



Tender Sr. No:.....



**REQUEST FOR PROPOSAL  
FOR  
Installation, Commissioning and Operationalization  
OF  
SATELLITE BASED  
RECEIVE ONLY TERMINALS (ROT<sub>s</sub>) NETWORK  
FOR  
THE EDUSAT PROJECT  
OF THE GOVERNMENT OF PUNJAB**

**THROUGH**

**PROJECT DIRECTOR, PUNJAB EDUSATSOCIETY  
SCO.104-106,2<sup>nd</sup> FLOOR, SECTOR-34, CHANDIGARH**





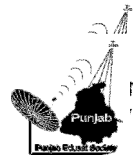
## TENDER SUMMARY

1. Tender No. :
2. Total pages : 1 to 30
3. Description : For Installation, Commissioning and Operationalization of Satellite Based Receive Only Terminals (ROTs) Network for the Edusat Project of the Govt of Punjab
4. EMD : **Rs. 20.00 Lacs (Rs. Twenty Lacs only)**
5. Pre-Bid conference : **15.02.2010 at 11:00AM**
6. Last Date of Submission : **05.03.2010 at 2.00 PM**
7. Date of Opening of bid : **05.03.2010 at 3.00 PM**



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**SECTION – I**  
**INVITATION FOR BIDS**

- 1.0 This invitation of bid is for supply, installation, commissioning and Operationalization of Satellite Based Receive Only Terminals(ROTs) Network for the EDUSAT Project of the Government of Punjab.
- 1.1 Bidders are advised to study the Tender Document carefully. Submission of Tender shall be deemed to have been done after careful study and examination of the Tender Document with full understanding of its implications.
- 1.2 Sealed offers should be submitted to Project Director Punjab Edusat Society, SCO.104-106 2<sup>nd</sup> floor, Sector-34 A Chandigarh not later than the last date and time of submission.
- 1.3 All bids must be accompanied by an **Earnest Money of Rs. 20 lacs (Rs Twenty lacs only)** in the form of Bank Draft, in favour of The Project Director cum Director General School Education, Punjab Edusat Society Payable at Chandigarh.
- 1.4 This Tender document is not transferable
- 1.5 Schedule for Invitation to Tender
  - 1.5.1 Time and date for receipt of Tender: 2.00 PM on 05.03.2010
  - 1.5.2 Date, Time & Place of opening of bids: 3.00 PM on 05.03.2010 in the office of the Project Director Punjab Edusat Society, Chandigarh, SCO.104-106, 2<sup>nd</sup> Floor, Sector-34 Chandigarh.
- 1.6 Validity of the bid: 90 days from the date of opening of tenders.
- 1.7 Schedule for delivery: Delivery, commissioning and integration of equipment within 10 weeks of issue of LOI/order.

**Note:** The PUNJAB EDUSAT SOCIETY shall not be responsible for any postal delay about non-receipt/non delivery of the documents.



## SECTION – II

### SCOPE OF WORK

#### 2.0 INTRODUCTION

Edusat, a satellite specially designed for facilitating distance education in India, has been launched in September 2004. This satellite has 5 spot beams, each having 36 MHz bandwidth in Ku band; together, they cover the whole country. In addition, there is a National beam in Ku band having 36 MHz bandwidth and covering Mainland India. Apart from Ku band there are 6 Extended C band channels each of 36 MHz bandwidth covering India including the Lakshadweep and Andaman and Nicobar islands.

- 2.1 The Government of Punjab has embarked upon an ambitious programme for delivering quality education to the students of the educational institutions in the state of Punjab through EDUSAT. For delivering educational content, lectures are required to be broadcast/ recorded from studios based at Mohali. The State Government through the Punjab Education Society (PES) intends to select reputed companies/firms, with relevant experience to supply, install, commission and Operationalization of Satellite Based Receive Only Terminals (ROTs)
- 2.2 This contract document gives the specifications, terms and conditions and other requirements of the system to be supplied by the vendor on turnkey basis. While the Annexure-1 of this document consists of the detailed specifications of all individual subsystems, Annexure-2 includes the format in which the commercial bid is to be submitted by the Bidder.

#### 2.3 GENERAL INSTRUCTIONS

- 2.3.1 It is mandatory for Bidder to submit the compliance of each and every part of this RFP (including general instructions, terms & conditions, schedule, maintenance, specifications of each system given in Annexure, etc.) in his technical bid failing which the proposal will not be evaluated and will be rejected without any further notice/communication to the bidder.
- 2.3.2 This is a two part bid and Bidder, therefore, shall submit separate technical and commercial bids in two different envelopes. The compliance statement, however, should be submitted along with the technical bid.



