUMMARY OF COMMERCIAL BID

Based on above schedules the Project summary will be generated by SSCDL/SMC to evaluate the Commercial Proposal of the bidder as per table below:

Summary of All Cost Components		
Sr. No.	Description	Total Amount without Taxes
H1	IT HARDWARE WITH 3 YEARS OF WARRANTY SUPPORT FROM THE DATE OF GOLIVE	
H2	IT HARDWARE WITH 3 YEARS OF WARRANTY SUPPORT	
H3	IT HARDWARE WITH 5 YEARS OF WARRANTY SUPPORT FROM THE DATE OF GOLIVE	
H4	BLADE SERVER /RACK SERVER, BLADE CHASIS FOR ICCC REQUIREMENTS (WITH 5 YEARS OF WARRANTY SUPPORT FROM THE DATE OF GOLIVE)	
S1	ICCC SOFTWARE WITH PERPETUAL LICENSES AND UNLIMITED SENSORS (WITH 5 YEARS OF ATS FROM THE DATE OF GOLIVE)	

	Summary of All Cost Components	
S2	CALL CENTER MANAGEMENT SOFTWARE SOLUTION FOR 50 USER LICENSES (WITH 5 YEARS OF ATS FROM THE DATE OF GOLIVE)	
S3	SOFTWARE LICENSES FOR VIRTUALISATION, SERVER OS, DATABASE, ENTERPRISE SECURITY & ANTIVIRUS SOFTWARE (WITH 5 YEARS OF ATS FROM THE DATE OF GOLIVE)	
S4	VM BASED NETWORK ACCESS CONTROL SOLUTION (WITH 5 YEARS OF ATS FROM THE DATE OF GOLIVE)	
S5	OUTDOOR DIGITAL DISPLAY BOARD APPLICATION (WITH 5 YEARS OF ATS FROM THE DATE OF GOLIVE)	
S6	SI'S SUPPORT COST	
O1	SOFTWARE & OTHER ONE TIME COST	
	Grand Total in INR	

ANNEXURE -VIII

[This section overrides the original Annexure-II of the RFP document]

14. <mark>Revised</mark> Annexure II –Technical requirements for ICT Components

2. The bidder can quote for each item meeting or exceeding the below mentioned minimum specification. Separate sheet needs to be attached if required.

3. The specification mentioned below are minimum specification. The bidder can quote the products equivalent or higher depending upon the sizing for the entire solution.

4. The technical spec sheet and the product brochure of the product offered should also be submitted along with technical bid.

5. In case the space provided is not sufficient then a separate paper as per the format below can be annexed to the bid. The same must be duly signed and stamped.

14.1 Video Wall Screen

The Video Wall for CCC shall be configured with 14 x 4 matrix formation of the following Professional Display (TV) Screens of DELTA / BARCO/ CHRISTIE/ <mark>PLANAR</mark>/ NEC/MITSUIBISHI make.

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
1.	Technology	DLP Display suitable for use in video wall		
2.	Screen Size	70" or higher (14x4 matrix)		
3.	Projection	Rear Projection		
4.	Access	Rear Access		
5.	Light Source	Laser		
6.	Lifetime of Light Source	Minimum 1,00,000 hrs. in eco mode		
7.	Resolution	1920 x 1080 Full high definition (1080p) 16:9 Widescreen or 16:10		
8.	Brightness	Minimum <mark>1700</mark> lumens (ANSI) or Minimum onscreen <mark>500</mark> Cd/m2		
9.	Brightness Uniformity	≥ 95 %		
10.	Response time	8ms		
11.	Power Supply	Dual /redundant power supply		
12.	Screen to Screen Gap	≤ 1 mm at all temperature/humidity conditions		
13.	Input	HDMI and other inputs as per Video Wall solution offered		
14.	Control	- On Screen Display (OSD) - IR remote control (Desirable)		
15.	Chip Type	Single chip DLP		

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
16.	Operations	24 x 7		
17.	Specify the proposed Make			
18.	Specify the proposed Model No			

14.2 Video Wall Controller (From same Video wall OEM)

#	Parameters	Minimum Requirements	Compliance (Yes/No)	Remarks, if any
Display Processor				
1.	Features	Supports output up to 1920 * 1200 resolution with 60fps		
		Supports H.264/H.265 decoding immediately		
		Supports up to 64 windows per display		
		Supports Multicasting Windows		
2.	Output	HDMI 1.3 , Channel -1 , Color depth 8/10 bit		
3.	Image processing	High tap filter for image scaling		
		Accurate synchronization for display wall		
		Support H.264/H.265/MPEG4 decoding		
		Up to 64 free window per display		
		Window title with vector texts		
		Bezel-compensation and overlap		
4.	Network	1000 MB network with redundancy		
		Should support POE (Desirable)		
		Supports protocol - DHCP, UDP, TCP/IP		
		Supports Static IP & Automatic IP		
5.	MTBF	more than 100,000 hours		
6.	Interface	HDMI /DVI-D, RS 232x1, USB x 2,RJ-45 x 2, BNC-F*2 Sync In/Out		
7.	Operating Range	Temperature: 0-40 degree Centigrade, Humidity - 10 to 90% non-condensing		
8.	LED indicator	LED indicators for Power, Status, Network.		
9.	Specify the proposed Make	Make should be same of Video wall display		
10.	Specify the proposed Model			

#	Parameters	Minimum Requirements	Compliance (Yes/No)	Remarks, if any
	No			
HD Input Processor				
11.	Features	Captures signals up to 1920 * 1200 resolution with 60fps		
		Supports four windows at any position and in any size		
		Supports to loopback progressive VGA or HDMI input signal		
		Supports Multicasting Windows		
		Supports Power-on-Ethernet(Desirable)		
		Supports KVM		
12.	Input	DVI -I, Channel -1, Color depth 8 bit		
13.	Output	HDMI 1.3 , Channel -1		
14.	Network	1000 MB network with redundancy		
		Should support POE (Desirable)		
		Supports protocol - DHCP, UDP, TCP/IP		
		Supports Static IP & Automatic IP		
15.	Image processing	High tap filter for image scaling		
		Accurate synchronization for display wall		
		Support 4 window simultaneously		
		Supports windows multicasting		
16.	LED indicator	LED indicators for Power, Status, Network.		
17.	Operating Range	Temperature: 0-40 degree Centigrade, Humidity - 10 to 90% non-condensing		
18.	MTBF	more than 100,000 hours		
19.	Interface	HDMI Type A /DVI-I Type A/DVID/DP, RS 232 (DB 9), USB x 2, RJ-45 x 2		
20.	Specify the proposed Make	Make should be same of Video wall display		
21.	Specify the proposed Model No			
Video Wall Solution				
22.	Features	• Each input source (workstation or direct) shall be connected with an individual encoder		

#	Parameters	Minimum Requirements	Compliance (Yes/No)	Remarks, if any
		device using HDMI/DVI/Display cable. • Each video wall cube to be connected to the decoder individually without looping. Maximum 4 video wall cubes can be connected with one decoder. • The encoder and decoder shall be connected using separate network cable to the dedicated network created for video wall. • Capability to project one or more input sources (workstation or direct) on the entire or part of the video wall or on single cube. • Apart from decoders required to connect 56 video wall cubes,four number of decoders with minimum 1 output to be provided separately to project content from video wall solution to other output devices like LED TV, projector, etc		
Server Specifications				
23.	CPU	Core 2 Du0 2.4G Hz or above		
24.	Memory	16 GB or above		
25.	Network	2*1 GbE LAN		
26.	OS	Windows Server 2008/2010 or latest		
27.	HDD	2*1TB SAS HDD with RAID – 1 configuration		
28.	Specify the proposed Make			
29.	Specify the proposed Model No			

14.3 Video Wall Management Software

#	Functionality	Compliance (Yes/No)	Remarks, if any
1.	Ability to pre-configure and store various display layouts and access them at any time with a simple mouse click.		
2.	Ability to display multiple sources anywhere on video wall in any size.		
3.	Ability to configure display layouts in real time without reboot.		
4.	Ability to create the display layout in background without interrupting the live display.		
5.	Ability to create and store different profiles defining one or more source and size for different scenarios.		
6.	Application must be GUI based with easy to use and configure interface.		
7.	Ability to control the Wall Monitoring System through remote PC connected by LAN		
8.	Ability to share the layouts over LAN/WAN Network with display in Meeting room or on Remote Workstations connected on LAN/WAN Network		
9.	Ability to display the screen content of the desktop / workstation connected with the Display Controller on the Display wall.		
10.	The wall management software should support open APIs/ Command list / RS232 command to enable system integrators to integrate it with their Software or other 3rd party devices to control the system.		
11.	Ability to centrally manage configuration parameters.		
12.	Ability to schedule backup and restore the configuration parameters.		
13.	Ability to Drag and Drop of sources.		
14.	Ability to create event log of user access with time stamp.		
15.	Role based user creation and management.		

14.4 49" Curved Monitor for ICCC Operator

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
1.	Screen Size (Diagonal)	48 - 49 Inch		
2. `	Technology	LED Backlit		
3.	Resolution (Pixels)	Minimum 3840 X 1080		
4.	Aspect Ratio	32:9		
5.	Brightness (Nits)	300		
6.	Native Contrast Ratio (Minimum)	1000 : 1		
7.	Antiglare Coating	Yes		
8.	Split Screen Feature	Yes		
9.	Inbuilt Speakers	Yes		
10.	Input Ports	Minimum 3 ports (HDMI / Display Port / DVI-D/Type C USB)		
11.	USB Port	Yes		
12.	Mounting Arrangement	Table Mount		
13.	Operating Humidity (%RH)	20 - 80%		
14.	Power Supply	230V AC, 50 Hz		
15.	Type Of Power Supply	In-built		
16.	Specify the proposed Make			
17.	Specify the proposed Model No			

14.5 Workstations for ICCC Operators

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
1.	Form Factor	Tower		
2.	Processor	Intel® 10th generation Core™ i7-10700 Processor (2.90 GHz Base Frequency/Clock Speed, 16M Cache, 8 core) or higher		
3.	Chipset	Intel Q470 chipset or better		
4.	Motherboard	OEM Motherboard		

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
5.	RAM	16 GB DDR4 RAM @ 2933 MHz or higher with single DIMM, Minimum 2 DIMM slots and Shall be expendable to 64 GB		
6.	Graphics card	Graphics card with 4 GB memory		
7.	HDD	Minimum 2 TB SATA III Hard Disk @7200 RPM or higher (should have provision for attachment of additional 3.5" SATA III HDD)		
8.	Media Drive	NO CD / DVD Drive		
9.	Network interface	10/100/1000 Mbps autosensing on board integrated RJ-45 Ethernet port.		
10.	Audio	Line/Mic IN, Line-out/Speaker Out (3.5 mm)		
11.	USB Ports	Minimum 6 no's (Min. 4 no.'s of 3.2 / 3.1 Gen-2 and Min. 1 no. of USB 3.2 Gen-2), out of 6 Nos. minimum 2 in front, 4 in back and should be easily accessible.		
12.	Ports	Minimum 3 display output ports out which Minimum 1 no. of HDMI port, Minimum 1 no. of VGA / Display Port		
13.	Keyboard	104 keys Heavy Duty Mechanical Switch Keyboard (USB Interface) with 50 million keystrokes life per switch. Rupee Symbol to be engraved.		
14.	Mouse	2 button optical scroll mouse (USB)		
15.	Monitor	Please refer specifications for 49" Curved Monitor for Operators		
16.	Accessories	All workstations should be with keyboard, mouse, headphones including mic.		
17.	Certification	Energy star 5.0/BEE star certified		
18.	Operating System	Pre-loaded Windows 10 (or latest) Professional 64 bit, licensed copy with certificate of authenticity (or equivalent authenticity information) and all necessary and latest patches		

Sign

Stamp

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
		and updates. All Utilities and driver software, bundled in CD/DVD/Pen-drive media No software that are trial version or unlicensed in nature should be pre-installed on the system.		
19.	Security	Onboard Integrated Trusted Platform Module 2.0		
20.	Specify the proposed Make			
21.	Specify the proposed Model No			

14.6 Desktop PC (Dell/HP/Lenovo)

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
1.	Form Factor	Tower		
2.	Processor	Intel® 10th generation Core™ i3-10100 Processor (3.60 GHz Base Frequency/Clock Speed, 6M Cache, 4 core)or higher		
3.	Memory	8 GB DDR4 RAM @ 2666 MHz or higher with single DIMM, Shall be expendable to 64 GB One DIMM Slot must be free for future upgrade		
4.	Motherboard	Intel Q470 chipset or better		
5.	Hard Disk Drive	Minimum 1 TB SATA III Hard Disk @7200 RPM or higher (should have provision for attachment of additional 3.5" SATA III HDD)		
6.	Audio	Line/Mic In, Line-out/Speaker Out (3.5 mm)		
7.	Network port	10/100/1000 Mbps auto-sensing on-board integrated RJ-45 Ethernet Port		
8.	USB Ports	Minimum 6 no's (Min. 4 no.'s of 3.2 / 3.1 Gen-2 and Min. 1 no. of USB 3.2 Gen-2), out of 6 Nos. minimum		

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
		2 in front, 4 in back and should be easily accessible.		
9.	Display Port	Minimum 3 display output ports out which Minimum 1 no. of HDMI port, Minimum 1 no. of VGA / Display Port		
10.	Keyboard	104 keys Heavy Duty Mechanical Switch Keyboard (USB Interface) with 50 million keystrokes life per switch. Rupee Symbol to be engraved.		
11.	Mouse	Optical with USB interface (same make as desktop)		
12.	Monitor	• Minimum 21.5" diagonal Antiglare LED Monitor with 1366x768 or higher resolution. (Same make as desktop). • Must be TCO Displays 6.0 and Energy Star certified • Monitor should be of same make of offered Desktop Brand		
13.	Operation System and Support	Pre-loaded Windows 10 (or latest) Professional 64 bit, licensed copy with certificate of authenticity (or equivalent authenticity information) and all necessary and latest patches and updates. All Utilities and driver software, bundled in CD/DVD/Pen-drive media No software that are trial version or unlicensed in nature should be pre-installed on the system.		
14.	Certification for Desktop	Energy Star / BEE star certified		
15.	Specify the proposed Make			
16.	Specify the proposed Model No			

