



**Jammu and Kashmir e-Governance Agency
(JaKeGA),
Information Technology Department
Government of Jammu and Kashmir**

***TENDER FOR SUPPLY, INSTALLATION
AND COMMISSIONING OF IT INFRASTRUCTURE FOR
DIGITAL VILLAGE CENTRE***

**Tender Document
Notification No.: 04-JaKeGA of 2019
Dated: 20.11.2019**

Definitions:

AMC: Annual Maintenance Contract

BG: Bank Guarantee

CDR: Call Deposit Receipt

DD: Demand Draft

EMD: Earnest Money Deposit

FDR: Fixed Deposit Receipt

Go Live: Is the date of Commissioning of the project

ITD: Information Technology Department

JaKeGA: Jammu and Kashmir e-Governance Agency

OEM: Original Equipment Manufacturer

PBG: Performance Bank Guarantee

SLA: Service Level Agreement

TAC: Technical Assistance Center

Wi-Fi: Wireless Fidelity

TRAI: Telecom Regulatory Authority of India

BDO: Block Development Officer

VLW: Village Level Worker

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1. Disclaimer:

All information contained in this RFP document provided/ clarified is in the good interest and faith. This is not an agreement and this is not an offer or invitation to enter into an agreement of any kind with any party. Though adequate care has been taken in the presentation of this RFP document, the interested firms shall satisfy it-self that the document is complete in all respects. The information published in this document is not intended to be exhaustive. Interested respondents are required to make their own enquiries and assumptions wherever required. Intimation of discrepancy, if any, should be given to the specified office immediately. If no intimation is received by this office by the date mentioned in the document, it shall be deemed that the RFP document is complete in all respects and firms submitting their bids are satisfied that the RFP document is complete in all respects. Jammu & Kashmir e-Governance Agency (JaKeGA) for Promotion of Information Technology (A society under Department of Information Technology, Government of Jammu & Kashmir) reserves the right to reject any or all of the applications submitted in response to this RFP document at any stage without assigning any reasons whatsoever. JaKeGA for Promotion of Information Technology also reserves right to withhold or withdraw the process at any stage with intimation to all who have submitted their applications in response to this RFP. JaKeGA for Promotion of Information Technology reserves the right to change/ modify/ amend any or all of the provisions of this RFP document without assigning any reason. Any such change would be communicated to the applicants by posting it on the website of JaKeGA (www.jakega.jk.gov.in) for Promotion of Information Technology. Neither JaKeGA for Promotion of Information Technology nor their employees and associates will have any liability to any prospective Respondent interested to apply or any other person under the law of contract to the principles or resolution or unjust enrichment or otherwise for any loss, expense or damage which may raise from or be incurred or suffered in connection with anything contained in this RFP document, any matter deemed to form part of this RFP document, the award of the Assignment, the information and any other information supplied by or on behalf of JaKeGA for Promotion of Information Technology or their employees and Prime applicant (PA)/ Consortiums or otherwise arising in any way from the selection process for the Assignment. Information provided in this document or imparted to any respondent as part of RFP process is confidential to JaKeGA for Promotion of Information Technology and shall not be used by the respondent for any other purpose, distributed to, or shared with any other person or organization.

1. Introduction:

The Jammu and Kashmir e-Governance Agency is an implementation agency for execution of Information Technology Projects in the state of Jammu and Kashmir. The agency works under the administrative control of Information Technology Department. The primary objective of the Jammu and Kashmir e-Governance Agency (JaKeGA) is to design, deliver and administer e-Governance projects in the State of Jammu and Kashmir. JaKeGA works in promoting and disseminating Information Technology culture in the State so that common man could avail the benefits of Information technology and e- Governance. The Agency also facilitate establishment of e-service centre's throughout the State through suitable public-private partnerships to ensure that public gets the desired information and e-Services literally at their doorsteps. JaKeGA has so far delivered various mission mode and other projects.

JaKeGA, IT Department intends to establish a Digital Village Centre in Gram Panchayats as per Annexure 'VIII' in J&K .

2. Notice Inviting Bid:

S. No	Subject	Description
1	Bid Inviting Authority	Chief Executive Officer, Jammu and Kashmir e-Governance Agency
2	Requirement	Selection of System Integrator for Supply, Installation and Commissioning of IT Infrastructure for Digital Village Centres
3	Mode of Bid	Through e-tendering mode using two Bid System – Technical and Financial
4	Bid Evaluation Criteria (Selection Method)	Least Cost Based Selection (LCBS) (L1)
5	Websites for downloading RFP, Corrigendum's, Addendums etc.	www.jktenders.gov.in www.jakega.jk.gov.in
6	Bid Document/Tender Fee	Rs.5000/- (Rupees Five thousand only) in form of DD/Bankers Cheque in favor of CEO, JaKeGA payable at Jammu, J&K. The Tender fee DD can be scanned and uploaded on e-tendering portal before 19.12.2019 upto 04:00 PM in the office of CEO, JaKeGA Civil Secretariat Jammu, J&K. NSIC and MSME registered bidders are exempted from EMD as per applicable rules, However, certificate must be submitted on above mentioned date.

7	Bid Security and Mode of Payment	Bid security- Earnest Money Deposit in the form of a CDR/FDR/Cheque from a scheduled or Nationalized Indian Bank in favor of 'CEO JaKeGA, valid for (01) One Year payable at Jammu, J&K, for the sum of Rupees Five Lakh shall be required to be submitted by each bidder ("bid Security"). EMD fees shall be submitted alongwith the Bid documents by the bidders. Bids not accompanied with the Earnest Money Deposit shall be liable to be rejected by JaKeGA. The EMD can be scanned and uploaded on e-tendering portal. Meanwhile actual EMD must be send either by hand or through registered courier and must reach this office by or before 05:00 PM of 19.12.2019
8	Start/ End Date for the submission of Bids	Start Date: 10:00 AM of 28-11-2019 End Date: 04:00 PM of 19-12-2019
9	Pre Bid Meeting Date and Time and Place	02:30 PM of 26 th Nov 2019, in the office of CEO, JaKeGA, Civil Secretariat, Jammu.
10	Submission of Online Banker's Cheque/ Demand Draft for Tender Fee, Bid Security, and Processing Fee*	The Bidder shall submit the scanned copies of EMD/tender Fee receipt along with the Technical Bid. However, the bidder has to submit original documents of EMD/Tender fee by or before 05:00 PM of 19 th Dec 2019 in the office of CEO, JaKeGA Civil Secretariat Jammu, J&K. NSIC and MSME registered bidders are exempted from EMD/Tender fee as per applicable rules. However certificate must be submitted on above mentioned date.
10	Date/ Time/ Place of Technical Bid Opening	20/12/2019 at 11:00 AM in the office of CEO, JaKeGA Civil Secretariat, Jammu
11	Date/ Time/ Place of Financial Bid Opening	Will be notified later to the Technically qualified bidders
12	Date and Time to seek Query/Clarification on the RFP	via email on ceojakega@nic.in by or before 2 PM, 25 th Nov 2019
13	Bid Validity	365 days from the bid submission deadline
14	Communications regarding this RFP	All communications regarding this RFP/Tender shall be done via www.jakega.gov.in and www.jktenders.gov.in

3. Scope of Work:

In order to create IT Infrastructure **JaKeGA, IT Department of J&K Government** plans to set up Digital Village Centre Infrastructure in all Gram Panchayats as per Annexures of this tender.

The following summarizes the scope of work.

- A. To Implement Digital Village Centre in 4290 Gram Panchayats in Jammu and Kashmir starting with 44 Gram Panchayats.
- B. To supply, install and commission all the components mentioned as per the technical and financial bid and to carry out the work.
- C. Detailed Specification of Components needed as per Annexure IV and all other allied detailed on Annexure I to Annexure VII.
- D. Successful bidder will be responsible to rollout the Digital Village Centre Infrastructure.
- E. Successful Bidder to provide detailed connectivity diagram (Physical and Logical) including: Raceway/pathway diagram, heat maps, Cable and Fiber patching details, Naming and labeling details, Cable scanning and test results.
- F. Successful Bidder will carry penta-scanning of each and every node of the Network

4. General Terms and Conditions

- a. The bids under Two-Bid System will consist of two parts as per following details:-
 - i) Technical bid consisting of all technical details along with terms and conditions and EMD (Earnest Money Deposit) and Tender Cost, in the form of two separate Demand Drafts issued from any Nationalized / Scheduled commercial bank in favour of CEO, Jammu and Kashmir e-Governance Agency, IT Department, Government, J&K, and payable at "Jammu, India ii) Price bid indicating price for the items / services mentioned in Financial Bid as per the BOQ mentioned herein. In stage-one, only the Technical Bids shall be opened and evaluated. In stage-two, the Price bids of only the technically qualified and acceptable offers will be opened, for further evaluation.
- b. The documents referred in Checklist and its Annexures thereof of this Tender form the Technical Bid Evaluation criteria. All documents pertaining to the same as mentioned therein may be signed and stamped by the bidder and uploaded as Technical Bid on e-Tendering portal.
- c. The successful bidder will have to deposit 10% of the total value of supply as Security Money in the form of Performance Bank Guarantee or FDR in favour of the CEO, JaKeGA, J&K; which will be refunded after completion of the warranty and support period or will be adjusted/forfeited in case of violation of terms and conditions laid down in this tender.
- d. Conditional offer will not be accepted.
- e. It will be the sole responsibility of the bidder(s) that its bid should be uploaded on time on e-tendering portal.
- f. Necessary corrigendum(s), if required, will be issued at any stage. Any corrigendum will be published on our website www.jakega.jk.gov.in and www.jkteders.gov.in. Bidder(s) must be in touch with our websites for corrigendum(s). It will be sole responsibility of the bidder(s) that they will go