- 2.3.3 *The ROTs are required to be installed & commissioned at different locations in Punjab state. The list of locations and respective custodian at the site will be provided by PUNJAB EDUSAT SOCIETY later.*
- 2.3.4 *This RFP should be treated by the successful Bidder as a 'rate-contract'. Bidder shall provide the quote for different quantity slab as per Annexure '2', for all the items mentioned under "List of Deliverables" section of this RFP. The prices quoted by the vendor shall be valid for one year during which PUNJAB EDUSAT SOCIETY may place the order multiple times for different quantities, depending on requirement.*
- 2.3.5 *The successful bidder (vendor) should stock required spares for ROT during warranty period to meet the uptime requirement.*
- 2.3.6 *Vendor shall submit a comprehensive document detailing Acceptance Test procedures proposed under the contract to PUNJAB EDUSAT SOCIETY for its approval, within 10 days from the date of order. The random inspection of the installed equipment will be done by the Society with the help of Third Party.*
- 2.3.7 *Vendor shall work out immediately after receiving order and in consultation with PUNJAB EDUSAT SOCIETY, an implementation plan detailing various milestones to the effect that all activities falling under the scope of the contract get completed within stipulated delivery schedule.*
- 2.3.8 *The content of training and training material to be given to the participants should be clearly explained. Vendor to supply one hard copy of operating/technical manual with each unit of ROT. Vendor should also supply checkout documents for ROT, which will be approved by purchaser with changes, if any.*
- 2.3.9 *Vendor shall work out, in consultation with PUNJAB EDUSAT SOCIETY, a detailed plan of preventive and corrective maintenance during and after the expiry of warranty period within one month on the placement of the separate AMC order. Appropriate penalty clauses and other terms and conditions will be included in the plan.*



2.3.10 *As a part of maintenance philosophy, Vendor to clearly focus on the following.*

i) Fault reporting mechanism to be followed – by way of availability of no. of maintenance/reporting centers, help desk etc. and by way of reporting by phone, fax e-mail etc.

Preventive maintenance proposed.

2.3.11 *The successful bidder shall be responsible for transportation and installation of the terminals and other associated equipment at site. All the ordered ROTs will be transported, installed, commissioned and maintained by the vendor. During the warranty and / or AMC period, vendor is fully responsible for all equipments supplied as part of this order. The remote terminals must work with normal domestic earthing. All equipments must work from 0 to 50 deg.C without requiring air conditioning.*

2.3.12 *The remote nodes shall be so designed that they are easily installable in the field and pointed properly to the satellite with the help of set-top-box monitor/display of signal strength. The TV and Set Top Box must be kept aesthetically in the cabinet/stand to ensure protection from dust. The actual number of site locations will be given separately. The names of contact person at each place (with alternative 2nd name, if available) will be furnished in the due course.*

2.3.13 The Bidder shall submit the delivery schedule including supply, installation, commissioning and operationalization of the complete network. However, this period shall, in any case, not be more than 10 weeks from the issue of order or site readiness, whichever is later. LD clause, as mentioned in the tender document will be applicable, if the delivery schedule promised by the bidder is not adhered to. Vendor shall work out, within 15 days of the placement of the order and in consultation with PUNJAB EDUSAT SOCIETY, an implementation plan detailing various milestones to the effect that all activities falling under the scope of the contract get completed within stipulated time.



### 3.0 **INSTALLATION OF ROTs**

#### 3.1 Site Survey:

(i) Vendor should do the site survey for the sites for ROTs installation. Any non-suitability observed at site must be informed to user agency/respective nodal agency for corrective action.

#### 3.2 **Foundation**

3.2.1 All civil works related to foundation of terminals, proper harnessing and trench for routing RF cables at sites, etc. will be the responsibility of the vendor.

3.2.2 The Location for foundation is to be given by the respective Nodal Agency keeping in view the Line Of Sight Clearance. Legs of antenna stand should be grouted with cement (penetrating mount). Vendor has to make arrangement for foundation materials and labourers.

3.2.3 The mount of the antenna should be sufficiently rugged to withstand wind velocity of 200 Km/hrs (survival). The Bidder shall submit the required analysis, in his technical bid, to substantiate the survival and operational wind velocity specifications. Please note that the bid will not be considered for further evaluation if it is not accompanied with such an analysis.

#### 3.3 **Transportation**

3.3.1 Vendor should cover transit insurance for value of the materials to be transported. This insurance policy shall cease once the equipments are safely handed over to the custodians of the respective classrooms.

3.3.2 All the subsystems are to be transported safely with proper packing to each site with packing list containing all details of hardware packed with serial Nos. and quantity.

1. Vendor has to prepare delivery schedule for distribution of subsystems in consultation with respective nodal agencies and also inform site coordinator well in advance.





2. All additional taxes (Toll Tax, RTO Tax etc.) during transportation will be borne by the vendor.

### **3.4 Installation and Deployment**

- 3.4.1 The Installation and commissioning should be carried out at sites as per the list given by the respective nodal agencies/PUNJAB EDUSAT SOCIETY and signature to be obtained in the form of 'Hand Over and Acceptance Certificate' from the users.
- 3.4.2 Logistic support in respect of installation & deployment will be the responsibility of the vendor.
- 3.4.3 During installation, satellite signal containing video pattern & audio tone will be transmitted by the respective Nodal Agency from Hub for subjective checkout of classroom.
- 3.4.4 During installation of receive classrooms, if any of the sub system/component is found faulty, vendor shall replace/ repair and make the classroom operational.
- 3.4.5 Channeling/dressing of RF / Interface cable is to be done by the vendor.
- 3.4.6 Vendor has to provide detailed installation schedule and manpower deployed for the installation and commissioning and inform respective Nodal Agency.
- 3.4.7 Vendor has to show functioning of ROT and get inspected the quality of workmanship to the concerned custodian/site in-charge and get it certified from the respective Nodal Agency.

### **3.5 Acceptance Test**

- 3.5.1 Factory acceptance test will be carried out by PUNJAB EDUSAT SOCIETY on at least one fully integrated terminal. Apart from this, Site acceptance tests will be carried out by PUNJAB EDUSAT SOCIETY on randomly selected few sites.