14.7 Office Productivity suite

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any

1.	Software OEM	Microsoft		
2.	Software	Microsoft Office 2019 Standard		
3.	License Type	Perpetual, Not tied to OEM Machine (can be used on any desktop)		

14.8 Monochrome Printer

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
1.	Printer type	Monochrome laser		
2.	Printer speed	Minimum 27 PPM		
3.	Memory	32 MB RAM or More		
4.	Duty cycle	Minimum 10000 monthly		
5.	Duplex	Automatic		
6.	Input Tray Capacity	Minimum 250 pages		
7.	Paper size	A4, Letter, Legal		
8.	Paper Types	Plain paper, envelopes		
9.	Interface/Connectivity	USB 2.0 or higher and 10/100 Ethernet		
10.	OS Compatibility	Windows 10		
11.	Accessories	Power cord; Ethernet Cable (patch cord), USB cable; Install Guide; Driver Software CD		
12.	Specify the proposed Make			
13.	Specify the proposed Model No			

14.9 MFP I (Network B/W MFP for Offices in ICCC)

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
1.	Function	Printer, Scanner, Copier all-in-one		
Printer				
2.	Printing Speed	Min. 25 ppm or Higher		
3.	Print Technology	Laser		
4.	Print Quality	1200 x 1200 dpi		
5.	Duty Cycle	Min 20000 pages/month		
6.	2-Side Printing	Automatic		
7.	Automatic Paper Sensor	Yes		
Scanner				
8.	Scanner type	Flat Bed with ADF for Duplex documents		
9.	Scan File Format	JPEG, PDF, PNG/TIFF		

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
10.	Resolution	1200 x 1200 dpi		
11.	Scan speed	Min. 20 ppm		
Copier				
12.	Copy Speed	Min. 20 ppm		
Paper Feeder				
13.	Total No. of Trays	1		
14.	Input paper Handling	Min. 150-sheet standard		
15.	Output Paper Handling	Min. 150-sheet		
16.	Media Size Support	A4, A5, Legal, Letter		
Network Capabilities				
17.	Network support	Built-in Ethernet 10/100/1000 Base TX		
18.	Operating System Support	Windows XP, Vista, 7, 8, 10, Linux/Unix		
19.	Memory / Processor	256 MB, 600MHz		
20.	Cartridge Yield	7000 pages/cartridge		
21.	Specify the proposed Make			
22.	Specify the proposed Model No			

14.10 MFP II (Heavy Duty)

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
1.	Function	Printer, Scanner, Copier all-in-one		
Printer				
2.	Printing Speed	Min. 30 ppm or Higher		
3.	Print Type	Monochrome		
4.	Duty Cycle	Min 50000 pages/month		
5.	2-Side Printing	Automatic		
6.	Automatic Paper Sensor	Yes		
Scanner				
7.	Scanner type	Flat Bed with ADF for Duplex documents		
8.	Scan File Format	JPEG, PDF, PNG/TIFF		
Copier				
9.	Copy Speed	Min. 30 ppm		
Paper Feeder				
10.	Total No. of Trays	Minimum 2		
11.	Input paper Handling	Min. 250-sheet standard		
12.	Output Paper Handling	Min. 150-sheet		
13.	Media Size Support	A4, A5, Legal, Letter		
Network Capabilities				
14.	Interface/Connectivity	USB 2.0 and 10/100 Ethernet		
15.	OS Compatibility	Windows 10		

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
16.	Accessories	Power cord; Ethernet Cable (patch cord), USB cable; Install Guide; Driver Software CD		
17.	Specify the proposed Make			
18.	Specify the proposed Model No			

14.11 Colour Laser Printer

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
1.	Print Speed	Print – 25 ppm or higher in color and black		
2.	Resolution	600 X 600 DPI		
3.	Memory	128 MB or more		
4.	Paper Size	A3 ,A4, Legal, Letter, Executive, custom sizes		
5.	Paper Capacity	250 sheets or above on standard input tray, 100 Sheet or above on Output Tray		
6.	Duty Cycle	25,000 sheets or better per month		
7.	OS Support	Windows 10		
8.	Interface	Ethernet Interface USB 2.0 or Higher and inbuilt network connectivity		
9.	Specify the proposed Make			
10.	Specify the proposed Model No			

14.12 Projector-1 (6000 lumens)

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
1.	Technology	3 LCD technology		
2.	Projection Method	Ceiling Mount		
3.	light output	6,000 lumens or more		
4.	Contrast Ratio	50,000:1		
5.	Size (projected distance)	50 inches to 300 inches		
6.	Color Reproduction	Up to 1 billion colors		
7.	Keystone Correction	Horizontal and Vertical		
8.	Projection Lens Type	Powered focus/zoom		
9.	Lens Zoom Ratio	Optical zoom 1 – 1.6x		

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
10.	Connectivity	HDBaseT x 1, DVI-D x1, HDMI x 1, Computer: D-sub 15 pin x 1, Component Video: BNC x 1, Audio-in: Mini stereo x 3 Audio Out x 1 Network: RJ-45 x 1, 100 Mbps Serial: RS-232c Hardwire remote jack x 1 Monitor Out: D-sub 15 pin x 1, Wireless Connectivity		
11.	Resolution	1080p, 16:9		
12.	Lamp Life	Approx. 3,000 Hours durability in Normal mode & 4,000 Hours durability in Eco mode		
13.	Aspect ratio supports	4:3, 16:9, 16:10		
14.	Audio	Internal Speaker		
15.	Security Features	Security cable hole, lens lock, Kensington lock provision		
16.	Advance Features	Simultaneously project side-by-side from different sources with Split Screen
Web-based remote management — control and monitor projector status via a Web browser
Multi-PC Projection		
17.	Mounting	Ceiling mount with fixed structure, with all accessories, its mounting and cabling upto connection point defined by authority		
18.	Accessories	Fully Functional remote with battery, carry bag, power cable, VGA/HDMI cable, User's manual (English)		
19.	Lamp warranty	Please specify		
20.	Specify the proposed Make			
21.	Specify the proposed Model No			

14.13 Projector-2 (3000 lumens)

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
1.	Technology	3 LCD technology		
2.	Projection Method	Ceiling Mount		
3.	Light output	3,000 lumens or more		
4.	Contrast Ratio	2000:1 or more		
5.	Color Reproduction	16.7 million Colours		
6.	Keystone Correction	Horizontal and vertical		
7.	Zoom and Focus	Manual Zoom and Focus		
8.	Connectivity	HDMI, VGA, USB-A (Wi-Fi Adaptor), USB-B, Audio, S-video		
9.	Resolution	1080p, 16:9		

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
10.	Lamp Life	Minimum 4000 Hours in Normal mode & 5000 Hours in Eco mode		
11.	Aspect ratio supports	4:3, 16:9		
12.	Audio	Internal Speaker		
13.	Security Features	Security cable hole, lens lock, Kensington lock provision		
14.	Advance Features	Simultaneously project side-by-side from different sources with Split Screen Web-based remote management — control and monitor projector status via a Web browser Multi-PC Projection		
15.	Mounting	Ceiling mount with fixed structure, with all accessories, its mounting and cabling upto connection point defined by authority		
16.	Accessories	Fully Functional remote with battery, carry bag, power cable, VGA/HDMI cable, User's manual (English)		
17.	Lamp warranty	Please specify		
18.	Specify the proposed Make			
19.	Specify the proposed Model No			

14.14 Projector Screen 1 (200 Inch size)

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
1.	Type	Portable Motorized Projection Screen with remote		
2.	Mounting Type	Manual Wall Mount		
3.	Screen Size	200 inch diagonally		
4.	Supported Display Technology	1080p , 3D and 4K Technology		
5.	Aspect Ratio	16:9		
6.	Fabric	Matt white, high gain fabrics, flame retardant, uniform flat screen surface with less imperfection		
7.	Specify the proposed Make			
8.	Specify the proposed Model No			

14.15 Projector Screen 2 (100 Inch size)

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
1.	Type	Portable Motorized Projection Screen with remote		
2.	Mounting Type	Manual Wall Mount		
3.	Screen Size	100 inch diagonally		
4.	Supported Display Technology	1080p , 3D and 4K Technology		
5.	Aspect Ratio	16:9		
6.	Fabric	Matt white, high gain fabrics, flame retardant, uniform flat screen surface with less imperfection		
7.	Specify the proposed Make			
8.	Specify the proposed Model No			

14.16 65" LED Display Screen

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
1.	Display Size	65" inch diagonal		
2.	Technology	LED Backlit		
3.	Resolution pixel	(1920 x 1080) Full HD		
4.	Aspect Ratio	16:9		
5.	Brightness	350 nits or more		
6.	Native Contrast Ratio	1000:1		
7.	Viewing Angle	178:178		
8.	Response time	8 ms or less		
9.	Inbuilt Speakers	Yes		
10.	VGA Port	Optional		
11.	HDMI	Yes, minimum 2 quantities		
12.	USB	Yes		
13.	DVI-D	Optional		
14.	Display Port	Optional		
15.	Power Supply	230V AC, 50 Hz		
16.	Mounting kit	Wall Mount		
17.	Accessories & Mounting	Remote, wall mount kit, mounting and cabling upto connection point defined by authority		
18.	Certification	BIS		
19.	Should be able to sync with centralized content management, Video wall , in premise presentation if necessary			
20.	Specify the proposed Make			

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
21.		Specify the proposed Model No		

14.17 Indoor Wifi Access Points (AP)

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
1.	Architecture	The Access Point should support IEEE 802.11a/b/g/n/ac/ac Wave 2 standards		
2.		Frequency of Radio 1 shall be 2.4 GHz b/g/n 20/40 MHz (2x2:2 stream)		
3.		Frequency of Radio 2 shall be 5 GHz b/g/n/ac/ac Wave 2 20/40/80 MHz (2x2:2 stream)		
4.		Should have minimum 2 Internal Antennas		
5.		Should have minimum 1x GE RJ45		
6.		Should support Power over Ethernet (PoE) IEEE 802.3af PoE or 802.3at PoE+ & External DC/AC Adapter Input		
7.		Radio 1 should minimum Throughput: 300Mbps		
8.		Radio 2 should minimum Throughput: 800Mbps		
9.	Mobility	Should support wireless controller discovery		
10.		Should support minimum 16 SSIDs		
11.		Should support minimum 20 dBm Transmission Power on both Radio		
12.		Should support Wireless Mesh or equivalent technology		
13.	Security	User/Device Authentication with WPA and WPA2 with 802.1x or Pre-shared key		
14.		Solution should have support for Captive portal for guest authentication		
15.		Solution should support devices authentication/Access List based on MAC address Filtering.		
16.		Should detect and suppress Rogue APs from day one		
17.		Solution should have security for application level filtering based on IP/Users/Group		
18.		Should have support for integration with existing security infrastructure.		
19.		Solution should have support two-factor authentication.		
20	Management	It should be able managed by virtual/physical wireless controller.		

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
21.		Should support web-based secured management interface		
22		Support Wall mounting option and necessary mounting kit should be provided with product.		
23		Operating Temperature should be 0°C to 40°C		
24		It should be WiFi /WiFi Alliance Certified		
25	Networking Passive Components	All types Fiber/DAC/Cat-6/Cat-7 Patch Cords of various lengths required to Interconnect Switch-Switch, Switch-Server, Switch-LIU must be provided/supplied from day one.		
26	Warranty	Minimum **5 Years OEM Comprehensive** Replacement warranty with support & subscription of all modules/software/components if any required to utilize the product/solution with all features enabled.		
27	Specify the proposed Make			
28	Specify the proposed Model No			

14.18 8 ports Unmanaged PoE+ Switch

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
1.	Ports	The switch shall have minimum 8 x RJ-45 auto-sensing/negotiating 1G 802.3at compatible PoE+ ports to power up the Wi-Fi Access Points.		
2.		Integrated LEDs for improved visual monitoring and analysis.		
3.	Networking Passive Components	All types Fiber/DAC/Cat-6/Cat-7 Patch Cords of various lengths required to Interconnect Switch-Switch, Switch-Server, Switch-LIU must be provided/supplied from day one.		
4.	Warranty	5 Years OEM comprehensive Warranty with support.		
5.	Chassis	1U, rack-mounting kit must be included		
6.	Power	Power supply AC 230 V (50/60 Hz)		
7.	Specify the proposed Make			
8.	Specify the proposed Model No			

14.19 24 ports (1G/1G) Web Managed Switch

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
1.	**Ports**	The switch shall have minimum 24 x RJ-45 auto-sensing/negotiating 1G ports		
2.		Either Minimum 2 x 1G SFP ports and 2 x 1G BASE-T RJ-45 ports Or Minimum 4 x 1G SFP ports with 2 x 1G BASE-T RJ-45 SFP Transceivers Modules Supplied with Product from Day one in addition to above fixed 24 ports.		
3.		Minimum 56 Gbps Switching Capacity		
4.		Auto-negotiation for speed, duplex mode and flow control & Manual for 10M Half/Full 100M Half/Full.		
5.		Auto-MDI/MDIX.		
6.		IEEE 802.3X flow control.		
7.		Integrated LEDs for improved visual monitoring and analysis.		
8.	Switch Management	Must have IEEE 802.1Q Static & Trunk VLAN (4090 VLAN IDs) & Port-based VLAN.		
9.		Spanning Tree Protocol (STP) to support standard IEEE 802.1D STP, IEEE 802.1w Rapid Spanning Tree Protocol (RSTP) for faster convergence, and IEEE 802.1s Multiple Spanning Tree Protocol (MSTP).		
10.		IEEE 802.3ad Link Aggregation Control Protocol (LACP).		
11.		IPv6 Host, Management, multicast and QoS.		
12.		SNMPv1, v2c, and v3.		
13.		Built-in switch Web-based GUI configuration utility for easy browser-based device configuration (HTTP/HTTPS) which Supports configuration, system dashboard, system maintenance, and monitoring.		
14.		IPv6 Host, Management, multicast and QoS		
15.		Layer 3 IPv4 and IPv6 static Routing.		
16.		Provision of Dual flash images to provide independent primary and		