- through the corrigendum(s) published, if any, on our website www.jakega.jk.gov.in, www.jktenders.gov.in and submit its tender accordingly
- g. Bidder has to quote all the passive components like Optical Fibre, Cat 6A or similar cable, LIU's, Fiber Patch Cords, Patch Panels, RJ-45 connectors of the same make as per this RFP Specifications.
 - h. Successful Bidder to provide Heat maps as a part of Wi-Fi Survey before start of actual work.
 - i. No part shipment/transshipment/third party shipment shall be acceptable.
 - j. Bidders are requested to mandatorily do a survey and understand the setup for Smooth Integration work. Survey can be done any day between 21-11-2019 2019 till 17-12-2019 by coordinating with JaKeGA. Hence if any extra material will be needed because of this laxity then its expenses will be borne by the bidder.
 - k. All pre bid queries regarding the tender must be submitted to email: ceojakega@nic.in by or before 4:00 PM 25-Nov-2019.
 - l. Minimum warranty period for each equipment / instrument should be for a period of 05 years from the date of delivery.
 - m. In case any manufacturing defect arises in the equipment, it should be replaced within four working days.
 - n. In the event of goods not being in accordance with the specification or the conditions of the contract or failure by the bidder to perform services as outlined in the Tender/Bid document, **JAKEGA** reserves the right to cancel the contract at any stage
 - o. Validity of the quoted offer should cover the period of the completion of project. Offers without such validity need not to bid.
 - p. All information in the Tender/Bid should be in English language and each page of the Tender/Bid document should be signed & stamped by the Bidder as a token of acceptance to terms and conditions.
 - q. Bidders should quote for all accessories, which are either part of an item or are necessary for proper functioning of that item. Thus, for accessories of individual items JaKeGA shall not pay anything separately and if the functioning of any item is not proper or does not function at all, JaKeGA shall have the full right to deduct complete payment of that item(s).
 - r. The successful Bidder shall have to sign an agreement with JaKeGA to comply with all rules, regulations, Laws and Byelaws enforced by the Govt. of Jammu and Kashmir and JaKeGA.
 - s. It shall be the responsibility of the successful bidder to make an inventory of all the supplied materials upon its arrival at the customer's location and inform of missing components, if any
 - t. All Passive Cabling work whether it is Fiber, UTP, Patch Panels, Racks Patch Cords etc should be done neatly and with proper tagging. Entire cabling should be structured and aesthetically implemented.
 - u. Successful Bidder must have a local office presence in J&K or arrange the same within a period of two months of issuance of work order.
 - v. All Hardware and software to have five (05) years of Warranty and support from OEM and five (05) years on onsite support from successful bidder from the date of supply, installation and commissioning.
 - w. Bidder must not have been blacklisted by any State/Central Government

- Department. An undertaking in this effect may be submitted.
- x. Participating in this tender would mean that Bidder is accepting all terms and conditions of this tender document. Bidders are requested to mandatorily do survey and understand the existing Network of Civil Secretariat Jammu for Smooth Integration with proposed network.
 - y. All legal disputes, arising if any, would be settled under jurisdiction of High Courts in Jammu and Kashmir. Arbitration shall be only in the state of J&K.

5. Special Terms and Conditions

a) TERMINATION BY DEFAULT

- JaKeGA may, without prejudice to any other remedy for breach of contract, by written 30 days' notice of default sent to the Successful Agency, terminate the Contract in whole or part. If the Successful Agency fails to deliver any or all of the systems within the period(s) specified in the Contract, or within any extension thereof granted by the Purchaser pursuant to conditions of contract clause or if the Successful Agency fails to perform any other obligation(s) under the Contract. In the event that JaKeGA terminates the Contract in whole or in part, pursuant to the conditions of contract clause, it may procure, upon such terms and in such manner, as it deems appropriate, systems or services similar to those undelivered, and the Successful Agency shall be liable to pay JaKeGA for any excess costs for such similar systems or services. However, the Successful Agency shall continue the performance of the Contract to the extent not terminated.
- b) All the items are to be quoted in Indian Rupees.
 - c) All prices quoted shall be inclusive of all taxes, freight and octroi etc. and shall be for all locations as per Annexure VIII and centralized components for State Data Centre, Jammu.
 - d) The bidder must clearly mention the make, model & enclose relevant datasheet/brochures along with requisite certificates of the products as per technical specifications as mentioned in technical specification Annexures.
 - e) Payment Terms will be as follows subject to the successful audit report as decided by JaKeGA:
 - i. 65% of payment shall be made at the time of delivery and Bill of Material (BOM) technical Verification by JaKeGA, IT Department.
 - ii. 15 % of Payment shall be made on Successful Installation and Commissioning and completion of the project.
 - iii. Remaining payment shall be made quarterly in 20 equal installments after Go-Live and subject to the satisfactory functioning of the IT Setup and network as per scope of the project.
 - f) JaKeGA may decrease or increase any active or passive component or both and make a commensurate adjustments in the corresponding service components while issuing work order or at a later stage. JaKeGA shall decide to add or drop any item at any stage of the tender process or on award of Purchase order to successful bidder. Bidders are advised to quote competitively on each and every line item of the financial bid.
 - g) Additional similar equipment or components may be required at a later date, contingent on additional funding being made available. JaKeGA shall decide to add

or drop any item at any stage of the tender process or on award of Purchase order to successful bidder.

- h) Delivery Schedule: The Material delivery has to be done in Six weeks from the release of work Order and complete installation has to be done within Eight weeks from the date of release of work Order
- i) Warranty/Guarantee: The equipment's supplied and installed shall be guaranteed by the successful bidder for a minimum period of Five (05) years with regards to quality of material, workmanship, performance, efficiency, installation, etc. Defects developed in the system within guarantee period, shall be rectified by the successful bidder at his own expense promptly within twenty four hours. All supplied material must be accompanied with back to back warranty from OEM.
- j) The Passive quantity mentioned in the Tender/Bid is only indicative one. JAKEGA reserves the right to increase/ decrease/ remove any/all quantities while placing the order. All passive components will be paid on actual basis.
- k) Any work not covered under this contract which may be essentially required for the completion of job (to the satisfaction of JAKEGA) shall be carried out by the Successful Bidder as extra item with prior approval of JAKEGA for which payment shall be made separately at the reasonable rates decided by JAKEGA.
- l) All material at the sites shall be handed over to Panchayat Secretary/VLW or Block Development Officer (BDO) who will give provisional receiving. The list of Panchayat Secretary/BDO of the concerned Gram Panchayat will be shared while commencing the project. Thereafter the material shall be technically verified before installation of material by the team of JaKeGA, IT Deptt.
- m) The Bidder will coordinate for any issues related to sites with the concerned Panchayat Secretary/VLW.
- n) For the period of 05 years beyond Go-Live of the project, Bidder shall be responsible for smooth running of the system.
- o) Necessary corrigendum(s), if required, will be issued at any stage. Any corrigendum will be published on our website www.jakega.jk.gov.in, www.jkit.nic.in. Bidder(s) must be in touch with our websites for corrigendum(s). It will be sole responsibility of the bidder(s) that they will go through the corrigendum(s) published, if any, on our website www.jakega.jk.gov.in and www.jkit.nic.in and submit its tender accordingly.
- p) The entire rollout is essential for the said project and successful bidder has to ensure necessary coordination with all stakeholders at District, Block and Panchayat level with its own resources, transportation etc.
- q) The Successful bidder has to demonstrate the working of solution and provide necessary training of a minimum of two days on the working of setup at each Panchayat to designated Officer/officials as per the information/directions of District Administration/JaKeGA, ITD Department.
- r) Bidder has to ensure the termination of Internet Link from Service Provider on its Routers with provisioning of internet connectivity through its setup although Internet Connectivity Lease Line is taken separately taken up with Service Provider by JaKeGA, ITD.
- s) Digging work required to be carried out for laying out the fiber is the responsibility of the bidder.
- t) Bidder shall be responsible to provide all the electrical equipment's (like wires,pipes,MCBs,switches etc) that would be required to complete the project without any extra cost.

u) **FORCE MAJEURE:**

Force Majeure shall mean any event or circumstances or combination of events or circumstances that materially and adversely affects, prevents or delays any party in performance of its obligation in accordance with the terms of the Agreement, but only if and to the extent that such events and circumstances affected party's reasonable control, directly or indirectly and effects of which could have prevented Good Industry Practice or, in the case of the construction activities through reasonable skill and care through the expenditure of reasonable sums of money.

Any events or circumstances meeting the description of the Force Majeure which have same effect upon the performance of any contractor shall constitute Force Majeure with respect to the Vendor.

The Parties shall ensure compliance of the terms of the Agreement unless affected by the Force Majeure Events.

If a Force Majeure situation arises, the supplier/ selected bidder shall promptly notify the JaKeGA in writing of such conditions and cause thereof within 15 days of occurrence of such event. Unless otherwise directed by JaKeGA, the supplier/ selected bidder shall continue to perform its obligations under the contract as far as reasonably practical.

If the performance in whole or part or any obligation under the contract is prevented or delayed by any reason of Force Majeure for a period exceeding 60 days, either party at its option may terminate the contract without any financial repercussion on either side.