- 3.5.2 The Test and Acceptance plan for the checkout of required classrooms should be prepared by the vendor and duly approved by the respective nodal agencies/PUNJAB EDUSAT SOCIETY vendor has to carryout the test/checkout as per the test plan.
- 3.5.3 Test schedules must be planned in consultation with users.
- 3.5.4 During integrated test, user will provide satellite transmission with test signals as per the test schedule agreed mutually between vendor and user.
- 3.5.5 Vendor has to arrange test instruments required for carrying out integrated test & checkout of all classrooms. Vendor shall provide list & number of equipments for installation, integration & maintenance of classrooms at site.
- 3.5.6 Vendor has to prepare document containing test results of all terminals, test results of LNB, set-top box, UPS etc., duly signed by user, who conducts and witnesses the test and approved by the respective nodal agency official.
- 3.5.7 It is a mandatory for the vendor to take photographs of foundation, quality of harnessing for all sites, before and after the completion of the work alongwith site witness, using digital camera. The photographs CDs/Floppies will be submitted to the respective nodal agencies/PUNJAB EDUSAT SOCIETY as a proof of the completion of the work satisfactorily.

### **3.6 MAINTENANCE SERVICE PROVIDER (SP)**

- 3.6.1 The Service Provider [SP] for maintenance can be vendor himself or vendor's authorized Party. However, the vendor will be a single contact point, which carries out maintenance activities of complete respective network.
- 3.6.2 The SP has to co-ordinate following activities with the respective Nodal Agencies:
  - a. Information about nonfunctioning of classroom by setting of a help desk at both the nodal agency locations.



- b. The SP has to co-ordinate with the nodal agencies with intimation to PUNJAB EDUSAT SOCIETY for replacement/ repair of subsystems.
  - c. SP has to maintain / update inventory of each terminal on regular basis during PM cycle.
- 3.6.3 The SP has to maintain separate help desk for co-ordination with Nodal Agency. Help desk cannot be shared for any other applications. The help desk should have “toll free” telephone and a Fax for registration of the complaints. The complaints will also be registered, in parallel, by the concerned colleges/ Schools on the website being designed by the nodal agency. The SP should also browse this website daily for noting these complaints. The complaints registered on the website will be treated as the authentic and valid complaints to the SP and he shall attend to them irrespective of whether the complaints are already registered or not with him through phone / mail.
- 3.6.4 SP will provide the weekly-feedback/service-report on these complaints to PUNJAB EDUSAT SOCIETY through E-mail/Fax.
- 3.6.5 During maintenance activities, SP will coordinate with respective Nodal Agencies for obtaining transmission support from Hub during field visit.
- 3.6.6 The SP has to deploy dedicated technical manpower for executing maintenance activities.
- 3.6.7 The SP has to carryout preventive maintenance at every quarter of the year in concurrence to Punjab Edusat Society.
- 3.6.8 The SP must have office /help desk at every Education Circle. This office must be manned for 12 hours to receive complaints and report back to Nodal Agency on day-to-day basis.
- 3.6.9 The Service engineer of the SP has to take complaints on daily basis and visit concerned site and repair the faults of what-so-ever nature. He should prepare service report and submit it to the respective Nodal Agencies and PUNJAB EDUSAT SOCIETY within 7 days time.
- 3.6.10 If services are found not satisfactory during any time of the contract, PUNJAB EDUSAT SOCIETY will have all the right to terminate the



contract for the remaining period. If SP is not able to repair 70% of the complaints in 4 days time, received in a month will be treated as unsatisfactory and PUNJAB EDUSAT SOCIETY can terminate contract by giving one months notice.

3.6.11 The SP has to furnish all details as specified in PM data sheet (which will be decided by vendor and PUNJAB EDUSAT SOCIETY mutually after placement of the order) during preventive maintenance cycle for each site and sent it to respective Nodal Agencies and PUNJAB EDUSAT SOCIETY.

### **3.7 The LD clause would be as follows:**

- (a) The faults reported from the ROTs must be attended and repaired within seven days time after receiving the fault complaint. For each 24 hours of delay after 7 days, vendor has to pay 0.5 % of total AMC/Warranty cost of all ROTs as Liquidated Damages (LD) to PUNJAB EDUSAT SOCIETY.
- (b) In case, the number of non-functioning ROTs increases beyond 200 in the network, for each 24 hours of delay after 7 days, vendor has to pay additional 0.5 % of total AMC/Warranty cost of all ROTs as Liquidated Damages (LD) to PUNJAB EDUSAT SOCIETY.

3.7.1 The LD clause shall be applicable if the delays are on account of the vendor. In case delays are on account of PUNJAB EDUSAT SOCIETY or any of the identified nodal agencies Force Majeure, no LD clause will be applicable.

### **3.8 AUGMENTATION OF THE NETWORK / SHIFTING OF SITES (OPTIONAL)**

3.8.1 Vendor is required to shift the existing sites as and when required by PUNJAB EDUSAT SOCIETY on additional payment agreed upon. The tasks are to be carried out while augmentation of the network/ shifting of site.



### **3.9 OPERATIONS TRAINING**

- 3.9.1 The operation & training document prepared by SP should be approved by the respective nodal agencies/PUNJAB EDUSAT SOCIETY. The SP has to provide hands on training to operational persons at each site.
- 3.9.2 The SP has to prepare an operation and maintenance. SP has to provide hands on training (practical training) on operations and primary-level of the corrective & preventive maintenance to all trainees and also prepare DOs & DONTs for smooth operation of system and circulate at all sites.
- 3.9.3 The Training schedule must be planned in consultation with the users/respective nodal agencies.