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
		secondary operating system files for backup while upgrading.		
17.		Intuitive web interface to upload/download the Switch software to the switch.		
18.		Intuitive web interface to upload/download Configurations to and from the switch.		
19.		Availability of Port statistics through industry-standard RMON		
20.		Jumbo frame support for packets.		
21.		Broadcast storm control to help eliminate network traffic storms.		
22.		Must have Network traffic filtering and network control using MAC and IP-Binding based Access Control.		
23.	Networking Passive Components	All types Fiber/DAC/Cat-6/Cat-7 Patch Cords of various lengths required to Interconnect Switch-Switch, Switch-Server, Switch-LIU must be provided/supplied from day one.		
24.	Warranty	5 Years OEM comprehensive Warranty with support.		
25.	Chassis	1U, rack-mounting kit must be included		
26.	Power	Power supply AC 230 V (50/60 Hz)		
27.	Specify the proposed Make			
28.	Specify the proposed Model No			

14.20 24 ports (1G/10G) Web Managed Switch

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
1.	**Ports**	The switch shall have minimum 24 x RJ-45 auto-sensing/negotiating 1G ports		
2.		Either Minimum 2 x 10G SFP+ ports and 2 x 10G BASE-T RJ-45 ports Or Minimum 4 x 10G SFP+ ports with 2 x 10G BASE-T RJ-45 SFP+ Transceivers Modules Supplied with Product from Day one		

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
		in addition to above fixed 24 ports.		
3.		Minimum 128 Gbps Switching Capacity		
4.		Auto-negotiation for speed, duplex mode and flow control & Manual for 10M Half/Full 100M Half/Full.		
5.		Auto-MDI/MDIX.		
6.		IEEE 802.3X flow control.		
7.		Integrated LEDs for improved visual monitoring and analysis.		
8.	Switch Management	Must have IEEE 802.1Q Static & Trunk VLAN (4090 VLAN IDs) & Port-based VLAN.		
9.		Spanning Tree Protocol (STP) to support standard IEEE 802.1D STP, IEEE 802.1w Rapid Spanning Tree Protocol (RSTP) for faster convergence, and IEEE 802.1s Multiple Spanning Tree Protocol (MSTP).		
10.		IEEE 802.3ad Link Aggregation Control Protocol (LACP).		
11.		IPv6 Host, Management, multicast and QoS.		
12.		SNMPv1, v2c, and v3.		
13.		Built-in switch Web-based GUI configuration utility for easy browser-based device configuration (HTTP/HTTPS) which Supports configuration, system dashboard, system maintenance, and monitoring.		
14.		IPv6 Host, Management, multicast and QoS		
15.		Layer 3 IPv4 and IPv6 static Routing.		
16.		Provision of Dual flash images to provide independent primary and secondary operating system files for backup while upgrading.		
17.		Intuitive web interface to upload/download the Switch software to the switch.		
18.		Intuitive web interface to upload/download Configurations to and from the switch.		
19.		Availability of Port statistics through industry-standard RMON		

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
20.		Jumbo frame support for packets.		
21.		Broadcast storm control to help eliminate network traffic storms.		
22.		Must have Network traffic filtering and network control using MAC and IP-Binding based Access Control.		
23.	Networking Passive Components	All types Fiber/DAC/Cat-6/Cat-7 Patch Cords of various lengths required to Interconnect Switch-Switch, Switch-Server, Switch-LIU must be provided/supplied from day one.		
24.	Warranty	5 Years OEM comprehensive Warranty with support.		
25.	Chassis	1U, rack-mounting kit must be included		
26.	Power	Power supply AC 230 V (50/60 Hz)		
27.	Specify the proposed Make			
28.	Specify the proposed Model No			

14.21 48 ports (1G/10G) Web Managed Switch

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
1.	Ports	The switch shall have minimum 48 x RJ-45 auto-sensing/negotiating 1G ports		
2.		Either Minimum 2 x 10G SFP+ ports and 2 x 10G BASE-T RJ-45 ports Or Minimum 4 x 10G SFP+ ports with 2 x 10G BASE-T RJ-45 SFP+ Transceivers Modules Supplied with Product from Day one in addition to above fixed 48 ports.		
3.		Minimum 176 Gbps Switching Capacity		
4.		Auto-negotiation for speed, duplex mode and flow control & Manual for 10M Half/Full 100M Half/Full.		
5.		Auto-MDI/MDIX.		
6.		IEEE 802.3X flow control.		

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
7.		Integrated LEDs for improved visual monitoring and analysis.		
8.	Switch Management	Must have IEEE 802.1Q Static & Trunk VLAN (4090 VLAN IDs) & Port-based VLAN.		
9.		Spanning Tree Protocol (STP) to support standard IEEE 802.1D STP, IEEE 802.1w Rapid Spanning Tree Protocol (RSTP) for faster convergence, and IEEE 802.1s Multiple Spanning Tree Protocol (MSTP).		
10.		IEEE 802.3ad Link Aggregation Control Protocol (LACP).		
11.		IPv6 Host, Management, multicast and QoS.		
12.		SNMPv1, v2c, and v3.		
13.		Built-in switch Web-based GUI configuration utility for easy browser-based device configuration (HTTP/HTTPS) which Supports configuration, system dashboard, system maintenance, and monitoring.		
14.		IPv6 Host, Management, multicast and QoS		
15.		Layer 3 IPv4 and IPv6 static Routing.		
16.		Provision of Dual flash images to provide independent primary and secondary operating system files for backup while upgrading.		
17.		Intuitive web interface to upload/download the Switch software to the switch.		
18.		Intuitive web interface to upload/download Configurations to and from the switch.		
19.		Availability of Port statistics through industry-standard RMON		
20.		Jumbo frame support for packets.		
21.		Broadcast storm control to help eliminate network traffic storms.		
22.		Must have Network traffic filtering and network control using MAC and IP-Binding based Access Control.		
23.	Networking Passive Components	All types Fiber/DAC/Cat-6/Cat-7 Patch Cords of various lengths required to Interconnect Switch-		

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
		Switch, Switch-Server, Switch-LIU must be provided/supplied from day one.		
24.	Warranty	5 Years OEM comprehensive Warranty with support.		
25.	Chassis	1U, rack-mounting kit must be included		
26.	Power	Power supply AC 230 V (50/60 Hz)		
27.	Specify the proposed Make			
28.	Specify the proposed Model No			

14.22 DC Core Switch

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
1.	Switching Capacity	• Minimum 5 Tbps or Higher Switching Capacity		
2.	Slots	• Minimum 4 Interface Line Card or Module Slots • (other than management module/slot) • Switch should support Interface Line cards/Modules of 1G, 10G, 40G and 100 GE ports		
3.	Ports	• Min. 24 x 10G Base-T RJ-45 ports • Min. 48 x 10G SFP+ ports with SR/LR/ZR ports • Min. 24 x 40G QSFP+ SR4/LR4 ports • Minimum 1 Slot must be empty after configuring above ports • HA Port.		
4.	High Availability/ Architecture	• Switch should have In-Service Software Upgrade (ISSU) or Live Upgrade and patching without interrupting traffic/operations (Necessary software to be provided along with valid licenses & Subscriptions).		

		• Switch needs to be provided with redundant supervisor/Fabric modules, power supplies, and fans trays from day 1. • The switch should provide non-blocking, lossless CLOS architecture with VOQs and large buffers with the flexibility and scalability for future growth. • The switch should support modular operating system which brings native high stability, independent process monitoring, and restart through the modular design and multiple processes and support enhanced serviceability functions • The switch should support virtualization of a physical switch into multiple logical devices, with each logical switch having its own processes, configuration, and administration.		
5.	Backplane	• Properly sized Switching fabric capacity (as per network configuration to meet performance requirements of wire speed switching for the connected devices)		
6.	Layer-2 Features	• Switch should Support IEEE 802.1Q VLAN encapsulation & must have feature to configure minimum 4090 VLAN IDs.		
		• The switch must support dynamic VLAN Registration or equivalent and Dynamic Trunking protocol or equivalent		
		• Switch should Support Ether Channelling - IEEE 802.3ad or port aggregation technologies (support of LACP)		
		• Switch should Support IEEE 802.3x flow control for full-duplex mode ports.		

		• Switch should Support IEEE 802.1s/w Rapid Spanning Tree Protocol (RSTP) and Multiple Spanning Tree Protocol (MSTP)		
		• Support for Automatic Negotiation of Trunking Protocol, to help minimize the configuration & errors.		
		• IGMP snooping v1, v2 and v3		
		• Should support 64k or more ARP/MAC Address table		
		• Should support Loop protection and Loop detection.		
7.	Layer-3 Features	• Must have Static, OSPFv3, BGP4, RIPv1, RIPv2 and Policy based routing protocols with IPV4 & IPv6 supported.		
		• Should support Dual IP stack which Maintains separate stacks for IPv4 and IPv6		
		• Should support Virtual Router Redundancy Protocol (VRRP).		
		• Should support Equal-Cost Multipath (ECMP) which provides equal-cost links in a routing environment to increase link redundancy.		
		• Support 802.1D, 802.1S, 802.1w, Rate limiting.		
		• Inter-VLAN IP routing for full Layer 3 routing between 2 or more VLANs.		
		• Inbuilt Feature of Dynamic Host Configuration Protocol (DHCP) Sever which simplifies the management of large IP networks and supports client and server system.		
		• L2/L3 VXLAN and EVPN support for virtualized environments		
8.		• Standard 802.1p CoS and DSCP.		

		• Must have Network traffic filtering and network control using MAC and IP Binding based ACLs		
		• Support for Asynchronous data flows upstream and downstream from the end station or on the uplink using ingress policing and egress shaping (Optional)		
		• Should support TACACS+ and RADIUS authentication		
		• Broadcast storm control to help eliminate network traffic storms		
		• IEEE 802.1x to allow dynamic, port-based security, providing user authentication (Optional).		
	Network Security & QoS	• VLAN ACLs (VACLs) on all VLANs to prevent unauthorized data flows from being bridged within VLANs. Port-based ACLs (PACLs) for Layer 2 interfaces to allow application of security policies on individual switch ports		
		• Standard and Extended IP security router ACLs to define security policies on routed interfaces for control- and data-plane traffic.		
		• Unicast MAC filtering to prevent the forwarding of any type of packet with a matching MAC address.		
		• Unknown unicast and multicast port blocking to allow tight control by filtering packets that the switch has not already learned how to forward.		
		• Support for SSHv2 and SNMPv3 to provide network security by encrypting administrator traffic during Telnet/SSH and SNMP sessions.		
		• Private VLAN or equivalent to provide security and isolation		

		between switch ports, helping ensure that users cannot snoop on other users' traffic.		
		• MAC address management to allow administrators for analysis of users added to or removed from the network.		
		• Multilevel security on console access to prevent unauthorized users from altering the switch configuration.		
		• IPv6 Host, Management, multicast and QoS.		
9.	Management	• Easy-to-use, Web-based management interface through either GUI based software utility or using standard web browser interface which Supports configuration, system dashboard, system maintenance, and monitoring and for easier software/firmware upgrade through network using TFTP/HTTP etc (Necessary software to be provided along with valid licenses & Subscriptions).		
		• Should have accessibility using Telnet/SSH, Console access.		
		• Intuitive web interface to upload/download Configurations to and from the switch through external management software from same switching OEM. (Necessary software to be provided along with valid licenses & Subscriptions).		
		• Provision of Dual flash images to provide independent primary and secondary operating system files for backup while upgrading.		
		• Availability of Port statistics through industry-standard RMON		
		• SNMPv1, SNMPv2 and SNMPv3.		

10.	Networking Passive Components	• All types Fiber/DAC/Cat-6/Cat-7 Patch Cords of various lengths required to Interconnect Switch-Switch, Switch-Server, Switch-LIU must be provided/supplied from day one.		
11.	Warranty:	• 5 Years Direct OEM Comprehensive Warranty with parts, Support.		
12.	Chassis:	• Device must have 4 x AC power input supply and all 4 must be included with switch from day 1 with necessary switch mounting kit.		
13.	Specify the proposed Make			
14.	Specify the proposed Model No			

14.23 1G SFP LX Transceiver Module for above 24 Port Web Managed Switches

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
1.	Ports	1G BASE-LX port; Bi-Directional Duplex: full only using 2 core fiber		
2.	Warranty	5 Years comprehensive warranty.		
3.	Specify the proposed Make			
4.	Specify the proposed Model No			
	Note: Bidder is required to quote for same make & model proposed for the switches			

14.24 10G SFP+ LR Transceiver Module for 24 Port/48 Port Web Managed Switches

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
1.	Ports	10G BASE-LR port; Bi-Directional Duplex: full only using 2 core fiber		
2.	Warranty	5 Years comprehensive warranty.		
3.	Specify the proposed Make			
4.	Specify the proposed Model No			
	Note: Bidder is required to quote for same make & model proposed for the switches			

14.25 10G SFP+ LR Transceiver Module for DC Core Switch

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
1.	Ports	10G BASE-LR port; Duplex: full only		
2.	Warranty	5 Years comprehensive warranty		
3.	Specify the proposed Make			
4.	Specify the proposed Model No			

14.26 10G DAC (10M Length) for DC Core Switch

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
1.	Ports	(Minimum 10M Length) 10G DAC for 10G SFP+ Slots		
2.	Warranty	5 Years comprehensive warranty.		
3.	Specify the proposed Make			
4.	Specify the proposed Model No			

14.27 40G QSFP+ LR4 Transceiver Module for DC Core Switch

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
1.	Ports	40G QSFP+ BASE- LR4 port		
2.	Warranty	5 Years comprehensive warranty.		
3.	Specify the proposed Make			
4.	Specify the proposed Model No			

14.28 DC TOR / DC Aggregation Switch Type-1

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
1.	Switching Capacity	• Switching Capacity of minimum 1440 Gbps or Higher		
2.	Ports	• Should have minimum 48 X 10G BASE-T RJ-45 ports. • Should have minimum 4 X 40G BASE-QSFP+ LR4/SR4 ports		
3.	Switch type	• Fully Managed & Advanced Layer 3 Core/Data Centre Switch & Non Chassis Based		

4.	Backplane	• Properly sized Switching fabric capacity (as per network configuration to meet performance requirements of wire speed switching for the connected devices)		
5.	Layer-2 Features	• Switch should Support IEEE 802.1Q VLAN encapsulation & must have feature to configure minimum 4090 VLAN IDs.		
		• The switch must support dynamic VLAN Registration or equivalent and Dynamic Trunking protocol or equivalent		
		• Switch should Support Ether Channelling - IEEE 802.3ad or port aggregation technologies (support of LACP)		
		• Switch should Support IEEE 802.3x flow control for full-duplex mode ports.		
		• Switch should Support IEEE 802.1s/w Rapid Spanning Tree Protocol (RSTP) and Multiple Spanning Tree Protocol (MSTP)		
		• Support for Automatic Negotiation of Trunking Protocol, to help minimize the configuration & errors.		
		• IGMP snooping v1, v2 and v3		
		• Should support 32k or more ARP/MAC Address table		
		• Should support Loop protection and Loop detection.		
6.	Layer-3 Features	• Must have Static, OSPFv3, BGP4, RIPv1, RIPv2 and Policy based routing protocols with IPV4 & IPv6 supported.		
		• Should support Dual IP stack which Maintains separate stacks for IPv4 and IPv6		
		• Should support Virtual Router Redundancy Protocol (VRRP).		