6. Checklist

To ensure that your offer submitted to JAKEGA is complete in all respects, please go through the following checklist & tick mark for the enclosures attached with your offer:

#	DESCRIPTION	Documents Required	(Yes/No)	(Page No)
1.	General Information about Bidder as per Annexure I and the documents thereof.	Annexure I and the documents thereof.		
2.	Earnest Money Deposit	Demand Draft / FDR of INR 5 Lakh (Rs 500000).		
3.	Tender Fee:	Draft/FDR of Rs5000 in favor of CEO JaKeGA, Civil Sectt. Jammu.		
4.	Letter of proposal – Form 1	Letter of proposal; as per template provided (Form 1)		
5.	Form 2	Technical Compliance as per detailed specifications of this Tender. Affidavit duly attested by Oath Commissioner		
6.	Compliance and details on Annexure I – General Information about Bidder	Documentary Proof as per Annexure I		
7.	Compliance and details on Annexure II- Bidder and OEM Compliance	Documentary Proof as per Annexure II		
8.	Compliance and details on Annexure III	Documentary Proof of SLA as per Annexure III		
9.	Local Office in Jammu Province	A Self Certified letter by an authorized signatory. In case the bidder doesn't have an office, it has to setup its office for which declaration should be submitted.		
10.	Blacklisting	A self-certified letter by Authorized Signatory of Company/firm. In case of Consortium, all partners must submit a separate self-certified letter by Authorized signatory.		
11.	Broachers/Catalogs	Product catalogue sheets or equipment brochures clearly mentioning the model.		
12.	Technical Bid in Separate Envelope - Annexure I to Annexure VII Compliance	Signed copy of the entire Tender and Annexure I to Annexure VII Compliance		
13.	Financial Bid in a Separate Sealed Envelope - Annexure VII	Annexure VII to be placed in financial bid of tender		

FORM 1: Proposal Letter

(Affidavit duly attested by Oath Commissioner)

**To
The Chief Executive Officer
Jammu and Kashmir e-Governance Agency
Civil Jammu
Srinagar 180001.**

Sir,

Having examined the Bid Documents, the receipt of which is hereby duly acknowledged, we the undersigned, offer to execute the Wi-Fi Networking works in conformity with the said Bid documents and schedule of prices attached herewith as made part of this Bid.

We undertake, if our Bid is accepted, to complete the works within the specified period as per the Bid document.

We also undertake that we accept all the terms and conditions of this Tender.

Until a formal contract is prepared and executed, this Bid, together with your written acceptance thereof and your notification of award, shall constitute a binding contract between us.

We undertake that in competing for and if the award is made, in executing the above work, we will strictly observe the laws against fraud and corruption in force in India namely "Prevention of Corruption Act 1988".

We acknowledge that we will complete the said project in all respects and also provide best of the best of the support. We also undertake to put required manpower for smooth functioning of the setup for 05 years post Go-Live.

Further we certify that our organization is not blacklisted by any Govt. Department.

Dated_____

Authorized Signatory Signature of Bidder with Company Stamp

FORM 2: Technical Compliance as per detailed specifications of this Tender

(Affidavit duly attested by Oath Commissioner)

To
The Chief Executive Officer
Jammu and Kashmir e-Governance Agency
Civil Secretariat Jammu, 180001.

Sir,

Having examined the Bid Documents of tender vide Notification No: 04 -JaKeGA of 2019 dated 20-11-2019, the receipt of which is hereby duly acknowledged, we the undersigned, offer to execute the System Integration and other works as per the Scope, Bill of Quantity, specifications mentioned in this tender.

We undertake that the Bill of material supplied as mentioned in Annexure V are fully compliant with the detailed specifications of the corresponding items from Annexure III to IV of this tender. Any non compliance on technical specifications of all the hardware and software mentioned in this tender or any non other non compliance of scope of work and terms and conditions of this tender will lead to cancellation of work order, blacklisting of our company, forfeiting of EMD, forfeiting of Performance Bank Guarantee submitted and a penalty of Rupees 03 (Three) Crores in INR.

All legal disputes, arising if any, would be settled under jurisdiction of High Courts in Jammu and Kashmir. Arbitration shall be only in the state of J&K.

Dated _____

Authorized Signatory Signature of Bidder with Company Stamp

Annexure – I

General Information about the bidder

1.	Name Of The Bidder	
2	Postal Address	
3	Telephone/Fax no	
4	E-mail address & URL	
5	Type of Company Attach Proof of Company Registration. The bidder must be registered in India under The Companies Act, 1956 or The Companies Act 2013 for atleast last three years.	
6	Name and designation of the representative of the Bidder to whom all references shall be made to expedite technical co-ordination.	
7	Amount and reference of the EMD	
8	Financial capacity of the company/ firm. (Attach copies of I.T. Returns and Balance Sheets for last 2 Year)	
9	Name and address of the Indian/Foreign collaborator(s) if any.	
11	PAN/TAN Number (A copy should be enclosed)	

ANNEXURE – II: Bidder and OEM Compliance

S. No	DESCRIPTION	Documents Required	(Yes/No)	(Page No)
I.	The bidder should be a registered Company/Organization/MSME with Government with Valid GST No and PAN No. The bidder should be registered under The Companies Act, 1956 or The Companies Act 2013 for atleast last three years.	GST Registration Certificate and PAN Card		
II.	The Bidder should submit the Manufacturers Authorization Form (MAF) from the respective major OEMs.	Manufacturers Authorization Form (MAF) of One Page from each OEM.		
III.	The Bidder must be a profit making Company/Organization from 3 years/12 Quarters i.e (2016-17, 2017-18, 2018-19) duly certified by registered CA.	Documentary Proof of not more than Three pages		
IV.	Passive components should be from same OEM.	Documentary Proof of not more than one page		
V.	OEM should have presence in India at least from last 03 years and making no losses in business in last 03 years (Only for the products that require Manufacturers Authorization)	Documentary Proof of not more than one page		
VI.	Required hardware, Software and Licenses to manage proposed Infrastructure should be given from day 1.	Documentary Proof of not more than one page		
VII.	The Bidder- System Integrator should have average turnover of Rs Three Crore in last three Financial years i.e (2016-17, 2017-18, 2018-19) duly certified by registered CA	Documentary Proof of not more than Three pages		
VIII.	Bidder must have executed the following work in any State/Central Government Department/Government Agencies/PSU in last three financial years:	Purchase Orders and completion Certificate from Government Department/Government Agencies/PSU.		
	One Project of similar nature of system integration having minimum of Supply, installation and			

	Commissioning of Mast/Tower, Wi-Fi Access Point, Router, LED Display order of the value of 1.5 Cr. or more in any State/Central Government/Government Agencies/PSU; or Two Projects of 75 Lacs of similar nature of system integration having minimum of Supply, installation and Commissioning of Mast/Tower, Wi-Fi Access Point, Routers,LED Display, order of the value of 1 Cr. or more in any State/Central Government/Government Agencies/PSU			
IX.	Bidder should be an ISO 20000:2011 Company	Valid ISO 20000:2011		
X.	Back to Back Warranty from OEM	OEM Certificate specifying back to back warranty for material supplied		

Annexure – III - SLA

- I. Bidder shall be responsible for on call maintenance and operations support for a period of Five(05) years.
- II. All change requests will be routed to Bidder for next Five year and will be taken care by Bidder as a part of warranty with zero Cost on on-call basis.
- III. Successful bidder to depute oneon call networking resources with more than 3 years of Networking Experience for day to day operations and changes in the Network for five years after completion of implementation phase.
- IV. Successful Bidder to imparttraining to all the Panchayat Secretaries/VLWs or designated teams and JaKeGA designated team on the entire setup of this project. The team at District Level will give rating for the training. The minimum rating must be minimum of 6 out of 10. Additional training required shall be imparted by bidder as required.
- V. Any spare replacement or disruption will be handled in maximum of twoworking days for 05 years after completion of implementation phase. Any deviation on the part of successful bidder will attract a penalty of Rs 500 per day.
- VI. All material at the sites shall be handed over to Panchayat Secretary/VLW or BDO who will give provisional receiving. Thereafter the material shall be technically verified before installation of material by the team of JaKeGA, IT Deptt.
- VII. The Bidder will coordinate for all issues related to sites with the concerned Panchayat Secretary/VLW.

VIII. This SLA will be a part of agreement with further additions as deemed necessary by JaKeGA.

Annexure IV – Technical Specifications

Passive Item Specifications

S. No	Technical Specifications Optical Fiber Armored Single-Mode OS2	
1	Cable Type	Optical fibres in water blocked loose tube, taped, corrugated steel tape armoured (STA) polyethylene (HDPE) outer sheathed embedded with two steel wires on the periphery. The cables are with UV Stabilized PE Jacket and protected from Rodent attacks. Complying to ISO/IEC 11801, EN50173, ANSI/TIA 568-C.3, Telcordia GR-20; suitable for use in indoor / outdoor ducts, direct burial and backbone cabling
2	Fiber Type	Single Mode, 9/125 micron primary coated buffers, OS2 (IEC 60793-2-50, B1.3 and ITU T G652.d). Shall be manufactured using Vapor Axial Deposition technology.
3	Construction type	
	Tube:	Polybutylene, Terephthalate(PBT)
	Tube colour:	White
	Tube diameter	3.0/2.0 mm nominal OD/ID
	No of fibres:	6
	Fibre colour sequence	Blue, Orange, Green, Brown, Slate (Grey), White, Red, Black, Yellow, Violet, Pink, Aqua
	Water Blocking	Thixotropic Gel (Tube) Petroleum Jelly (Interstices)
	Core Wrapping	Polyethylene Terephthalate
	Armouring:	Corrugated Steel Tape Armour (ECCS Tape) Thickness > 0.125mm
	Peripheral Strength Member	Two Steel wires (0.9 mm dia)
	Ripcord:	Polyester based yarns below armoured tape for easy ripping
	Outer Sheath	UV Stabilised Polyethylene (HDPE)
	Sheath thickness	2.0 mm nominal
	Sheath colour	Black