### **3.10 OTHER TERMS AND CONDITIONS**

- 3.10.1 The Supplier, once order is placed, has to complete the Supply, Installation, Commissioning and Operationalization of ROTs within delivery schedule given above. In case the supplier fails to complete this work in PUNJAB EDUSAT SOCIETY specified period in the order or any extension thereof allowed by PUNJAB EDUSAT SOCIETY HQ, the department shall have the right to recover from the Supplier as Liquidated Damages (LD) a sum at the rate of 0.5 % (1/2 %) per week not exceeding the total cost of 10% of undelivered systems.
- 3.10.2 All the items in the systems supplied against this order should be covered under on-site warranty for a period of one year after the installation and commissioning against bad workmanship, manufacturing defects, etc. If any defect/malfunctioning of system is noticed during the warranty period, free replacement should be done immediately.
- 3.10.3 The system shall be under comprehensive AMC for Two years after expiry of warranty period of one year (Optionally).
- 3.10.4 Preventive maintenance need to be carried out minimum 3 times a year. Preventive maintenance must be carried out once at the end of third year of AMC for all the ROTs.



- 3.10.5 After commissioning, the antenna will be fixed with some lock-nut arrangement/araldite to prevent its unintended movement.
- 3.10.6 All cables will be routed through a flexible metal conduit, inside the building, to protect from rodents.
- 3.10.7 The TV cabinet will be strengthened at backside to protect from rodents.
- 3.10.8 All connector-ends will be weather-proof and will be appropriately strengthened and sealed with suitable compound.
- 3.10.9 All audio-video cables will be strengthened to make it more rugged.
- 3.10.10 Vendor has to provide an operational manual for each ROT and training to the identified custodians at each site to operate the system.
- 3.10.11 Vendor has to submit acceptance test procedure and test results for ROTs for evaluation before installation added with the submission of two ROTs to PUNJAB EDUSAT SOCIETY for evaluation before installation.
- 3.10.12 Certification of terminal installation shall be done by: Custodian at site, respective Coordinator, vendor's Representative and PUNJAB EDUSAT SOCIETY representative.
- 3.10.13 All channels of the receivers shall be tuned to the same receiving frequency to avoid mishandling of the equipment at the user end. Vendor shall provide Factory Lock / a facility to Receiver Lock to avoid mistuning.
- 3.10.14 The court of Chandigarh only shall have jurisdiction to deal with and decide any legal matter or dispute whatsoever arising out of this contract.
- 3.10.15 Expenditure related to all logistics and transportation for replacement of parts/ Sub-systems / components has to be borne by the vendor.
- 3.10.16 The client reserves the right to distribute the quantity among bidders at the L1 price. L1 bidder will be allotted quantity not less than 60% of the total quantity.

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## **SECTION – IV**

### **BIDDERS QUALIFICATIONS**

- 4.0 The bidder must be reputed company/ firm with relevant experience to supply, install, commission and Operationalization of Satellite Based Receive Only Terminals (ROTs).The bidder must be in existence for last five years. The bidder must be in the field of selling of LCD TVs, Studio Equipments and its related accessories and providing maintenance service for the last three years.
- 4.1 The annual turnover of the bidder should not be less than Rupees 30 Crores from media, entertainment and Telecommunication business in the last 3 financial years. The bidder must produce copies of audited balance sheets of the company/firm for the last three years in proof of the above.
- 4.2 The turnover of OEM company in case of LCD TV must be Rs. 200 crore over last 3 consecutive years.
- 4.3 The bidder should have experience of executed IT and communication based projects of similar nature worth Rs. 2.00 crore in Government / PSUs. Proof of this must be submitted by the bidder in the form of testimonials/satisfactory performance certificates.
- 4.4 The Bidder must be Authorized Service Provider (ASP) for the last 2 years of the manufacturer whose products are being quoted for this tender. Attach proof.
- 4.5 The bidder must have 50 manpower on rolls.
- 4.6 The bidder should be having assured service support for Broadcast and Professional products in Chandigarh and Punjab.



## **SECTION - V**

### **SUBMISSION OF BIDS**

- 5.0 The bid should be submitted to Project Director, Punjab Edusat Society, SCO.104-106, 2<sup>nd</sup> floor, Sector-34 Chandigarh not later than the last date of submission, in a sealed cover superscribing as “Bid for supply, installation, commissioning and Operationalization of Satellite Based Receive Only Terminals(ROTs) Network for Punjab Edusat Project.
- 5.1 The bidder or a person/persons duly authorized by the bidder shall affix the bid with his seal. All pages of the bid, where signature required is not mentioned, shall be initialed by the bidder with his seal, except un-amended, printed literature.
- 5.1.1 The Bidder is expected to carefully examine all instructions, forms, terms and specifications in the Tender Document. Failure to furnish all information required in the Tender Document or submission of a bid not substantially responsive to the Tender Document in every respect will be at the Bidder's risk and may result in the rejection of the bid.
- 5.1.2 Clarification regarding Tender Document: A prospective Bidder requiring any clarification of the Tender Document may contact the office of the Society personally. The Society will try to respond to the query there and then. However, submission of request for clarification will not entitle the Bidder for any extension of time in submission of the Tender Document.
- 5.1.3 **Amendments in the Tender Document.**
- 1 At any time up to the last date for receipt of bids, the Punjab Edusat Society may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder, modify the Tender Document by an amendment.
  - 2 The amendment will be notified by general advertisement or through letter or by FAX or Email to the prospective Bidder/Bidders who have received the Tender Documents and the same will be binding on them.
  - 3 In order to afford prospective Bidder/Bidders reasonable time, or otherwise for any other reason, in which to take the amendment into account in preparing their bids, the Punjab Edusat Society may, at its discretion, extend the last date for the receipt of Bids.