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		• Should support Equal-Cost Multipath (ECMP) which provides equal-cost links in a routing environment to increase link redundancy.		
		• Support 802.1D, 802.1S, 802.1w, Rate limiting.		
		• Inter-VLAN IP routing for full Layer 3 routing between 2 or more VLANs.		
		• Inbuilt Feature of Dynamic Host Configuration Protocol (DHCP) Sever which simplifies the management of large IP networks and supports client and server system.		
		• L2/L3 VXLAN and EVPN support for virtualized environments		
7.	Network Security & QoS	• Standard 802.1p CoS and DSCP.		
		• Must have Network traffic filtering and network control using MAC and IP Binding based ACLs		
		• Support for Asynchronous data flows upstream and downstream from the end station or on the uplink using ingress policing and egress shaping (Optional)		
		• Should support TACACS+ and RADIUS authentication		
		• Broadcast storm control to help eliminate network traffic storms		
		• IEEE 802.1x to allow dynamic, port-based security, providing user authentication (Optional)		
		• VLAN ACLs (VACLs) on all VLANs to prevent unauthorized data flows from being bridged within VLANs. Port-based ACLs (PACLs) for Layer 2 interfaces to allow application of security policies on individual switch ports		
		• Standard and Extended IP security router ACLs to define security policies		

		on routed interfaces for control- and data-plane traffic.		
		• Unicast MAC filtering to prevent the forwarding of any type of packet with a matching MAC address.		
		• Unknown unicast and multicast port blocking to allow tight control by filtering packets that the switch has not already learned how to forward.		
		• Support for SSHv2 and SNMPv3 to provide network security by encrypting administrator traffic during Telnet/SSH and SNMP sessions.		
		• Private VLAN or equivalent to provide security and isolation between switch ports, helping ensure that users cannot snoop on other users' traffic.		
		• MAC address management to allow administrators for analysis of users added to or removed from the network.		
		• Multilevel security on console access to prevent unauthorized users from altering the switch configuration.		
		• IPv6 Host, Management, multicast and QoS.		
8.	Management	• Easy-to-use, Web-based management interface through either GUI based software utility or using standard web browser interface and change to management through external or internal software from the same switching OEM (Necessary software to be provided along with valid licenses & Subscriptions).).		
		• Should have accessibility using Telnet/SSH, Console access.		
		• Intuitive web interface to upload/download Configurations to and from the switch through external management software from same switching OEM (Necessary software to		

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
		be provided along with valid licenses & Subscriptions).		
		• Provision of Dual flash images to provide independent primary and secondary operating system files for backup while upgrading.		
		• Availability of Port statistics through industry-standard RMON		
		• SNMPv1, SNMPv2 and SNMPv3.		
9.	Networking Passive Components	• All types Fiber/DAC/Cat-6/Cat-7 Patch Cords of various lengths required to Interconnect Switch-Switch, Switch-Server, Switch-LIU must be provided/supplied from day one.		
10	Warranty:	• 5 Years back to back OEM Warranty with parts		
11.	Chassis:	• Device must have 1+1 redundant AC power input supply and must be included with switch from day 1 with necessary mounting kit.		
12	Specify the proposed Make			
13	Specify the proposed Model No			

14.29 DC TOR / DC Aggregation Switch Type-2

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
1.	Switching Capacity	• Switching Capacity of minimum 1440 Gbps or Higher		
2.	Ports	• Should have minimum 24 X 10G BASE-T RJ-45 ports and • Should have minimum 24 X 10G BASE-SFP+ SR/LR ports. • Should have minimum 4 X 40G BASE-QSFP+ LR4/SR4 ports		
3.	Switch type	• Fully Managed & Advanced Layer 3 Core/Data Centre Switch & Non Chassis Based / Modular with slots		

4.	Backplane	• Properly sized Switching fabric capacity (as per network configuration to meet performance requirements of wire speed switching for the connected devices)		
5.	Layer-2 Features	• Switch should Support IEEE 802.1Q VLAN encapsulation & must have feature to configure minimum 4090 VLAN IDs.		
		• The switch must support dynamic VLAN Registration or equivalent and Dynamic Trunking protocol or equivalent		
		• Switch should Support Ether Channelling - IEEE 802.3ad or port aggregation technologies (support of LACP)		
		• Switch should Support IEEE 802.3x flow control for full-duplex mode ports.		
		• Switch should Support IEEE 802.1s/w Rapid Spanning Tree Protocol (RSTP) and Multiple Spanning Tree Protocol (MSTP)		
		• Support for Automatic Negotiation of Trunking Protocol, to help minimize the configuration & errors.		
		• IGMP snooping v1, v2 and v3		
		• Should support 32k or more ARP/MAC Address table		
		• Should support Loop protection and Loop detection.		
6.	Layer-3 Features	• Must have Static, OSPFv3, BGP4, RIPv1, RIPv2 and Policy based routing protocols with IPV4 & IPv6 supported.		
		• Should support Dual IP stack which Maintains separate stacks for IPv4 and IPv6		
		• Should support Virtual Router Redundancy Protocol (VRRP).		
		• Should support Equal-Cost Multipath (ECMP) which provides equal-cost links in a routing environment to increase link redundancy.		
		• Support 802.1D, 802.1S, 802.1w, Rate limiting.		

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		• Inter-VLAN IP routing for full Layer 3 routing between 2 or more VLANs.		
		• Inbuilt Feature of Dynamic Host Configuration Protocol (DHCP) Sever which simplifies the management of large IP networks and supports client and server system.		
		• L2/L3 VXLAN and EVPN support for virtualized environments		
7.	Network Security & QoS	• Standard 802.1p CoS and DSCP.		
		• Must have Network traffic filtering and network control using MAC and IP Binding based ACLs		
		• Support for Asynchronous data flows upstream and downstream from the end station or on the uplink using ingress policing and egress shaping (Optional).		
		• Should support TACACS+ and RADIUS authentication		
		• Broadcast storm control to help eliminate network traffic storms		
		• IEEE 802.1x to allow dynamic, port-based security, providing user authentication (Optional).		
		• VLAN ACLs (VACLs) on all VLANs to prevent unauthorized data flows from being bridged within VLANs. Port-based ACLs (PACLs) for Layer 2 interfaces to allow application of security policies on individual switch ports		
		• Standard and Extended IP security router ACLs to define security policies on routed interfaces for control- and data-plane traffic.		
		• Unicast MAC filtering to prevent the forwarding of any type of packet with a matching MAC address.		
		• Unknown unicast and multicast port blocking to allow tight control by filtering packets that the switch has not already learned how to forward.		

		• Support for SSHv2 and SNMPv3 to provide network security by encrypting administrator traffic during Telnet/SSH and SNMP sessions.		
		• Private VLAN or equivalent to provide security and isolation between switch ports, helping ensure that users cannot snoop on other users' traffic.		
		• MAC address management to allow administrators for analysis of users added to or removed from the network.		
		• Multilevel security on console access to prevent unauthorized users from altering the switch configuration.		
		• IPv6 Host, Management, multicast and QoS.		
8.	Management	• Easy-to-use, Web-based management interface through either GUI based software utility or using standard web browser interface and change to management through external or internal software from the same switching OEM (Necessary software to be provided along with valid licenses & Subscriptions)		
		• Should have accessibility using Telnet/ SSH, Console access.		
		• Intuitive web interface to upload/download Configurations to and from the switch through external management software from same switching OEM (Necessary software to be provided along with valid licenses & Subscriptions).		
		• Provision of Dual flash images to provide independent primary and secondary operating system files for backup while upgrading.		
		• Availability of Port statistics through industry-standard RMON		
		• SNMPv1, SNMPv2 and SNMPv3.		

9.	Networking Passive Components	• All types Fiber/DAC/Cat-6/Cat-7 Patch Cords of various lengths required to Interconnect Switch-Switch, Switch-Server, Switch-LIU must be provided/supplied from day one.		
10.	Warranty:	• 5 Years back to back OEM Warranty with parts		
11.	Chassis:	• Device must have 1+1 redundant AC power input supply and must be included with switch from day 1 with necessary mounting kit.		
12.	Specify the proposed Make			
13.	Specify the proposed Model No			

14.30 40G QSFP+ LR4 Transceiver Module for DC TOR/ DC Aggregation Switch

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
1.	Ports	40G QSFP+ BASE- LR4 port		
2.	Warranty	5 Years comprehensive warranty.		
3.	Specify the proposed Make			
4.	Specify the proposed Model No			

14.31 10G SFP+ LR Transceiver Module for DC TOR / DC Aggregation Switch

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
1.	Ports	10G BASE-LR port; Duplex: full only		
2.	Warranty	5 Years comprehensive warranty.		
3.	Specify the proposed Make			
4.	Specify the proposed Model No			

14.32 DC Application & Delivery Controller with Global Server Load Balancing

#	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
1	**OEM should have support Centre in India.**		
	Port		
2	Should have minimum 4 X 1G Base-T ports		

#	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
3	Should have minimum 2 X 1G Base-X SFP ports (SFP Transceivers/Modules must be provided/supplied with product) from day one.		
	Appliance Throughput		
4	Minimum 1 Gbps or higher L4/L7 throughput		
5	Minimum 1,00,000 Layer 4 Connections per second		
6	Maximum Layer 4 Concurrent Connection 5M (Million)		
7	Minimum 1000 RSA TPS, 2k Keys as SSL Performance		
8	Minimum 4 Gb Memory		
	Global Server Load Balancing (GSLB)		
9	Should have Global data center DNS-based failover of web applications		
10	Should support WAN Link Load balancing between two locations (DC,DR)		
11	Should be able to Deliver local and global load balancing between multi-site SSL VPN		
12	DNS Access Control Lists		
	Layer 4 Application Load Balancing		
13	Should have Round robin, weighted round robin, least connections, shortest response		
14	Should have feature of L4 dynamic load balancing based on server parameters (CPU, Memory and disk)		
	Layer 7 Application Load Balancing		
15	Should be HTTP, HTTPS, HTTP 2.0 , FTP, SIP, RDP, RADIUS supported		
16	Should have feature of L7 content switching for HTTP Host, HTTP Request URL, HTTP Referrer, Source IP Address		
17	Should have feature of URL Redirect, HTTP request/response rewrite/modification		
18	Should have feature of Layer 7 DNS load balancing, security, and caching		
	Networking		
19	IPv6 Support, IPv6 routing		
20	**License for Device**		
	• The proposed solution must be licensed per unit for **5 years** & there should not be any license limit on number of sessions, rules, no of nodes/desktops, no. of IPs, domains, etc. It must include minimum **5 years** subscription for above stated specifications. • Hardware must be latest released product from OEM and it must not be under the list end of sale, end of support from OEM till **5 years** from date of commissioning. • All types Fiber/DAC/Cat-6/Cat-7 Patch Cords of various lengths required to Interconnect Switch-		

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#	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
	Switch, Switch-Server, Switch-LIU must be provided/supplied from day one.		
21	5 Years OEM comprehensive Warranty with support		
22	Specify the proposed Make		
23	Specify the proposed Model No		

14.33 Wireless LAN Controller for Indoor Wifi Access Point

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
1.	Hardware	Redundancy Features: Controller Must support Active- Active and Active-Passive.		
2.		Should Support minimum 50 x 802.11 ac Wave2 base Wifi Access Points		
3.		Should support minimum 3000 clients/users/devices		
4.		Should Support minimum 4090 VLANs		
5.		Minimum 4Gbps Throughput		
6.		Should have minimum 4 x 1G RJ45 Port		
7.		Should have minimum 1 x Management Port		
8.		Should support minimum Operating temperature 0° C to 40° C		
9.	General Feature Requirements	Ability to map SSID to VLAN.		
10.		Should support automatic channel selection – interference avoidance (Co-channel management, Adjacent Channel Management, Channel reuse management).		
11.		Should have System Internal Captive Portal for guest management		
12.	System Architecture	Centralized MAC addresses filtering		
13.		Should support onboard/ external DHCP server		
14.		Controller should support Onboard / External AAA server		
15.		The proposed architecture should be based on controller based Architecture within AP deployment. While Encryption / decryption of 802.11 packets should be performed at the AP.		
16.		Support roaming between access points deployed on same subnet and different subnets		
17.	QoS features	Per user bandwidth Rate Limiting		
18.		Self-healing (on detection of RF interference or loss of RF coverage)		

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
19.		Should support per user, per device, and per application/TCP-port prioritization		
20.		Dynamic load balancing to automatically distribute clients to the least loaded 802.11 channel and AP; load balancing must not require any client specific configurations or software		
21.		Adaptive RF management that provides the capability to pause channel scanning / adjust RF scanning intervals based on application and load presence.		
22.		Capability to provide preferred access for —fast clients over — slow clients (11n vs. 11g) in order to improve overall network performance.		
23.	RF Management	Should be able to load balance clients across channels and access points		
24.		Should be able to load balance clients based on client count		
25.		Should be able to load balance clients based on effective throughput on AP		
26.		Should be able to use client and throughput as a measure to load balance between bands		
27.	Inline Security Features	Should allow authenticated client devices to roam securely from one access point to another, within or across subnets, without any perceptible delay Security during re association.		
28.		Controller should support AES-128 and AES-256 encryption		
29.	Networking Passive Components	All types Fiber/DAC/Cat-6/Cat-7 Patch Cords of various lengths required to Interconnect Switch-Switch, Switch-Server, Switch-LIU must be provided/supplied from day one..		
30.	Warranty:	5 Years OEM comprehensive Warranty with support		
31.	Specify the proposed Make			
32.	Specify the proposed Model No			

14.34 Servers for SMC Application Requirements

Note: Hyperconverged Solution will not be considered.

