LAKSHADWEEP ADMINISTRATION
Society for Promotion of Nature Tourism and Sports
(Lakshadweep Tourism)
Tourism Bhavan, Rajpath Road, U.T of Lakshadweep, Kavaratti – 682555
Ph: 04896 263666, email: sportsgm.lk@gmail.com,
sportshqfinance@gmail.com

F.No.109/18/2025-SPORTS Dated.10.06.2025

Request for Proposal

For

Augmentation of IT Infrastructure at Bangaram Resort

Key Bid Parameters

Bidders are invited to submit their Bids on or before the time, date and at the office of SPORTS, Lakshadweep Tourism Kavaratti for submission as indicated below. The Bids submitted after the due date and time or at any other office other than indicated herein below will not be considered under any circumstances; unless notified by the Authority with full information of the altered time, date and the office for submission.

Sl. No.	Event Description	Particulars
1	Name of Work	Selection of Master System Integrator for Providing Augmentation of IT Infrastructure at Bangaram Resort.
2	Tender Fee/Cost of Tender Form	Rs.1500/-
3	Earnest Money Deposit (EMD)	Rs.5,62,500/- in the form of DD/NEFT/RTGS transfer to the following bank Account: Name : SPORTS A/c No.: 99502140000091 Bank : Canara Bank, Kavaratti IFSC : CNRB0019950
3	RFP Document available for downloading from	3.00 PM on 10.06.2025
4	RFP Document available for downloading up to	4.00 PM on 01.07.2025
5	Last date & Time for submission of Bid	5.00 PM on 01.07.2025
6	Mode of Bid Submission	Bids shall be submitted in the e-tender mode on the website www.tendersutl.gov.in Formalities for Registration, submission of bids, etc. are available in this website itself.
7	Bid Documents	The bid is invited in Two Bid System. Bidder shall submit the Technical Bid and Financial Bid separately in the given format.
8	Address for communication & submission of Bid	The Managing Director SPORTS (Lakshadweep Tourism), Headquarter Office, UT of Lakshadweep, Kavaratti – 682 555. Phone: 0489 626 3666 Email : sportshqfinance@gmail.com
9	Contact Details	
10	Last date for receiving pre-bid queries	Pre-bid queries shall be shared over email sportshqfinance@gmail.com before; 15:00 hours IST) on …..06.2025 Queries shall be in the form of excel and pdf (signed /stamped).

12	Date of Pre-Bid Meeting	
13	Place of Pre-Bid Meeting	Online mode through VC /Zoom Meeting
14	Date & Time for opening of Technical Bid	3.30 PM on 02.07.2025
16	Date & Time for opening of Financial Bid	3.30 PM on 04.07.2025
17	Validity of the RFP	180 Days from the last date of submission.

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Section 1

1. Introduction

1.1 Background

Bangaram Island is a picturesque atoll located in the Union Territory of Lakshadweep, India. Known for its pristine beaches, crystal-clear turquoise waters, and vibrant coral reefs, it is one of the most popular tourist destinations in the Lakshadweep archipelago. Surrounded by a shallow lagoon and dotted with coconut palms, Bangaram offers a tranquil escape from urban life and is ideal for activities such as snorkeling, scuba diving, and kayaking. Bangaram island is situated very close to Agatti Island. The tourist resort on this island provides an amazing opportunity for guests to unwind from the pressures and tensions of modern life. Two small islands of Thinnakara and Parali also lie close to Bangaram enclosed by the same lagoon. During the night, phosphorescent plankton washed ashore on the coral sands impart a bluish glow to the beach, which is totally enchanting. Being the only uninhabited island resort in Lakshadweep, it has got its own charm, absolute serenity and uniqueness as a tourist destination . An ideal destination for discerning exclusive tourists, Bangaram has carved its presence in the international tourist map. It is surrounded by a shallow lagoon enclosed by coral reef. Bangaram has been ranked among the best gateways of the world. It offers utmost tranquillity and unpolluted comfort with crystal clear water. Agatti Island is the gateway to Bangaram and is linked to Cochin for onward flights to metro cities.

Island at a glance	
Location	10°- 56* North Latitude 72°- 17* East longitude, located 459 kms, from Cochin.
Land Area	2.30 sq.Kms.
Climate	The climate of the island is warm round the year. Rainfall is limited and the temperature during the monsoon is 25-27° C.
Elevation/ Altitude	Around 7 to 10 m
Transport	Kavaratti Island is the Administrative Capital of Lakshadweep. Lakshadweep Administration provides the inter-island boat service facility for both local people and tourists. The Bangaram island can be reached by boat/ferry from Agatti jetty. Airways and waterways are the two modes of transport to reach Lakshadweep from Kochi. Agatti is the gateway of Lakshadweep islands. The inter-islands can be reached by

	High Speed Crafts (HSC)/boat and helicopter. Bangaram Island is situated 14 kms away from Agatti Airport, Lakshadweep and Agatti Airport is 468 km away from Cochin International Airport, Kerala.

1.2 Vision

The Union Territory of Lakshadweep envisions the holistic development of its islands by building core infrastructure that ensures a decent quality of life for both residents and tourists. The focus is on creating a clean, sustainable environment through the use of ‘Smart’ solutions, such as efficient resource management, digital connectivity, and eco-friendly technologies. Emphasizing smart, sustainable, and inclusive growth, the approach aims to develop compact, well-planned areas that can serve as replicable models for other regions. This vision seeks to balance ecological preservation with economic and social development, ensuring long-term resilience and prosperity for the island communities.

Section 2

2. Instructions to Bidders

2.1 Instructions for Online Bid Submission

i. Possession of valid Digital Signature Certificate (DSC) and enrolment/registration of the Bidders on the e-Procurement/e-tender portal are pre-requisites for e-tendering.

ii. Bidder should register for the enrolment in the e-Procurement site using the "Online Bidder Enrolment" option available on the home page. Portal enrolment is generally free of charge. During enrolment/registration, the bidders should provide only valid and true information including valid email id.

iii. All the correspondence shall be made directly with the Bidders through email id as registered.

iv. Bidder needs to login to the site through their user ID/ password chosen during enrolment/registration.

v. The Digital Signature Certificate (Class II or Class III Certificates with signing key usage) issued by SIFY/TCS/nCode/e-Mudra or any other Certifying Authority recognized by Controller of Certifying Authorities (CCA) India on e-Token/ Smart Card, should be registered.

vi. The registered DSC only should be used by the Bidder in the transactions and should ensure safety of the same.

vii. Bidder may go through the tenders published on the site and download the tender documents/schedules for the tenders.

viii. After downloading / getting the tender document/schedules, the Bidder should go through them carefully and then submit the documents as required, otherwise the bid will be rejected.

ix. Any clarifications may be sought online through the tender site, through the contact details or during pre-bid meetings if any. Bidder should take into account the corrigendum if any is published before submitting the bids online.

x. Bidder may log in to the site through the secured login by the user id/ password chosen during enrolment/registration and then by submitting the password of the e-Token/Smart Card to access DSC.

xi. Bidders may select the tender which they are interested in by using the search option and then move it to the 'my tenders' folder.
    a. From my tender folder, the Bidder may select the tender to view all the details uploaded there.
    b. It shall be deemed that the bidder has read and understood all the terms and conditions before submitting the offer. Bidder should go through the tender schedules carefully and upload the documents as asked; otherwise, the incomplete bid shall stand rejected.

c. Bidder, in advance, should prepare the bid documents to be submitted as indicated in the tender document/schedule and ordinarily it shall be in [PDF/xls/rar/jpg/dwf] formats. If there is more than one document, all may be clubbed together (attached in order) and provided in the requested format. Bidders Bid documents may be scanned with 100 dpi with black and white option. It is advisable that each document to be uploaded online for the tenders should be less than [2 MB]. If any document is more than [2MB], it can be reduced through zip/rar and the same, if permitted, may be uploaded. The total available size for uploading the documents will be as per the size limited by e-procurement portal.
d. Bidder should submit the Bid Document Fee/Bid Security/EMD as specified in the tender. The hard copy of the document should be posted/couriered/given in person to the Tender Inviting Authority, within bid submission due date and time as indicated in the tender. Scanned copy of the instrument (bid documents) should be uploaded online as part of the offer.
e. While submitting the bids online, the Bidder shall read the terms and conditions and may accept the same to proceed further to submit the bid packets.
f. The Bidder has to select the payment option as offline to pay the Bid Document Fee/ Bid Security/EMD as applicable and enter details of the instruments.
g. The details of the DD/any other accepted instrument, physically delivered, should tally with the details available in the scanned copy and the data entered during bid submission time, otherwise submitted bids shall not be acceptable or liable for rejection.
h. The Bidder has to digitally sign and upload the required bid documents one by one as indicated. Very act of using DSC for downloading the bids and uploading their offers shall be deemed to be a confirmation that the Bidder has read, understood and agreed with all clauses of the Bid Document including General conditions of contract without any exception.
i. The Bidder has to upload the relevant files required as indicated in the cover content.
j. The Price-bid/BOQ template is provided in a spreadsheet file (for e.g. BoQ_XXXX.xls), the rates offered should be entered in the allotted space only and uploaded after filling the relevant columns. The Price-bid/BOQ template shall not be modified / replaced by the Bidder; else the bid submitted is liable to be rejected for the tender.
k. The Bidders are advised to submit the bids through an online e-tendering system to the Tender Inviting Authority (TIA) well before the bid submission due date and time (as per Server System Clock). The TIA shall not be held responsible for any delay or the difficulties faced during the submission of bids online by the Bidders.

l. After the bid submission, the acknowledgement number indicated by the system should be printed by the Bidder and kept as a record of evidence for online submission of bids for the particular tender.
m. The time settings fixed in the server side and displayed at the top of the tender site, shall remain valid for all actions of requesting, bid submission, bid opening etc., in the e-Tender system. The Bidder should follow such time during bid submission.
n. All the data being entered by the Bidder would be encrypted using Public Key Infrastructure (PKI) encryption techniques to ensure the secrecy of the data. The data entered is not retrievable by unauthorized persons during the bid submission and until the time of bid opening by any person.
o. Any Bid Document that is uploaded on the server is subjected to symmetric encryption using a system generated symmetric key. Further this key is subjected to asymmetric encryption using buyers/bid openers' public keys. Overall, the uploaded Bid Documents become readable only after the tender opening by authorized bid openers.
p. The confidentiality of the bids is maintained with the use of Secure Socket Layer (SSL) 128-bit encryption technology. Data storage encryption of sensitive fields is done.
q. The Bidder should logout of the tendering system using the normal logout option available at the top right-hand corner and not by selecting the (X) exit option in the browser.
r. For any queries regarding e-Tendering process, the Bidders may contact at address as provided in the Bid Document. For any further queries, the Bidders are advised to send an email to sportshqfinance@gmail.com

2.2 General

i. While every effort has been made to provide comprehensive and accurate background information, requirements and envisaged solution(s) specifications, Bidders must form their own conclusions about the solution(s) needed to meet the Authority's requirements. Bidders and recipients of this RFP may wish to consult their own legal advisers in relation to this RFP.
ii. All information supplied by Bidders as part of their bids in response to this RFP, may be treated as contractually binding on the Bidders, on successful award of the project by the Authority on the basis of this RFP.
iii. No commitment of any kind, contractual or otherwise shall exist unless and until a formal written contract has been executed by or on behalf of Authority. Any notification of preferred bidder status by Authority shall not give rise to any enforceable rights by the Bidder. Authority may cancel this public procurement at any time prior to a formal written contract being executed by or on behalf of Authority.
iv. Bids shall be received by the Authority on the e-Procurement portal www.tendersutl.gov.in before the time and date specified in the schedule of the tender notice. In the event of the specified date for the submission of tender

being declared a public holiday by the Government of respective state, the offers will be received up to the appointed time on the next working day. The Authority may, at its discretion, extend this deadline for submission of offers by issuing corrigendum and uploading the same on e-Procurement portal.

v. Telex, cable, or facsimile offers will be rejected.

vi. There is ferry service between the Islands. All the necessary approval and permission shall be given by the authority. However, all the charges wrt. to transport shall be borne by the Successful Bidder.

vii. Bidder shall supply the 100% Tender complied product. Bids shall be submitted strictly in accordance with the requirements and terms & conditions of the RFP. (No Deviation Certificate). The bids with deviation(s) are liable for rejection. Bidder shall submit the cross references against each compliance and highlight in datasheet/relevant doc.

viii. The rate quoted by System Integrator shall be inclusive of GST, transportation and installation etc. Nothing extra shall be paid by the authority.

ix. Number of Camera or any other equipment shown in financial bid are indicative in nature. The number may increase or decrease. The successful bidder shall be paid as per the work done and as per quantity shown in BOQ.

2.3 Tender Fee/ Cost of Tender Form

i. Tender Fee/ Cost of Tender Form is Rs.500 /- (Rupees Five Hundred) only including all taxes.

ii. Each Bidder shall remit Tender Fee/ Cost of Tender Form to the Bank Account of the Purchaser.

iii. Copy of Bank Remittance Slip towards Tender Fee/ Cost of Tender Form shall be attached with the Bid.

iv. Bidder's who are exempted from payment of Tender Fee/ Cost of Tender Form shall submit the documentary evidence to that effect.

v. Tender Fee/ Cost of Tender Form once remitted by the bidder shall not be refunded under any circumstances.

2.4 Mode of submission of Bid

i. Bids shall be submitted in the e-tender mode through the website www.tendersutl.gov.in.Formalities for Registration, submission of bids, etc. are available in this website itself.

ii. Bids submitted by any other means shall not be considered.

iii. Enclosures submitted along with the Bid shall be serially page numbered and page number of the enclosure shall be specified in the respective column of Technical Bid format.

2.5 Bid System

i. The bid is invited in Two Bid System. Bidder shall submit the Technical Bid and Financial Bid separately.

ii. Technical Bid: Format for submission of Technical Bid is attached as (Address of Bidder, Cost of Tender Form & EMD, Pre-Qualification Criteria for Bidders, etc.)

iii. Financial Bid: Format for submission of Financial Bid is attached as Section -6. The Financial Bid shall be properly filled and submitted along with the Bid.

2.6 Bid Security/ Earnest Money Deposit (EMD)

i. All bids must be accompanied by an earnest money of Rs.5,62,500.00 (Rupees Five Lakh Twenty Eight Thousand) only in the form of Demand Draft from a scheduled bank in India and shall be valid for at least six months, in favour of 'Managing Director, SPORTS' payable at Canara Bank, Kavaratti. No interest shall be paid on the earnest money under any circumstances.

ii. EMD for each schedule of Goods intended in this tender is as given below.

Sl.No.	Schedule No.	EMD
1.		Rs.5,62,500.00

iii. EMD for each schedule shall be submitted separately by means of

(i) Bank Guarantee for equal amount of EMD from any nationalized bank valid for one year from the tender opening date. Original BG shall be sent by Registered Speed Post to purchaser before the last date of submission of Bid. Copy of BG and Registered Speed Post Receipt shall be attached with the Bid.

Or

(ii) Amount of EMD shall be remitted to the Bank Account of the Department. Copy of Remittance Slip shall be attached with the RFP Bid.

iv. EMD of unsuccessful bidder shall be released/ refunded after finalization of the tender and awarding of work to the successful bidder.

v. EMD of successful bidder shall be released/ refunded only after receipt of Performance Guarantee/ Security Deposit and execution of contract agreement as per this tender document.

vi. EMD shall not bear any interest under any circumstances and bidder shall not have any right to claim interest on EMD.

vii. EMD of successful bidder, who fails to submit Performance Guarantee/ Security Deposit or execute contract agreement within the stipulated timeframe as per this tender document shall be forfeited and remitted into Government account.

viii. The authority reserves all rights to realize any sum of amount from the EMD as Liquidated Damage/ Penalty to be charged from the bidder as per this tender document.

2.7 Validity of Bids

i. Bids once submitted can be withdrawn or modify till the last date for submission of bids. Bidder cannot withdrawn or modify his bid after the last date for submission of bids.
ii. Bids available as on the last date for submission of bids shall be valid till finalization of the tender by Purchaser.
iii. EMD of bidders, who withdraw or modify their bid after due date but before finalization of RFP, shall liable to be forfeited.

2.8 Opening of Bids

i. Bids shall be opened by a Tender Opening Committee duly constituted by the Authority.
ii. Bids shall be opened in the Chamber of The Managing Director, SPORTS (Lakshadweep Tourism), U.T of Lakshadweep, Kavaratti – 682 555 on the date & time mentioned above.
iii. Bids shall be opened in the presence of bidders or their authorized representatives, whoever may present at the place, date & time of bid opening.
iv. Financial Bid of the Bidders, who qualified in the Technical Bid evaluation only, shall be considered for opening. Date of opening of the Financial Bid is tentative and depends upon the finalization of Technical Bid evaluation.

2.9 Eligible Bidders

i. The Bidder for qualification shall be a single entity, fulfilling the deliverables as per the scope of the Bid.
ii. A Bidder may be an individual, private entity, [government-owned entity].
iii. A Bidder shall not have a conflict of interest (the “Conflict of Interest”) that affects the Bidding Process. Any Bidder found to have a Conflict of Interest shall be disqualified.

2.10 Consortium of Firms

Consortium is not allowed.

