

BID DOCUMENT

For

SITC of Upgradation & Replacement of Earth Station at DDK Guwahati, Shillong and Aizawl

Bid document Ref: 14(3)2026-27EI(P)TV

BID DUE DATE & TIME FOR ONLINE SUBMISSION	30/09/2026 12:00 Hrs.
BID DUE DATE & TIME FOR BID OPENING	30/09/2026 13:00 Hrs.

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ABBREVIATIONS USED IN THE DOCUMENT

SL NO.	ABRIVIATION	FULL FORM
1	BDS	Bids Data Sheet
2	CPPP	Central Public Procurement Portal
3	CVC	Central Vigilance Commission
4	DP	Delivery Period
5	DSC	Digital Signature Certificate
6	EMD	Earnest Money Deposit
7	FOR	Free on Rail/Road
8	GST	Goods and Service Tax
9	GSTIN	Goods and Service Tax Identification Number
10	GTC	General Terms & Conditions
11	HSN/ SAC	Harmonized System Nomenclature / Service Accounting Code.
12	IEM	Independent External Monitor
13	IFB	Invitation for Bid
14	INR	Indian Rupees
15	IP	Integrity Pact
16	ITB	Instructions to Bidders
17	JV	Joint Venture
18	L-1	Lowest Tender
19	LPP	Last Purchase Price
20	MSME	Micro, / Small & Medium Enterprise
21	NEFT	National Electronic Funds Transfer
22	OEM	Original Equipment Manufacture
23	PBG	Performance Bank Guarantee
24	RTGS	Real Time Gross Settlement
25	SITC	Supply, Installation, Testing & Commissioning.
26	SETC:	Supply, Erection, Testing & Commissioning.

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INVITATION FOR BID (IFB)

Ref No: 14(3)2026-27EI(P)TV

Dated : 24/08/2026

To,

SUB: SITC of Upgradation & Replacement of Earth Station at DDK Guwahati, Shillong and Aizawal

Dear Sir/Madam,

1.1 On behalf of the Prasar Bharati (India's Public service Broadcaster), Doordarshan, Digitally signed E-tenders are invited from eligible bidders in the prescribed Bid Proforma under Two bid system for SITC of Upgradation & Replacement of Earth Station at DDK Guwahati, Shillong and Aizawal for the subject in complete accordance with the following details and enclosed Bid Documents, as prescribed at Annexure, Form No.1 to 14. The details of tender are given below:

1.2 Bids Data Sheet: The brief details of the tender are as under:

1.2.1 Tender Inviting Authority	Prasar Bharati (Broadcasting Corporation of India) Director General, Doordarshan
1.2.2 Name of the Supply /Work	SITC of Upgradation & Replacement of Earth Station at DDK Guwahati, Shillong and Aizawal
1.2.3 Tender Reference No.	14(3)2026-27EI(P)TV
1.2.4 Place of availability of Tender Documents (RFPs)	1. Procurement Portal of Prasar Bharati https://prasarbharati.eproc.in 2. Website of Prasar Bharati, https://prasarbharati.gov.in/ 3. Central Public Procurement Portal (CPPP): https://www.eprocure.gov.in
1.2.5 Estimated Cost of the Tender	Rupees Eleven Crore Fifty Lakhs only (Rs. 11,50,00,000/-)
1.2.6 Tender Processing Fee	As per Para 2.1.7 of "Instructions to Bidder"
1.2.7 Earnest Money Deposit (EMD)	Earnest Money Deposit (EMD) @ 4% of estimated value is Rs 46,00,000/- (Forty Six Lakhs only)
1.2.8 Address to send Pre bid Queries Video Conference	Meeting queries in the prescribed Form No. 13 Email: <ddpurchase401@yahoo.co.in>
1.2.9 Nature of bid process	Two BID System 1. Technical Bid 2. Commercial Bid
1.2.10 Broad Scope of Work	As per specs no. SATD/Upgradation & Replacement of Earth Stations at DDK Guwahati, Shillong and Aizawl/Aug 2026 dated 10/08/2026 of Annexure-D
1.2.11 Bid Validity up to:	120 (One Hundred Twenty) days from the date of opening of Technical Bid.
1.2.12 Bid Bond Validity up to :	165 days (Bid validity +45 days beyond bid validity.)

1.2.13	Date of publication of Bid	24/08/2026								
1.2.14	Last Date & Time for Submission of written queries by bidders	09/09/2026 17:00 Hrs								
1.2.15	Date & Time of Pre- bid Conference	07/09/2026, 15:00 Hrs onwards								
1.2.16	Place for Pre-bid meeting (could also be processed through e-procurement portal)	Malgudi conference hall, 5th Floor, Tower-A, Doordarshan Bhawan, New Delhi Queries may be sent by email at ddpurchase401@yahoo.co.in or Queries for Pre-bid may be uploaded on the Procurement Portal of Prasar Bharati, http://prasarbharati.eproc.in in the prescribed format, Form No.13								
1.2.17	Opening of Technical bid	30/09/2026 ; 13:00 Hrs								
1.2.18	Opening of Commercial bids	To be informed later								
1.2.19	Address for Communication	ASSISTANT DIRECTOR (ENGG.) ROOM NO. 403 DIRECTORATE GENERAL: DOORDARSHAN DOORDARSHAN BHAWAN, COPERNICUS MARG, NEW DELHI- 110001 (INDIA) TELEPHONE -011-23114403								
1.2.20	Paying Authority	<table><tr><td>S. No.</td><td>Bill Processing Zone</td><td>Paying Authority</td></tr><tr><td>1</td><td>East Zone</td><td>PAO, Doordarshan, Akashwani Bhawan, Eden Garden, Kolkata, West Bengal</td></tr></table>	S. No.	Bill Processing Zone	Paying Authority	1	East Zone	PAO, Doordarshan, Akashwani Bhawan, Eden Garden, Kolkata, West Bengal		
S. No.	Bill Processing Zone	Paying Authority								
1	East Zone	PAO, Doordarshan, Akashwani Bhawan, Eden Garden, Kolkata, West Bengal								

Note: In case the days specified above happen to be a holiday in Prasar Bharati, the next working day shall be implied.

- 1.3 Instructions to Bidders: As per Appendix-A
- 1.4 General Terms and Conditions: As per Appendix-B
- 1.5 Bid Evaluation Criteria : As Per Appendix-C
- 1.6 Delivery Period: As per Appendix-D (As per Clause 8.5 of Specification no. SATD/Upgradation & Replacement of Earth Stations at DDK Guwahati, Shillong and Aizawl/Aug 2026 dated 10/08/2026)
- 1.7 Technical Specification: As per Appendix-D
- 1.8 The Bid Security/Performance Security from any Indian scheduled Commercial Bank would be acceptable.
- 1.9 Warranty/Guarantee: Required as per Clause 8.3 of Specification no. SATD/Upgradation & Replacement of Earth Stations at DDK Guwahati, Shillong and Aizawl/Aug 2026 dated 10/08/2026 and Clause 3.9 of Appendix-B (General Terms and Conditions)
- 1.10 **Performance Security Deposit:** Required as per Clause 3.8 of Appendix-B (General Terms and Conditions) and Annexure- 14 (Form -14).

- 1.10.1 Amount to be **5%** of the value of the contract (To be filled by the Purchase unit; depending on the market conditions and commercial practice for the particular kind of goods, an amount, three to ten percent of the value of the contract, as specified in Rule 171(i) of GFR, 2017.)
- 1.10.2 Performance security shall be valid up to two months after completion of work /supply/end of guarantee whichever is later.
- 1.11 Bids shall be submitted in electronic mode only as per the ITB; EMD/Bid Security have to be submitted in physical/net banking form by the bidder before the due date & time of the opening of the bid, and copy of the same shall also be uploaded along with the Technical Bid within the Due Date & Time of Bid Submission, to the address mentioned in Bid Data Sheet (BDS).
- 1.12 Bidder(s) are advised to submit their bid strictly as per terms and conditions of the Tender Documents and not to stipulate any deviations.
- 1.13 A Nil deviation Certificate as mentioned in the Form-6 shall have to be essentially submitted by the Bidder along with the Technical Bid.
- 1.14 The Tender will be governed by the “Instruction to the Bidder” as per Appendix-A; “General Terms and Conditions” placed at Appendix-B and “Technical Specifications” at Appendix-D. The contract will be governed by Indian laws including the Indian Contract Act, 1872; the Sale of Goods Act, 1930; Right to Information Act, 2005; The Micro, Small and Medium Enterprises Development Act, 2006; Prevention of Corruption Act, 1988; and Arbitration and Conciliation Act, 1996, etc, as amended from time to time. The contract will also be governed by General Financial Rules, 2017, Manual for procurement of goods and works 2017 and 2019, Delegation of Financial Power Rules and any other financial, vigilance, security, safety, counter- trade and other regulatory aspects, orders and guidelines of the Government on the subject of Public Procurement as amended from time to time in so far as they are applicable and not inconsistent with the conditions mentioned in the tender document.
- 1.15 Prasar Bharati will follow the reciprocal market access strategy of the Government of India, which describes on the Clause 10 (d) of Public Procurement Preference to Make in India, Order 2017. The Purchaser reserves the right to not consider any Bid and may restrict such Bidders from the bidding process who originate from those countries, where they do not allow market access for Indian companies; in such cases, the Clause 10(d) of Public Procurement Preference to Make in India, order 2017, shall be invoked wherever applicable, when it is relevant.
- 1.16 Single Stage Two Bid Systems shall be followed for this tender. Bidders should take due care to submit tenders in accordance with Bid requirements as specified in clause 2.1 of “Instruction to Bidders” (Appendix-A). Bid evaluation Criteria at Appendix-C shall be the basis for evaluation of tenders.
- 1.17 For Payment terms pertaining to Supply contracts and SITC/SETC Contracts, please refer to clause 2.24 of the tender document.
- 1.18 As per clause 171(1) of CGST Act, 2017 which relates to anti-profiteering measure, any reduction in rate of tax on any supply of goods and or services or both, the benefit of input tax credit shall be passed on to the recipient by way of commensurate reduction in prices.
- 1.19 THE FOLLOWING SHOULD BE SUBMITTED ALONG WITH THE TENDER.
- 1.19.1 Original Equipment's Manufacturer's authorization for equipment quoted.
- 1.19.2 Documents as specified in Technical specifications at Appendix-D
- 1.20** Paying Authority:

S. No.	Bill Processing Zone	Paying Authority
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1	East Zone	PAO, Doordarshan, Akashwani Bhawan, Eden Garden, Kolkata, West Bengal
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Note:-Supplier has to provide Consignee-wise Tax Invoices to respective Bill Processing Authorities. The GST Compliant Invoices should have firm's GSTIN & Consignee GSTIN.

- 1.21 Prasar Bharati follows e-tendering Process; Bid shall be submitted only on <http://prasarbharati.eproc.in>. The responsive Bids shall be decided according to various aspects mentioned in ITB, GTC and Eligibility conditions mentioned in the Bid Document. Before the Bid submission, Bidders are advised to refer the help manuals and general FAQs provided in the E-procurement Portal regarding the e-tendering.
- 1.22 Clarification(s)/Corrigendum(s) if any shall also be available on referred above websites, Para 1.2.4. Any revision, clarification, addendum, corrigendum, time extension, etc. to the Tender Document will be hosted on the above mentioned website(s) only. Bidders are requested to visit the website regularly to keep themselves updated.
- 1.23 **EVALUATION METHODOLOGY:** Price evaluation shall be as under: The "Schedule of Rates / Prices" quoted for complete scope of work /Supply inclusive of GST shall be taken up for evaluation, **on overall L-1 basis**.
- 1.24 Purchase Preference (Linked with Local Content): Applicable as per government guideline/Tender Document. (Refer Para 4.6)
- 1.25 In case any cess on GST is applicable same shall also be considered in evaluation.
- 1.26 The Bidders shall quote on FOR destination basis only.

For & on behalf of Prasar Bharati,

Name:

Designation: Assistant Director (Engg.)

E-mail ID : ddpurchase401@yahoo.co.in

Contact No. : 011-23114403/23114401

INSTRUCTION TO BIDDERS (ITB)**2.1 INSTRUCTIONS TO BIDDERS FOR ONLINE BID SUBMISSION:**

- 2.1.1** The scope of work / Supply of stores to be tendered are available in the complete bid documents which can be viewed / downloaded free of cost from e-procurement portal of Prasar Bharati, <https://prasarbharati.eproc.in>, or from the website Prasar Bharati, www.prasarbharati.gov.in or CPP Portal <http://eprocure.gov.in>.
- 2.1.2** Both Technical Bid and Financial Bid will be submitted concurrently duly digitally signed on the website <https://prasarbharati.eproc.in>
- 2.1.3** No claim shall be entertained on account of any Technical snag or disruption of internet service being used by bidders. Bidders are advised to upload their bids well in advance to avoid last minute technical snags.
- 2.1.4** All Corrigendum/Amendment/Corrections, if any, will be published on the website <https://prasarbharati.eproc.in>
- 2.1.5** All documents / papers uploaded / submitted by the bidder must be in English and legible.
- 2.1.6** It is mandatory for all the applicants to have Class-III Digital Signature Certificate, with both DSC Components i.e. signing & Encryption, (in the name of the person who will sign the bid document) from any of the licensed Certifying Agency. Bidder may contact the Service provider of e-procurement Portal, at mobile no. +91-8130606629 for DSC related queries or can email at vikas.kumar@c1india.com/prasarbharatisupport@c1india.com.
- 2.1.7** The Bidders/ Vendors shall be charged the Processing Fees in according with the Estimated Cost of respective Tenders. The following are the charges to be paid by the Bidders /Vendors on the e-procurement portal:

Estimated value of Tender	Processing fees	
	Per Tender Bidder	Total including GST
Less than or Equal to Rs. 10 Lakhs	₹ 475.00 + 18 % GST	₹560.50
More than 10 Lakhs but Less than or equals to 50 Lakhs	₹ 925.00 + 18 % GST	₹1091.50
More than 50 Lakhs	₹ 1150.00 + 18 % GST	₹1357.00
Annual charges for Online Bidder / Vendor for the Registration	₹ 450.00 + 18 % GST	₹531.00

- 2.1.8** To participate in the e-bid, it is mandatory for the Applicants to get themselves registered with the Prasar Bharati e-Tendering Portal (<https://prasarbharati.eproc.in>) to have a user ID & Password which has to be obtained by submitting a non-refundable annual registration charges of Rs. 450/- plus 18% GST through online mode (net banking/debit card/credit card). Validity of Registration is 1year.

- 2.1.9 Page No. shall be given on each and every paper/documents serially uploaded in the technical bid.
- 2.1.10 Bidders shall ensure to quote rate of each item. If any cell is left blank and no rate is quoted by the bidders, the rate of such item shall be treated as “0” (Zero).
- 2.1.11 To participate in bidding, bidders have to pay Tender Processing Fee as mentioned in the Para 2.1.7 through online mode (net banking/debit card/credit card).
- 2.1.12 The Bidder may modify or withdraw their bid after submission prior to the Bid Due Date. No Bid shall be modified or withdrawn by the Bidder after the Bid Due Date and Time.
- 2.1.13 The Bid Security/Earnest Money shall be in the form of Account Payee Demand Draft, NEFT/RTGS (**SBI Account Number: 11084233516, IFSC Code : SBIN0000691**) from any scheduled bank (s), Fixed Deposit Receipt) FDR, Insurance Surety Bonds, Bankers Cheque or Bank Guarantee from an India scheduled Commercial Bank (including e-bank Guarantee), in favour of PB:BCI, DG:DOORDARSHAN, NEW DELHI In case of EMD Exemption, letter along with NSIC Certificate for MSME in the concerned category of the Tendered items, (Ref Format “Form-3, MSME Exemption”) will be submitted.
- 2.1.14 Bid Security/EMD shall be placed in a single sealed envelope superscripted with tender reference no. and date of opening so as to reach <Asstt. Director Engg. (Purchase)/Assistant Engineer (Purchase) in Room No.403, Directorate General: Doordarshan, Doordarshan Bhawan, Copernicus Marg, New Delhi> before scheduled time on prescribed tender opening date. EMD received after Tender opening date shall be summarily rejected along with the corresponding Tender. Hard copy of any other tender document shall not be accepted. Soft copy of the EMD should be uploaded while submitting bids on e-tendering portal.
- 2.1.15 Micro and Small Enterprises (MSEs) as defined in MSE Procurement Policy issued by Department of Micro, Small and Medium Enterprises (MSME) or are registered with the Central Purchase Organisation or the concerned Ministry or Department or Start-ups as recognised by Department of Industrial Policy & Promotion (DIPP) shall be exempted from payment in respect of cost of Earnest Money as per the Government instructions on the subject on submission of documentary evidence of valid Registration in the concerned category of the Tendered items.
- 2.1.16 The successful bidders will be required to furnish Performance Security Deposit within 30 days of placement of contract at the rate of **Five (5) %** (three to ten per cent of the value of the contract,(Ref: Circular-05/PP/2023 Dated 06/05/2023 issued by Procurement Policy Wing of Prasar Bharati) in one of the acceptable forms as per tender documents. Performance Security shall be in the form of Account Payee Demand Draft, Insurance Surety Bonds, NEFT/RTGS from any scheduled bank (s) Fixed Deposit Receipt (FDR), Bankers Cheque or Bank Guarantee (including e-Bank Guarantee from an India scheduled Commercial Bank in an acceptable form.
- 2.1.17 Technical Bid must contain scanned copy of Unconditional Acceptance of Prasar Bharati’s Tender Terms &Conditions, GST details and EMD etc.
- 2.1.18 In case of payment through net-banking the money will be immediately

transferred to Prasar Bharati's designated Account through NEFT/RTGS from any scheduled bank(s), the bidder will have to furnish the UTR Remittance Number(s) before submission of bid, payment details shall also be uploaded on e-procurement portal along with Bid. The payment of EMD through NEFT /RTGS mode should be made well ahead of time to ensure that the EMD amount is transferred to Prasar Bharati account before submission of bid.

- 2.1.19** The financial Bid shall be opened only of those Bidder(s) found to be meeting the Technical qualifying requirements. In case of nonresponsive Bids, Financial Bids shall not be opened. The opening date of financial bid will be decided later on and same will be informed to eligible Bidders in advance.
- 2.1.20** Bidders are advised to submit written queries in advance of the Pre-Bid Meeting. The Form # 13 can be used for this purpose. The Pre-Bid queries may also be submitted through e-procurement portal of Prasar Bharati. After the Meeting, the techno-commercial requirements may be revised, if considered necessary. After that no request/query will be entertained.
- 2.1.21** Prasar Bharati reserves the right to accept or reject any or all applications without assigning any reasons. Prasar Bharati also reserves the right to annul the tender process at any stage without assigning any reason.
- 2.1.22** If any clarification is needed from the bidder about the deficiency in his uploaded documents, he will be asked to provide it through e-procurement portal of Prasar Bharati. The bidder shall upload the requisite clarification/documents within time specified by Prasar Bharati, failing which tender will be liable for rejection.
- 2.1.23** Prasar Bharati reserves the right to reject whose performance at ongoing Supply/ Work(s) is below par and usually poor and has been issued letter of restrain/Temporary/Permanent debar by any office of Prasar Bharati, Government or Public sector. (Rule 151, GFR 2017) Prasar Bharati reserves the right to verify the credential submitted by the agency at any stage (before or after the award of the work). If at any stage, any information /documents submitted by the applicant is found to be incorrect/false or have some discrepancy which disqualifies the firm then Prasar Bharati shall take the following action:
 - 2.1.23.1** Forfeit the entire amount of EMD submitted by the firm.
 - 2.1.23.2** The agency shall be liable for debarment from tendering in Prasar Bharati, apart from any other appropriate contractual/legal action.
 - 2.1.23.3** Public procurement policy for Micro, small and medium enterprises registered under MSME shall be followed as per the directives of Government of India prevailing at the date of acceptance
- 2.1.24** Bidders have to submit a GST Registration Certificate while uploading the tender.
- 2.1.25** Bidders shall separately indicate the HSN/SAC code, rate and amount of GST for each quoted item as applicable on the date of tendering in their offer, failing which the offer may be rejected.
- 2.1.26** IGST and Compensation Cess (wherever applicable) will be levied on imports.

2.1.27 Terms & Conditions given in Technical specifications will supersede for conflict with any terms & conditions given in Tender Document.

2.1.28 For Consortium / Joint Venture: :

In case of a Consortium/JV, Power of Attorney issued by Board of Directors/ Chairman/CEO / MD / Company Secretary of the Consortium Lead Member as well as Consortium Member(s) of the Consortium/ partners of JV, in favour of the authorised employee(s) of the Consortium /Lead member of JV, for signing the documents on behalf of the Bidder, in respect of this particular tender, to sign the Bid and all subsequent communications, agreements, documents etc. pertaining to the tender and act and take any and all decisions on behalf of the Consortium/JV, are to be submitted.

2.1.29 The authorized employee(s) of the Bidder shall be signing the Bid and any consequence resulting due to such signing shall be binding on the Bidder.

2.1.30 Bids from consortium/ JV of two or more members (maximum 3 nos. Including Leader) are acceptable provided that they jointly fulfill the qualification criteria and requirements stated in the Tender Documents. Participating Consortium/ JV shall submit the Agreement, clearly defining the scope and responsibility of each member. Members of consortium/ JV shall assume responsibility jointly & severally. The bid security shall be submitted by the Lead Bidder of the Consortium/ JV. In case of award, payment shall be made to the Lead Bidder of the Consortium/JV.

2.1.31 The Consortium/ JV Agreement must clearly define the Consortium Leader/ Lead Partner of JV, who shall be responsible on behalf of the Consortium/JV during the period of evaluation of the bid as well as during the execution and timely completion of all the contractual obligations and shall receive/ send instructions for and on behalf of the Consortium/JV..

2.1.32 A Consortium/ JV once established at the time of submitting the Bid shall not be allowed to be altered with respect to constituting members of the Consortium/ JV or their respective roles/ scope of supply/work, except with prior written approval of Prasar Bharati. If during the evaluation of bids, a Consortium/ JV propose any alteration/ changes in the orientation of Consortium/JV or replacements or inclusions or exclusions of any partner(s)/ member(s) which had originally submitted the bid, bid from such Bidder shall be liable for rejection.

2.1.33 Any member of the Consortium/ JV shall not be eligible either in an individual capacity or be a part of any other Consortium/JV to participate in this tender. Further, no member of the Consortium/ JV should have been put on 'Holiday' or banned/ blacklisted by Prasar Bharati/ Government department/ Public Sector as on the due date of submission of bid. Offer submitted by such Consortium/ JV shall not be considered for opening/evaluation/Award.

2.2 ONE BID PER BIDDER

2.2.1 A Bidder shall submit only 'one [01] Bid' in the same Bidding Process. A Bidder who submits or participates in more than 'one [01] Bid', will cause all the Bids in which the Bidder has participated to be disqualified.

2.2.2 Alternative Bids shall not be considered.

- 2.2.3 Any Bidder having formed a JV/Consortium shall not be considered eligible to make JV/ consortium with any other bidder or form part of any other JV/Consortium and submit a Bid for the same tender.
- 2.3 COST OF BIDDING**
- 2.3.1 The Bidder shall bear all cost associated with the preparation and submission of the Bid including but not limited to Documentation Charges, Bank charges, all courier charges, translation charges, authentication charges and any associated charges including taxes & duties thereon. Further, Prasar Bharati will in no case be responsible or liable for these costs, regardless of the outcome of the bidding process.
- 2.3.2 The Bidder shall not be entitled to hold any claim against Prasar Bharati for non- compliance due to lack of any kind of pre-requisite information as it is the sole responsibility of the Bidder to obtain all the necessary information with regard to site, surrounding, working conditions, weather etc. on its own before submission of the Bid.
- 2.4 **For more information regarding submission of Bid in the e- Procurement portal, Bidders may refer the help manuals and, General FAQs (Frequently Answered Questions) about the e-Tendering, which has been provided in the Portal.**
- 2.5 **LIST OF DOCUMENTS (to be uploaded with tender):**
- 2.5.1 **PART-I: "TECHNO-COMMERCIAL / UNPRICED BID"**
- 2.5.1.1 'Covering Letter' on Bidder's 'Letter head' clearly specifying the enclosed contents.
- 2.5.1.2 'Bidder's General Information', as per 'Form-1' along with Copy of 'PAN' and 'GST' registration and 'Bid Form', as per 'Form-2'
- 2.5.1.3 Scanned copy of EMD along with Form-4 or Declaration of MSME as per Form-3
- 2.5.1.4 Copies of documents required as per 'Form -5 (May be modified, if required) and as mentioned elsewhere in the Tender Document.
- 2.5.1.5 Nil deviation Certificate as per 'Form-6'.
- 2.5.1.6 Declaration regarding Holiday/Banning, in 'Form-8
- 2.5.1.7 Letter of Authority' on the Letter Head, as per 'Form-9
- 2.5.1.8 DD's Tender Document along with Technical Specifications should be duly signed on each page.
- 2.5.1.9 Original Equipment's Manufacturers (OEM) Authorization for Equipment quoted.
- 2.5.1.10 Letter of authority to sign and upload bid documents.
- 2.5.1.11 Undertaking regarding Fall Clause as mentioned in Para 3.22.3
- 2.5.1.12 Enclosures as per Commercial requirement.
- 2.5.1.13 Enclosures as per Technical requirement (as per Technical Specification attached in Appendix -D)
- 2.5.1.14 **Certificates for Local Content as per Form-11.**
- 2.5.1.15 Duly filled and signed Integrity Pact / Undertaking as per Form 12A (for estimated contract value of Rs. Two Crore or more) / 12B (for less than Rs. Two Crore).
- 2.5.1.16 Certificates as mentioned on Para 2.33.8 along with evidence of valid registration by the Competent Authority to be attached, if applicable.
- 2.5.1.17 Any other information/details required as per Tender Document

- 2.5.2 PART-II: Price Bid (APPENDIX-F - Schedule of Rate)**
(As per the Tender, the reference of the Schedule of Rate may be specified here)
- 2.6** All GTC attached with the “Invitation to Tender” are sacrosanct for considering any offer as a complete offer. It is therefore important that all documents duly completed and signed are returned with the Bidder’s offer.
- 2.7** Prasar Bharati shall have all right to ignore any offer which fails to comply with the above instructions.
- 2.8** The Bid shall be submitted online not later than the time specified in the tender document, or on the notified date of closing of the tender. Offers sent through any mode other than uploading on e-procurement portal of Prasar Bharati will not be accepted.
- 2.9** Any change in quotation after opening of tender will not be considered. Bidders must ensure that all the documents / files uploaded on e- procurement portal are in order and legible in all respect. Prasar Bharati will not be responsible for any documents / files illegible or corrupted due to any disruption/ technical snag of internet service being used by the bidders.
- 2.10 VAGUE AND INDEFINITE EXPRESSION**
Tenders qualified by vague and indefinite expressions such as "subject to immediate acceptance" or "subject to prior sale" etc. will not be considered. Unconditional Bids shall only be considered.
- 2.10.1 VALIDITY PERIOD OF OFFER**
- 2.10.1.1** The Tender shall be valid for acceptance for the period as indicated in the "Invitation to Bid" (hereinafter referred to as validity period) and shall not be withdrawn on or after the opening of tenders till the expiration of the validity period or any extension thereof.
- 2.10.1.2** The offers of these Bidders who have not kept the validity open till the period stipulated in the tender will be treated as unresponsive and will be ignored without making any back reference.
- 2.10.1.3** The Bidder will undertake not to vary/modify the tender during the validity period or any extension thereof.
- 2.11 OPENING OF TENDERS**
- 2.11.1** The tender will be opened online on the e-tendering portal of PrasarBharati<https://prasarbharati.eproc.in> at the time specified in the tender document, on the date of opening indicated in the "Invitation to Bid.", in the presence of bidders' authorized representatives who choose to attend.
- 2.11.2** In case of unscheduled holiday on the closing/opening day of tender, the next working day will be treated as scheduled prescribed day of closing/opening of tender; the time notified remains the same.
- 2.11.3 PRICES FOR BIDDERS**
Bidders are to quote in INR only on FOR Destination basis.
- 2.12 VARIATION OF QUANTITIES (Ref: PARA 7.5.3 MFP 2017)**
At the time of awarding the contract, Prasar Bharati shall have right to re-judge

the quantity to be procured based on the current data, since the ground situation may have very well changed. The tendered quantity can be increased or decreased by 25 (Twenty-Five) per cent for ordering, if so warranted.

2.13 OPTION CLAUSE:

Prasar Bharati reserves the right to increase/decrease the ordered quantity by up to 25 (Twenty Five) per cent at any time, till final delivery date (or the extended delivery date of the contract), by giving reasonable notice even though the quantity ordered initially has been supplied in full before the last date of the delivery period (or the extended delivery period)

2.14 TAX LIABILITY

2.14.1 The Bidder shall be entirely responsible for all taxes, duties, license fees, etc., incurred till its final manufacture/ production up to the point of delivery. Further instruction, if any, shall be as provided in the Schedule of Requirements.

2.14.2 Payment of CGST/SGST/UTGST/IGST and all other applicable taxes (on ultimate products and Services) and custom duty, as applicable on the closing date of tender will be to supplier's /contractor's account. In the case of "Two Bid" system where revised price bids are permitted after technical discussions payment of these charges as applicable on closing day of revised price bids, will be to supplier's /contractor's account. Any increase over the rate existing on the last date of submission of Bid shall be reimbursed by the Organisation on production of documentary evidence in support of payment actually made to the concerned authorities. Similarly, if there is any decrease in such duties, taxes and levies the same shall become recoverable from the contractor. The details of such duties, taxes and other levies along with rates shall be declared by the bidder.

2.14.3 The bidder(s) will indicate in their bid the amount with exact rate of customs duty and the applicable item of custom tariff under which it is covered. Similarly, the amount of CGST/SGST/UTGST/IGST and all other applicable taxes on ultimate furnished product with HSN/SAC code, as applicable at tendering stage will be shown separately in the bid. In case the above information subsequently proves wrong incorrect or misleading

(a) This Organization will have no liability to reimburse the excess in the difference in rates of the item under which the duty/ tax assessed finally

(b) This Organization will have the right to recover the difference in case the rate of duty/ tax finally assessed is on the lower side.

2.14.4 Contractor shall ensure timely submission of invoice(s) as per rules/ regulations of GST with all required supporting document(s) to enable Prasar Bharati to avail Input Tax Credit (ITC). Further, returns and details required to be filed under GST laws & rules should be timely filed by supplier with requisite details.

2.14.5 If input tax credit (ITC) with respect to GST (CGST & SGST/UTGST or IGST) which normally shall be available to Prasar Bharati, is not available, for any reason, which is not attributable to Prasar Bharati, then Prasar Bharati shall not be obliged or liable to pay or reimburse GST (CGST & SGST/UTGST or IGST) charged in the invoice(s) and shall be entitled to/ deduct/ setoff/ recover the such GST (CGST & SGST/UTGST or IGST) thereupon together with all

penalties and interest if any, against any amounts paid or payable by Prasar Bharati to Supplier/ Vendor.

2.14.6 The rates and prices quoted by the Bidder shall be fixed for the duration of the contract and shall not be subject to variations on any account except to the extent variations allowed as per the conditions of the contract of the bidding document.

2.15 TRADE/ VOLUME DISCOUNT

Bidders will not indicate a separate discount. Discount, if any, should be merged in the rates against the quoted items(s). Discount of any type indicated separately will not be taken into account for evaluation purposes.

2.16 ELIGIBILITY CRITERIA

2.16.1 Bids should preferably be from original manufacturers, however, Bids from sole selling agents/authorised distributors/authorised dealers can also be considered provided such bids are accompanied with necessary supporting documents/authority letter from concerned original manufacturer who authorised them to market their product, provided further, such an authority letter is valid at the time of bidding. Required Warranty Cover of the manufacturer for the product will be provided by such a supplier through OEM. The Bidder shall not be under a declaration of ineligibility by Purchaser for Corrupt/ Fraudulent/ Collusive/ Coercive practices,

2.16.2 The Bidder is not put on 'Holiday' by Prasar Bharati or any of the Government departments, Public Sector or banned/blacklisted by Government department/ Public Sector on the due date of submission of bid. If the Bid submitted by such Bidder shall not be considered for opening/ evaluation/ award and in case of Manual Tendering, such Bid along with the Bid Security, if any, will be returned immediately to the Bidder.

2.16.3 Bidder should meet experience and other criteria, if any as specified in Appendix-D and basic guidelines/ eligibility criteria as under:

2.16.3(a) Company Existence	Company should be registered under Companies Act, 1956 or Companies Act 2013 or a Partnership firm / LLP registered in India under Partnership Act 1932/2008 as amended and should have been in operations in India in the last 3Years.
2.16.3(b) Annual Turnover/ Net Worth (CA certified documents) (Except the Covid FYs 2020-21 and 2021-22)	Average Annual turnover of 200% of estimated cost of the project in the last 03 financial years Or Cumulative Turnover of 600% of estimated cost of the project in the last 03 financial years Or Average Annual Net Worth of minimum of 50% of estimated cost of the project in the last 03 financial years Or Cumulative Net Worth of minimum of 150% of estimated cost of the project in the last 03 financial years
2.16.3(c) Positive Net	Profitable / positive net worth in the last financial

Worth/ Profitability	year Solvent entity (CA certified documents)
2.16.3(d) Work Experience (Self - certified with relevant documents)	One Similar work of minimum value of 80% of estimated cost of the project or Two Similar worksof minimum value of 60% of the estimated cost of project or Three Similar works of minimum value of 40% of the estimated cost of project Note: Similar works will be defined based on scope of the work. Similar works may be executed with any Central and State Government agency, PSUs, Private organizations.
2.16.3(e) Non – Blacklisting Certificate	The bidder should not have been blacklisted /debarred by any Governmental / Non – Governmental Organisation in India as on bid submission date.
2.16.3(f) Certification, if required	The Bidder should have valid ISO 9001:2008/ ISO 9001:2015/ ISO 27001 (relevant certification based on type of work) valid as on bid submission
2.16.3(g) GFR Restrictions/Norms, if required	Bidder complies with restrictions on procurement under rule 144 (xi) vide order no: 06/18/2019-PPD dated 23rd July 2020 inserting Rule 144(xi) in GFRs 2017
2.16.3(h) Preferential Market Access	Bidder should comply with Preferential Market Access (PMA) order 2017, guidelines notified by DPIIT and DoT with all its clarifications / amendments, if applicable.

However nothing in this shall prevent Prasar Bharati from engaging new and emerging Technology start-ups in the areas of R&D and innovation from time to time. Relaxation for Start-ups as per Government guidelines would apply (GFR Rule 173(1) relaxes DPIIT recognised Start-ups from prior experience and prior turnover requirements subject to meeting of quality and technical specifications and making suitable provisions in the Bid document).

2.17 PURCHASE PREFERENCE

2.17.1 Purchase preference to Central Government Public Sector Undertaking, Micro, Small& Medium Enterprises (MSMEs) and Domestically Manufactured Electronic Products (DMEP) shall be allowed as per Government instructions in vogue, as applicable necessary supporting documents to be furnished by the bidder.

2.17.2 Public Procurement (Preference to Make in India) Order No. P-45021/2/2017-B.E-II dated 15.06.2017 of Government of India, Ministry of Commerce and Industry, Department of Industrial Policy and Promotion and its amendments

shall be applicable. Purchase preference for the domestic manufacturer, the methodology of its implementation, value addition to be achieved by domestic manufacturers, self-certification, and modalities for compliance and monitoring shall be as per the Para 4.6.

2.18 SCOPE OF SUPPLY OF EQUIPMENT/SITC/SETC:

The delivery of the stores/execution of SITC/SETC is required as stated in “Invitation to Bid” on terms specified in the description of Stores/SITC/SETC and Technical Specifications mentioned at Appendix-D , subjected to the terms “General Terms and Conditions” at Appendix-B.

2.19 CONSIDERATION OF OFFER IN FULL OR IN PART

This Organisation may reject/accept or prefer any tender without having to assign any reason whatsoever. This Organisation also reserves to itself the right to accept any tender in part or split the order between two or more bidders.

2.20 SPECIFICATIONS

2.20.1 If this Organisation finds that materials supplied/works carried out are not of correct quality, quantity and are not according to required specifications or are not satisfactory owing to any reason of which the Organisation will be the sole judge, the Organisation will be entitled to cancel the contract for supply of stores/SITC/SETC and meet its requirements of stores/SITC/SETC from the open market at the risk and cost of the supplier/contractor, reserving always to itself the right to forfeit the security deposit placed by the supplier/contractor for fulfillment of the contract.

2.21 BID SECURITY/ EARNEST MONEY/SECURITY DEPOSIT/PERFORMANCE BOND:

2.21.1 Earnest Money/Bid Bond : The bidders must submit Earnest Money/ Bid Bond on or before the last date & time of submission of bid in the form of FDR, Bank Draft or Bank Guarantee of any Scheduled Commercial Bank in India in case of Indian supplier or Bank Guarantee/Demand Draft in equivalent Indian currency from a Scheduled Commercial Bank in favour of “PB:BCI, DG: DOORDARSHAN, NEW DELHI” or in lieu thereof bid bond in the enclosed Proforma at Form - 4 from a Scheduled Indian Commercial Banks for the amount specified in Para 1.2.7 of “Invitation to Bid”. In case of Bank Guarantee obtained from the foreign Bank, it should be guaranteed by a Scheduled Indian Commercial Bank and must be governed by Indian Laws subject to jurisdiction of the court of New Delhi. The bid bond should initially be valid up to 45 days beyond the period of Bid validity (except for the Demand draft whose validity should be 90 days).