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
1.	Form factor	Rack		
2.	Processor	2 No. of Intel® Xeon® Gold 6238 2.1G,22C/44T, 10.4GT/s, 30.25M		

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
		Cache, Turbo,HT (140W) DDR4-2933		
3.	RAM	• DIMM Slots must be supporting 2400 MHz/2666MHz memory frequency • Memory DIMM Slots must be supporting 8GB / 16GB / 32GB /64GB/128GB memory modules. • Minimum 384 GB Memory per physical server		
4.	Chipset	Compatible latest series of chipset (specify chipset)		
5.	Internal Storage	Minimum 2 x 600 GB SAS (10k rpm) hot swap		
		Specify the No. of HDD Slots Supported		
6.	Storage Controllers	SAS RAID Controller supporting RAID 0,1 and 5 with minimum 2 GB Cache memory with battery backup		
7.	Network Interface	2 X 10G-Base T RJ45 LAN port for providing Ethernet connectivity		
8.	Storage Connectivity Interface	2 X Single-port 16Gbps FC HBA/FCOE for providing connectivity to SAN **Note:** If bidder is offering FCOE based solution, corresponding ports must be present in server as well as storage controllers or should be achieved through use of media converter		
9.	Power Supply	Minimum 750W Hot Swappable High Efficiency Redundant Power Supplies (1+1) capable to provide necessary power for fully loaded server with C14 to C13 PDU Power Cables		
10.	Mounting Kit	Sliding Rack mounting kit rack server		
11.	Virtualization	Shall support Industry standard virtualization hypervisor like Hyper-V, VMWARE, Oracle VM etc. OEM of the blade chassis / rack and servers offered.		

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
12.	Warranty	24 x 7 Five (5) years on-site back to back comprehensive warranty		
13.	Quantity	10 No.		
14.	Specify the proposed Make			
15.	Specify the proposed Model No			

14.35 Servers for ICCC and Outdoor Digital Display Requirements

Note: Hyperconverged Solution will not be considered.

(As Building block, to establishing computing solution for sub-systems/solutions)

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
1.	Form factor	Blade / Rack		
2.	Processor	Latest series/Generation of 64 bit Gold or Platinum x86 processor(s) with 8 or higher Cores Processor speed should be minimum 2.4 GHz Minimum 2 processors each physical server		
		Specify Processor Model		
		Specify Processor Speed		
		Specify No. of Cores		
		Specify Cache		
		Specify No. of Processors Proposed		
3.	RAM	• DIMM Slots must be supporting 2400 MHz/2666MHz memory frequency • Memory DIMM Slots must be supporting 8GB / 16GB / 32GB /64GB/128GB memory modules. • Minimum 64 GB Memory per physical server		
		Specify Maximum RAM supported		
		Specify Total RAM proposed		
4.	Chipset	Compatible latest series of chipset (specify chipset)		
5.	Internal Storage	Minimum 2 x 600 GB SAS (10k rpm) hot swap		
		Specify the No. of HDD Slots Supported		

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
		Specify the HDD Capacity Offered		
		Specify the HDD Composition proposed with capacity of each type of HDD		
6.	Storage Controllers	SAS RAID Controller supporting RAID 0,1 and 5 with minimum 2 GB Cache memory with battery backup		
7.	Network interface	2 X 10G-Base T RJ45 or SFP+ LAN port for providing Ethernet connectivity		
8.	Storage Connectivity Interface	2 X Single-port 16Gbps FC HBA/FCOE for providing connectivity to SAN **Note:** If bidder is offering FCOE based solution, corresponding ports must be present in server as well as storage controllers or should be achieved through use of media converter		
9.	Power Supply (for Rack Server)	Minimum 750W Hot Swappable High Efficiency Redundant Power Supplies (1+1) capable to provide necessary power for fully loaded server with C14 to C13 PDU Power Cables		
10.	Mounting Kit	Sliding Rack mounting kit in case of rack server		
11.	Virtualization	Shall support Industry standard virtualization hypervisor like Hyper-V, VMWARE, Oracle VM etc. OEM of the blade chassis / rack and servers offered.		
12.	Warranty	24 x 7 Five (5) years on-site back to back comprehensive warranty		
13.	Quantity	Specify the quantity of the proposed server as per the solution architecture		
14.	Specify the proposed Make			
15.	Specify the proposed Model No			

14.36 Blade Chassis for Blade Servers

#	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
1.	Minimum 6U size, rack-mountable, capable of accommodating minimum 8 or higher hot pluggable blades		
2.	Dual network connectivity of 10 G speed for each blade server for redundancy		
3.	Shall support Industry standard virtualization hypervisor like Hyper-V, VMWARE, Oracle VM etc.		
4.	DVD ROM shall be available in chassis, can be internal or external, which can be shared by all the blades allowing remote installation of software		
5.	Minimum 4 USB port		
6.	Minimum 2 hot-plug/hot-swap 10 Gbps Ethernet modules each with 8 No. of Ethernet ports for uplink and sufficient internal 10 GBPS ports within chassis to support redundancy for each blade		
7.	Two hot-plugs/hot-swap redundant 16 GBPS Fiber Channel module or FCOE module with 16 number of internal and 8 external 16 GBPS ports for connectivity to the external Fiber channel Switch / Storage Controller (Ports must be active and populated with SFP+ from day one.) **Note:** If bidder is offering FCOE based solution, corresponding ports must be present in server as well as storage controllers or should be achieved through use of media converter		
8.	Power supplies shall have N+N. All power supplies modules shall be populated in the chassis. Required number of PDUs and power cables, to connect all blades, Chassis to Data Center power outlet.		
9.	Hot pluggable/hot-swappable redundant cooling unit		
10.	Provision of systems management and deployment tools to aid in blade server configuration and OS deployment		
11.	Blade enclosure shall have provision to connect to display console/central console for local management such as troubleshooting, configuration, system status/health display.		
12.	Single console for all blades in the enclosure, built-in KVM switch with facility for Virtual KVM features over IP		
13.	Dedicated management network port shall have separate path for remote management.		
14.	24 x 7 Five (5) years on-site back to back comprehensive warranty		
15.	Specify the proposed Make		

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#	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
16.	Specify the proposed Model No		

14.37 IP KVM with 17" Rack LED/LCD and USB VM Server Module Bundle

#	Parameter	Minimum Specifications		
1.	Components	• 1 x 16 Port IP KVM with VM • 1 x 17-inch Rack LED/LCD Monitor/Console • 2 X USB Ports with Virtual Media Server Modules • 1 x KVM/LCD 1U bracket kit • Necessary Software CD, Installation guide etc.		
2.	Form	1U Rack Mountable hardware proposed should be able to access multiple servers mounted in rack or by accessing them remotely.		
3.	Authentication	It should have feature to Control user privileges & access rights to Secure assets from unauthorized access.		
4.	OS/Platform Support	It should be compatible with Windows, Sun, Unix and Linux OS.		
5.		It should have Pluggable Operation support by which servers can be added or removed without having to power off the switch.		
6.	Accessories	All Types of accessories/cables/converters/modules required to utilize the solution at full potential should be supplied with it.		
7.	Warranty	3 Years repair or replacement warranty with parts		
8.	Specify the proposed Make			
9.	Specify the proposed Model No			

14.38 Storage

Note: Hyperconverged Solution will not be considered.

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
1.	Controllers	• At least 2 hot pluggable Controllers in active/active mode (for all required protocols) with automatic failover to each other in case of one controller failure. • The controllers / Storage nodes should be upgradable seamlessly, without any disruptions / downtime to production workflow for performance, capacity enhancement and software / firmware upgrades. • Minimum four Xeon 8 Core CPU across storage controllers • Controller must support Multipath I/O Architecture.		
2.	Storage Operating System	• Storage offered must be with the latest operating system		
3.	Cache	• Minimum 512 GB of useable cache across controllers, out of which minimum 384 GB Cache must be controller cache and rest can be flash based cache. • Cache shall be used only for data and control operations and should not handle any overhead of operating system		
4.	Host Interface Port	Minimum 16 nos. of 16 Gbps Fibre Channel Ports (in high availability) across Controller shall be available. Ports must be active and populated with SFP+ from day one.		
5.	Back and front port	The storage should support 8/16 Gbps on FC to connect SAN Switch, 10Gbps on iSCSI (SFP+/Base-T) to Connect on LAN switch within same controller pair.		
6.	Scalability	System should support a minimum of 500 drives or more within the same set of controllers.		
7.	Disk Drive Support	System should have support for • SSD/Flash drives • SAS drives • Near-line SAS drives		

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
8.	RAID support	Should support various RAID Levels (RAID 0 / 1 / 5 / 6 / 10 or any combination of RAID level on single Storage system)		
9.	Solution/ Type	Bidder is required to offer corresponding ports both in server as well as storage controller based on the solution proposed (FC/iSCSI).		
10.	Storage	The proposed storage should be supplied with 1000 TB usable capacity (with no compression and de-duplication) with at least 200 TB usable capacity using SSD drive, 400 TB usable capacity using SAS drives and 400 TB usable capacity using NL-SAS drives. Bidder is required to use RAID 5 / RAID 6 / RAID 10 as per best practises and to maximise the performance of entire software solution proposed. Each LUN created should not have more than 10 drives. 1 Global Hot Spare per 20 drives with equivalent or higher capacity should be considered. • Capacity of SSD drive proposed should not be more than 4 TB. • Capacity of SAS drive proposed should not be more than 2 TB. • Capacity of NL-SAS drive proposed should not be more than 10 TB		
11.	Global Hot Spare	• System should have the capability to designate global hot spares that can be automatically be used to replace a failed drive anywhere in the system. • Storage system should be configured and offered with required Global Hot-spares for the different type and no. of disks configured, as per the system architecture best practices.		
12.	Minimum LUNs	• Capacity to create minimum 2000 numbers of LUNs		
13.	Thin Provisioning	• Offered Storage System should have Thin Provisioning and Thin Reclamation.		
14.	Hardware Platform	• Rack mounted form-factor		

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
		• Modular design to support controllers and disk drives expansion		
15.	On-line Expansion/RAID Group creation/ Expansion	• System should have online expansion and shrinking of RAID Group or addition and deletion of new RAID Group. Must be able to add and delete additional disks on the fly to expand or reduce the RAID group capacity or create new RAID Group.		
16.	Redundancy and High Availability	• The Storage System should be able to protect the data against single point of failure with respect to hard disks, Cache memory, Controller card, connectivity interfaces, fans and power supplies		
17.	Management software	• All the necessary software (GUI Based) to configure and manage the storage space, RAID configuration, logical drives allocation, snapshots, Deduplication, Compression, Thin Provisioning, Virtualization integration, etc. are to be provided for the entire system proposed from day-1. • Licenses for the storage management software should include disc capacity/count of the complete solution and any additional disks to be plugged in in the future, upto max capacity of the existing controller/units. • A single command console for entire storage system. • Should also include storage performance monitoring and management software. This should provide detail of performance like IOPs utilization, response time and also provide capacity detail like amount of capacity allocated, capacity used and capacity free. • Should provide the functionality of proactive monitoring of Disk drive		

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
		and Storage system for all possible disk failures • Should be able to take "snapshots" of the stored data to another logical drive for backup purposes • There should be a dedicated Ethernet port for management and it should not use the iSCSI host ports for management.		
18.	Data Protection	The storage array must have complete cache protection mechanism either by de-staging data to disk or providing complete cache data protection with battery backup for up to 4 hours		
19.	Server Operating System Support	Must be completely supported by the server operating system offered by the bidder for all the features and technology		
20.	Virtualization Support	Storage System must be completely supported by the virtualization technology offered by the bidder for all the features and technology		
21.	Accessories	All the necessary tools & tackles licenses, cables/ connectors for Ethernet/ Fibre/USB/ Power etc. required for making the system operational shall be provided by the bidder.		
22.	SAN Switch	• Standard 24 Port 16Gbps SAN Switches x 2 Nos. • Each SAN switch with all 24 Activated ports from day one or if more active ports require as per proposed application architecture, bidder has to provide the same. • Necessary SFP modules, patch cables and other required accessories has to be provided. Bidder will have to ensure that all the hardware; i.e. servers, storage, backup or any other devices connecting to SAN switch shall be in redundant mode for controllers, ports as well as cables.		

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
23.	Warranty	• 24 x 7 five (5) years on-site back to back comprehensive warranty from the date of Golive • Minimum 7 years OEM's product support guarantee (Vendor has to give the same on OEM letterhead)	•	
24.		Specify the proposed Make		
25.		Specify the proposed Model No		

14.39 42U Rack for Servers

Racks to be supplied with 5 Years repair or replacement comprehensive warranty with parts from **Vertive/Rittal/APC/Emerson/HPE/Lenovo/Dell make**.

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
1.	Dimension	Rack Width: 600mm Rack Depth/Length: 1000 mm to 1070 mm		
2.		Rack Height : 42U		
3.		Color: Black		
4.		Rack Equipment Mounting should be as per EIA-310 standard: 19" along with 'U' marking.		
5.		Rack should have minimum weight carrying Capacity of 500Kgs.		
6.	Doors	Front and Back doors should be perforated with at least 60% or higher perforations		
7.		Front & Back door should be lockable utilizing a single key with the doors.		
8.		Rack should have single front door and it should be able moved to the opposite side or interchanged with rear doors. Doors should be able to be removed easily with simple lift-off design.		
9.		Rack should have Split rear doors to improve access and serviceability to rear of rack mounted equipment.		
10.	Side Panels	Side Panels should be of Half-height on each side for easy access.		
11.		Side panels should be lockable utilizing a single key with the doors.		