4	Standards	Complying to ISO/IEC 11801 2nd Edition, type OS1/OS2; AS/ACIF S008; AS/NZS 3080 ; TIA/EIA 568.C.3; IEC-60793-1, 60793-2, EN50173, ANSI/TIA 568-C.3, Telcordia GR-20; suitable for use in indoor / outdoor ducts, direct burial and backbone cabling
5	Mechanical characteristics	
	Dimensions and Mass Overall Cable (Nominal):	9.0 MM
	Mass (Nominal)	80 kg/km
	Cable length	2 km \pm 10%
	Max. Bending Radius (during installation)	20 X Overall diameter
	Max. Bending Radius (during full load):	10 X Overall diameter
	Max. Tensile Strength-Short Term	1500N
	Max. Crush Resistance-Short Term:	2000N/10 cm
	Operating Temperature range	-40°C \pm 70°C
6	Optical characteristics	
	Core Diameter @ 1310nm	9 + 0.6 μ m
	Cladding Diameter	125 + 1.0 μ m
	Cladding Non circularity	< 1.0 %
	Core Non circularity	< 6.0 %
	Core-Cladding Concentricity error	< 0.6 μ m
	Primary Coating Diameter-uncoloured	245 + 10 μ m
	Primary Coating Diameter-coloured	250 + 15 μ m
	Primary Coating Non Circularity	< 6.0 %
	Primary Coating Cladding Concentricity error	< 12.5 μ m
	Proof Stress Level	> 0.7 (~ 1%) GPa
	Strip Force (Peak):	1.0 < F peak strip < 8.9
	Zero dispersion wavelength	1310-8/+12 nm
	Zero dispersion slope	> 0.091 ps/(nm ² .km)
	Fibre curl:	> 4 m-radius of curvatuer
	Cut-off wavelength	< 1260 nm
	Mode field diameter at 1310	9.3 \pm 0.5 μ m
	Mode field diameter at 1550	10.4 \pm 0.8 μ m

	Macrobending loss @ 1550 nm, 100 turns on a 60mm mandrel	<0.5 db
	Max (chromatic)dispersion:	
	@1270-1340nm	<5.3ps/nm-km
	@1285-1330nm	<3.5ps/nm-km
	Polarisation mode dispersion (PMD)coefficient, cabled	< 0.5 ps/sq km)
	PMD Link Design Value	< 0.2 ps/sq km) RoHS Complaint
7	Electrical/Optical Characteristics	
	Attenuation	Characteristics - Optical Performance Max. Attenuation (Cable with fibres) At 1310 nm: 0.35 dB/km At 1550 nm: 0.22 dB/km Max. Average Attenuation; At 1310 nm: 0.33 dB/km At 1550 nm: 0.21 dB/km

Technical Specifications of Cat 6A UTP/STP CABLING SYSTEM

Sr No.	Details	Specification
1	Type	Unshielded twisted pair cabling system, Certificate by Intertek (ETL) for the 4-Connectors channel testing to the Cat 6/Cat 6 STP Cabling system as per the ANSI/TIA 568 C.2 & as well as the ISO 11801 standards up to 550 MHz or more
2	Networks Supported	Minimum of 10 / 100/1000 Ethernet, 155 Mbps ATM, 1000 Mbps IEEE 802.3ab Ethernet, and proposed Cat 6 Gigabit Ethernet
3	TIA / EIA 568 C.2	ETL Verified / UL Listed
4	Warranty	25 year systems warranty; Warranty to cover Bandwidth of the specified and installed cabling system, and the installation costs
5	Others	DCA fire rating, IP 20 protection class
		(b) Should perform to CAT6 UTP/STP with short channel
		(c) Low Smoke zero halogen cable jacket (LSZH)
		(d) AWG 23 conductor

Technical Specifications of Cat 6ASTP JACKS

Sr No.	Details	Specification
1	Type	PCB based, Unshielded Twisted Pair, Category 6, TIA /EIA 568-C.2 and ISO/IEC 11801
2	Modular Jack	750 mating cycles
3	Wire terminal	200 termination cycles
4	Accessories	Integrated bend-limiting strain-relief unit for cable entry or other mechanism to reduce the strain and bends at cable entry
		Integrated hinged dust cover
		Support cable pair termination process on the jacks at 45, 90 or 180 degree angle.
		Bidder should have a mechanism to maintain the quality of the termination ir-respective of the skill level of the termination staff.
5	Housing	Polyphenylene oxide, 94V-0 rated.
6	110 Blocks	polycarbonate, 94V-0 rated
7	Jack contacts	Beryllium copper, plated with 1.27 mm [.000050] thick gold in localized area and 3.81 mm [.000150] minimum thick tin-lead in solder area over 1.27 mm [.000050] minimum thick nickel under plate
8	Wiring blocks	Polycarbonate, 94V-0 rated
9	Approvals	(a) UL Listed / CSA Approved
		(b) ETL verified to TIA / EIA Cat 6
10	Performance Characteristics to be provided with bid	Attenuation, NEXT, PS NEXT, FEXT and Return Loss
11	ROHS Compliance	ROHS compliant

Technical Specifications of UTP Jack Unloaded Panels, Cat 6A

S No.	Details	Specification
1	Type	24port, 1U, Unloaded Modular, PCB based, Unshielded Twisted Pair, Category 6A, TIA / EIA 568-C.2 and ISO/IEC 11801
2	Ports	24/48
3	Port arrangement	Configured as 6 Port Module with individually replaceable CAT-6 Jacks

4	Circuit Identification	Front of each module shall be capable of accepting labels
5	Port Identification	Labels on each of 48-ports (to be included in supply)
6	Modular Jack	750 mating cycles
7	Wire terminal	200 termination cycles
8	Accessories	Integrated bend-limiting strain-relief unit for cable entry or other mechanism to reduce the strain and bends at cable entry
9	Materials	
	Housing	Polyphenylene oxide, 94V-0 rated
	Wiring blocks	Polycarbonate, 94V-0 rated
	Jack contacts	Beryllium copper, plated with 1.27 mm [.000050] thick gold in localized area and 3.81 mm [.000150] minimum thick tin-lead in solder area over 1.27 mm [.000050] minimum thick nickel under plate
	Panel	Black, powder coated steel
10	Approvals	UL listed / ETL Verified
11	Termination Pattern	TIA / EIA 568 A and B;
12	ROHS Compliant	ROHS/ELV Compliant

Technical Specifications of WORKSTATION / EQUIPMENT PATCH CORDS

S.No.	Details	Specification
1	Type	Unshielded Twisted Pair, Category 6, TIA / EIA 568-C.2 & ISO/IEC 11801
2	Conductor	24 AWG 7 / 32, stranded copper conductors 100 Ohm
3	Length	4 feet, 7 feet, 10 feet
4	Plug Protection	Transparent/clear/anti snag Slim boot
5	Warranty	25-year component
6	Jacket	CM Rated / LSZH
7	ROHS Compliance	ROHS/ELV Complaint

Technical Specifications of FACEPLATE

Sr No.	Details	Specification
1	Type	Single Gang, US style, 2.5 x 4 inches
2	Material	ABS / UL94 V-0
3	No. of ports	Two/Four/Six
4	Holder, Jack	ABS UL 94V-0
5	Cover Label	Acrylic UL94V-0
6	ROHS Compliance	ROHS/ELV Complaint

Technical Specifications of LC to LC Patch Cord Single Mode

Sr No.	Specifications	Requirement
1	Make and Type	LC to LC Duplex Fiber Optic Patch Cord, 9/125 micron
2	Cable Sheath	LSZH
3	Cable Diameter	1.8 mm mini twin zip
4	Ferrule	Ceramic
5	Return Loss	> 45 db
6	Insertion Loss	1 db Typical Max .3 db
7	Length	3/5/10 meters.
8	ROHS	ROHS Compliant

Technical Specifications of Fiber LIU

Sr. No	Specifications	Requirement
1	Fiber optic patch panel	The 1U Multi-Function Fibre Enclosure is a configurable rack mount unit for storing and terminating incoming fibre cable.
		The fibre enclosure has been designed to accommodate various termination types and adapter configurations
		The enclosure must, have a sliding drawer for ease of reconfiguring fibres, incorporates a heavy duty ball bearing slide mechanism, allowing easy access to fibres
		The adapter plates must be an interchangeable front plate which can facilitates upgrades as & when required required.
		The enclosure/LIU should have locks to secure all the fiber terminations & must have front cable management to properly route patch cords.

		Fibre management enclosures that can be used as a wall mount enclosure for isolated applications or rack mount enclosure for integrated applications.
2	Height 1 U	1.75 inches
3	No. of fiber ports	The LIU must be upgradable up 96 ports LC Style
4	Dimensions	482mm W x 254mm D x 43mm H(Rackmount)
		305mm W x 254mm D x 43mm H (Wallmount)
5	Material	Powder coated Mild Steel
		Rugged steel construction in graphite finish
		Rear, side & base access for Incoming / Outgoing fiber cables
6	Cable Management rings	Management rings within the system to accommodate excess fibre cordage behind the through adapters and maintain fibre bend radius.
7	Sliding cover	Panel cover is of slide out for easy maintenance
8	Splice Tray	24Fiber Splice Tray of Moulded ABS material should be supplied for the LIU.