## **SECTION - VI**

### **TERMS AND CONDITIONS OF THE TENDER**

#### **6.0 PAYMENT TERMS**

- **60% of the Contract value shall be paid on delivery of Goods.**
- 30% payment will be released on satisfactory installation and Commissioning of the entire infrastructure and network.
- Balance 10% payment will be released against Bank Guarantee of equal sum. The Bank Guarantee shall be issued by a nationalized/scheduled bank on Rs. 100/- non- judicial stamp paper and would be valid during warranty period.

6.1.1 The bills after certification by the in-charge of respective site/location shall be submitted to Project Director Punjab Edusat Society.

6.1.2 All payments will be subjected to tax deduction at source as applicable at the prevailing tax rates.

#### **6.2 DELIVERY SCHEDULE**

The supply, installation commissioning and Operationalization of Satellite Based Receive Only Terminals (ROTs) Network shall be completed within 10 weeks of placement of order/LOI upon the successful bidder or sites readiness, whichever is later.

#### **6.3 WARRANTY**

6.3.1 All the systems/sub-systems/equipments/accessories supplied against this order shall carry warranty for a period of 12 (Twelve) months comprehensive on-site from the date of installation and acceptance after commissioning, UPS and Plasma TV.

6.3.2 UPS & Plasma TV shall carry warranty for 36 months comprehensive. During the period of warranty, if found that the system/equipment is not conforming to the description, specification, quality, workmanship, etc. Bidder shall replace/repair the same at their cost.

6.3.3 Warranty certificate for each system and for all the equipments supplied shall be provided along with the invoice.

6.3.4 Software upgrades, if any, released during Warranty period shall be supplied free of cost.



#### 6.4 **COMPREHENSIVE ANNUAL MAINTENANCE SERVICE**

The bidder must quote separately for annual Comprehensive Maintenance Service (inclusive of spares) of the equipment offered. The duration of Comprehensive Annual Maintenance Service will be for 2 year after warranty period. This will commence immediately after satisfactory discharge of services under warranty.

#### 6.5 **DOWN TIME**

The maximum down time of equipment during the period of Warranty and Comprehensive Annual Maintenance Service shall not be more than 48 hours from the time of intimation of the defect.

#### 6.6 **PERFORMANCE BANK GUARANTEE (PBG)**

The successful bidder will have to deposit a performance bank guarantee **for an amount equivalent to 10 % of the contract value** within 7 days of the issuance of LOI/Order. The PBG would be valid for a period after **6 months post warranty**, failing which the LOI/order shall be withdrawn at the discretion of the Society and the EMD of the bidder shall be forfeited.

#### 6.7 **LATE DELIVERY/ INSTALLATION/ PENALTY:**

In case supplies are not made within the delivery date stipulated at Sl. No. 5.1 or any extension thereof, LD 0.5% (zero point five percent) of the order value or part thereof of the undelivered portion for each calendar week of delay shall be recovered from the bills. However, the total Liquidated Damages shall not exceed 10% (ten percent) of the total value of each order.

6.7.1 The penalty will be calculated on weekly basis. In case the delay exceeds one month, the order/contract will be liable to be cancelled along with forfeiture of bank guarantee and recovery of liquidated damages.

6.7.2 The above provision is notwithstanding the right of the Punjab Edusat Society to get the work executed at the risk and cost of the Bidder and to avail of other remedies/provisions laid down in the terms of bid/contract.

6.8 **TERMINATION FOR DEFAULT:** The Punjab Edusat Society may, without prejudice, to any other remedy for breach of contract, by written notice of default sent to the Bidder, terminate the contract in whole or in part. if:

6.8.1 The qualified Bidder fails to deliver any or all of the obligations within the time period (s) specified in the contract, or any extension



thereof granted by the Punjab Edusat Society.

6.8.2 The qualified Bidder fails to perform any of the obligation(s) under the contract

6.8.3 The qualified Bidder becomes bankrupt or otherwise insolvent, provided that such termination will not prejudice or effect any right of action or remedy which has accrued to the Punjab Edusat Society.

## 6.9 **FORCE MAJEURE:**

6.9.1 Notwithstanding the provisions of the tender, the Bidder shall not be liable for forfeiture of its performance security, liquidated damages or termination for default, if and to the extent that, its delay in performance or failure to perform its obligations under the contract is the result of an event of Force Majeure.

6.9.2 For the purposes of this Clause, 'Force Majeure' means an event beyond the control of the Bidder like acts of the Government of Punjab/ Punjab Edusat Society either in its sovereign or contractual capacity, war or revolution, fire, floods, epidemics, quarantine restrictions and freight embargoes.

6.9.3 If a Force Majeure situation arises, the qualified Bidder shall promptly notify the Punjab Edusat Society in writing of such a condition and the cause thereof. Unless otherwise directed by the Punjab Edusat Society in writing, the Bidder shall continue to perform its obligations under the contract as far as reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event. The Punjab Edusat Society may terminate this contract, by giving a written notice of minimum 15 days to the Bidder, if as a result of Force Majeure, the Bidder is unable to perform a material portion of the services for a period of more than 30 days.