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
12.	Cable access	It should have cable access slots in the roof for overhead cable egress.		
13.		It should have unobstructed cable access from bottom of the Rack through a raised floor.		
14.	Wire managers	Two vertical wire/cable managers/panels should be provided in front and back of the rack for cable management.		
15.	Power Distribution Units	Rack must be supplied with 2 x PDUs per Rack - Vertically Mounted, 32AMPs with 25 Power Outputs. (20 Power outs of IEC 320 C13 Sockets & 5 Power outs of 5/15 Amp Sockets), Electronically controlled circuits for Surge & Spike protection 32AMPS MCB, 5 KV AC isolated input to Ground & Output to Ground.		
16.		PDUs provided should have LAN/RJ-45 Port and it should be able to manage by assigning IP address to fetch the Information like current/voltage/power being drawn from the each port or total power from PDU.		
17.		All types of Power Cables (like C13 to C14, e.t.c.) required to power up the various Network/Server devices should be supplied/provided with it from day one.		
18.	**Hardware/Accessories provided**	Rack must be supplied with minimum 2 (two) nos of standard hardware pack/bag (which includes mounting nut-bolts, cable ties e.t.c) for mounting IT equipment and tools for enclosure adjustment.		
19.		Pre-installed full-enclosure height Integrated and adjustable rear accessory channel to accommodate PDUs and vertical cable organizers.		
20.		Rear accessory channel should be able to move to other locations of the enclosure along the side brace to resituate cable management as per requirement.		
21.		Minimum 2 x 1U Mountable Cable Manager and maximum as per site		

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
		requirement needs to be supplied from Day one.		
22.	Warranty	5 Years repair or replacement comprehensive warranty with parts.		
23.	Specify the proposed Make			
24.	Specify the proposed Model No			

14.40 42U Rack for Network Devices

Racks to be supplied with 5 Years repair or replacement comprehensive warranty with parts from **Vertive/Rittal/APC/Emerson/HPE/Lenovo/Dell make.**

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
1.	Dimension	Rack Width: 750-800mm Rack Depth/Length: 1000 mm to 1070 mm		
2.		Rack Height : 42U		
3.		Color: Black		
4.		Rack Equipment Mounting should be as per EIA-310 standard: 19" along with 'U' marking.		
5.		Rack should have minimum weight carrying Capacity of 500Kgs.		
6.	Doors	Front and Back doors should be perforated with at least 60% or higher perforations		
7.		Front & Back door should be lockable utilizing a single key with the doors.		
8.		Rack should have single front door and it should be able moved to the opposite side or interchanged with rear doors. Doors should be able to be removed easily with simple lift-off design.		
9.		Rack should have Split rear doors to improve access and serviceability to rear of rack mounted equipment.		
10.	Side Panels	Side Panels should be of Half-height on each side for easy access.		
11.		Side panels should be lockable utilizing a single key with the doors.		
12.	Cable access	It should have cable access slots in the roof for overhead cable egress.		

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
13.		It should have unobstructed cable access from bottom of the Rack through a raised floor.		
14.	Wire managers	Two vertical wire/cable managers/panels should be provided in front and back of the rack for cable management.		
15.	Power Distribution Units	Rack must be supplied with 2 x PDUs per Rack - Vertically Mounted, 32AMPs with 25 Power Outputs. (20 Power outs of IEC 320 C13 Sockets & 5 Power outs of 5/15 Amp Sockets), Electronically controlled circuits for Surge & Spike protection 32AMPS MCB, 5 KV AC isolated input to Ground & Output to Ground.		
16.		PDUs provided should have LAN/RJ-45 Port and it should be able to manage by assigning IP address to fetch the Information like current/voltage/power being drawn from the each port or total power from PDU.		
17.		All types of Power Cables (like C13 to C14, e.t.c.) required to power up the various Network/Server devices should be supplied/provided with it from day one.		
18.	**Hardware/Accessories provided**	Rack must be supplied with minimum 2 (two) nos of standard hardware pack/bag (which includes mounting nut-bolts, cable ties e.t.c) for mounting IT equipment and tools for enclosure adjustment.		
19.		Pre-installed full-enclosure height Integrated and adjustable rear accessory channel to accommodate PDUs and vertical cable organizers.		
20.		Rear accessory channel should be able to move to other locations of the enclosure along the side brace to resituate cable management as per requirement.		
21.		Minimum 2 x 1U Mountable Cable Manager and maximum as per site requirement needs to be supplied from Day one.		

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
22.	Warranty	5 Years repair or replacement comprehensive warranty with parts.		
23.	Specify the proposed Make			
24.	Specify the proposed Model No			

14.41 Enterprise Security & Antivirus Software License for Server

#	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
1.	Enterprise Server Security Software shall provide server security, network security and application security covering Antivirus, Antimalware, IDS/IPS, Web Application Protection, etc. to ensure complete security		
2.	Specify the proposed Make		
3.	Specify the proposed Model No		

14.42 Call Center Management Solution

#	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
1.	The contact centre solution should be able to route voice/ VOIP calls from centralized Interactive Voice Response System (IVRS) to respective call centre (s) along with interaction history of the calling party. **Note:** Scope of EPBAX and PRI Lines are not in the scope of SI. However, the SI is required to co-ordinate with SMC for the smooth roll out of Call Centre Management Solution. Apart from IVRS based Call Center Management Solution under this RFP, the SI may also be required to integrate /route the call to existing Sitilink IVRS system for smooth operations, if required.		
2.	The callers should be able to access the various services through state-of-art centralized integrated Interactive Voice Response System (IVRS). The information is envisaged to be available to the customer through telephone (IVRS) and call centres agents.		

#	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
3.	The IVRS should establish two way communication on the same channel with customers through recorded synthesized voice in Hindi / English / Gujarati or in combination of languages to give information, reply to queries and provide other.		
4.	IVRS should be modular and scalable in nature for easy expansion without requiring any change in the software.		
5.	It should be possible to access IVRS through any of the access device such as Landline telephone, Mobile phone (GSM as well as CDMA) etc.		
6.	IVRS should support various means of Alarm indications/error logs in case of system failures, e.g. Functional error, missing voice message prompt, etc., and shall generate error Log		
7.	The system should have the ability to define business rules based upon which the system should quickly identify, classify and prioritize callers, and using sophisticated routing, to deliver interactions to the best qualified agent in the any of the connected local/remote call centre, regardless of interaction channel		
8.	The IVRS should be capable to capture usage details of each customer as the customer traverses through a call. The IVRS should have an interface through which usage details can be shared with other solutions.		
9.	The application should provide CTI services such as: • Automatic display (screen pop) of information concerning a user/customer on the call agent screen prior to taking the call based on ANI, DNIS or IVR data. • Synchronized transfer of the data and the call to the call centre agent. • Transfer of data corresponding to any query raised by any IP agent regarding a query raised by a customer whose call is		

#	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
	being attended by the call IP agent. • Call routing facilities such as business rule based routing, skills-based routing etc.		
10	The application should support integration to leading CTI middleware vendors.		
11.	Should provide pre-integration with industry standard IVR servers and enhance routing & screen-pop by forwarding the information.		
12.	Should provide facilities for outbound calling list management, and software based predictive or preview dialling.		
13.	**Call Centre Agent's Desktop: The agents desktop shall have an application which shall fulfil the following functionalities :** • It should provide consistent agent interface across multiple media types like fax, SMS, telephone, email, and web call back. • The agent's desktop should have a "soft-phone" – an application that enables standard telephony functions through a GUI. • It should be possible for agents to escalate the query.		
14.	System should be able to integrate with e−mail / SMS gateway so that appropriate messages can be sent to the relevant stakeholders after the interaction and any updates thereon.		
15.	Should intelligently and automatically routes inquires with skills based routing discipline to agents		
16.	Should have an Intelligent distribution of email to agents		
17.	**CTI (Computer Telephone Integration) Application Requirements** • The CTI link should allow a computer application to acquire control of the agent resources on the IP EPABX & change state of the agent phone through commands on the CTI link.		

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#	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
	• The CTI link should pass events & information of agent states & changes in agent states as well as incoming calls to the computer applications. • The CTI link should allow a computer application to take control of the call flow inside the IP EPABX & also allow the computer application to decide the most suitable action / agent for an incoming call. • Should be able to integrate with various domain systems of SMC to send/receive data like caller number, call duration, agent id, transfer details, etc. • Ability to generate and service requests • Call events should be handled from the system such as hold, retrieve hold, conference, transfer, etc. • CTI should be integrated with core call center system and update the IVR		
18	**Automatic Call Distribution (ACD) Requirements** • The ACD solution should be able to route the call to any remote call centre agent using IP phones • Should able to Handle high call volumes efficiently • Should allow calls to be transferred within the call center • Should support multiple groups for all call types • Should provide highly configurable system for adding/removing users • Should have an ability to queue or hold the call for an agent if none is immediately available. • Should have an ability to keep the callers informed as to the status of the call and providing information to callers while they wait in queue. • System should be able to perform prioritized call routing		
19.	**Supervisor Module**		

#	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
	The call centre should provide a graphical console application program for the supervisor's workstation. This position shall facilitate the following features:- • Any supervisor shall be able to monitor or control any group in the call Centre. • It shall show the live activity of each agent in details as well as in a summarized fashion including information like total number of calls received, calls answered, average response time etc. • The Supervisor console shall also graphically display live status of the call session summary, number of call waiting in the queue, call traffic etc. • Live status of the group shall be shown, including waiting calls and calls being answered currently. • Access to the supervisor console shall be restricted. • It shall be possible for a supervisor to attend calls whenever necessary.		
20	**Recording** The solution should have provision for call recording, archival and retrieval. The recording should contain detailed call information and the solution must provide advanced searching capabilities The solution should able to store /retain the recording on the recording server for 30 days.		
21.	Proposed solution should not have any user license restriction up to 50 user licenses. The performance of solution must not degrade with increase in number of users in the application up to 50 user licenses.		
22	Should have a comprehensive audit trail detailing every user activity including system/security administrators.		
23	**Security and Privacy** • Should be capable to protect the caller		

#	Minimum Specifications	Compliance (Yes/No)	Remarks, if any

	information and thus privacy of the caller.
	• System must maintain log including date, time, terminal number of each operation, done by every user/group and should have back up.
	• There should be a complete and comprehensive security from unauthorized access and misuse.
	• System should support the following
	  - Forced password change
	  - Display last login/logout
	  - Failed login attempts
	  - Inactivity time out
	  - No concurrent login
	  - Block/delete/relocate users
	  - Password control (length, composition etc.)
	  - Password not displayed when entered
	  - Password change interval
	  - Password change history
	  - Login session timeout
	  - Allows password reset
	  - Allows user to change password		

24	a. **Reporting**
	• The daily, weekly, monthly MIS reports shall include all the following but not limited to: report on calls handled, call pending, average duration of calls, min. & max duration of calls, number of instances the operator found busy, calls abandoned due to breakdown, etc. The proposed solution must have comprehensive reports for various activities by the Contact Center:
	  - Calls per week, month or other period.
	  - Numeric and graphical representation of call volume
	  - Calls for each interaction tracked by type
	  - Number of dropped calls after answering
		b.	c.

#	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
	- Calls that ended while on hold, indicating that the caller hung up - Reports must have restricted access based on user access privileges. - The ad-hoc reporting tool must enable reports to be exported to other formats like MS Excel and MS word format - Agent based/shift based and other suitable reporting shall be there		
25	Specify the proposed Make		
26	Specify the proposed Model No		

14.43 VM based Network Access Control Solution

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
1.	Solution Type	VM Hosted (VMWare/Hyper-V)		
2.		Bidder/OEM is required to specify recommended hardware specification for hosting/mounting product/solution VM on server like RAM, HDD, vCPU, Ethernet Gig ports, VMware/Hyper-V version etc.		
3.	Features	Product/Solution should be Web-based Centralized GUI that can perform the task mentioned as per below points to devices which are connected to various branches through distributed network and thorough multiple router hopes via Leased Line/MPLS/Internet with various VLANs or different L3 IP networks configured for its connectivity to HQ/DC.		
4.		Solution should provide functionality to Centrally configure and manage Various Profiles, Guest Access, BYoD, Device, user Authentication and Authorization based services, Administration in single Web-based Centralized GUI console.		
5.		It should be able to authenticate wired devices from LAN, WAN and wireless devices from WLAN as well as VPN users connected to network.		
6.		It should be able to provide clientless web authentication for guest devices.		
7.		It should check for policy compliance before permitting access to any devices on network and upon verification grant access to those particular resources which were allocated for		

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
		it and block access to other recourses on network.		
8.		Product/Solution should be able to detect/discover and control every managed devices on network and it should be able provide automatic responses to devices based on predefined templets/policy.		
9.		Product/Solution should be able to Enrol guest, BYOD, and IOT devices and provide protection against modern day threats/challenges from IoT , BYoD, guests etc.		
10.		It should be able to detect and eliminate/isolate/quarantine rogue devices on network and should be able to provide alert on dashboard and by other methods like reporting or by email etc..		
11.		It should be able to detect and enforce predefined or custom policy compliance based on user type, device type and operating system.		
12.		Product/Solution should be able to respond/react to events/threats in networks before they spread by its own or by help of existing Firewall and End Point Antivirus Solution.		
13.		It should be able authenticate IP devices by its MAC Address with either agentless deployment with the help of 802.1x enabled existing switches in network or with the help of Agent/client (Agent/Client licence must be included if required) based deployment or with combination of both techniques (Agentless & with Agent) without making changes to existing network infrastructure.		
14.		Solution should provide inventory of all devices connected to HQ/DC though LAN, WAN, WLAN, Leased Line/MPLS connectivity and able to identify that which device is connected to which port of various managed switches via drilled down access.		
15.		It should provide integration for Inbound & Outbound Security Events.		
16.		It should be able to perform Layer 2 and Layer 3 Polling to fetch/resolve details like IP address, MAC Address, Hostname, Location, Vendor Name, Operating System for each and every system/device connected to network.		