Technical Specifications of Network Racks Specifications:

1. Adjustable 12U equipment mounting verticals provide the better mounting flexibility and maximizes the usable mounting space and compatible with active and passive devices of this tender.
2. Depth adjustable mounting slots
3. Top and bottom Panel with ventilation and cable entry facility
4. Provision to mount the cooling fans on the top panel
5. Powder coated finish with pretreatment process meeting all industry standards
6. Grounding and Bonding Options.

Active Equipment Specifications

Router Specifications

S. No	Specifications
1	General requirements
1.1	Gateway should be ruggedized & modular in nature with minimum IP30 or above certification. Wherever needed it should be possible to put the gateway in a enclosure supporting IP67 as the need may be.
1.3	Gateway should support minimum CPU, memory,storage of I 1.25GHz, 2GB, 4GB
1.4	Gateway should have atleast Serial Ports (one each for RS-232 and RS-485) for the function of making changes / IP Ethernet protocol, conversion to RS-232 interface or vice versa.
1.5	Gateway should support multiple mounting options like Din rail, floor mount or wall-mount
2	Hardware and Interface Requirements
2.1	Gateway should have support for integrated fourth-generation (4G) wireless WAN capabilities from day one. Dual SIM support Should be provided. All necessary cables/accessories must be provided along with the router. Should also support WAN port SFP slot for Fast Ethernet or Gigabit Ethernet fiber connectivity.
2.2	Gateway should have minimum 4x10/100/1000 Gigabit Ethernet LAN ports with option of PoE/PoE+ support. Should be provided with One no of Single Mode10 G SFP and one number of 1G Single Mode SFP for termination of Internet Lease Line from Service Provider.
2.3	Gateway should have POE ports to power up devices like IP Video Camera, the switch ports should support functionalities like VLAN, Inter VLAN Routing
2.4	The gateway should have integrated 802.11a/b/g/n compliant wireless Access point capability. Should have dual radios for 2.4Ghz as well as 5Ghz
2.5	The integrated Access point should have capability to serve both as access point as well client to a WiFi network.
2.6	Gateway should be able to support atleast 10 IP sec tunnels for secure VPN connectivity.
3	Software Feature Set
3.1	The gateway should come with built-in software, so that it can provide highly secure data, voice, wireless and video communications to the remotest of the places in India.
3.2	The gateway should support secure boot and Image Signing to ensures that the software stack at every instance starting with boot loader to OS stack is authentic and has not been tampered or manipulated.

3.3	The Gateway should have built-in security features so that firewalling, intrusion prevention, point to point & point to multipoint automated IP tunnels (GRE, IPSEC) based upon traffic pattern to encrypt the data (using industry standard security protocols like DES, 3DES, AES encryption) between source & destination nodes can be provided to protect network from external threats, such as viruses/trojans.
3.4	Gateway should have built-in intelligence in the software so that dynamic path selection feature can be achieved to select the best available path out of multiple routes based on delay, jitter, and latency.
3.5	Gateway should have the capability to classify traffic per application level and be able to monitor application response in terms of jitter, loss, and latency and apply service control policies and QOS to prioritize critical applications.
3.6	Gateway should support IPv6 name resolution, IPv6 DHCP and IPv6 NAT features
3.7	The gateway should support remote 3G/LTE firmware and configuration upgrade/updates.
4	High Availability Features
4.1	Gateway should support high-availability protocols like VRRP/HSRP, Should support the functionality to active/active gateway load balancing for IPv4 & IPv6, IPv6 support for HSRP/VRRP
5	Quality of Service (QoS) requirements
5.1	Gateway should support Class-based queuing
5.2	Gateway should support marking, policing and shaping
5.3	Gateway should support DSCP based marking & classification, Should support Hierarchical Queuing Framework and NBAR.
6	SCADA Support
6.1	Gateway should support DNP3
6.2	Gateway should support MODBUS SCADA Tunneling (BSTUN)
6.3	Gateway should support for high availability architectures and the ability to duplicate RTU traffic in software to a redundant SCADA master station. Sometime referred to as 'multi-drop'.
6.4	Gateway should support SCADA Protocol Translation (Serial to IP) for DNP3->DNP3/IP
6.5	Gateway should be able to provide IEC 60870 T101 to IEC 60870 T104 protocol translation to serve as a SCADA gateway
7	Mobile IP features
7.1	Gateway should support Mobile IP with support of which it should offers transparent roaming for mobile networks, and establishing a transparent Internet connection regardless of location or movement.
7.2	Gateway should allow an entire subnet or mobile network to maintain connectivity to the home network while roaming

7.3	The router should support hypervisor architecture to support Linux OS within and VM/Containers.
7.4	The router should allow porting of additional application at later stage
8	Gateway Management Features support
8.1	Fully automated, highly secure ZTD for routers and endpoints Provisions mobile field technicians with time-bound security credentials to perform authorized field maintenance Integrates with enterprise security policies and role-based access control for network devices Provides device-level authentication through AAA and RADIUS integration and alerts operators of attempted rogue device access to communication networks Integrates with standard Security Event and Incident Management (SEIM) to help enable security and reporting needs (NERC-CIP compliance)
8.2	Fault event collection, filtering, and correlation for communication network monitoring Supports a variety of fault event mechanisms for threshold-based rule processing, custom alarm generation, and alarm event processing Automatic issue tracking based on events collected
8.3	Performs over-the-air software and firmware upgrades to remote endpoints: Allows centralized configuration management, including change control enforced through operator role-based access control. Delivers flexible device grouping options, including policy-based management and methods for deploying configuration changes.
8.4	Monitors and collects network device status and statistics: Provides standard set of metrics parameter collection as it relates to the operations network Customizable metrics collection frequency, along with historical trend reporting to suit operational needs
8.5	Allows ease of integration for existing applications such as Outage Management System (OMS), trouble-ticketing systems, and manager of managers
9	General Administration of Router
9.1	Gateway should support SNMP V1, V2, V3 so that it can automatically be discovered, monitored, managed to a granular level to have config push, config backup, image backup, auto provisioning of devices, auto reboot functionality, inventory management can be done using a Network Management Tool.
9.2	Gateway should support IPv4, IPv6 protocols from day one without adding any additional cost.
9.3	Additional external antenna must be provisioned from day one along with the Gateway so that signal strength can be improved. All necessary accessories like antenna, cable etc must be provided along with the router.
9.4	Gateway should be able to operate in the temperature range of -40 to 60 degree celcius
9.5	The Gateway should have a standalone GPS which should help to map the coordinates on the NMS

9.6	Gateway should support both In-band and out-of-band management using Telnet and SNMP, including MIB II and other extensions
9.7	Gateway should support Industry-standard 4G LTE diagnostics and monitoring tools
9.8	Gateway should comply to automotive standards like SAEJ1455 2a1, 2b2, 2c, 2d3, 3a4, 3b
9.9	Hazardous certification: UL 121201, CSA 213, UL/CSA 60079-0, -15, IEC 60079-0, -15 IECEx Test Report, EN 60079-0, -15 ATEX Certificate

Technical Specification of Wireless Outdoor Access Point Specifications

S. No	Access Point Specifications
1	Dual-Band 802.11ac Wave 2 or better access points. The Wi-Fi signal dissemination is expected to be minimum of 150 feet reach
2	The APs should support the legacy 802.11b/g/n standards also in the 2.4 and in the 5 GHz Dual bands
3	Radio chains: streams 2x2:2. Min EIRP power 28 dBm or Better
4	Access Point should be support directional integrated antenna .
5	The access point should provide aggregate 1 Gbps or more data-rate.
6	AP shall have minimum 1 or more Gigabit Ethernet ports. With support for 10 /100/1000 Mbps with Full duplex support
7	AP should be able to function as a stand-alone access point without the requirement of a controller
8	The APs Should be Support Wall/Pole mounting bracket
9	The access points should be centrally managed
10	AP should have -20 to +55 degree operating temperature.
11	AP should operate with 802.3af POE power with full MIMO.
12	AP shall be IP67 rated for operation in harsh outdoor environment of winter and summer.
13	AP shall support LED visual status for device operation status and device status managed from controller
14	AP should provide power-over-ethernet to another device on its auxiliary ethernetport . In case said port with PoE is not available one no of external POE Injector with the Access point to be provided.
15	AP shall support minimum antenna gain of 4.5 dBi or higher for both radios. May be read as " AP shall support minimum antenna gain of 4.5 dBi or higher for both 2.4 and 5 Ghz radios. The directional angle for Wi-Fi signal dissemination is expected to be minimum of 150 Ft reach.
16	
17	AP should support up to 255 concurrent client associations
18	AP shall support Hotspot 2.0 (Passpoint)
19	AP shall support WPA-2 (802.11i) security: WPA2-Enterprise (802.1x/EAP) & WPA2-Preshared-keys, Open authentication mechanisms

20	AP shall support MAC authentication for upto 1000 Mac per SSID. MAC authentication data base can be local to AP or at remote RADIUS server
21	AP shall support per client and as well per SSID rate limiting
22	AP shall support Wi-Fi WMM for traffic prioritization and UAPSD for power save.
23	AP shall support airtime fairness or equivalent feature
24	AP shall support simultaneously MESH mode to serve MESH connection requirements and also regular WLAN for wireless clients to association
25	AP shall support MESH mode operation both on 2.4 GHz and 5 GHz bands
26	AP shall support Wi-Fi WMM QoS over MESH link
27	AP shall support layer 3 and layer 4 ACLs on MESH link for traffic control
28	AP shall support to drop L2 and L3 multicast and broadcast traffic on MESH link to minimize network congestion
29	AP should be Wi-Fi certified for WMM, WPA2, PMF, 802.11n, 802.11ac
30	Certifications: FCC, CE and EN certified, Plenum rated pig tail to be used wherever applicable.
31	AP shall support wall and pole mounting included

Technical Specifications of Mast/Tower

Self Supporting Galvanized Pole Single Tubular Monopole Tower Pole with ladder and Top Mounting Ring with as per TRAI Guidelines
Complete work to install Pole for Wi-Fi Setup with Wiring from interior of the Pole with Lock and key at the down exit.
Pole must be capable to host a maximum of 6 Outdoor Access Points and a Solar Panel. The Tower/Mast Height must be ensured considering that that each Access Point must have a clear line of sight to give signal of minimum upto 100 ft directionally in its angle. The directional angle for Wi-Fi signal dissemination is expected to be 120 degree.
Height Adjustable Ring of Metal to host the Access Point /LED Lights on the top of Pole
Chemical earthing to Support the Tower and complete Setup near the Pole
The Tower be strengthen enough to withstand wind, snow , rain etc and atleast 2 meters must be underground in concrete structure.