2.21.2 Offers without Earnest Money/Bid Security will be ignored. Offers with Earnest Money /Bid Security deposited of shorter validity will also be ignored.

2.21.3 Bidders exempted from EMD are to submit required documents.

2.21.4 The earnest money/bid bond of unsuccessful bidders will be returned on finalisation or after the award of the Tender to the Lowest Bidder (L1), and the earnest money/bid bond of the successful bidder will be returned on receipt of requisite security deposit/Performance Bond.

2.21.5 FORFEITURE OF EMD: The earnest money/Bid bond deposited by the

Bidder shall be forfeited by this Organisation in the following events:

- 2.21.5.1 If tender is withdrawn during the validity period or any extension thereof;
- 2.21.5.2 If Bid is amended or modified unsolicited, during the validity period or any extension thereof;
- 2.21.5.3 If a Bidder, whose tender has been accepted, fails to furnish Security deposit, performance bank guarantee within 30 (Thirty) days of the receipt of order/ advance order/ letter of intent;
- 2.21.5.4 In case of tenders in which only a single bidder qualifies or in cases of procurement on PAC basis, if the Bidder decides at any stage not to participate further in the tender but in spite of withdrawing on his own, he deliberately delays the tendering process to let the validity period expire;
- 2.21.5.5 If, the bidder is not earnest about their bid, and withdraws it before the completion of Technical Evaluation against the accepted specification, at the time of bidding and before the validity period or any extension thereof;

2.22 SECURITY DEPOSIT/PERFORMANCE BOND.

The successful bidder, within 30 (Thirty) days of the receipt of order/advance order/letter of intent, will be required to send Security Deposit in the form of Account Payee Demand draft, NEFT/RTGS from any scheduled bank(s), Fixed Deposit Receipt (FDR), Bankers Cheque or Bank Guarantee from an Indian scheduled Commercial Bank favour of PB:BCI, DG:DOORDARSHAN, NEW DELHI or in lieu thereof Performance Security/Bank Guarantee for the amount as indicated in the Para 1.7.1 of "Invitation to Bid".

2.23 NAME OF MANUFACTURER AND CERTIFICATE OF ORIGIN

The name of the manufacturer should be clearly mentioned in the offer. The Bidder shall have to furnish information of country of origin of each offered item.

2.24 PAYMENT TERMS

2.24.1 Schedule of Payments:

2.24.1.1 For Supply Contracts:

The supplier will submit bill for 90% of the basic amount and 100% of the GST applicable on the total basic amount along with a copy of Inspection Notes and provisional Consignees Receipt certificate to concerned Zonal Offices who will, after verifying bills, pass on to the respective PAOs for making payment. The bill for the balance 10% basic amount shall be submitted by the suppliers after receipt of final consignees receipt certificates.

2.24.1.2 For SITC/SETC Contracts:

The supplier will submit bill for 80% of the material/equipment basic cost and 100% of the GST applicable on the total basic amount of material/equipment supplied along with a copy of Inspection Notes and Provisional consignees Receipt certificate to concerned Zonal Offices who will, after verifying bills, pass on to the respective PAOs for making payment. The bill for balance 20% of material/equipment cost along with 100% installation/Erection, Testing & commissioning charges, if any, shall be submitted by the suppliers after receipt of final consignees receipt

certificates and satisfactory installation/Erection, Testing& commissioning certificate whichever required.

(Note: GST shall be paid only once against an order. Supplier will submit invoice accordingly.)

2.24.2 The payment shall be made on receipt of the goods by the consignee and upon submission of following documents.

- a. The supplier's invoice showing contract number, description of goods, quantity, unit price and the total amount;
- b. Delivery note;
- c. Packing list identifying contents of each package;
- d. Certificate of origin.
- a. Provision receipt certificate for the corresponding delivery, issued by the consignee indicating acceptance of materials at site in good condition;
- b. Any other document(s) and/or modification of above documents specified in the Schedule of Requirement and the contract.

2.24.3 Advance Payment

2.24.3.1 Ordinarily, Prasar Bharati (PB) would disburse payments for services rendered or supplies made, only after the services have been rendered or supplies made. However, in case of supply of services and turnkey projects and maintenance contracts, advance payment might be considered only on request of the contractor/supplier in cases where it is considered absolutely necessary and justification accepted by Prasar Bharati (PB).

2.24.3.2 Advance payment will only be released after submission of an unconditional Bank Guarantee by the contractor/supplier. The Bank File No.IT-1/102/SBD/2020-IT&PP 963460/2023/Procurement Policy – PBS 39/46983168/2023/Purchase Section - DG DD 4456 Guarantee shall be from a Commercial bank acceptable to the Procuring Entity in amounts equal to 110% (one hundred ten percent) of the amount of the advance payment being requested and subsequent verification of the Bank Guarantee. The Bank Guarantee shall remain effective until the advance payment has been adjusted. The amount of advance payment against contract for supply of stores shall be restricted to:

2.24.3.2.1 Thirty per cent of the contract value (without taxes) to private firms;

2.24.3.2.2 Forty per cent of the contract value (without taxes) to a state or central Government agency or PSU;

2.24.3.2.3 In case of maintenance contract, the amount shall not exceed the amount payable for six months under the contract.

2.24.3.3 An assurance in the shape of indemnity bond/insurance shall be submitted by the vendor in every case where advance payment is to be made. The goods supplied under the contract, shall be fully insured by the contractor/supplier in a freely convertible currency against loss or damage incidental to manufacture or acquisition, transportation, storage and delivery in the manner specified in the contract. The amount to be covered under insurance should be sufficient to take care of the overall expenditure to be incurred by the procuring entity for receiving the goods at the destination.

2.24.3.4 The advance paid shall be progressively adjusted against bills within the schedule of payments along with the applicable taxes.

2.24.3.5 Normally, interest shall not be charged on the advance payment. However, in case of breach of contract by the supplier/contractor and thereby termination of

contract by Prasar Bharati, the Advance shall be deemed an interest bearing advance at the prevailing rate (MIBID - Mumbai Inter bank Bid Rate) on the date of such advance payment.

2.25 UNSOLICITED POST TENDER MODIFICATION

2.25.1 In case certain clarifications are sought by this Organisation after opening of tenders, then the reply of the bidder should be restricted to the clarifications sought.

2.25.2 Any bidder who modifies his bid(including a modification which has the effect of altering the value of his offer) after the closing date without specific reference by this Organisation shall render the bid liable to be ignored and rejected without notice and without further reference to the bidder.

2.25.3 Canvassing in any form by the bidders shall also render the bid liable to be ignored and rejected without notice and without further reference to the bidder.

2.26 CLARIFICATION IN RESPECT OF INCOMPLETE OFFERS

2.26.1 This Organisation has to finalise its purchase within a limited time schedule. Therefore, it may not be feasible in all cases for this Organisation to seek clarifications in respect of incomplete offers. Prospective bidders are advised to ensure that their bids are complete in all respects and conform to our terms and conditions and Bid Evaluation Criteria of the tender. Bids not complying with this Organisation's requirements may be rejected without seeking any clarifications .However, during evaluation and comparison of bids, Prasar Bharati at its discretion, may ask the bidder for clarifications on the bid. The request for clarification shall be given in writing by registered email Id or through e-procurement Portal, asking the Bidder to respond by a specified date, and also mentioning therein that, if the Bidder does not comply or respond by the date, his Bid will be liable to be rejected. Depending on the outcome, such tenders will be ignored or considered further. No change in prices or substance of the bid shall be sought, offered or permitted. No post bid clarification at the initiative of the bidder shall be entertained.

2.26.2 The Bidder shall quote the prices in 'figures' & words. There should not be any discrepancy between the prices indicated in figures and the price indicated in words. In case of any discrepancy, the same shall be dealt as follows:

2.26.2.1 When there is a difference between the rates in figures and words, the rate which corresponds to the amount worked out by the Bidder (by multiplying the quantity and rate) shall be taken as correct.

2.26.2.2 When the rate quoted by the Bidder in figures and words tallies but the amount is incorrect, the rate quoted by the contractor shall be taken as correct and not the amount and the amount corrected.

2.26.2.3 When it is not possible to ascertain the correct rate, in the manner prescribed above, the rate as quoted in words shall be adopted and the amount worked

2.27 AFTER SALES SERVICE AND TRAINING- As per clause 8.3 and Point L of BOM of Specification no. SATD/Upgradation & Replacement of Earth Stations at DDK Guwahati, Shillong and Aizawl/Aug 2026 dated 10/08/2026

2.28 REPLACEMENT/ RECTIFICATION

In the event the stores supplied or SITC/SETC carried out against the contract

are found to be defective, the supplier/contractor will have to take back the defective materials at his own cost and replace/rectify the defects of the Stores/SITC/SETC free of charge without loss of time. The supplier will not be entitled to dispose of the store/equipment/material given for replacement/rectification without the prior permission of this Organisation. All charges concerned with the rectification including freight charges will be borne by the supplier/contractor.

2.29 EVALUATION/ SCRUTINY OF BIDS.

In evaluation of the techno-commercial bid, conformity of the eligibility/qualification, technical and commercial conditions of the offered goods to those in the bid document is ascertained. Technical requirement, incorporated in the Appendix-D of tender documents will also be considered in the manner indicated therein. Evaluation will be based only on the conditions included in the tender document.

2.30 SIGNING OF AGREEMENT

2.30.1 Prasara Bharati will award the Contract to the successful Bidder, who, within 'fifteen [15] days' of receipt of the same, shall sign and return the acknowledged copy to Prasara Bharati.

2.30.2 The successful Bidder/Contractor shall be required to execute an 'Agreement' in a Performa on a 'non-judicial stamp paper' of appropriate value [cost of the 'stamp-paper' shall be borne by the successful Bidder/Contractor] and of 'state' specified only, within 'fifteen [15] days' of receipt of the "Letter of Acceptance [LOA]" of the Tender by the successful Bidder/Contractor failure on the part of the successful Bidder/Contractor to sign the 'Agreement' within the above stipulated period, shall constitute sufficient grounds for appropriate action per tender provisions.

2.30.3 If the Bidder or any employee of the Bidder or any person acting on behalf of the Bidder, either directly or indirectly, is a relative of any of the employee of Prasara Bharati, or alternatively, if any relative of an employee of Prasara Bharati has financial interest/stake in the Bidder's firm, the same shall be disclosed by the Bidder at the time of filing of tender. The term 'relative' for this purpose would be as defined in Section 6 of the Companies Act 1956.

2.30.4 The Bidder shall not lend to or borrow any money from or enter into any monetary dealings or transactions, directly or indirectly, with any employee of Prasara Bharati

2.31 EMPLOYMENT BY FIRMS TO OFFICIALS OF THIS ORGANISATION.

Firms/companies who have or had business relations with the Organisation are advised not to employ serving employees of this Organisation without its prior permission or within the initial one year period after the retirement/resignation/severance from the service without specific permission of this Organisation. This Organisation may decide not to deal with such firms who failed to comply with the above advice.

2.32 CANCELLATION /RESCISSION :

The Bidder shall be liable to pay compensation for any loss or damage to Prasara Bharati resulting from any cancellation/rescission due to the reasons attributable to the Bidder and the Prasara Bharati shall be entitled to deduct the amount so payable from the amount due to the Bidder.

2.33 FOR THE BIDDER FROM A COUNTRY WHICH SHARES A LAND BORDER WITH INDIA

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

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

2.33.3 "Bidder from a country which shares a land border with India" for the purpose of this Order means; -

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

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

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

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

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

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

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

2.33.4 The beneficial owner for the purpose of Para 2.33.3 above will be as under:

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

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

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

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

- 2.33.4.1.4 In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has ownership of or entitlement to more than fifteen percent of the property or capital or profits of such association or body of individuals;
- 2.33.4.1.5 Where no natural person is identified under Para 2.33.4.1 above, the beneficial owner is the relevant natural person who holds the position of senior managing official;
- 2.33.5 In case of a trusty the identification of beneficial owner(s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership.
- 2.33.6 An Agent is a person employed to do any act for another, or to represent another in dealings with third person.
- 2.33.7 The successful bidder shall not be allowed to sub-contract works to any contractor from a country which shares a land border with India unless such contractor is registered with the Competent Authority.(In case of Tenders for Works contracts, including Turnkey contracts)

2.33.8 The following Certificate shall be submitted by the Bidder appending to the Technical Bid—

Certificate to be filled by the Bidder:

"I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I certify that this bidder is not from such a country or, if from such a country, has been registered with the Competent Authority. I hereby certify that this bidder fulfills all requirements in this regard and is eligible to be considered. [Where applicable, evidence of valid registration by the Competent Authority shall be attached.]"

Certificate for Tenders for Works involving possibility of sub-contracting:

"I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India and on sub-contracting to contractors from such countries; / certify that this bidder is not from such a country or, if from such a country, has been registered with the Competent Authority and will not sub-contract any work to a contractor from such countries unless such contractor is registered with the Competent Authority. I hereby certify that this bidder fulfills all requirements in this regard and is eligible to be considered, [Where applicable, evidence of valid registration by the Competent Authority shall be attached.]"

ANNEXURE-1 (FORM-1)**BIDDER'S GENERAL INFORMATION**

To,
Prasar Bharati

TENDER NO: 14(3)2026-27EI(P)TV

1	Bidder Name:	
2	Number of Years in Operation	
3	Address of Registered Office	City: District: State: PIN/ZIP:
4A	Bidder's address where order/contract is to be placed	City: District: State: PIN/ZIP:
4B	Address from where Goods/ Services are to be dispatched/ provided along with GST no. <i>(In case supply of Goods/ Services are from multiple locations, addresses and GST no . Of all such locations are</i>	City: District: State: PIN/ZIP: GST No.:
	<i>to be provided).</i> (Indian Bidder only)	
5	Telephone Number of address where order is to be placed	(Country Code) (Area Code) (Telephone Number)
6	E-mail address	
7	Fax Number (if available)	(Country Code) (Area Code) (Telephone Number)
8	Website	

9	Name & Designation of Contact Person	
10	ISO Certification, if any {If yes, please furnish details}	
12	Banker's Name	
13	Branch	
14	Branch Code	
15	Bank Account Number	
16	PAN No	
17	Status of Firm	Proprietorship Firm/Partnership firm/Limited/Others If Others Specify: [Enclose relevant certificates / partnership deed/certificate of Registration, as applicable]
18	GST No. (refer sl. no. 4B above)	[Enclose copy of GST Certificate]
19	Whether Micro or Small Enterprise? (Indian Bidder only)	Yes / No <i>(If Yes, Bidder to submit requisite documents as specified in ITB)</i>
20	Type of Entity (Indian Bidder only)	Corporate/ Non-Corporate (As per CGST/SGST/UTGST Act). (In case of Non-Corporate Entity, bidder will submit documentary evidence for same).
21	Whether Bidder is Startups or not? (Indian Bidder only)	Yes / No
22	Whether Bidder is related to any employee of Prasar Bharati? (If, yes, then the list may also be enclosed as mentioned in Para 2.30.3)	Yes / No

Place:

[Signature of Authorized Signatory of Bidder]

Date:

Name:

Designation:

Seal

ANNEXURE-2 (FORM-2)
BID SUBMISSION FORM AND AGREEMENT

To,

Prasar Bharati

TENDER NO: 14(3)2026-27EI(P)TV

SUB: SITC of Upgradation & Replacement of Earth Station at DDK Guwahati, Shillong and Aizawl

Dear Sir,

After examining / reviewing the Bidding Documents for the tender of

Including "Specifications & Scope of Work", "General Term Conditions [GTC]" and "Price Bid", etc. the receipt of which is hereby duly acknowledged, we, the undersigned, are pleased to offer to execute the whole part of the job and in conformity with the said Bid Documents, including Addenda / Corrigenda Nos.

We confirm that this Bid is valid for a period as specified in BDS from the date of opening of "Techno-Commercial / Un-priced Bid", and it shall remain binding upon us and may be accepted by any time before the expiry of that period and any extension thereof.

If our Bid is accepted, we will provide the "Contract Performance Security / Security Deposit" equal to " < _____ > of the Contract Price" or as mentioned in Tender Document for the due performance within "thirty [30] days" of such Award.

Until a final Agreement/Letter of Award is prepared and executed, the tender document (including addenda/ corrigenda) together with the "Notification of Award" shall constitute a binding Agreement between us.

We understand that Bidding Document is not exhaustive and any action and activity not mentioned in Bidding Documents but may be inferred to be included to meet the intend of the Bidding Documents shall be deemed to be mentioned in Bidding Documents unless otherwise specifically excluded and we confirm to perform for fulfillment of Agreement and completeness of the Work in all respects within the time frame and agreed price.

We understand that you are not bound to accept the lowest priced or any Bid that you may receive.

Place:

[Signature of Authorized Signatory of Bidder]

Date:

Name:

Designation:

Seal:

ANNEXURE-3 (FORM-3)

‘Declaration regarding MSME’:-

(To be submitted in Non-Judicial Stamp Paper value of Rs.100/- and to be uploaded in the Technical Bid.)

DECLARATION (For MSME Units only)

I,<_____>on behalf of M/s.<_____>in the capacity of<_____>(Position) hereby declare that

1. Our MSE Unit(s)is/are availing benefits extended by MSME , Government of India to Micro and Small Enterprises (MSEs) for the work of <_____> invited vide Bid Number <_____>
2. Our MSE Unit(s) has/ have not been awarded any work /supply under MSME benefit during the current financial year.

OR

Our MSE Unit(s) has/have been awarded work /supply for a total value of Rs.(Rupees<_____>only) under MSME benefits as on date and same work(s)/Supply is/are “In hand (Progress)/Incomplete” during the current financial year. Further, We confirm that the value of)/Supply is/are in hand (awarded under MSME benefits) during the financial year plus estimated cost of this tender has not crossed the “Monetary Limit” mentioned in NSIC certificate.

3. Our firm is participating in this tender under “MSE unit” or “OPEN BIDDER”.

NOTE: Strike out the conditions in (2) & (3) whichever is not applicable. Decision on any discrepancy in this “DECLARATION” shall be at the discretion of Prasar Bharati and shall be final and binding.

SIGNATURE WITH COMPANY SEAL

ATTESTED BY NOTARY PUBLIC

ANNEXURE-4A (FORM-4A)

(PROFORMA OF BANK GUARANTEE FOR BID BOND)

Bank Guarantee No. _____

Ref :

To
PRASAR BHARATI
(India's Public Service Broadcaster)
DIRECTORATE GENERAL: DOORDARSHAN
DOORDARSHAN BHAWAN, COPERNICUS MARG,
NEW DELHI – 110001

Dear Sirs,

Whereas the PRASAR BHARATI(India's Public Service Broadcaster),
DIRECTORATE GENERAL: DOORDARSHAN having its head office at DOORDARSHAN
BHAWAN, COPERNICUS MARG,NEW DELHI – 110001(hereinafter called the
Organisation) which expression shall, unless repugnant to the context or meaning thereof,
include all its successors, administrators, executors and assignees, has floated a Tender
No. _____ and M/s
_____ having Registered/ Head Office at
_____ (Hereinafter called the "Bidder" which expression
shall, unless repugnant to the context or meaning thereof, mean and include all its successors,
administrators executors and assignees) have submitted a quotation Reference No.
_____ and Bidder having agree to furnish as a conditions precedent for
participation in tender as unconditional and irrevocable bank guarantee of Rupees
_____ Only) for the due performance of Bidder/s
obligations as contained in the terms of the Notice inviting Tenders (NIT) and other terms and
conditions contained in the Tender Documents supplied by the Organisation specially the
conditions that (a) Bidder shall keep his tender open for a period of day, i.e., from
_____ to _____ or any extension thereof, and shall not withdraw or
modify it in a manner not acceptable to the Organisation(b) the Bidder will execute the
contract, if awarded, and shall furnish performance guarantee in the format prescribed by the
Organisation within the required time. The Bidder has absolutely and unconditionally accepted
these conditions. The Organisation and the Bidder have agreed that NIT/tender document is an
offer made on the condition that the tender, if submitted would be kept open in its original
form without variation or modification in a manner not acceptable to the Organisation for a
period of _____ days, i.e., from _____ to _____ or any extension thereof and that
making of the tender itself shall be regarded as an unconditional and absolute acceptance of
the conditions, contained in NIT and the tender documents. They have further agreed that the
contract consisting of NIT/Tender documents as the OFFER and submission of the tender as
the ACCEPTANCE shall be a separate contract distinct from the contract which will come
into existence when the tender is finally accepted by the Organisation. The consideration for
this separate initial contract preceding the main contract is that the Organisation is not
agreeable to sell the NIT/tender documents to the Bidder and

to consider the tender to be made except on the condition that the tender shall be kept open for
the period indicated above and the Bidder desires to make a tender on this condition after
entering into this separate initial contract with the Organisation promises to consider the tender
on this condition and Bidder agrees to keep this tender open for the required period. These

reciprocal promises form the CONSIDERATION for this separate initial contract between the parties.

2. Therefore, _____ we
_____ registered _____ (indicate the name
of Bank) under the laws of _____ having
head/registered office at _____ (hereinafter) referred to as the
"Bank" which expression shall, unless repugnant to the context or meaning thereof, include all
its successors, administrators and executors hereby issue irrevocable and unconditional bank
guarantee and undertake to pay immediately on first demand in writing Rupees
_____ at any time immediately on such demand without any demur,
reservations, recourse, contest or protest and/ or without any reference to the Bidder and any
such demand made by the Organisation on the bank shall be conclusive and binding
notwithstanding any difference between organisation and the Bidder or any dispute pending
before any court arbitrator or any other matter whatsoever. We also agree to give that
Guarantee herein the Organisation in writing. This guarantee shall not be
determined/discharged/affected by the liquidation, winding up, dissolution or insolvency of
the Bidder and will remain valid, binding and operative against the bank.

3. The bank also undertakes that the Organisation at the option shall be entitled to enforce this
guarantee, against the Bank as a principal debtor, in the first instance, without proceeding
against the Bidder.

4. The bank further agree that as between the bank and the Organisation, for purpose of the
guarantee, any notice of the breach of the conditions contained in NIT and other terms and
conditions contained in the Tender Documents as referred above given to the bank by the
Organisation shall be conclusive and binding on Bank, without any proof, notwithstanding any
other matter or difference or dispute whatsoever. We further agree that this guarantee shall not
be affected by any change in our constitution, in the constitution of the Organisation or that of
the Bidder. We also undertake not to revoke, in any case, this Guarantee during its currency.

5. The bank agrees with the Organisation that the Organisation shall have the fullest liberty
without our consent and without affecting in any manner our obligations hereunder to vary any
of the terms of the tender or get extension of the validity period from time to time. We shall
not be relieved from our liability by reason of any such variation or extension of the validity
period or for any forbearance, act of omission and commission on the part of the Organisation
or any indulgence shown by the Organisation to the said Bidder or by any such matter or thing
whatsoever which under the law relating to sureties, would, but for this provision, have the
effect of so relieving us.

6. Notwithstanding anything contained herein above our liability under this Guarantee is
limited to Rupees (_____ only) in aggregate and it shall remain in
full force upto and including 45 days after _____ unless
extended further (indicate the last date of validity period) from time to time, for such period as
may be instructed in writing by M/s _____ on
whose behalf this guarantee has been given, in which case, it shall remain in full force upto
and including 45 days after the expiry of extended period. Any claim under this guarantee
must be received by us before the expiry of 45 days from
_____ or (indicate the last date of validity period)
before the expiry of 45 days after the expiry of extended period, if any, if no such claim has
been received by us within 45 days after the said date/extended date, the rights of the
Organisation under this guarantee will cease subject to Para 8. However, if such a claim has
been received by us within and upon forty five days after the said date/extended date, all rights
of the organisation under this guarantee shall be valid and shall not cease until we have
satisfied that claim.

7. In case contract is awarded to the Bidder here in after referred to as "Contractor" the validity of this Bank Guarantee will stand automatically extended until the contractor furnished to the Organisation a bank guarantee for Rs. _____ (in figure) (Rupees _____ only) (in words) towards performance guarantee for satisfactory performance of the contract. In case of failure to furnish performance bank Guarantee in the format prescribed by this Organisation by the required date the claim must be submitted to us within 120 days after the last date of validity period or extended period, if any. If no such claim has been received by us within 120 days after the said date/extended date, rights of the organisation under this guarantee will cease. However if such a claim has been received by us within and up to 120 days after the said date/extended date all rights of the Organisation under this guarantee will cease. However, if such a claim has been received by us within and upto 120 days after the said date/extended date, all rights of the Organisation under this guarantee shall be valid and shall not cease until we have satisfied that claim.

8. The Bank confirms that this guarantee has been issued with the approval of appropriate Exchange Control Authority in _____ and any other authority (indicate the name of the country of issue of Guarantee) if required as per the laws of the country of issue of guarantee.

The bank confirms that this guarantee has been issued with observance of the appropriate Exchange Control rules and Regulations of the country.

In witness whereof the Bank, through its authorised officer, has set its hand & stamp on this _____ day of _____ at _____ of _____ (month & year)

Signature

(Full name in capital letters)

(Designation with bank stamp)

Date.....

Witness No. 1

Signature

Full name and Address (in capital letters).....

.....
.....

Witness No. 2

Signature

Full name and Address (in capital letters).....

.....
.....

INSTRUCTIONS

(FOR FILLING UP BANK GUARANTEE FOR BID BOND)

1. The bank guarantee should be stamped in accordance with the Stamp Act.
2. The non-judicial stamp paper should be in the name of the issuing bank.
3. Clause 7 of the bank guarantee is applicable in cases of global tenders where foreign tenders also participate. When tenders are invited from parties within India, clause 7 may be deleted and replaced by clause. “The bank also agrees that courts of the place from where tenders have been invited shall have exclusive jurisdiction”.
4. Please indicate the currency in which bank guarantee is being given Rs/-(Rupees) have been mentioned only for illustrations. Therefore, in cases where bank guarantee is being given in a currency other than Rupees' or US Dollars' these terms may be deleted and replaced by relevant currency.
5. The period of forty five (45) days mentioned in clause 6 and one hundred twenty (120) days as given in clause 6 should be available after the expiry of the validity period of the tender or any extension thereof.
6. The bank guarantee by Indian bidder will be given from an Indian scheduled commercial bank only. The foreign bidders will give Bank Guarantee from an Indian scheduled commercial bank situated in that country. In case no Indian Bank is situated in bidder's country then Bank Guarantee from a foreign bank acceptable to the Organisation will be considered, provided it is confirmed by an Indian scheduled commercial bank and shall be governed by the Indian laws and subject to the jurisdiction of the courts in New Delhi.

ANNEXURE-4B (FORM-4B)

PROFORMA OF INSURANCE SECURITY BOND FOR BID BOND

Surety Bond No. _____

Reference: _____

Dated: _____

To
PRASAR BHARATI
(India's Public Service Broadcaster)
DG: Doordarshan,
Doordarshan Bhawan, Copernicus Marg, NEW DELHI

[Address of the Procuring Authority]

Whereas _____, having its head office at _____ (hereinafter called "the Organisation", which expression shall, unless repugnant to the context or meaning thereof, include all its successors, administrators, executors, and assignees) has floated Tender No. _____ and _____ M/s _____, having its registered/head office at _____ (hereinafter called "the Bidder", which expression shall unless repugnant to the context or meaning thereof include all its successors, administrators, executors, and assignees), have submitted their bid in response thereto.

And whereas the Bidder has agreed, as a condition precedent for participation in the said tender, to furnish an **unconditional and irrevocable insurance surety bond** of Rs.

_____ (Rupees _____ Only), for the due performance of the Bidder's obligations under the conditions of the Notice Inviting Tender (NIT) and other terms and conditions contained in the tender documents.

We, the undersigned, **[Name of the Insurance Company]**, a company incorporated under the laws of India and having its registered office at _____ (hereinafter referred to as "the Surety", which expression shall unless repugnant to the context or meaning thereof, include its successors, administrators, and assignees), hereby issue this Surety Bond on behalf of the Bidder and irrevocably undertake to pay the Organisation, on first written demand and without any demur or reference to the Bidder, an amount not exceeding Rs. _____ (Rupees _____ Only).

1. This Surety Bond guarantees the following obligations:

- That the Bidder shall keep their bid open and valid for a period of ____ days i.e., from _____ to _____ or any extension thereof, and shall not withdraw or modify the

bid in a manner not acceptable to the Organisation.

- That the Bidder, if awarded the contract, shall execute the agreement and furnish the required performance security within the stipulated timeframe in the form prescribed by the Organisation.

2. We, as Surety, hereby irrevocably undertake to pay the Organisation on first demand without protest or demur, and without reference to the Bidder, the said amount of Rs.

_____ (Rupees _____ Only), or part thereof, as may be demanded by the Organisation, in the event of:

- Withdrawal or modification of the bid in violation of the tender conditions,
- Failure of the Bidder to sign the contract or furnish performance security within the stipulated period.

3. The Surety hereby waives all rights of objection or defence under any applicable laws relating to sureties. The Organisation's written declaration as to any default on the part of the Bidder shall be binding and conclusive on the Surety.

4. The Surety acknowledges and agrees that its obligations under this bond are independent of the obligations of the Bidder and may be enforced without requiring the Organisation to first proceed against the Bidder.

5. This Surety Bond shall be irrevocable and shall remain valid for a period of 45 days beyond the bid validity period i.e., up to _____(indicate date), unless extended further in writing by the Organisation.

Any claim under this bond must be received by us on or before 45 days after expiry of the bond validity, i.e., up to _____. If no such claim is received within this period, the Surety's obligations under this bond shall automatically cease.

6. This Surety Bond shall be governed by and construed in accordance with the laws of India and shall be subject to the exclusive jurisdiction of courts located in New Delhi (mention place of Tendering Authority).

7. This bond shall remain unaffected by any change in the constitution of the Organisation, the Bidder, or the Surety. The obligations of the Surety shall not be impaired or discharged by any indulgence or concession granted by the Organisation to the Bidder. In witness whereof, the Surety has executed this Surety Bond through its authorized signatory under proper authority on this _____ day of _____, _____ at _____.

8. All Claims against this **Insurance Surety Bond**, shall be remitted by the(Insurer's name to be inserted) to the following account of Prasar Bharati only through electronic transfer of funds, unless otherwise specifically communicated by Prasar Bharati :

- 1) Beneficiary Account Name:
- 2) Bank Name
- 3) Bank Account Number:
- 4) IFSC Code:

For and on behalf of

[Insurance Company Name]
(Seal of the Company)

Signature: _____

Name (in Block Letters): _____ Designation: _____ Date: _

Witness No. 1

Signature: _____ Name: _____ Address: _____

Witness No. 2

Signature: _____ Name: _____ Address: _____

Note:

- Ensure the Surety Bond is executed on a valid insurance policy bond paper/stamp paper as per applicable Stamp Act.
- The Insurance Company must be registered with IRDAI and authorized to issue bid security/contract surety insurance as per the latest government guidelines.

ANNEXURE-5 (FORM-5)				
Check List				
Tender no.		14(3)2026-27EI(P)TV		
Tech. Specification no		SATD/Upgradation & Replacement of Earth Stations at DDK Guwahati, Shillong and Aizawl/Aug 2026 dated 10/08/2026		
Specification for		SITC of Upgradation & Replacement of Earth Station at DDK Guwahati, Shillong and Aizawl		
(COMMERCIAL)				
Group A				
Name of Bidder and Address				
GSTIN of Firm				
S.No	Description			YES / NO / NOT APPLICABLE
1.1	Whether requisite tender Processing fee has been paid?			
2.1	Whether NEFT/RTGS/FDR/DD Bank Guarantee for the requisite earnest money/Bid Bond enclosed with the offer?			
2.2	If so, furnish the following			
	I	Name of the Bank		
	II	Value		
	III	Number		
	IV	Date of issue		
	V	Period of validity of the DD/FDR/ Bank Guarantee (it should not be for less than 165 days(90 days in case of DD) from the date of opening of Technical Bid)		
3	Have the rates, prices and totals etc. been checked thoroughly before signing the tender?			
4	Has a statement incorporating the Nil-deviation from the commercial terms and conditions of this Organisation has been prepared and enclosed with the offer?			
5	Whether charges for training of this Organisation's officials included in the prices? If not, whether these have been quoted separately?			
6	Whether firm FOR Destination prices have been quoted?			
8	Whether the cost of installation/erection/commissioning at site is included in the prices or not and whether it has been quoted separately?			
9	Whether the period of validity of the offer is as required in the tender document. If not, mention the extent of variation in days.			

10	Whether the offer has been signed indicating full name?		
11	Are the pages of the tender consecutively numbered and an indication given on the front page of the tender as to how many pages are contained in the tender?		
12	Has the tender been prepared in sufficient details/clarity so as to avoid post tender clarifications/amendments?		
13	Whether required sample asked in tender has been submitted along with the offer		
14	Whether all Clauses of the tender are accepted?		
15	If not, the clauses not accepted may please be indicated		
16	Whether guarantee/warranty has been furnished?		
17	Whether Commercial bid and technical bid of the tender document duly filled in and submitted.		
18	Whether each Page of Appendix- A, B, C, D, E, F and G of the tender document is signed and submitted with the offer.		
19	Whether Integrity Pact duly signed is submitted, if estimated cost of the bid is more than 2 Crore.		
Group B			
1	Whether a copy of the latest income tax return has been enclosed?		
2	Whether details of your registration under GST have been indicated in the offer?		
Group C			
(Technical)			
1	Whether necessary literature/catalog of the full complement of equipment offered as well as operation service and maintenance manual thereof has been attached with the offer?		
2	Whether the material being offered fully conforms to all the required technical specifications (Appendix-D)?		
3	If not, has the extent of deviation and how it is suitable to this Organisation's requirement been specified.		
5	Whether the model of each equipment offered are the latest?		
6	Whether the spares support will be available for a period of 5 years from the date of supply?		
7	Do you have an after-sales service centre in India?		
	If no, which is the nearest service centre (Address).		
8	Whether complete details of after-sales service arrangements given including training for the officials of this organisation?		

ANNEXURE-6 (FORM-6)

(Technical Bid)

Tender no. : 14(3)2026-27EI(P)TV

Subject: SITC of Upgradation & Replacement of Earth Station at DDK Guwahati, Shillong and Aizawal

NIT Enquiry No: NIT-19/2026-27

NIL DEVIATION CERTIFICATE

Notwithstanding anything mentioned in our bid, we hereby accept all the terms and conditions of this Tender Document without any reservations whatsoever. We hereby undertake and confirm that we have understood all the specifications, stipulations, terms and conditions as mentioned in this Tender enquiry.

I hereby declare that – There is no deviation in the offer.

Signature of Authorized Signatory of Bidder
Name:
Designation:

Date:
Place:

Seal of Organization:

ANNEXURE-7 (FORM-7)					
	BIDDERS PAST SUPPLIES PROFORMA				
Sl . N o.	Name & address of client	Period from	Description in detail	Total quantity supplied	Remarks

ANNEXURE-8 (FORM-8)

DECLARATION REGARDING HOLIDAY/BANNING AND LIQUIDATION, COURT RECEIVERSHIP

To,
Prasar Bharati

SUB: SITC of Upgradation & Replacement of Earth Station at DDK Guwahati, Shillong and Aizawal

TENDER NO: 14(3)2026-27EI(P)TV

Dear Sir,

We hereby confirm that we are not on 'Holiday' by any offices of Prasar Bharati/ AIR/ DD/ CCW/ Government or Public Sector (due to "poor performance" or "corrupt and fraudulent practices") or banned by Government department/ Public Sector on due date of submission of bid.

Further, we confirm that neither we nor our allied agency/(ies) (as defined in the Procedure for Action in case of Corrupt/ Fraudulent/ Collusive/ Coercive Practices) are on banning list of Government or Public Sector.

We also confirm that we are not under any liquidation, court receivership or similar proceedings or 'bankruptcy'.

In case it comes to the notice of Prasar Bharati that the bidder has given wrong declaration in this regard, the same shall be dealt as 'fraudulent practices' and action shall be initiated as per the Procedure for action in case of Corrupt/Fraudulent/Collusive/Coercive Practices.

Further, we also confirm that in case there is any change in status of the declaration prior to award of contract, the same will be promptly informed to Prasar Bharati by us.

Place:	[Signature of Authorized Signatory of Bidder]
Date:	Name:
	Designation:
	Seal:

ANNEXURE-9 (FORM-9)

LETTER OF AUTHORITY

[Proforma for Letter of Authority for Attending Pre-Bid Meetings' /'Un-priced Bid Opening' / 'Price Bid Opening'/Subsequent 'Negotiations']

Ref:

Date:

To,
Prasar Bharati

SUB: SITC of Upgradation & Replacement of Earth Station at DDK Guwahati, Shillong and Aizawal

TENDER NO: 14(3)2026-27EI(P)TV

Dear Sir,

I/We, <_____>hereby authorize the following representative(s) for attending any 'Meetings [Pre-Bid Meeting]', 'Un- priced Bid Opening', 'Price Bid Opening' and for any subsequent 'Negotiations' correspondence / communication against the above Bidding Documents:

[1] Name & Designation

Signature

[2] Phone/Cell:

Fax:

E-mail: @

[3] Name & Designation

Signature

[4] Phone/Cell:

Fax:

E-mail: @

We confirm that we shall be bound by all commitments made by aforementioned authorised representative(s).