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#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
17.		It should support third-party network devices available in existing infrastructure as per below, **Network Devices** from OEM like: Cisco, D-Link, H3C, HP/HPE/3Com/Aruba, Intel, Juniper, Brocade, Ruckus, Fortinet products etc. **Security/Firewalls** like: FortiGate, Checkpoint, Cisco etc. **Operating Systems** like: MS Windows, Linux, Apple MAC OSX & iOS, Android etc. **Endpoint Protection** software like: Microsoft, Symantec, Norton, Trend Micro, McAfee etc. **Authentication & Directory Services** like RADIUS, Microsoft IAS, LDAP, MS Active Directory etc.		
18.		Solution should be compatible and work with existing Enterprise firewall from Fortigate and End Point Antivirus Solution from Symantec & Microsoft.		
19.		It should have inbuilt support 802.1x or SPAN Ports and captive portal to implement solution.		
20.		Solution should be able to create pre-defined templates for endpoints like IP device		
21.		It should provide various advanced and customized Reports for analysis and tools for troubleshooting.		
22.	Licensing	Product Solution offered must have capacity for support of minimum 15,000 Concurrent Ports/End Device/End Users. Product/Solution/Modules offered must be with 5 years subscription base license(from the date of Go-live) provided with perpetual licence initially for minimum 5,000 Concurrent Ports/ Ports/End Device/End Users which also includes IoT, BYoD, guests devices and it should be upgradable up to at least 15,000 Concurrent Ports/End Device/End Users in future if required with additional licence. Note: SI is required to provide atleast 1 major upgrade during the 5 years of Contract period, if any		
23.	Training	Bidder/OEM is responsible for Full Configuration, Integration, Implementation and maintenance and technical support of solution/product as per requirement of SSCDL/SMC for RFP contract period and		

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#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
		necessary hands on training for Administration & Operational Features in this regard is required to be provided without any additional commercial to identified Representatives of SSCDL/SMC.		
24.	Specify the proposed Make			
25.	Specify the proposed Model No			

14.44 Wired and Wireless Presentation Solution for Conference Room

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
1.	Key Features	a. The solution to have capability for capturing multiple input through wired and wireless connection. b. The wireless connectivity capability should preferably be inbuilt, however if not available, external device to be proposed to meet the requirement as part of solution. c. The solution must be compatible with Windows, MAC, IOS and Android OS. d. It should provide universal BYOD (bring your own device) compatibility with HDMI, DisplayPort, and USB-C inputs, plus wireless connectivity for mobile devices/ laptops etc.		
2.	Video Input Interface	4 x HDMI 1 x HDBaseT		
3.	Video Output Interface	1 x HDMI 1x HDBaseT		
4.	Video Resolution	Up to 1080p@60Hz		
5.	Audio Input	1 x Balanced Audio IN connector		
6.	Audio Output	1 x balanced audio OUT		
7.	Control Method	LAN(1 - RJ45, 10/100/1000 Mbps)		
8.	Wireless Projection	a. The solution should support wireless projection through Airplay, Miracast, Chromecast or through application. b. In case of wireless projection through dedicated application, necessary perpetual client and device software license should be provided with the solution along with upgrades. The client software must be accessible via direct download from the device.		

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
		c. The wireless projection should be supported for Windows, MAC, IOS and Android OS. d. The solution should support connection of the input device over wifi and should enable projection as well as internet access utilizing the same SSID. e. Supports wireless video up to 1080p at minimum 30 FPS f. Simultaneous connection and content display from up to four different devices		
9.	Automatic input selection and automatic display control	Capability to automatically changes inputs based on device connection or disconnection from the switcher for devices connected through wire or wireless.		
10.	Operating Temperature	0-40°C		
11.	Power Supply	240 VAC at 60 Hz		
12.	Accessories	HDBaseT receiver – 1 no. (same OEM), Transmitter & Receiver pair HDMI over, Ethernet – 4 nos. (same OEM), HDMI cable – 9 nos. (same OEM), Power cable, necessary LAN cable required to connect end devices, user manual (English), any other accessories which is necessary for solution		
13.	Mounting	Rack Mount with all necessary accessories		
14.	Compliances	CE, RoHS		
15.	Warranty	3 years comprehensive onsite back-to-back OEM warranty including service and parts		
16.	Specify the proposed Make			
17.	Specify the proposed Model No			

14.45 8-Port HDMI Cat 5/6 Splitter

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
1.	Input Interface	1 x HDMI Type A Female		
2.	Output Interface	1 x HDMI Type A Female - Local Output 8 x RJ-45 Female		
3.	Resolution	Up to 1080p		
4.	Distance	Up to 60 m		
5.	Audio Input	1 x HDMI Type A Female		
6.	Audio Output	1 x HDMI Type A Female		
7.	Operating Temperature	0-40°C		

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
8.	Accessories	HDMI over Ethernet Receiver - 8 nos. (same OEM), HDMI Cable – 8 nos. (same OEM), Power cable, necessary LAN cable required to connect end devices, user manual (English), any other accessories which is necessary for solution		
9.	Warranty	3 years comprehensive onsite back-to-back OEM warranty including service and parts		
10.	Specify the proposed Make			
11.	Specify the proposed Model No			

14.46 Outdoor Digital Display Board I (7 mt x 5 mt)

#	Parameters	Minimum Specification	Compliance (Yes/No)	Remarks, if any
1.	To supply Full Colour LED Displays with Controller, Power Distribution Unit, Auto Brightness Controller, Power cables and signal cables			
2.	LED Type	SMD 3 in 1		
3.	Pixel Pitch	8 mm		
4.	Pixel Density	Minimum 15,000 dots/m2		
5.	ODDB Size	Minimum 7 mt x 5 mt (WxH)		
6.	Color Type	Real Full Color		
7.	Brightness	Brightness: Minimum 6000 cd/m² or better		
8.	Contrast Ratio	Minimum 3000:1		
9.	Flicker	No visible flicker to naked eye.		
10.	Viewing Angle	Viewing angle shall ensure readability covering maximum area for approach side Horizontal: >= 140 degree Vertical: >= 90 degree		
11.	Picture Display	a. Synchronized Dot to Dot display.		
		b. Special frontal design to avoid reflection.		
		c. Display shall be UV resistant		
12.	Grey Scale Processing	12 Bit or better		
13.	Ambient Operating Temperature	0° to + 50°C		
14.	Humidity	10% ~90% RH or better		
15.	LEDs Lifetime	>=100,000 Hours (half brightness)		

#	Parameters	Minimum Specification	Compliance (Yes/No)	Remarks, if any
16.	LED Processor Capacity	Minimum 2.3 million pixels		
17.	Protection	Protection for Overvoltage and fluctuation to be incorporated		
18.	Power Socket	The enclosure shall contain at least two 15 Amp VAC (industrial grade) outlet socket for maintenance purpose.		
19.	Interface/Port	RJ45/FC port/RS232/RS485. SI has to ensure data communication between all the necessary devices, as required.		
20.	Ingress Protection Rating	a. IP 54 for whole cabinet		
		b. IP 65 for Front side		
21.	Luminance Control & auto Diming	Should be automatically provide different luminance levels and shall also be controllable from the Command center using software.		
		Auto dimming capability to adjust to ambient light level (sensor based automatic control)		
		Photoelectric sensor to measure ambient light. Capable of being continually exposed to direct sunlight without impairment of performance.		
22.	Cabinet Material	Aluminium Die-casting or Non-corrosive, water resistant or better. Frame of the Outdoor Led Display Board should be black & Powder coated		
23.	Self-Test	a. Display shall have self-test diagnostic feature to test for correct operation.		
		b. Display driver boards shall test the status of all display cells in the sign even when Light Emitting diodes are not illuminated.		
		c. All periodic self-test results shall be relayed to the command center in real time to update the status of the Digital Display Board		
24.	Alarms	a. Door Open sensor to Inform Control room during unauthorized access		
		b. LED Pixel failure detection alarm		

#	Parameters	Minimum Specification	Compliance (Yes/No)	Remarks, if any
25.	Mounting, Installation and finishes	a. Mounting structure shall be of appropriate height of GI Pole (Class B) with 5.5 mtr of minimum vertical clearance from the ground surface.		
		b. The mounting shall be capable of withstanding road side vibrations at site of installation.		
		c. It shall be provided with suitable half walkway for maintenance access.		
		d. The side interior and rear of outer enclosures shall be provided in Aluminium Composite Panel (ACP). The bidder is required to provide the colour for the enclosure as per the colour suggestions from the SMC/SSCDL. All enclosure shall be flat and wipe clean.		
		e. Locking mechanism should be provided for onsite enclosures and cabinets.		
		f. For Structural safety, the successful bidder has to provide structural safety certificate from qualified structural engineers approved/ certified by Govt. Agency.		
26.	Wind Load	WL9 as per EN12966 to withstand high wind speeds and its own load		
27.	Cabling, connections and Labelling.	a. All cable conductors shall be of ISI marked for quality and safety. It shall be of copper insulated, securely fastened, grouped, wherever possible, using tie warps approximately every 10-20 cms. on cable trays.		
		b. All cables shall be clearly labelled with indelible indication that can clearly be identified by maintenance personnel using "As built drawings".		
		c. Lightening arrester shall be installed for safety on each ODDB.		
		d. Electrical Earthing should be done as per IS-3043 standard		

#	Parameters	Minimum Specification	Compliance (Yes/No)	Remarks, if any
	Other	**Display Controller:** The Display Controller of appropriate specification required to configure and manage the ODDB to meet optimum performance and SLAs of RFP.		
		Communication Interface Device: Necessary Communication Interface device required as part of the solution should be provided for each ODDB.		
		Offered product model should be available on OEMs web site. Link of offered model –OEM website to submit along with technical bid.		
28.	Certifications	CE, FCC, BIS certification		
29.	Warranty	Five (5) years on-site back to back comprehensive warranty		
30.	Specify the proposed Make			
31.	Specify the proposed Model No			

14.47 ODDB Media Player

#	Parameters	Minimum Specification	Compliance (Yes/No)	Remarks, if any
1.	Processor	Minimum 2 GHz Intel Core i3		
2.	RAM	16 GB DDR4 RAM		
3.	HDD	128 GB Solid State Drive (SSD)		
4.	USB Ports	2 USB 3.0 Ports		
5.	Network	10/100/1000 Base-T (RJ45)		
6.	Audio Output	3.5 mm stereo mini-jack		
7.	Media File Support	Support display of different contents like image, video, text, live stream, HTML, etc. with common media formats like JPEG, PNG, PNG, BMP, GIF, MP4, MKV, MPEG, AVI, HTML, CSS, JS, PDF, etc.		
8.	Audio File Support	MPEG-1 (layers 1, 2, and 3), MPEG-2 (AAC), MPEG-4 (AAC), AC3, MP3, WAV		

#	Parameters	Minimum Specification	Compliance (Yes/No)	Remarks, if any
9.	Resolution	Full HD @ 60fps		
10.		Multiple fonts, speeds, colours, and directions. RSS newsfeeds.		
11.		Digital Clock (multilingual and localisable date and time formats)		
12.	Other	Animation - HTML (with JavaScript), HTML cropping and zoom, HTML		
13.		Support for playing live stream through IP or URL as a source.		
14.		Should be rugged enough to withstand 24*7 operations and diverse weather conditions in outdoor environment.		
15.	Mounting	Necessary mounting accessories for secure mounting		
16.	Certifications	CE , UL certification		
17.	Warranty	Five (5) years on-site OEM back to back comprehensive warranty		
18.	Specify the proposed Make			
19.	Specify the proposed Model No			

14.48 Outdoor Cabinets

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
1.	An IP 55 rack shall be provided to house the various components required to drive the Outdoor Digital Display Boards. The Junction Box shall be at least 13 U high with a provision to mount 19" wide equipment's. The indicative equipment's required to be installed inside the rack shall be (i) Power Distribution Unit for the Digital Display Boards with surge protection (ii) Audio Amplifier (iii) Media Player (iv) controller (v) Network switch (vi) Communication interface Device, (vii) Other devices/accessories if any required to run the Outdoor Digital Display boards as per RFP Requirements.			
2.	19" pillar front & 19" pillar rear	Bolted on rack side wall		
3.	Locking Arrangement	To be provided with a locking system		
4.	Earthing	Earthing studs should be provided in the rack for earthing purposes		

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
5.	Cable points	Adequate number of Cable entry and exit points should be provided in the Rack		
6.	Mounting	Should be possible to mount the rack either on a pole or on a wall with options of different mounting types		
7.	Rack Internal size	Minimum 13U 19" rack		
8.	Material	1.5 mm GI Hot Dip Galvanized with Zinc coating of 86 micron as per IS:2629		
9.	IP rating	IP55		
10.	AC input	230V		
11.	AC out put	230V, having enough number of output ports to run all the equipment's/ components placed inside the rack to meet the RFP requirements. Additional 1 (one) spare output port to be provisioned for maintenance		
12.	Surge protection	Class C		
13.	Temperature protection	Rack design should ensure to keep the temperature (Considering atmospheric condition of Surat) within suitable operating range for equipment's placed inside rack as per the proposed solution		
14.	Other	Necessary mounting accessories, cables, connectors as per RFP requirements		
15.	Warranty	Onsite Warranty for 5 years		
16.	Specify the proposed Make			
17.	Specify the proposed Model No			

14.49 Outdoor Speakers for Digital Display Boards

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
1.	Outdoor Speakers Preferred Make:	Bose, Philips, JBL, Val Audio, Harman		
2.	Type	It should be Weather resistant IP56 rating Outdoor 2 way Coaxial Loudspeaker		
3.	Frequency Range (-10 dB)	80 Hz – 20 kHz		
4.	Frequency Response (±3 dB)	100 Hz – 20 kHz		
5.	Transducers	LF : 8 inch woofer with Kevlar-reinforced 2 inch voice coil		

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
		HF: 1 inch exit compression driver, high temperature, polymer diaphragm, patent design, fluid cooling."		
6.	Overload Protection	It should have SonicGuard High Frequency Overload Protection		
7.	Crossover Network	1.8 kHz, should have high slope crossover network for constant coverage and smooth, natural midrange.		
8.	Long Term System Power Rating	250 W 2 hrs. 200 W 100 hrs		
9.	Transformer Taps	70V: 200W, 100W, 50W, 25W 100V: 200W, 100W, 50W		
10.	Coverage Pattern	120° x 120° broadband pattern		
11.	Sensitivity	94dB or better		
12.	Max SPL	Direct 8Ω: 118 dB (peaks of 124 dB) 200 W Tap: 117 dB		
13.	Nominal Impedance	8 ohms		
14.	Physical	Environment : IP56 per IEC529 with a min. 5 degree downward aiming angle Exceeds Mil Spec 810 for humidity, salt spray, temperature & UV, and ASTM G85 for salt spray		
15.	Enclosure	ABS with Glass enclosure		
16.	Grille	Corrosion-resistant zinc-rich extra-thick powder coated steel grille, 3-layer assembly with foam and woven poly mesh backing.		
17.	Other	Necessary mounting accessories, cables, connectors as per RFP requirements		
18.	Warranty	Five (5) years on-site back to back comprehensive OEM warranty		
19.	Specify the proposed Make			
20.	Specify the proposed Model No			

14.50 Amplifier

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
1.	Power Supply	AC: 240V, DC: 24 V		
2.	Rated Power	250 W		

Sign

Stamp

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
3.	Tone Controls	Bass: ±10dB at 100Hz, Treble: ±10dB at 10kHz		
4.	Output Power	Should be > 50% rated power		
5.	Speaker Output	4Ω/8Ω & 70/100 V		
6.	Frequency Response	50-15, 000 Hz ±3 dB		
7.	Signal to Noise Ratio	≥70 dB		
8.	Other	Necessary mounting accessories, cables, connectors as per RFP requirements		
9.	Warranty	Five (5) years on-site back to back comprehensive OEM warranty		
10.	Specify the proposed Make			
11.	Specify the proposed Model No			