Technical Specifications of Solar based UPS

S. No	Type	Solar
1	Capacity	1500 VA
2	Charge Controller Type	PWM
3	Charge Controller Rating	40 Amp/24V, with 98% efficiency for fast charging
4	Nominal battery voltage (Vdc)	24V
5	Maximum PV Power	24V upto 1000Wp
6	Number of MPPT	Sine Wave
7	Rated Output Power (kW)	1500 VA
8	MPPT Efficiency	1000

9	Max Input Strings Number	34-39
10	Input Voltage Range (Vmp)	34-39
11	Efficiency	85%
12	Operating Voltage	100-290V
13	Fast Charging	Yes
14	Running Modes	Supports ECO Mode(180V to 260V) & UPS mode (extended voltage range)
15	Battery	Supports double Battery
16	Solar Panel	As per need for the above UPS Inverter
17	Backup	Must provide a backup of 6 hours for running upto Six Access Points with approximately 30 Watts each, One PC with 200 Watts, One TV with minimum of 124 Watts, and two LED Lights of 20 Watts each

Technical Specifications of Desktop Computer

Processor	Intel Core i5-8500 Processor (3.2GHz, 6 Cores, 12 MB Cache)
Operating System and MS Office	Windows 10 Pro 64-bit with MS office
Memory	8 GB Ram
Storage	1TB 7200 rpm
Display	19.5" FHD display
Power	AC Adapter 180W
Graphics	Intel® Integrated Graphics 630
Ports	Minimum of 2 no's USB 3.1 ports, Minimum of 2 no's of USB 2.0 ports, 1 no. of serial port, 1 no. of Gigabit Ethernet Port, one no. of VGA, DisplayPort, headphone / microphone combo jack included
Speakers	Internal
Connectivity	802.11ac and backward compatible
Warranty	Five years onsite

Technical Specifications of Large Display Technical

S.No.	Technical Specification of Large Monitor Commercial Series Display – Type 1	
1	Screen Size	55 Inch Smart 4K Ultra HD TV
2	Compute	1.7 Ghz Quad Core Processor with 2 GB Ram + 8 GB Storage
3	Platform	3840 X 2160
4	Aspect Ratio	16:09
5	Brightness	350 nits or higher
6	Contrast Ratio (Typical)	From 5000:01 to 4000:1
7	Viewing Angle (H/V) and Refresh Rate	178Deg & 60Hz
8	Response Time	6ms or high
9	Connectivity	Minimum of USB :2, HMDI: 2, Ethernet:1, Wi-Fi Support, S, Bluetooth Support
10	Video Decoder	MPEG1/2/4, VP8/VP9/VC1, H.264, H.263
11	Image Decoder	PNG, GIF, JPG
12	Audio Decoder	DTS, FLAC, AMR, AAC, OGG
14	Power Supply	AC 100 - 240 V~ (+/- 10 %), 50/60 Hz
17	Environmental Conditions	
18	Operating Temperature	0 ~ 40 degree Celsius
19	Operating Humidity	20% ~ 80%
20	Storage temperature	0 ~ 40 degree Celsius
21	Relative Humidity	<80%
22	Software	Android Based with inbuiltChromecast or any other open platform
23	Speakers	20W stereo speakers
24	Safety, EMC Certifications	CE, FCC, UL, EMC Class B

Sr. No	Specification of Interactive Display – Type 2
1	The system should be delivered like a fully integrated interactive board with multi-touch 55 inch Edge LED /LCD Display, 1080p integrated camera, Integrated microphone array, integrated speakers, white boarding pen etc.
2	The system should have viewing angle of +/- 86 degrees, 1:4000 contract.
3	The system should have an HDMI Input port to connect a PC/laptop, 3.5mm line out.
4	The system should provide the following functionality – Video conferencing, white boarding and content annotation by the presenter, content sharing and should also act as a screen for display content (local presentation)
5	The system should provide high quality audio, acoustic echo cancellation, automatic gain control, noise reduction, lip synchronization and voice/face tracking capabilities
6	The system should have 1080p30fps resolution during video call and content sharing
7	The system should be interoperable with the proposed Video conferencing endpoint and MCU solution proposed
8	The solution would be used for training, briefing etc.
9	The system should be H.323/SIP, H.264 compliant from day one.

S. No	Specifications of MCU
1	Type of MCU capable of delivering the video bridging performance as defined in the specifications
2	The MCU should be a hardware based all in one MCU
3	The MCU should have minimum 48 Number of ports on IP in all in one MCU. The MCU if operated in HD720p mode should have 96 ports.
4	Resolution Supported should be 1080p30fps and 720p30fps
5	Minimum Bandwidth Required for Specified video quality at MCU End (Mbps)
6	Minimum Bandwidth Required for Specified video quality at End point/far-site end (Mbps)
7	All components of the MCU solution, management sw& desktop client sw should be from the same OEM, Servers can be from third party
8	MCU should support audio ports on IP minimum 20 VoIP ports. An MCU which doesn't have this feature inbuilt, then it may have a third party integration products that provide 20 the number of Audio VOIP ports however the integration must be tested and smooth.
9	MCU is IP based and Availability of Internal Network management systems
10	The solution should have max 10 number of registered End Point on an external /internal (Internet/Intranet) server

11	The solution should have max 10 Number of registered Desktop Clients an external /internal (Internet/Intranet) server
12	The solution should have max 10 Number of registered Mobile Clients an external /internal (Internet/Intranet) server
13	The solution should have max 10 Number of registered External Users an external /internal (Internet/Intranet) server
14	The solution should have Dual Video Feature to be available in Desktop
15	The MCU must support Audio algorithms: (G . 711, G . 722, G .729 or equivalent or better wideband audio coding support)
16	MCU must support Telnet /USB /RJ45 /ssh
17	The MCU should have H.264 AVC based Video coding Protocol support
18	MCU must support control of a conference like adding participants, removing participants, muting participants video and/ or audio, lock a conference
19	MCU support sending/receiving multiple streams of video and presentation content without losing MCU port capacity
20	MCU must support layout choices of different layouts
21	MCU configurable to adapt the continuous presence screen layouts to accommodate newly added or dropped participants from the conference, up to 16 participants automatically
22	MCU must provide standard based method of compensating and correcting for packet loss media streams loss
23	MCU must provide a complete `conference control' interface browser to support all `in call' management functions with add and drop' manipulation of parties in the call
24	MCU must support a configurable text overlay function, where in the Name, Site Identifier or terminal info is displayable
25	MCU solution support maximum bandwidth control per endpoint or per groups of endpoints
26	MCU solution support distributed architecture
27	MCU solution must support real time monitoring
28	Scheduling support through outlook integration
29	The solution should allow registration of users, endpoints, their authentication and providing each a unique ID and presence status for simplified dialling.
30	MCU solution support Microsoft Outlook/Google etc. scheduling with email notifications to individual participants. If the said feature is not inbuilt in MCU then a third party integration product must be made available that provides the said feature however the integration must be tested and smooth.
31	MCU solution must support personal address book

32	The conference scheduling application must support Dial-in or Dial-out to terminals
33	The conference MCU solution must support Direct Inward Dial to scheduled meetings. If the feature is not inbuilt in MCU then it must have a third party integration product that provides the said facility however the integration must be tested and smooth
34	The network management software of the MCU/bridge must provide CDR data and view of current calls It allows to view all components of the solution and allow them to be maintained and upgrade centrally
35	MCU management software is capable to send e-mail notification to all participants using Microsoft outlook / Google etc plug in. If the said feature is not inbuilt in MCU then a a third party integration product must be provided that shall provide said feature however the integration must be tested and smooth.
36	The MCU should be equipped with minimum 50 number of licenses of the management software.
37	Both the MCU management software should be installed on server/appliances
38	The MCU support Desktop Client with resolution of 1080p from day one
39	Video and Content simultaneously both feature to be available in desktop clients day one
40	The MCU should have the ability to conduct 5 multiple conferences/Sessions/ meetings with total number of participants concurrently from day 1
41	MCU is with redundant power supply in same chassis/ Server
42	The desktop Client must be downloadable from central server or available on CD/USB or browser based.
43	The desktop client is capable to display the presentation/ data sharing, shared by remote sites
44	The desktop client is capable to share presentations, desktop display or documents/application sharing to the participants
45	It must support AES 128 bit encryption
46	Media Relay Unit/Firewall and Nat firewall unit to be linked with MCU in order to make it available to all Codecs/endpoints
47	The desktop client is capable to run on latest Windows/Mac/Linux platforms along with mobile devices of IOS and Android
48	Management system (Gatekeeper and Scheduler) - Concurrent ports and registration for Admin User and Authentication
49	MCU should support IP connectivity for streaming and recording unit. If the said feature is not inbuilt in MCU then an additional streaming server with sufficient capacity must be added to ensure the said feature and functionality, however integration must be tested and smooth.
50	All equipment are in compliance with the requirements of ITU-T Standard related to Video Conferencing
51	System to be IPv6 ready from day one

52	System uses standards based protocols and the offered system is interoperable with any existing H-323 AVC based video Conferencing MCU on all ports All H/W and S/W required to make it interoperable on port basis is included in the scope of supply
53	On Site OEM Warranty for 05 years.