2.11 Eligibility Criteria

Sl. No.	Description	Pre-Qualification Criteria	Documentary Proof
Q 1	Legal Entity	A Company Registered under the Companies Act 1956/2013:. The Bidder should have a registered office in India and should be in existence for at least last 5 years.	Bidder should submit copy of Certificate of Incorporation/Registration, Copy of PAN & Article of association & MOA bringing out ICT/ IT works.
Q 2	Financial Capability	The Bidder should have average annual turnover of at least Rs. 15 Cr in last three audited financial years ending 31 March 2025, i.e. (FY 2022-23, FY 2023-24, FY 2024-25).	Certificate from the Statutory auditor/CA clearly specifying the annual turnover & profit before tax (PBT) for the specified years.
		Net Worth of the Bidder for last 3 years as on 31.03.2025 should be positive.	Annual Report/Balance Sheet duly certified by CA for last three years i.e. up-to 31.03.2024.
Q 3	Technical Capability for Project work	Experience of having successfully implemented similar works of value not less than INR 3 crs. during the last three years ending last day of month previous to the one in which bids are invited covering a minimum of 200 cameras.	For each project Copy of Work order and work Completion Certificates/ substantially completion certificate (along with time schedule and payments received) from the client, needs to be provided.
Q 4	Tax Registration and clearance	The Lead Bidder should be registered with the Tax Department and carry a valid PAN/TAN Numbers and GST No.	Copy of the certificate of GST, PAN/TAN Number etc.
Q 5	Certification	Bidder must have ISO 9001:2015	Necessary valid certificates copies to be enclosed with this bid.
Q 6	Mandatory Undertaking	The Tenderer should: -	Self-Declaration by Director/Company Secretary/Board resolution as per format in Annexure enclosed**.**
		a. not be insolvent, in receivership, bankrupt or being wound up, not have its affairs administered by a court or a judicial officer, not have its business activities suspended and must not	

Sl. No.	Description	Pre-Qualification Criteria	Documentary Proof
		be the subject of legal proceedings for any of the foregoing reasons;	
		b. not have, and their directors and officers not have, been convicted of any criminal offence related to their professional conduct or the making of false statements or misrepresentations as to their qualifications to enter into a procurement contract within a period of three years preceding the commencement of the procurement process, or not have been otherwise disqualified pursuant to debarment proceedings;	
		c. not have a conflict of interest in the procurement in question as specified in the Tender document.	
		d. Undertaking to not submit any fraudulent information/ mis representation of facts/ concealment of data/information with regard to the bid requirement.	
Q 7	Affidavit	The Tenderer shall submit a self-declaration for being not under legal action for corrupt or fraudulent practices (blacklisted) by any Ministry / Department of GoI / State / U T Government/Government organizations.	A Self Declaration by Director/Company/Secretary/Board resolution.
Q 8	Integrity Pact	Comply with the code of integrity of authority as specified in Bid document.	Sign the integrity pact as per Annexure enclosed.

Sl. No.	Description	Pre-Qualification Criteria	Documentary Proof
Q 9	Letter of Authorization	The Tenderer shall submit Letter of Authorization signed by Managing Director or Board Resolution.	Original copy should be signed and notarized on a legal bond paper.
Q 10		The Bidder (Prime) should furnish, as part of its bid, an Earnest Money Deposit (EMD) of Rs.5,62,500/-	The EMD should be denominated in Indian Rupees, and should be in the form of NEFT/RTGS/ Demand Draft in favour of Managing Director, SPORTS, payable at Canara Bank , Kavaratti.

2.12 Evaluation Criteria

An evaluation committee so constituted by the authority which shall evaluate the bids i.e. technical and commercial as per the following pattern.

i. Conditional bids shall be summarily rejected.
ii. Evaluation committee will examine the bids to determine whether they are complete, whether any computational errors have been made, and whether the bids are generally in order.
iii. Arithmetical errors will be rectified on the following basis: If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected. If the Bidder does not accept the correction of the errors, his bid will be rejected. If there is a discrepancy between words and figures, the amount in words will prevail.
iv. The tenderer may conduct clarification meetings with each or any bidder to discuss any matters, technical or otherwise.
v. Further, the scope of the evaluation committee also covers taking of any decision with regard to the RFP, execution/ implementation of the project including management period.
vi. Bid document shall be evaluated as per the following steps.

a) Examination of qualification documents: The qualification document will be examined to determine whether the bidder meets the eligibility criteria, completeness of the bid, whether the documents have been properly signed and whether the bids are generally in order. Any bids found to be non-responsive for any reason or not meeting the minimum levels of the performance or eligibility criteria specified in the various sections of this RFP will be rejected and not included for further consideration.

b) Evaluation of Commercial Bids: Lowest Commercial cost

The commercial bids will be opened only for the bidders who meets the qualification criteria. The bid with the lowest commercial (L1) will be considered as the successful bidder.

2.13 OEM Criteria

2.13.1 Camera OEM

i. CCTV OEM should have direct Manufacturing in India from last 5 years. (not as joint venture, partnership firms or through any association) and R&D unit registered with Department of Scientific and Industrial Research (DSIR) in India. OEM should submit Manufacturing and DSIR certificates.
ii. The camera OEM Should be a genuine manufacturer and should be an official valid H.265 HEVC Certificate and should be listed on HEVC website at the time of submitting bid. They should be paying the licensed fee for using the genuine HVEC Compression legally. The same will be verified at the time of bidding.
iii. CCTV OEM should be full member of ONVIF and same will cross check online in ONVIF website. OEM should give the declaration about full membership at the time of bidding.
iv. No OEM should be banned or suspended by ONVIF within the last five years at the time of bidding.
v. Bidder shall ensure compliance to the Office Memorandum for insertion of Rule 144 (xi) in the General Finance Rules (GFR)-2017 bearing reference number F.No. 6/18/2019-PPD dated 23 July 2020 or latest, by the Public Procurement Division, Department of Expenditure, Ministry of Finance. Non-compliant bid(s) will be summarily rejected. The OEM should not have any common directors who are also on the board of companies having beneficiaries from land border countries at the time of bidding.
vi. Bid should be compliant to the Policy and Make in India makes shall be given preference as per Order 2017-Revision vide the Department of Industrial Policy and Promotion (DIPP) Order No. P-45021/2/2017-PP(BE-II) dated 16th September,2020 or latest. OEMs under make in India must submit Undertaking and supporting documents.
vii. **MAC address** of proposed CCTV cameras should be registered in the name of **OEM** supplying the cameras.
viii. The OEM of CCTV should not use any main processing chipset that is manufactured by any country having international land border with India or any adversary country considering protecting the cyber threats. A declaration from OEM shall be submitted by bidder.
ix. CCTV OEM should not be blacklisted or barred by any Ministry of Government of India or globally or any of the Government / PSUs or any other Government Department at the time of bidding. The OEM should not have any common directors who are also on the board of blacklisted companies.

2.13.2 Voice communication system OEM

i. Proposed Solution's OEM must be in Gartner's Magic Quadrant for "Unified communication"
ii. Proposed EPABX solution OEM must have Valid TEC Certificate on their own Name.

iii. Proposed Voice, Network and WLAN OEM's must have Research and Development center, technical support center and Office in India from last minimum 5 years.

2.14 Deciding Award of Contract

i. The Tenderer reserves the right to ask for a technical elaboration/clarification in the form of a technical presentation from the Bidder on the already submitted Technical Proposal at any point of time before opening of the Commercial Proposal. The Bidder shall furnish the required information to SPORTS, (Lakshadweep Tourism), U.T of Lakshadweep, Kavaratti and its appointed representative on the date asked for, at no cost to the Tenderer. The Tenderer may at its discretion, visit the office of the Bidder for Services, any time before the issue of Letter of Award.

ii. The Authority shall inform those Bidders whose proposals did not meet the eligibility criteria or were considered non-responsive, informing that their Commercial Proposals will be returned unopened after completing the selection process. SPORTS, (Lakshadweep Tourism), U.T of Lakshadweep, Kavaratti shall simultaneously notify those Bidders who had qualified the Evaluation process as described in this RFP, informing the date and time set for opening of Commercial Proposals. The notification may be sent by mail or fax.

iii. The bidder's names, the Bid Prices, the total amount of each bid, and such other details as the Tendering Authority may consider appropriate, will be announced and recorded by the Tenderer at the time of opening.

2.15 Confidentiality

i. As used herein, the term "Confidential Information" means any information, including information created by or for the other party, whether written or oral, which relates to internal controls, computer or data processing programs, algorithms, electronic data processing applications, routines, subroutines, techniques or systems, or information concerning the business or financial affairs and methods of operation or proposed methods of operation, accounts, transactions, proposed transactions or security procedures of either party or any of its affiliates, or any client of either party, except such information which is in the public domain at the time of its disclosure or thereafter enters the public domain other than as a result of a breach of duty on the part of the party receiving such information. It is the express intent of the parties that all the business process and methods used by the Bidder in rendering the services hereunder are the Confidential Information of the Bidder.

ii. The Bidder shall keep confidential any information related to this tender with the same degree of care as it would treat its own confidential information. The Bidders shall note that the confidential information will be used only for the purposes of this tender and shall not be disclosed to any third party for any reason whatsoever.

iii. At all times during the performance of the Services, the Bidder shall abide by all applicable security rules, policies, standards, guidelines and procedures.

The Bidder should note that before any of its employees or assignees is given access to the Confidential Information, each such employee and assignees shall agree to be bound by the term of this tender and such rules, policies, standards, guidelines and procedures by its employees or agents.

iv. The Bidder should not disclose to any other party and keep confidential the terms and conditions of this Contract agreement, any amendment hereof, and any Attachment or Annexure hereof.

v. The obligations of confidentiality under this section shall survive rejection of the contract.

vi. Successful bidder may refer this project to meet eligibility criteria for other tenders.

2.16 Publicity

Any publicity by the bidder in which the name of project/authority is to be used, should be done only with the explicit written permission from the Authority

2.17 Insurance

The equipment and services supplied under the contract shall be fully insured by the bidder against loss or damage incidental to manufacture or acquisition, transportation, storage, delivery and installation. The period of insurance shall be up to the date the supplies are accepted and the rights of the property are transferred to the Authority.

The Insurance cover should take care of Storage, Transportation, Natural calamities like earth quake, floods, fire and also manmade calamities like riots, insurgency attacks etc.,

Section 3

3. Scope of Work

The Scope of Work envisages following infrastructure is required for setting up the proposed PoPs at the identified locations across Bangaram island, Lakshadweep.

i. Networking & Wi-Fi solution
ii. IP CCTV Surveillance System
iii. Hospitality TV, DTH
iv. Voice Communication System (EPABX)
v. Indoor & Outdoor Rack with Accessories
vi. UPS System

3.1 Site Preparation

The Authority shall arrange for necessary clearances, which shall enable the Bidder to undertake civil, electrical, and mechanical works including installation of UPS equipment, cable laying etc., at the respective sites. Infrastructure required for installation of equipment (for 8-10 persons) including power shall also be the responsibility of the Bidder.

The entry and exit to the site for the equipment and personnel of the Bidder shall be in accordance with Security Rules and Regulations that may apply to the UTL.

Supply of Products/ equipment's including active and passive components:

The Bidder is responsible for the supply of all the Products/equipment specified in the Bill of Material (BoM) included in the tender and their appropriate quantity & capacity, which will meet the Technical Specifications as per the requirement approved by the Authority.

i. The bidder is responsible for supply of passive components specified in the BoM section of the tender viz. Cables, Racks etc. and install them as required.
ii. The Bidder shall also quote any optional items and their appropriate quantities that are not listed in the BoM Section of the tender but are considered necessary for the successful implementation of the project. The bidder selected for implementation should not submit any further BoM during the implementation stage.

3.2 Installation and Commissioning:

i. The Bidder shall install, integrate and commission.
ii. The Bidder shall install and integrate all Network, electrical, computer equipment's and UPS.

3.3 Structured Cabling:

The Bidder is required to install and commission on a turnkey basis, the structured cabling involving CAT6 cables, Surface Mount I/Os, 3' CAT6 patch cord, 7' CAT6 patch

cords, Jack Panel, Racks, PVC conduit / casing / capping with accessories, any other required components such as labels, ferrules etc., and all associated civil works in accordance with the following guidelines:

i. The cabling job should be carried out under the supervision of certified engineers.
ii. All the wiring should be fully concealed inside the conduit and no cable (except patch cords) should be visible to the naked eye.
iii. The cabling shall be properly labelled and ferruled so as to facilitate easy identification and maintenance.
iv. All civil work like cutting, chiselling, drilling, etc. shall be finished to ensure smooth levelled surfaces matching the existing surface finish without disturbing the existing aesthetics of the office to the extent possible.
v. Bidder will provide warranty support for site maintenance till end of Project.
vi. Fixing & installation of existing hubs/switches, if any, inside the supplied rack(s).

3.4 Power Cabling

The Bidder is required to install & commission the Power Cabling from the building power source to the UPS & from the UPS to the network equipment's that involves design, laying, fixing, installation & commissioning of the power cabling system including electrical box / boards, cables etc. and associated civil works and earthing on a turnkey basis in accordance with the following guidelines.

i. The power-cabling job should be carried out under the supervision of licensed electrical technicians.
ii. All the wiring should be fully concealed inside the conduit / G.I. pipe / Aluminium Channel and no cable should be visible to the naked eye.
iii. The cabling shall be properly labelled so as to facilitate easy identification and maintenance.
iv. All civil work like cutting, chiselling, drilling, etc. shall be finished to ensure smooth levelled surfaces matching the existing surface finish without disturbing the existing aesthetics of the office.
v. All waste material shall be properly disposed of from the premises in an environment friendly manner and compliant to applicable civil / municipal guidelines.
vi. Earthing - The Bidder is required to ensure a proper electrical earth for Power Cabling is available in the locations. The bidder is also required to properly earth the UPS.
vii. Testing - Each electrical point should be tested with line tester / multi-meter. Test results attested by local authority should be submitted to authority in hard copy. Representative from consultant/TPA may be present.

3.5 Training

Upon completion of the implementation, successful Bidder shall provide training free of cost to the personnel identified for the state. (The number of personnel required to be trained shall be specified by the UTL). The training should cover system design, installation, configuration, set-up, upgrade, administration, testing, management, and

maintenance of all the equipment (hardware and software) supplied. This Training shall be held at the location (s) identified by the UTL. Separate training modules for the following components must be provided. The training modules and their duration shall be finalized in consultation with the state. The Successful Bidder shall also supply detailed training material to state, to enable them to train more number of officers independently.

3.6 Power Requirement

Bidder shall have to do the necessary wiring to draw the required power from main source (i.e EB) of respective PoP building/ campus.

Section 4

4.1 Schedule of Requirements

Sl. NO.	Description	Qty	Unit
01.00	**Networking & Wi-Fi Solution**		
01.01	Power CAT-6 /u UTP 4 Pair Unshielded Cable -PVC +PE Sheath (Armoured) cable for EPABX, CAMERA, NETWORKING	7,600	Mtrs
01.02	PVC Conduit with Accessories ISI	1,700	Mtrs
01.03	HDPE Pipe 40mm (thickness 5mm) with Coplers & Tees	5,000	Mtrs
01.04	Soft Soil Digging (Bit Send)	5,000	Mtrs
01.05	6Core Fiber Optic Cable SM FRP	3,200	Mtrs
01.06	Layer 3 Switch with accessories	2	Nos
01.07	SMF Trans receiver for Layer 3 Switch with accessories	22	Nos
01.09	SMF Trans receiver for Layer 2 Switch with accessories	20	Nos
01.11	Layer 2 Switch with accessories	10	Nos
01.13	Wireless Indoor access point with accessories and mounting (solid surface)	40	Nos
01.15	Wireless Outdoor access point with accessories and mounting (pole/wall)	7	Nos
01.17	Wired and Wireless cloud managed controller- Class NMS with accessories	1	Lot
01.20	Controller License	50	Nos
01.22	IO Box with IO Module + Face Plate + Back Box	20	Nos
01.23	24 Port SC Duplex RM/WM Fibre Panel loaded With LC SM Coupler and blank (EXCLUDING PIGTAIL)	2	Nos
01.24	LC Pigtail,SM ,9/125,900 MICRON 1.5 mtrs	85	Nos
01.25	LC-LC SM DUPLEX LSZH PATCH CORD -3M	30	Nos
01.26	24Port Cat6 Rack mount Patch Panel- Loaded	10	Nos
01.27	Cable Manager	14	Nos
01.28	0.5 Mtrs. Cat 6 UTP LHZH Patch Cord	100	Nos
01.29	1.0 Mtrs.Cat 6 UTP LHZH Patch Cord	20	Nos
01.30	2.0 Mtrs. Cat 6 UTP LHZHPatch Cord	5	Nos
01.31	RJ-45 Jack	100	Nos
01.32	Server Rack Dressing	9	Nos
2.00	**IP CCTV Surveillance System**		
02.01	32 CH Network Video Recorder 8 SATA	2	Nos
02.02	5MP Dome Camera with In-Built Mic	15	Nos
02.03	5MP Bullet Camera with In-Built Mic	25	Nos
02.04	4TB Hard Disk	8	Nos
02.05	HDMI Cable 1080p Size: 20 Mtrs.	1	Nos

02.06	55” Professional 350 - 500 nts Display	1	Nos
02.07	RJ-45 Connector for CCTV (Both Side)	100	Nos
02.08	Hensel Camera Jn Box Dimensions H x W x D: 104 x 104 x 70 mm	40	Nos
3.00	**Hospitality TV, DTH**		
03.01	43" Commercial 4K smart Hospitality TV	65	Nos
03.02	RG6 Coaxial Cable for DTH	5500	Mtr
03.03	Cable TV services for Rooms	65	Nos
4.00	**Voice Communication System (EPABX)**		
04.01	3U 150 Pair rack mount frame	3	Nos
04.02	20 pair outdoor Jn Box	10	Nos
04.03	10 pair IDF Module	70	Nos
04.04	Jumber Cable	10	mtr
04.05	Telephone RJ11, I/o, Face Plate with Back box	145	Nos
04.06	2 Pair telephone cable	1,675	Mtr
04.07	10 pair Jelly Cable	2000	Mtr
04.08	50 pair Jelly Cable	650	Mtr
04.09	IP EPABX System enabling TDM configuration	1	Nos
04.10	Hybrid Digital IP Essential Deskphone, Dual stack NOE-SIP	2	Nos
04.11	Smart Expansion Module color LCD +20Keys	1	Nos
04.12	Hospitality Caller ID Phone Active memory, Support FSK/DTMF Caller ID System	10	Nos
04.13	Hospitality Bedroom Phone with 6 One touch key	67	Nos
04.14	Hospitality Bathroom Phone with Water and Damp Proof	67	Nos
04.15	1 Port GSM FCT 4G VOLT	1	Nos
04.16	Telephone Point Termination	142	Nos
04.17	Earth Bench and Accessories (EARTHING)	1	Nos
05.00	**Rack**		
05.01	42U Rack Frame/600X800/Steel/NRS1/ CKD/Casters Type 2	1	set
05.02	15U 600 IP 55/56 Floor Mount Outdoor Rack (Plinth fixing type) With lock	8	set
06.00	**UPS System**		
06.01	UPS -6 KVA UPS -online UPS system with Rack and accessories	1	No.
06.02	12V SMF ,12V,42AHx16nos SMF batteries,	1	Set
06.03	UPS -1 KVA UPS -online ups	8	No.