Place:

[Signature of Authorized Signatory of Bidder]

Date:

Name:

Designation:

Seal:

Note: This "Letter of Authority" should be on the "letterhead" of the Firm / Bidder and should be signed by a person competent and having the 'Power of Attorney' to bind the Bidder. Not more than 'two [02] persons per Bidder' are permitted to attend "Techno-commercial / Un-priced" & "Price Bid" Openings. Bidders authorized representative is required to carry a copy of this authority letter while attending the un-priced and priced bid opening, the same shall be submitted to PRASAR BHARATI.

ANNEXURE-10 (FORM-10)

E-Banking Mandate Form

SUB: SITC of Upgradation & Replacement of Earth Station at DDK Guwahati, Shillong and Aizawl

TENDER NO: 14(3)2026-27EI(P)TV

(To be issued on Bidder letter head)

1. Bidder/customer Name:
2. Bidder /customer Address:
3. Bidders' e-mail id:
4. Particulars of bank account
 - a) Name of Bank
 - b) Name of branch
 - c) Branch code:
 - d) Address:
 - e) Telephone number:
 - f) Type of account (current/saving etc.)
 - g) Account Number:
 - h) IFSC of the bank branch
 - i) 9 digit MICR code

I/We hereby authorize Prasar Bharati to release any amount due to me/us in the bank account as mentioned above. I/We hereby declare that the particulars given above are correct and complete. If the transaction is delayed or lost because of incomplete or incorrect information, we would not hold Prasar Bharati responsible.

(Signature of Bidder/)

ANNEXURE-11 (FORM-11)

Self-Certificate for Local Content

*We [name of manufacturer] hereby confirm in respect of quoted item(s) that Local Content is equal to or more than 50% and come under 'Class-I Local Supplier' Category. As being 'Class-I Local Supplier', we are eligible for Purchase Preference under 'Make in India' Policy vide GoI Order no. P-45021/2/2017-PP (B.E.-II) dated 15.06.2017 (subsequently revised vide orders dated 28.05.2018, 29.05.2019, 04.06.2020 and 16.09.2020, or latest order, if any, will be applicable).

OR

*We [name of manufacturer] hereby confirm in respect of quoted item(s) that Local Content is more than 20% but less than 50% and come under 'Class-II Local Supplier' Category.

OR

*We [name of manufacturer] hereby confirm in respect of quoted item(s) that Local Content is below 20%, equal to _____% and come under 'Non- Local Supplier' Category.

The details of the location(s) at which the local value addition made is/are as under:

1.....

2.....

3.....

*** Strike out whichever is not applicable**

Please provide the exact percentage of local value addition for entire 'Bill of Material'.

*Certificate as per Clause 9b of DPIIT order No. P-45021/2/2017-PP (BE-II) dated 16/09/2020 i.e. in cases of procurement for a value **in excess of Rs. 10 crores**, the 'Class-I Local Supplier'/'Class-II Local Supplier' shall be required to provide a certificate from the statutory auditor or cost auditor of the company (in the case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content.

*The certificate from OEMs/Manufacturers for their percentage of local content/local value addition.

Date:

Seal & Signature of the Bidder

*[To be executed on plain paper and submitted along with bid/tender document for Bidders **having a value of Rupees two crores or more**]*

*To be signed by the Authorized Signatories of the Bidders
and Prasar Bharati*

INTEGRITY PACT

This pre-bid pre-contract Agreement, hereinafter called the INTEGRITY PACT,
is made on this

_____ day of the month of _____, 20____. BETWEEN
CEO Prasar Bharati (Broadcasting Corporation of India), Prasar Bharati House,
Copernicus Marg, New Delhi 110001 acting through Deputy Director General
(Purchase) >Address: <DG: DD> hereinafter called the “Buyer”, which
expression shall mean and include, unless the context otherwise requires, his
successors in office and assigns, on the one hand,

AND

M/s<_____>, at
address<_____>
_____>acting through Sh.<_____>
_____, Chief Executive Officer, hereinafter called the “BIDDER”,
which expression shall mean and include, unless the context otherwise requires,
his successors in office and assigns, on the other.

PREAMBLE

WHEREAS the BUYER proposes to procure (Supply, Installation, Testing and
Commissioning of <_____>), hereinafter
referred as “<SITC of _____>” and has floated a tender [Tender
No.<_____>], hereinafter referred to as the
“TENDER”, and the BIDDER/ SELLER is willing to offer/ has offered the
<(Name of the Work/Supply:><_____> and the BUYER
intends to award a contract / purchase order / work order for the <SITC
of _____> covered under the TENDER hereinafter referred to the
“CONTRACT”,

AND WHEREAS the BIDDER/ SELLER is a company incorporated in India
under Companies Act, 1956/2013 or a Partnership registered under Indian
Partnership Act, 1932 or a Limited Liability Partnership (LLP) in India **or**
Government undertaking or a Government Autonomous body and the BUYER is
an Autonomous Organisation of the Government of India performing its
functions on behalf of the President of India.

AND WHEREAS the BUYER has appointed Independent External Monitors
(IEMs) to monitor

The TENDER process and the execution of the CONTRACT for compliance with
the principles as laid down in this INTEGRITYPACT.

AND WHEREAS to meet the purpose aforesaid both the parties have agreed to enter into this INTEGRITY PACT, the terms and conditions of which shall also be read as integral part of the TENDER document and CONTRACT between the parties.

NOW, THEREFORE,

To avoid all forms of corruption by following a system i.e. fair, transparent and free from any influence / prejudiced dealing prior to, during and subsequent to the currency of the CONTRACT to be entered into with a view to:-

Enable the BUYER to obtain the <SITC of _____> at a competitive price in conformity with the defined specifications by avoiding the high cost and distortion any impact of corruption on public procurement,

And

Enable the BIDDER/ SELLER to abstain from bribing or indulging in any corrupt practices in order to secure the CONTRACT by providing assurance to the BUYER that their competitors will also abstain from bribing and other corrupt practices,

And

Enable the BUYER to prevent corruption in any form, by its officials by following transparent procedures.

The parties hereto hereby agree to enter into this INTEGRITY PACT and agree as follows:

1. Article 1 – COMMITMENTS OF THE BUYER

- 1.1 The BUYER undertakes that no official of BUYER, connected directly or indirectly with the CONTRACT/ TENDER or the BUYER personally or any of his family members will demand, take a promise for or accept, directly or through intermediaries, any bribe, consideration, gift, reward, favor or any material or immaterial benefit or any other advantage from the BIDDER/ SELLER, either for themselves or for any person, organization or third party related to the CONTRACT in exchange for an advantage in the bidding process, bid evaluation, contracting or implementation process related to the CONTRACT.
- 1.2 BUYER will, during the pre-contract stage, treat all BIDDERS alike, and will provide to all BIDDERS the same information and will not provide any such information to any particular BIDDER/ SELLER, which could afford an advantage to that particular BIDDER in comparison to the other BIDDERS.
- 1.3 The officials of the BUYER will report to the Independent External Monitor (IEM) with a copy to the Chief Vigilance Officer (CVO) any attempted or completed breaches of the above commitments as well as any substantial

suspicion of such a breach.

- 1.4 In case any such misconduct on the part of such official(s) of the BUYER is reported by the BIDDER to the BUYER with the full and verifiable facts and the same is prima facie found to be correct by the BUYER, necessary disciplinary proceedings, or any other action as deemed fit, including criminal proceedings may be initiated by the BUYER and such a person shall be debarred from further dealings related to the CONTRACT process. In such a case, while an enquiry is being conducted by the BUYER, the proceedings under the CONTRACT would not be stalled, unless considered necessary.

2 Article 2 - COMMITMENTS OF THE BIDDER

- 2.1 The BIDDER commits himself to take all measures necessary to prevent corrupt practices, unfair means and illegal activities during any stage of the bidding or during any pre- contract or post-contract stage in order to secure the CONTRACT or in furtherance to secure it and in particular commits himself to the following:-
 - 2.1.1 The BIDDER will not offer, directly or through intermediaries, any bribe, gift, consideration, reward, favor, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official or family member of the BUYER, connected directly or indirectly with the Bidding Process, or to any person, organization or third party related to the CONTRACT in exchange for any advantage in the bidding, evaluation, contracting and implementation of the contract.
 - 2.1.2 The BIDDER further undertakes that it has not given, offered or promised to give, directly or indirectly any bribe, gift, consideration, reward, favor, any material or immaterial benefit or other advantage, commission, fees, brokerage, or inducement to any official of the BUYER or family member of the BUYER or otherwise in procuring the CONTRACT or forbearing to do or having done any act in relation to the obtaining or execution of the CONTRACT or any other CONTRACT with the Prasar Bharati for showing or forbearing to show favor or disfavor to any person in relation to the CONTRACT or any other CONTRACT with Prasar Bharati.
 - 2.1.3 BIDDER shall disclose the name and address of his agents and representatives and the Indian BIDDERS shall disclose his foreign principals or associates, if any.
 - 2.1.4 BIDDER shall disclose the payments to be made by them to agents/ brokers or any other intermediaries, in connection with this TENDER/CONTRACT.
 - 2.1.5 The BIDDER further confirms and declares to the BUYER that the BIDDER is the original manufacturer/ authorised partner of the <SITC of _____> and has not engaged any individual or firm or company whether Indian or foreign other than those Para 2.1.3 and Para 2.1.4 above, to intercede, facilitate or in any way to recommend to the BUYER or any of its functionaries, whether officially or unofficially to the award of the CONTRACT to the BIDDER.
 - 2.1.6 The BIDDER will not collude with other parties interested in the CONTRACT to impair the transparency, fairness and progress of the bidding process, bid evaluation, contracting and implementation of the

CONTRACT.

- 2.1.7 The BIDDER will not accept any advantage in exchange for any corrupt practice, unfair means and illegal activities.
- 2.1.8 The BIDDER shall not use impropriety, for purpose of competition or personal gain, or pass on to others, any information provided by BUYER as part of the business relationship, regarding plans, technical proposal and business details, including information contained in any electronic data carrier. The BIDDER also undertakes to exercise due and adequate care lest any such information is divulged.
- 2.1.9 The BIDDER commits to refrain from giving any complaint directly or through any other manner without supporting it with full and verifiable facts.
- 2.1.10 The BIDDER shall not instigate or cause to instigate any third person to commit any of the actions mentioned above in the sub clause of this Article2.
- 2.1.11 If the BIDDER or any employee of the BIDDER or any person acting on behalf of the BIDDER, either directly or indirectly, is a relative of any of the officers of the BUYER, or alternatively, if any relative of an official of the BUYER has financial interest/stake in the BIDDER's firm, the same shall be disclosed by the BIDDER at the time of filling of tender.
- 2.1.12 The term, relative "for this purpose would be as defined in Section 2(77) of the Companies Act, 2013.
- 2.1.13 The BIDDER shall not lend or borrow any money or enter into any monetary dealings or transactions, directly or indirectly, with any employee of the BUYER.

3

Article 3 - PREVIOUS TRANSGRESSION, IF ANY, OF THE BIDDER

- 3.1 The BIDDER declares that no previous transgression has occurred in the last three years immediately before signing of this INTEGRITY PACT with any other company in any country in respect of any corrupt practices envisaged hereunder or with any Public Sector Enterprise in India or any Government Department in India that could justify BIDDER's exclusion from the TENDER process.
- 3.2 The BIDDER agrees that if it makes incorrect statement on this subject, he can be disqualified from the TENDER process or the CONTRACT, if already awarded, can be terminated for such reason.
- 3.3 If the BIDDER can prove that he has resorted/ recouped the damage caused by him and has installed suitable corruption prevention system, the BUYER may, at his own discretion, as per laid down organisational procedures, revoke the exclusion prematurely.

4

Article 4 - SANCTIONS FOR VIOLATIONS

- 4.1 Any breach of the aforesaid provisions by the BIDDER or any one employed by it or acting on its behalf (whether with or without the knowledge of the BIDDER) shall entitle the BUYER to take all or any one of the following actions, wherever required:-

- 4.1.1 To immediately call off the pre-contract negotiations without assigning any reason or giving any compensation to the BIDDER. However, the proceedings with the other BIDDER(S) would continue.
- 4.1.2 The Earnest Money Deposit (in pre-contract stage) and/or Security Deposit/ Performance Bond (after the CONTRACT is signed) shall stand forfeited either fully or partially, as decided by the BUYER and the BUYER shall not be required to assign any reason there for.
- 4.1.3 To immediately cancel the CONTRACT, if already signed, without giving any compensation to the BIDDER.
- 4.1.4 To recover all sums already paid by the BUYER, and in case of an Indian BIDDER with interest thereon at 2% higher than the prevailing Prime Lending Rate of State Bank of India, while in case of a BIDDER from a country other than India with Interest thereon at 2% higher than the LIBOR. If any outstanding payment is due to the BIDDER from the BUYER in connection with any other CONTRACT for any other stores, such outstanding payment could also be utilized to recover the aforesaid sum and interest.
- 4.1.5 To encash the advance bank guarantee and performance bond/ warranty bond, if furnished by the BIDDER, in order to recover the payments, already made by the BUYER, along with interest.
- 4.1.6 To cancel all or any other contracts with the BIDDER. The BIDDER shall be liable to pay compensation for any loss or damage to the BUYER resulting from such cancellation/ rescission and the BUYER shall be entitled to deduct the amount so payable from the money(s) due to the BIDDER.
- 4.1.7 Registration of suppliers and their eligibility to participate in Procurement Entity's procurements is subject to compliance with Code of Integrity for Public Procurement and good performance in contracts.
- i. A bidder shall be debarred if he has been convicted of an offence.
 - a. Under the prevention of Corruption Act. 1988; or
 - b. Under the Indian Penal Code or any other law for the time being in force, for causing a threat to public health as part of execution of a public procurement contract.
 - ii. A bidder debarred under sub-section (i) or any successor of the bidder shall not be eligible to participate in a procurement process of any procuring entity of Prasar Bharati for a period not exceeding three years commencing from the date of debarment.
 - iii. Buyer may debar a bidder or any of its successor, from participating in any procurement process undertaken by it, or period not exceeding two years, if it determines that the bidder has breached the code of integrity.
 - iv. Prasar Bharati will maintain such list of debarred suppliers which will also be displayed on its website.
 - v. The bidder shall not be debarred unless such bidder has been given a reasonable opportunity to represent against such debarment.
- 4.1.8 To recover all sums paid in violation of this INTEGRITY PACT by the BIDDER to any middlemen or agent or broker with a view to securing the CONTRACT.

- 4.1.9 In cases where irrevocable Letters of Credit have been received in respect of any contract signed by the BUYER with the BIDDER, the same shall not be opened.
- 4.1.10 The BUYER will be entitled to take all or any of the actions mentioned at Paras 4.1.1 to 4.1.9 of this INTEGRITY PACT also on the Commission by the BIDDER or any one employed by it or acting on its behalf (whether with or without the knowledge of the BIDDER), of an offence as defined in Chapter IX of the Indian Penal code, 1860 or Prevention of Corruption Act, 1988 or any other statute enacted for prevention of corruption.
- 4.1.11 The decision of BUYER to the effect that a breach of the provisions of this INTEGRITY PACT has been committed by the BIDDER shall be final and conclusive on the BIDDER. However, the BIDDER can approach the IEM(s) appointed for the purposes of this INTEGRITY PACT

5 Article 5 - INDEPENDENT MONITORS

- 5.1 THE BUYER has appointed an Independent External Monitor (hereinafter referred to as "MONITOR") for this INTEGRITY PACT in consultation with the Central Vigilance Commission (Addresses and Contact details of the Monitor is:

Shri Alope Prasad, IPS (Retd.) E-mail: alokewa@gmail.com	Sh. Rakesh Kumar Verma, Email: rakeshkumarverma@hotmail.com
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- 5.2 The task of the MONITOR shall be to review independently and objectively, whether and to what extent the parties comply with the obligations under this Integrity Pact.
- 5.3 The MONITOR shall not be subject to instructions by the representatives of the parties and shall perform his functions neutrally and independently. He will report his findings to Chief Executive Officer, Prasar Bharati (CEO,PB).
- 5.4 Both the Parties accept that the MONITOR has the right to access, without restriction, all the documents relating to the Project/ procurement, including minutes of meetings.
- 5.5 The BIDDER accepts that the MONITOR has the right to access, without restriction, all Project documentation of the BUYER including that provided by the BIDDER. The BIDDER will also grant the MONITOR, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his Project documentation. The same is applicable to Subcontractors of the BIDDER. The MONITOR shall be under contractual obligation to treat the information and documents of the BIDDER and his Subcontractor(s) with confidentiality.
- 5.6 The BUYER will provide to the MONITOR sufficient information about all meetings among the parties related to the Project/ procurement provided such meetings could have an impact on the contractual relations between the Parties. The Parties will offer to the MONITOR the option to participate in such meetings.

- 5.7 As soon as the MONITOR notices, or believe to notice, a violation of this INTEGRITY PACT, he will so inform the Authority designated by the BUYER with a copy to CVO, PB and request them to discontinue or take corrective action, or to take other relevant action. He will also inform separately to CEO, PB with copy to CVO, PB. The MONITOR can in this regard submit non-binding recommendations. Beyond this, the MONITOR has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action.
- 5.8 The MONITOR will submit a written report to the CVO, PB within 4 to 8 weeks from the date of reference or intimation to him by the BUYER or BIDDER and, should the occasion arise, submit proposals for correcting problematic situations.
- 5.9 If the MONITOR has reported to the CEO, PB and CVO, PB a substantial suspicion of an offence under the relevant IPC/PC Act and they have not, within reasonable time taken visible action to proceed against such offence, the MONITOR may also transmit the information directly to the Central Vigilance Commissioner

6 Article 6 - FACILITATION OF INVESTIGATION

In case of any allegation of violation of any provisions of this INTEGRITY PACT or payment of commission, the BUYER or its agencies shall be entitled to examine all the documents including the Books of Accounts of the BIDDER and the BIDDER shall provide necessary information and documents in English and shall extend all possible help for the purpose of such examination.

7 Article 7 - LAW AND PLACE OF JURISDICTION

This Pact is subject to Indian Law. The place of performance and jurisdiction is the seat of the BUYER.

8 Article 8 - OTHER LEGAL PROVISIONS/ ACTIONS

- 8.1 The actions stipulated in this Integrity Pact are without prejudice to any other legal action that may follow in accordance with the provisions of the extent law in force relating to any civil or criminal proceedings.
- 8.2 Any dispute or difference arising between the parties with regard to the terms of this INTEGRITY PACT and / or, any action taken by the BUYER in accordance with this INTEGRITY PACT or interpretation thereof shall not be subject to arbitration.
- 8.3 Both the parties agree that this INTEGRITY PACT has precedence over the TENDER/ CONTRACT documents with regard to any of the provisions covered under this INTEGRITYPACT.

9 Article 9 – VALIDITY

- 9.1 The validity of this INTEGRITY PACT shall be w.e.f. the date of its signing and shall extend up to 5(five) years or during the complete execution of the CONTRACT to the satisfaction of both the BUYER and the BIDDER, including warranty period, whichever is later. For unsuccessful BIDDERS at the tendering / pre-contract stage, this INTEGRITY PACT shall expire after six

(06) months from the date of signing of the CONTRACT.

9.2 Should one or several provisions of this INTEGRITY PACT turn out to be invalid; the remainder of this Integrity Pact shall remain valid. In this case, the Parties will strive to come to an agreement to their original intentions.

9.3 If any claim is made/ lodged during the validity period of the INTEGRITY PACT, the same shall be binding and continue to be valid despite the lapse of INTEGRITY PACT as specified above.

9.4 The parties hereby sign this INTEGRITY PACT at _____ on _____.

(For & On behalf of the Prasara Bharati)

(For & On behalf of BIDDER)

(Office Seal)

(Office Seal)

Place:.....

Date:.....

Witness 1:

(Name & Address)

Witness 2:

(Name & Address)

ANNEXURE-12B (FORM-12B)

*[To be executed on plain paper and submitted along with bid/tender document for Bidders having a value of **less than Rupees two crores**]*

To be signed by the Authorized Signatories of the Bidders

Undertaking

If the BIDDER or any employee of the BIDDER or any person acting on behalf of the BIDDER, either directly or indirectly, is a relative of an official of the BUYER. Alternatively, if any relative of an official of the BUYER has financial interest/stake in the BIDDER's firm, the same shall be disclosed by the BIDDER at the time of filling of tender.

Place:
Date:

[Signature of Authorized Signatory of Bidder]
Name:
Designation:
Company Seal:

ANNEXURE-13 (FORM-13)**BIDDER'S QUERIES FOR PRE BID MEETING**

SUB: SITC of Upgradation & Replacement of Earth Station at DDK Guwahati, Shillong and Aizwal

TENDER NO: 14(3)2026-27EI(P)TV

SL. NO.	REFERENCE OF BIDDING DOCUMENT				BIDDER'S QUERY	For the Use of Office.
	SEC. NO.	Page No.	Clause No.	Subject		

NOTE: The Pre-Bid Queries may be sent by e-mail before due date for receipt of Bidder's queries.

The Address / Email / to Send Email Queries: Assistant Director (E) Room No.403 DIRECTORATE GENERAL: DOORDARSHAN DOORDARSHAN BHAWAN, COPERNICUS MARG, NEW DELHI- 110001 (INDIA) TELEPHONE 011-23114403/23114401

E-Mail: ddpurchase401@yahoo.co.in

SIGNATURE OF BIDDER:

NAME OF BIDDER :

ANNEXURE-14A (FORM-14A)

(PROFORMA FOR BANK GUARANTEE FOR PERFORMANCE SECURITY)

(To be stamped in Accordance with Indian stamp Act)

The Non-judicial stamp paper should be in the name of issuing Bank

RefBank Guarantee No.

To

PRASAR BHARATI

(India's Public Service Broadcaster),

DG: DOORDARSHAN, DOORDARSHAN BHAWAN,

Copernicus Marg, NEW DELHI

Dear Sirs,

- 1 In consideration of PRASAR BHARATI ((India's Public Service Broadcaster), DG:DOORDARSHAN having its head office at India (herewith referred to as the Organisation which expression shall, unless repugnant to the context or meaning thereof, include all its successors, administrators, executors and assignees and having entered into a contract dated (hereinafter called "the contract" which expression shall include all the amendments thereto) on behalf of the PRASAR BHARATI with M/s_____ having its Head/ Registered office at _____ (hereinafter referred to the contractor which expression unless repugnant to the context having been executors and assigns) and the contract having been unequivocally been accepted by the contractor resulting in a contract bearing No._____ dated_____ valued at Rs._____ (Rupees_____) (in words) for having agreed that the contractor shall furnish to the organisation Performance Guarantee for the faithful performance of the entire contract to the extent of **5 (five)%** of the of the value of the contract Rupees_____ (in words). We_____ (Name of the Bank) having its registered unless repugnant to the context or meaning thereof, include all its successors, administrators, executors and assignees do hereby guarantee and undertake to pay immediately on first demand in writing, in Rupees as acceptable to the Organisation any and all moneys the extent of Rupees_____(In words). In aggregate at any time without any demur, reservations, recourse, contest or protests and /or without any reference to the contractor. Any such demands made by the Organisation on the Bank shall be conclusive and binding notwithstanding any difference between the Organisation and contractor or any dispute pending before any court Arbitrator or any other authority. We agree that guarantee herein contained shall be irrevocable and shall continue to be enforceable till it is discharged by the Organisation in writing.
- 2 The Organisation shall have the fullest liberty without affecting in any way the liability of the Bank under this guarantee, from time to time to extend the time for performance of the contract by the contractor or vary the terms of the contract. The Organisation shall have the fullest liberty without affecting this guarantee to postpone from time to time the exercise of power vested in them or of any right which they might at anytime in any manner, and either to enforce, or to forebear to enforce, any covenants contained or implied in the contract between the Organisation and the contractor or any other course or remedy or security available to the Organisation. The Bank shall not be released of its obligations under these

presents by any exercise by the Organisation of its liberty with reference to matter aforesaid or any of them or by reason of any other act of forbearance or other acts of omission or commission on the part of the Organisation or any other indulgence shown by the Organisation or by any other matter or thing whatsoever, which under law would, but for this provision, have the effect of relieving the Bank.

- 3 The Bank also agrees that the Organisation at its option, shall be entitled to enforce this Guarantee against the Bank as a principal debtor, in the first instance, without proceeding against the contractor and notwithstanding any security or other guarantee that the Organisation may have in relation to the contractors liabilities.
- 4 The Bank further agrees that the Guarantee herein contained shall remain in full force during the period that is taken for the performance of the contract i.e. complete delivery of the material/equipment as the same is a condition of supply contract and all the dues of the Organisation under or by virtue of this contract, have been fully paid and its claim satisfied or discharged or till the Organisation discharge this guarantee in writing.
- 5 We further agree that as between us and the Organisation for the purpose of this guarantee any notice given to us by the Organisation that the money is payable by the contractor and any amount claimed in such notice by the Organisation shall be conclusive and binding on us notwithstanding any difference between the Organisation and the contractor or any dispute pending before any court, Tribunal, Arbitrator or any other authority. We further agree that this Guarantee shall not be affected/discharged by any change in our constitution, in the constitutions of the Organisation that of the contractor. We also undertake not to revoke this guarantee during its currency. This guarantee shall not be determined discharged or affected by the liquidation, winding up, dissolution or insolvency of the contractor and shall remain valid, binding and operative against the Bank.
6. Notwithstanding anything contained herein above, our liability under this guarantee is limited to Rs. _____ (In figure)(Rupees _____) (In words) in aggregate and it shall remain in full force up to and including 60 days after (Indicate the date of expiry of Guarantee/Warranty period) unless extended further, from time to time, for such period as may be instructed in writing by M/s _____ on whose behalf this guarantee has been given, in which case it shall remain in full force up to the expiry of the extended period. Any claim under this guarantee must be received by us before the expiry of one year from _____ (indicate the date of expiry of Guarantee/warranty period) or before the expiry of one year after the expiry of extended period, if any. If no such claim has been received by us within one year after the said date/extended date, the right of the Organisation under this guarantee will cease, However, if such a claim has been received by us within and up to one year after the said date/extended date, all the rights of the Organisation under this Guarantee shall be valid and shall not cease until we have satisfied that claim.
7. The bank confirms that this guarantee has been issued with the approval of the appropriate Exchange Control, Rules and regulations of the country.

We also agree that this guarantee shall be governed and construed in accordance with Indian Laws and subject to the exclusive jurisdiction of Indian courts.

The bank also agrees that Courts of New Delhi, India shall have exclusive jurisdiction.

Dated this.....day of

At

(SIGNATURE)
(Full name and address in of official capital letter)

(Designation with Bank Stamp)
Date

Witness No. 1
Signature

Full name and Address (in capital letters).....
.....

Witness No. 2
Signature
Full name and Address (in capital letters).....
.....

* Applicable where the party is foreign one.

** Applicable where the party is Indian.

3.1 INSTRUCTIONS

(FOR FILLING UP BANK GUARANTEE FOR PERFORMANCE BOND)

- I. The Bank guarantee should be stamped in accordance with the stamp act.
 - II. The non-judicial stamp paper should be in the name of the issuing bank.
The bank also agrees that the Court of New Delhi India shall have exclusive jurisdiction.
- a. The period one year mentioned in clause 6 should be available after the expiry of the validity period/satisfactory performance, as the case may be, or any extension of such period.
 - b. The Bank Guarantee by bidders will be given from any Scheduled Commercial Bank in India.
 - c. In the case of guarantee by a foreign bank, the same should be got confirmed by an Indian Commercial bank.

ANNEXURE-14B (FORM-14B)

PROFORMA FOR INSURANCE SECURITY BOND FOR PERFORMANCE SECURITY

(To be stamped as per the Indian Stamp Act and executed by an IRDAI-licensed Insurer)

Insurance Bond No.: _____

Date of Issue: _____

To
PRASAR BHARATI
(India's Public Service Broadcaster)
DG: Doordarshan,
Doordarshan Bhawan, Copernicus Marg, NEW DELHI

INSURANCE SECURITY BOND FOR PERFORMANCE GUARANTEE

1. In consideration of _____ having its head office at New Delhi (hereinafter referred to as the "Organisation", which expression shall, unless repugnant to the context or meaning thereof, include its successors, administrators and assigns), having entered into a Contract dated _____, bearing No. _____, dated _____ (hereinafter called 'the Contract' which expression shall include all the amendments thereto) with M/s _____, having its registered office at _____ (hereinafter referred to as the "Contractor", which expression shall, unless repugnant to the context or meaning thereof, include its successors, administrators, and assigns), and the Contractor having unequivocally accepted the contract for a total value of Rs. _____ (Rupees _____ only), the Contractor is required to furnish a Performance Security to the Organisation to the extent of (5 %) of the contract value, i.e., Rs. _____ (Rupees _____ only).
2. We, _____ (name of the Insurer), a company registered and licensed under the Insurance Regulatory and Development Authority of India (IRDAI) under registration number _____, having its registered office at _____ (hereinafter referred to as the "Insurer"), hereby issue this Insurance Security Bond irrevocably and do hereby guarantee and undertake to pay Prasar Bharati on first written demand and without demur, protest, or contest, and or without reference to the Contractor any amount or amounts not exceeding in aggregate Rs. _____ (Rupees _____ only), if the Contractor fails to fulfill its contractual obligations as specified in the said Contract.
3. The Organisation shall have the absolute right, without notice to or consent of the Contractor, to invoke this Insurance Bond and claim the full or partial amount at any time during the validity of this bond. Any such demand made by the Organisation shall be binding on the Insurer as to the amount and validity of the claim.

4. This Bond shall remain valid until __ (expiry date) and shall be automatically extended in the event the Organisation grants an extension of time for performance under the said Contract. The Insurer shall not revoke this bond during its currency without the prior written consent of the Organisation. The Organisation shall have full liberty, without affecting this bond, to vary the terms of the Contract or grant extensions of time for the performance thereof. The liability of the Insurer shall not be affected or discharged by such variations or extensions or by any forbearance, indulgence or waiver by the Organisation.
5. This bond shall not be affected by the insolvency, winding up, dissolution, or liquidation of the Contractor. The liability of the Insurer under this bond shall be absolute and unequivocal.
6. Notwithstanding anything contained herein, the maximum liability of the Insurer under this Bond shall be Rs. _____ (Rupees _____ only), and it shall remain in full force up to and including 60 days after the expiry of the warranty/performance period or such extended period as may be instructed in writing by M/s _____, on whose behalf this bond has been issued. Any claim under this bond must be received by the Insurer on or before one year from the said expiry date. If no claim is received within that period, all rights of the Organisation under this bond shall cease.
7. This Bond is issued subject to the approval and in accordance with the applicable IRDAI guidelines and Indian laws. It shall be governed by and construed in accordance with Indian law and subject to the exclusive jurisdiction of the courts at New Delhi.
8. All Claims against this **Insurance Surety Bond**, shall be remitted by the (Insurer's name to be inserted) to the following account of Prasar Bharati only through electronic transfer of funds, unless otherwise specifically communicated by Prasar Bharati :
 - 1) Beneficiary Account Name:
 - 2) Bank Name
 - 3) Bank Account Number:
 - 4) IFSC Code:

IN WITNESS WHEREOF, this Insurance Security Bond has been executed by the authorized signatory of the Insurer on this _____ day of _____, 202x at _____.

For and on behalf of the Insurer:

Signature: _____

Name: _____

Designation: _____

Stamp/Seal of the Insurer

Witnesses:

1. Signature: _____

Name: _____

Address: _____

2. Signature: _____
Name: _____
Address: _____

Notes:

- This bond must be executed on non-judicial stamp paper as per applicable laws.
- The Insurer must be licensed by IRDAI and authorized to issue such bonds.
- A copy of the IRDAI registration and authority letter must be annexed.
- Ensure all fields such as contract details, bond amount, expiry date, and contractor's name are filled accurately.

3. (GENERAL TERMS AND CONDITIONS (GTC))

(Each page must be signed and submitted along with your offer)

3.1.1 DEFINITIONS

Unless inconsistent with or otherwise indicated by the context, following terms stipulated in this GTC shall have the meaning as defined hereunder.

3.1.2 ORDER

3.1.3 Shall mean written purchase order or acceptance of Tender (AT) issued by this organisation to the successful bidder including subsequent amendments to ORDER or AT in writing thereof.

3.1.4 THE ORGANISATION /PURCHASER

Shall mean DG: DOORDARSHAN, acting on behalf of the PRASAR BHARATI (India's Public Service Broadcaster), which shall include all their legal representatives, successors and assignees.

3.1.5 SUPPLIER/CONTRACTOR

Shall mean any person or persons of firm or company in India as well as abroad whose bid has been accepted by this Organisation and the legal representation, representatives, successors and permitted assignee of such person, persons, firm or company.

3.1.6 SUB-CONTRACT

Shall mean ORDER placed by the SUPPLIER/CONTRACTOR for any portion, of the ORDER or work subletted with necessary written consent of this Organisation on third party. Such subletting shall not relieve the contractor from any obligation, duty or responsibility under the Contract.

3.1.7 SUB-CONTRACTOR

Shall mean any person or persons or firm or their legal representatives, successors, assignees to whom part of ORDER has been subletted by the SUPPLIER/CONTRACTOR after necessary consent of this Organisation.

3.1.8 ORDER PRICE

Shall mean the sum accepted or the sum calculated in accordance with the rates accepted by this Organisation and amendments thereof and shall include all fees, registration and other charges paid to statutory authorities without any liability on the Organisation for any of these charges unless specially agreed to, in writing by this Organisation.

3.1.9 DELIVERY PERIOD

Shall mean receipt of the stores, erection & commissioning of the stores depending on the type of contract (Supply of Stores/SITC/SETC) by the date specified in the ORDER.

3.1.10 DESTINATION

Shall mean the location of the consignees for which this ORDER has been issued.

3.1.11 EQUIPMENTS/MATERIALS

Shall mean and include any equipment, instruments, stores and goods to be supplied for under the ORDER and amendments thereto.

3.1.12 DRAWINGS

Shall mean and include all Engineering sketches, general arrangements, layout drawing Sectional plans, and all elevations etc., related to the ORDER together with modification and revision thereto.

3.1.13 SPECIFICATIONS

Shall mean and include detailed description, statements to technical data, performance characteristic and standards (Indian as well as international as applicable and as specified in the ORDER.

3.1.14 INSPECTORS

Shall mean any person or outside Agency nominated by this Organisation to inspect equipment, materials and services, if any, in the contract stage-wise as well as final on receipt at destination as per the terms of the ORDER.

3.1.15 TESTS

shall mean such process or processes to be carried out by the SUPPLIER/CONTRACTOR as are prescribed in the ORDER considered necessary by this Organisation or their representative in order to ascertain quality, workmanship, performance and efficiency of equipment or part thereof.

3.1.16 APPROVAL

Shall mean and include the written consent either manuscript, typewritten or printed statement under or over signature or seal as the case may be of this Organisation or the representative or documents or other particulars in relation to the ORDER.

3.1.17 F.O.R./F.O.B./FAS, C&F, CIF shall mean the terms as explained in INCO terms.

3.1.18 SCOPE OF ORDER

Scope of the order shall be as defined in the ORDER, specifications, drawings and Appendices thereto.

3.2 Completeness of the EQUIPMENT shall be the responsibility of the SUPPLIER/CONTRACTOR. Any equipment, fittings and accessories, which may not be specifically mentioned in the specification or drawing (s) but which are usual or necessary for the satisfactory functioning of the EQUIPMENT (successful operation and functioning of the equipment being SUPPLIER'S/CONTRACTOR'S

responsibility) shall be provided by the SUPPLIER/CONTRACTOR without any extra cost.

- 3.3 The SUPPLIER/CONTRACTOR shall follow the best modern practice in the manufacture of high grade EQUIPMENT notwithstanding any omission in that, the SUPPLIER/CONTRACTOR shall in all respect design, engineer, manufacture, and supply the same within delivery period to the entire satisfaction of the Organisation.

3.4 WORK TO BE CARRIED OUT UNDER THE ORDER

All equipment to be supplied and work to be carried out under the ORDER shall conform to and comply with the provision of relevant regulations/Acts (State Govt. or Central Govt.) as may be applicable to the type of equipment/work carried out and necessary certificate shall be furnished.

3.5 SPECIFICATION, DRAWING, TECHNICAL MANUALS

- 3.5.1 The SUPPLIER/CONTRACTOR shall furnish copies as required by this organisation and specified in the “Technical Specifications” at Appendix-D, of the technical documents, final drawing, preservation instructions, operation and maintenance manuals, test certificates, spare parts catalogue etc. before dispatch of the equipment.

- 3.5.2 The supplier/contractor shall be responsible for any loss to this Organisation consequent to the furnishing of the incorrect data/drawings.

- 3.5.3 Specifications, design and drawings issued by this Organisation to the supplier/contractor along with tender specification and ORDER are not to be sold or given on loan. These documents continue to remain property of this Organisation or their assignee and are subject to recall by this Organisation.

- 3.5.4 The SUPPLIER/CONTRACTOR and its employees shall not make use of the drawings, specification and technical information for any purpose any time and shall not disclose the same to any person, firm or corporate authorities without written permission of the Organisation. All such details shall be kept confidential.

- 3.5.5 In order to facilitate quick disposal, copies of the drawing for approval shall be sent directly and simultaneously to the authorities specified in the order in addition to the sets submitted to authority issuing order.