## 6.10 **STANDARD OF PERFORMANCE**

6.10.1 The qualified Bidder shall carry out the services and carry out its obligations under the contract with due diligence, efficiency and economy in accordance with generally accepted norms techniques and practices used in the industry. The Bidder/ bidders shall also adhere to professional standards recognized by international professional bodies. The Bidder/ bidders shall employ appropriate advance technology and safe and effective equipment, machinery, material and methods. The Bidder/Bidders shall always act in respect of any matter relating to this



contract, as faithful advisors to the Society and shall, at all times support and safeguard the Society's legitimate interests in any dealings with the third party.

#### 6.10.2. **OTHER TERMS AND CONDITIONS:**

- (i) **Fall Clause:** The prices charged for the stores supplied under contract by the contractor shall in no way exceed the lowest price at which the contractor sells the stores or offer to sell stores of identical description on similar terms and conditions to any person/Organization including the purchaser or any department of the Central Govt. or any Deptt. of the State Govt. or any statutory undertaking of the Central or State Govt. as the case may be during the period till performance of the supply order placed during the currency of the contract is completed.
- (ii) If at any time during the said period the contractor reduces the rate of sale price, sells or offers to sell such stores to any person/Organization including the purchaser or any Deptt. of Central Govt. or any Deptt. of State Govt. or any statutory undertaking of the central or State Govt. as the case may be at price lower than the price chargeable under the contract shall forthwith notify such reduction sale or offer to sell to the Society and the price payable under the contract for the stores supplied after the date of coming into force of such reduction or shall offer to sell shall stand correspondingly reduced.
- (iii) The contractor shall furnish the following certificate alongwith each bill or payment for supplies made against the contract. The supplier has to certify that there has been no reduction in sale price of the stores of description identical to the stores supplied to the Govt. under the contract herein and such stores have not been offered and sold by him on similar terms and conditions to any person/Organization including the purchaser of any Deptt. of the Central Govt. or any Deptt. of the State Govt. or any statutory undertaking of the Central or State Govt. as the case may be upto the date of the bill/date of completion of supplies against the supply order placed during the currency of the contract at a price lower than the price charged to the Society under the contract.

6.10.3 The Punjab Edusat Society reserves the right to carry out the capability assessment of the Bidder. The Society's decision shall be final in this regard.

6.10.4 The Punjab Edusat Society reserves the right to accept or reject any/all tenders without assigning any reason.



6.10.5 The Punjab Edusat Society reserves the right to increase or decrease the quantities of items to be purchased or drop any item all together.

#### 6.11 **ARBITRATION**

6.11.1 All disputes, differences, claims and demands arising under or pursuant to or touching the contract shall be referred to the sole arbitrator i.e. the Principal Secretary/ Secretary to Government of Punjab, Department of Secondary Education. This is notwithstanding the fact that the sole arbitrator may be connected in any manner with the official process of finalizing the Contract. The award of the sole arbitrator shall be final and binding on both the parties under the provisions of the Arbitration and Conciliation Act, 1996 or by statutory modification re-enactment thereof for the time being in force. Such arbitration shall be held at Chandigarh.

#### 6.12 **JURISDICTION**

In all matters and disputes arising hereunder the appropriate Courts at Mohali alone shall have jurisdiction to entertain and try them.



## Annexure-I

### SPECIFICATIONS OF THE RECEIVE ONLY TERMINAL (ROT) SYSTEM

#### 1. Antenna system

<b>Ku-band Rx frequency</b>	<b>10.7 to 12.7 GHz</b>
<b>Ext C-band Rx Freq</b>	<b>4.5 to 4.8 GHz</b>
Aperture:	90 cm (Ku-band)/ 1.2m (Ku-band) /1.8m (Ext C-band)
Gain (Typical)	39 dB @ 11.85 GHz (90 cm antenna) 41.5 dB @ 11.85 GHz (1.2m antenna) 37 dB @ 4.6 GHz (1.8m antenna)
G/T (Minimum) @50° El (At gain specified freq.)	19.0 dB/K (90 cm antenna) 21.5 dB/K (1.2m antenna) 18.0 dB/K (1.8m antenna)
El movement	10-90°
Az Movement	+/- 180°
Wind (Operational)	100 Km/Hour
Wind (Survival)	200 Km/Hour
Mount	Penetrating

Note: (1) Bidder shall provide make, model and detailed specifications of antenna system like reflector type, optics, material, mount type & material, beamwidth, feed return loss and isolation, etc., in his technical proposal.

(2) Bidder shall provide the break-up of the G/T including total noise temp. of the system, in his technical bid.

#### 2. KU Band LNBF

RF Input Frequency Range	10.7-11.7 GHz
IF Output Frequency Range	950-1950 MHz
Noise Figure	0.6 dB, Typical (Ku-band)

(Note: The bidder should choose the LNB noise figure such that the G/T specification of the respective ROT is met)

LO stability @ 25deg C	+/- 1 MHz (Ku-band) or better +/- 1 MHz (Ext C-band) or better
LO stability over full temp range	+/- 2 MHz (Ku-band) or better +/- 2 MHz (Ext C-band) or better
LO Phase noise @ 1 KHz	-55 dBc/Hz, Typical



	@ 10 KHz	-80 dBc/Hz, Typical
	@ 100 KHz	-100 dBc/Hz, Typical
Conversion Gain		57 dB, Typical
Gain Variation		5 dB pk-pk/27 MHz
Image Rejection		45 dB, Min
O/P 1 dB Compression Point		+1 dBm, Typical
Cross Polarization		25 dB, Min
O/P Spurious		-60 dBm, Typ
I/p & O/P VSWR		2.5:1
Operating Temp.		-40 to +60 <sup>0</sup> C
Relative Humidity		Up to 100% condensation and frost