4.2 Detailed Specifications

4.2.1 Network Switch L3

S.No	Specification	Compliance Yes/No
1	**Architecture**	
	The Switch should have 24 ports SFP+ 1/10G supports and 4x 1/10/25/50G SFP ports and must be populated with 11 No's of 10G SM LR Transceivers days 1 on each switch.	
	The switch should have 880 Gbps of Switching Capacity and 654 Mpps Throughput Capacity.	
	Shall be 19" Rack Mountable and switch should support two field-replaceable and hot- swappable power supply loaded from day one. The switch should have 1x USB-C Console Port, 1x OOBM and 1x USB Type A Host port.	
	4GB SDRAM and 16 GB flash and 8 MB Packet buffer size.	
	The switch should support front plane stacking on uplink port or Backplane stacking and should have Stacking Performance of minimum 200 Gbps. The switch should support minimum 8 switches in stack.	
	The Switch should support 32000 MAC address.	
	The switch should have minimum 60,000 Ipv4 Unicast Routes ,32K Ipv6 Unicast Routes ,8K Ipv4 Multicast Routes,8K Ipv6 Multicast Routes,4K Igmp Groups ,4K Mld Groups 4,000, Ipv4/Ipv6/MAC ACL Entries (Ingress) 5000/1250/5000 and Ipv4/Ipv6/MAC ACL Entries (Egress) 2000/500/2000	
2	**IPv6 feature**	
	IPv6 host enables switches to be managed in an IPv6 network.	
	Dual stack (IPv4 and IPv6) transitions from IPv4 to IPv6, supporting connectivity for both protocols	
	MLD snooping forwards IPv6 multicast traffic to the appropriate interface	
	IPv6 ACL/QoS supports ACL and QoS for IPv6 network traffic	
	IPv6 routing supports Static and OSPFv3 protocols	
	RA guard, DHCPv6 protection, dynamic IPv6 lockdown, and ND snooping	
3	**High Availability And Resiliency**	
	The switch should support front plane stacking on uplink port or Backplane stacking and should have Stacking Performance of minimum 200 Gbps. The switch should support minimum 8 switch in stack	
	The Switch should have Hot Swappable Power Supplies	
	The Switch should support Bidirectional Forward Detection (BFD) to enable sub-second failure detection for rapid routing protocol re-balancing	

	The Switch should support Virtual Router Redundancy Protocol (VRRP) to allow groups of two routers to dynamically create highly available routed environments in IPV4 and IPV6 networks	
	The Switch should support Uni-directional Link Detection (UDLD) to monitor link connectivity and shut down ports at both ends if unidirectional traffic is detected, preventing loops in STP-based networks	
	The Switch should support IEEE 802.3ad LACP supports up to 256 LAGs, each with up to 8 links per LAG and provide support for static or dynamic groups and a user-selectable hashing algorithm	
	The Switch should support IEEE 802.1s Multiple Spanning Tree provides high link availability in VLAN environments where multiple spanning trees are required and legacy support for IEEE 802.1d and IEEE 802.1w	
	The Switch should support IEEE 802.3ad link-aggregation-control protocol (LACP) and port trunking supports static and dynamic trunks where each trunk supports up to eight links (ports) per static trunk	
4	**Management**	
	The Switch should support Built-in programmable and easy to use REST API interface	
	The Switch should support On-premises and cloud- based management	
	The Switch should support Zero-Touch Provisioning (ZTP) simplifies installation of switching infrastructure using DHCP-based	
	The Switch should have Scalable ASIC-based wire speed network monitoring and accounting with no impact on network performance.	
	The Switch should support Industry-standard CLI with a hierarchical structure	
	The Switch should support Management security that restricts access to critical configuration commands, provides multiple privilege levels with password protection, and local and remote syslog capabilities allow logging of all access	
	The Switch should support SNMP v2c/v3 provides SNMP read and trap support of industry standard Management Information Base (MIB), and private extensions sFlow (RFC 3176)	
	The Switch should support Remote monitoring (RMON) with standard SNMP to monitor essential network functions. Supports events, alarms, history, and statistics groups as well as a private alarm extension group; RMON, XRMON, and sFlow provide advanced monitoring and reporting capabilities for statistics, history, alarms and events.	
	The Switch should support TFTP and SFTP support offers different mechanisms for configuration updates;	
	The Switch should support Debug and sampler utility support ping and traceroute for IPv4 and IPv6	
	The Switch should support Network Time Protocol (NTP) synchronizes timekeeping among distributed time servers and clients	

	The Switch should support IEEE 802.1AB Link Layer Discovery Protocol (LLDP) advertises and receives management information from adjacent devices on a network, facilitating easy mapping by network management applications	
	The Switch should support Dual flash images that provides independent primary and secondary operating system files for backup while upgrading	
	The Switch should support Assignment of descriptive names to ports for easy identification	
	The Switch should support Multiple configuration files which can be stored to a flash image	
	The Switch should support Ingress and egress port monitoring enable more efficient network problem solving	
	The Switch should support Unidirectional link detection (UDLD) monitors the link between two switches and blocks the ports on both ends of the link if the link goes down at any point between the two devices	
	The Switch should support Power down mode to deliver energy savings by allowing the switch to power down most of the switch, except a clock which will boot up the switch when scheduled	
	The Switch should support IP SLA for Voice monitors quality of voice traffic using the UDP Jitter and UDP Jitter for VoIP tests	
5	**Multicast**	
	The Switch should support IGMP Snooping to allow multiple VLANs to receive the same IPv4 multicast traffic, lessening network bandwidth demand by reducing multiple streams to each VLAN	
	The Switch should support Multicast Listener Discovery (MLD) that enables discovery of IPv6 multicast listeners; supports MLD v1 and v2	
	The Switch should support Protocol Independent Multicast (PIM) defines modes of IPv4 and IPv6 multicasting to allow one-to-many and many-to-many transmission of information and support PIM Sparse Mode (SM) and Dense Mode (DM) for both IPv4 and IPv6	
	The Switch should support Internet Group Management Protocol (IGMP) and Any-Source Multicast (ASM) to manage IPv4 multicast networks; supports IGMPv1, v2, and v3	
	The Switch should support Multicast Service Discovery Protocol (MSDP) to efficiently route multicast traffic through core networks	
6	**Layer 2 Switching**	
	The Switch should support VLAN and tagging for IEEE 802.1Q (4094 VLAN IDs)	
	The Switch should support Jumbo packet to improve the performance of large data transfers and support frame size of up to 9198 bytes	
	The Switch should support IEEE 802.1v protocol VLANs to isolate select non-IPv4 protocols automatically into their own VLANs	

	The Switch should support Rapid Per-VLAN Spanning Tree (RPVST+) to allow each VLAN to build a separate spanning tree to improve link bandwidth usage.	
	The Switch should support MVRP to allow automatic learning and dynamic assignment of VLANs	
	The Switch should support VXLAN encapsulation (tunnelling) protocol for overlay network that enables a more scalable virtual network deployment	
	The Switch should support Bridge Protocol Data Unit (BPDU) tunnelling to Transmits STP BPDUs transparently	
	The Switch should support Port mirroring duplicates port traffic (ingress and egress) to a monitoring port; and support minimum 4 mirroring groups	
	The Switch should support STP supports 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)	
	The Switch should support Internet Group Management Protocol (IGMP) Controls and manages the flooding of multicast packets in a Layer 2 network	
7	**Layer 3 Routing**	
	The Switch should support Border Gateway Protocol (BGP) provides IPv4 and IPv6 routing.	
	The Switch should support Equal-Cost Multipath (ECMP) enables multiple equal-cost links in a routing environment to increase link redundancy and scale bandwidth	
	The Switch should support Multi-protocol BGP (MP-BGP) enables sharing of IPv6 routes using BGP and connections to BGP peers using IPv6	
	The Switch should support Open shortest path first (OSPF) delivers faster convergence.	
	The Switch should support OSPFv2 for IPv4 routing and OSPFv3 for IPv6 routing	
	The Switch should support Static IP routing provides manually configured routing	
	The Switch should support Policy-based routing and uses a classifier to select traffic that can be forwarded based on policy set by the network administrator	
	The Switch should support Static IPv4 and IPv6 routing to provide simple manually configured IPv4 and IPv6 routes	
	The Switch should support IP performance optimization to provide a set of tools to improve the performance of IPv4 networks including directed broadcasts, customization of TCP parameters, support of ICMP error packets, and extensive display capabilities.	

	The Switch should support Dual IP stack to maintain separate stacks for IPv4 and IPv6 to ease the transition from an IPv4-only network to an IPv6-only network design	
8	**Convergence**	
	The Switch should support IP multicast routing includes PIM Sparse and Dense modes to route IP multicast traffic	
	The Switch should support IP multicast snooping (data-driven IGMP) to prevent flooding of IP multicast traffic	
	The Switch should support Protocol Independent Multicast for IPv6 and support one-to- many and many-to-many media casting use cases such as IPTV over IPv6 networks	
	The Switch should support LLDP-MED (Media Endpoint Discovery) to define a standard extension of LLDP that stores values for parameters such as QoS and VLAN to automatically configure network devices such as IP phones	
	The Switch should support multiple method of PoE allocations (allocation by usage or class, with LLDP and LLDP-MED) to allocate PoE power for more efficient power management and energy savings	
	The Switch should support Auto VLAN configuration for voice RADIUS VLAN using a standard RADIUS attribute and LLDP-MED to automatically configure a VLAN for IP phones	
9	**Security**	
	The Switch should support integrated trusted platform module (TPM) for platform integrity. This ensures the boot process started from a trusted combination of switches.	
	The Switch should support Access control list (ACL) support for both IPv4 and IPv6 to allow for filtering traffic to prevent unauthorized users from accessing the network, or for controlling network traffic to save resources. rules can either deny or permit traffic to be forwarded. rules can be based on a Layer 2 header or a Layer 3 protocol header	
	The Switch should support ACLs filtering based on the IP field, source/ destination IP address/subnet, and source/ destination TCP/UDP port number on a per-VLAN or per-port basis	
	The Switch should support Remote Authentication Dial-In User Service (RADIUS)	
	The Switch should support Terminal Access Controller Access-Control System (TACACS+) delivers an authentication tool using TCP with encryption of the full authentication request to provide additional security	
	The Switch should support Control Plane Policing sets rate limit on control protocols to protect CPU overload from DOS attacks	

	The Switch should support multiple user authentication methods. Uses an IEEE 802.1X supplicant on the client in conjunction with a RADIUS server to authenticate in accordance with industry standards	
	The Switch should support Web-based authentication provides a browser-based environment, similar to IEEE 802.1X, to authenticate clients that do not support IEEE 802.1X	
	The Switch should support MAC-based client authentication	
	The Switch should support Concurrent IEEE 802.1X, Web, and MAC authentication schemes per switch port accepts up to 32 sessions of IEEE 802.1X, Web, and MAC authentications	
	The Switch should support DHCP protection blocks DHCP packets from unauthorized DHCP servers, preventing denial-of-service attacks	
	The Switch should support Secure management access delivers secure encryption of all access methods (CLI, GUI, or MIB) through SSHv2, SSL, and/or SNMPv3	
	The Switch should support Switch CPU protection to provide automatic protection against malicious network traffic trying to shut down the switch	
	The Switch should support ICMP throttling defeats, ICMP denial-of-service attacks by enabling any switch port to automatically throttle ICMP traffic	
	The Switch should support Identity-driven ACL to enable implementation of a highly granular and flexible access security policy and VLAN assignment specific to each authenticated network user	
	The Switch should support STP BPDU port protection to block Bridge Protocol Data Units (BPDUs) on ports that do not require BPDUs, preventing forged BPDU attacks	
	The Switch should support Dynamic IP lockdown with DHCP protection to block traffic from unauthorized hosts, preventing IP source address spoofing	
	The Switch should support Dynamic ARP protection to blocks ARP broadcasts from unauthorized hosts, preventing eavesdropping or theft of network data	
	The Switch should support STP root guard to protect the root bridge from malicious attacks or configuration mistakes	
	The Switch should support Port security to allow access only to specified MAC addresses, which can be learned or specified by the administrator	
	The Switch should support MAC address lockout to prevent particular configured MAC addresses from connecting to the network	
	The Switch should support Source-port filtering to allow only specified ports to communicate with each other	

	The Switch should support Secure shell to encrypt all transmitted data for secure remote CLI access over IP networks	
	The Switch should support Secure Sockets Layer (SSL) to encrypts all HTTP traffic, allowing secure access to the browser-based management GUI in the switch	
	The Switch should support Secure FTP to allow secure file transfer to and from the switch and protect against unwanted file downloads or unauthorized copying of a switch configuration file	
	The Switch should support Critical Authentication Role to ensure that important infrastructure devices such as IP phones are allowed network access even in the absence of a RADIUS server	
	The Switch should support MAC Pinning to allow non-chatty legacy devices to stay authenticated by pinning client MAC addresses to the port until the client's logoff or get disconnected	
	The Switch should support Management Interface Wizard to help secure management interfaces such as SNMP, telnet/SSH, SSL, Web.	
	The Switch should support Security banner that displays a customized security policy when users log in to the switch	
	The Switch should support Green initiative for RoHS (EN 50581:2012) and WEEE regulations	
10	**Certification**	
	EN 60950-1, EC 60950-1,EN 61000,EN 60825	

4.2.2 Network Switch L2

S.No	Specification	Compliance Yes/No
1	**Architecture**	
	The should have 24x ports 10/100/1000 BASE-T POE+ ports and 4x 1/10 SFP+ ports with 370W POE power. Each switch must be populated with 2* 10G LR SM Transceivers	
	The switch should have 128 Gbps of Switching Capacity and 95 Mpps Throughput Capacity	
	Shall be 19" Rack Mountable and switch should have dedicated Console Port, 4GB SDRAM and 16 MB flash and 12 MB Packet buffer size and 8K MAC address must be support	
	The switch should have minimum 512 Ipv4 Unicast Routesand 512 Ipv6 Unicast Routes ,512 Igmp Groups ,512 Mld Groups ,256 Ipv4 and 128 ingress Entries.	
2	**IPv6 feature**	
	IPv6 host enables switches to be managed in an IPv6 network	

	Dual stack (IPv4 and IPv6) transitions from IPv4 to IPv6, supporting connectivity for both protocols	
	MLD snooping forwards IPv6 multicast traffic to the appropriate interface	
	IPv6 ACL/QoS supports ACL and QoS for IPv6 network traffic	
	IPv6 Static routing	
	RA guard, DHCPv6 protection, dynamic IPv6 lockdown, and ND snooping	
3	**High Availability And Resiliency**	
	The Switch should support Uni-directional Link Detection (UDLD) to monitor link connectivity and shut down ports at both ends if uni-directional traffic is detected, preventing loops in STP- based networks	
	The Switch should support IEEE 802.3ad LACP supports up to 8 LAGs, each with up to 8 links per LAG and provide support for static or dynamic groups and a user-selectable hashing algorithm	
	The Switch should support IEEE 802.1s Multiple Spanning Tree provides high link availability in VLAN environments where multiple spanning trees are required and legacy support for IEEE 802.1d and IEEE 802.1w	
	The switch should support Strict priority (SP) queuing, Traffic prioritization (IEEE 802.1p), Class of Service (CoS) ,IP Type of Service (ToS), Layer 3 protocol, TCP/UDP port number, source port, and DiffServ, Rate limiting ,per-queue minimums Large buffers for graceful congestion management	
4	**Management**	
	The Switch should support Built-in programmable and easy to use REST API interface	
	The Switch should support On-premises and cloud- based management	
	The Switch should support Zero-Touch Provisioning (ZTP) simplifies installation of switching infrastructure using DHCP-based.	
	The Switch should have Scalable ASIC-based wire speed network monitoring and accounting with no impact on network performance.	
	The Switch should support Industry-standard CLI with a hierarchical structure	

	The Switch should support Management security restricts access to critical configuration commands, provides multiple privilege levels with password protection, and local and remote syslog capabilities allow logging of all access	
	The Switch should support SNMP v2c/v3 provides SNMP read and trap support of industry standard Management Information Base (MIB), and private extensions sFlow (RFC 3176)	
	The Switch should support Remote monitoring (RMON) with standard SNMP to monitor essential network functions. Supports events, alarms, history and statistics groups as well as a private alarm extension group; RMON, XRMON, and sFlow provide advanced monitoring and reporting capabilities for statistics, history, alarms and events	
	The Switch should support TFTP and SFTP support offers different mechanisms for configuration updates;	
	The Switch should support Debug and sampler utility support ping and traceroute for IPv4 and IPv6	
	The Switch should support Network Time Protocol (NTP) that synchronizes timekeeping among distributed time servers and clients	
	The Switch should support IEEE 802.1AB Link Layer Discovery Protocol (LLDP) advertises and receives management information from adjacent devices on a network, facilitating easy mapping by network management applications	
	The Switch should support Dual flash images that provides independent primary and secondary operating system files for backup while upgrading	
	The Switch should support Assignment of descriptive names to ports for easy identification	
	The Switch should support Multiple configuration files which can be stored to a flash image	
	The Switch should support Ingress and egress port monitoring enable more efficient network problem solving	
	The Switch should support Unidirectional link detection (UDLD) that monitors the link between two switches and blocks the ports on both ends of the link if the link goes down at any point between the two devices	
5	**Multicast**	