3.6 ACCEPTANCE OF ORDER

- 3.6.1 Within fifteen (15) days from date of mailing of ORDER, SUPPLIER/CONTRACTOR shall confirm acceptance of the order in its entirety.

- 3.6.2 The ORDER is accepted unconditionally by SUPPLIER/CONTRACTOR by returning to this Organisation copy of the ORDER duly signed, without qualification.

- 3.6.3 When SUPPLIER/CONTRACTOR has accepted the order with all its terms and conditions, Bidder’s Bid with General sales conditions and all previous correspondence are considered superseded and void.

- 3.6.4 Should SUPPLIER/CONTRACTOR not respect the time limit for the confirmation of the order or in case BIDDER cannot accept the ORDER without qualifications, this Organisation reserves the right to cancel, in writing, without prejudice to other terms,

the entire ORDER or part of it without notice. Under these circumstances the earnest money /bid bond given by the supplier will be forfeited in full.

3.7 MODIFICATION IN ORDER

3.7.1 All modifications leading to changes in the order with respect to technical and commercial aspects, including terms of delivery, shall be considered valid only when accepted in writing by this Organisation by issuing an amendment to the ORDER.

3.7.2 This Organization shall not be bound by any printed conditions, provision in the SUPPLIER'S BID, forms of acknowledgement of ORDER, invoice, packing list and other documents, which purport to impose any condition at variance with or supplement to ORDER.

3.8 PERFORMANCE SECURITY DEPOSIT.

3.8.1 The successful bidder, within 30 (Thirty) days of the receipt of order/letter of intent, will be required to send Security Deposit in the form of Bank Draft/NEFT or in lieu thereof a Bank Guarantee from an Scheduled Indian Commercial Bank for amount as indicated in Para 1.7.1 of the "Invitation to Bid". Being a FOR destination contract, the Security Deposit shall be 3 % of the value of the order,(Ref: Circular-05/PP/2023 Dated 06/05/2023 issued by Procurement Policy Wing of Prasar Bharati)

3.8.2 The security money may be deposited in the form of Bank guarantee/TDR in the proforma enclosed as Appendix to these General Terms and Condition (GTC).

3.8.3 This Organisation shall not be liable to pay any Bank Charges, Commissions or interest on the amount of Security Deposit/Performance Bond.

3.8.4 Security Deposit, Performance Bond shall be refunded to the supplier after completion of warranty period as stipulated in the order. If the materials are supplied in the extender delivery period, the supplier will extend the validity of Bank Guarantee accordingly and the Bank Guarantee will be released after extended validity is expired.

3.8.5 For any equipment or spare parts thereof replaced during Guarantee/warranty period, it shall have further warranty for a period of 12 months from the date of acceptance as per Clause 3.9.5. The supplier will extend the validity of Bank Guarantee for a value proportionate to the value of the equipment for the period commensurate with the period of Guarantee/Warranty extension and the Bank Guarantee will be released after completion of extended warranty period subject to fulfillment of other conditions stipulated in Clause 3.9.1 to 3.10.2 below.

3.9 WARRANTIES AND GUARANTEES.

MATERIALS AND WORKMANSHIP As per Clause 8.3 of specification No SATD/Upgradation & Replacement of Earth Stations at DDK Guwahati, Shillong and Aizawl/Aug 2026 dated 10/08/2026 Unless some special Warranty/Guarantee clause has been stipulated elsewhere in the invitation to the tender or any of its Appendix, the following warranty shall form part of the contract placed on successful tender:-

3.9.1 SUPPLIER/CONTRACTOR shall fully warrant that all the stores, Equipment and components supplied under the ORDER shall be new and of first quality according to the specifications and shall be free from any defects (concealed fault, deficiency in design, materials and workmanship).

3.9.2 Should any defects be noticed in design, material and/or workmanship within 15 months from the date of shipment/dispatch of last consignment or 12 months from the date of receipt/commissioning of the equipment, or the guarantee/warranty period as specified in specifications(Appendix-D) whichever is later, the organization shall

inform Supplier/Contractor and Supplier/Contractor shall immediately on receipt of such intimation, depute their personnel within 14 days to investigate the causes of defects and arrange rectification/replacement/modification of the defective equipment at site without any cost to the Organization within a reasonable period(Maximum upto 30 days). If the Supplier/Contractor Fails to take proper corrective action to repair/replace the defects satisfactorily within the reasonable period, this Organization shall be free to take such corrective action as may be deemed necessary at SUPPLIER'S/CONTRACTOR'S risk and cost after giving notice to the SUPPLIER/CONTRACTOR.

- 3.9.3** Damage to the machinery and/or equipment due to incomplete and erroneous instructions issued by Supplier/Contractor will be responsibility of the Supplier/Contractor and will be treated according to the provisions of warranty clause. Normal wear & tear shall not come under purview of this clause.
- 3.9.4** In case defects are of such nature that equipment shall have to be taken to Supplier's/Contractor's Works for rectification etc. Supplier/Contractor shall take the equipment at his cost after giving necessary undertaking or security as may be required by the Organisation. This Organisation shall, if so required by the Supplier/Contractor, dispatch the equipment by quickest mode on "Freight-to pay" basis to the Supplier's/ Contractor's works. After repairs, Supplier/Contractor shall deliver the equipment at site on freight prepaid basis. All risks in transit to and fro shall be borne by the Supplier/Contractor.
- 3.9.5** Equipment or spare parts thereof replaced shall have further warranty for a period of 12 months from the date of acceptance.
- 3.9.6** The Supplier/Contractor shall guarantee that they will supply spare parts if and when required on agreed price. The agreed price should include, but without any limitation to, agreed discount on the published catalogue price or on agreed percentage of profit on the landed cost.
- 3.9.7** The Supplier/Contractor will warranty that before going out of production for any of the spare parts, they will give adequate advance notice to the purchaser so that the latter may undertake to procure, if necessary, the balance of the life time requirements.
- 3.9.8** If the repairs, replacement or modification referred are of such nature as may affect the efficiency of the EQUIPMENT, this Organisation shall have the right to give to the SUPPLIER/CONTRACTOR, within one month of such replacement/renewal, notice in writing to carry out test as may be required for acceptance of the equipment.
- 3.9.9** If the Supplier/Contractor fails to honour his obligation to repair or replace defective goods within a reasonable period of time, or if Supplier/Contractor refuses to carry out work under the guarantee clause and implied guarantee condition, if danger is anticipated or in case of severe urgency, the Organisation shall be entitled to carry out, at Supplier's/Contractor's cost and risk, repair work or replacement deliveries or have it done by a third party. In case not all goods have been delivered by Supplier/Contractor, this Organisation is entitled to procure the remaining goods at Supplier's/Contractor's cost and risk. This does not relieve Supplier/Contractor of any of his guarantee obligations. Taxes and duties of any kind whatever imposed by the authorities of the country of the supplier/contractor or his sub-contractors until delivery shall be borne by supplier.

3.10 PERFORMANCE GUARANTEE

3.10.1 SUPPLIER/CONTRACTOR shall guarantee that the performance of the EQUIPMENT/MATERIAL supplied under the order shall be strictly in conformity with specification and shall perform the duties specified under the ORDER.

3.10.2 The SUPPLIER/CONTRACTOR shall guarantee that the materials/equipment that shall be purchased from the sub-contractor(s) shall be such as to fulfill the requirements laid down vide Para 3.9.1 to 3.10.1 above and shall undertake to ensure fulfillment of these requirements.

3.11 REJECTION

If the ORGANISATION finds that the goods supplied are not in accordance with the specification and other condition stated in the order or its sample (s) are received in damaged conditions (of which matters this Organisation will be the sole judge), this Organisation shall be entitled to reject the whole of the goods or the part, as the case may be, and intimate to the supplier/contractor the rejection without prejudice to the Organisation's other rights and remedies to recover from the supplier any loss which the ORGANISATION may be put to, also reserving the right to forfeit the security deposit/performance bond, if any, made for the due fulfillment of the contract. The goods shall be removed by the supplier/contractor and if not removed within 14 days of the date of communication of the rejection, the Organisation will be entitled to dispose-off the same on account and at the risk of the supplier/contractor and after recovering the storage charges at the rate of 5% of the value of goods of each month or part of month and loss and expense, if any caused to the Organisation, pay balance to the supplier/contractor.

3.12 FAILURE AND TERMINATION CLAUSE

Time and date of delivery shall be the essence of the contract. If the supplier/contractor fails to deliver the stores, or any installment thereof, within the period fixed for such delivery in the schedule or at any time repudiates the contract before the expiry of such periods, the Purchaser may, without prejudice to any other right or remedy available to him to recover damages for breach of the contract:-

3.12.1 recover from the Supplier/Contractor as agreed, liquidated damages including administrative expenses and not by way of penalty, While granting an extension of the delivery period, where the delivery of stores or any installment thereof is accepted after expiry of the original delivery period, the Purchaser shall recover from the contractor, as agreed, the LD a sum equivalent to 0.5 (Half) percent of the prices of any portion of stores delivered late, for each week or part thereof of delay. The total damages shall not exceed 10 (Ten) percent of the value of delayed goods/Units. **If the delayed supply/unit found vital for the functioning of the entire supply/unit, then the entire unit/Supply shall consider as delayed supply/ unit for the calculation of LD.** The LD shall not exceed the amount stipulated in the contract. After a full period of extension, termination of the contract will be considered by the Organization.

3.12.2 purchase or authorize the purchase elsewhere on the account and at the risk of the supplier/contractor, of the stores not delivered/SITC/SETC not carried out or other of a similar description (where stores/ SITC/SETC exactly complying with the particulars

are not in the opinion of the purchaser, which shall be final, readily procurable) by serving prior notice to the supplier/contractor without cancelling the contract in respect of the installment not yet due for delivery; or

- 3.12.3** cancel the contract or a portion thereof by serving prior notice to the supplier/contractor and if so desired purchase or authorize the purchase of the stores not delivered /SITC/SETC not carried out or others of a similar description (where stores not delivered/ SITC/SETC not carried out, exactly complying with particulars are not in the opinion of the purchaser, which shall be final, readily procurable) at the risk and cost of the supplier/contractor. If the supplier/contractor had defaulted in the performance of the original contract, the purchaser shall have the right to ignore his tender for risk purchase even though the lowest. Where the contract is terminated at the risk and cost of the firm under the provisions of this clause, it shall be at the discretion of the purchaser to exercise his discretion to collect on not, the Security Deposit from the firm on whom the contract is placed, at the risk and expense of the defaulted firm.
- 3.12.4** Where action is taken under sub-clause 3.12.2or sub-clause 3.12.3 above the supplier/contractor shall be liable for any loss which the purchaser may sustain on that account, provided the purchase or if there is an agreement to purchase, such agreement is made in case of failure to deliver the stores, within 6 months from the date of such failure and in case of repudiation of contract the supplier/contractor shall not be entitled to any gain on such the entire discretion of the purchaser to serve a notice of such purchase on the contractor.
- 3.12.5** It may further be noted that clause 3.12.1 above provides for recovery of liquidated damages on the cost of the contract price of delayed supplies at the rate of 1/2% (Half Percent) of the contract price of the delayed unit or effective delay occurred unit (even if it has been supplied) for per week for such delay or part thereof up to a ceiling of 10% of the contract price of delayed supplies/SITC/SETC. **If the delayed supply/unit found vital for the functioning of the entire supply/unit, then the entire unit/Supply shall consider as delayed supply/ unit for the calculation of LD.** Liquidated damages for delay in supplies/SITC/SETC thus accrued will be recovered by the Paying Authority on instruction as specified in the supply order, from the bill for payment of the cost of material/works submitted by the contractor in accordance with terms of supply order on instruction from Purchaser regarding liquidated damages amount.
- 3.12.6** Notwithstanding anything stated above, equipment and materials will be deemed to have been delivered/SITC/SETC will be deemed to have been carried out only when all its components/parts are also delivered. If certain components of stores are not delivered in time/SITC/SETC not carried out in time, the stores/SITC/SETC will be considered as delayed until such time all the missing parts are also delivered.

3.13 INSPECTING/TESTING OF MATERIAL

The inspection of material will be carried out by the authority specified in the purchase order. The material will be accepted only after the same has been found satisfactory after inspection and duly marked and sealed by the Inspection Authority.

- 3.13.1** The supplier/contractor shall ensure that the material to be supplied against this order shall be individually inspected, tested and analysed in terms of the specifications attached to the

tender and the relevant codes and practices specified therein by expression or implication. Necessary test reports shall be provided as required.

- 3.13.2** The supplier/contractor should make available to the Organisation and any other individual/agency authorised by the Organisation for the purpose of inspection all its records and results in respect of inspection, test and analysis conducted by it as part of their manufacturing and testing operation under the applicable codes and practices specified by expression or implication in the tender.
- 3.13.3** Inspection tests and analysis shall be carried out/conducted at the supplier's/ contractor's works by the authorised representative of the Organisation and the cost of such inspection tests and analysis including the cost of to and fro air fare and accommodation and cash allowances payable shall be borne by the Organisation.
- 3.13.4** The Contractor shall provide and deliver free of charge for tests/analysis by an independent authority at any such place or places as the Organisation or its authorised inspector may reasonably require such raw material (s) used or intended to be used for the contracted work by the Contractor as the Organisation/Inspector shall consider necessary. The cost of such tests/analysis shall be borne by the Contractor.
- 3.13.5** This Organisation shall be entitled at all times, whether prior to, during or after the completion of inspection by itself and/or through inspectors appointed by the Organisation at the Organisation's cost, to inspect, test and/or analyses and/or to direct the Supplier/Contractor in all respect of any store(s) or materials processes used or proposed to be used in the fabrication of the product of any of them. The said inspection, tests and analysis as far as required, is to be conducted in the presence of the inspectors. The supplier/contractor shall ensure that the inspecting personnel referred to above are given free access to all the required places and information connected with their work, besides working facilities to carry out their function.
- 3.13.6** Should the supplier/contractor fail to comply with any of the provisions aforesaid relating to inspection, testing and /analysis the Organisation shall be entitled by itself and/or through inspectors to conduct or have conducted the inspection, test and/or analysis at the risk and expense of the supplier/contractor in all respects.
- 3.13.7** No rejected raw materials shall be used for the contracted work or re-tendered for inspection and/or test except with the prior permission of concerned Inspectors.
- 3.13.8** Unless otherwise specifically authorised by the Organisation in writing, the supplier/contractor shall not ship or dispatch for shipment under the contract entered into, any material which has not been properly inspected/tested marked and in respect of which a certificate of quality has not been issued or signed by the inspectors.
- 3.13.9** In addition to the general conditions of the inspection stated above, the supplier/ contractor shall also satisfy all the specific conditions of inspection as enumerated in the specification attached.
- 3.13.10** In addition to inspector(s) the Organisation shall be entitled to nominate, depute or designate a representative to be stationed at the supplier's/contractor's factory in order to supervise and/or coordinate operations related to the contract. In the event of there being more than one factory involved in the work entrusted to the supplier/contractor, the Organisation shall be entitled to nominate/depute or appoint such representative(s) as necessary in respect of each such factory.

- 3.13.11** The supplier/contractor shall ensure that the material to be supplied against this order shall be individually inspected, tested and analysed in terms of the specifications attached to the tender and the relevant codes and practices specified therein by expression or implication. Necessary test reports shall be provided as required.
- 3.13.12** The posting of such a representative by the Organisation or his actions in any manner does not absolve the supplier/contractor of any liability, and/or responsibility under this contract. The representative's posting shall be treated as advisory to the Organisation.
- 3.13.13** For false calls for the cases where material is rejected on inspection, the supplier/Contractor will bear the actual cost of inspection incurred/suffered by the Organisation.
- 3.13.14** Place of inspections specified in supply order will not be changed without written confirmation from the Purchase Authority.

3.14 SUB-STANDARD MATERIAL/REPLACEMENT OF REJECTED GOODS

- 3.14.1** If the Organisation finds that MATERIAL supplied are not of the correct quality or not according to specification required or otherwise not satisfactory owing to any reason of which the Organisation will be the sole judge, the Organisation will be entitled to reject materials, cancel the contract and buy its requirement in the open market at the risk and cost of supplier, reserving always to itself the right to forfeit the security deposit/performance bonds placed by the supplier for the due fulfillment of the contract.
- 3.14.2** Rejected goods should be removed and replaced within 14 days of the date of communication of rejection.

3.15 SUBLETTING AND ASSIGNMENT

The contractor shall not save with the previous consent in writing of the purchase Authority, sublet, transfer or assign the contract or any part thereof or interest therein or benefit or advantage thereof in any manner whatsoever, provided nevertheless that any such consent shall not relieve the contractor from any obligation, duty or responsibility under the contract.

3.16 INTER/CHANGEABILITY OF PARTS

- 3.16.1** If against any item it becomes necessary to supply spare parts other than specified, the supplier/contractor shall be required to give the following certificate to the purchaser before arranging supply of spare parts bearing different parts numbers. If there is any obvious typographical or clerical error in the part number and /or description of any item, the supplier/contractor will supply the correct part. The aforesaid certificate should be supplied in such cases also. The supplier will furnish this certificate in either case, to the paying authority. No formal amendment is necessary in such cases.
- 3.16.2** “The changed part numbers are an exact replacement of parts ordered and are suitable for and will fit in equipment/machines and the existing fittings for which they are intended without in any way affecting the efficiency and quality of performance of the equipment/machines.”

3.16.3 If however, the substitute spare part is not a bare replacement of the part originally ordered and involves a purchase of other items in addition, as would be the case when a kit is offered instead of one small item(s) forming part of the kit, the supply of the kit would be subject to the following conditions:-

3.16.3.1 The supply of the kit will be accompanied with a certificate that the manufacturer has definitely stopped supply of the spare parts but supplying only a kit.

3.16.3.2 The spares will not be supplied as kit unless prior acceptance of the same has been obtained from the purchaser.

3.16.3.3 In case the supply of the kit involves any change in the price and if so, the revised price would be stated for scrutiny and incorporation of the same in the supply order, if found acceptable.

3.17 Provided further that if any part numbers are declared by the purchaser to be unsuitable to the machines for which they have been supplied within 60 days from the date of arrival of the stores at site, the supplier/contractor will take them back at their own cost and expense.

3.18 BREAKAGE/SHORTAGE

3.18.1 Claim in respect of breakage/shortages, if any, shall be preferred on the supplier/contractor within thirty days from the date of receipt of stores at destination by Ultimate consignee which shall be replaced/made good by the supplier/contractor at his own cost.

3.18.2 All risk or loss or damage to the material shall be upon the supplier/contractor till it is delivered in accordance with the terms and conditions of the supply order.

3.19 DESIGNS, PATENTS AND ROYALTIES

If any material used or methods or processes practiced or employed in the manufacture of items to confirm with the requirement of the contract is/are covered by a patent(s) in respect of which contractor is not licensed, the contractor shall before using the material, method or process, as the case may be, obtain such license(s) and pay such royalty/royalties and license fee(s) as may be necessary. The contractor shall keep the Organisation indemnified from and against any and all claims, actions demand and proceedings whatsoever brought or made against the Organisation on the basis of any patent or infringement thereof claimed or otherwise relating to and arising from any method or process employed or matter or thing done to or in connection with any work executed by the contractor. The contractor shall at their own risk and expense defend any suit for infringement of patent or like suits brought against the Organisation (whether with or without the contractor being a party thereto and shall pay damages and costs awarded in such suit and keep the Organisation indemnified from and against all consequence thereof.

3.20 FORCE MAJEURE

3.20.1 If any time during the continuance of the contract the performance in whole or in part by the Successful Bidder shall be prevented or delayed by reason of any war, hostility acts of the public enemy, civil commotion, sabotage, fire, floods, explosions, epidemics, Quarantine restriction, strikes, lock-outs or acts of god, **(but not including**

negligence or wrong-doing, predictable/seasonal rain) herein after refer to as events and provided notice of happenings of any such eventuality is given by the successful Bidder in writing within 07 days from the date of occurrence thereof **(and it cannot be claimed ex-post facto)**, the purchaser shall by reason of such event, neither cancel this order nor shall claim for damages against the contractor in respect of such non-performance or delay in performance and delivery shall be resumed as soon as practicable after such events have come to an end or ceased to exist. However, if such event continues for a period exceeding 90 days, either party may at its option terminate the contract by giving notice to the other party.

- 3.20.2** If the deliveries are suspended by force majeure conditions lasting for more than 90 days, the organization have the option of cancelling this contract in whole or part at its discretion without any liability on its part of the Purchaser,

3.21 LANGUAGE/TERMINOLOGY

The supplier/contractor shall ensure the language/terminology/description of goods used in supply order/bill of lading/Invoice any other documents dispatched by the supplier is verbatim in English.

3.22 FALL CLAUSE

- 3.22.1** The price for the stores/services/works under the contract/Supply order by the contractor/Supplier shall in no event exceed the lowest price at which supplier/contractor or his agent/principal/dealer as the case may be, sells the stores /services/works or offers to sell stores/services/works of identical description to any persons/organizations including the purchaser or any department of the Central Govt. or any Deptt. of State Govt. or any Statutory undertaking of the Central or State Govt., as the case may be, during the currency of the contract supply/work order.

- 3.22.2** If at any time, during the said period, the contractor/supplier or his agent/principal/dealer as the case may be, reduce the sales price, sells or offers to sell such stores/services/works to any persons/organizations including the purchaser or any Deptt. of Central Govt. of any Deptt. of a State Govt. or any statutory undertaking of the Central or State Govt. as the case may be, at a price lower than the price chargeable under the contract/supply order, he shall forthwith notify such reduction or sale or offer of sale to the Purchase Authority who has issued this contract/supply order and price payable under the contract/supply order for the stores supplied/services rendered/works carried out after the date of coming into force of such reduction or sale or offer of Sale shall stand correspondingly reduced. The above stipulation will however, not apply to :--

- a) Exports by the contractor/supplier; or
- b) Sale of goods as original equipment at prices lower than the prices charged for normal replacement.

- 3.22.3** The contractor/supplier shall furnish the following certificate to the concerned Purchaser.

"I/We certify that there has been no reduction in sale price of the stores/services of description identical to the stores/services supplied to PRASAR BHARATI (India's Public Service Broadcaster), DIRECTROATE

GENERAL: DOORDARSHAN under the contract/supply order here in and such stores/services have not been offered/sold by me/us to any person organisation including the purchaser or any Deptt. of Central Govt. or any Deptt. of a State Govt. or any statutory Undertaking of the Central or State Govt. as the case may be upto the date of bill during the currency of the supply order contract whichever is later at a price lower than the price charged to the Organisation under the contract/supply order except for quantity of stores categories under sub-clauses (a) and (b) of sub para (3.22.2) above, details of which are as follows.....

In case, if the price charged by our firm is more, Prasar Bharati will have the right to recover the excess charged amount from the subsequent/unpaid bill of the supplier.

3.23 PACKING & MARKING

3.23.1 The Supplier shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to their final destination as indicated in the Contract. Each package shall have a detailed packing list in duplicate indicating:

3.23.1.1 Supply order number & date

3.23.1.2 Brief description of consignment

3.23.1.3 Name and address of the consignee.

3.23.1.4 Name and address of the Suppliers.

3.23.1.5 Item-wise nomenclature and part number and given reference with quantities to assembly drawing.

3.23.1.6 Tag number for all items contained in the package.

3.23.1.7 Gross weight and outer dimension of the package.

3.23.1.8 Packing list package-wise package marks and numbers

3.23.1.9 Any other requirement relevant to the contract

3.23.2 Another copy of the packing list shall be put in a waterproof envelope and fastened securely to the outside of the Package.

3.23.3 Shipping Of Documents:

3.23.3.1 Invoice showing value item-wise as per supply order for customs purposes, in triplicate drawn in the name of the “PRASAR BHARATI (BCI), DG: DOORDARSHAN, DOORDARSHAN BHAWAN, NEW DELHI” and duly manually signed by the supplier or their authorised representative.

3.23.3.2 Certificate of test inspection from manufacturer/supplier.

3.23.3.3 Certificate of recent manufacture.

3.24 INSURANCE

3.24.1 The Successful Bidder shall arrange for the insurance covering the risk during transit, storage and installation till commissioning. The Bidder shall take insurance for his men while working at the Prasar Bharati site against any accident, death, etc. Similarly equipments, instruments, tools etc. belonging to the Bidder shall be insured against damage, loss, theft etc. All the charges for such insurance shall be borne by the Bidder.

3.25 SHORT/DAMAGE/DEFECTIVE/NON RECEIPT OF MATERIAL

The supplier is responsible for safe arrival of the material up to destination. In case, there find any shortage/breakage of material, the supplier will make good the deficiency at the earliest.

3.26 PROGRESS OF MANUFACTURING OF ITEMS

From the date of receipt of order the manufacturer will send a report on monthly basis to the purchase Authority about the progress on manufacturing of item(s) ordered from him. The monthly progress report will be sent on a regular basis till completion of the entire supply as per delivery date indicated in supply order.

3.27 ARBITRATION

3.27.1 If any dispute, difference, question or disagreement shall at any time, hereafter arise, between the parties hereto or the respective representatives or assignees in connection with or arising out of the contract or in respect of meaning of specification, design, drawings, estimates, schedules, Appendix(s), orders, instructions, the construction, interpretation of this agreement, application of provisions thereof or anything hereunder contained or arising hereunder or as to the rights, liabilities or duties of the said parties hereunder or any matter whatsoever incidental to this contract or otherwise concerning the works of execution or failure to execute the same whether during the progress of work or stipulated/extended periods or before or after the completion or abandonment thereof, it shall be referred to the sole arbitration of the person appointed by the Chief Executive Officer, Prasar Bharati .

3.27.2 If an arbitrator to whom the matter is referred dies or refuses to act or resigns for any reason from the position of arbitrator, it shall be lawful for the Chief Executive Officer, Prasar Bharati to appoint another person to act as arbitrator in the manner aforesaid. Such person shall be entitled to proceed with the reference from the stage at which it was left by his predecessor if both the parties consent to Chief Executive Officer, Prasar Bharati to this effect failing which the arbitrator will be entitled to proceed de-novo.

3.27.3 It is a further term of this contract that no person other than the person appointed by the Chief Executive Officer, Prasar Bharati as aforesaid shall act as arbitrator and that, if for any reason that is not possible, the matter is not to be referred to the arbitration at all.

3.27.4 The arbitrator(s) may from time to time, with the written consent of all the parties to the contract, enlarge the time for making and publishing the award.

3.27.5 It is a term of the contract that the party invoking arbitration shall specify the dispute or disputes to be referred to arbitration under the clause.

3.27.6 It is also the term of the contract that the contractor shall not stop the work under this contract and work shall continue as expected to continue whether the arbitration proceedings have commenced or not.

3.27.7 The arbitrator shall give reasoned award in respect of each dispute or difference referred to him. The award as aforesaid shall be final and binding on all the parties to the contract in accordance with the Indian law.

3.27.8 The Venue of the arbitration shall be at New Delhi, India. Subject to as aforesaid, the provision of the Indian Arbitration and Conciliation Act, 1996 and any statutory

modifications or re-enactments thereof and rules made there under and for the time being in force shall apply to the arbitration proceedings under this clause.

3.28 COMPLAINT OF SPECIFICATIONS

- 3.28.1** The successful Bidder shall execute the whole and every part of the work in the most substantial and workman like manner both as regards materials and otherwise in every respect in strict accordance with the specifications. The contractor shall also conform exactly, fully and faithfully to the designs, drawings and instructions in writing in respect of the work.
- 3.28.2** The several documents forming the Contract are to be taken as mutually explanatory of one another, detailed drawings being followed in preference to small scale drawing and figured dimensions in preference to scale and special conditions in preference to General Conditions”.
- 3.28.3** In the case of discrepancy between the schedule of Quantities, the Specifications and/or the Drawings, the following order of preference shall be observed: -
- 3.28.3.1** Description of Schedule of Quantities.
 - 3.28.3.2** Particular Specification and Special Condition, if any.
 - 3.28.3.3** Drawings.
 - 3.28.3.4** AIR/DD Specifications.
 - 3.28.3.5** Indian Standard Specifications of B.I.S.
- 3.28.4** If there are varying or conflicting provisions made in any one document forming part of the contract, the Accepting Authority shall be the deciding authority with regard to the intention of the document and his decision shall be final and binding on the contractor.
- 3.28.5** Any error in description, quantity or rate in Schedule of Quantities or any omission there from shall not vitiate the Contract or release the Contractor from the execution of the whole or any part of the works comprised therein according to drawings and specifications or from any of his obligations under the contract

3.29 COMPLIANCE TO MINIMUM WAGE ACT

The Bidder shall comply with all the provisions of the Minimum Wages Act, 1948, and Contract Labour (Regulation and Abolition) Act, 1970, amended from time to time and rules framed there under and other labour laws affecting contract labour that may be brought into force from time to time.

3.30 *APPLICABLE LAW

This contract, including all matters connected with this contract, shall be governed by the Indian laws, both substantive and procedural, for the time being in force and shall be subject to the exclusive jurisdiction of Indian Courts.

* To be included in an international contract.

3.31 INTEGRITY PACT(Applicable for the Tender more than 2 Crore)

- 3.31.1** Signing of Integrity Pact (IP) is mandatory for every Bidder participating in this Bid (Tender value more than 2 Cr). A copy of the IP is enclosed (Form-12A), which may be deemed to have been signed by Prasar Bharati. The Bidder(s) and Prasar Bharati shall be bound by the provisions of IP in case any complaint relating to the tender is

found substantiated. The IP shall be executed on a plain paper and duly signed on each page by the same signatory who signs the bid document. Any bid not accompanied by duly signed IP by the Bidder would be rejected. Prasar Bharati has appointed the Independent External Monitor (IEM) nominated by Central Vigilance Commission (CVC). Contact detail of IEM is given in Form -12A. Any tender related complaint, for tenders covered under Integrity Pact having value of Rs.2 (Two) Crore and above, may be addressed to the Independent External Monitor (IEM).

3.31.2 VIOLATIONS & CONSEQUENCES:

- 3.31.2.1 If a Bidder commits a violation of its Commitments and Obligations under the Integrity Pact Programme during bidding process, their entire Earnest Money Deposit/ Bid Security, would be forfeited and in addition, they would be banned from the Prasar Bharati business in future.
- 3.31.2.2 In case of violation of the Integrity pact by Bidder after award of the Contract, Prasar Bharati shall be entitled to terminate the Contract. Further, Prasar Bharati would forfeit the security deposits/ Contract Performance Bank Guarantee. In case it is found that the Bidder has made any frivolous, untrue and misleading allegations against Prasar Bharati or its associates, Prasar Bharati reserves its right to initiate criminal proceedings against the violating Bidder and may also impose exemplary cost for the same

4 BID EVALUATION CRITERIA

	SALIENT FEATURES	BIDDERS CONFIRMATION
4.1.1	Open Tender No.	14(3)2026-27EI(P)TV
4.1.2	Single Stage Two Bid System	Two Bid System
4.1.3	Tender Processing Fee	As per Para 1.2.6 of Bid Data Sheet (BDS) and Para 2.1.7 of “Instructions to Bidder”
4.1.4	Validity Period of Bid	120 days from the date of opening i.e. up to and inclusive of date of opening.
4.1.5	Bid Security	Earnest Money Deposit(EMD) @ 4% of estimated contract value is Rs46,00,000/-
4.1.6	Performance Security	Would be required on placement of purchase order i.e. Five (5)% of the ordered value and shall be valid beyond 60 days from the date of expiry of guarantee/warranty with claim period up to one year from the date of expiry of guarantee/warranty.(Ref: Ministry of Finance,Department of Expenditure Order No.F.9/4/2020-PPD dated 30-12-2021.)
4.1.7	Delivery Period	Six months from the date of issue of purchase order or Five months from the date of the Decision Letter provided by DD in respect of RF equipment
4.1.8	Last date of submission of Bid clarification	09/09/2026 17:00 Hrs
4.1.9	Time & Date of Submission of Tender	30/09/2026; 12:00 Hrs
4.1.10	Opening date of technical bid	30/09/2026; 13:00 Hrs
4.1.11	Opening date of price bid	Date will be notified later
4.1.12	Evaluation Methodology	As per Para 1.23 to Para 1.26 and Para 4.6

Note: -

- A. Latest updates regarding this tender can be accessed at Web-Site
<https://prasarbharati.eproc.in>, <https://prasarbharati.gov.in>, and <https://eprocure.gov.in>.

4.2 VITAL COMMERCIAL CRITERIA FOR ACCEPTANCE

- 4.2.1** The following vital commercial conditions should be strictly complied with failing which the bid will not be considered.
- 4.2.2** Bid should be from actual manufacturers, public sector undertakings, supply houses/representatives/distributors/dealers/agents authorised by the Principals.
- 4.2.3** After opening of the price bids, if the Lowest Bid (L-1) rate is found substantially higher than the updated cost estimate or available budget, Prasar Bharati will cancel the procurement process/ reject all Bids; re-Tender will be invited afresh after detailed scrutiny of the estimated cost.
- 4.2.4** If the quoted rate for Bid, is found considerably lower than the estimated rates, it will be considered as abnormally low Bid; in such cases, Prasar bharati may seek written clarification from the Bidder, including detailed price analyses of its bid price in relation to scope, schedule, allocation of risks and responsibilities, and any other requirements of the bid's document. If, after evaluating the price analyses, Prasar Bharati determines that the bidder has substantially failed to demonstrate its capability to deliver the contract at the offered price, the Prasar Bharati may reject the bid/proposal.
- 4.2.5 SUBMISSION OF BID BOND/BANK GUARANTEE ALONG WITH BID**
- a) In case of domestic bidders, tender must be accompanied with Earnest Money Deposit in the form of either a Bank Draft/FDR Payable to <PB BCI, DG:DOORDARSHAN, NEW DELHI> or a Bank Guarantee from an Indian Scheduled Commercial Bank with the tender document. Bank Guarantee by domestic bidders will be given on non-judicial stamp paper as per stamp duty act applicable at New Delhi.
- b) The amount of Earnest Money Deposit should be as per the Notice Inviting Tender and it shall be as per Para 1.2.7 and Para 2.21; regarding Submission of Security Deposit cum Performance Bank Guarantee for execution of contract as well as for satisfactory performance of equipment during warranty period by the successful bidders; Acceptance of Failure and Termination Clause No.3.12 of Tender document; Acceptance of Warranty and Guarantee Clause No.3.9 of Tender document; Acceptance of jurisdiction clause No. 3.27 and 3.30 of tender document.
- 4.3** The Bidders to quote firm prices fully in Indian currency only.
- 4.4 CRITERIA FOR LOADING OF BIDS**
- The following criteria will be adopted for evaluation of bid:-
- 4.4.1** For delivery /completion periods quoted longer than that specified in the bid document, the quoted price shall be loaded 1/2% per extra week or part thereof subject to a maximum of 5% of the quoted price. Offer with delivery/completion period longer than 10 week beyond the stipulated delivery completion period will be rejected.
- 4.4.2** Bidders will not indicate a separate discount. Discount if any should be merged in the rates against the quoted items. Discount, if any, indicated separately will not be taken into account for bid evaluation purposes.
- 4.5 VITAL TECHNICAL CRITERIA FOR ACCEPTANCE OF BIDS**
- 4.5.1** Quotation in original must be from actual manufacturers, public sector undertakings, supply houses/representatives/distributors/dealers/agents authorised by the Principals.

4.5.2 In case the bidder is an authorised dealer/supply house, he should name the original manufacturer. Bidder should furnish a warranty to quality from the manufacturer and also furnish a certificate from the manufacturer that the bidder can quote items of the manufacturer directly. Offers not complying with these requirements will be rejected, without any notice/back reference.

4.5.3 Past performance report of similar items earlier supplied to this Organisation will be taken into consideration while evaluating this bid. The bid shall be rejected, if the past performance of the similar item earlier supplied to the Organisation is found to be unsatisfactory.

4.6 **PREFERENCE TO MAKE IN INDIA**

The policy of the Govt. of India to encourage “Make in India” and promote manufacturing and production of goods and services in India as per the revised “Public Procurement (Preference to Make in India), Order 2017”, circulated by the Department of Promotion of Industry and Internal trade, Ministry of Commerce & Industry, Govt. Of India vide Order No. P-45021/2/2017-PP (BE-II dated 16.09.2020, or latest order, if any, will be applicable for this tender.

4.6.1 **Definitions:** For the purpose of this Tender

4.6.1.1 **‘Local content’** means the amount of value added in India which shall, unless otherwise prescribed by the Nodal Ministry, be the total value of the item procured (excluding net domestic indirect taxes) minus the value of imported content in the item (including all customs duties) as a proportion of the total value, in percent.

4.6.1.2 **‘Class-I local supplier’** means a supplier or service provider, whose goods, services or works offered for procurement, has local content equal to or more than 50%, as defined under this Tender.

4.6.1.3 **‘Class-II local supplier’** means a supplier or service provider, whose goods, services or works offered for procurement, has local content more than 20% but less than 50%, as defined under this Tender.

4.6.1.4 **‘Non – Local supplier’** means a supplier or service provider, whose goods, services or works offered for procurement, has local content less than or equal to 20%, as defined under this Order.

4.6.1.5 **‘L1’** means the lowest tender or lowest bid received in response to this tender.

4.6.1.6 **‘Margin or purchase preference’** means the maximum extent to which the price quoted by a “Class-I local supplier” may be above the L1 for the purpose of purchase preference. For being eligible for purchase preference under this clause, the Margin of purchase preference shall be 20% (i.e. L1 + 20% band).