14.51 2 Megapixel Full HD IR IP Vandal proof <mark>Bullet</mark> Camera with Varifocal Lens

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
1.	Image Sensor	1/3" Progressive Scan CMOS or better		
2.	Pixels	2 Mega Pixel Full HD (1920 X 1080)		
3.	Min. Illumination	Color: 0.05 lux, B/W: 0 lux with IR (ON)		
4.	Lens	2.8 mm ~ 12 mm Varifocal, DC Auto Iris, IR Corrected, or better		
5.	Signal to Noise Ratio	More Than 50 dB		
6.	Focus	Automatic, Manual		
7.	Wide Dynamic Range	100 dB or better		
8.	IR Range	30 Meter or better		
9.	Day & Night	Auto (IR), Color, B/W		
10.	Backlight Compensation	Automatic BLC		
11.	Noise Reduction	3D DNR, 2D DNR		
12.	Compression Standard	H.265 (backward compatible with H.264), MJPEG or better		

Sign

Stamp

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
13.	Streams	Minimum two video Stream Supported. Each stream configurable for resolution, fps.		
14.	Resolution & Frame Rate	Minimum 25 frames per second (FPS) for both the Streams. Full HD (1080P) @ 25 FPS with H.265 compression on one stream & HD (720p) @ 25 FPS with H.265 compression on other stream.		
15.	Data rate	i) 8 Mbps maximum for H.265 Video Compression. ii) Shall work on 3 Mbps bit rate or less average for Full HD@ 25 FPS at Variable bit rate (VBR) on individual (Single) stream with H.265 Video Compression.		
16.	Video Streaming	Unicast and Multicast Streams		
17.	Text Superimposing	Camera shall support superimposing the title and date & time on the video		
18.	Ethernet Port	RJ45 (10/100Base-T) self-adaptive		
19.	Protocols	IPv4/IPv6, TCP/IP, UDP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, RTSP, PPPoE, NTP, UPnP, SMTP, SNMP, IGMP		
20.	Power	12 V DC / 24V DC/AC and PoE		
21.	Local Storage	Support minimum 128 GB of microSD/SDHC/SDXC card		
22.	Alarm I/O	Alarm I/P Port:1 And O/P Port: 1		
23.	Audio	2 Way Audio Supported		
24.	Housing	Vandal proof and Impact resistant enclosure with IP66 or NEMA 4X and IK 10 Rated or better		
25.	Operating Temperature	0 °C to 50 °C		
26.	Operating Humidity	0% to 80% Relative, Non-Condensing		
27.	Standard	ONVIF 2.0 and above supported		
28.	Certification	CE, FCC and UL		
29.	Warranty	5 Years comprehensive onsite Warranty with parts		
30.	Specify the proposed Make			
31.	Specify the proposed Model No			

14.52 2 Megapixel IR IP Bullet Camera with fixed lens

#	Parameters	Minimum Specifications	Compliance (Yes / No)	Remarks if Any
1.	Image Sensor	1/3" Progressive Scan CMOS or better		
2.	Pixels	2 Mega Pixel Full HD (1920 X 1080)		
3.	Min. Illumination	Color: 0.05 lux, B/W: 0 lux with IR (ON)		
4.	Lens	Fixed Lens wide angle between 2.8mm to 3.6mm /Fixed Lens narrow angle between 4 mm to 6mm (actual focal length to be decided based on feasibility study)		
5.	Signal to Noise Ratio	More Than 50 dB		
6.	Wide Dynamic Range	80 dB or better		
7.	IR Range	30 Meter or better		
8.	Day & Night	Auto (IR), Color, B/W		
9.	Backlight Compensation	Automatic BLC		
10.	Noise Reduction	3D DNR, 2D DNR		
11.	Compression Standard	H.265 (backward compatible with H.264), MJPEG or better		
12.	Streams	Minimum two video Stream Supported. Each stream configurable for resolution, fps.		
13.	Resolution & Frame Rate	Minimum 25 frames per second (FPS) for both the Streams. Full HD (1080P) @ 25 FPS with H.265 compression on one stream & HD (720P) @ 25 FPS with H.265 compression on other stream.		
14.	Data rate	i) 8 Mbps maximum for H.265 Video Compression. ii) Shall work on 3 Mbps bit rate or less average for Full HD@ 25 FPS at Variable bit rate (VBR) on individual (Single) stream with H.265 Video Compression.		

#	Parameters	Minimum Specifications	Compliance (Yes / No)	Remarks if Any
15.	Text Superimposing	Camera shall support superimposing the title and date & time on the video		
16.	Ethernet Port	RJ45 (10/100Base-T) self-adaptive		
17.	Protocols	IPv4/IPv6, TCP/IP, UDP, HTTP, HTTPS, DHCP, DNS, DDNS, PPPoE, NTP, UPnP, SMTP		
18.	Power	12 V DC / 24V DC/AC and PoE		
19.	Housing	IP66/NEMA 4X or better		
20.	Operating Temperature	0 °C to 50 °C		
21.	Operating Humidity	0% to 80% Relative, Non-Condensing		
22.	Standard	ONVIF 2.0 and above supported		
23.	Certification	CE, FCC and UL		
24.	Warranty	5 Years comprehensive onsite Warranty with parts		
25.	Specify the proposed Make			
26.	Specify the proposed Model No			

14.53 8 Port Web Managed PoE/PoE+ Network switch (at Field Locations)

#	Parameter	Minimum Specifications	Compliance (Yes, No)	Remarks if Any
1.	Type	Web Managed		
2.	Total Ports	• 8 RJ-45 auto-negotiating 10/100/1000 PoE/PoE+ ports • Minimum 2 Combo 100/1000 BASE-X SFP/BASE T ports in addition to above ports		
3.	PoE Standard	IEEE 802.3af/ IEEE 802.3at.		
4.	Protocols	• IPV4, IPV6 • DHCP support • IGMP • SNMP Management • Should support Loop protection and Loop detection • Should support Ring protection • End point Authentication • Should support NTP		

#	Parameter	Minimum Specifications	Compliance (Yes, No)	Remarks if Any
		• Should have IPv4 and IPv6 Static Routing		
5.	Access Control	• Support port security • Support 802.1x (Port based network access control). • Support for IP and MAC binding based filtering and Access List. • Support security group access control list		
6.	PoE Power per port	Sufficient to operate the Offered CCTV cameras/edge devices connected		
7.	Operating Temperature	0 - 45° C or better		
8.	Multicast support	IGMP Snooping V1, V2, V3		
9.	Management	• The Switch should support simple Web management • Support NTP		
10.	Power Supply	AC Input		
11.	Compliance	UL/EN/IEC		
12.	Warranty	5 Years comprehensive onsite Warranty with parts		
13.	Specify the proposed Make			
14.	Specify the proposed Model No			

14.54 1G SFP Transceiver Module for 8 Port Web Managed PoE/PoE+ network switch

#	Parameter	Minimum Specifications	Compliance (Yes, No)	Remarks if Any
1.	Make	Of the same OEM as proposed for 8 Port PoE/PoE+ Web Managed network switch (Item 14.16) and should be compatible with it.		
2.	Type	• 1000BASE-LX SFP transceiver type • Single-mode fiber supported • 1310 nm wavelength Supported • Distance Support up to 10 km • Hot swappable • Low insertion-loss duplex LC receptacle • Bi-Directional Full Duplex Transceiver Module		

#	Parameter	Minimum Specifications	Compliance (Yes, No)	Remarks if Any
3.	Patch Cord	Along with required Patch cord for connecting transceiver		
4.	Warranty	5 Years comprehensive onsite Warranty with parts		
5.	Specify the proposed Make			
6.	Specify the proposed Model No			

14.55 Power cable

#	Component	Minimum Specifications	Compliance (Yes/No)	Remarks if Any
1.	No's of core	3 core 2.5 sq. mm.		
2.	Materials	XLPE insulated and PVC sheathed armored cable with copper conductor of suitable size		
3.	Certification	ISI Marked		
4.	IS: 7098	XLPE insulated electric cables (heavy duty)		
5.	Warranty	5 Years comprehensive onsite Warranty Support		
6.	Specify the proposed Make			
7.	Specify the proposed Model No			

14.56 DWC & HDPE Pipe

#	Parameters	Minimum Specifications	Compliance (Yes/No)	Remarks if Any
1.	Diameter	32/40 mm (Inner Dia./Outer Dia.)		
2.	Standard	IS		
3.	Specify the proposed Make			
4.	Specify the proposed Model No			

14.57 Other Software

#	Item	Part Code	Compliance (Yes/No)	Remarks if Any
1.	VMware vSphere 7 Enterprise Plus for 1 processor	VS7-EPL-C		

#	Item	Part Code	Compliance (Yes/No)	Remarks if Any
2.	Production Support/Subscription for VMware vSphere 7 Enterprise Plus for 1 processor for 3 years	VS7-EPL-3P-SSS-C		
3.	WinSvrSTDCore 2019 OLP 2Lic NL Gov CoreLic	9EM-000671		
4.	SQLSvrStdCore 2019 OLP 2Lic NL Gov CoreLic Qlfd	7NQ-01581		
5.	Azure DevOps Server AzureDevOpsServer LicSAPk OLP NL Gov	125-00162		
6.	Visual Studio Professional VSPro 2019 OLP NL Gov	C5E-01388		

14.58. Laptop

#	Criteria	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
1.	Processor	10th Generation Intel® Core™ i7-10510U Processor or higher		
2.	RAM	16 GB DDR4 2666 MHz RAM or Higher expandable up to 32 GB		
3.	Storage	1TB SSD		
4.	Graphic Card	Minimum 4GB dedicated graphic card		
5.	Battery	At least 6 hours battery back up		
6.	Audio	Built-in Speakers and Built-in Microphone		
7.	Display	Size: 14" FHD (1920x1080)		
8.	Ports	Minimum 3 In-built USB ports with at least 2 USB 3.0 Minimum One HDMI port, Minimum One VGA port (Optional) Minimum One RJ-45 port Dedicated Headphone jack Dedicated Microphone jack		
9.	Web Camera	On Board HD Webcam		
10.	Ethernet	Min 1x LAN Gigabit (10/100/1000)		
11.	Wireless LAN/WAN	Wi-Fi, Bluetooth v4.1 or higher		
12.	Accessories	OEM carry case (Office Laptop Messenger Bag) 1 USB Mouse		
13.	Operating System	Pre-loaded licensed Microsoft Windows 10 Professional 64 bit Operating System with Latest service pack with recovery DVD media or Disk Recovery System No software that are trial version or unlicensed in nature should be pre-installed on the system.		

#	Criteria	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
14.	Warranty	3 years comprehensive onsite back-to-back OEM warranty including service and parts		
15.	Specify the proposed Make			
16.	Specify the proposed Model No			

14.59. Media Converter

#	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
1.	Speed (Auto, 10/100 Mbps), Full Duplex		
2.	Unmanaged Fast Ethernet media converter which supports 100 Base-Tx to 100Base-Fx media conversion		
3.	1 x 100 Base-FX optical port along with required optical fiber patch cord and 1 x 100Mbps Ethernet port-RJ45		
4.	Distance up to 10Kms on Single Mode Fiber		
5.	Required accessories for complete installation and configuration		
6.	Operating Temperature: 0 degree to 55 degree Celsius		
7.	5 Years comprehensive onsite Warranty with parts		
8.	Specify the proposed Make		
9.	Specify the proposed Model No		

14.60.   Optical Fiber Cable

#	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
1.	6 Core Single Mode Optical Fiber Cable		
2.	Optical Fiber cable should be ISO/IEC-11801, Indoor/Outdoor, IEC 60332-3, IEC 61034-2, IEC 60754-2		
3.	Shall be 9µ, 6-core Single mode OS2 steel armoured cable as per ISO/IEC-11801		
4.	Shall be able to meet Gigabit & 10 Gigabit Ethernet performance requirement specified by IEEE 802.3z (1000 Base-X) & IEEE 802.3ae (10G Base-X)		
5.	Shall be jelly filled with loose tube construction		

#	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
6.	Shall have water blocked construction to prevent water absorption and consequent damages		
7.	Optical Fibers should be in multitube/Unitube type of cables		
8.	Fiber cable shall be RoHS Compliant.		
9.	Shall have minimum 25 year performance Warranty		
10.	Specify the proposed Make		
11.	Specify the proposed Model No		

14.61. UTP Cat 6 Cable with rodent resistant Jacket

#	Minimum Specifications	Compliance (Yes/No)	Remarks if Any
1.	Shall be of 4 twisted pairs of 23 AWG solid conductors or better		
2.	Shall support network line speeds upto 1 gigabits per second or better		
3.	Shall be 4-pair Unshielded twisted pair with a cross filler/ isolator (+), meeting Category 6 tested till 250 MHz as per EIA/TIA-568C.2.		
4.	Should comply with all of the performance requirements for current and proposed applications such as Gigabit Ethernet, 100BASE-Tx, Digital Video and Voice.		
5.	The Category 6 Solution shall fully comply with the link segment specifications for 1000 Base-TX in addition to the ANSI/TIA and ISO/IEC Category 6 requirements.		
6.	Shall have the length printed on the outer jacket of the cable after every meter.		
7.	With Rodent Resistance jacket		
8.	Support for Temperature Range: 0 deg. To 50 deg		
9.	Specify the proposed Make		
10.	Specify the proposed Model No		

14.62. UTP Cat 6 Cable

#	Minimum Specifications	Compliance (Yes/No)	Remarks if Any
1.	Shall be of 4 twisted pairs of 23 AWG solid conductors or better		
2.	Shall support network line speeds upto 1 gigabits per second or better		
3.	Shall be 4-pair Unshielded twisted pair with a cross filler/ isolator (+), meeting Category 6 tested till 250 MHz as per EIA/TIA-568C.2.		
4.	Should comply with all of the performance requirements for current and proposed applications such as Gigabit Ethernet, 100BASE-Tx, digital video and Voice		
5.	The Category 6 Solution shall fully comply with the link segment specifications for 1000 Base-TX in addition to the ANSI/TIA and ISO/IEC Category 6 requirements.		
6.	Shall have the length printed on the outer jacket of the cable after every meter.		
7.	Specify the proposed Make		
8.	Specify the proposed Model No		