	The Switch should support IGMP Snooping to allow multiple VLANs to receive the same IPv4 multicast traffic, lessening network bandwidth demand by reducing multiple streams to each VLAN	
	The Switch should support Multicast Listener Discovery (MLD) that enables discovery of IPv6 multicast listeners; supports MLD v1 and v2	
	The Switch should support Internet Group Management Protocol (IGMP) and Any-Source Multicast (ASM) to manage IPv4 multicast networks; supports IGMPv1, v2, and v3	
6	**Layer 2 Switching**	
	The Switch should support 4094 VLAN IDs	
	The Switch should support Jumbo packet to improve the performance of large data transfers and support frame size of up to 9198 bytes	
	The Switch should support Rapid Per-VLAN Spanning Tree (RPVST+) to allow each VLAN to build a separate spanning tree to improve link bandwidth usage.	
	The Switch should support MVRP to allow automatic learning and dynamic assignment of VLANs	
	The Switch should support Bridge Protocol Data Unit (BPDU) tunnelling to Transmits STP BPDUs transparently	
	The Switch should support Port mirroring duplicates port traffic (ingress and egress) to a monitoring port and support minimum 4 mirroring groups	
	The Switch should support STP supports 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)	
	The Switch should support Internet Group Management Protocol (IGMP) Controls and manages the flooding of multicast packets in a Layer 2 network	
7	**Layer 3 Routing**	
	The Switch should support Static IP routing.	
	The Switch should support Static IPv4 and IPv6 routing to provide simple manually configured IPv4 and IPv6 routes	
	The Switch should support Dual IP stack to maintain separate stacks for IPv4 and IPv6 to ease the transition from an IPv4-only network to an IPv6-only network design	
8	**Convergence**	
	The Switch should support IP multicast snooping (data-driven IGMP) to prevent flooding of IP multicast traffic	

	The Switch should support LLDP-MED (Media Endpoint Discovery) to define a standard extension of LLDP that stores values for parameters such as QoS and VLAN to automatically configure network devices such as IP phones	
	The Switch should support Auto VLAN configuration for voice RADIUS VLAN using a standard RADIUS attribute and LLDP-MED to automatically configure a VLAN for IP phones	
9	**Security**	
	The Switch should support integrated trusted platform module (TPM) for platform integrity. This ensures the boot process started from a trusted combination of switches.	
	The Switch should support Access control list (ACL) support for both IPv4 and IPv6 to allow for filtering traffic to prevent unauthorized users from accessing the network, or for controlling network traffic to save resources. rules can either deny or permit traffic to be forwarded. rules can be based on a Layer 2 header or a Layer 3 protocol header	
	The Switch should support ACLs filtering based on the IP field, source/ destination IP address/subnet, and source/ destination TCP/UDP port number on a per-VLAN or per-port basis	
	The switch should support Enrolment over Secure Transport (EST)and Remote Authentication Dial-In User Service (RADIUS)	
	The Switch should support Terminal Access Controller Access-Control System (TACACS+) that delivers an authentication tool using TCP with encryption of the full authentication request to provide additional security	
	The Switch should support Control Plane Policing that sets rate limit on control protocols to protect CPU overload from DOS attacks	
	The Switch should support multiple user authentication methods. Uses an IEEE 802.1X supplicant on the client in conjunction with a RADIUS server to authenticate in accordance with industry standards	
	The Switch should support Web-based authentication that provides a browser-based environment, similar to IEEE 802.1X, to authenticate clients that do not support IEEE 802.1X	
	The Switch should support MAC-based client authentication	
	The Switch should support Concurrent IEEE 802.1X, Web, and MAC authentication schemes per switch port accepts up to 32 sessions of IEEE 802.1X, Web, and MAC authentications	

	The Switch should support Secure management access that delivers secure encryption of all access methods (CLI, GUI, or MIB) through SSHv2, SSL, and/or SNMPv3	
	The Switch should support Switch CPU protection to provide automatic protection against malicious network traffic trying to shut down the switch	
	The Switch should support ICMP throttling defeats, ICMP denial-of-service attacks by enabling any switch port to automatically throttle ICMP traffic	
	The Switch should support Identity-driven ACL to enable implementation of a highly granular and flexible access security policy and VLAN assignment specific to each authenticated network user	
	The Switch should support STP BPDU port protection to block Bridge Protocol Data Units (BPDUs) on ports that do not require BPDUs, preventing forged BPDU attacks	
	The Switch should support Dynamic IP lockdown with DHCP protection to block traffic from unauthorized hosts, preventing IP source address spoofing	
	The Switch should support Dynamic ARP protection to block ARP broadcasts from unauthorized hosts, preventing eavesdropping or theft of network data	
	The Switch should support STP root guard to protect the root bridge from malicious attacks or configuration mistakes	
	The Switch should support Port security to allow access only to specified MAC addresses, which can be learned or specified by the administrator	
	The Switch should support MAC address lockout to prevent particular configured MAC addresses from connecting to the network	
	The Switch should support Source-port filtering to allow only specified ports to communicate with each other	
	The Switch should support Secure shell to encrypt all transmitted data for secure remote CLI access over IP networks	
	The Switch should support Secure Sockets Layer (SSL) to encrypts all HTTP traffic, allowing secure access to the browser-based management GUI in the switch	
	The Switch should support Secure FTP to allow secure file transfer to and from the switch and protect against unwanted file downloads or unauthorized copying of a switch configuration file	
	The Switch should support Critical Authentication Role to ensure that important infrastructure devices such as IP phones are allowed network access even in the absence of a RADIUS server	

	The Switch should support MAC Pinning to allow non-chatty legacy devices to stay authenticated by pinning client MAC addresses to the port until the client's logoff or get disconnected	
	The Switch should support Management Interface Wizard to help secure management interfaces such as SNMP, telnet/SSH, SSL, Web.	
	The Switch should support Security banner displays a customized security policy when users log in to the switch	
10	**Certification**	
	The Switch should support Green initiative for RoHS (EN 50581:2012) and WEEE regulations	
	EN 60950-1/I EC 60950-1 EN 60825CAN/CS A C22.2 No. 60950, 2nd Edition UL 60950-1, 2nd Edition	

4.2.3 Wi-Fi 6 Access points for Indoor Environment

Sr. No	Specifications	Compliance (Yes/No)
	Technical Specification	
1	Access Point radio should be Minimum 2x2 MIMO with 2 on 5ghz and 2x2 on 2.4 Ghz radio. The AP should have Dual Radio 802.11ax access point with OFDMA and Multi-User MIMO (MU-MIMO)	
2	AP should have one 10/100/1000 Mbps speed LAN port and Auto-sensing link speed	
3	Access Point should be 802.11ax ready from day one and support WPA3 and Enhanced Open security from day one	
4	Access point should support Built-in technology that resolves sticky client issues for Wi-Fi 6 and Wi-Fi 5 devices	
5	Access point should support OFDMA and MU-MIMO for enhanced multi-user efficiency	
6	Access point should IoT-ready Bluetooth 5 and Zigbee support	
7	Maximum data rates of 1.2Gbps in the 5GHz band and 570Mbps in the 2.4GHz band (for an aggregate peak data rate of 5.4Gbps).	
8	Access Point can have integrated internal antenna	
9	The Max transit power of the AP + Antenna should be as per WPC norms for indoor Access Points. OEM to give an undertaking letter stating that the AP will be configured as per WPC guidelines for indoor AP and also submit the WPC certificate showing approval.	

10	Access point should have Interna/External Bluetooth Low energy beacon to support advance location based services for Mobile engagement solutions and Applications.	
11	Should support 16x BSSID per AP radio.	
12	The access point should be capable of performing security scanning and serving clients on the same radio. It should be also capable of performing spectrum analysis and security scanning using same radio.	
13	Should support BPSK, QPSK, 16-QAM, 64-QAM, 256 QAM and 1024 QAM modulation types	
14	Access point should support 802.3af/at POE standard.	
15	Intelligent Power Monitoring (IPM) to continuously monitor and report hardware energy consumption. AP can also be configured to enable or disable capabilities based on available PoE power – ideal when wired switches have exhausted their power budget.	
16	Access point should have option of external power adaptor as well.	
17	Access point should have console port.	
18	Must operate as a sensor for wireless IPS	
19	AP model proposed must be able to be both a client-serving AP and a monitor-only AP for Intrusion Prevention services	
20	The Access Point should have the technology to improve downlink performance to all mobile devices.	
21	Access point must incorporate radio resource management for power, channel, coverage hole detection and performance optimization	
22	AP mounting kit should be with locking mechanism so that AP cannot be removed without using special tools.	
23	AP should have Kensington security slot	
24	AP should support standalone mode/Inbuilt Virtual controller mode for specific requirements.	
25	The AP should support Advanced Cellular Co-existence (ACC) to minimize interference from 3G/4G cellular networks, distributed antenna systems and commercial small cell/femtocell equipment	
26	The AP should support Supports priority handling and policy enforcement for unified communication apps, including Skype for Business with encrypted video conferencing, voice, chat and desktop sharing	
27	The AP should support deep packet inspection to classify and block, prioritize, or limit bandwidth for thousands of applications in a range of categories	
28	Pass point Wi-Fi (Hotspot 2.0) offers seamless cellular-to-Wi-Fi carryover for guests	
29	The Access point should support maximum ratio combining (MRC) for improved receiver performance	

30	The Access point should support cyclic delay/shift diversity (CDD/CSD) for improved downlink RF performance	
31	The Access point should support Space-time block coding (STBC) for increased range and improved reception	
32	The Access point should support Low-density parity check (LDPC) for high-efficiency error correction and increased throughput	
33	The Access point should support Transmit beam-forming (TxBF) for increased signal reliability and range	
34	The Access point should support 802.11ax Target Wait Time (TWT) to support low-power client devices	
35	AP should be UL 2043 certified.	
36	AP should support Dual mode AP's (same AP can be managed via cloud or controller)	
37	Solution should have the ability to provide AI-ML Powered radio resource algorithm	
38	AP should provide SLA-grade performance by allocating radio resources, such as time, frequency, and spatial streams, to specific traffic types.	
39	Regulatory Compliance FCC/ISE DCE Marked RED Directive2014/53/EU EMC Directive 2014/30/EU Low Voltage Directive 2014/35/EUUL/IEC/EN60950 EN 60601-1-1, EN60601-1-2	
40	Certifications UL2043 plenum rating Wi-Fi Alliance: - Wi-Fi CERTIFIED a, b, g, n, ac - Wi-Fi CERTIFIED 6 (ax) - WPA, WPA2 and WPA3 – Enterprise with CNSA option, Personal (SAE), Enhanced Open (OWE) - WMM, WMM-PS, Wi-Fi Vantage, W-Fi Agile Multiband - Wi-Fi Location - Passpoint (release 2) Bluetooth SIG Ethernet Alliance (POE, PD device, class 4)	

4.2.4 Wi-Fi 6 Access points for Outdoor Environment

Sr. No	**Specifications**	**Compliance (Yes/No)**
	Technical Specification	
1	Outdoor Access Point radio should be minimum 2x2 MIMO with 2 on 5Ghz and 2x2 on 2.4 Ghz radio. The AP should have Dual Radio 802.11ax access point with OFDMA and Multi-User MIMO (MU-MIMO)	

2	Outdoor AP should have one number of 10/100/1000BASE-T (RJ-45) Mbps port.	
3	Access Point should be 802.11ax ready from day one and support WPA3.	
4	Access point should support Built-in technology that resolves sticky client issues for Wi-Fi 6 and Wi-Fi 5 devices	
5	Access point should support OFDMA and MU-MIMO for enhanced multi-user efficiency	
6	Access point should be IoT-ready Bluetooth 5 and Zigbee support	
7	AP should support minimum data rates of 1.2Gbps in the 5GHz band and 280 Mbps in the 2.4GHz band	
8	Access Point can have integrated internal antenna	
9	The Max transit power of the AP + Antenna should be as per WPC norms for indoor Access Points. OEM to give an undertaking letter stating that the AP will be configured as per WPC guidelines for indoor AP and also submit the WPC certificate showing approval.	
10	AP should provide SLA-grade performance by allocating radio resources, such as time, frequency, and spatial streams, to specific traffic types.	
11	Should support 16x BSSID per AP radio.	
12	Should support BPSK, QPSK, 16-QAM, 64-QAM, 256 QAM and 1024 QAM modulation types	
13	Access point should support 802.3af/at POE standard.	
14	Intelligent Power Monitoring to continuously monitor and report hardware energy consumption. AP can also be configured to enable or disable capabilities based on available PoE power – ideal when wired switches have exhausted their power budget.	
15	Access point should have console port.	
16	Must operate as a sensor for wireless IPS	
17	AP model proposed must be able to be both a client-serving AP and a monitor-only AP for Intrusion Prevention services	
18	The Access Point should have the technology to improve downlink performance to all mobile devices.	
19	Access point must incorporate radio resource management for power, channel, coverage hole detection and performance optimization	
20	AP should support standalone mode/ Inbuilt Virtual controller mode.	
21	The AP should support Advanced Cellular Coexistence (ACC) to minimize interference from cellular networks.	
22	The AP should support Supports priority handling and policy enforcement for unified communication apps,	

	including Skype for Business with encrypted video conferencing, voice, chat and desktop sharing	
23	The AP should support deep packet inspection to classify and block, prioritize, or limit bandwidth for thousands of applications in a range of categories	
24	AP should have Pass point (release 2) certification	
25	The Access point should support maximum ratio combining (MRC) for improved receiver performance	
26	The Access point should support cyclic delay/shift diversity (CDD/CSD) for improved downlink RF performance	
27	The Access point should support Space-time block coding (STBC) for increased range and improved reception	
28	The Access point should support Low-density parity check (LDPC) for high-efficiency error correction and increased throughput	
29	The Access point should support Transmit beam-forming (TxBF) for increased signal reliability and range	
30	The Access point should support 802.11ax Target Wait Time (TWT) to support low-power client devices	
31	AP should support Dual mode AP's (same AP can be managed via cloud or controller)	
32	Solution should have the ability to provide AI-ML Powered radio resource algorithm	
33	Regulatory Compliance FCC/ISE DCE Marked RED Directive2014/53/EUEMC Directive 2014/30/EU Low Voltage Directive 2014/35/EU UL/IEC/EN 60950 EN 60601-1-1, EN60601-1-2	
34	Certifications UL2043 plenum rating Wi-Fi Alliance certified802.11a/b/g/n/Wi-Fi Alliance certified Wi-Fi 6 (802.11ax)Wi-Fi CERTIFIEDTM ac (with wave 2 features) Pass point (Release 2)	
35	Environmental Temperature: -40° C to +55° C (-40° F to+140°F)with full solar loading Water and Dust: IP66/67 Salt Tolerance: Tested to ASTM B117-07A Salt Spray 200hrs Wind Survival: Up to 165 Mph Shock and Vibration ETSI 300-19-2-4	

4.2.5 Controller

Sr. No	Specifications	Compliance Yes / No
1	The Cloud Managed Controller cum NMS tool should provide a complete view of the devices that are monitored and managed by tool. It also allows end-end provisioning, management, monitoring, and maintenance operations for the devices. NMS tool should simplify network operations by providing zero-touch setup, centralized management of networks, historical data reporting, and troubleshooting for networks located around city or around the state.	
2	The Cloud Management tool should have Guest management, flexible captive portal templates, captive portal customization, custom welcome text and terms/conditions, guest self-registration, sponsored access, social logins such as Google+, LinkedIn, Twitter, Facebook and support for Facebook Wi-Fi.	
3	Proposed solution should be Streamlined Network Operations and eliminates the inefficiency of using disjointed, domain-specific network management tools and should have network health summary dashboard that provides quick insights to analyze and improve the network-whether it be the wired or wireless LAN, or performance across the WAN.	
4	Tool should have Single dashboard for IT operators for readily assessing the state of the network with views into global and site-level details. Selecting a site that changes the interface to only show network devices and connected clients specific to that location. IT operators can swiftly identify potential problems, as well as zero-in on specific locations that require their immediate attention.	
5	NMS tool should simplify Onboarding and Provisioning of network infrastructure. Tool should accelerate this process with an easy setup wizard, flexible configuration options, and zero touch provisioning, and provide an intuitive mobile installer app.	
6	NMS tool should provide simplified network device configurations with templates and a User-interface option with guided, step-by-step workflows. For devices with common configuration requirements, network admins can use groups to instantly apply or modify settings across large sets of devices.	

7	NMS tool should provide Zero touch provisioning, intuitive workflow for setting up network devices without onsite IT involvement. Configuration parameters can be defined within monitoring and management tool- based on network- or site-specific requirements. To get started, simply plug in and power on a device. As the device boots up, it connects to centralised cloud-based tool and automatically receives its running configuration from the cloud customer a possibility to run any software of your choice from the available releases and will support each of them. NMS toll should allow administrator to test a software version in pilots and deploy them reliably at a larger scale. Administrator should be able to choose and stay on a firmware and tool should not have forced firmware upgrade policy.	
8	Monitoring tool should have Detailed health and analytics dashboards, broad visibility into network-wide performance, and drill-in to specific sites with summaries of device utilization, configuration compliance, and other statistics. Monitor application health across the network, ensuring critical services receive priority traffic while tracking and enforcing acceptable usage by site, device, or location. Delivers a multitude of details on devices connected to the network, including insights into client performance, connectivity status, physical location, and the data path. Automatically identify potential Wi-Fi connectivity issues tied to DHCP, DNS, authentication failures, and more. IT operators gain visibility into the health and utilization of switches. This includes port status, PoE consumption, VLAN assignments, device and neighbour connections, power status, and more-with built-in alerts and events that accelerate wired network troubleshooting.	
9	NMS Tool should have Built-in troubleshooting capabilities including live events, packet capture, logs, and rich command line tools. Tool should have Diagnostic checks such as ping tests and traceroutes and device-level performance tests. NMS tool should have debug capability from day one.	

	Management tool should provide reporting features. Reports should cover device connectivity, network health, capacity planning, and the ability to baseline and compare user experience across various sites in the network. A reporting wizard is also provided to generate scheduled and on-demand reports that highlight network and application health, throughput and usage data, device and client inventory, activity auditing, and much more. Toll should have minimum 30 days of statistic and 90 days of reporting data.	
10	Management tool should have GUI-based workflow to upgrade firmware on deployed network devices. This includes the ability to complete live upgrades to reduce maintenance windows and ensure continuous operations. Upgrades can be completed at the site level, and can also be scheduled during non-peak hours of operation. Management tool should support rules governing firmware compliance for all managed devices. NMS tool should have flexibility to deploy in On-Premises as well in cloud without changing the network devices. Toll should have golden firmware option like Test one firmware & deploy and support rollback.	