4.6.2 **Eligibility of ‘Class-I local supplier’/ ‘Class-II local supplier’ / ‘Non-local suppliers’ for this tender:**

Only ‘Class-I local supplier’ and ‘Class-II local supplier’ as defined under this tender shall be eligible to bid in procurements undertaken by procuring entities, except when global Tender enquiry has been issued. In global Tender enquiries, ‘Non-local suppliers’ shall also be eligible to bid along with ‘Class-I local supplier’ and ‘Class-II local supplier’.

4.6.3 Purchase preference

Purchase preference shall be given to “class-I local supplier” for the purpose of this tender in the manner specified here under.

4.6.4 For the procurement of <_____> (In the procurement of Goods which are divisible in nature/ where the work Order could be divided)

The ‘Class-I local supplier’ shall get purchase preference over ‘Class-II local supplier’ as well as ‘Non-local supplier’, as per following procedure:

4.6.4.1 Among all qualified bids, the lowest bid will be termed as L1. If L1 is ‘Class-I local supplier’, the contract for full quantity will be awarded to L1.

4.6.4.2 If L1 bid is not a ‘Class-I local supplier’, 50% of the order quantity shall be awarded to L1. Thereafter, the lowest bidder among the ‘Class-I local supplier’ will be invited to match the L1 price for the remaining 50% quantity subject to the Class-I local supplier’s quoted price falling within the margin of purchase preference, and contract for that quantity shall be awarded to such ‘Class-I local supplier’ subject to matching the L1 price. In case such lowest eligible ‘Class-I local supplier’ fails to match the L1 price or accepts less than the offered quantity, the next higher ‘Class-I local supplier’ within the margin of purchase preference shall be invited to match the L1 price for remaining quantity and so on, and contract shall be awarded accordingly. In case some quantity is still left uncovered on Class-I local suppliers, then such balance quantity may also be ordered on the L1 bidder.

4.6.5 For the procurement of <_____> (In the procurement of Goods which are not divisible in nature/ where the work Order could not be divided)

The ‘Class-I local supplier’ shall get purchase preference over ‘Class-II local supplier’ as well as ‘Non-local supplier’ as per following procedure.

4.6.5.1 Among all qualified bids, the lowest bid will be termed as L1. If L1 is ‘Class-I local supplier’, the contract will be awarded to L1.

4.6.5.2 If L1 is not ‘Class-I local supplier’, the lowest bidder among the ‘Class-I local supplier’, will be invited to match the L1 price subject to Class-I local supplier’s quoted price falling within the margin of purchase preference, and the contract shall be awarded to such ‘Class-I local supplier’ subject to matching the L1 price.

4.6.5.3 In case such lowest eligible ‘Class-I local supplier’ fails to match the L1 price, the ‘Class-I local supplier’ with the next higher bid within the margin of purchase preference shall be invited to match the L1 price and so on and contract shall be awarded accordingly. In case none of the ‘Class-I local supplier’ within the margin or purchase preference matches the L1 price, the contract may be awarded to the L1 bidder.

4.6.6 “Class-II local supplier” will not get purchase preference.

4.6.7 **Minimum Local Content:** The local content requirement to categorize a supplier as “Class-I local supplier” / ‘Class-II local supplier’ / ‘Non-local supplier’ shall be as defined in the Para “4.6.1” above. No change is permissible on this account.

- 4.6.8 Margin of Purchase Preference:** The margin of purchase preference shall be 20%. For being eligible for purchase preference under this clause, the Margin of purchase preference shall be 20% (i.e. L1 + 20% band)
- 4.6.9 Verification of local content:**
- 4.6.9.1** The ‘Class-I local supplier’ / ‘Class-II local supplier’ at the time of tender, bidding or solicitation shall be required to indicate percentage of local content and provide self-certification that the item offered meets the local content requirement for ‘Class-I local supplier’ / ‘Class-II local supplier’, as the case may be. They shall also give details of the location(s) at which the local value addition is made.
- 4.6.9.2** Prasar Bharati may constitute committees with internal and external experts for independent verification of self-declarations and auditor’s / accountant’s certificates on random basis and in the case of complaints.
- 4.6.9.3** False declarations will be in breach of the Code of Integrity under rule 175(1)(i)(h) of the General Financial Rules for which a bidder or its successors can be debarred for up to two years as per rule 151(iii) of the General Financial Rules along with such other actions as may be permissible under law.
- 4.6.9.4** A supplier who has been debarred by any procuring entity for violation of this Order shall not be eligible for preference under this tender for procurement by any other procuring entity for the duration of the debarment. The debarment for such other procuring entities shall take effect prospectively from the date on which it comes to the notice of other procurement entities.

5

DESCRIPTION STORES AND TECHNICAL SPECIFICATIONS*Description/specifications, Material Code, Quantity of Items.*

Sr. No	Description	Qty.	Specification No.
1.	SITC of Upgradation & Replacement of Earth Station at DDK Guwahati, Shillong and Aizawl	As detailed in the BOM (Annexure I) part of technical specification (Specification no. SATD/Upgradation & Replacement of Earth Stations at DDK Guwahati, Shillong and Aizawl/Aug 2026 dated 10/08/2026 *)	Specification no. SATD/Upgradation & Replacement of Earth Stations at DDK Guwahati, Shillong and Aizawl/Aug 2026 dated 10/08/2026 *

* Copy Enclosed

Note: -

1. Delivery instruction:

- a) **Delivery Period:** i. Six months from the date of issue of purchase order or Five months from the date of the Decision Letter provided by DD in respect of RF equipment
- b) **Consignee:** (i) DDK Guwahati (ii) DDK Shillong and (iii) DDK Aizawl

2. Taxes:

- All taxes as applicable must be quoted and shown separately.
- Bidder should quote the prices of stores and all applicable taxes viz. Excise Duty, Custom Duty, all applicable Cesses, Goods and Service Tax etc., should be shown separately in the price bid. Supplier should submit their claim for payment in invoice having GSTIN number of the supplier and also the respective consignee indicating separately amount of applicable taxes etc. to enable Prasar Bharati to avail GST Input tax Credit (ITC) on Goods and Services.

6 STATE-WISE GSTINS OF DOORDARSHAN		
S.No.	State	GSTIN
1	ANDAMAN AND NICOBAR ISLANDS	35AAAJP0288R1ZI
2	ANDHRA PRADESH	37AAAJP0288R2ZD
3	ARUNACHAL PRADESH	12AAAJP0288R1ZQ
4	ASSAM	18AAAJP0288R2ZD
5	BIHAR	10AAAJP0288R1ZU
6	CHANDIGARH	04AAAJP0288R1ZN
7	CHATTISGARH	22AAAJP0288R1ZP
8	DAMAN AND DIU	25AAAJP0288R1ZJ
9	DELHI	07AAAJP0288R1ZH
10	GOA	30AAAJP0288R1ZS
11	GUJARAT	24AAAJP0288R1ZL
12	HARYANA	06AAAJP0288RIZJ
13	HIMACHAL PRADESH	02AAAJP0288R2ZQ
14	JAMMU AND KASHMIR	01AAAJP0288R1ZT
15	JHARKHAND	20AAAJP0288R2ZS
16	KARNATAKA	29AAAJP0288R3Z9
17	KERALA	32AAAJP0288R5ZK
18	LAKSHADWEEP ISLANDS	NOT APPLICABLE
19	MADHYA PRADESH	23AAAJP0288R1ZN
20	MAHARASHTRA	27AAAJP0288R1ZF
21	MANIPUR	14AAAJP0288R2ZL
22	MEGHALAYA	17AAAJP0288R2ZF
23	MIZORAM	15AAAJP0288R2ZJ
24	NAGALAND	13AAAJP0288R1ZO
25	ODISHA	21AAAJP0288R2ZQ
26	PONDICHERRY	34AAAJP0288R2ZJ
27	PUNJAB	03AAAJP0288R2ZO
28	RAJASTHAN	08AAAJP0288R4ZC
29	SIKKIM	11AAAJP0288R2ZR
30	TAMIL NADU	33AAAJP0288R2ZL
31	TELANGANA	36AAAJP0288R2ZF
32	TRIPURA	16AAAJP0288R3ZG
33	UTTAR PRADESH	09AAAJP0288R1ZD
34	UTTARAKHAND	05AAAJP0288R1ZL
35	WEST BENGAL	19AAAJP0288R2ZB

Prasar Bharati
(India's Public Service Broadcaster)
DIRECTORATE GENERAL: DOORDARSHAN

**Specifications for SITC of
Upgradation & Replacement of Earth Stations at
DDK Guwahati, Shillong and Aizawl**

Specification No.: SATD/Upgradation & Replacement of Earth Stations at
DDK Guwahati, Shillong and Aizawl/Aug_2026

Dated: 10/08/2026

Shimanshu
10/08/2026

A. Nanda
10/08/26

Qw
10/8/26

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Jimarshu G *H. Lander* *Q/-*

1. Introduction

This project envisages Supply, Installation, Testing & Commissioning (SITC) for Upgradation & Replacement of C Band Earth Station at DDK Guwahati, Shillong and Aizawl comprising of Compression System, IF System, RF System and Monitoring System under plan scheme Upgradation & Replacement of 2x(1+1) Earth Station for SD and HD TV Channels.

Compression System, IF System, RF System and Monitoring System of these earth stations is proposed to be replaced for uplinking of SDTV & HDTV channels (Anyone standard on any given point of time) with MPEG-2/MPEG-4 compression and Uplink in DVB-S/DVB-S2 standard.

Configuration of major equipment for the proposed Earth Station Chain

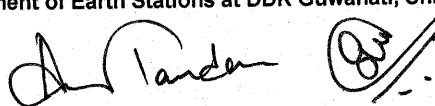
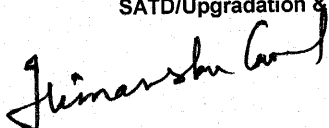
S. No.	Configuration of Equipment	Uplink Standard	Proposed Configuration of Equipment
1.	2x(1+1) Stand-alone Encoder for SDTV in MPEG-2 & MPEG-4 and HDTV in MPEG-4 compression in 4:2:0, 4:2:2 format for both SDTV and HDTV (Anyone standard on any given point of time)	SDTV& HDTV	SITC of 2x(1+1) encoders.
2.	Satellite Modulators 2x(1+1)	DVB-S & S2 Systems	SITC of 2x(1+1) Satellite Modulators
3.	C band RF Up-converters 2x(1+1)	-	SITC of 2x(1+1)Up converter system
4.	High Power Amplifier	C Band frequency	(1+1) Redundant configuration
5.	Monitoring System consisting of: • Uplink to L band converter (TLT) • Downlink to L band converter • L band IRD • A/V Monitors • 70 to L Band converter	SDTV& HDTV	SITC of Monitoring System

Table 1

2. Scope of Work

The scope of the work at Digital Earth Station at DDK Guwahati, Shillong and Aizawl on turnkey basis shall include the following but not limited to (refer drawing no. 1 to 5).

- 2.1 All the concerned equipment shall capable to take SDTV & HDTV channel without any limitation or requiring any upgradation by way of hardware or software.
- 2.2 The bidder shall Supply, Installation, Testing & Commissioning of the Digital Earth Station for two carrier up-link configuration consisting of HD/SD-SDI router and compression chain having MPEG-2 and H.264/MPEG-4 AVC Encoders in 2x(1+1) mode.(refer drawing no. 1).



- 2.3 The bidder shall supply, install, test & commission (SITC) one set of 32 x 32 or better matrix HD-SDI/ASI router with dual redundant power supply, X-Y remote panel and single Bus panel (refer drawing no. 1).
- 2.4 The bidder shall Supply, Installation, Testing & Commissioning of DVB-S2 compliant Digital Modulators in 2x(1+1) configuration with IF redundancy switch (inbuilt or external). (refer drawing no. 1).
- 2.5 The bidder shall Supply, Installation, Testing & Commissioning of RF chain consisting of (1+1) Up-converters with RF redundancy switch (inbuilt or external), RF combiner, splitters etc. (refer drawing no. 1).
- 2.6 The bidder shall supply, install, test & commission (SITC) High Power Amplifier (HPA) in (1+1) configuration (based on TWT/SSPA) along with waveguide switch, dummy load, dehydrator and associated accessories (refer drawing no. 2).
- 2.7 The bidder shall Bidder shall supply, install, test & commission (SITC) 24 port IP Network Switch and Work Station/ Control Computer for control and monitoring of IF & RF System (refer drawing no. 1 & 2).
- 2.8 The bidder shall supply, install, test & commission (SITC) of Uplink to L band converter (TLT), 70 to L Upconverter, C band D/L to L Down convertor, 17" HD Monitor, dual 9" HD Monitors rack mount, 8 channel Audio (Bar Graph) Monitor, Ampli-speaker and IRDs (IP ASI and L Band Input) for confidence monitoring points, Monitoring of ASI output of Encoders, IF Monitoring, RF Uplink Monitoring and RF Downlink Monitoring (refer drawing no. 1 & 2).
- 2.9 The system shall be designed to meet the International standards for digital Satellite Broadcasting having MPEG-2 & H.264/MPEG-4 AVC compression and DVB-S, S2 modulation (one at a time).
- 2.10 The bidder shall provide fully wired 42 RU, 19", 1000 mm (depth) standard equipment racks for mounting all the offered indoor equipment along with interconnecting power/signal/audio/ video/RF cables. All the racks are to be provided with minimum two nos. single phase MDUs and one no. single phase automatic power transfer/static switch connected between two sources of power supply routed through physically isolated routes.
- 2.11 The bidder has to integrate and configure the new equipment chains and commission the system as per the scope of the project and configuration mentioned in table-1 at clause 1.
- 2.12 The bidder shall provide assorted items required for the project like Rack Frames, MDUs, interconnecting material including Audio, Video, Power supply and control Cables with associated connectors, 1:4 IF splitter, 1:4 RF splitter, 2:1 RF combiner etc. are also to be provided and install.
- 2.13 The Bidder shall supply, install, test & commission (SITC) minimum 04 sets of earth pits (2 nos. for Input and baseband, 2 nos. for IF & RF System). All earth pits shall be extended up to earth terminals mounted on the wall in their respective equipment room. All electrical equipment and racks shall be directly connected at two points

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(without loop formation) to Earth Terminals with insulated multi strand copper wire (refer drawing no. 4 & 5).

- 2.14 The Power Supply System has to operate in conjunction with the Existing UPS system, AVR and LT Panel of Mains/DG AMF, 3Ø LT Panel to provide power conditioning, back-up power protection, and power distribution for the critical load.
- 2.15 The bidder should provide and install Power Distribution Panel (PDP), Suitable rating Power Supply Cables and lugs for the new equipment. However, it is advisable to the bidders to visit the site for their assessment of existing facilities before bidding.
- 2.16 Assorted items required for the project like inter connecting copper power supply cables with copper connectors/thimbles (Flat/bottle type) etc. from output of UPS to PDP and inter connecting cables are also to be provided by the successful bidder.
- 2.17 Bidder shall provide furniture for installation of various monitoring equipment in monitoring and control area.

3. Work Experience for Vendor and OEM

3.1 Work Experience for Selection of the vendor:-

- 3.1.1 Bidder must have his local office/authorized representative/dealer in India for after sales service support.
- 3.1.2 The Bidder shall have to meet the following Work experience:-

Work Experience- (Self - certified with relevant documents*)-	One Similar work** of minimum value of 80% of estimated cost of the project. or Two Similar works** each of minimum value of 60% of the estimated cost of project, or Three Similar works** each of minimum value of 40% of the estimated cost of project.
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Note:

- a) *Self-certified with Relevant document means to provide copies of work order/orders clearly mentioning the cost of the project/projects and Receipt Certificate/successful completion certificate/Factory dispatch document/Delivery Challan/Copy of Invoice of the project/projects to various organizations along with the bid.
- b) **Similar works is defined based on scope of the work or SITC of Earth Station/Teleport for DTH/Digital Earth Station/ DTH System/ Compression System (MCPC)/DTT/DVB-C/VSAT/DSNG/ Broadcast Equipment (i.e. as a standalone/their Part or in combination of these works) in any past ten financial years during the period 2015-2016 to 2025-2026. Similar Work may be executed with any Central and State Government agency, PSUs, Private organizations. Bidder shall provide list of all the self-certified relevant document of such work experience along with their cost in Rupees as per Annexure-VI of Appendix-D.

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3.2 Work Experience for OEM of Professional IRD and Encoder:-

Bidder shall offer Professional IRDs and Encoders of only those OEMs who are having past experience of at least five years of manufacturing and supplying of similar Professional IRDs and Encoders. List of past supply record of OEM of such equipment to various organizations must be provided.

- 3.2.1 OEM of the offered equipment must have manufactured and supplied the offered equipment to the leading broadcaster as mentioned in the table below in any past seven financial years during the period FYs 2018-2019 to 2025-2026:

S. No.	Offered Equipment	Qty
1	Professional IRDs	60 Nos.
2	Encoder	40 Nos.

- 3.2.2 Copies of supply order and receipt certificate/Factory dispatch document/ delivery challan/Copy of invoice of above said quantity of professional IRDs and Encoders provided in para 3.2.1 to various organizations in any past seven financial years during the period FYs 2018-2019 to 2025-2026. should essentially be submitted along with the bid document.

3.3 Work Experience for OEM of Satellite Modulator, C/Ku band RF Upconverter and Down Converter

- 3.3.1 Bidder shall offer Satellite Modulator and C Band RF Upconverter of only those OEMs who are having past experience of at least five years of manufacturing and supplying of similar Satellite Modulator and C/Ku Band RF Upconverter. List of past supply record of OEM of such equipment to various organizations must be provided.

- 3.3.2 OEM of the offered equipment must have manufactured and supplied the offered equipment to the leading broadcaster as mentioned in the table below in any past seven financial years during the period FYs 2018-2019 to 2025-2026.:

S. No.	Offered Equipment	Quantity
1	Satellite Modulator	25 Nos.
2	C Band RF Upconverter	10 Nos.

- 3.3.3 Copies of supply order and receipt certificate/Factory dispatch document/delivery challan/Copy of invoice in respect of above said quantity of Satellite Modulator and C/Ku Band RF Upconverter provided in para 3.3.2 in any seven financial years during the period from FYs 2018-2019 to 2025-2026. to various organizations should essentially be submitted along with the bid document.

3.4 Work Experience for OEM of High Power Amplifier

- 3.4.1 Bidder shall offer RF system of only those OEMs who are having past experience of at least five years of manufacturing and supplying of similar RF System. List of past supply record of OEM of such equipment to various organizations must be provided.

- 3.4.2 OEM of the offered equipment must have manufactured and supplied the offered equipment to the leading broadcaster as mentioned in the table below in any past seven financial years during the period FYs 2018-2019 to 2025-2026.

S. No.	Offered Equipment	Quantity
1	High power amplifier (HPA)	04 Nos.

- 3.4.3 Copies of supply order and receipt certificate/Factory dispatch document/delivery challan/Copy of invoice of above said quantity of equipment provided in para 3.4.2 to various organizations in any past seven financial years during the period FYs 2018-2019 to 2025-2026. should essentially be submitted along with the bid document.

- 3.5 Bidder must have a valid Dealer Possession License (DPL) at the time of submission of bid. A copy of valid DPL should be submitted along with bid.

- 3.6 **For Consortium/Joint Venture (If applicable):** In case of Consortium/Joint Venture, Vender/bidder shall follow the instructions provided at Appendix-A of the bid document.

4. Turnkey Implementation and Commissioning:-

The complete project will consist of Supply, Installation, Testing and Commissioning (SITC) of Upgradation & Replacement of C Band Earth Station at DDK Guwahati, Shillong and Aizawl. The project will be carried out on turnkey basis.

4.1 Input and Base Band System

- 4.1.1 The bidder has to integrate, test and commission OFC Link to transport HD-SDI & SD-SDI signal from MSR to Earth Station. Bidder shall lay, integrate and test pair of armored optical fiber cable with matching connectors between Single channel Optical Transmitter unit and single channel Optical receiver unit. Bidder shall install, integrate and test Rack Frame Mounting (Chassis) including Analog Audio & HD/SD-SDI Video Multiplexer Unit (Embedder), Analog Audio & HD/SD-SDI Video De-multiplexer unit (De-Embedder) and HD-SDI & SD-SDI Distribution Amplifier (DA) with suitable breakout cables.
- 4.1.2 Bidder shall lay, integrate and test HD video cables with matching connectors to route all video sources through 32 port HD SDI patch panel (Input). The patch panels should be 75 ohm normal through type. Refer to DRG No. 1.
- 4.1.3 Bidder shall lay, integrate and test HD video cables with matching connectors from 32 port HD-SDI patch panel (Input) to 32 port termination panel (Input) of 32x32 HD-SDI/ASI Router and 32 port termination panel (Output) of 32x32 HD-SDI/ASI Router, to 32 port HD-SDI patch panel (Output). All the 32 port (Input & Output) of 32x32 HD SDI/ASI Router Output shall be connected to 32 port HD SDI patch panel (Input & Output as per DRG No. 1.

4.2 Compression and IF System:

- 4.2.1 Bidder shall lay, integrate and test HD video cables with matching connectors from 32 port HD SDI patch panel (Output) to inputs of all Encoders in 2x(1+1) configuration.
- 4.2.2 Bidder shall lay, integrate and test HD video cables with matching connectors between output of Encoders and DVB-S2 compliant Modulators in (1+1) configuration including IF redundancy switch as per DRG No. 1.

- 4.2.3 The offered system shall meet the International standards for digital satellite broadcasting having DVB-S and DVB-S2 modulation (one at a time).
- 4.2.4 The offered system would also include the standard accessories supplied by the Manufacturer along with the modulator and IF redundancy switch.
- 4.2.5 Bidder shall lay, integrate and test RF Cables from Satellite Modulators to IF Redundancy switch and to IF Splitter as per DRG. No. 1.
- 4.2.6 Bidder shall lay, integrate and test Cat-6 cables or better for control interfaces through RS 232/ RS 422/ RS 485/ RJ45 etc so that all the Encoders, Modulators and IF redundancy switch should interfaced with a Control Computer through 24 port Network Switch as per DRG No. 1.
- 4.2.7 For Integration of equipment, Video Cable, Audio Cable and CAT-6 or better cable (Indoor type) for audio/Video/data/networking should be used. The colour of Audio/Video cables, IP control & data cable should be different and fitted with colour coded ferrule for ease of identification in equipment racks.
- 4.3 RF System (Up convertors, RF Redundancy Switch and HPA System):**
- 4.3.1 Bidder shall lay, integrate and test RF cables with matching connectors between IF Splitter to 2x(1+1) C Band up converters and up converter to RF Redundancy switch as per DRG. No. 1.
- 4.3.2 Bidder shall lay, integrate and test RF cables with matching connectors between RF Redundancy Switch and RF Combiner, RF Combiner to RF Splitter and RF Splitter to the input of High Power Amplifiers (HPAs) in (1+1) configuration. High Power Amplifiers (HPAs), dummy load and associated accessories shall be installed and test in 19" fully wired ventilated racks. The rack is to be provided with minimum two nos. single phase MDUs and one no. single phase automatic power transfer/static switch connected between two sources of power supply routed through physically isolated routes as per DRG.No.2.
- 4.3.3 Bidder shall lay, integrate and test rigid waveguide between outputs of High Power Amplifiers and waveguide switch. The output of waveguide switch shall be connected to Elliptical Waveguide through flexible waveguide. Automatic Waveguide Dehydrator shall also be fitted with Elliptical waveguide. Automatic Waveguide Dehydrator shall also be fitted with Elliptical waveguide.
- 4.3.4 The bidder shall integrate the offered RF System with the existing uplink antenna system and commission it. Bidder has to offer the solution accordingly.
- 4.3.5 Bidder shall lay, integrate and test Cat-6 cables or better for control interfaces through RS 232/ RS 422/ RS 485/ RJ45 etc so that C Band up converters and HPAs should interface with a Control Computer through 24 port Network Switch as per DRG No. 2.
- 4.4 Confidence level Monitoring System:**
- 4.4.1 Bidder shall install, integrate and test C-Band Uplink frequency to L band converter (TLT), 70 MHz to L Band Upconverter, C band D/L to L Band Down convertor, 17" HD Monitor, dual 9" HD Monitors rack mount, 8 channel Audio (Bar Graph) Monitor, Ampli-speaker and IRDs (IP ASI and L Band Input) for confidence monitoring points. Bidder shall lay, integrate and test RF cables, Video Cable, Audio Cable and CAT-6

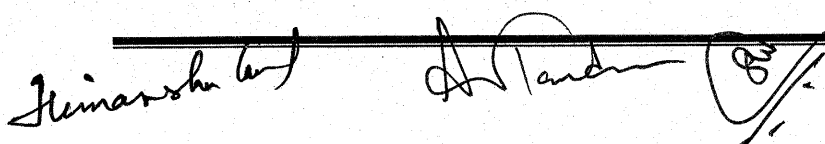
or better cable with matching connectors at the following locations for the Earth Stations mentioned below (refer drawing no.1 & 2).

- (i) **Monitoring of SDI Input Source:** Bidder shall lay, integrate and test required HD Video Cables with matching connectors for monitoring of SDI (Audio embedded) inputs through SDI/ASI router with 17" Video monitor and 8 channel Audio (Bar Graph) Monitor.
- (ii) **Monitoring of ASI output of Encoders** (In case of Hardware Encoders) : Bidder shall lay, integrate and test required HD Video Cables with matching connectors for monitoring of ASI SDI/ASI routers using IRD (with ASI input), 17" TFT monitor with speaker, 8 channel Audio (Bar Graph) Monitor.
- (iii) **IF Monitoring:** Bidder shall lay, integrate and test required RF cables and HD Video cables with matching connectors for monitoring of 70 MHz output of Modulators through 16port IF Patch panel, which is to be converted to L-Band using an Up-converter (70MHz to L-band), IRD (L band input), SDI/ASI router and 17" TFT monitor and 8 channels Audio (Bar Graph) Monitor.
- (iv) **RF Uplink Monitoring:** Bidder shall lay, integrate and test required RF cables and Video cables with matching connectors for monitoring of output of Up-converters and HPA through 16 port RF Patch Panel, Test Loop Translator (TLT- C-band U/L to L-band converter), IRD (L-band input), SDI/ASI router and 17" TFT monitor and 8 channels Audio (Bar Graph) Monitor.
- (v) **RF Downlink Monitoring:** Bidder shall lay, integrate and test required RF cables and Video cable with matching connectors for monitoring of downlink signal coming from LNA (both V & H) and down converters through RF Patch Panel and IRD (with L band input) via SDI/ASI router with 17" Video monitor, 8 channels Audio (Bar Graph) Monitor and dual 9" Monitors rack mount.

4.4.2 Bidder shall lay, integrate and test CAT-6 or better cable for control interfaces through RS 232/ RS 422/ RS 485/ RJ45 etc so that Uplink to L band converter (TLT), 70 to L Upconverter, C band D/L to L Down convertor, 17" HD Monitor, dual 9" HD Monitors rack mount, 8 channel Audio (Bar Graph) Monitor, Ampli-speaker and IRDs (IP ASI and L Band Input) should be interfaced with a Control Computer through 24 port Network Switch as per DRG No 1.

4.5 Power Supply System:

- 4.5.1 Bidder shall supply, install, test & commission (SITC) Power Distribution Panel (PDP) fitted with industrial MCCB, MCBs, Change over switch, Busbar with Voltage and Current metering and indication in power supply room which caters the load of all equipment as per DRG No. 3.
- 4.5.2 Bidder shall supply, install, test & commission (SITC) Power Distribution Panel (PDP). Bidder shall supply and lay down 4 core armored copper power supply cables of suitable rating between (iv) UPS output & PDP (v) PDP & Existing U/L Antenna Panel (vi) PDP & SDB 1 to 2. Bidder shall supply and lay down copper power supply cables of suitable rating between SDB 1 to 2 & all racks as per DRG No. 3.



- 4.5.3 Bidder shall supply, install, test & commission (SITC) the Sub Distribution Boards (SDBs) fitted with industrial MCBs in Earth Station which shall cater the load of all equipment as per DRG No. 3.
- 4.5.4 Bidder shall supply, install, test & commission (SITC) minimum two nos. MDUs in each rack having inbuilt or external, dual input, single phase automatic power transfer/static switch for providing redundant power supply to equipment as per DRG No. 3.
- 4.5.5 Bidder shall provide power supply in each rack and terminated on industrial type 3 Pin female connector to be mounted near each rack and shall be connected to MDUs for further feeding to equipment.
- 4.5.6 Bidder shall supply, install, test & commission (SITC) minimum 04(Four) nos. of earth pits. All earth pits shall be extended upto earth terminals mounted on the wall with insulated copper strip (75 Sq.mm minimum) in the Earth Station Room. All electrical equipment and racks shall be directly connected at two points (without loop formation) to Earth Terminals with insulated multi strand copper wire (25 sq mm minimum) with copper lugs at both ends as per DRG No. 4 & 5.
- 4.5.7 Bidder shall affix permanently in a conspicuous position a danger notice in Hindi or English adequate number of Danger/Caution board on all the PDP/SDB etc. to effectively warn individuals of high-voltage electrical hazards and promote safety.
- 4.5.8 The offer shall include supply, installation, testing and commissioning (SITC) of the setup, complete in all respects. A suggestive block schematic is provided to give a general idea about the intended configuration. A complete schematic of actually proposed implementation including power supply system should be submitted by the bidder along with the quote.

4.6 System Requirements:

- 4.6.1 The bidder must ensure completeness of the offered system in all respects. The system should be completed and fully wired for all the indoor equipment fitted in 19" standard racks. The offered system must have enough flexibility in adapting the changing requirements from the technical and operational point of view. The bidder should submit detailed schematics and layouts for proposed solution based on the offered equipment along with the offer.
- 4.6.2 In order to ensure the completeness of the system, any additional equipment/accessories which bidder feels necessary to complete the configuration should also be quoted. However, in such case they should provide proper justification for the additional equipment required.
- 4.6.3 Bidder shall submit only one solution (Single BOM) for the offered system. Bid with multiple options against any requirement is liable to be rejected. BOM shall not contain any optional items as an alternative for any line entry item. However, bidder can offer additional accessory items as options for performance improvement of main line entry item of same make.
- 4.6.4 Each offer should be complete in all respect. Incomplete & non-compliant offers will be rejected summarily, without making any references to bidder.
- 4.6.5 In the process of technical evaluation, Doordarshan may ask for any clarification/ query as required through e-mail/FAX/Post, which shall be treated as a part of tender and invariably attended and replied by the bidder within the time stipulated therein.

- 4.6.6 Cross reference in respect of supporting documents, should be given with proper page number and volume no. etc. If required Doordarshan may also ask for any other supporting document to ascertain the claim of bidder and their OEM.
- 4.6.7 All software being offered, are to be licensed to Doordarshan on perpetual basis without specifying any time limit or without specifying any end of life of the software. Software upgrades within five years of installation i.e. warrantee period should be supplied free of cost.
- 4.6.8 The bidder may visit the site before the submission of the bid. The bidder may also ensure the soil composition, moisture content, and temperature etc. for earth resistance measurements. The bidder desiring to visit the site must submit the request one week in advance with the details of the persons. All visits will take place only during working days from 1500 to 1700 hours only.
- 4.6.9 Cost of any other work, consultancy and material required for completing the installation & commissioning of the Input, compression, IF, RF, monitoring and Power Supply system should be taken into account and clearly mentioned while submitting the bid.
- 4.6.10 The local office/authorized representative/dealer will be the nodal point for resolving issues related to installation, commissioning and after sales support. Details of the OEM office and its location are to be provided along with bid.
- 4.6.11 The offer should clearly specify the list of equipment hardware, interfaces, cables etc and associated software provided with the Remote Computer System for interfacing it with different components of the chain.
- 4.6.12 As an SITC contract, all supplied equipment are to be installed, tested and commissioned at site mentioned above, by the Bidder. The cost of any other interconnecting material and labour required for laying of cables, Earthing etc. should be included in the tender.
- 4.6.13 Each and every offered equipment and accessories including software should be from reputed manufacturer and the quoted model should be high class, high MTBF, field proven and in use by leading broadcasters/ organizations.
- 4.6.14 The successful bidder will be solely responsible for commissioning and operationalization of Input and Baseband System, Compression System, Monitoring System, IF& RF System to the satisfaction of Doordarshan.
- 4.6.15 System/equipment (Equipment, Panels, Board, etc.) should be offered along with its frame/housing and other accessories which are necessary to meet the specifications/requirement and for the full exploitation of the equipment.
- 4.6.16 **The successful bidder must submit the firm's self-certified copies of import license at the time of commissioning in respect of RF Equipment for issuance of operating license from WPC.**
- 4.6.17 **For facilitating maintenance issues, bidder must also submit firm's self-certified copies of Bill of Entry/Custom Invoice of all imported items to DG: DD for release of PBG.**
- 4.6.18 **All invoices shall bear Serial Numbers of the equipment to meet the requirement of WPC.**
- 4.6.19 The successful bidder will be responsible for providing after sales service support of all the offered equipment for Seven years from the date of commissioning including

three (3) years warranty period. The bidder must submit undertaking for providing after sales support for additional four (4) years after the end of warranty period along with bid.

If bidder is not the OEM of the offered equipment, then after sales service support for the repairs/ maintenance for 3 years warranty period and for 4 years after the completion of guarantee/ warranty period shall also be **extended** by the OEM **through the bidder**. A certificate, on the letterhead, in this regard duly signed by the OEM must be submitted with offer by the bidder.

- 4.6.20 If required, bidder may have to give a presentation to explain their technical offer within one week from the date of issue of letter, as part of technical evaluation.
- 4.6.21 Bidder may have to demonstrate (within 15 days) the features of equipment offered as and when asked as part of technical evaluation of Tender. However it will not bestow any right of acceptance of the bid.
- 4.6.22 All interconnecting material including cables and connectors shall be provided by the successful bidder to complete the project. The bidder will be required to use only high quality HD-SDI video and audio cables, Data cables, Power Supply Cables, connectors and other accessories from reputed manufacturers. Suitable length of Video cable with matching connectors and Audio cable with matching XLR connectors should be used for rack wiring and long distance applications.
- 4.6.23 The routing of wiring between racks to be done from the Top of the racks.
- 4.6.24 The bidder should specify the hardware limitation if any.
- 4.6.25 The system must offer an intuitive user interface as well as remote configuration of all modules, simplifying system deployment and reducing operational routines.
- 4.6.26 The layout plan of equipment of Input and Base band system, Compression system and Monitoring system, IF, RF System, Power Supply system, racks, electrical diagram, PDP, SDB layout and other drawings need to be submitted for approval of Directorate General, Doordarshan before execution of SITC work at site.
- 4.6.27 A suggestive block schematic is provided in annexure –VII of Appendix-D (DRG No. 1 to 5) to explain the full scope of the work and give a general idea about the intended configuration. A complete schematic of actually proposed implementation should be supplied along with the quote. Physical topography may be different than the suggestive block diagram but it should meet the project objectives.
- 4.6.28 The successful bidder will be required to print and display the Final laminated Technical Block diagram and detailed Line diagrams (in color) of adequate (A1 or bigger) size for all the modules of the final solution in the facility after the completion of the installation. One set shall be mounted on wall and other for record at Station. The soft editable copy of the Technical Block diagram and detailed Line diagrams (in color) shall also be provided.

5. Technical Specification of Major Equipment:

5.1 Audio Video processing equipments including Distribution Amplifier, SD/HD-SDI Video Embedder, De-Embedder, and Optical Fiber Link:

Digital Video Distribution Amplifier, Analog Audio & SD/HD-SDI Video Embedder, De-embedder, and Optical Fiber Link are envisaged to be used for processing the input signals and supplied to HD/SD-SDI router input ports through Patch Panel. The Audio Video processing equipments shall consist of the following:

- A. Digital Video Distribution Amplifier (DVDA)
- B. Analog Audio & SDI Video Multiplexer Unit (Embedder)
- C. Analog Audio & SDI Video De-multiplexer unit (De-embedder)
- D. 19" Rack Frame mounting with hot swappable redundant power supply unit to hold minimum 10 nos. of different cards
- E. Optical Fiber Link for SD&HD SDI with embedded audio signal

The offered equipment shall be modular in construction and card type. It should be offered along with the 19" Rack Frame/housing with hot swappable redundant power supply unit.

General Features for Embedder, De-embedder, Distribution Amplifier and Rack Frame:

5.1.1 Digital Video Distribution Amplifier (DVDA)

A. General

- 1) It should provide automatic equalized output.
- 2) The offered product should auto detect the defined standard of video input signal.
- 3) Monitoring software should allow management of all the signal paths.
- 4) It should ensure no cross channel loading effects.
- 5) Visual indicators should also give its status about power supply, input etc.

B. Technical Specifications

S. No.	Parameter	Performance
1	Input	1 x HD/SD- SDI, BNC
2	Output	6 or more x HD/SD- SDI, BNC
3	Processing	
	i) Input Equalization	Minimum 100 m @1.5 Gb/s & minimum 300m @270 Mb/s
	ii) Return Loss	>15 dB up to 1.5 Gb/s

5.1.2 Analog Audio & SDI Video Multiplexer Unit (Embedder)

A. General

- 1) The offered product should auto detect the defined standard of video input signal.
- 2) It should be able to provide programmable audio delay for lip sync issues.