### **3. Digital Set Top Box (DVB-S Satellite Receiver)**

Input Frequency Range	950-2150 MHz
I/P level	-25 to -65 dBm
Channel selection	PLL synthesizer
System	DVB-S
Modulation	QPSK
I/P Impedance	75 Ohm
Connector (I/P)	75 ohm female
Symbol Rate	1 MSPS to 45 MSPS
Video decoder	MPEG-2 ISO/IEC 13818
Video Format	4:3, 16:9
Video Transfer Rate	15 Mbps
TS Data Rate	60 Mbps
Video Resolution	720*576 PAL
Audio Decoder	MPEG-1, MPEG-2, MPEG-Layer3
Audio Mode	Mono, Stereo
Sampling Rate	32, 44.1, 48 KHz
Memory	
FLASH	16 Mb (2 Mbyte)
SDRAM	64 Mb (7 Mbyte)
EEPROM	2 KB/64kB
A/V Output	Video: 1xRCA, Audio: 2xRCA
Data Port	RS 232 up to 115200 bps
Bypass of analog free to air RF	Yes
Power Supply	
I/P Voltage	90-270 V, 50 Hz +/- 5%
Type	SMPS Base AC to DC Converter internal or external
Power Consumption	<20 W
RF Modulator	PAL-B for VHF, PAL-G for UHF
RF O/P Channel	UHF Channel 3/4; Agile/UHF
RF O/P Level	60 dBu V to 80 dBu V



C/N Ratio	44 dB
Physical	
Weight	< 2 Kg
Operating Temperature	0-50 <sup>0</sup> C
Humidity	5-95%, non condensing

#### **4. Cables and Connectors, low loss RG-6 coaxial cable (25 m length) with weather-proof connectors**

#### **5. Installation materials**

#### **6. LCD TV**

##### **SPECIFICATIONS FOR 42" LCD**

##### **LCD PANEL**

Native Display Resolution	1920x1080p
Brightness (cd/m2)	500
Dynamic Contrast Ratio	50,000:1
Viewing Angle	178 <sup>o</sup> x 178 <sup>o</sup>
Response Time (Grey to Grey)	2.7ms
Wide Color Control	*
TruMotion 120Hz	*
Life Span (Typical)	60,000 hours

##### **BROADCASTING SYSTEM**

Analog	*
ATSC/NTSC/Clear QAM	*

##### **VIDEO**

Aspect Ratio	16.9
Aspect Ratio Correction	6 Modes
Just Scan (1:1 Pixel Matching)	
- HDMI <sup>TM</sup>	1080p/1080i/720p
-Component	1080p/1080i/720p
-RF	1080i/720p
Enhanced Noise Reduction (Video Noise Filter)* (3D & MPEG)	
Color Temperature Control	4 Modes
Black Stretcher (Black Level Enhancer)	*
24p Cinema (Film Mode)	*
Picture Reset	*
AV Mode (Picture & Sound)	3 Modes
Picture Selection Mode	8 Modes
ISFccc	*





Intelligent Sensor Mode	*
DTV Signal Strength Indicator	*
AUDIO	
Mono/Stereo/Dual (MTS/SAP)	*
Audio Output Power (Watts - THD 10%)	10W + 10W
Speaker System Details	2 Way 4 System (Invisible Speaker)
Dolby® Digital Decoder	*
Surround System Type	SRS TruSurround XT™
Bass/Treble/Balance Controls	*
Auto Volume Leveler	*
Sound Mode	4 Modes
Mute	*

**\* MEANS all these parameters are required**

### **FULL HD 1080P RESOLUTION**

Displays HDTV programs in full 1920 x 1080p resolution for a more detailed picture.

### **TRUMOTION 120 HZ**

Advance 120Hz panel provides clearer, smoother images, even during fast action scenes creating a more stable structure for a crisper picture.

### **INTELLIGENT SENSOR**

Unlike other sensors which can only sense brightness of ambient light, LG's "Intelligent Sensor" uses 4,096 sensing steps to evaluate its surroundings. Using a sophisticated algorithm, the LG processes picture quality elements including brightness, contrast, color, sharpness and white balance. The result is a picture optimized for its surroundings, more pleasing to watch and which can also save up to 50% in power consumption.

### **249 REAL CINEMA**

Hi-def movies run at the 24 frames per second speed that they were originally filmed in, making your home cinema experience one step closer to a "Real Cinema" experience.

### **CLEAR VOICE TECHNOLOGY**

Automatically enhances and amplifies the sound of human voice frequency range to help keep dialogue audible when background noise swells.



## **7. Wooden 42” LCD Cabinet**

1. Wall mounted Wooden cabinet for Plasma TV will be quoted (this wall-mounted cabinet shall contain only Plasma TV and other equipments like STB and UPS will be kept on table).
2. Made of high quality pre-laminated board with edge banded with PVC beading.
3. Modular knockdown construction for easy transportation and assembly at site.
4. Proper ventilation for heat dissipation.
5. TV partition to be fitted with double doors of sliding type so that they do not project outside in open condition.
6. Ventilation at side using perforated wooden sheet for air circulation
7. Easy opening of front door and facility for locking.
8. Master key, which can be used to open locks of all the supplied cabinets
9. Two standard cable-manager holes of about 3”dia to be provided.
10. Protection from access to rodents, rats, etc.
11. The front view of the cabinet is given below for indicating the type of cabinet and arrangement required for Plasma and STB. Bidder shall give detailed drawing and photograph of the proposed wooden cabinet in his technical proposal.