S. No	Specification of video conference Camera - Type 1
1	Registration with MCU not mandatory with the condition that seamless Video Conferencing among various participants doesn't get hampered.
2	The Video conferencing endpoint should be a point to point system with integrated codec and Camera and microphone. The
3	Video Conferencing System Resolution which should be available on the system is 1080p@60fps
4	The system should support a minimum Bandwidth of 512kbps or higher for delivering high quality
5	The Video conferencing endpoint should support a single Non PTZ camera with Face Detection/ Automatic voice tracking capability or PTZ camera with speaker tracking capability with 12x optical zoom or higher.
6	The Video conferencing camera should have a CMOS based sensor.
7	The Video conferencing endpoint should have automatic Camera Control features such as focusing, brightness, and white balance
8	The camera of the system should have a minimum digital zoom of 2x or higher.
9	The system should have a field of view range of minimum 70 degrees or higher so as to capture the participants properly.
10	The system should be supplied with all appropriate cords and connectors such as power cord, HDMI Cables for presentation sharing and connection to display and ethernet cables. be supplied
11	System delivers Full HD video and voice & Full HD content for an overall Full HD experience at specified bandwidth
12	The system should support Video coding protocols H.264 or better.
13	System has G-722/ G-711/ G-729 or equivalent wideband audio coding support
14	The Video conferencing system should support 1080p@30fps sharing of video and graphics content during the video call day one.
15	It is possible to see both the near and far site on one Screen thus making most efficient use of a single display area
16	The system is equipped with an integrated or external microphone for audio pick up.

17	The Video conferencing unit should support a single camera with codec and camera from the same OEM.
18	The Video conferencing endpoint should have a 10/100/1000Mbps ethernet connectivity.
19	The system should have integrated Wi Fi Connectivity so that the system can work on wireless network in the room. Incase the product doesn't have in built Wi-Fi then it may alternatively do so by turning it into a Wi-Fi client device using a third party integration solution. However the integration must be tested and smooth.
20	System supports AES encryption video calls; System has Encryption On and Off capability
21	Video Codec shall support 16:9 format
22	Power supply: 230 + or - 10% volts, 50 Hz
23	Shall come with easy to use infra-red hand held remote control / Touch Panel with operating distance
24	All equipment are in compliance with the requirements of ITU-T (SIP Protocol & H Dot 323) Standard related to Video Conferencing
25	System to be IPv6 ready from day one
26	System uses standard based protocols & the offered system is inter operable with any existing H-323 AVC/SVC based VC equipment in a P to P call on VC end point; All H/W and S/W required to make it interoperable is included in the scope of supply
27	The system should have minimum of one Number of Video Input HDMI and one number of HDMI based Video output port.The system should also have a flexibility to connect with a Laptop on a USB port to function as a Web Camera. The required cables for the same should be supplied
28	System supplied complete with the following components from the same OEM (a) Codec (b) Camera (c) At least one integrated Microphones with suitable connectivity (d) Remote Control/Touch Panel (e) Data sharing capability using H/W or S/W (f) Necessary Cables
29	On Site OEM Warranty of 05 (Year)

Sr. No	Specification of Video conferencing Equipment for Larger Conference rooms - Type 2
1	The Video conferencing endpoint should comprise of dual 10x or 12x or higher optical zoom based automatic voice speaker tracking full HD camera/s, 70 or 80 degrees or more, full HD Codec, 4 or 6 or more Microphones, Touch Panel and necessary cables. These microphones could either be connected directly to the codec or cascaded
2	The system should have the ability to send and receive two live simultaneous video sources in a single call, so that the image from the main camera and PC can be seen simultaneously

3	
4	The system should have at least 2 no.'s of HDMI output to connect Full High Definition display devices such as plasma/LED/LCD and projectors for both Video and Content(Dual Monitor Support). The system should have two microphone input ports directly on the codec.
5	The system should deliver full HD 1080p @30fps resolution for video and content
6	The system should have 3x HDMI/DVI ports to connect two or more cameras and 1 x PC/Computer. If the said ports are inbuilt in the VC equipment End Point then an additional external hardware must be added and integrated however the solution must be tested and smooth
7	The system should be H.323, SIP, H.264 /H.265, H.239, BFCP, G.711, G.722, IPV4 and IPV6 compliant from day one.
8	The system should be supplied with 6 Microphones day one. The system should support Noise Reduction, Automatic Gain control, Acoustic Echo Canceller, Active Lip synchronization
9	The system should have two Audio in over HDMI or higher
10	The system should have one 10/100/1000Mbps Ethernet Interface
11	Should support Standards-based: H.235 v3 and AES Encryption via Automatic key generation and exchange. The same should be available in a call with Video with presentation. In case the product doesn't have this security feature inbuilt, then it may add a firewall for such functionality or provide alternate tested working solution in any Government Organization/PSU/Government Agency to meet the feature as per the RFP. Bidder to ensure all the communications to be secure as per this requirement.

Computer Table:

To be made with pre-laminated medium density board 18mm thick and edges sealed with PVC edge banding, Sliding platform for printer, a drawer, and a place for CPU with auto hinge cover. One drawer, one cupboard with shelf, CPU Stand, Foot Rest, key board tray fitted with necessary fittings such as wire / cable manager, auto closing hinges, stainless steel handle, multipurpose lock, sliders, necessary bushes etc. with fully closed back panel.

Table base should have Castor wheels for smooth movement of system, Natural finish, 30kg or more.

The tables and chairs should be from an ISO 9001 Certified firms.

(ANNEXURE V) - TECHNICAL BID COMPLIANCE INFORMATION – Bill of Quantity

Note: Bidders to ensure that the detailed technical specifications mentioned on Annexure IV in this tender are complied

Technical BOQ			
S.No	Item Description as per Technical Specifications in this Tender	UoM	Qty
1	Router	Nos.	44
2	Access Point	Nos.	132
3	Solar based UPS	Nos.	44
4	Desktop Computer	Nos.	44
5	55 Inch LED Display - Type 1	Nos.	46
8	Interactive Display - Type 2	Nos	1
6	Centralized MCU	Nos.	1
7	Camera for Video Conference - Type 1	Nos.	44
9	Video conferencing endpoint for large conference rooms with speaker track capability - Type 2	Nos.	2
S.No	Passive Components as per Specifications in this tender	UOM	Qty
10	Mast/Tower of minimum of 10 Meters above ground	Nos.	44
11	Loaded LIU (loaded with adapter plate and splice tray)	Nos.	44
12	12U Rack with Accessories	Nos.	44
13	24 Port Loaded Patch Panel	Nos.	46
14	Single Port STP Cat6A Information Outlet with Face Plate & SMB	Nos.	142
15	STP Cat6A Cable @ 200 Meters Per Site	Meters	8800
16	1 Meter STP Cat6A Patch Cord @ 6 Per Site	Nos.	264
17	HDPE Pipe @ 80 Meters Per Site	Meters	3520
18	PVC Conduit – 1.5” ISI Certified Preferably AKG @ 100 Meters Per Site	Meters	4400
19	Unslotted PVC Channel 30 x 25mm – ISI Certified @ 10 Meters Per Site	Meters	440
20	1-inch PVC Flexible pipe including all accessories (Reputed Brand) @ 10 Meters Per Site	Mtrs.	440
21	RJ 45 Connectors @ 15 connectors per site	Nos.	660

22	Computer Table with Accessories	Nos.	44
23	Any other item to complete the complete network setup end to end in all respects	Lumpsum	-
S.No	Service Components (will be calculated on actuals upon billing)	UOM	Qty
24	Installation and Commissioning of Routers	Nos.	44
25	Installation and Commissioning of Outdoor Wireless Access Point with mounting kit and accessories.	Nos.	132
26	Installation & Commissioning of Solar based UPS	Nos.	44
27	Installation & Commissioning 55 Inch LED Display - Type 1	Nos.	44
28	Installation & Commissioning Interactive Display - Type 2	Nos.	1
29	Installation & Commissioning Centralized MCU with required	Nos.	1
30	Installation & Commissioning Camera for Video Conference - Type 1	Nos.	44
31	Installation & Commissioning Video conferencing endpoint for large conference rooms with speaker track capability - Type 2	Nos.	2
32	Installation & Commissioning of Desktop Computer	Nos.	44
33	Installation & Commissioning Mast/Tower of 9 Meters above ground with underground of minimum 1.5 Meters underground in concrete with Central Ring to host Access Points and LED Light	Nos.	44
34	Installation & Commissioning of 9U Rack with Accessories	Nos.	44
35	Installation & Commissioning of 24 Port Loaded Patch Panel	Nos.	46
36	Installation & Commissioning of Single Port STP Cat6A Information Outlet with Face Plate & SMB	Nos.	142
37	Installation & Commissioning of STP Cat6A Cable @ 200 Meters Per Site	Nos.	8800
38	Installation & Commissioning of 1 Meter STP Cat6A Patch Cord @ 6 Per Site	Nos.	264
39	Installation & Commissioning of HDPE Pipe @ 80 Meters Per Site	Meters	3520
40	Installation & Commissioning of PVC Conduit – 1.5” ISI Certified Preferably AKG @ 100 Meters Per Site	Nos.	4400
41	Installation & Commissioning of Unslotted PVC Channel 30 x 25mm – ISI Certified @ 10 Meters Per Site	Meters	440
42	Installation & Commissioning of 1-inch PVC Flexible pipe including all accessories (Reputed Brand) @ 10 Meters Per Site	Nos	440
43	Installation & Commissioning of RJ 45 Connectors @ 15 connectors per site	Nos	660