- 3) The offered Embedder should have excellent performance features like "high Input impedance", "flat frequency response", "very low total harmonic distortion" and "extremely high signal to noise ratio (S/N)".
- 4) It should be able to remove all available audio before embedding or allow overwriting with channel shuffling.
- 5) Monitoring software should allow configuration and status of the card.
- 6) Visual indicators should also give its status about power supply, input etc.

B. Technical Specifications

S. No.	Parameter	Performance
(a)	Input:	
i.	Analog Audio Inputs	4 or more analog balanced audio inputs with high input impedance >10 K Ω and should accept inputs level of at-least up to +24 dBu
ii.	Serial digital video Input	1 no. HD/SD-SDI
(b)	Output:	
i.	No. of Outputs	1 or more HD/SD-SDI signal with Embedded audio
(c)	Processing:	
i.	Audio processing	24 bits or more, 48 kHz sampling
ii.	Audio Frequency Response	± 0.2 dB (20 Hz to 20KHz) or better
iii.	Distortion (Audio)	-90 db(20Hz to 5kHz) or better
iv.	Channel phase difference	$\pm 1^\circ$ or better
v.	Audio Delay	Equal to Video Delay
vi.	Serial input & output return loss	> 15 dB up to 1.5 GHz
vii.	Input Equalisation	Minimum 100 m @1.5 Gb/s & minimum 300m @270 Mb/s

5.1.3 Analog Audio and SDI Video De-multiplexer unit (De-Embedder)

A. General

- 1) The offered product should auto detect the defined standard of video input signal.
- 2) It should be able to provide audio delay for lip sync issues.
- 3) It should give balanced audio output with low impedance.
- 4) Monitoring software should allow configuration and status of the card.
- 5) Visual indicators should also give its status about power supply, input etc.

B. Technical Specifications

S. No.	Parameter	Performance
(a)	Input	
i.	Input	1 or more HD/SD-SDI SDI signal
(b)	Output:	
i.	SDI Video Outputs	1 or more
ii.	Analog Audio Outputs	4 or more balanced output

(c)	Processing:	
i.	Audio processing	24 bits or more, 48 kHz sampling
ii.	Audio Frequency Response	$\leq \pm 0.2$ dB (20 Hz to 20KHz) or better
iii.	S/N Ratio	>90 dB
iv.	Cross talk	<-80 dB (20 Hz to 20KHz) or better
v.	Audio Signal Level	+22dBm on 600 Ω or better
vi.	Serial input & output return loss	> 15 dB up to 1.5 GHz
vii.	Input Equalisation	Minimum 100 m @1.5 Gb/s & minimum 300m @270 Mb/s

5.1.4 Rack Frame

A. General

- 1) The offered product should have redundant hot swappable power supply.
- 2) It should be capable of monitoring the performance of individual module/card by using SNMP or any other industry accepted interface.
- 3) It should be possible to adjust parameters of individual module/card mounted in the rack frame from a remote PC or any other similar device.
- 4) Standard 19 inches Rack Mounting frame/ housing to hold minimum 10 different cards with hot swappable redundant power supply unit.

B. Technical Specifications

S. No.	Parameter	Performance
1.	Control	RS-422 or RJ-45
2.	Operating temperature	5° to 40° Celsius
3.	Mount	Standard 19 inches Rack Mounting frame/ housing
4.	Number of slots	10 or more slots to hold different peripheral cards
5.	Height of frame	3 RU maximum
6.	Power Supply	230 $\pm$ 5% Volts, 50 Hz

5.1.5 General Features for Optical Fiber Link:

- (a) The offered solution should be scalable and modular in design and architecture.
- (b) The system should have built-in 1:1 dual redundant & hot-swappable power supply units.
- (c) The SD&HD SDI optical transmitter & receiver modules should have facility to pass 4 stereo/4 AES embedded audio, Dolby E audio etc without any limitation or upgradation by way of hardware or software licenses.
- (d) Trans & Receive unit shall be configurable locally through front-panel or remotely via Web-Interface (Web-GUI, SNMP etc).
- (i) **Optical Fiber Transmitter (SD & HD SDI with embedded Audio to optical fiber conversion):**

S. No	Parameter	Specification
Input Parameters		
1.	Input type	SD & HD-SDI with 4 stereo/4 AES embedded audio
2.	Standard	SMPTE 292 M & SMPTE 259-M
3.	Input impedance	75 Ohm
4.	Input Connector type	BNC Type
5.	No. of Input	1 No.
6.	Cable Equalization	75 m @1.485 Gbps & 300m @270 Mbps
7.	Return loss	> -14dB @1.485 Gbps
Output Parameters		
8.	Output type	One Optical SMPTE297-2006 or latest One SD & HD- SDI SMPTE-259M & 292M
9.	SDI output connector	BNC
10.	No. of SDI connector	Min. 1 No. input
11.	Optical output connectors	SC/PC or LC
12.	No. of Optical connector	Min 1 No. output
13.	Operating wavelength	1310 nm OR 1550 nm
14.	Optical power	-8 dBm (min)
15.	Mode	Single mode or Multimode

(ii) **Optical Fiber Receiver (Optical fiber to SD & HD SDI with embedded audio conversion) :**

S. No.	Parameter	Specification
Input parameters		
1.	Input type	One Optical SMPTE297-2006 or latest
2.	Optical input connectors	SC/PC or LC
3.	No. of Optical connector	Min 1
4.	Operating wavelength	1270 nm to 1610nm
5.	Mode	Single or Multi mode
6.	Optical input level	-18 dBm or better
Output Parameters		
7.	Output Type	SD & HD-SDI with 4 stereo/4 AES embedded audio
8.	Standard	SMPTE 292 M & SMPTE 259-M
9.	Output impedance	75 Ohm
10.	Connector Type	BNC
11.	No. of Output	2 No
12.	Return loss	> -14dB @1.485 Gbps

(iii) **SD&HD-SDI to fiber optical transmitter & receiver link (Chassis):**

S. No.	Parameter	Specification
1.	Size/Dimensions (per chassis)	Max. 3RU / 19" rack-mount
2.	Capacity	Min. 8 slots

3.	Power-supply	1:1 dual redundant (hot-swappable)
4.	Control	Front panel or remotely via Ethernet Interface (Web-GUI, SNMP etc.)

5.2 Compression System:

Compression system consists of the following:

- A. 32x32 HD/SD-SDI/ASI router
- B. Encoders in 2x(1+1) redundant configuration

The base band SDI signals received directly from MSR/PCR to the patch panel through Digital Distribution Amplifiers/Embedder then from patch panel to input of HD/SD-SDI/ASI router through HD-SDI 32 port termination panel, from output of HD/SD-SDI/ASI router to patch panel through HD-SDI 32 port termination panel and finally from patch panel to input of the offered encoders in 2x(1+1) configuration.

5.2.1 HD/SD-SDI/ASI Routing Switcher

A. General

32x32 HD/SD-SDI/ASI Routing switcher should be very reliable and able to be used for selection of any one of the 32 HD/SD-SDI/ASI input signals to 32 different destinations. The equipment offered should be for 24x7 hours use in Broadcast applications. The router has to be quoted with XY and single bus control panels.

B. Essential features

- i. The routing switcher electronics should be capable of being mounted in a standard 19" rack frame.
- ii. The routing switcher shall handle HD/SD-SDI/ASI signal for routing from input to output destinations. The switching should take place during the vertical interval period.
- iii. The routing switcher shall have facility to pass SD-SDI & SD-SDI with embedded audio, HD-SDI & HD-SDI with embedded audio (including Dolby Digital (AC-3) 5.1, Dolby digital plus 5.1 & Dolby E audio) and ASI signal for routing from input to output destinations of their respective ports.
- iv. The routing switcher should have storage facilities for control information, so that in case of power supply failure, the status of the switcher output should remain unchanged after the power supply is restored.
- v. The routing switcher should have auto-switchable dual redundant power supplies.
- vi. The routing switcher quoted against this specification should be complete in all respect and should have the desired features.
- vii. Any of the 32 HD-SDI and SD-SDI input shall be capable of being switched to any or all of 32 outputs port.
- viii. All the requisite drivers, software and licenses required for meeting the DD specifications must necessarily be pre-loaded and configured by the OEM before supplying equipment to DD.

C. Technical Specifications

i)	Matrix size	32 HD/SD-SDI/ ASI inputs. 32 destinations (output buses) output HD/SD-SDI/ASI
ii)	Input	SDI (75 ohms, BNC/HD BNC Female either directly mounted on chassis or with suitable adopter) SMPTE 259-M, SMPTE 292M, MPEG-2 TS over DVB ASI
iii)	Equalization for SD-SDI signal	Automatic: 150 Meters at 270 Mbps,
iv)	Equalization for HD-SDI signal	Automatic: 80 Meter at 1.485 Gbps
v)	Output	One or more HD-SDI with embedded audio (including Dolby AC-3 5.1 audio & Dolby E) and SD-SDI with embedded audio for each of 32 HD & SD SDI destinations; (75 ohms, BNC Female either directly mounted on chassis or with suitable adopter)
vi)	Return Loss	≥10 dB on data rate upto 1485 Mb/s throughout the switching chain.

5.2.2 SDTV Encoder in MPEG-2 & H.264/MPEG-4 AVC compression and HDTV Encoder in H.264/MPEG-4 AVC compression configuration with 4:2:0 format for both SDTV & HDTV

A. Essential Features:

- (i) The offered encoder should be a standalone unit having capability of MPEG-2 and H.264/MPEG-4 AVC compression with easy to use either front panel control through front panel keys and front panel display or through web browser.
- (ii) There should be dual redundant power supply units per Chassis. These encoder chassis shall be configurable to operate in 2X(1+1) redundant mode without any limitation or requiring upgradation/downgrading by way of Hardware and Software.
- (iii) Doordarshan is planning to implement DVB-Subtitling, Audio description, EPG, closed captioning etc services in future. Hence, the equipment offered by the bidder shall be capable of carrying these services without any limitation or requiring upgradation by way of hardware, software and their license.
- (iv) It should also have the pre-processing hardware and software facility for the efficient encoding process viz; adaptive noise reduction.
- (v) The encoder should have facility to support BISS -1 and BISS-E encryption mode. The hardware and software for encryption should be provided in all the encoders.
- (vi) The encoder should have facility to support internal multiplexing of external ASI input signal on BNC. All the hardware and software including provision for accepting ASI input for multiplexing should be provided in all the encoders.
- (vii) It should have multi-pass encoding hardware and software.
- (viii) It should have interface for Remote Control.
- (ix) It should have facility for PSI generation.
- (x) On loss of Video input, it should have option to auto switch to either last freeze frame or pre-recorded video frame/test Pattern. There should however be a facility to configure the encoder for NO output on the loss of video input.

- (xi) The encoder shall be MPEG-2 and MPEG-4 AVC standard compliant without any limitation or up-gradation by way of hardware or software licenses.
- (xii) It should have either front panel display or Keys for configuration of various parameters of encoder or through web browser.
- (xiii) There shall have facility for 4 stereo/4 AES audio with MPEG-1 Layer-II & HE AAC v1 & v2, 5.1 Audio encoding in each encoder. There should also be provision for Dolby Digital (AC-3) 5.1 decoding in each encoder and encoding audio in Dolby Digital (AC-3) 5.1 & Dolby Digital Plus 5.1 audio along with down-mix of one MPEG-1 Layer-II at any given point of time.
- (xiv) The Encoder shall have audio loudness control for maintaining uniform audio level in spite of changes from different input feeds and programs meeting the ITU-BS-1770-2/ITU-BS-1770-3 standard for loudness control.
- (xv) The Encoder shall have facility for ancillary data like closed captioning with EIA 608/708, DVB-subtitling, audio descriptor and digital program insertion compliant with SCTE-35 insertion via SCTE-104 triggers without any limitation or up-gradation by way of hardware or software licenses & keys.
- (xvi) There should have facility to insert ancillary data through IP data port.
- (xvii) The output of chassis should be MPEG-2 TS over IP on RJ-45 connector and MPEG-2 TS on BNC connector either directly mounted on Chassis or with suitable adopter.
- (xviii) The Encoder should have facility to insert Dynamic Logo for each channel.
- (xix) For hardware based encoder, there should be a provision to generate alarm and control signal on GPI port for compression chain redundancy and IF redundancy which shall be controlled by the IF redundancy switch.

Note: This clause is applicable only in case of hardware encoder.

- (xx) The encoder should support 10 bit encoding in 4:2:2 (MPEG-4) mode for better video quality.

B. Video Inputs

The Encoder shall be capable of accepting SD-SDI and HD-SDI with and without embedded audio Inputs with a facility to select between different inputs either through front panel keys or through browser on remote computer.

C. Serial Digital Input Specifications

S. No.	Parameters	Specification
1	Video Inputs	SD-SDI & HD-SDI with embedded audio
2	Serial Interface	i) SMPTE 292M/299M, 1485 Mb/s (10 bit) with embedded audio. ii) SMPTE 259M/272M, 270 Mb/s (10 bit) with embedded audio.
3	Format	ITU(R)-BT.601 & ITU-R BT.709
4	Connector	BNC/HD BNC/Micro BNC/DIN/Mini DIN Female, 75 ohm
5	Input Level	800 mV p-p nominal +/- 10%
6	Return Loss	≥15 dB from 5 MHz - 1.5 GHz/ or ≥10 dB on data rate upto 1485 Mbps

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D. TS Inputs Specifications for Re-Muxing in Output:

S. No.	Parameter	Specification
A	IP Input	
1	Type	Gigabit Ethernet
2	MPEG Format	MPEG-2 TS over IP (SPTS & MPTS)
3	No. of Bi-directional physical ports dedicated for IP Data Input	Minimum 1 no.
4	IP Data Port Speed	1000 Mbps or better per port
5	Ethernet IP Connector type	RJ45
B	ASI Input	
1	Format	MPEG-2 TS over ASI on BNC
2	Quantity for ASI Input	Minimum 1 no. on BNC/HD BNC/ Micro BNC/DIN/Mini DIN Female,75 ohm
3	Speed	Minimum 100 Mbps

E. Video Compression Parameters

S. No.	Parameters	Specification
1	Video Resolution (PAL)	For SDTV: 720 x 576, 544 x 576, 480 x 576 For HDTV: 1920 x 1080, 1440 X 1080
2	Profiles and Levels	i) SD MPEG-2 MP@ML, 4:2:0, 8 bit ii) SD H.264 MP@L3.0/Hip@L3.0 4:2:0, 8 bit iii) HD H.264 HIP@L4.0 ,4:2:0, 8 bit
3	Video Bit-rate (depending upon Resolution)	i) 1.5 to 15 Mbps for SD MPEG 2 4:2:0 profile ii) 1.0 to 12.5 Mbps for SD MPEG 4 4:2:0 profile iii) 3.0 to 20 Mbps for HD MPEG 4 4:2:0, profile
4	Temporal Processing	Dynamic GOP structure support such as IP,IBP,IBBP,IBBBP etc.
5	Coding of Interlaced Video	Adaptive field & frame Processing support
6	Spatial Redundancy	Discrete Cosine Transform (DCT) Reduction
7	Chrominance Format	4:2:0 for SDTV and HDTV
8	Aspect Ratio	4:3 and 16:9

F. Embedded Serial Digital Audio Input specifications

S. No.	Parameters	Specification
1	Serial Interface	SMPTE 272M, SMPTE 299 M, 1485 Mbps, 270 Mbps (20 bit)
2	Format	AES/EBU, 8 channels
3	Connector	BNC/HD BNC/Micro BNC/DIN/Mini DIN Female,75 ohm

G. Compression methods for Audio:

S. No.	Parameters	Specification
1	Audio Encoding Method	i) MPEG-1 layer II ii) HE AAC(MPEG 4)v1 & v2 5.1 audio iii) Dolby Digital 5.1 AC-3 audio iv) Dolby Digital Plus 5.1 E-AC-3 audio
2	Audio decoding Method	Dolby Digital 5.1 AC-3 audio Dolby Digital Plus 5.1 audio Dolby E
3	Audio Pass through	Dolby Digital 5.1 AC-3 audio Dolby AC-3 digital plus 5.1 AC-3 audio Dolby E Linear PCM
4	Data rate	i) 64-192 kbps (MPEG-1, layer II) ii) 32-72 kbps (MPEG-4, HE AAC v1 audio encoding) iii) 16-48 kbps (MPEG-4, HE AAC v2 audio encoding) iv) 224-640kbit/s (Dolby Digital 5.1 audio encoding) v)192-640kbit/s (Dolby Digital Plus 5.1 audio encoding)

H. Encoder Output

S. No.	Parameter	Specification
1	Format	MPEG-2 TS over IP
1(a)	No. of Bi-directional physical ports dedicated for IP output	Minimum 1 no. per chassis
1(b)	IP Data Port Speed	1000 Mbps or better per port
1(c)	Ethernet Connector Type	RJ 45
2	Format	MPEG-2 TS/DVB-ASI (with MPEG-2 TS over IP to DVB-ASI adapter if required)
2(a)	Output	2 no per chassis (min)
2(b)	Speed	Minimum 100 Mbps
2(c)	Connector Type	BNC/HD BNC/ MicroBNC/ DIN/ MiniDIN Female,75 ohm

I. Control (for remote access and monitoring)

S. No.	Parameter	Specification
1	Control port for remote access and monitoring	Min. 1 no. 10/100/1000 Base-T Ethernet port (RJ 45)

J. Hardware of Server in case of software based compression solution:

A) General Feature of Hardware:

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- i. CPU/Chipset of server should have facility to enable an environment where applications can run within their own space, protected from all other software on the system.
- ii. CPU/Chipset of server should have security feature that can reduce exposure to viruses and malicious-code attacks and prevent harmful software from executing and propagating on the server or network.
- iii. CPU/Chipset of server should have facility of Secure Key consisting of a digital random number generator that creates truly random numbers to strengthen encryption algorithms.
- iv. CPU/Chipset of server should have Thermal Monitoring facility to protect the processor package and the system from thermal failure.
- v. The offered processor of server should be scalable, high quality, robust with efficient performance.
- vi. Each server of software compression solution should be designed with 80 percent (Max.) CPU loading.
- vii. CPU of server shall be similar to Intel Xeon Gold series/ Intel Xeon W series/ AMD EPYC 3rd Generation Series or better and the launch date of CPU of offered server should not be prior to year 2021.

B) Technical Feature of Hardware:

S. No.	Parameter	Specification
A	Performance of Central Processing Unit	
1	No. of Core	16 (Min.) per CPU
2	No. of Thread	32 (Min.) per CPU
3	Processor	2.60 GHz or better Base Frequency
B	Memory Specification	
4	RAM	DDR4, 64 GB or more
5	Storage Memory	SSD, 240 GB (Min.) in Raid 1 Configuration
C	Operating System	
6	Operating system	Linux
D	Ethernet Network	
7	No. of Ports (Duplex) in server	i) One no. of 1 Gigabit port for Input or more ii) One no. of 1 Gigabit port for Output or more iii) One no. of 1 Gigabit port for Management & Control
E	PCI slot	
8	PCI slot	2 nos. or more
F	Operating Environment	
9	Operating Temperature	+10 to +35 °C
10	Humidity	10% to 90% non-condensing

5.3

IF System

The IF System consists of the following equipment:

- a) Satellite Modulator in 2x(1+1) redundant configuration

b) IF Redundancy switch.

c) 1:4 IF Splitter.

5.3.1 Satellite Modulator:

Modulators will be used in 1+1 redundant mode.

A. Essential Features:

- i) The offered modulator should be compact, reliable and have state of the art technology.
- ii) It should provide IF output (70 ± 18 MHz) as per DVB-S and DVB-S2 standards' modulation schemes based on the user requirement.
- iii) It should have facility to perform pre-equalization/ pre-correction to signal before feeding upconverter so that downlink signal is kept within 36 MHz BW of the transponder. This should not affect the operation of the existing IRDs (MPEG-2, MPEG-4, HEVC and DVB-S & DVB-S2 compliant).
- iv) The offered modulators should have front panel display. It should be possible to configure the modulators through front panel keys and through browser on remote computer.
- v) The offered modulators should be compliant to the ETSI 103 129 DVB Carrier ID (DVB-CID) requirement.
- vi) The offered Modulators should have the facility to generate alarm on failure of ASI input stream and IF Redundancy Switch shall be capable to switch the services on such alarm to redundant chain.
- vii) In case of failure of main/ redundant modulator, audio/visual alarm should be generated to indicate the failure of main/ redundant modulator.
- viii) The offered Modulators should have facility to take ASI input through BNC port and MPEG2 TS over IP input through IP data port.
- ix) All the requisite drivers, software and licenses required for meeting the DD specifications must necessarily be pre-loaded and configured by the OEM before supplying equipment to DD.

B. Technical Specifications:

S. No.	Parameter	Specifications
I. ASI Inputs		
1	Compliance	DVB Document A010 rev. 1, May 1997: Section 4.4
2	Byte stuffing modes	Byte and single packet burst mode.
3	Connector	BNC
II. IP Input Data Port {External IP to ASI converter is not acceptable}		
1	Input data format	MPEG-2 TS over IP

2	Ethernet interface	1000 base T, 1xRJ45 Connector
III. Forward Error Correction and Modulation Scheme as per DVB-S standard		
1	Multiplex Adaptation and Energy Dispersal	As per ETSI EN 300 421 (DVB-S)
2	Outer Coding	Reed-Solomon (204,188,T=8)
3	Interleaving Depth	12
4	Inner coding	QPSK : Convolution R=1/2, 2/3, 3 /4, 5/6 or 7/8
5	Spectrum Roll off factor	20%, 25 % and 35% selectable
6	Modulation	QPSK
7	Transmission rates	variable, 1.0 to 45.0 M symbol/s (min.)
IV. Forward Error Correction and Modulation Scheme as per DVB-S2 standard		
1	Multiplex Adaptation and Energy Dispersal	As per EN 302 307 (DVB-S2)
2	Modulation	QPSK, 8PSK
3	Modulation mode	Backward compatible mode (DVB-S/ DVB-S2 one at a time) And Constant Coding and Modulation mode (CCM)
4	Outer Coding	BCH
5	Inner coding	LDPC R= 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10 (for DVB-S2, QPSK), R= 3/5, 2/3, 3/4, 5/6, 8/9, 9/10 (for DVB-S2, 8PSK)
6	Spectrum Roll off factor	5%, 10%, 15%, 20%, 25% and 35% selectable
7	Transmission rates	Variable, 1.0 to 45 M symbol/sec (min.)
V. IF output Interface Specifications		
1	Output Frequency Range	70 +/- 18 MHz
2	Output Impedance	75 ohms unbalanced
3	Connector	BNC, female
4	Output Return Loss	15 dB (min.)
5	Output Level Range	-20 dBm to 0 dBm
6	Level Step Size	0.2 dB max.
7	Spurious Outputs	≤ -55 dBc/4 kHz at 0 dBm output power level in Band. Or ≤ -60 dBm outside Band
8	Synthesizer Phase Noise	Should meet the requirements of IESS-308
9	CW mode	Selectable
10	Noise floor (No/ C)	< -120 dBc/Hz
VI. Internal 10 MHz clock & Synchronization		
1	Frequency stability with respect to temperature	<+2.5ppm over 0°C to 50°C

5.3.2 IF Redundancy switch

IF redundancy switch would be used for the compression chain redundancy in 1+1 configuration for Modulators.

A) Essential Features:

- (i) The offered IF redundancy switch must be from the OEM of offered satellite modulator or endorsed/authorized by the OEM for the offered satellite modulator to ensure compatibility of the offered IF redundancy switch with the offered modulator system.
- (ii) The switch should be able to accept alarm signal from both main and redundant chain equipment i.e. Encoders (in case of only Hardware Encoder) and Modulators for redundancy of Modulators.
- (iii) In case of failure of main /redundant chain, audio or visual alarm should be generated to indicate the failure of main/ redundant chain.
- (iv) The offered IF redundancy switch should have dual redundant power supplies.
- (v) Facility for automatic, Manual and remote (through web interface) switching of the modulators should be available through the IF Switch.
- (vi) The switch should have high reliability, robustness and low MTBF.
- (vii) All the requisite drivers, software and licenses required for meeting the DD specifications must necessarily be pre-loaded and configured by the OEM before supplying equipment to DD.

B) Technical Specifications

S.No.	Parameter	Specifications
i)	Operating frequency range	50 to 90 MHz
ii)	Insertion loss	≤ 3 dB
iii)	Isolation	
	a) Input to input	45dB min
	b) input to output	50dB min
iv)	Input return loss	13 dB min
v)	Output return loss	13 dB min
vi)	IF connector	BNC/SMA type
vii)	Impedance	75 Ohms
viii)	Remote control	RS232 or RS422/485 or RJ 45

5.3.3 1:4 IF Splitter

S. No.	Description	Specifications
(i)	Impedance	75 Ohm
(ii)	Connector	BNC/ SMA type
(iii)	Frequency	50MHz to 90MHz

(iv)	VSWR	1.3:1 or better
(v)	Isolation	28 dB or better
(vi)	Insertion loss	1 dB or better

5.4 RF System

The RF System shall consist of the following equipment.

- C-Band Up-converter (U/C) in 2x (1+1) redundant configuration.
- RF Redundancy Switch for U/C Redundancy (external or internal).
- 2:1 RF Combiner
- 1: 2 RF Splitter
- HPA (C-Band, 400 W) in (1+1) redundant configuration with RF waveguide switch and Dummy load.
- Semi Rigid Elliptical Waveguide
- Automatic waveguide Dehydrator

Output of IF Redundancy Switch will be connected to the input of Upconverter in (1+1) redundancy configuration through IF Splitter. Output of RF Redundancy Switch will be fed to the HPAs using 2:1 RF Combiner and RF Splitter.

5.4.1 C-Band Up-converter:

A. Essential Features:

- The offered RF Redundancy Switch (in case of external RF Redundancy Switch) must be from the OEM of the offered upconverter or endorsed/authorised by the OEM of offered upconverter to ensure compatibility of the offered RF redundancy switch with the offered upconverter.
- In case of failure of main Up-converter, the RF Redundancy Switch should be able to provide RF signal output from redundant Up-converter.
- In case of failure of main/redundant Up-converter, alarm should be generated to indicate the failure of main/ redundant Up-converter.
- If the offered C band Up-converters are having built in redundancy controller then the built in redundancy controller should meet the technical specification mentioned at clause no. 5.4.2.

B. Technical Specifications :

Sl. No.	Parameters	Specifications
(i)	Input Frequency	70 MHz $\pm$ 18 MHz
(ii)	Input Connector	BNC(F)
(iii)	Input Power	-20 dBm to 0 dBm
(iv)	Input return loss	18 dB minimum

(v)	Input Impedance	75 Ohms
(vi)	Frequency Steps Size	Synthesized 125 KHz
(vii)	Frequency Stability	$\pm 1 \times 10^{-8}$ over 0 to 50°C
(viii)	Output Frequency range	5.85 GHz to 6.425 GHz
(ix)	Output Bandwidth	± 18 MHz
(x)	Output Connector	N Type(F)/ SMA(F)
(xi)	Output Impedance	50 Ohms
(xii)	Output return loss	18 dB minimum
(xiii)	Output Power	+10 dBm (min.) at P1 dB
(xiv)	Gain	30 dB (min.)
(xv)	Third order intermodulation at 0 dBm	-45 dBc or better
(xvi)	Amplitude response/ Gain Flatness	± 1.0 dB per 36 MHz (Max)
(xvii)	Gain Adjustment step size	0.2 dB (Max)
(xviii)	Phase Noise	IESS308/309 compliant or better
(xix)	Spurious	-60 dBc at 0 dBm output carrier related or better -65 dBm Non carrier related or better
(xx)	Remote Control	RS232 or RS422/485 or RJ 45 or any other port. This should be connectable to LAN using required format converters.

5.4.2 RF Redundancy Switch:

A. Essential Features:

- (i) Built-in RF Redundancy controller or external RF Redundancy switch for Up-converters in 1+1 redundant configuration.
- (ii) The offered RF Redundancy Switch (in case of external RF Redundancy Switch) must be from the OEM of the offered upconverter or endorsed by the OEM of offered upconverter to ensure compatibility of the offered RF redundancy switch with the offered upconverter.
- (iii) The switch should be able to accept alarm signal from both main and redundant Up-converter.
- (iv) In case of failure of main Up-converter, the RF Redundancy switch (In case of external RF Redundancy Switch) should be able to provide RF signal output from redundant Up-converter.
- (v) Facility for Automatic, Manual and Remote switching should be available.
- (vi) In case of failure of main / redundant Up-converter, alarm should be generated to indicate the failure of main/ redundant Up-converter.
- (vii) The switch should have high reliability and should be of professional type.

B. Technical Specifications:

Sr. No.	Parameters	Specifications
(i)	Operating Frequency Range	5.85 GHz to 6.425 GHz

(ii)	Insertion loss	≤ 0.5 dB
(iii)	Isolation	60 dB or better
(iv)	Input return loss	13 dB min
(v)	Output return loss	13 dB min
(vi)	RF Input/ Output Connector	SMA/N-Type
(vii)	Impedance	50 Ohm
(viii)	Remote control	RS232 or RS422/485 or RJ 45 or any other port. This should be connectable to LAN using required format converters.

5.4.3 1:2 RF Splitter/(2:1) Combiner:-

S. No.	Description	Specifications
(i)	Impedance	50 Ohm
(ii)	Connector	SMA
(iii)	Frequency	5.850 GHz to 6.425 GHz
(iv)	VSWR	1.3:1 or better
(v)	Isolation	15 dB or better
(vi)	Insertion loss	1 dB or better

5.4.4 C-Band High Power Amplifier

Bidder may offer Travelling Wave Tube (TWT) or Solid State Power Amplifier (SSPA).

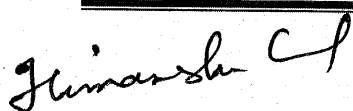
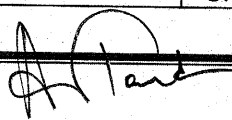
5.4.4.1 Travelling Wave Tube (TWT) based C-Band Linear Power Amplifier

A. Essential Features:

- (i) The High Power Amplifier (TWTA HPA) is to be used for the final power amplification of the digital RF signal in C-band (from 5.850 GHz to 6.425 GHz) that would be fed to the antenna system.
- (ii) These HPAs are required to be configured in (1:1) redundant system. It should be indoor type and 19" rack mountable.
- (iii) The amplification has to be carried out in two stages i.e. Solid State Intermediate Pre-Amplifier (SSIPPA) and Traveling Wave Tube Amplifier (TWTA).
- (iv) It should have integrated (internal) linea rizer.
- (v) It should have control and monitoring hardware interface ports along with software, which can monitor as well as operate the HPA system from a remote computer.
- (vi) It should have front panel display to monitor forward RF power, Reflected RF Power or VSWR, Helix voltage & current, heater voltage, TWT Temperature.
- (vii) The offered HPAs should have the facility to protect the HPA in case abnormal rise of temperature, high reflected power or VSWR, over voltage, over current etc, available in the amplifier and it's functioning.
- (viii) During the failure of the Main HPA, it should generate audible alarm and the Output is to be switched automatically to the Backup HPA. The system shall work in Manual Mode also.

B. Technical Specifications:

S. N	Parameters	Specifications
1.	Type of amplifier	TWTA (Indoor type, rack mountable) with integrated (internal) linearizer
2.	Frequency range	5.850 GHz to 6.425 GHz
3.	Bandwidth	Minimum 575.00 MHz
4.	Output power at TWT (Peak Power)	400 W min (56.02 dBm)
5.	Output power at Amplifier Flange	350 W min. (55.44 dBm)
6.	Gain (a) At rated power (b) At Small Signal	75 dB min. at rated power output; 78 dB min. at small signal
7.	RF level adjust range	0- 20 dB (Min)
8.	Gain variation	1.0 dB (max.) for 40 MHz (Any narrow band) 3.0 dB for 575 MHz bandwidth
9.	Gain Stability Over temp, constant drive	± 0.25 dB/ 24 hrs. (Max.) ± 1.0 dB max. over operating temperature range
10.	Gain Slope	± 0.02 dB/MHz (Max.)
11.	Input VSWR	1.3: 1 max
12.	Output VSWR	1.3: 1 max
13.	Load VSWR	1.7: 1 max operational; any value for operation without damage.
14.	Residual AM noise (Max.)	-50 dBc to 10 KHz -20(1.5+logf) dBc to 500 kHz -85 dBc above 500 kHz.
15.	Phase Noise (Max.)	10 dB below IESS 308/309 compliant or better AC fundamental related – 50 dBc Sum of all spurs-47 dBc
16.	AM/PM conversion at 6 dB below rated output power	2.5 Degree/dB Max.
17.	Harmonic Output	-60 dBc Max
18.	Spurious/Noise Power at rated output power	<-130 dBW / 4 KHz (Max.) for Receive band <-65 dBW / 4 KHz (Max.) for Transmit band
19.	Inter-modulation	-24 dBc or better with two equal carriers at 4 dB Output Back Off (OBO) (with linearizer) -18 dBc or better with two equal carrier at 4 dB Output Back Off(OBO) (without linearizer)
20.	Group delay, (maximum): (a) Linear (b) Parabolic (c) Ripple (peak to peak)	0.01 ns /MHz (linear) over any 40 MHz band 0.005 ns /square MHz over any 40 MHz band 0.5 ns over any 40 MHz band
21.	Power consumption at rated o/p	2 KVA Typical.
22.	Power factor	0.90 Min
23.	Operating temp:	-10° C to + 50° C
24.	Relative humidity	95% non condensing
25.	Altitude	Should operate upto 10,000 Feet AMSL


26.	Cooling	Forced air
27.	RF Input connector	N type Female/ N type Male, 50 Ohm
28.	RF Output connector	CPR 137 F/G waveguide flange
29.	RF power monitor connectors	N type Female/ N type Male, 50 Ohm
30.	Remote monitoring Port	RS 232/422 or 485, RJ 45 Ethernet
31.	Fail over Switching	Auto and Manual
32.	Operating Voltage	230 V AC (Nominal)
33.	Front panel display	LCD/TFT/ OLED or better

5.4.4.2 C-Band GAN based SSPA (C band Linear High Power Amplifier):

A. Essential Features:

- (i) The High Power Amplifier (SSPA HPA) is to be used for the final power amplification of the digital RF signal (wide band) in C-band (from 5.850 GHz to 6.425 GHz) that would be fed to the antenna system.
- (ii) These HPAs are required to be configured in (1:1) redundant system. It should be indoor or outdoor type.
- (iii) The amplification has to be carried out in two stages i.e. Solid State driver Amplifier and Solid State Power Amplifier.
- (iv) It should have control and monitoring hardware interface ports along with software, which can monitor as well as operate the HPA system from a remote computer.
- (v) It should have front panel display to monitor forward RF power, Reflected RF power or VSWR, Bias Voltage and Bias Current, Temperature.
- (vi) The offered HPAs should have the facility to protect the HPA in case of abnormal rise of temperature, high reflected power or VSWR, over voltage, over current etc, available in the amplifier and it's functioning.
- (vii) During the failure of the Main HPA, it should generate audible alarm and the Output is to be switched automatically to the Backup HPA. The system shall work in Manual Mode also.