## **8. UPS**

Bidder shall compulsorily quote for APC make, model no. APC Smart UPS SUA1000uxi UPS. However, Bidder is also at liberty to propose/quote, additionally, other reputed make/model of equivalent UPS with following minimum specifications:

Capacity in VA                      600 VA and 1KVA, typical

NOTE: This is only tentative specification. Bidder should choose the VA ratings considering the overall consumption of all the indoor equipment including set top box, 42” LCD TV, whichever is opted. Bidder shall submit, in his technical proposal, the detailed break-up for total power consumption plasma TV to substantiate the rating selected by him.



1	UPS Make & Model No	Bidder to specify
a)	<u>TOPOLOGY</u>	Line Interactive UPS
b)	<u>OUTPUT</u> Output power capacity (VA)  Power factor Output power capacity (W)  Nominal output voltage Output Voltage Note Output Voltage Distortion Output Frequency (sync to mains) Crest Factor Waveform type Output Connections	1000va and 600Va (UPS with both capacities to be quoted)  0.8 800V/480 VA  230V 220/230/240V less than +/- 5% at full load 47- 53 Hz Up to 5 :1 Sine wave 8 nos of IEC320 and 2 nos of IEC jumpers
c)	<u>INPUT</u> Nominal input voltage Input frequency Input Connection Type Input voltage range for main operations Input voltage adjustable range for mains operation	230V 50Hz +/- 3Hz IEC-320 C14 160 - 285V  151 - 302V
d)	<u>BATTERIES</u> Battery type Battery make / Model No  Backup time (in hours) from 90% to 20% battery charged conditions  AH Rating of Individual Batteries Total VAH of the Battery Bank for 4 hours Battery charging  Battery charging time	Sealed Maintenance free OKAYA/YUASA  <b>Minimum 4 hrs back up on full load of UPS rating</b> <b>Minimum 8 hrs backup on full load of ROT</b> <b>Vendor to specify depending on the load</b>  Vendor to specify  Vendor to specify  Temperature compensated battery charging



		6 hours for 90% charging at full load and 8 hours for 100% charging (Vendor to specify the ampere rating of the charger)
	Battery transfer time	4 msec or better
<b>e)</b>	<b>COMMUNICATIONS &amp; MANAGEMENT</b> Interface port USB connectivity Inverter Efficiency Overall Efficiency Monitoring Software Automatic restart of load Automatic self test Cold start capability Generator compatible  LED display  Alarms  Operating Temperature Operating Humidity Noise level Approvals	RS232 Included 90% 90% to be included Included Every 14 to 21 days To be included To provide clean uninterrupted power when genset is used Online, On battery, Replace battery, overload On battery, Low battery  0 to 50 deg C 0-95% non condensing less than 45dBA CE, C- tick, EN50091-1, EN50091-2
<b>f)</b>	Protections Surge protection  Sustained input over voltage protection  Sustained Short circuit protection  Full time EM/RFI suppression	As per IEC 61000-4-5 Class3 & Testing to be done as per IEC 61000-4-5 (protection against up to 2KVA surges)  Protection Up to 440 V sustained input for long duration  To be provided Yes

**NOTE**

1. UPS of only standard brands need to be quoted (APC, NUMERIC, TRITRONICS).
2. Bidder, in his technical bid, shall submit the documentary evidence (copy of the purchase orders/certificates of satisfaction issued by previous customers, etc.) substantiating the ruggedness and reliability of the projectors.
- 3. UPS will carry warranty for 36 months**



## Annexure-2

### Format for submitting the Commercial bid

The vendor will submit the quote for following items in the quantity slabs of 1-100 Nos., 101-500 Nos., 501-1000 Nos., and more than 1000 Nos., strictly in the format given below:

Sl. No.	Items	Make & Model (to be provided compulsorily)	Cost			
			1 to 100 Nos.	101 to 500 Nos.	501 to 1000 Nos.	More than 1000 Nos.
1.	0.9m Ku-band antenna, feed, mount, powder coated for outside weather					
2.	LNBF					
3.	Digital set top box with remote control for DVB-S					
4.	(a) 42" Plasma TV with remote control with wall mounted accessories					
5.	1. Wall mounted wooden cabinet for plasma TV					
6.	a. UPS 1KVA					
	b. UPS 600 VA					
<b>Services</b>						
9	Installation and Commissioning					
10	One year warranty and comprehensive AMC for 2 Years (AMC to be quoted in terms of the percentage of the material cost excluding the cost of the services) Except UPS and LCD TV					
11	Un-installation, and reinstallation of the ROTs at other site (shifting of the site), if required	Quote for different quantity slabs of 1to 5 Nos, 6-10 Nos., 10-20 Nos and more than 20 Nos.				



12	Others, if any (*)	
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(\*) not to be accounted for evaluation for lowest bidder. The remaining 11 items will be considered for deriving L1 Bidder. (Price of UPS 600 VA will be accounted for L1 bidder).

**NOTE**

The prices for different quantity slab of the lowest bidder will be treated as 'Rate-Contract (RC) for next ONE Year during which PUNJAB EDUSAT SOCIETY may place the order multiple times for different quantities, depending on requirement.

**Installations and commissioning are included in the cost**