4.2.6 EPABX System

Sl. No.	Specifications	Compliance (Yes/No)
1	The offered system should be the latest model of the vendor being supplied worldwide. Old models / releases will not be accepted.	
2	System should be state of the art and deployable over both packet and circuit switching infrastructure.	
3	System should be Non-Blocking Architecture	
4	CPU of EPABX should be with minimum 800 MHz, 512MB RAM, 8 GB equipped with eMMC	
5	System should be designed for a nominal load of 0.25 Erlang per extension	
6	System to support loop resistance upto 1800 Ohms	
7	The system should provide advanced, embedded solutions without the need of any external hardware & software. It should have strong convergence solution for voice, Internet, e-mail applications including LAN services.	
8	The system should support traditional telephony, VOIP features and Mobile telephone features in one single system through pluggable interface boards.	
9	The system Moreover, should be fully extremely modular - meaning total adaptation easy migration, modular, scalable.	
10	The system should be using latest Linux Operating system	
11	The system should be modular at every level; it should be rack mountable, stackable.	

12	The system should have universal slots for the interface boards.	
13	**The system should provide the following features as part of the system without the need for any external hardware or software:**	
13.1	Same features as a router with a firewall and Proxy cache server for internet access, An inbuilt DHCP server, An inbuilt CTI server	
13.2	The system should be based on standard protocols like CSTA, TAPI, IP etc	
13.3	The system should provide a single management interface window for all application management. The management software should be based on web browser	
13.4	The System should be expandable to 300 extensions; the expansions should be achieved through addition of interface boards. There should not be any change of the CPU or the system software during expansions.	
13.5	EPBX System should provide advance facilities for Analog user's minimum configuration of 24 CO trunk/232 Analog extension/32 IP extensions from Day 1.	
13.6	System should offer Hot-Desking functionality for minimum 150 Users.	
13.7	System should have very simple and same type of Licenses for all users (irrespective of user type whether Analog, Digital, IP, license Type should remain same)	
13.8	System should support built-in Contact center functionality expandable upto 32 Agents & 8 Supervisors just by enabling licenses (No need to have any external Hardware)	
13.9	System to support Intelligent call routing	
13.10	System to have BHCA value upto 1500	
13.11	System to support SSL V3 and HTTPS for secured sessions	
14	**End Points Supported:**	
14.1	Analog telephones	
14.2	Digital telephones	
14.3	DECT Telephones	
14.4	High - end IP hard phones	
14.5	High- end IP soft phones	
14.6	Client / server-based CTI solutions	
15	**Telephone features:**	
15.1	Music on hold (up to 2mn customizable)	
15.2	Personal assistant	

15.3	Voice mail	
15.4	Call forwarding	
15.5	Call transfer	
15.6	Call Back	
15.7	Park / Retrieve	
15.8	3-way conference	
15.9	6 Party meet me conference	
15.10	Dial by name	
15.11	Directory (3000 names)	
15.12	Company greeting	
15.13	Hunting group (cyclical, sequential, parallel)	
15.14	External loudspeaker broadcasting	
15.15	Pick up (group, individual, supervised line...)	
15.16	Manager / Secretary profile	
15.17	Automatic Route Selection (ARS)	
15.18	The users should have Personal assistant function for all	
15.19	Different options should be offered to the callers to reach different destinations like secretary, mobile phone, outside number, operator, voicemail.	
16	**VOIP**	
	The system should support VOIP features without any additional cards. IP users should register directly on processor	
	It should support: IP Telephony, IP trunking SIP(H323 protocols and SIP protocols)	
	QOS features should be supported. It should be able to tag the voice packets at the level 3 (IP) using TOS and DiffServ.	
	System to offer Redundancy for VOIP calls on Soft Clients like Pc, Laptop, Mobile, Tabs, etc.	
	The system should support the following compression algorithm for VOIP:	
	G711 when packets will stay in the LAN,	
	G722, G723.A and G729.AB when packets will be sent over the WAN	
17	**Voice Mail Features**	

	The system should have in-skin voicemail expandable to 8 ports with 200 hrs of storage. The system should be offered with 2 ports, 60 minutes of recording	
	The voice mail should be Easy to use: User should be able to navigate through the voice mail features using voice prompts and the digital phones with soft keys should provide display for accessing the voice mailbox.	
	Direct access to any message whatever its rank, Record online function, Screening function.	
	Notification by message LED	
	Remote consultation to mailbox	
	External notification (on mobile, phone pager, home set, …)	
	Personal options: customized greeting, protection by password, resend with comments, dial by name, reply function key, Answer only mode	
	Unconditional / on busy / on no answer forward on voice mail with specific message.	
	System to offer Multi-level and Multi group Auto Attendant functionality	
18	**Networking:**	
	Branch office and remote ext IP solutions	
	It should be possible to have Remote IP phones in the branches, managed by the call server in the headquarters. The IP phones at the remote site should have exactly the same features as they would at the headquarters.	
	The system should be compliant with QSIG standards.	
	The system should have networking features and it should allow to build the networks over the following physical interfaces:	
	ISDN	
	Leased lines, IP networks using H323 protocols, SIP	
19	**The system should allow building feature transparent networks. It should support the following features when networked:**	
	Basic call	
	Block dialing	
	Call forwarding indication on Cent. OP	
	Called party state indication on Display	
	Caller’s repertory	
	CLIP/CLIR & COLP/COLR	

	Diversion / Dynamic Routing	
	DTMF transparency	
	I/C call processing as Int. or Ext. calls	
	Name identification Carried via UUS	
	Optimized path in case of Forwarding	
	Optimized path in case of Transfer	
	Private / public call differentiation	
	Sub/address	
	Transfer	
20	**Data features:**	
	The LAN services offered by the system should have advanced features like: Powerful LAN: Switch 100 BT	
	The users should be able to move from one place to other and also it should be possible to add new users easily. For this the system should support embedded DHCP server	
	System to support NTP for Network wide synchronization	
21	**Security features:**	
	Supports Server Client CA certificate Authentication.	
	Supports Encryption	
	Supports TLS and MD-5 Protocol	
	Remote connectivity secured via VPN Tunnel	
22	**Internet / UC features**	
	The Internet access should be possible through ISDN or ADSL lines or through Leased Lines through separate interface	
	Following features should be supported:	
	Shared internet access through ISDN or DSL	
	Firewall, Proxy/cache server,	
	VPN features for the remote workers to access the emails or voice communication with the extensions of the system over internet.	
	The system should have standards-based solution for Internet, email and VPN features. It should support the following industry standards:	
	Internet standard protocols support	

	E-mail protocol support (POP3, SMTP, MIME) with multi-vendor e-mail client support	
	VPN standard protocol support for secure remote access (PAP/CHAP, PPTP, IPSec).	
23	**CTI features:**	
	The system should support high-end CTI (Computer Telephony Integration) features. It should allow users to access all the telephony features from their PC, irrespective of telephone type like Digital phones, Mobile DECT phone, Analog, without any physical phone	
	System to offer Screen Pop functionality	
	System to have embedded Database and flexibility to connect with external CRM	
24	**DECT features:**	
	The system should offer mobility features inside the office. It should be based on DECT technology. The DECT telephones should offer following features apart from the standard features like big display, icons based display etc :	
	Built in loudspeaker,	
	Built in vibrator,	
	Headset connection	
	Large graphical display	
	Navigation key	
	Pop –up menus	
	Wireless desktop digital telephones should be supported. It means standard digital telephones should be equipped with additional hardware, so that it can work with the DECT infrastructure and no cables should be used to connect the set with the system.	
25	**Unified Features**	
	System to support and control Desktop Phone and Mobile Phone from PC	
	System to have universal Phone directory	
	Each User to have single identity irrespective of having multiple devices and Contact options	
	System should be Cloud Connect ready and should support connectivity with cloud-based applications	
	System to offer features like Instant Messaging, Presence	
	System to offer Document Sharing	
	System to have Multi-line functionality	

	System to offer Group creation and participation for Group discussion	
	System to offer Click to Call functionality	
	System to offer LDAP integration	
	System to offer Microsoft Skype integration	
	Comp ability with Mac, Android Handheld devices	
	System to support Peer to Peer Video Calling functionality	
26	**System management and call accounting. The software should have the following features:**	
	Windows user interface	
	Access control by password	
	Multi-language	
	Traffic analysis (incoming & outgoing calls)	
	Pre-defined reports	
27	**System to support following Standards:**	
	IEC 60950-1, UL 60950-1,IEC-CISPR22 Class B,IEC-CISPR32 Class B,Cenelec EN55022 Class B, Cenelec EN55032 Class B,FCC Part 15B,IEC-CISPR24,Cenelec EN55024,IEC-EN61000-3-2, ETSI-EN 301 489-06: DECT,ETSI-EN 301 489-17: Bluetooth and WLAN,IEC 60945: maritime	

4.2.7 32 CH Network Video Recorder 8 SATA

Sl. No.	Parameter	Minimum Specifications	Compliance (Yes/No)
1	Operation System	Embedded Linux	
2	Processor	Quad-core Embedded processor	
3	IP Camera Input	32 Channel	
4	Network Access Bandwidth	160Mbps	
5	VGA	1 CH VGA output (1920×1080@60Hz 1280×1024@60Hz)	
6	HDMI	1 CH HDMI output (3840×2160@30Hz, 1920×1080@60Hz, 1280×1024 @60Hz)	
7	Video Format	H.265+/H.265 /H.264	
8	Resolution	4K/5MP/3MP/1080P/960P/720P/D1 /VGA/4CIF/DCIF/2CIF/CIF/QCIF	
9	Audio Format	G.711u	
10	ONVIF	ONVIF Profile G, S & T Support	
11	Motion Detection	Support 396(22*18) surveyed area can be set in every screen and multi-level sensitivity adjustable	
12	SATA	2 SATA Ports	
13	Max. Capacity	10TB (Each HDD)	
14	Network Interface	2 X RJ45 10M/100M adaptive Ethernet port	
15	Protocols	IPv4,IPv6, IP filter, TCP/IP, HTTP, HTTPS, DDNS, SMTP(SSL), DHCP, PPPoE, UPnP, NTP, P2P, FTP	
16	USB Interface	2 USB2.0	
17	Alarm Input	1 CH RCA port	
18	Alarm Output	1 CH RCA port, HDMI audio	
19	Power Supply	DC12V 6.25Amp	
20	Operating Conditions	-10°C ~ 55°C/10% -90%	
21	Certification	CE, FCC, EN-60950-1, IEC-60950-1, BIS Certified	

4.2.8 5MP Dome Camera

Sl. No.	Parameter	Minimum Specifications	Compliance (Yes/No)
1	Image sensor	1/1.8”, 5MP Low Illumination Progressive Scan CMOS Sensor	
2	Effective Pixels	2560(H)X1920(V)	
3	Min. Illumination	Color: 0.001Lux @ (F1.2, AGC ON), 0.014 Lux @ (F1.4, AGC ON), 0 Lux with IR	

4	S/N Ratio	≥58dB (AGC OFF)	
5	IR Distance	30-40Mtr	
6	Shutter Speed	Auto, Slow Shutter, (1/5 sec ~ 1/100,000 sec Adjustable)	
7	Output	PAL/NTSC adjustable	
8	Lens Type	2.7-13.5 mm Motorized Zoom Lens (Optional: 2.8mm, 3.6mm, 6mm)	
9	Angle Of View	2.7-13.5mm: 121.36° to 34°(H), 52° to 19°(V), 116° to 40°(D)2.8mm:109°(H)59°(V)129°(D), 3.6mm:89°(H)47°(V)105°(D),6mm:57°(H)34°(V)64°(D)	
10	Streaming Capability	Quad Streams	
11	Resolution	5MP/2MP/VGA	
12	Streams	Mainstream: 5MP (2560X1920)@25/30fps Sub Stream: 1080P (1920X1080)@25/30fps Third Stream: VGA(640x480)@10fps FourthStream:VGA(640x480)@10fps	
13	Network Port	RJ45 10M, 100M Network Self Adjustable	
14	Protocol	TCP/IP, IPv4, IPv6, SSL, TLS, UDP, HTTP/HTTPS, HTTP-Base64, HTTP-Digest, DHCP, DNS, RTP,RTSPS, NTP, SMTP, IGMP, Multicast	
15	System Compatibility	ONVIF Profile S, G & T	
16	Alarm	1Ch Alarm IN, 1Ch Alarm Out	
17	SD Card	Yes, Up to 512GB	
18	Storage Conditions	-40 °C ~ 70 °C Humidity 95% or Less (Non-Condensing)	
19	Ingress Protection	IP67 Compliant	
20	Vandalism Protection	IK10 Compliant	
21	Product Certification	Safety: CE, FCC, EN:60950-1, IS 13252 (Part 1):2010, BIS Registered EMC & Immunity: CE, FCC Cyber Security: ISO/IEC 27400 OWASP Level 2 of ASVS v4.0 Appendix C Certificate No. STQC/IOTSCS/0922/001U1 Reliability Certification: MTBF >1,00,000 hours at 40°C	

4.2.9 5MP Bullet Camera

Sl. No.	**Parameter**	**Minimum Specifications**	**Compliance (Yes/No)**
1	Image sensor	1/1.8”, 5MP Low Illumination Progressive Scan CMOS Sensor	
2	Effective Pixels	2560(H)x1920(V)	
3	Aspect Ratio	16:9	

4	Min. Illuminatio n	Color: 0.001Lux @ (F1.2, AGC ON), 0.014 Lux @ (F1.4, AGC ON), 0 Lux with IR	
5	S/N Ratio	≥58dB (AGC OFF)	
6	IR Distance	3.6mm: 20-30Mtr 8mm: 50-60Mtr 2.7-13.5mm:50-60Mtr 5-50mm: 80-100Mtr	
7	Shutter Speed	Auto, Slow Shutter, (1/5 sec ~ 1/100,000 sec Adjustable)	
8	Slow Shutter	On/ Off	
9	WDR	Up to 120 dB, TWDR (Off/ Low/ Middle/ High)	
10	IR LED Control	Auto, Manual, OFF	
11	Output	PAL/NTSC adjustable	
12	Lens Type	2.7-13.5mm Motorized Zoom Lens (Optional: 3.6mm, 8mm, 5-50mm Motorized Lens)	
13	IRIS Control	Auto	
14	Angle Of View	**3.6mm-** Horizontal:89°, Vertical:47°, Diagonal:105°(D), **8mm**-45°(H)26°(V)55°(D), **2.7-13.5mm-** Horizontal: 121.36° to 34° Vertical: 52° to 19° Diagonal: 116° to 40° **5-50mm-** Horizontal: 62° to 7° Vertical: 48° to 5° Diagonal: 75° to 8°	
15	Mount Type	M14	
16	Focus Control	Auto/ Manual	
17	Compressi on	H.265/H.264/MJPEG	
18	H.265 Encoding	Main Profile	
19	H.264 Encoding	Baseline / Main Profile / High Profile	
20	Streaming Capability	Quad Streams	
21	Resolution	5MP/2MP/VGA	
22	Streams	Mainstream:5MP (2560X1920)@25/30fps Sub Stream: 1080P (1920X1080)@25/30fps Third Stream: VGA(640x480)@10fps Fourth Stream: VGA(640x480)@10fps	
23	Frame Rate	1~ 30fps	
24	Video bit Rate	Constant bit rate, variable bit rate (16kbps-16Mbps)	
25	I - Frame	2 -255	
26	Color Mode	Normal, Bright, Nature	

27	Network Port	RJ45 10M, 100M Network Self Adjustable	
28	Protocol	TCP/IP, IPv4, IPv6, SSL, TLS, UDP, HTTP/HTTPS, HTTP-Base64, HTTP-Digest, DHCP, DNS, RTP, RTSPS, NTP, SMTP, IGMP, Multicast	
29	System Compatibility	ONVIF Profile S, G & T	
30	Storage Conditions	-40 °C ~ 70 °C Humidity 95% or Less (Non-Condensing)	
31	Ingress Protection	IP67 Compliant	
32	Vandalism Protection	IK10 Compliant	
33	Power supply	DC 12V ± 10% / PoE (802.3af)	
34	Product Certification	Safety: CE, FCC, EN:60950-1, IS 13252 (Part 1):2010,BISRegisteredEMC & Immunity: CE, FCC Cyber Security: ISO/IEC 27400 OWASP Level 2 of ASVSv4.0AppendixCCertificateNo.STQC/IOTSCS/0922/001U1Reliability Certification: MTBF >1,00,000 hours at 40°C	

4.2.10 Hard Disk

Sl. No	Minimum Requirement Specification	Compliant (Yes/ No)
1	Workload rating of up to minimum 180TB/year	
2	MTBF of up to minimum 1 million hours	
3	Warranty of 5 yrs.	
4	High transfer rate of 170MB/s or more	
5	Interface: SATA	
6	Capacity: Minimum 4TB	
7	Recording Technology: CMR	
8	Operating Temperature: 0 deg C to 65 deg C	
9	Certifications: CE, FCC, TUV, UL	

4.2.11 55" Screen Professional 350 - 500 nts Display

Sl. No.	Parameter	Minimum Specifications	Compliance (Yes/No)
1.	Screen Size (Diagonal) Minimum (Cm)	139 Cm	
2.	Orientation	Landscape	
3.	Native Resolution (Pixels)	3840 x 2160 - UHD	
4.	Brightness	600 cd/m²	
5.	Viewing Angle (Horizontal: Vertical)	178:178	

6.	CPU	Quad-Core ARM Cortex-A55/or As Per OEM Standards	
7.	GPU	ARM Mali-G31 MP2/ Or As per OEM Standards	
8.	Bezel Width (Mm)	14	
9.	Number Of Speakers	2 x 10 W	
10.	Arrangement Of Speakers	Inbuilt	
11.	Video Input	2 xHDMI2.0, 1xDP1.2, 2xUSB-2.0	
12.	Connectivity	10/100/1000 Mbps Ethernet, Wi-Fi 5	
13.	Operating Temperature	0-40°C	
14.	Operating Humidity	10-90%	
15.	Power Consumption	194 W	
16.	Operation Hours	24 X 7	
17.	Mounting Arrangement	Wall Mount & Table Top as Per Requirement 5Years Warranty Support to Be Provided	
18.	Compliance	BIS,	
19.	Power Supply	110 VAC - 240 VAC - 50/60 Hz	
20.	Dimensions (WxDxH)	As Per OEM Standards	
21.	Features	HDMI-Wakeup, No Signal Power Off, SNMP	
22.	Accessories To Be Supplied: AC Power Cord, Remote Control, User Manual, 5 Mtr HDMI Cable, Wall Mount Bracket, Necessary Cables and Connectors		