B. Technical Specifications:

S. No.	Parameters	Specifications
1.	Type of amplifier	SSPA (Indoor type, rack mountable)
2.	Frequency Range	5.850 GHz to 6.425 GHz
3.	Bandwidth	Minimum 575.00 MHz
4.	Output RF Power (P Sat)	400 W min (56dBm)
5.	Output RF Power	200W min (53dBm) at Amplifier Flange (P Lin)
6.	Gain at rated power	67 dB (Min.)
7.	RF Level adjust range	0 - 20 dB
8.	Gain adjustment step size	0.1 dB
9.	Gain variation/Flatness	1 dB (max.) for 40 MHz (Any narrow band) 2 dB (max) for 500 MHz bandwidth
10.	Gain Variation vs. Temperature (0 to 50 °C)	± 1.5 dB max. over operating temperature range

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11.	Gain Stability at constant temperature	± 0.25 dB/ 24 hrs. (Max.)
12.	Gain Slope per 40 MHz	± 0.3 dB/40 MHz (Max.)
13.	Input VSWR	1.30:1 (Max)
14.	Output VSWR	1.30:1 (Max)
15.	Load VSWR	1.7: 1 max operational; any value for operation without damage.
16.	Residual AM noise (Max.)	-50 dBc to 10 KHz -20(1.5+logf) dBc to 500 kHz -85 dBc above 500 kHz.
17.	Residual Phase Noise	-10 dB below IESS 308/309 compliant or better AC fundamental related – 50 dBc or better Sum of all spurs -47 dBc or better
18.	AM/PM conversion	2.5 Degree/dB Max. at rated output power
19.	Harmonic Output at rated output power	-60 dBc Max
20.	Spurious/Noise Power	-65 dBc or better at rated output power
21.	Intermodulation Distortion	-25 dBc or better (Two-tone, 5 MHz spacing) at rated output power
22.	Group delay (40 MHz band) (a) Linear (b) Parabolic (c) Ripple (peak to peak)	0.03 ns /MHz or better 0.005 ns /square MHz or better 1 ns or better
23.	Power consumption at rated o/p	2 KW Nominal.
24.	Power factor	0.95 or better
25.	Operating temp:	-0° C to + 50° C
26.	Relative humidity	5% to 95% non condensing
27.	Altitude	Should operate upto 10,000 Feet AMSL
28.	Cooling	Forced air
29.	RF Input Connector type & Impedance	N Type (F)/ N Type (M), 50 ohms
30.	RF Output Connector	CPR 137 F/G waveguide flange
31.	RF power monitor connectors	N Type (F)/ N Type (M), 50 ohms
32.	Remote monitoring Port	RS 232/422 or 485, RJ 45 Ethernet
33.	Fail over Switching	Auto and Manual
34.	Operating Voltage	230 V, 50Hz (Nominal)
35.	Front panel display	LCD/TFT/OLED or better

5.4.5 Semi Rigid Elliptical Waveguide:

S. No.	Description	Requirement
i.	Conductor Material	Corrugated Copper
ii.	Operating Frequency Band	5.85 GHz - 6.425 GHz
iii.	Jacket Material	PE
iv.	Weight	1.1 Kg/m (maximum)

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v.	Cut-off frequency	3.65 GHz
vi.	VSWR	≤1.15 dB at full freq. range
vii.	Attenuation at 6 GHz	≤ 4.0 dB/100 m

5.4.6 Automatic waveguide Dehydrator

1. Maintenance free, Harsh Duty, Automatic waveguide Dehydrator to Provide Clean & Dry pressurized air to ensure signal quality of antenna Waveguide
2. Pressure level 1-5(min) PSI user configurable (adjustable output pressure)
3. Brushless dual-diaphragm and Oil-less compressor for long life includes a pressure regulator and air filter.
4. Remote monitoring and control by Ethernet RJ-45, RS-422/485, RS-232 and alarm relay outputs
5. Provisions for dry-contact alarms for Low pressure alarm (< 5psi) and excessive run time alarm.
6. Air reservoir to store dry compressed air.
7. Display for status monitoring with or without network connection & IP configuration.
8. 19" Rack mountable.
9. Environmental Noise Level: < 70 dB(A)
10. Operating voltage 230 ±5% VAC

5.5 Confidence Level Monitoring System

Confidence level monitoring system consists of:

- a) Up-converter(70MHz to L-band)
- b) Test Loop Translator (TLT for C-band U/L to L-band)
- c) C-band downlink to L Band Down Converter
- d) 17"(Nominal) LCD (TFT) SD & HD Colour Monitor
- e) 8 Channel Audio Monitor
- f) Dual 9 inch HD/SD-SDI Colour Video Monitor
- g) IRD with L-Band, ASI and IP input
- h) High Quality Digital Audio Ampli-speaker

5.5.1 Up-converter (70 MHz to L-band)

70 MHz to L-band Up-converter is to be used to check the monitoring output of modulators. Output of this Up-converter will be fed to IRD through RF Patch panel. The Specifications are detailed below:

S.No.	Parameter	Specifications
a)	Input Frequency	70 MHz ± 18 MHz
b)	Output Frequency range	950 MHz to 1450 MHz
c)	Return loss	15 dB or better (for both input & output)
d)	Phase Noise	IESS308/309 compliant
e)	Spurious	-55 dBc carrier related -65 dBm Non carrier related

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5.5.2 Test Loop Translator (TLT for C-band U/L to L-band)

Test Loop Translator (C-band uplink frequency to L-band) is to be used to check the monitoring output of Up- converters & HPAs. Monitoring ports of Up-converter and HPAs will be fed to TLT using a RF patch panel. Output of TLT will be fed to IRD (with L-band input) through patch panel. The Specifications are detailed below:

Sl. No	Parameter	Specification
a)	Input Frequency	5.925 GHz to 6.425 GHz
b)	Output frequency	L-Band
c)	Conversion loss	Better than 20 dB+2 dB
d)	Level Control	25 dB Minimum
e)	Return loss	15 dB or better (for both input & output)
f)	Phase noise	IESS 308/309 Compliant

5.5.3 C Band downlink to L Band Down Converter:

S. No.	Description	Specifications
i.	Input Frequency Band	3.7 GHz to 4.2 GHz
ii.	Output Frequency Band	950 – 1450 MHz
iii.	RF Input Return Loss	18 dB minimum
iv.	Output Return Loss	15 dB minimum
v.	Noise Figure	20 dB maximum
vi.	Impedance	50 Ohms input and 50 Ohms output
vii	Frequency stability	a) Daily $+5 \times 10^{-9}$ max b) Yearly $+1 \times 10^{-7}$ max c) $+2 \times 10^{-8}$ max over entire operating Temp.
vii	Spurious	a) –60 dBm maximum (Non Carrier) b) –55 dBc maximum (Carrier)
ix.	Phase Noise	As per IESS 308/309 (phase noise profile)
x.	Output Power at P1dB	+5dBm minimum
xi.	Conversion Gain	20dB+1dB minimum
xii	Gain Stability	+1.0 dB over temperature range
xii	Gain Flatness	± 0.5 dB across any 40 MHz at constant temperature
xi.	Input Connector	N type
xv	Output Connector	Suitable for terminating at F Type Patch panel

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5.5.4 17 inch (Nominal) LCD (TFT) SD & HD Colour Monitor

A. Essential Features:

- i) The offered monitor should incorporate high intensity, high contrast wide screen 17"(nominal), wide viewing angle LCD/TFT/OLED Panel to view stable images from various angles: both horizontally and vertically, with no reduction in picture contrast, brightness and colour saturation.
- ii) The LCD/TFT/OLED panel of the offered monitor should have resolutions of 1920x1080 pixels in 16:9 aspect ratio. The offered monitor should support 16:9 and 4:3 aspect ratios of the video signal. The monitor should support 1920X1080/50I (HD) and 720X576/50I (SD) video formats (with auto detect).
- iii) The offered monitor should support embedded audio. It should also have built in speaker (2.5W min) for audio monitoring.
- iv) The offered monitor should have 10-bit signal processing.
- v) The monitor should have 1:1 pixel mapping to display the pictures in the original resolution (subject to the native resolution of the LCD/TFT/OLED panel) and aspect ratio of the input signal without any stretch and distortion.
- vi) It should be possible for the user to select the industry standard colour temperature through menu for matching colours and gradation of the monitor.
- vii) The LCD/TFT/OLED panel should be coated with Anti-Reflection protection layer to provide high transmission rate of the internal light source and to keep the reflection from ambient light to a minimum.
- viii) The monitor should have an external remote control capability via Ethernet, serial or similar interface.
- ix) The offered monitor should have front panel controls to control the display parameters like brightness, contrast, color saturation etc.
- x) The offered monitor should be rack mountable and hence necessary 19" mounting brackets should be supplied.

B. Technical Specifications:

S. No.	Parameter	Specification
1.	Display size	17" diagonally (nominal)
2.	Screen type	LCD/TFT/OLED
3.	Resolution	1920 x 1080 pixels or better
4.	Colour reproduction	16 million or better
5.	Contrast ratio	300:1 or better
6.	Viewing Angle	176 degrees in Horizontal & in Vertical or better
7.	Brightness	250 cd/sq.m or better
8.	Aspect ratios	16:9 and 4:3 (auto detection) should be supported
9.	Video Inputs	HD/ SD SDI: 2 or more HD SDI SMPTE 292, 1.485Gb/s, 0.8V pp across 75 ohms (1080/50I) and SD SDI SMPTE 259 in BNC, 270Mb/s, auto detection
10.	Video input connectors	HD/ SD SDI: 2 or more BNC

11.	Video Format	SD: 720 x 576, 704 x 576, 544 x 576, 480 x 576, 352 x 576 HD: 1920X 1080/50I
12.	Video Outputs	HD/ SD SDI: 1 or more SDI SMPTE 292 in BNC, 1.485Gb/s, 0.8V pp across 75 ohms (1080/50I) or 1 or more SDI SMPTE 259 in BNC, 270Mb/s, 0.8V pp across 75 ohms active loop through of selected input
13.	Audio Outputs	XLR/RCA Jack/Phone Jack/ Mini Jack and built-in speaker
14.	Control I/O	Serial (RS 232/422/485)/ Ethernet RJ-45

5.5.5 8 channel Audio Monitor with Bar-graph & internal speakers:

A. Essential Features:

- i) High quality auto sensing 3G/HD/SD-SDI multi-channel audio monitoring system.
- ii) It should have high quality internal stereo loudspeakers.
- iii) 8 channel monitoring with ability to monitor any channel on either speaker, including combinations & groups.
- iv) 8 channel (minimum) bar graph display for level metering with tri-color LED/OLED/LCD Screen.
- v) Headphone output with loud speaker mute.
- vi) Dolby E, Dolby Digital 5.1 audio and Dolby Digital Plus 5.1 audio decoding from HD SDI and AES signal sources.
- vii) Multi-channel outputs for external stereo or 5.1 loudspeaker system integration.
- viii) Front panel controls for any combination of up to 8 channels.
- ix) Premium quality drivers and power amplifier.
- x) Excellent frequency response and low distortion.
- xi) It must have premium quality drivers and power amplifiers.
- xii) It should be of professional quality, 19" rack mountable and of reputed make.

B. Technical Specifications:

S. No.	Parameters	Specifications
1	Inputs	2 Nos. of 3G/ HD/ SD-SDI
2	Outputs	1 no. of HD/SD-SDI re-clocked Audio Monitor output port (with Digital to Analog converters if required)
3	Connectors	3G/HD/SD-SDI re-clocked : BNC 75 Ohms
4	Computer Interface	RS-485/RS 232/RJ-45
5	Sample rate for Digital input	48KHz
6	Analog O/P	
	a) Frequency Response	±1dB (20Hz to 20KHz)
	b) Noise + THD	Better than -60dB w.r.t. max O/P
7	Peak acoustic output at 2 feet	100 dB SPL
8	Mount	19" rack mount

5.5.6 Dual 9" HD/SD-SDI Colour Video Monitor

A. Essential Features:-

- i) The video & audio monitor should have ability to monitor both audio & video from selectable HD/SD-SDI (video & embedded audio) and composite analog video source.
- ii) Monitor should have LCD/TFT/OLED display of size dual 9" (nominal) diagonal.
- iii) Rack adaptor unit should also be offered for mounting dual 9" video monitors in a standard 19" rack.
- iv) It should have audio monitoring along-with bar-graph display facility.
- v) It should have direct control for brightness, contrast, Colour & input selection.
- vi) It should have low power consumption.

B. Technical Specifications:-

S. No.	Parameters	Specifications
1.	Display Size	9 inch diagonally (Nominal)x2
2.	Screen type	LCD/TFT/OLED
3.	Resolution	1920X1080 or more
4.	Colour reproduction	16 million or better
5.	Contrast Ratio	750 : 1 or more
6.	Viewing Angle	160 degree horizontal , 160 degree vertical
7.	Brightness	350 cd/m ² min
8.	Aspect Ratio	16:9 and 4:3 (auto detection)
9.	Video Inputs	HD/SD SDI: 2 or more in HD/SD-SDI (with embedded audio) in BNC 0.8 V across 75 ohms with loop through output.
10.	Video input connectors	HD/ SD SDI: 2 or more BNC
11.	Video Format	SD: 720 x576, 704 x576, 544 x576,480 x576, 352 x576 HD: 1920X 1080/50I
12.	Video Outputs	HD/ SD SDI: 1 or more SDI SMPTE 292 in BNC, 1.485Gb/s, 0.8V pp across 75 ohms (1080/50I) or 1 or more SDI SMPTE 259 in BNC, 270Mb/s, 0.8V pp across 75 ohms active loop through of selected inputs
13.	Audio Outputs	XLR/RCA Jack/Phone Jack/ Mini Jack and built-in speaker
14.	Control I/O	Serial (RS 232/422/485)/ Ethernet RJ-45

5.5.7 Integrated Receiver Decoder (IRD)

A. Essential Features:

- i) The professional IRDs should receive ASI and L band input signal and provide analog audio, digital SD-SDI, SD-SDI with Embedded audio, AES/EBU, HD-SDI, HD-SDI with Embedded audio, ASI outputs and MPEG-2 TS over IP output with multiple services filtering facility.

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- ii) One SD-SDI down converted output of HD-SDI should be available.
- iii) IRD should be able to carry out multi service filtering on IP output port.
- iv) IRD should have provision to enter or edit all the parameters for perfect reception of the signals either through front control panel display or through web browser.
- v) There should be at least one vacant slot (CI slot) for conditional Access System for descrambling all MPEG-2 & MPEG 4 and DVB-S & DVB S2 services.
- vi) There shall be a provision for observing BER & signal level or C/N & C/N margin or Eb/No & Link Margin for DVB-S mode of operation and PER & signal level or C/N & C/N margin or Es/No & Link Margin for DVB-S2 mode of operation either through front control panel display or through web browser.
- vii) IRD should be able to descramble BISS mode 1 and BISS-E signals.
- viii) There should be direct decompression of ASI to SDI i.e. not through analog to Digital conversion.
- ix) The IRD should be able to store at least 10 preset configurations in its memory.
- x) IRD should have facility to decode and pass ancillary data like closed captioning EIA 608/708, DVB-Teletext, DVB- subtitle, DPI SCTE-35 etc.
- xi) It should be possible to configure and monitor the IRD through a Control Computer.

B. Technical Specifications:

SNo	Parameters	Specifications
I. ASI input Parameter		
1	Format	MPEG-2 DVB-ASI
2	Quantity for ASI Input	Minimum one no. on BNC
II. RF input Parameter		
1	Input Frequency Range	950 - 2150 MHz
2	No. of Inputs	2 or more
3	Tuning Step Size	125 kHz, Max.
4	Satellite Frequency Band	C- Band & Ku-Band, Selectable
5	Input Impedance	75 Ohms
6	Input Connector	F Type female
7	Input Power Range	-30 to -65 dBm per carrier
8	Image Rejection	>30 dB
9	Input Return Loss	9 dB, Min.
10	Noise Figure	15 dB, Max.
11	AFC Tuning Range	± 5 MHz
12	De-Modulation Method	DVB-S QPSK, DVB-S2 QPSK and 8PSK demodulation
13	Variable Symbol Rates	1.0 to 40 M symbol/sec for DVB-S & for DVB-S2
14	Convolution Inner FEC selectable	R= 1/2, 2/3, 3/4, 5/6, 7/8 (DVB-S, QPSK), R= 1/2 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10 (DVB-S2, QPSK) R= 3/5, 2/3, 3/4, 5/6, 8/9, 9/10 (DVB-S2, 8PSK)
15	IF Filter Bandwidth	Automatic Selection (dependent on Symbol Rate)
III. Audio and Video Decompression Parameters:		
1	Video Resolution	For SDTV : 720x576, 704x576, 544x576, 480x 576 For HDTV : 1920 x 1080, 1440 X1080 (all resolutions shall be capable of I, P & B frame decoding, other standard resolution should be selectable)

2	Television Standard	PAL-B (EN50083-9)
3	Video Decompression Type	a) SD MPEG-2 MP@ML, 4:2:0, 8 bit b) SD MPEG-2 Hi422P@ML, 4:2:2, 8 bit c) SD H.264 MP@L3.0/Hip@L3.0 4:2:0, 8 bit d) SD H.264 Hi422P@L3.0/Hi422PL3.1, 4:2:2, 8 bit e) SD H.264 Hi4:2:2P@L3.1, 4:2:2, 10 bit f) HD H.264 HIP@L4.0, 4:2:0, 8 bit g) HD H.264 Hi422P@L4.0/Hi422P@L4.1, 4:2:2, 10 bit
4	Audio Decompression Type	i) MPEG-1 Layer-II audio ii) HE AAC(MPEG 4) v1 & v2 5.1 Audio iii) Dolby Digital (AC-3) 5. 1 audio iv) Dolby Digital plus 5.1 (E-AC-3) (Pass through) v) Linear PCM (Pass-through) vi) Dolby E (Pass through)
IV. Transport Stream O/P:		
1	Format	i) MPEG-2 TS over ASI on BNC and ii) MPEG-2 TS over IP over Ethernet with service filtering.
2	Ports	Minimum 02 nos. of BNC and Minimum 02 nos. RJ 45
V. Video Input /Output Specifications		
1	Video Output Format	SD-SDI and HD-SDI over BNC (75 Ohm) port/s
2	Video Outputs	02 Nos. HD/SD-SDI Outputs with one port providing down converted SD-SDI output
3	O/P Serial Interface Ports	SMPTE 292M-1485 Mbps, SMPTE 259M- 270 Mbps
4	SD-SDI O/P	SMPTE 272M with Embedded Audio
5	HD-SDI O/P	SMPTE 299 M with Embedded Audio
6	Digital Video O/P Level	800 mV p-p for SDI As per ITU-R BT.601 (part A)
7	Gen lock Input	One
VI. Digital Audio Output Specifications		
1	Output Format	i) AES/EBU or AES-3 id ii) HE AAC(MPEG 4) v1 & v2 5.1 Audio iii) Dolby Digital (AC-3) 5.1 audio iv) Dolby Digital plus 5.1 (E-AC-3) (Pass through) v) Dolby E (Pass through)
2	Load Impedance	110 Ohms balanced OR 75 Ohms Unbalanced
3	Connector Type	BNC Female/ XLR male Socket or with suitable XLR adapter (i.e. no terminal block)
4	Number of Output	4 Stereo Channels
VII. LNB Power Supply & Control		
1	LNB Voltage	Off, +13 V(Vertical), +18 V(Horizontal)
2	Circuit protection	Over Current & Short Circuit protection thru Fold back current limiting
3	LNB Control	22 +2 KHz Tone (Low and High Band control)
VIII. Mount		
1	Mount	19" Rack Mount

IX. Hardware of Server in case of Server Based Professional IRDs

A. General Feature:

- (i) Bidder may offer server based professional IRDs in place of Hardware based professional IRDs. Each Chassis may accommodate two to four professional IRDs.
- (ii) CPU/Chipset of server should have facility to enable an environment where applications can run within their own space, protected from all other software on the system.
- (iii) CPU/Chipset of server should have security feature that can reduce exposure to viruses and malicious-code attacks and prevent harmful software from executing and propagating on the server or network.
- (iv) CPU/Chipset of server should have facility of Secure Key consisting of a digital random number generator that creates truly random numbers to strengthen encryption algorithms.
- (v) CPU/Chipset of server should have Thermal Monitoring facility to protect the processor package and the system from thermal failure.
- (vi) The offered processor of server should be scalable, high quality, robust with efficient performance.
- (vii) Each server of software based professional IRDs should be designed with 85 percent (Max.) CPU loading.
- (viii) CPU of server shall be similar to Intel Xeon Gold series /Intel Xeon W/ AMD EPYC 3rd Generation Series or better and the launch date of CPU of offered server should not be prior to year 2021.
- (ix) Facility to store the last configuration in the software based professional IRDs.

B. Hardware Feature:

S. No.	Parameter	Specification
a.	Performance of Central Processing Unit	
1	No. of Core	10 (Min) per CPU
2	No. of Thread	20(Min.) per CPU
3	Processor Base Frequency	2.40 GHz or better
4	No. of CPU	One or more
b.	Memory Specification	
5	RAM	DDR4 or better, 64 GB or more
6	Storage Memory	SSD, 240 GB (Min.) in Raid 1 Configuration
c.	Operating System	
7	Operating System	Linux
d.	Ethernet Network	
8	No. of Ports (Duplex) in Server	i. Minimum one physical (RJ 45) bi-directional port of 1 Gigabit for Input

		ii. Minimum one physical (RJ 45) bi-directional port of 1 Gigabit for output
		iii. Minimum one physical (RJ 45) bi-directional port of 1 Gigabit for Management & Control
e.	PCI slot	
9	PCI slot	2 nos. or more
f.	Operating Environment	
10	Operating Temperature	10 to +35°C
11	Humidity	10% to 85% non-condensing

5.5.8 High Quality Digital Audio Ampli-speaker

A. Essential Features:

- i) The offered ampli-speaker should have wide dynamic range, low distortion, flat frequency response and high SPL capability.
- ii) The offered ampli-speaker should have two way speaker system consisting of a woofer and a tweeter. It should be a bi-amplified active monitor system.
- iii) It should have 8" Low Frequency Transducer (woofer) and approximately 1" High Frequency Transducer (tweeter).
- iv) The transducers/ drivers should be magnetically shielded for exceptional transient response and superb power handling. There should be no interference when these ampli-speakers are placed in the close proximity of other audio and video equipment especially CRT-type monitors.
- v) It should incorporate two high power amplifiers to provide 150 Watts (RMS) or more power to the low frequency transducer and 70 Watts (RMS) or more power to the high frequency transducer. These amplifiers should be highly efficient and should withstand long hours of uses.
- vi) It should be equipped with a precise cross-over network for smooth transition between transducers.
- vii) The ampli-speaker should disperse sound across the frequency spectrum evenly and consistently along the horizontal and vertical window of consistency.
- viii) It should be possible to network multiple ampli-speakers to control their various parameters such as volume, equalizers/ filters etc. It should also be possible to calibrate various parameters of the ampli-speaker in accordance with the acoustic environment. Necessary hardware and software required for this purpose must also be included in the offer.
- ix) The ampli-speaker should have volume control arrangements for standalone operations. It should also indicate signal overloading.
- x) The ampli-speaker should employ Digital Signal Processing (DSP).
- xi) The offered ampli-speaker should accept balanced analog audio on 3-pin XLR female connector. It should also accept balanced AES/EBU digital audio input on 3-pin XLR female connector.

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- xii) The offered ampli-speaker should be suitable for horizontal and vertical mounting.
- xiii) The offered ampli-speaker should also be capable of ceiling, wall and stand mountings.

B. Technical Specifications:

Sl. No.	PARAMETER	PERFORMANCE
1	INPUTS	
1.1	Digital Audio Input	AES/EBU, 24 bit, 48 kHz on XLR
1.2	Analogue Audio Input	Balanced on XLR with 10K Ω input impedance
2	DRIVERS	
2.1	Bass (woofer)	8 inch
2.2	Treble (Tweeter)	approx. 1 inch
3	FREQUENCY RESPONSE	
3.1	Lower cutoff frequency	≤ 43 Hz
3.2	Upper Cutoff Frequency	≥ 20 KHz
4	AMPLIFIER POWER	
4.1	Bass (woofer)	150 Watts or better
4.2	Treble (tweeter)	70 Watts or better
4.3	Gain	X1, X5 and variable
5	SOUND PRESSURE LEVEL	
5.1	Short term RMS SPL @ 1 Meter	Better than 110 dB
5.2	Continuous Max SPL @ 1 Meter	Better than 100 dB
6	DIMENSION	
6.1	Width	≤ 300 mm
6.2	Height	≤ 450 mm
6.3	Depth	≤ 400 mm
7	Total weight	≤ 15 Kg
8	Networking	Via RJ 45 port

5.5.9 4K/ UHD TV Display Units:

Sr. No.	Features	Specifications for 4K/UHD TV/Display Panel
1	Display Size	55 inches or above
2	Panel Technology	In plane Switching (IPS)

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3	Native Resolution	3840 x 2160 (UHD) 4K
4	Brightness	400 cd/ m ² or above
5	Contrast Ratio	4000:1 or better
6	Viewing Angle	178°x178°
7	Response Time	15 ms or less
8	Maximum Bezel Width (Left/Right/Top /Bottom)	13/13/13/20 mm or less
9	Input Ports	HDMI - 3 Nos., USB 2.0-1 no., RJ45 -1 No.
10	Output Ports	Optical output-1 for digital audio
11	Special features	Smart Share / Screen Share, Failover, Wake on LAN, Wireless access point/Hotspot, Pre-loaded You-tube app, Play via URL, SOC Player
12	Wi-Fi	Built-in Wi-fi required
13	Blue-tooth	Yes
14	Audio	20W (10W * 2)
15	Power Supply	100-240V~, 50/60Hz
16	Power Type	Built-In Power
17	Power Consumption	145 W or Less (Typical)
18	Certificates	BIS
19	Accessories	Table stand / Wall mount, Remote, IR remote, user manual
20	OEM Warranty	5 Years

5.6

Power Supply System

The Power Supply System consists of the following equipment:-

- Power Distribution Panels (PDPs), Sub distribution Boards (SDBs) for power distribution to the various equipment chains.
- Mains Distribution Units (MDUs).
- Earthing for the power supply system.

5.6.1 Power Distribution Panel (PDP) & Sub Distribution Board (SDB)

Essential Features:

- PDP shall have 63 A 440V 4 pole TPN for control of input Power Supply.
- PDP shall have 3 Phase TPN output busbar (one input and 4 outputs through 4 pole industrial MCBs).

- iii. PDP shall have provision of digital Volt meter, CT based digital current meter, phase indicator and double earthing connection points.
- iv. SDB shall have one incoming power supply controlled by 4 pole industrial MCB and outgoing power supply shall be connected to all Racks to meet the requirement of all supplied equipment, controlled by suitable industrial MCBs with 30% spare capacity to connect additional load in future. SDB shall have provision of double earthing connection points.
- v. Bidder shall affix permanently in a conspicuous position a danger notice in Hindi and English adequate number of Danger/Caution board on all the PDP/SDB etc. to effectively warn individuals of high-voltage electrical hazards and promote safety.
- vi. Successful bidder shall submit schematic diagram in advance before installation of PDP and SDB for approval.

5.6.2 Mains Distribution Units (MDU)

- i) Every rack should have minimum two nos. of Mains Distribution units (MDUs) with sequential delayed output on start up, output status LED and IEC-3 pin for each equipment installed in the rack. Each MDU shall have inbuilt or external, dual input, single phase automatic power transfer/static switch.
- ii) All Equipment which have dual power supply unit shall be connected directly from both MDUs

S. No.	Parameter	Specification
1	No. of fused outlets with IEC 3-Pin Connectors in each MDU	12 nos. or more
2	Primary Power Supply	220/240 V AC nominal, Single phase, (50 +/- 2)Hz
3	Current (Max)	16 Amp

5.6.3 Earthing System

- a. Earth pits should consist of Copper Earth electrode (diameter 20 mm (min)), insulated copper strip/wire (75 Sq. MM (Min)), Chemical earth fill compound with fast discharge characteristics, water absorbing gel, perforated Hard HDPE pipe (diameter 40 mm (min)), funnel, water supply provision upto each earth pit (preferably from A/c condenser), 10 feet depth (min) and 1 feet diameter (min.). Earth pit should be prepared so that earth resistance is less than 1 ohms –typical depth of earth pit is 10 feet minimum. (Sample picture is enclosed at DRG No. 4).
- b. All earth pits shall be extended upto earth terminals mounted on wall with insulated copper strip (75 Sq.mm (Min)) in the equipment room. All equipment racks shall be directly connected to Earth Terminals with insulated multi strand copper wire (25 sq mm (Min)) with copper lugs at both ends. (Sample picture is enclosed at DRG No. 5).
- c. The earth resistance should be less than 1 ohm. In case of hilly terrain/Rock area, etc. If earth resistance of new pit is more than 1 ohm, Bidder shall make upto four similar earth pits and connect it parallel to achieve minimum possible earth resistance.

Guinness CP *A. Tandon* *CS*

6. Physical, Environmental and Mechanical Specifications

6.1 Power Supply :

Equipment shall operate from a wide range of power supply voltages without interruption or damage.

6.2 Environmental Specifications (wherever not mentioned)

Sl.	Parameter	Specification
1	Operating Temperature (Indoor)	5°C to 35°C
2	Operating Temperature (Outdoor)	-10°C to 50°C
3	Storage Temperature	-10°C to 60°C
4	Humidity (Indoor)	5 to 85% non-condensing
5	Humidity (Outdoor)	10 to 95%
6	Altitude	2 to 1000 m

6.3 Mechanical Specifications

Sl.	Parameter	Specification
1	Construction	Modular approach, EIA RS-310C, 19" rack mount
2	Cooling	Internal circulation fan wherever applicable
3	Mounting	Equipment shall be rack mounted and required number of racks shall be supplied pre-wired to house all the supplied equipment.

7. COMPLEMENT OF EQUIPMENT:

- The make and model/part no. of each and every equipment/item/installation material etc. should be clearly mentioned in the offered Bill of Material (BOM).
- The suggestive Bill of Material (BOM) has been provided in **Annexure-I of Appendix-D**. The bidder is required to provide the complete list of equipment, software and accessories etc. offered to meet the requirement as per DD specifications. The quantity of each item including sub-module, licenses etc. are to be specified clearly and compulsorily, failing which the bid is liable to be rejected summarily. The following is the proforma for the BOM:

Sr. No.	Description of the item as per specification (suggestive BOM)	Description of items offered by bidder	Quantity as per suggestive BOM	Quantity offered by the Bidder	Make Offered	Model Offered
1.	2.	3.	4.	5.	6.	7.

- The bidder should provide the offered un-priced Bill of Material in electronic form with the priced bid for ease of technical evaluation.

8. GENERAL

8.1 Compliance and OEM Authorisation

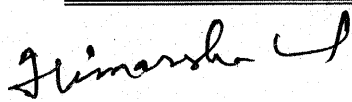
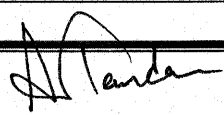
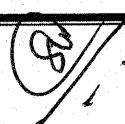
- Bidder must submit a point-by-point compliance statement in respect of all the points, sub-points and pares laid down in this specification from page 1 in the format as indicated below along with bid.

Jimenez C *A. Pandan* *Q*

Sr. No. of DD specs.	DD specs.	Compliance (Yes/No)	Performance fig. of equipment offered.	Deviations, in case of non-compliance	Optional items if any required to make the system Compliant to DD specs.	Features in the system offered Which exceed DD specs.	Page No.	Remarks
1	----							
2	----							
3	----							

- b) In addition to the above, compliance from respective OEMs (not from their Indian representatives) in respect of the equipment as listed below should necessarily be given, in respect of all the points, sub-points and pares laid down in the Technical Specification of the respective equipment in the format as given above. The OEM should necessarily record the performance figure of the equipment offered in the quote for which the compliance statement is required.

A	Input and Base Band System
1.	Analog Audio & HD/SD-SDI Video Multiplexer Unit (Embedder)
2.	Analog Audio & HD/SD-SDI Video De-multiplexer unit (De-Embedder)
3.	HD-SDI & SD-SDI Distribution Amplifier (DA) and Rack frame (Chassis)
4.	OFC Link from MSR to ES (Optical transmitter, receiver and optical fiber cable)
B	Digital Compression System
1.	32x32 SDI Router
2.	Encoder
C	Satellite Modulator
1.	Digital satellite Modulator
2.	IF Redundancy Switch
D	RF System
1.	C Band Up converter
2.	RF Redundancy Switch
3.	High Power Amplifier (HPA)
4.	Waveguide
5.	Waveguide Switch
6.	Automatic Waveguide Dehydrator
E	Monitoring system
1.	Professional IRD
2.	70 to L Band Up Converter

3.	C Band Uplink to L Band Converter (TLT)
4.	C Band Downlink to L Band Converter
5.	8 Channel Audio/Video Monitor
6.	Dual 9" video monitor
F	Measuring Equipment
1.	Spectrum Analyser

- c) Mere signature on a copy of Doordarshan specifications shall not be accepted as a compliance statement.
- d) The compliance statement in respect of Technical Specifications of the equipment should be supported by highlighted record of these in the relevant technical literature/data sheets of respective equipment enclosed with the tender and a clear reference (with volume number and page number of tender documents) to the attached supporting document should be given in the remarks column against each & every specs. Any offer without proper supporting document of each & every specs and containing only a commercial hand out/pamphlet is liable to be rejected.
- e) Data sheets in respect of all offered equipment should be submitted. Any deviation from the specification detailed in the compliance statement is to be highlighted separately. Page no. of location of data sheet should be given in page no. column of the compliance statement.
- f) Offers without proper & duly completed compliance statement are likely to be rejected with the sole responsibility of bidder and no further claim/correspondence will be entertained.
- g) The bidder is also required to submit authorization in respect of the equipment as listed above at Sl. No. 8.1(b) in their favour from respective OEMs (not from their Indian representatives) on their letter heads along with the bid **as prescribed in Annexure II of Appendix-D.**

8.2 Documentation:

- a) One set of technical manual for all the equipment are to be provided along with the tender to facilitate the technical evaluation, otherwise the tender is liable to be ignored.
- b) The successful bidder will have to supply set of printed technical & user manuals along with factory test report of all the offered equipment.
- c) Operation Manual for all equipment should also be supplied on DVD/USB with search facility.
- d) All offered software should have perpetual validity and should be in the name of Doordarshan. All software backups should also be supplied on DVD/USBs.
- e) For facilitating maintenance issues, the bidder must submit the firm's self certified copies of Bill of Entry/Bill of Laden/Custom Invoice of all imported items to DG:DD.
- f) The successful bidder must ensure that all Invoices bear serial numbers of equipment to meet the requirement of WPC.

8.3 Guarantee/Warranty and After Sales Support:

The Guarantee, warranty of material and workmanship will be covered by General Terms and Conditions (GTC) at APPENDIX-B of the Bid document except the following:

- a) All the offered equipment shall be guaranteed against any manufacturing defect for a period of 3 **(Three)** years from the date of Commissioning.
- b) Any part failing during the guarantee period shall be repaired/replaced free of charge by the successful bidder at site. For repairing of any defective equipment during guarantee period, the defective module or equipment requiring repairs will be handed over to local office/local authorized representative/ dealer who will arrange repairs locally at site or send/export the defective modules to OEM factory and re-import/send back after repairs.
- c) It is the responsibility of local office/ Authorized representative/ dealer of the bidder to arrange the repair/ replacement of faulty items for Doordarshan i.e. no transportation charges would be paid by DD for transporting the defective/ repaired items, if required to be removed from site, during the guarantee period.
- d) Guarantee/Warranty period of Complete System of the respective Earth Station is to be extended as follows:
 - i) If the rectification of failure takes more than 30 days time for any one or more equipment which needs to be sent back to out of India or needs to import spares for fault rectification, the Guarantee/Warranty period of all equipments offered for that Earth Station is to be extended corresponding to the outage period from the date of acceptance.
 - ii) If the rectification of failure takes more than 15 days time for any one or more equipment which does not need to be sent back to out of India or to import spares for fault rectification, the Guarantee/Warranty period of all equipments offered for that Earth Station is to be extended corresponding to the outage period from the date of acceptance.
- e) If bidder is not the OEM, then the guarantee/ warrantee in respect of the equipment as mentioned in Clause 8.1(b) shall be provided by the bidder through respective OEMs. ***A certificate, duly signed by the OEM on the OEM letterhead, in this regard of the respective equipment must be submitted with the offer by the bidder as prescribed in Annexure III of Appendix-D.***
- f) If bidder is not the OEM, then after sales service support for additional 4 **(Four)** years for the repairs/ maintenance in respect of the equipment as mentioned in Clause 8.1(b) after the completion of guarantee/ warranty period shall also be provided by the OEM either directly or through his representative in India. ***A certificate, duly signed by the OEM on letterhead, in this regard of the respective equipment must be submitted with the offer by the bidder as prescribed in Annexure IV of Appendix-D.***

8.4 Inspection and Commissioning:

The inspection of material will be carried out by the authority specified in the Purchase order. The material will be accepted only after the same has been found satisfactory after inspection and duly marked and sealed by the Inspection Authority, In addition to "General Terms and Conditions" (GTC) at Appendix-B of the Bid document, the inspection of material/equipment will be carried out as follows:

- 8.4.1 All the equipment to be supplied against this A/T (Purchase Order) for this tender shall be subjected to pre-installation inspection at Doordarshan Site by Doordarshan Officer appointed by Doordarshan Directorate. The pre-installation inspection shall be based on manufacturer's factory test results and physical verification of make and model of

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equipment. The successful bidder should produce the factory test reports of the offered equipment to facilitate inspection

8.4.2 Post installation inspection and commissioning of the system will be carried out by a team of Doordarshan Officers authorized by Doordarshan Directorate and based on approved Acceptance Test Procedure (ATP).

8.4.3 A draft copy of ATP (Acceptance Test Procedure) must be submitted by the successful bidder one month in advance of the proposed date of inspection of the installed system to Doordarshan Directorate for approval. ATP should describe the standard test procedure of individual equipment and overall system. The factory test report will not be treated as ATP.

8.4.4 The approved ATP with or without changes shall be sent back to the successful bidder to be used for inspection and commissioning of the installed system by DD Engineer(s) at site. All the equipment required for the inspection as per the approved ATP are to be provided by the successful bidder.

8.4.5 The SITC certificate will be issued by the team of Officers appointed at S.N. 8.4.2 above.

8.5 Delivery Period:

Six months from the date of issue of purchase order or Five months from the date of the Decision Letter provided by DD in respect of RF equipment, whichever is later.

8.6 Pre-Bid Conference:

- a) A pre bid conference on technical Specifications and other issues shall be held on date and time specified in the NIT. All prospective bidders may attend the pre bid conference to discuss their queries and suggestions.
- b) All the queries and suggestions should be sent to Doordarshan at least 2 days before the date of pre bid conference. No queries/ suggestions shall be entertained after pre bid conference.
- c) Amendments subsequent to the pre bid conference shall be sent to prospective bidders, who have purchased tender document by e-mail/fax/post/uploaded on website.
- d) It shall be bidder's responsibility to check for any amendments/addendum on the website before submitting their duly completed bids.

8.7 Check List and Enclosures:

The bidders may ensure the following check list while submitting the bid including some important list of enclosures for ease of technical evaluation (**Annexure V of Appendix-D**).

- a) Whether documents related to fulfilment of the eligibility criteria as per Clause 3 have been submitted.
- b) Whether the BOM has been submitted in the prescribed format as given in Clause 6.
- c) Ensure that all equipment and accessories as given in Annexure-1 have been included in the offered BOM.
- d) Whether the compliance statement from the bidder as required in Clause 8.1 (a) has been submitted.

Guinness *A. Panda* *(Signature)*

- e) Whether the compliance statements from the respective OEMs for equipment/system mentioned in Clause 8.1 (b) have been included.
- f) Whether the Authorization as required vide clause no. 8.1(g) in respect of equipment as mentioned in Clause 8.1 (b) from respective OEMs have been included.
- g) Ensure that the relevant technical brochures/manuals containing all the parameters of technical specifications of all the offered equipment and accessories have been included with proper indexing for ease of identification.
- h) Whether the page numbers of the relevant enclosed technical data sheet/manual against each parameter of the technical specifications have been given in the compliance statements.
- i) Whether the requisite undertakings for guarantee/warranty and after sales support by OEMs as required vide Clause no. 8.3 have been submitted.
- j) Ensure that no alternate item has been offered.
- k) Ensure that the Un-priced BOM has been included.
- l) Any other item mentioned elsewhere in the tender.

Himanshu P *A. Pandey* *AS//*

OEM LETTER HEAD

CERTIFICATE FOR AUTHORIZATION

Date:

Tender No. :

We, M/s (Name and Address of the OEM), do hereby authorize M/s..... (Bidder's name), having its office at (Bidder's address) to submit the bid and sign the contract with Doordarshan for the products offered by us against the above tender.

Signature

Name & Designation of authorized signatory.....

Name of the OEM -

Stamp

Sumesh Chandra

OEM LETTER HEAD

CERTIFICATE FOR GUARANTEE/WARRANTY

Date:

Tender No. :

We, M/s (Name and address of the OEM), do hereby confirm that:

1. All the offered equipment shall be guaranteed against any defect for a period of **5 (FIVE)** years from the date of Commissioning.
2. Any part failing during the Guarantee/Warranty period shall be repaired/replaced free of charge by the successful bidder at site. For repairing of any defective equipment during Guarantee/Warranty period, the defective module or equipment requiring repairs will be handed over to local office/local authorized representative/ dealer who will arrange repairs locally at site or send/export the defective modules to OEM factory and re-import/send back after repairs.
3. It is the responsibility of M/s -----,(their local office/ Authorized representative/ dealer of the bidder) to arrange the repair/ replacement of faulty items for Doordarshan i.e. no transportation charges would be paid by DD for transporting the defective/ repaired items, if required to be removed from site, during the Guarantee/Warranty period.
4. Guarantee/Warranty period of Equipment or spare parts thereof replaced is to be extended corresponding to the outage period from the date of acceptance, if the failure rectification takes more than 15 days or 30 days time as applicable.
5. All software being offered, are to be licensed to Doordarshan on perpetual basis without specifying any time limit or without specifying end of life of the software. Software upgrades within Guarantee/Warranty period will have to be supplied free of cost.

Signature

Name & Designation of authorized signatory.....

Name of the OEM-

Stamp

OEM LETTER HEAD

CERTIFICATE FOR AFTER SALES SERVICE SUPPORT

Date:

Tender No. :

We, M/s (Name and address of the OEM), do hereby confirm that after sales service support for additional **Two (2) years** for the repairs/maintenance of offered products after the completion of **Five (5) Years** guarantee/ warrantee period shall be provided through our representatives/authorized dealer/service provider for the offered equipment and accessories in India as mentioned below:

S. No.	Name of the authorized person	Name & Address of authorized After Sales & Support Office/Firm	Telephone/ Fax	Email of concerned personnel
1				

Signature

Name & Designation of authorized signatory.....

Name of the OEM-

Stamp

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BIDDER LETTER HEAD

DECLARATION BY THE BIDDER

1. Bill of Material (BOM)- : [Yes/No]
2. Bidder's compliance (As per specs clause no. 8.1.(a)) : [Yes/No]
3. The copy of Dealer Possession License in case of possession of RF equipment (if applicable) : [Yes/No]
4. Copy of the Memorandum of Understanding (MOU) of Consortium/Joint Venture (If Applicable)(as per clause no. 3.8) : [Yes/No]
5. OEM Compliance for following equipment from their respective OEMs (as per clause no. 8.1.(b)):

S. No.	Name of equipment	Name of OEM	OEM compliance submitted (Yes/ No)
i			
ii			
.			
.			

6. Certificate for Authorization for following equipment from their respective OEMs:

S.No.	Name of equipment	Name of OEM	Authorization certificate submitted (Yes/ No)
i.			
ii.			
iii.			
.			
.			

7. Certificate for Guarantee/Warranty for following equipment from their respective OEMs:

S.No	Name of equipment	Name of OEM	Guarantee certificate submitted (Yes/ No)
i.			
ii.			
iii.			
.			
.			
.			

8. Certificate for After sales service support for following equipment from their respective OEMs:

S.No.	Name of equipment	Name of OEM	After sales service support certificate submitted (Yes/ No)
i.			
ii.			
iii.			
.			
.			
.			

9. Datasheet for the offered equipment as per offered BOM: [Yes/No]

- i.
ii.
iii.

Signature
Name & Designation of authorized signatory.....
Name of the Bidder -
Stamp

Guirash C *A. Pandey* *(S/)*

Annexure VIII of Appendix-D

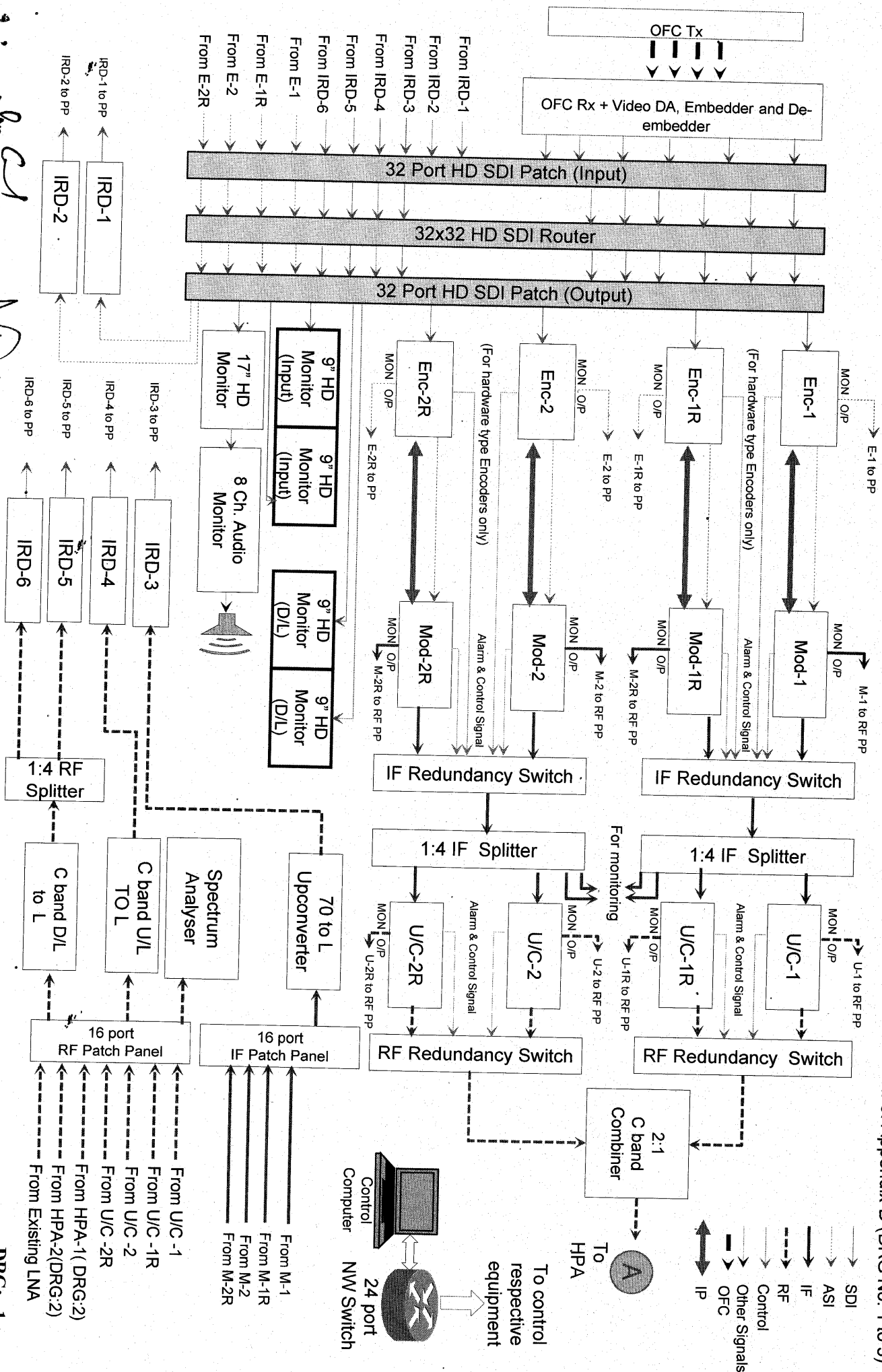
LIST OF TOOLS

S. No.	Tools	Qty.
(1)	Soldering and de-soldering station	1 Set
(2)	T-Handle Hex Allen Keys Set	1 Set
(3)	Flat & Star Head Screw driver Set	1 Set
(4)	Flat & Star watch maker Screw Driver Set	1 Set
(5)	Flat Plier	1 No.
(6)	Nose Plier	1 No.
(7)	Edge Cutter	2 No.
(8)	Wire Stripper	1 No.
(9)	Crimping Tool for RG11 and RG59U Cable	1 No.
(10)	Crimping Tool for RJ11 and RJ45 Cable	1 No.
(11)	BNC Puller	1 No.
(12)	Crimping Tool for Power Cable	1 Set
(13)	Box Spanner Set	1 Set
(14)	D-Spanner Set	1 Set
(15)	Ring Spanner Set	1 Set
(16)	Adjustable Wrench	1 No.
(17)	File Set	1 Set
(18)	Handheld Magnifying Glass	1 No.
(19)	Toolkit Box (Hard case type)	1 No.
(20)	Battery operated multifunctional (screw, unscrew, drilling etc.) hand machine with battery charger and other accessories.	1 Set
(21)	Digital Multi meter	1 No.
(22)	Digital clamp-on Meter	1 No.
(23)	Handheld Ethernet tester	1 No.
(23)	Any other special tool required as per offered equipment	1 Set

Junisha *A. Pandan* *08/11*

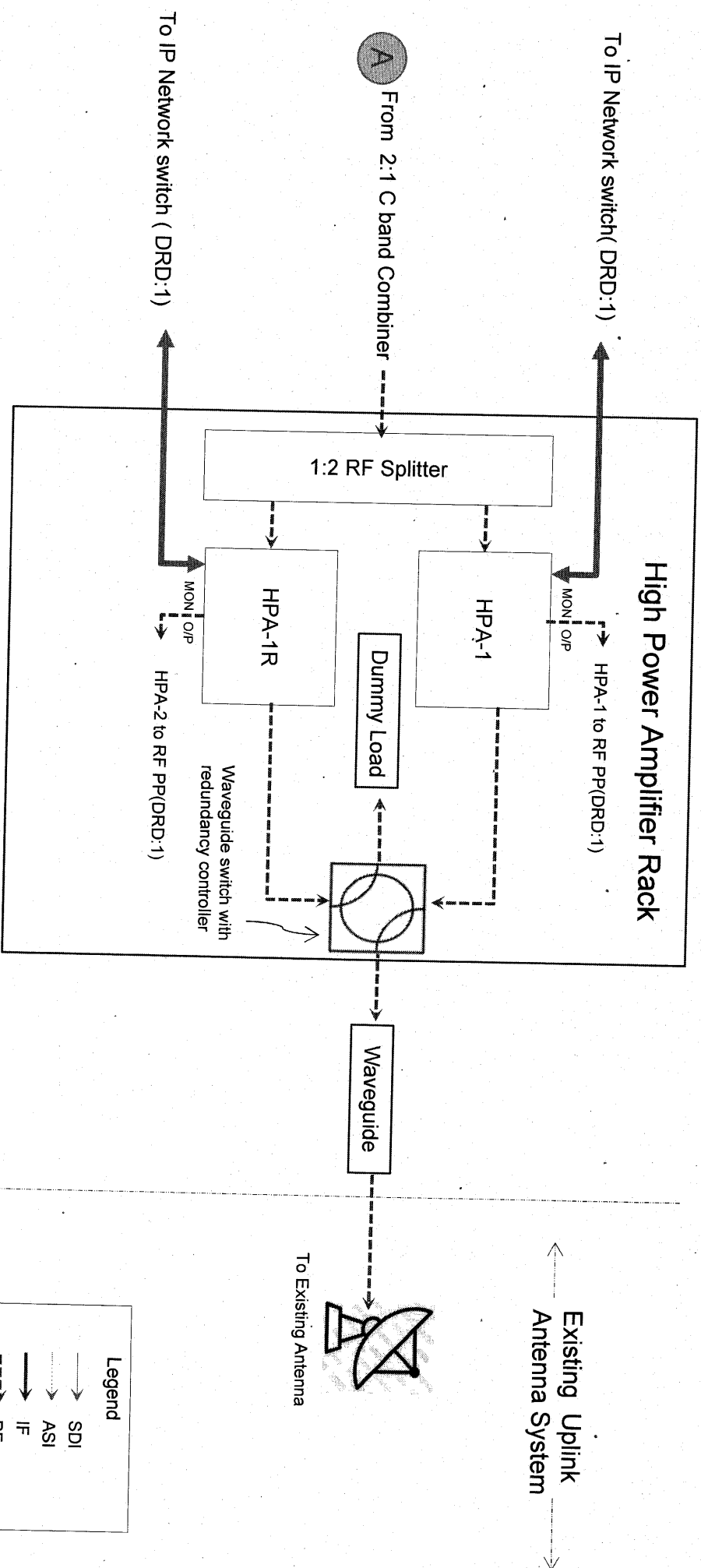
Suggestive Block Schematic for Upgradation & Replacement of Earth Stations at DDK Guwahati, Shillong and Aizawl

Annexure VII of Appendix-D (DRG No. 1 to 5)



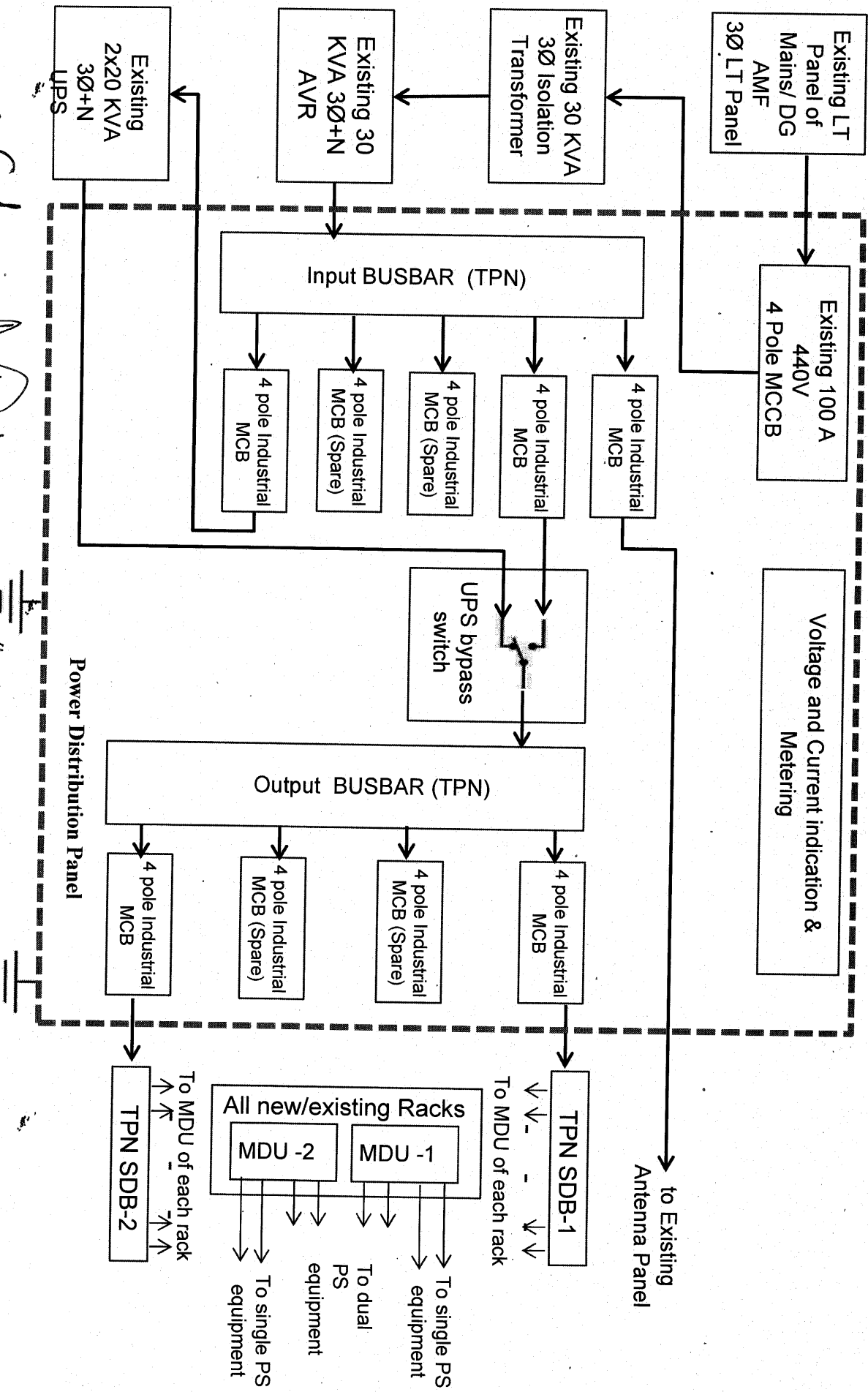
DRG: 1

Suggestive Block Schematic Of HPA System for Upgradation & Replacement of Earth Stations at DDK Guwahati, Shillong and Aizwal



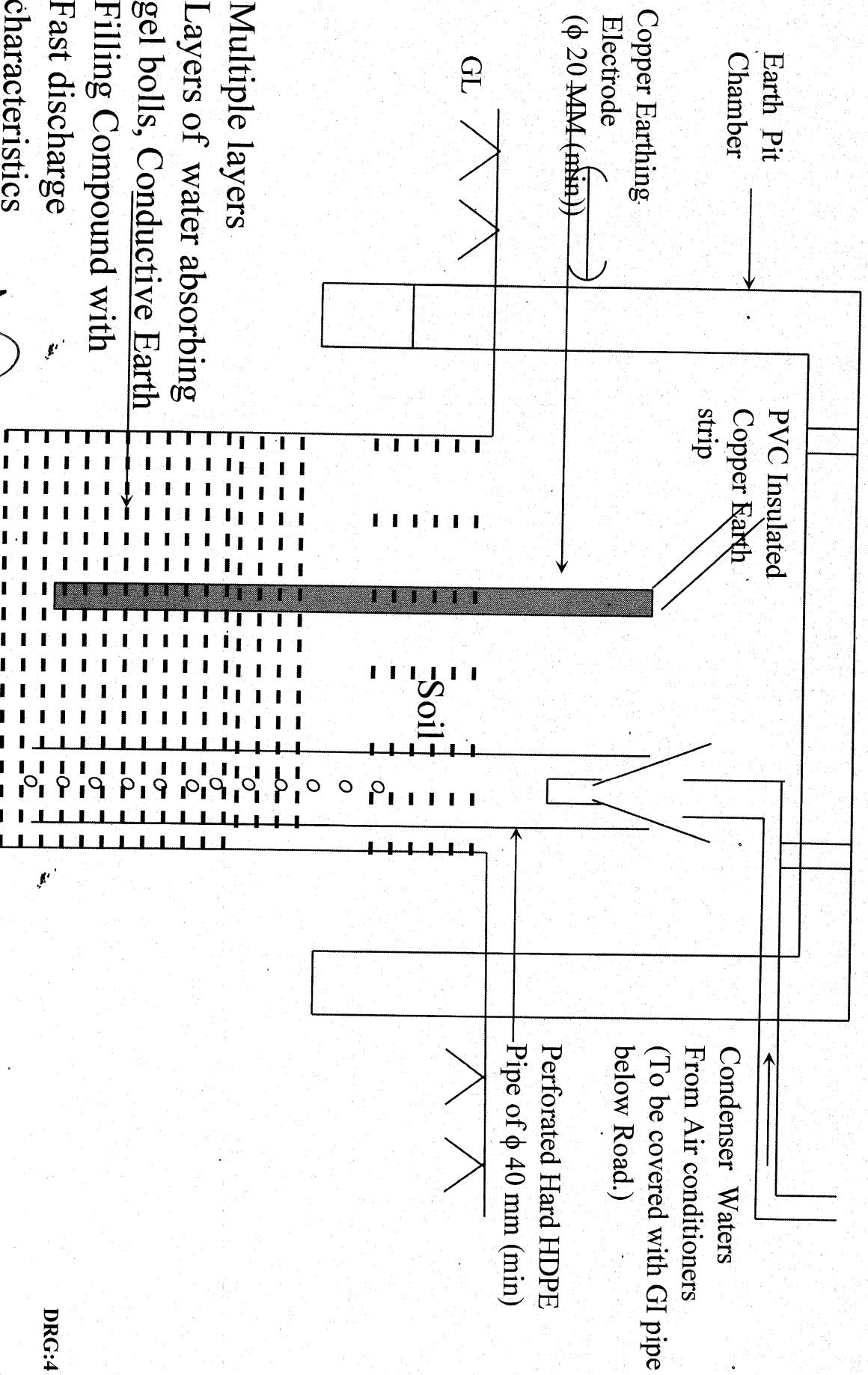
DRG: 2

Suggestive Block Schematic for Upgradation & Replacement of Earth Stations at DDK Guwahati, Shillong and Aizwal (Essential Power Supply System)



DRG:3

Suggestive Block Schematic for Upgradation & Replacement of Earth Stations at DDK Guwahati, Shillong and Aizwal : Earth Pit



Simamsha Ch
A. Vardan
Sf

DRG:4

**Suggestive Block Schematic for Upgradation & Replacement of Earth Stations at
DDK Guwahati, Shillong and Aizwal : Earth Terminal**



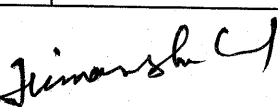
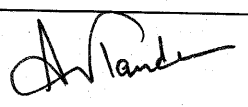
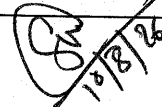
Shimashu Conf. Shillong (20/11)

DRG: 5

Upgradation & Replacement of Earth Stations at DDK Guwahati, Shillong and Aizwal

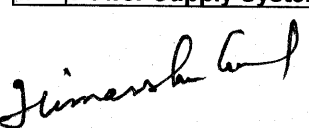
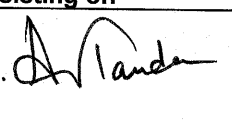
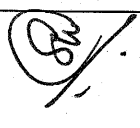
Bill of Material

Sr. No.	Description of Item as per Specification (Suggestive BOM)	Description of item offered by bidder	Make	Model	Qty. per site	Total Qty.	Unit
A. Link from MSR to Earth Station consisting of:							
1	Analog Audio & HD/SD-SDI Video Multiplexer Unit (Embedder) along with suitable breakout cables. (DDK Guwahati)				2	2	Nos.
2	Analog Audio & HD/SD-SDI Video De-multiplexer unit (De-Embedder) alongwith suitable breakout cables.				2	6	Nos.
3	HD-SDI & SD-SDI Distribution Amplifier (DA) with reclocking (i.e. 1: 4 or more output).				2	6	Nos.
4	19 inch Rack Frame Mounting (Chasis) with auto switchable redundant Power Supply Unit.				1	3	Nos.
5	Digital Video Cable alongwith suitable connectors to be laid for redundancy between MSR and Earth Station to transport video with embedded audio and for interconnection upto input of 32x32 router				400	1200	Metres
B. OFC Link from MSR to ES consisting of consisting of:							
6	Single channel Optical Transmitter unit. (DDK Guwahati, DDK Shillong)				4	8	Nos.
7	Single channel Optical receiver unit. (DDK Guwahati, DDK Shillong)				4	8	Nos.
8	Chassis to house the above OFC Link units with dual power supply units and control card (One chassis to be installed in MSR and one in Earth Station). (DDK Guwahati, DDK Shillong)				2	4	Sets
9	Water resistant, Armoured optical fiber cable (8 core) (DDK Guwahati, DDK Shillong)				200	400	Metres
10	Any other item found essential to meet DD specifications. Note: If offered, bidder must provide the detail.				1	3	Lots
C. Compression System consisting of:							
11	32 x 32 SDI/ASI router with one XY Control panel and single bus remote control panel.				1	3	Nos.
12	32 port HD-SDI patch panel 1 RU, normal through, self terminating type suitable up to 3 Gbps bandwidth, 20 dB return loss and 75 ohm normal through type. (One for SDI/ASI Router I/P & one for SDI/ASI Router O/P)				2	6	Nos.
13	HD-SDI 32 port termination panel, 75 Ohm Impedence for all input and output ports of SDI Router				2	6	Nos.
14	MPEG 4 Encoders in (1+1) redundancy configuration consisting of : Digital Encoder operating in 4:2:0 mode with MPEG-4 & MPEG-2 compression (Noise reduction hardware/software for encoders BISS-1 & BISS-E Software for Encoders Internal Remux Option, Audio options Auxiliary data input option etc as per specs)				4	12	Nos.
15	Essential item to complete the installation of Compression system if any. Note: If offered, bidder must provide the detail				1	3	Sets
D. IF System and Up converter System in (1+1) configuration consisting of:							
16	Digital Satellite Modulators in (1+1) mode consisting of: Digital Satellite Modulators capable of Modulating in DVB-S and DVB-S2 (one at a time) .				4	12	Nos.
17	IF Redundancy switch for managing redundancy of above Modulators.				2	6	Nos.
18	1:4 passive IF splitter				2	6	Nos.
19	C Band Up converter				4	12	Nos.
20	RF Redundancy switch (C- band) for upconverters				2	6	Nos.
21	2:1 RF Combiner(C- Band)				1	3	Nos.
22	Essential item to complete the installation of IF and Up converter system if any. Note: If offered, bidder must provide the detail				1	3	Lots
E. TWT/SSPA High Power Amplifer system in 1+1 configuration consisting of:							

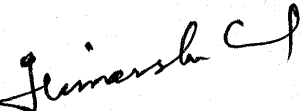
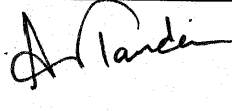
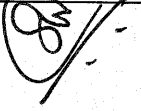




Sr. No.	Description of Item as per Specification (Suggestive BOM)	Description of item offered by bidder	Make	Model	Qty. per site	Total Qty.	Unit
23	400 watt C-Band Linear Power TWT/SSPA HPA (Indoor type) (DDK Guwahati, DDK Shillong)				1	2	Sets
24	Redundancy Controller for above 1+1 configuration of HPA (DDK Guwahati, DDK Shillong)				1	2	Nos.
25	1:2 low power RF Splitter (C-Band uplink frequency) (To be mounted in HPA Rack)				1	3	Nos.
26	Waveguide switch with rack mounting kit for 1+1 Redundant 400W linear Power HPA system				1	3	Nos.
27	Inter connecting rigid wave guide assembly with bends from each HPA to Waveguide switch.				1	3	Lots
28	Dummy Load / Termination for 5.85 to 6.425 GHz Frequency (Min 1000 Watts, VSWR $\leq$ 1.1) along with accessories				1	3	Nos.
29	Automatic Dehydrator (3-5 PSI user configurable) with required accessories and front panel Display with remote access through ethernet/SNMP etc and rack mounting kit. (DDK Guwahati, DDK Shillong, DDK Aizawl, DDK Gangtok)				1	4	Sets
30	Pre-wired Rack for 1+1 Redundant 400 W linear Power HPA system with MDU				1	3	Sets
31	Essential item to complete the installation of HPA System (if any) Note: If offered, bidder must provide the detail				1	3	Sets
F.	RF Rigid waveguide, Flexible waveguide, Waveguide E plane , H Plane, Twisted Waveguide, Connectors etc.						
32	C-Band, 90 degree rigid waveguide bend with CPR 137F/G Flange connector as below: (Length-0.30mtr max (each leg)).						
	i) H-plane bend				1	3	Nos.
	ii) E-plane bend				1	3	Nos.
33	Cross Guide Directional Coupler for Frequency range 5.85 to 6.425 GHz with CPR 137 F/G Flange connector				2	6	Nos.
34	C-Band, Twisted rigid waveguide, clockwise with CPR 137 F/G Flange connector (Length-0.30 mtr max).				2	6	Nos.
35	Supply of Flexible Waveguide with CPR 137G Flange connector at one end and CPR 137F Flange connector at other end as per details below:-						
	i) Length-0.6 mtr with gasket and screw kit				2	6	Sets
	ii) Length 1.0 mtr with gasket and screw kit				2	6	Sets
36	Supply of Flexible Waveguide with CPR 137 F/G Flange connector as per details below:						
	i) Length-0.6 mtr with gasket and screw kit				2	6	Sets
	ii) Length 1.0 mtr with gasket and screw kit				2	6	Sets
37	Aluminum duct or HDPE pipe as per site requirement of suitable size to take out hot air of each HPA from HPA room to outside the room (Minimum length-4 mtr).				1	3	Nos.
38	16 port or more C-band RF Patch Panel with N-type Female connector at both end having gold plated inner pin, 2 RU, 19" Rack mountable.				1	3	Nos.
39	20 port or more L-band Patch Panel with F-type Female connector having gold plated inner pin, 19" Rack mountable.				1	3	Nos.
40	Elliptical (Semi Rigid) RF Waveguide to connect existing uplink Antenna system as per site requirement (Shillong 23.4 meter, Guwahati 65 Meter, Aizwal 25 Meter)				1	3	Sets
41	Suitable waveguide connector for connecting the Elliptical waveguide at both end having CPR 137G/F flange with gasket and screw kit and pressure window at both end				1	3	Sets
42	Essential item to complete the installation of Waveguide System (if any) Note: If offered, bidder must provide the detail				1	3	Sets

Sr. No.	Description of Item as per Specification (Suggestive BOM)	Description of item offered by bidder	Make	Model	Qty. per site	Total Qty.	Unit
G.	Confidence Monitoring consisting of:						
43	TLT (C-Band uplink frequency to L-Band Down Converter) along with rack mounting kit.				1	3	Sets
44	C Band Down converter (C-Band downlink frequency to L Band Frequency)				1	3	Nos.
45	Up-converter (70 MHz to L band)				1	3	Nos.
46	16 port or more C-band RF Patch Panel, with 50 Ohm N-type Female connector at both end having gold plated inner pin, 2 RU, 19" Rack mountable.				1	3	Nos.
47	16 port or more IF-Patch Panel, with 75 Ohms F-type Female connector having gold plated inner pin, 19" Rack mountable.				1	3	Nos.
48	Prof. IRDs (with ASI and L-band inputs and with DVB-ASI, MPEG-2 TS over IP with service filter, SD-SDI, HD-SDI, AES/EBU, SD & HD SDI embedded stereo, Dolby digital (AC-3) 5.1 audio and Dolby Digital Plus 5.1 Audio) along with MPEG-2, 4:2:0, 4:2:2 and MPEG-4, 4:2:0, 4:2:2 decoding and Common Interface slot hardware and BISS mode -1 & BISS-E decryption facility.				6	18	Nos.
49	LCD/TFT 17" Colour monitor with built-in Speaker with SD-SDI and CVBS & Analog Audio Inputs with a suitable rack/tilt mount for proper installation in the monitoring desk.				1	3	Nos.
50	Dual 9" LCD/TFT Monitor with HD/SD-SDI (with embedded audio) and Composite (PAL) Video inputs and suitable power supply (19" Rack mountable)				2	6	Nos.
51	Eight Channel Audio Monitors				1	3	Nos.
52	4K/ UHD, size - 55 inch or more Display/TV/Panel Units along with Remote, Table Stand Wall Mount Operation manual/User Guide, maintenance manual etc. (in electronic or Printed form)				2	6	Nos.
53	High quality Digital Audio Ampli-Speaker having digital AES/EBU and Analog Audio input facility and suitable power supply				1	3	Nos.
54	L-band splitter (4-Way). One to be installed and one as cold standby				2	6	Nos.
55	Essential item to complete the installation of above monitoring system (if any) Note: If offered, bidder must provide the detail				1	3	Sets
H.	Remote control Computer system Hardware and Software consisting of:						
56	19" Rack Mountable Foldable 17" or bigger display, keyboard (with Digipad & Mouse Switches) with PC (Intel i7 or better processor, 4 GB or More DDR RAM, 800 GB or more HDD, Windows 11 or latest operating system, minimum 4 nos. USB ports, 1 AGP and 3 PCI Slots, Integrated Audio with external speakers to remotely control all the supplied equipments through Ethernet ports and should be connected to all the equipment through Fast Ethernet Switch using properly rack wired CAT-5 or CAT-6 cable and RJ-45 connectors.				1	3	Lots
57	10 /100 Fast Ethernet Switch (24-Ports, one -RU)				1	3	Nos.
58	Network Laser Printer (Heavy duty) with Ethernet Port				1	3	Nos.
59	UPS (ONLINE) 1KVA Capacity				1	3	Nos.
60	CAT-6 Cable with connector for wiring between all equipments and control computer through NW Switch as per site requirement and drawing no 1 & 2. 200 M (Min).				200	600	Metres
61	Essential item to complete the installation of Remote Control Computer System (if any) Note: If offered, bidder must provide the detail				1	3	Sets
I.	Power Supply System consisting of:						

Sr. No.	Description of Item as per Specification (Suggestive BOM)	Description of item offered by bidder	Make	Model	Qty. per site	Total Qty.	Unit
62	Suitable Power distribution Panel (PDP) including MCCB, Industrial MCBs, Changeover Switch, Voltage & Current metering and bus bar as per drawing no. 3.				1	3	Sets
63	Necessary Mains three phase Sub Distribution Boards (SDB-1 and SDB-2) with industrial MCBs for distributing UPS output to respective equipment racks as per drawing no. 3.				1	3	Sets
64	Coper Power Supply cables with suitable length and rating along with copper lugs at both end between: (i) Output of UPS & PDP (ii) PDP & Existing U/L Antenna Panel (iii) PDP & SDB 1 & 2				1	3	Lots
65	Essential item to complete the installation of power supply System (if any) Note: If offered, bidder must provide the detail				1	3	Sets
J.	Miscellaneous Items for integration of system consisting of:						
66	Digital Video Cable alongwith suitable connectors for interconnection between equipment (Compression chain and Monitoring equipment).As per DRG No. 1 & 2.				1	3	Lots
67	IF and RF Cable alongwith suitable connectors for interconnection between equipment as per drawing no. 1 & 2.				1	3	Lots
68	10 nos of patch chords (each of one meter length) for by-passing the router in case of failure.				1	3	Lots
69	19" standard wired equipment racks for mounting all compression chain, IF and Monitoring chain equipment				2	6	Nos.
70	Required no of Mains Distribution Units (Min 2 nos of 12 Ports MDU per Rack) with sequential delayed output on start up, output status LED and IEC-3 pin for each equipment in every rack. Each MDU having inbuilt or external, dual input, single phase automatic power transfer/static switch.				6	18	Nos.
71	Earth pits should consist of Copper Earth electrode (diameter 20 mm (min)), insulated copper strip/wire (50 Sq. mm (Min)), Chemical earth fill compound with fast discharge characteristics, water absorbing gel, perforated Hard HDPE pipe (diameter 40 mm (min)), funnel, water supply provision up to each earth pit (preferably from A/c condenser), 10 feet depth (min) and 1 feet diameter (min.). Earth pit should be prepared so that earth resistance is less than 1 ohm. (refer 5.7.6 a, b, c of Technical specification) (2 nos. for Baseband and compression, 2 nos. for IF & RF System, each with less than 1 ohm resistance)				4	12	Nos.
72	Earth Terminal as per DRG.No 5				1	3	Lots
73	Set of tools(As per attached list - Annexure -VIII of Appendix-D				1	3	Sets
74	Essential items (if any) required for completing the installation and commissioning work of the system as per Specifications, should be included and quoted. No extra cost will be paid for any extra item declared at a later date for completion of the project installation.				1	3	Sets
K.	Documentation Equipment manuals consisting of:						
75	Operation/User Manual Hard copy and Soft copy on Pen-drive with Search facility for all the supplied equipment. (2 Sets for each Kendra, 1 Set for DG:DD and 1 Set each for ADG(EZ) and ADG(NEZ))				1	3	Lots
76	All software backups are to be supplied on USB 3.0 pendrive.				1	3	Lots
77	Firm's self certified copies of import license in respect of RF Equipment (Modulators, Upconverter, HPA, etc.) for issuance of operating license from WPC. – 4 Sets for each site				1	3	Lots
L.	Training						

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78	In India: Two separate Seminars (including Theoretical (alongwith basic study material) & Practical training, hands on experience) for Compression, IF, RF, HPA, Monitoring etc. (minimum for 5 working days) for Doordarshan personnel at each site. (Note: Training will not be treated as part of the delivery period)				1	3	Lots
M. Installation, Testing and Commissioning							
79	Installation, testing and commissioning of all the equipments as per DRG.No.1,2,3,4 and 5 alongwith Dismantling the existing compression, monitoring & Power Supply equipment, if required.				1	3	Lots

Jimanshu Gahl
10/08/2025

A. Pandey
10/08/26

(Signature)
10/8/26