44	Installation and Commissioning of Computer Table		44
45	Any other item to complete the complete network setup end to end in all respects	Nos	-
46	Labeling of Jack Panels, Path Cords, Patch Panels, Pig tails with Printed labels and Route markers along with route marking	LumSump	-
47	Penta Scanning Testing of Data Nodes (Both Ends)	Nos	132
48	Complete Documentation w.r.t. network layout, cable structure, with count of Active, Passive Components with segregated list of each component for each network site implemented / operational.	Nos	1
49	Project Management Charges for execution of this project	Nos	1
50	Lump Sum of all Electrical Work needed for carrying the complete work for executing this tender including and not limited to giving UPS supply from Server Room to all Access Switches	Nos	1
51	Any other work to complete the complete project end to end in all respects	Nos	Lumsump

(ANNEXURE VI) - COMPONENTS REQUIRING MANUFACTURERS AUTHORIZATION

Major Components	
1	Router
2	Access Points
3	Video Conferencing Equipment
4	Solar UPS

Note: Bidders to ensure that the detailed technical specifications mentioned on Annexure IV, V and VI in this tender are complied

ANNEXURE VII – FINANCIAL BID

Financial Bid							
S.No	Item Description as per Technical Specifications in this Tender	UoM	Qty	Unit Rate	Amount in INR	Tax - %	Tax Amount
Active							
1	Router	Nos.	44				
2	Access Point	Nos.	132				
3	Solar based UPS	Nos.	44				
4	Desktop Computer	Nos.	44				
5	55 Inch LED Display - Type 1	Nos.	46				
8	Interactive Display - Type 2	Nos.	1				
6	Centralized MCU	Nos.	1				
7	Camera for Video Conference - Type 1	Nos.	44				
9	Video conferencing endpoint for large conference rooms with speaker track capability - Type 2	Nos.	2				
Passive							
10	Mast/Tower of minimum of 10 Meters above ground	Nos.	44				
11	Loaded LIU (loaded with adapter plate and splice tray)	Nos.	44				
12	12U Rack with Accessories	Nos.	44				
13	24 Port Loaded Patch Panel	Nos.	46				
14	Single Port STP Cat6A Information Outlet with Face Plate & SMB	Nos.	142				
15	STP Cat6A Cable @ 200 Meters Per Site	Meters	8800				
16	1 Meter STP Cat6A Patch Cord @ 6 Per Site	Nos.	264				
17	HDPE Pipe @ 80 Meters Per Site	Meters	3520				

18	PVC Conduit – 1.5” ISI Certified Preferably AKG @ 100 Meters Per Site	Meters	4400				
19	Unslotted PVC Channel 30 x 25mm – ISI Certified @ 10 Meters Per Site	Meters	440				
20	1-inch PVC Flexible pipe including all accessories (Reputed Brand) @ 10 Meters Per Site	Mtrs.	440				
21	RJ 45 Connectors @ 15 connectors per site	Nos.	660				
22	Computer Table with Accessories	Nos.	44				
23	Any other item to complete the complete network setup end to end in all respects	Lumpsum	-				
Installation and Commissioning							
24	Installation and commissioning of Routers	Nos.	44				
25	Installation and commissioning of Outdoor Wireless Access Point with mounting kit and accessories.	Nos.	132				
26	Installation &commissioning of Solar based UPS	Nos.	44				
27	Installation &commissioning 55 Inch LED Display - Type 1	Nos.	44				
28	Installation &commissioning Interactive Display - Type 2	Nos.	1				
29	Installation &commissioning Centralized MCU with required	Nos.	1				
30	Installation &commissioning Camera for Video Conference - Type 1	Nos.	44				
31	Installation &commissioning Video conferencing endpoint for large conference rooms with speaker track capability - Type 2	Nos.	2				
32	Installation &commissioning of Desktop Computer	Nos.	44				
33	Installation &commissioning Mast/Tower of 9 Meters above ground with underground of minimum 1.5 Meters underground in concrete with Central Ring to host Access Points and LED Light	Nos.	44				
34	Installation &commissioning of 9U Rack with Accessories	Nos.	44				
35	Installation &commissioning of 24 Port Loaded Patch Panel	Nos.	46				
36	Installation &commissioning of Single Port STP Cat6A Information Outlet with Face Plate & SMB	Nos.	142				
37	Installation &commissioning of STP Cat6A Cable @ 200	Nos.	8800				

	Meters Per Site						
38	Installation & commissioning of 1 Meter STP Cat6A Patch Cord @ 6 Per Site	Nos.	264				
39	Installation & commissioning of HDPE Pipe @ 80 Meters Per Site	Meters	3520				
40	Installation & commissioning of PVC Conduit – 1.5” ISI Certified Preferably AKG @ 100 Meters Per Site	Nos.	4400				
41	Installation & commissioning of Unslotted PVC Channel 30 x 25mm – ISI Certified @ 10 Meters Per Site	Meters	440				
42	Installation & commissioning of 1-inch PVC Flexible pipe including all accessories (Reputed Brand) @ 10 Meters Per Site	Nos	440				
43	Installation & commissioning of RJ 45 Connectors @ 15 connectors per site	Nos	660				
44	Installation and commissioning of Computer Table	Nos	44				
45	Any other item to complete the complete network setup end to end in all respects	Lumpsum	Lumsump				
46	Labeling of Jack Panels, Path Cords, Patch Panels, Pig tails with Printed labels and Route markers along with route marking	Lumsump	Lumsump				
47	Penta Scanning Testing of Data Nodes (Both Ends)	Nos	132				
48	Complete Documentation w.r.t. network layout, cable structure, with count of Active, Passive Components with segregated list of each component for each network site implemented / operational.	Nos	1				
49	Project Management Charges for execution of this project	Nos	1				
50	Lump Sum of all Electrical Work needed for carrying the complete work for executing this tender.	Lumpsum	Lumsump				
51	Any other work to complete the complete project end to end in all respects	Lumsump	Lumsump				
Total							

Annexure VIII (Gram Panchayat Details - 44 No.s)					
S. No	District	Block	Panchayat	Lat	Long
1	Jammu	Dansal	Jhajjar Kotli	32.578886	74.963436
		R.S. Pura	Bablehar	32.578886	74.771312
2	Reasi	Pouni	Bhambla	33.03	73.34
		Mahore	Sarh Upper B	33.35	74.84
3	Samba	Chak Salarian	Chak Salarian	32.53902	74.99225
		Rarri	Ghar Rarri	32.55902	74.9665
4	Udhampur	Tikri	Tikri A	32.9469	74.984
		Chenani	Sarar	32.9655	75.39158
5	Rajori	Budhal	Rehan A	33.3651	74.6687
		Darhal	Ujhan C	33.4536	74.3571
6	Poonch	Poonch	Ajote	33.7770789	74.056719
		Surankote	Lathoong	33.68715	74.374
7	Doda	Marmat	Goha	33.05	75.47
		Bhallessa	Gandoh	33.032426	75.905614
8	Ramban	Sangaldan	Sangaldan-A	33.14451	75.05188
		Banihal	Nowgam	33.29537	75.1012
9	Kathua	Hiranagar	Dinga Amb A	32.5535414	75.36357
		Duggain	Kohag	32.67262	75.4976
10	Kishtwar	Inderwal	Lower Chatroo-A	33.3347407	75.7067441
		Padder	Atholi	33.2626344	76.1591148
		Panamik	Kheme	34.8742271	77.657986
11	Srinagar	Harwan	Khimber	34.01921215	74.8626651
		Srinagar	Lasjan-B	24.04165512	74.83390560865402
12	Baramulla	Narwav	Sheeri	34.1595	74.3587
		Baramulla	Nadihal	34.2583	74.3717
13	Bandipora	Arin	Sumlar-A	34.4101732	74.718082
		Arin	Gundpora Rampora	34.4044672	74.719647

14	Shopian	Shopian	Keegam	33.78661	74.8655
		Ramnagri	Reshnagri	33.654533	74.840446
15	Anantnag	Verinag	Nowgam - B	33.31259	75.1625
		Shahabad	Larkipora - A	33.383155	75.102877
16	Ganderbal	Ganderbal	Nunner	34.25942	74.79213
		Sharpathri	Hathbura	34.186347	74.742961
17	Kulgam	Pahloo	Lammer A	33.610478	75.085784
		Qaimoh	Tarigam	33.707946	75.036278
18	Budgam	B.K. Pora	Chattergam A		
			Dada omporabala	33.9127589	74.733156
19	Kupwara	Drugmulla	Drugmulla B	34.29'31.46N	74.16'49.57E
		Tangdar	Tangdar B	34.40'09.828N	73.84'46.251E
20	Pulwama	Kakapora	Pinglena	33.88	74.92
		Kakapora	Kakapora - B (Hanji Mohalla)	33.88	74.92

Note* Name of the 04 panchayats will be communicated later.