4.2.12 42U Rack

Sl. No	**Minimum Requirement Specification**	**Compliant (Yes/ No)**
1	42 U Rack Height 800 mm Width And 1000mm Depth Networking Rack Confirms to DIN 41494 Standards with Fully Adjustable 19 Inches Equipment Mounting Angels. Ventilated Bottom and Top Covers with Cable Entry Position. Load Bearing Capacity Of 500kgs. With IP Rating -20. ISO Certified having manufacturing experience for more than Ten Years.	
2	Front door would be supplied with perforated type door and rear door would be SPCC quality cold rolled steel metal with 1mm thickness with locking provision in front and rear, and with easy removable side panels with slam latches	
3	ITE / Server Rack Air Circulation module/Tower Mount/360CFM	
4	AC Main Channel Vertical And 10x 5Amps and 2x15amps Sockets	
5	Equipment Tray Of 700 Depth for Mounting the Equipment	

6	Two Horizontal Cable Manager	
7	Hardware Fasteners Packet Of 20nos	
8	Copper Based Earthing Strip	
9	Cable Entry Provision at Top and Bottom.	
10	Powder Coating 60-100 Microns. Colour Light Grey RAL 7035	

4.2.13 15U Rack

Sl. No	Minimum Requirement Specification	Compliant (Yes/ No)
1	Hardware Packet (Pack of 20)	
2	Depth Shelf/600D	
3	ITE / Server Rack Air Circulation module/Tower Mount/180CFM (90CFMx2) with Power Cord	
4	Server /IT Rack mount power distribution unit, 1Ph, 230V, 16A, 50/60Hz, 2U standard with 6 X Indian Round Pin 5/15A, Inlet Plug type 16A Indian Round Pin, 16A MCB - PDU Rating 3.6KVA/Side feed-2Mt/ Black	
5	Horz. Cable Organiser/1U/Loop	
6	Shelf/600/Off White	
7	Mounting Hardware-CR (Pack of 20)	
8	Filter Unit/Double louvered Module/IP56/Off White	
9	ITE / Server Rack Air Circulation module/90CFM	
10	Gland/PG16/IP68	
11	Gland/PG29/IP68	

4.2.14 6 kVA UPS

Sl. No	Parameter	Minimum Technical Requirement	Compliant (Yes/ No)
1	Capacity	Adequate capacity to cover all above IT Components at respective field locations.	
2	Input Frequency Range	50 Hz+/-0.5 %(Free running); +/-3 %(Sync. Mode)	
3	Output Frequency Range	50 Hz+/-0.5 %(Free running); +/-3 %(Sync. Mode)	
4	Output Voltage	220/230/240Vac	
		230VAC	
5	Inverter efficiency	>90%	
6	Harmonic Distortion (THD)	< 3% (linear load)	
7	Output Waveform	Pure Sine wave	
8	Output Power Factor	0.8 or more	

Sl. No	Parameter	Minimum Technical Requirement	Compliant (Yes/ No)
9	Battery Backup	Min. 2 hrs. of battery backup to achieve required uptime of field device as well as SLA of the overall solution.	
10	Battery Type	VRLA (Valve Regulated Lead Acid), SMF (Sealed Maintenance Free) Battery.Makes Quanta/Exide/Unominda/HBL	
11	General Operating Temperature	As per City condition and requirement.	
12	Alarms & Indications	All necessary alarms & indications essential for performance monitoring of UPS like mains fail, low battery & fault detection	
13	Bypass	Automatic, Manual Bypass Switch.	
14	Certifications	Manufacturer in India shall have ISO 9001, 14001 & 45001 with NABL Accredited factory Calibration lab in India. (Copy of certificates required with bid proposal) UPS OEM must be established and supplying UPS from last 10 years in India..	
15	Overall Protection	UPS OEM has to supply IP 55 Cabinet to place UPS & Batteries (Floor type) along with FAN for ventilation, Main input Breaker with Indian socket PDU. The same shall be proven solution (I.e UPS + Outdoor IP 55 Cabinet) and UPS OEM must have supplied 40 nos or more (min. 5 nos must be installed) to any Govt/PSU customer in last 3 years.	
16	Rack & Accessories	Rack & Accessories	

4.2.15 1 kVA UPS

Sl. No	Minimum Requirement Specification	Compliant (Yes/ No)
1	Capacity: Adequate capacity to cover all above IT Components at respective location	
2	Output Waveform: Pure Sine wave	
3	Input & Output Power Factor at Full Load: min. 0.90	
4	Input: Single Phase	
5	Input Voltage Range: Single Phase 175 to 280Vac for any rating below 10kva	

6	Output Voltage: 400V AC, Three Phase for over 5 KVA UPS. Single Phase 220/230/240Vac for any rating below 10kva. UPS below 3kva shall have min. one programmable inbuilt Indian type Outlet at back of UPS	
7	Output Frequency: 50 Hz+/-0.5 %(Free running); +/-3 %(Sync. Mode)	
8	Inverter efficiency: >90%	
9	Overall AC-AC Efficiency: >89% for 1 Ph upto 3kva. For 5kva or higher– 95%	
10	UPS Shutdown: UPS should shut down with an alarm and indication on following conditions 1) Output over voltage 2) Output under voltage 3) Low Battery 4) Inverter over load 5) Over temperature 6) Output short	
11	Battery Back-up: Min 2 Hours and as per design consideration (on 0.8 O/p PF load). All UPS below 5kVA shall have min. internal charger capacity of 15A	
12	Battery: VRLA (Valve Regulated Lead Acid), SMF (Sealed Maintenance Free) Battery. Makes Quanta/HBL/Exide/Unominda/Leoch	
13	Indicators & Metering (LCD): Indicators for AC Mains, Load on Battery, Fault, Load Level, Low Battery Warning, Inverter On, UPS on By- pass, Overload, etc.	
14	Metering for Input Voltage, Output Voltage and frequency, battery voltage, output current (for any 3PH UPS) etc.	
15	Audio Alarm: Battery low, Mains Failure, Over temperature, Inverter overload, Fault etc.	
16	Cabinet: Rack/Tower type	
17	For any Outdoor installation, UPS OEM has to supply IP 55 Cabinet to place UPS & Batteries (Floor type) along with FAN for ventilation, Main input Breaker with Indian socket PDU. The same shall be proven solution & OEM must have supplied min. 40 nos (min. 3 nos must be installed) to any Govt/PSU customer in last one year. OEM to give undertaking with details of end user	
18	Manufacturer in India shall have ISO 9001, 14001 & 45001 with NABL Accredited factory lab in India. ALL UPS i.e Indoor or Outdoor and UPS for ICCC/DC shall be from same OEM only	

4.3 Payments

i. Authority shall make payments to MSI at the times and in the manner set out in the Payment schedule as specified under Payment Milestones. Authority shall make all efforts to make payments to MSI within 30 (thirty) days of receipt of invoice(s) and all necessary supporting documents.

ii. All payments agreed to be made by Authority to MSI in accordance with the Bid shall be inclusive of all statutory levies, duties, taxes and other charges whenever levied/applicable, if any, and Authority shall not be liable to pay any such levies/other charges under or in relation to the Agreement and/or the Services.
    a. No invoice for extra work/change order on account of change order shall be submitted by MSI unless the said extra work/change order has been authorized/approved by the Authority in writing in accordance with Change Control Note.
    b. In the event of Authority noticing at any time that any amount has been disbursed wrongly to MSI or any other amount is due from MSI to the Authority, the Authority may without prejudice to its rights recover such amounts by other means after notifying MSI or deduct/adjust such amount from any payment falling due to MSI. The details of such recovery, if any, shall be intimated to MSI. Similarly, MSI shall also be entitled to receive the payment of any undisputed amount under subsequent invoice for any amount that has been inadvertently omitted in previous invoice on the part of the Authority or MSI.

iii. All payments to MSI shall be subject to the deductions of tax at source under Income Tax Act, and other taxes and deductions as provided for under Applicable Laws. All costs, damages or expenses which Authority may have paid or incurred, for which under the provisions of the Agreement, MSI is liable, the same shall be deducted/set off by Authority from any payments/dues payable to MSI. All payments to MSI shall be made after making necessary deductions as per terms of the Agreement and recoveries towards facilities, if any, provided by the Authority to MSI on chargeable basis.

4.3.1 Payment Schedule

Sl. No.	Deliverables	Milestone/Deliverables	Payment
1	Material Delivery	Successful Delivery of Material	40% of Capex
2	Installation, deployment of Applications, training & operationalization of components	Successful operationalization of components i.e., Switches, Cameras, Applications, UPS etc.	40% of Capex
3	Go- Live	UAT Acceptance Applications Go-Live	20% of Capex
4	Operation & Maintenance	Weekly & Monthly Reports UAT Acceptance Certificate for the respective integrated solutions	OPEX will be paid in twenty (20) equal quarterly instalments spread across 5 years Post Go-Live

Note:

i. All payments to the Master System Integrator shall be made upon submission of invoices along with necessary approval certificates from Authority.

ii. The bill of material proposed by the MSI shall be approved by Authority. The exact quantity and requirement shall be proposed as part of the technical bid by the bidder.
iii. The request for payment shall be made to Authority in writing, accompanied by invoices describing the services performed, and by the required documents submitted pursuant to general conditions of the contract and upon fulfilment of all the obligations stipulated in the agreement.
iv. Due payments shall be made promptly by Authority generally within sixty (60) days after submission of an invoice for payment by MSI. The Taxes, as applicable, shall be deducted / paid, as per prevalent rules.
v. The currency or currencies in which payments shall be made to the MSI shall be in Indian Rupees (INR) only. All remittance charges shall be borne by the MSI.
vi. In case of disputed items, the disputed amount shall be withheld and shall be paid only after settlement of the dispute.
vii. Material Shall be delivered at respective Island.

Section 5- Conditions of Contract

A. General

1. Definitions

1.1 Terms which are defined in the Contract Data are not also defined in the Conditions of Contract but keep their defined meanings. Bold letters are used to identify defined terms.

- Bill of Quantities means the priced and completed Bill of Quantities forming part of the Tender.
- Compensation events are those defined in Clause-34 hereunder.
- The Completion Date is the date of completion of the Works as certified by the Authority in accordance with Sub Clause 38.1.
- The Contract is the contract between the Authority and the System Integrator to execute, complete and maintain the Works. It consists of the documents listed in Clause 2.3 below.
- The Contract Data defines the documents and other information which comprise the Contract.
- The System Integrator is a person or corporate body whose Tender to carry out the Works has been accepted by the Authority.
- The System Integrator's Tender is the completed Tender document submitted by the System Integrator to the Authority.
- The Contract price is the price stated in the Letter of Acceptance and thereafter as adjusted in accordance with the provisions of the Contract.
- Days are calendar days; months are calendar months.
- A Defect is any part of the Works not completed in accordance with the Contract.
- The Defects liability period is the period named in the Contract Data and calculated from the Completion Date.
- The Authority is the party who will employ the System Integrator to carry out the Works.
- Equipment is the System Integrator's machinery and vehicles brought temporarily to the Site to construct the Works.
- The Initial Contract price is the Contract Price listed in the Authority's Letter of Acceptance.
- The Intended Completion Date is the date on which it is intended that the System Integrator shall complete the Works. The Intended Completion Date is specified in the Contract Data. The Intended Completion Date may be

revised only by the Authority by issuing an extension of time.

- Materials are all supplies, including consumables, used by the System Integrator for incorporation in the Works.
- Plant is any integral part of the Works which is to have a mechanical, electrical, electronic or chemical or biological function.
- The Site is the area defined as such in the Contract Data.
- Specification means the Specification of the Works included in the Contract and any modification or addition made or approved by the Authority.
- The Start Date is given in the Contract Data. It is the date when the System Integrator shall commence execution of the works. It does not necessarily coincide with any of the Site Possession Dates.
- A Sub System Integrator is a person or corporate body who has a Contract with the System Integrator to carry out a part of the work in the Contract which includes work on the Site.
- A Variation is an instruction given by the Authority which varies the Works.
- The Works are what the Contract requires the System Integrator to construct, install, and turn over to the Authority, as defined in the Contract Data.

2. Interpretation

2.1 In interpreting these Conditions of Contract, singular also means plural, male also means female or neuter, and the other way around. Headings have no significance. Words have their normal meaning under the language of the Contract unless specifically defined. The Authority will provide instructions clarifying queries about the Conditions of Contract.

2.2 The documents forming the Contract shall be interpreted in the following order of priority:

- Agreement
- Letter of Acceptance, notice to proceed with the works
- System Integrator’s Tender
- Contract Data
- Conditions of Contract
- Specifications
- Drawings
- Bill of quantities and
- any other document listed in the Contract Data as forming part of the Contract.

3. Law governing contract

3.1 The law governing the Contract is the Laws of India, supplemented by the Local Acts.

4. Authority's decisions

4.1 Except where otherwise specifically stated, the Authority will decide contractual matters between the Authority and the System Integrator.

5. Delegation

5.1 The Authority may delegate any of his duties and responsibilities to other people after notifying the System Integrator and may cancel any delegation after notifying the System Integrator

6. Communications

6.1 Communications between parties which are referred to in the conditions are effective only when in writing. A notice shall be effective only when it is delivered (in terms of Indian Contract Act).

7. Subcontracting

7.1 The System Integrator may subcontract with the approval of the Authority but may not assign the Contract without the approval of the Authority in writing. Subcontracting does not alter the System Integrator's obligations.

8. Other System Integrators

8.1 The System Integrator shall cooperate and share the Site with other System Integrators, public authorities, utilities, and the Authority.

9. Personnel

9.1 The System Integrator shall employ the technical personnel (of number and qualifications) as may be stipulated by GOK from time to time during the execution of the work. The technical staff so employed shall be available at site as may be stipulated by the Authority.

9.2 If the Authority asks the System Integrator to remove a person who is a member of the System Integrator’s staff or his work force stating the reasons, the System Integrator shall ensure that the person leaves the Site within seven days and has no further connection with the work in the Contract.

10. Authority’s and System Integrator's risks

10.1 The Authority carries the risks which this Contract states are Authority’s risks, and the System Integrator carries the risks which this Contract states are System Integrator’s risks.

11. Authority's risks

11.1 The Authority is responsible for the excepted risks which are (a) in so far as rebellion, riot commotion or disorder or (b) a cause due solely to the design of the Works, other than the System Integrator’s design.

12. System Integrator’s risks

12.1 All risks of loss of or damage to physical property and of personal injury and death which arise during and in consequence of the performance of the Contract other than the excepted risks are the responsibility of the System Integrator.

13. Queries about the Contract Data

13.1 The Authority will clarify queries on the Contract Data.

14. System Integrator to construct the Works

14.1 The System Integrator shall construct the Works in accordance with the Specification and Drawings.

15. The Works to be completed by the Intended Completion Date

15.1 The System Integrator may commence execution of the Works on the Start Date and complete them by the Intended Completion Date.

16. Safety

16.1 The System Integrator shall be responsible for the safety of all activities on the Site.

17. Discoveries

17.1 Anything of historical or other interest or of significant value unexpectedly discovered on the Site is the property of the Authority. The System Integrator is to notify the Authority of such discoveries and carry out the Authority's instructions for dealing with them.

18. Possession of the Site

18.1 The Authority shall give possession of all parts of the Site to the System Integrator to carry out the implementation of the project.

19. Access to the Site

19.1 The System Integrator shall allow the Authority and any person authorized by the Authority access to the Site, to any place where work in connection with the Contract is being carried out or is intended to be carried out and to any place where materials or plant are being manufactured / fabricated / assembled for the works.

20. Instructions

20.1 The System Integrator shall carry out all instructions of the Authority which comply with the applicable laws where the Site is located.

B. Time Control

21. Program

21.1 Within the time stated in the Contract Data the System Integrator shall submit to the Authority for approval of a Program showing the general methods, arrangements, order, and timing for all the activities in the Works.

21.2 The Authority's approval of the Program shall not alter the System Integrator's obligations. The System Integrator may revise the Program and submit it to the Authority again at any time. A revised Program is to show the effect of Variations and Compensation Events.

22. Extension of the Intended Completion Date

22.1 The Authority shall extend the Intended Completion Date if a Compensation Event occurs or a Variation is issued which makes it impossible for Completion to be achieved by the Intended Completion Date.

22.2 The Authority shall decide whether and by how much to extend the Intended Completion Date within 21 days of the System Integrator asking the Authority for a decision upon the effect of a Compensation Event or Variation and submitting full supporting information.

23. Delays ordered by the Authority

23.1 The Authority may instruct the System Integrator to delay the start or progress of any activity within the Works.

24. Management meetings

24.1 The Authority may require the System Integrator to attend a management meeting. The purpose of a management meeting shall be to review the progress achieved and the plans for remaining work.

24.2 The responsibility of the parties for actions to be taken is to be decided by the Authority either at the management meeting or after the management meeting and stated in writing to be distributed to all who attended the meeting.

C. Quality Control

25. Identifying defects

25.1 The Authority shall check the System Integrator's work and notify the System Integrator of any Defects that are found. Such checking shall not affect the System Integrator's responsibilities. The Authority may instruct the System Integrator to search for a Defect and to uncover and test any work that the Authority considers may have a Defect

26. Tests

26.1 If the Authority instructs the System Integrator to carry out a test not specified in the Specification to check whether any work has a Defect and the test shows

that it does, the System Integrator shall pay for the test and any samples. If there is no Defect the test shall be a Compensation Event.

27. Correction of defects

27.1 The Authority shall give notice to the System Integrator of any Defects before the end of the Defects Liability Period, which begins at Completion and is defined in the Contract Data. The Defects Liability Period shall be extended for as long as Defects remain to be corrected.

27.2 Every time notice of a Defect is given, the System Integrator shall correct the notified Defect within the length of time specified by the Authority's notice.

28. Uncorrected defects

28.1 If the System Integrator has not corrected a Defect within the time specified in the Authority's notice, the Authority will assess the cost of having the Defect corrected, and the System Integrator will pay this amount.

D. Cost Control

29. Bill of Quantities (BOQ)

29.1 The BOQ shall contain items for the construction, installation, testing, and commissioning work to be done by the System Integrator.

29.2 The BOQ is used to calculate the Contract Price. The System Integrator is paid for the quantity of the work done at the rate in the BOQ for each item

30. Variations

30.1 The Authority shall have power to order the System Integrator to do any or all of the following as considered necessary or advisable during the progress of the work by him

a) Increase or decrease of any item of work included in the Bill of Quantities (BOQ);

b) Omit any item of work;

c) Change the character or quality or kind of any item of work;

d) Change the levels, lines, positions and dimensions of any part of the work;

e) Execute additional items of work of any kind necessary for the completion of the works; and

f) Change in any specified sequence, methods or timing of construction of any part of the work.

30.2 The System Integrator shall be bound to carry out the work in accordance with any instructions in this connection, which may be given to him in writing by the Authority and such alteration shall not vitiate or invalidate the contract.

30.3 Variations shall not be made by the System Integrator without an order in writing by the Authority, provided that no order in writing shall be required for increase

or decrease in the quantity of an item appearing in the BOQ so long as the work executed conforms to the approved drawings.

30.4 The System Integrator shall promptly request in writing the Authority to confirm verbal orders and if no such confirmation is received within 15 days of request, it shall be deemed to be an order in writing by the Authority.

31. Payments for Variations

31.1 Payment for increase in the quantities of an item in the BOQ up to 25% of that provided in the Bill of Quantities shall be made at the rates quoted by the System Integrator.

31.2 For quantities in excess of 125% of the tendered quantity of an item as given in the BOQ, the System Integrator shall be paid at the rate entered in or derived from in the Schedule of Rates (applicable for the area of the work and current at the time of award of contract) plus or minus the overall percentage of the original tendered rates over the current Schedule of Rates prevalent at the time of award of contract.

31.3 If there is no rate for the additional, substituted or altered item of the work in the BOQ, efforts would be made to derive the rates from those given in the BOQ or the Schedule of Rates (applicable for the area of the work and current at the time of award of contract) and if found feasible the payment would be made at the derived rate for the item plus or minus the overall percentage of the original tendered rates over the current Schedule of Rates prevalent at the time of award of contract

31.4 If the rates for additional, substituted or altered item of work cannot be determined either as at 31.1 or

31.5 31.2 or 31.3 above, the System Integrator shall be requested to submit his quotation for the items supported by analysis of the rate or rates claimed, within 7 days.

31.6 If the System Integrator's quotation is determined unreasonable, the Authority may order the Variation and make a change to the Contract Price which shall be based on Authority’s own forecast of the effects of the Variation on the System Integrator's costs.

31.7 Under no circumstances the System Integrator shall suspend the work on the plea of non-settlement of rates for items falling under this Clause.

32. Submission of bills for payment

32.1 The System Integrator shall submit to the Authority monthly bills of the value of the work completed less the cumulative amount paid previously.

32.2 The Authority shall check the System Integrator's bill and determine the value of the work executed which shall comprise of (i) value of the quantities of the items in the BOQ completed and (ii) valuation of Variations and Compensation Events.

32.3 The Authority may exclude any item paid in a previous bill or reduce the proportion of any item previously paid in the light of later information.

33. Payments

33.1 Payments shall be adjusted for deductions for retention, other recoveries in terms of the contract and taxes, at source, as applicable under the law. The Authority shall pay the System Integrator within 60 days of submission of bill.

33.2 Items of the Works for which no rate or price has been entered in will not be paid for by the Authority and shall be deemed covered by other rates and prices in the Contract.

34. Compensation events

34.1 The following are Compensation events unless they are caused by the System Integrator:

(a) The Authority does not give access to a part of the Site by the Site Possession Date stated in the Contract Data.

(b) The Authority orders a delay or does not issue drawings, specifications or instructions required for execution of works on time.

(c) The Authority instructs the System Integrator to uncover or to carry out additional tests upon work which is then found to have no Defects.

(d) The Authority gives an instruction for dealing with an unforeseen condition, caused by the Authority, or additional work required for safety or other reasons.

(e) The effect on the System Integrator of any of the Authority's Risks.

(f) The Authority unreasonably delays issuing a Certificate of Completion.

(g) Other Compensation Events listed in the Contract Data or mentioned in the Contract.

34.2 If a Compensation Event would cause additional cost or would prevent the work being completed before the Intended Completion Date, the Contract Price shall be increased and/or the Intended Completion Date is extended. The Authority shall decide whether and by how much the Contract Price shall be increased and whether and by how much the Intended Completion Date shall be extended.

34.3 As soon as information demonstrating the effect of each Compensation event upon the System Integrator's forecast cost has been provided by the System Integrator, it is to be assessed by the Authority and the Contract Price shall be adjusted accordingly. If the System Integrator's forecast is deemed unreasonable, the Authority shall adjust the Contract Price based on Authority's own forecast. The Authority will assume that the System Integrator will react competently and promptly to the event.

34.4 The System Integrator shall not be entitled to compensation to the extent that the Authority's interests are adversely affected by the System Integrator not having given early warning or not having cooperated with the Authority.

35. Tax

35.1 The rates quoted by the System Integrator shall be deemed to be inclusive of the sales and other taxes that the System Integrator will have to pay for the performance of this Contract. The Authority will perform such duties in regard to the deduction of such taxes at source as per applicable law.

36. Liquidated damages

36.1 The System Integrator shall pay liquidated damages to the Authority at the rate per day stated in the Contract Data for each day that the Completion Date is later than the Intended Completion Date. The total amount of liquidated damages shall not exceed the amount defined in the Contract Data. The Authority may deduct liquidated damages from payments due to the System Integrator. Payment of liquidated damages does not affect the System Integrator's liabilities.

36.2 If the Intended Completion Date is extended after liquidated damages have been paid, the Authority shall correct any overpayment of liquidated damages by the System Integrator by adjusting the next payment of bill.

37. Cost of repairs

37.1 Loss or damage to the Works or Materials to be incorporated in the Works between the Start Date and the end of the Defects Correction periods shall be remedied by the System Integrator at the System Integrator's cost if the loss or damage arises from the System Integrator's acts or omissions.

E. Finishing the Contract

38. Completion

38.1 The System Integrator shall request the Authority to issue a Certificate of Completion of the Works and the Authority will do so upon deciding that the Work is completed.

39. Taking over

39.1 The Authority shall take over the Site and the Works within seven days of issuing a certificate of Completion.

40. Final account

40.1 The System Integrator shall supply to the Authority a detailed account of the total amount that the System Integrator considers payable under the Contract before the end of the Defects Liability Period. The Authority shall issue a Defect Liability Certificate and certify any final payment that is due to the System Integrator within 90 days of receiving the System Integrator's account if it is correct and complete. If it is not, the Authority shall issue within 90 days a schedule that states the scope of the corrections or additions that are necessary. If the Final Account is still unsatisfactory after it has been resubmitted, the Authority shall decide on the amount payable to the System Integrator and make payment within 60 days of receiving the System Integrator’s revised account.

41. As built drawings

41.1 If “as built” Drawings are required, the System Integrator shall supply them by the dates stated in the Contract Data.

41.2 If the System Integrator does not supply the Drawings by the dates stated in the Contract Data, or they do not receive the Authority's approval, the Authority shall withhold the amount stated in the Contract Data from payments due to the System Integrator.

42. Termination

42.1 The Authority or the System Integrator may terminate the Contract if the other party causes a fundamental breach of the Contract.

42.2 Fundamental breaches of Contract include, but shall not be limited to the following:

(a) The System Integrator stops work for 45 days when no stoppage of work is shown on the current Program and the stoppage has not been authorized by the Authority;

(b) the Authority instructs the System Integrator to delay the progress of the Works and the instruction is not withdrawn within 60 days;

(c) The System Integrator becomes bankrupt or goes into liquidation other than for a reconstruction or amalgamation;

(d) a payment due to the System Integrator is not paid by the Authority within 90 days of the date of the submission of the Bill by System Integrator;

(e) the Authority gives Notice that failure to correct a particular Defect is a fundamental breach of Contract and the System Integrator fails to correct it within a reasonable period of time determined by the Authority;

(f) the System Integrator does not maintain a security which is required;

(g) the System Integrator has delayed the completion of works by the number of days for which the maximum number of liquidated damages can be paid as defined in the Contract data; and

(h) if the System Integrator, in the judgment of the Authority has engaged in corrupt or fraudulent practices in competing for or in the executing the Contract.

(i) For the purpose of this paragraph: "corrupt practice" means the offering, giving, receiving or soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution. "Fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Borrower, and includes collusive practice among Tenderers (prior to or after Tender submission) designed to establish Tender prices at artificial non- competitive levels and to deprive the Borrower of

the benefits of free and open competition."

42.3 When either party to the Contract gives notice of a breach of contract to the Authority for a cause other than those listed under Sub Clause 42.2 above, the Authority shall decide whether the breach is fundamental or not.

42.4 Notwithstanding the above, the Authority may terminate the Contract for convenience.

42.5 If the Contract is terminated the System Integrator shall stop work immediately, make the Site safe and secure and leave the Site as soon as reasonably possible.

43. Payment upon Termination

43.1 If the Contract is terminated because of a fundamental breach of Contract by the System Integrator, the Authority shall prepare bill for the value of the work done less advance payments received up to the date of the bill, less other recoveries due in terms of the contract, less taxes due to be deducted at source as per applicable law and less the percentage to apply to the work not completed as indicated in the Contract Data. Additional Liquidated Damages shall not apply. If the total amount due to the Authority exceeds any payment due to the System Integrator the difference shall be a debt payable to the Authority.

43.2 If the Contract is terminated at the Authority's convenience or because of a fundamental breach of Contract by the Authority, the Authority shall prepare bill for the value of the work done, the reasonable cost of removal of Equipment, repatriation of the System Integrator's personnel employed solely on the Works, and the System Integrator's costs of protecting and securing the Works and less advance payments received up to the date of the certificate, less other recoveries due in terms of the contract, and less taxes due to be deducted at source as per applicable law and make payment accordingly.

44. Property

44.1 All materials on the Site, Plant, Equipment, Temporary Works and Works are deemed to be the property of the Authority, if the Contract is terminated because of a System Integrator's default.

45. Release from performance

45.1 If the Contract is frustrated by any event entirely outside the control of either the Authority or the System Integrator the Authority shall certify that the Contract has been frustrated. The System Integrator shall make the Site safe and stop work as quickly as possible after receiving this certificate and shall be paid for all work carried out before receiving it and for any work carried out afterwards to which commitment was made

46. Notification of Award

- Prior to the expiration of the period of bid validity, the SPORTS, Lakshadweep Tourism will notify the successful Bidder in writing by registered letter or by fax or by email, to be confirmed in writing by registered letter, that its bid has been accepted.
- The notification of award will constitute the formation of the Contract.
- Upon the successful Bidder's furnishing of Bank Guarantee for contract performance, SPORTS may notify each unsuccessful Bidder and will discharge its EMD.

47. Signing of Contract

- At the same time as SPORTS notifies the successful Bidder that its bid has been accepted, SPORTS will send the Bidders the Proforma for Contract provided in the Tender Document, incorporating all agreements between the parties.
- Within 10 days of receipt of the Contract, the successful Bidder shall sign and date the Contract and return it to the Department.

48. Bank Guarantee for Contract Performance

- Within 10 days of the receipt of notification of award from SPORTS, the successful Bidder shall furnish the performance security in accordance with the Terms & Conditions of Contract, in the Contract Performance Guarantee Bond prescribed at Volume II, Section IV – Proforma.
- Failure of the successful Bidder to comply with the requirement of Clause 6.33 shall constitute sufficient grounds for the annulment of the award and forfeiture of the EMD. In case of exigency, if the Department gets the work done from elsewhere, the difference in the cost of getting the work done will be borne by the successful Bidder.

49. Confidentiality of the Document

- This Tender Document is confidential SPORTS shall ensure that anything contained in this Tender Document shall not be disclosed in any manner, whatsoever.

50. Rejection Criteria

- Besides other conditions and terms highlighted in the tender document, bids may be rejected under following circumstances:

51. General Rejection Criteria

- Bids submitted without or improper EMD.
- Bids which do not confirm unconditional validity of the bid as prescribed in the Tender.
- If the information provided by the Bidder is found to be incorrect / misleading at any stage / time during the Tendering Process.
- Any effort on the part of a Bidder to influence the bid evaluation, bid comparison or contract award decisions.
- Bids received by the Department after the last date prescribed for receipt of bids.
- Bids without signature of person (s) duly authorized on required pages of the bid.
- Bids without power of authorization and any other document consisting of adequate proof of the ability of the signatory to bind the Bidder.

52. Technical Rejection Criteria

- Technical Bid containing commercial details.
- Revelation of Prices in any form or by any reason before opening the Commercial Bid.
- Failure to furnish all information required by the Tender Document or submission of a bid not substantially responsive to the Tender Document in every respect.
- Bidders not quoting for the complete scope of Work as indicated in the Tender documents, addendum (if any) and any subsequent information given to the Bidder.

- Bidders not complying with the Technical and General Terms and conditions as stated in the Tender Documents.
- The Bidder not confirming unconditional acceptance of full responsibility of providing services in accordance with the Scope of work and Service Level Agreements of this tender.
- If the bid does not confirm to the timelines indicated in the bid.

53. Commercial Rejection Criteria

- Incomplete Price Bid
- Price Bids that do not conform to the Tender's price bid format.
- Total price quoted by the Bidder does not include all statutory taxes and levies applicable.
- If there is an arithmetic discrepancy in the commercial bid calculations, the Department shall rectify the same. If the Bidder does not accept the correction of the errors, its bid may be rejected.

54. Concessions permissible under statutes

- Bidder, while quoting against this tender, must take cognizance of all concessions permissible under the statutes including the benefit under Central Sale Tax Act, 1956, failing which it will have to bear extra cost where Bidder does not avail concessional rates of levies like customs duty, excise duty, sales tax, etc., The Department will not take responsibility towards this. However, Department may provide necessary assistance, wherever possible, in this regard.

Section 6 – Commercial Format

Sl. NO.	Description	Qty	Unit	Unit Rate (including taxes	Total (including taxes)
01.00	**Networking & Wi-Fi Solution**				
01.01	Power CAT-6 /u UTP 4 Pair Unshielded Cable -PVC +PE Sheath (Armoured) cable for EPABX, CAMERA, NETWORKING	7,600	Mtrs		
01.02	PVC Conduit with Accessories ISI	1,700	Mtrs		
01.03	HDPE Pipe 40mm (thickness 5mm) with Coplers & Tees	5,000	Mtrs		
01.04	Soft Soil Digging (Bit Send)	5,000	Mtrs		
01.05	6 Core Fiber Optic Cable SM FRP	3,200	Mtrs		
01.06	Layer 3 Switch with accessories	2	Nos		
01.07	SMF Trans receiver for Layer 3 Switch with accessories	22	Nos		
01.08	Layer 2 Switch with accessories	10	Nos		
01.09	SMF Trans receiver for Layer 2 Switch with accessories	20	Nos		
01.10	Wireless Indoor access point with accessories and mounting (solid surface)	40	Nos		
01.11	Wireless Outdoor access point with accessories and mounting (pole/wall)	7	Nos		
01.12	Wired and Wireless cloud managed controller- Class NMS with accessories and corresponding license	1	Lot		
01.13	IO Box with IO Module + Face Plate + Back Box	20	Nos		
01.14	24 Port SC Duplex RM/WM Fibre Panel loaded With LC SM Coupler and blank (EXCLUDING PIGTAIL)	2	Nos		
01.15	LC Pigtail, SM ,9/125,900 MICRON 1.5 mtrs	85	Nos		
01.16	LC-LC SM DUPLEX LSZH PATCH CORD -3M	30	Nos		
01.17	24Port Cat6 Rack mount Patch Panel- Loaded	10	Nos		
01.18	Cable Manager	14	Nos		

01.19	0.5 Mtrs. Cat 6 UTP LHZH Patch Cord	100	Nos		
01.20	1.0 Mtrs.Cat 6 UTP LHZH Patch Cord	20	Nos		
01.21	2.0 Mtrs. Cat 6 UTP LHZH Patch Cord	5	Nos		
01.22	RJ-45 Jack	100	Nos		
01.23	Server Rack Dressing	9	Nos		
2.00	**IP CCTV Surveillance System**				
02.01	32 CH Network Video Recorder 8 SATA	2	Nos		
02.02	5MP Dome Camera with In-Built Mic	15	Nos		
02.03	5MP Bullet Camera with In-Built Mic	25	Nos		
02.04	4TB Hard Disk	8	Nos		
02.05	HDMI Cable 1080p Size: 20 Mtrs.	1	Nos		
02.06	55” Professional 350 - 500 nts Display	1	Nos		
02.07	RJ-45 Connector for CCTV (Both Side)	100	Nos		
02.08	Camera Jn Box Dimensions H x W x D: 104 x 104 x 70 mm	40	Nos		
3.00	**Hospitality TV, DTH**				
03.01	43" Commercial 4K smart Hospitality TV	65	Nos		
03.02	RG6 Coaxial Cable for DTH	5500	Mtr		
03.03	Cable TV services for Rooms	65	Nos		
4.00	**Voice Communication System (EPABX)**				
04.01	3U 150 Pair rack mount frame	3	Nos		
04.02	20 pair outdoor Jn Box	10	Nos		
04.03	10 pair IDF Module	70	Nos		
04.04	Jumber Cable	10	mtr		
04.05	Telephone RJ11, I/o, Face Plate with Back box	145	Nos		
04.06	2 Pair telephone cable	1,675	Mtr		
04.07	10 pair Jelly Cable	2000	Mtr		
04.08	50 pair Jelly Cable	650	Mtr		
04.09	IP EPABX System enabling TDM configuration	1	Nos		
04.10	Hybrid Digital IP Essential Desk phone, Dual stack NOE-SIP	2	Nos		

04.11	Smart Expansion Module color LCD +20Keys	1	Nos		
04.12	Hospitality Caller ID Phone Active memory, Support FSK/DTMF Caller ID System	10	Nos		
04.13	Hospitality Bedroom Phone with 6 One touch key	67	Nos		
04.14	Hospitality Bathroom Phone with Water and Damp Proof	67	Nos		
04.15	1 Port GSM FCT 4G VOLT	1	Nos		
04.16	Telephone Point Termination	142	Nos		
04.17	Earth Bench and Accessories (EARTHING)	1	Nos		
05.00	**Rack**				
05.01	42U Rack Frame/600X800/Steel/NRS1/ CKD/Casters Type 2	1	set		
05.02	15U 600 IP 55/56 Floor Mount Outdoor Rack (Plinth fixing type) With lock	8	set		
06.00	**UPS System**				
06.01	UPS -6 KVA UPS -online UPS system with Rack and accessories	1	No.		
06.02	12V SMF ,12V,42AHx16nos SMF batteries,	1	Set		
06.03	UPS -1 KVA UPS -online ups	8	No.		

Section 7- Contract Data

Items marked "N/A" do not apply in this Contract The following documents are also part of the Contract:	**Clause Reference**
The Authority is :	
Name: SPORTS	[1.1]
Address: Kavaratti	
Name of authorized Representative:	
The name and identification number of the Contract is **Providing Augmentation of IT infrastructure at Bangaram Resort**	
[insert name and number as indicated in the Invitation for Tenders].	[1.1]
The Works consist of providing: 1. WI FI connectivity 2. Indoor and Outdoor Access Points 3. TV Display 4. EPBX and IP Telephone system	
The start date shall be the date of issue of notice to proceed with the work.	[1.1]
The Intended Completion Date for the whole of the work is **6 Weeks from the date of Award**	[15,22]
The following documents also form part of the Contract:	[2.2]
The Site Possession Date is **on the Date of Award**	[18]
The Site is located at **Bangaram and is defined vide drawings**	[1.1]

The Defect Liability Period is **180 days**	[27]
The liquidated damages for the whole of the works is 1% per week of delay of the remaining value of work	[36]
The maximum amount of LD for the whole of the works is 10%	[36]
The date by which "as built" drawings in 2 sets are required is within 30 days of issue of certificate of completion.	[41]
The amount to be withheld for failing to supply "as built" drawings by the date required is Rs. Nil	[41]
The following events shall also be fundamental breach of the contract: 1. The System Integrator has contravened sub clause 7.1 and clause 9 of CC.	[42.2]
The percentage to apply to the value of the work not completed representing the Authority's additional cost for completing the works shall be 30%	[43.1]

Sd/

(Dr.R.Giri Sankar, IAS)
Managing Director, SPORTS

<table>
<tr><th colspan="4">Queries for tender “Augmentation of IT Infrastructure at Bangaram Resort”</th><th>Response</th></tr>
<tr><th>#</th><th>Criteria</th><th colspan="3">Query</th><th></th></tr>
<tr><td rowspan="2">1</td><td rowspan="2">Section 4.3.1 Payment Schedule</td><td colspan="3">Concerned tender is based primarily on supply of equipment’s and its installation. We are proposing the Payment terms for CAPEX as:
<table><tr><td>#</td><td>Deliverables</td><td>Payment</td></tr><tr><td>1</td><td>Material Delivery</td><td>60% of CAPEX</td></tr><tr><td>2</td><td>Installation,deployment of Applications, training & operationalization of components</td><td>30% of CAPEX</td></tr><tr><td>3</td><td>Go- Live/UAT</td><td>10% of CAPEX</td></tr></table></td><td rowspan="2">Kindly refer Addendum.</td></tr>
<tr><td colspan="3"><table><tr><td>#</td><td>Deliverables</td><td>Payment</td></tr><tr><td>1</td><td>Material Delivery</td><td>70% of CAPEX</td></tr><tr><td>2</td><td>Installation, deployment of Applications, training & operationalization of components</td><td>20% of CAPEX</td></tr><tr><td>3</td><td>Go- Live/UAT</td><td>10% of CAPEX</td></tr></table></td></tr>
<tr><td>2</td><td>Section 2.2- No Deviation Certificate</td><td colspan="3">Kindly share the “No Deviation Certificate”</td><td>Kindly refer Addendum.</td></tr>
<tr><td>3</td><td>Section 2.6, EMD amount is mentioned as ₹5,62,500</td><td colspan="3">In Section 2.6, EMD amount is mentioned as ₹5,62,500; however, the text within sub-clause (i) says ₹5,28,000. Please confirm the correct EMD amount – ₹5,28,000 or ₹5,62,500.</td><td>EMD is ₹5,62,500. Kindly refer Addendum.</td></tr>
<tr><td>4</td><td>Tender Fee</td><td colspan="3">Section 2 mentions Tender Fee as ₹1500, while Section 2.3 (Cost of Tender Form) states it as ₹500.
Please confirm the correct tender fee – ₹500 or ₹1500.</td><td>Tender is ₹1,500. Kindly refer Addendum.</td></tr>
<tr><td rowspan="2">5</td><td rowspan="2">Shipping/Transport Support
It is mentioned that all transportation charges to the island are to be borne by the bidder.</td><td colspan="3">Will the Authority provide any logistical support (jetty loading/unloading, boat permits, etc.).</td><td rowspan="2">Kindly refer Addendum.</td></tr>
<tr><td colspan="3">Will the Authority arrange & support inter-island transport and on-island accommodation for the integrator’s technicians.</td></tr>
<tr><td>6</td><td>Training Details- Location and duration for training</td><td colspan="3">Location (onsite/offsite) and duration for training is not defined.</td><td>Onsite (Bangaram/Kavaratti) for 15-20 days</td></tr>
<tr><td>7</td><td>Key Bid Parameters
Pre Bid (Page No. 2)</td><td colspan="3">Is there a pre-bid meeting.</td><td>No. Queries are open till July 1st 2025</td></tr>
<tr><td>8</td><td>Project Duration</td><td colspan="3">Kindly mention the project duration including supply, installation, commissioning and O&M</td><td>0.5 Yrs for Supply, Installation and Commissioning. 5 yrs for O&M. Kindly refer Addendum.</td></tr>
<tr><td>9</td><td>Section 2.11- Eligibility Criteria (Q1)</td><td colspan="3">Inclusion of Partnership Firms Under Eligibility (Q1): The current clause restricts eligibility to private limited companies. We kindly request the inclusion of registered partnership firms a they are valid legal entities recognized under Indian law. This change would broaden participation and allow capable and compliant firms like ours to contribute meaningfully to ...</td><td>Tender condition prevails</td></tr>
<tr><td>10</td><td>Section 2.11- Eligibility Criteria (Q3)</td><td colspan="3">Revision of Experience Requirement (Q3): The condition specifying execution of a similar crore project in the last 3 years may restrict otherwise qualified vendors. We request that this clause he revised to allow either
•Similar project experience in the last 5 years, or
•General past experience in similar nature of work, irrespective of the timeframe</td><td>Revised Experience Requirement is as follows:

Experience of having successfully implemented works of value not less than INR 3 crs. during the last five years (2020-2025) covering a minimum of 200 cameras/50 outdoor Wi-Fi access points.</td></tr>
<tr><td>11</td><td>Section 2.11- Eligibility Criteria</td><td colspan="3">Clarification on Project Category General IT Infrastructure vs. Camera Deployment While the scope includes surveillance systems, the RFP clearly outlines a larger focus on IT infrastructure, including networking Wi-Fi. EPABX, UPS, and display systems. Framing the qualification around the supply of 200+ cameras may misrepresent the essence of the project. We therefore suggest modifying the category to reflect the overall IT infrastructure domain rather than narrowing it solely to surveillance volume</td><td>Revised Experience Requirement is as follows:

Experience of having successfully implemented works of value not less than INR 3 crs. during the last five years (2020-2025) covering a minimum of 200 cameras/50 outdoor Wi-Fi access points.</td></tr>
</table>

Addendum for the tender "Augmentation of IT Infrastructure at Bangaram Resort"

#	Existing	Revised
1.	Key Bid Parameters Page No. 2, Point No. 10 Last date for receiving pre-bid queries	Date 01 Jul 2025
2.	Key Bid Parameters Page No. 3, Point No. 12, 13 Date of Pre-Bid Meeting	Deleted
3.	Section 2.3 Tender Fee/ Cost of Tender Form Page No. 13, Point No. i Tender Fee/ Cost of Tender Form is Rs.500 /- (Rupees Five Hundred) only including all taxes.	Tender Fee/ Cost of Tender Form is Rs.1500 /- (Rupees One thousand five hundred) only including all taxes.
4.	Section 2.6 Bid Security/ Earnest Money Deposit (EMD) Page No. 14, Point No. i All bids must be accompanied by an earnest money of Rs.5,62,500.00 (Rupees Five Lakh Twenty Eight Thousand) only in the form of Demand Draft from a scheduled bank in India and shall be valid for at least six months, in favour of 'Managing Director, SPORTS' payable at Canara Bank, Kavaratti. No interest shall be paid on the earnest money under any circumstances.	All bids must be accompanied by an earnest money of Rs.5,62,500.00 (Rupees Five Lakh sixty two thousand five hundred) only in the form of Demand Draft from a scheduled bank in India and shall be valid for at least six months, in favour of 'Managing Director, SPORTS' payable at Canara Bank, Kavaratti. No interest shall be paid on the earnest money under any circumstances.
5.	Section 2.11 Eligibility Criteria (Q4) Page No. 16 Technical Capability for Project work Experience of having successfully implemented similar works of value not less than INR 3 crs. during the last three years ending last day of month previous to the one in which bids are invited covering a minimum of 200 cameras.	Technical Capability for Project work Experience of having successfully implemented works of value not less than INR 3 crs. during the last five years (2020-2025) covering a minimum of 200 cameras/50 outdoor Wi-Fi access points.
6.	Section 2.11 Eligibility Criteria (Q6, Q8) Page No. 16-17 Self-Declaration by Director/Company Secretary/Board resolution as per format in Annexure enclosed.	Self-Declaration by Director/Company Secretary/Board Resolution/Authorized person as per format in Annexure enclosed. Annexure added at the end of the document as "Annexure I-Declaration".

7.	Section 2.11 Eligibility Criteria (Q7) Page No. 17 A Self Declaration by Director/Company/Secretary/Board resolution.	A Self Declaration by Director/Company/Secretary/Board Resolution/Authorized person Annexure added at the end of the document as “Annexure II-Affidavit”.
8.	Section 2.11 Eligibility Criteria (Q9) Page No. 18 Original copy should be signed and notarized on a legal bond paper.	Original copy should be signed and notarized on a legal bond paper. Annexure added at the end of the document as “Annexure III-Power of Attorney”.
9.	2.18	Delivery of Materials • The materials are required to be supplied at the Office of the The Assistant General Manager SPORTS, Lakshadweep Tourism, UT of Lakshadwee Administration office, Indira Gandhi road, Willingdon Island Kochi - 682003 • Transportation of all materials from Kochi to Bangaram shall be done by SELECTED BIDDER with support of SPORTS. This period is exempted for the selected bidder. The bidder's installation time shall begin on the day of receipt of all materials at Concerned Island (Bangaram). SPORTS shall intimate the selected bidder once the materials are received at Lakshadweep. • All the costs involved towards the transportation the materials from Kochi to concerned islands shall be borne by the SELECTED BIDDER on actuals.

<table>
<tr>
<td>10.</td>
<td>Section 4.3.1 Payment Schedule
<table>
<tr><th>#</th><th>Deliverables</th><th>Payment</th></tr>
<tr><td>1</td><td>Material Delivery</td><td>40% of CAPEX</td></tr>
<tr><td>2</td><td>Installation, deployment of Applications, training & operationalization of components</td><td>40% of CAPEX</td></tr>
<tr><td>3</td><td>Go- Live/UAT</td><td>20% of CAPEX</td></tr>
<tr><td></td><td>Operation & Maintenance</td><td>OPEX will be paid in twenty (20) equal quarterly instalments spread across 5 years Post Go-Live</td></tr>
</table></td>
<td>Updated Payment Schedule
<table>
<tr><th>#</th><th>Deliverables</th><th>Payment</th></tr>
<tr><td>1</td><td>Material Delivery</td><td>50% of CAPEX</td></tr>
<tr><td>2</td><td>Installation, deployment of Applications, training & operationalization of components</td><td>30% of CAPEX</td></tr>
<tr><td>3</td><td>Go- Live/UAT</td><td>20% of CAPEX</td></tr>
<tr><td></td><td>Operation & Maintenance</td><td>OPEX will be paid in twenty (20) equal quarterly instalments spread across 5 years Post Go-Live</td></tr>
</table></td>
</tr>
<tr>
<td>11.</td>
<td>4.3 Payments</td>
<td>iv. The total payment shall be paid separately for CAPEX and OPEX. For payment release purpose, CAPEX value will not be considered more than 80% of total bid value at any stage, balance will be considered as OPEX. CAPEX payment shall be released based on the mentioned milestone in the below sections.
OPEX payment will be released in twenty (20) equal quarterly instalments spread across 5 years Post Go-Live. Other recurring/non-recurring expenses like Electricity/Water connections & consumption bills, fees for PUC/ROW etc. to be paid to Government Departments for Project Execution will be released on actual by SPORTS (These expenses need not to be mentioned in Price Bid).
V. The project timeline encompasses two distinct phases: a 0.5-year period allocated for the supply, installation, and commissioning of equipment, followed by a 5-year phase dedicated to operation and maintenance (O&M) activities.</td>
</tr>
</table>

ANNEXURE I- DECLARATION

Date: XXXX

We **M/s ……..** have carefully gone through the EOI document regarding Pre-qualification for **"Augmentation of IT Infrastructure at Bangaram Resort" dated XXX.**

I/We hereby irrevocably declare that:

1. All the information related to our Company/Firm, manpower, customer base, projects, financial details, list of products offered etc. provided in our offer is true and without any alteration / modifications.
2. Bidder declare that my Company/Firm has not been insolvent, in receivership, bankrupt or being wound up, not have its affairs administered by a court or a judicial officer, not have its business activities suspended and must not be the subject of legal proceedings for any of the foregoing reasons.
3. Bidder declare that my Company/Firm, and their directors and officers not have, been convicted of any criminal offence related to their professional conduct or the making of false statements or misrepresentations as to their qualifications to enter into a procurement contract within a period of three years preceding the commencement of the procurement process, or not have been otherwise disqualified pursuant to debarment proceedings.
4. Bidder declare that my Company/Firm does not have a conflict of interest in the procurement in question as specified in the Tender document.
5. Bidder declare that we have not submit any fraudulent information/ mis representation of facts/concealment of data/information with regard to the bid requirement.
6. Bidder declare that my Company/Firm is not under legal action for corrupt or fraudulent practices (blacklisted) by any Ministry / Department of GoI / State / U T Government/Government organizations.
7. Bidder declare that we will Comply with the code of integrity of authority.

I …….[Name and Designation] further certify that I am an authorized signatory of my Company/Firm and am, therefore, competent to make this declaration.

Yours faithfully,

(Signature of *Authorized Signatory*)

Name:
Designation:

ANNEXURE II-AFFIDAVIT

I ….. [Name, Designation] appointed as the attorney/authorized signatory of the Partner (including its constituents), …..[Company/Firms full name] for the purpose of the tender documents for the work of "**Augmentation of IT Infrastructure at Bangaram Resort"** as per the tender reference no. **F.No.109/18/2025-SPORTS Dt. 11/06/2025** of **SPORTS**, do hereby solemnly affirm and state that:

1. I/we the Partner (s), am/are signing this document after carefully reading the contents.

2. I/we the Partner (s) also accept all the conditions of the tender and have signed all the pages in confirmation thereof.

3. I/we hereby declare that I/we have downloaded the tender documents from LTDC website www.tendersutl.gov.in. I/we have verified the content of the document from the website and there is no addition, no deletion or no alternation to be content of the document. In case of any discrepancy noticed at any stage i.e. evaluation of tender, execution of work or final payment of the contract, the master copy available with the authority shall be final and binding upon me/us.

4. I/we declare and certify that I/we have not made any misleading or false representation in the forms, statements and attachments in proof of the qualification requirements.

5. I/we also understand that my/our offer will be evaluated based on the documents/credentials submitted along with the offer and same shall be binding upon me/us.

6. I/we declare that the information and documents submitted along with the tender by me/us are correct and I/we are fully responsible for the correctness of the information and documents, submitted by us.

7. I/we undersigned that if the certificates regarding eligibility criteria submitted by us are found to be forged/false or incorrect at any time during process for evaluation of tender, it shall lead to forfeiture of the EMD besides banning of business for five years. Further, I/we (insert name of the Partner) ** and all my/our constituents understand that my/our constituents understand that my/our offer shall be summarily rejected.

8. I/we also understand that if the certificates submitted by us are found to be false/forged or incorrect at any time after the award of the contract, it will lead to termination of the contract, along with forfeiture of EMD/SD and Performance guarantee besides any other action provided in the contract including banning of business for five years on entire RailTel.

DEPONENT SEAL AND SIGNATURE OF THE PARTNER

VERIFICATION

I/We above named tender do hereby solemnly affirm and verify that the contents of my/our above affidavit are true and correct. Nothing has been concealed and no part of it is false.

DEPONENT

Name:

Designation:

SEAL & SIGNATURE OF THE PARTNER

Name:

Designation:

Place:

Dated:

ANNEXURE III- POWER OF ATTORNEY

Know all men by these presents

We ….[Company/Firm's full name and Address] do hereby irrevocably constitute nominate appoint and authorize …..[Full name and Address], who is presently employed with us and holding the position of ….[Designation], as our true and lawful attorney (hereinafter referred to as the "Attorney") to do in our name and on our behalf, all such acts, deeds and things as are necessary or required in connection with or incidental to submission of our application for qualification and submission of our bid for the Project proposed by the **SPORTS** (the "Authority") including but not limited to signing and submission of all applications, bids and other documents and writings, participate in pre- applications and other conferences and providing information/ responses to the Authority, representing us in all matters before the Authority, signing and execution of all contracts including the Agreement and undertakings consequent to acceptance of our bid, and generally dealing with the Authority in all matters in connection with or relating to or arising out of our bid for the said Project and/ or upon award thereof to us and/or till the entering into of the Agreement with the Authority. AND we hereby agree to ratify and confirm and do hereby ratify and confirm all acts, deeds and things done or caused to be done by our said Attorney pursuant to and in exercise of the powers conferred by this Power of Attorney and that all acts, deeds and things done by our said Attorney in exercise of the powers hereby conferred shall and shall always be deemed to have been done by us.

IN WITNESS WHEREOF WE, …. [Company/ Firm Name], THE ABOVE NAMED PRINCIPAL HAVE EXECUTED THIS POWER OF ATTORNEY ON THIS DAY OF …..[Date].

For ……...

(Signature)

Name:
Designation:
Address:

Witnesses:

1. (Name)

2. (Name)

Deponent
Signature Name:
Designation:
Address of the Attorney: