



सत्यम् शिवम् सुन्दरम्

प्रसार भारती
PRASAR BHARATI
(Broadcasting Corporation of India)
दूरदर्शन महानिदेशालय
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New Delhi - 110 001

File No. 19(2)2018-19E1 (P) TV

Dated: 28.01.2019

Subject: Draft Specification for Supply of TWTA HPA at 11 Earth Stations.

The Draft specification of the upcoming tenders is enclosed herewith to offer comments, if any by due date at e-mail address ddpurchase401@yahoo.co.in or on following Address:


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Specification For: Draft Specification for Supply of TWTA HPA at 11 Earth Stations.

Specification no: SATD/ ES_11 Nos._ TWTA HPA /Jan_2019 dated 14/01/2019

Due Date to offer Comments: **12.02.2019**

Encl.: As above


28/01/2019
Prabhat Kumar Singh
Assistant Engineer
For DG: DD

Prasar Bharati
Directorate General: Doordarshan
Doordarshan Bhawan: Copernicus Marg
New Delhi-110001

Specification for
"Supply of TWTA HPA for 11 Locations"

Specification No.: SATD/ES_11 Nos._TWTA HPA/Jan_2019
Date: 14/01/2019

**Technical Specifications for Supply of TWTA HPA for Earth Station-11
Locations (Jalandhar, Shimla, Ahmadabad, Bhopal, Bhubaneswar, Chennai,
Jaipur, Jammu, Kolkata, Lucknow, Thiruvananthapuram)**

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1. Introduction :

This document lays down technical specifications for “Supply of TWTA HPA for Digital Earth Station at 11 Locations” namely Jalandhar, Shimla, Ahmadabad, Bhopal, Bhubaneswar, Chennai, Jaipur, Jammu, Kolkata, Lucknow and Thiruvananthapuram.

2. Scope :

- a. The scope of the tender shall include “Supply of TWTA HPA for Digital Earth Station at Jalandhar, Shimla, Ahmadabad, Bhopal, Bhubaneswar, Chennai, Jaipur, Jammu, Kolkata, Lucknow and Thiruvananthapuram for use in existing chain of Modulator and RF equipment.
- b. The offered system shall meet the International standards for digital satellite broadcasting
- c. The offered system would also include the standard accessories supplied by the Manufacturer along with the items mentioned in para 2.a

3. Eligibility Criteria :

The Bidder and original equipment manufacturer (OEM) shall have to meet the following eligibility criteria:-

- 3.1 The bidder should be the original equipment manufacturer (OEM) of TWTA HPA system or their authorized representative/dealer in India.
- 3.2 In case bidder is the authorized representative/dealer of TWTA HPA system, it should be in the business of sales and supply of Broadcast Equipment for at least past three years. Copies of orders and completion certificates/delivery challans/dispatch certificates/copy of invoice to support this must be provided.
- 3.3 Bidder shall offer TWTA HPA system of only those OEMs who are having past experience of :
 - 3.3.1 At least five years of manufacturing similar TWTAs; and
 - 3.3.2 Supplying at least 10 Nos. of offered HPAs in immediate proceeding past five years.
- 3.4 Copies of documentary evidence from OEM ie. supply order and receipt certificates/delivery challan/factory dispatch documentary/copy of invoice in respect of above said quantities at para 3.3.2 of HPAs in preceding past five year should essentially be submitted along with the bid document.
- 3.5 The bidder must have his local office/ authorized representative/ dealer in India for after sales support etc.
- 3.6 The bidder must have a valid Dealer Possession License at the time of submission of bid. A copy of valid Dealer Possession License should be submitted along with the bid.
- 3.7 The cutoff date for the experience shall be the date of NIT.

4. General Requirements:

- 4.1 The bidder shall submit only one solution (Single BOM) for the offered system. Bid with multiple options against any requirement is liable to be rejected.
- 4.2 The project will consist of Supply of the TWTA HPA system at Jalandhar, Shimla, Ahmadabad, Bhopal, Bhubaneswar, Chennai, Jaipur, Jammu, Kolkata, Lucknow and Thiruvananthapuram as detailed at Clause No. 2, Scope of Tender.
- 4.3 Each and every offered equipment and accessories including software should be from internationally reputed manufacturer and the quoted model should be of high class, high MTBF, field proven and in use by leading broadcasters/organizations in various continents of the World. Any customized product which is not field proven in the industry will not be acceptable.
- 4.4 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 warrantee period will have to be supplied free of cost
- 4.5 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 The installation, testing and commissioning of the equipment supplied at site will be done by Doordarshan as per procedure laid down in the installation manual of respective equipment. The installation manual should also include list of Do's & Don'ts and step by step procedure for configuration etc. Bidder must submit copy of the installation manual along with the bid.
- 4.7 **Testing and Commissioning at site: Site Acceptance Test (SAT)**
 - 4.7.1 The TWTA HPA system shall be installed, configured, tested and commissioned at site by Doordarshan as per the instructions contained in the manufacturer's installation manual.
 - 4.7.2 However, the local representative of the OEM/bidder shall be responsible for resolving any issues related with installation, configuration, testing and commissioning of the TWTA HPA system.

- 4.7.3 If required, local representative of the OEM/bidder may also arrange the visit of OEM Engineer at site.
- 4.8 In the process of technical evaluation Doordarshan can ask for any clarification/ query as required through e-mail/FAX/Post etc, which shall be treated as a part of tender and invariably attended and replied by the bidder within the time stipulated therein.
- 4.9 Bidder may have to demonstrate 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.
- 4.10 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
- 4.11 The successful bidder must submit the firm's self certified copies of import license along with TWTA HPA system for issuance of operating license from WPC. All invoices shall bear Serial Numbers of the equipments to meet the requirement of WPC.
- 4.12 The successful bidder along with OEM will be responsible for providing after sales support of all the offered items as per para 8.3.
- 4.13 The bidder must have his local office/authorized representative/dealer in India for after sales support. The local office/authorized representative/dealer in India will be nodal point for resolving issues, related to installation, integration, configuration, testing, commissioning and after sales support. Details of OEM office and its location are to be provided along with bid.
- 4.14 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.

5. Technical Specifications of Major Equipment :

5.1 Specifications for HPA {C-Band 400 W TWTA (Indoor type)} in (1+1) redundant configuration

A. Essential Features:

- (i) The High Power Amplifier (HPA) is to be used for the final power amplification of the digital RF signal in C-band that would be fed to the antenna system.
- (ii) These HPAs are required to be configured in redundant system (1+1). It should be indoor type and 19" rack mountable.
- (iii) It should have front panel keys and display for configuration, control and monitoring of the HPA system.
- (iv) It should have control and monitoring hardware interface port along with software, which can monitor as well as operate the HPA system from a remote computer.
- (v) It should have provision for monitoring the forward RF power, Reflected RF power, Helix voltage & current, heater voltage, TWT Temperature etc. on the front panel display as well as on the remote computer through browser.
- (vi) The supplier should give a detailed account of the protection systems for abnormal rise in temperature, reflected power, voltage, current etc, available in the amplifier and its functioning. All the monitoring and protection system should support the latest digital control.
- (vii) The amplification has to be carried out in two stages i.e. Solid State Intermediate Pre-Amplifier (SSIPA) and Traveling Wave Tube Amplifier (TWTA).
- (viii) It should have integrated (internal) linearizer.

B. Technical Specifications:

Sr. No	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.	Output power (a) at TWT (b) at Amplifier Flange	400 W Min.(56.02 dBm) 350 W Min (55.44 dBm)
4.	Bandwidth	Minimum 575.00 MHz
5.	Gain (a) At rated power (b) At Small Signal	70 dB (Min.) 75 dB (Min.)
6.	RF level adjust range	0- 20 dB (Min)
7.	Gain variation	1.0 dB (max.) for 40 MHz (Any narrow band) 2.50 dB for 575 MHz bandwidth
8.	Gain stability	+/- 0.25 dB/ 24 hrs. (Max.) at constant drive and temperature. +/- 1.0 dB max. over operating temperature range
9.	Gain Slope	+/- 0.04 dB/MHz (Max.)
10.	Input VSWR	1.3: 1 max
11.	Output VSWR	1.3: 1 max
12.	Load VSWR	2.0: 1 max operational; any value for operation without damage.
13.	Residual AM noise (Max.)	-50 dBc to 10 KHz -20(1.5+logf) dBc to 500 kHz -85 dBc above 500 kHz.
14.	Phase Noise (Max.)	IESS 308/309 compliant or better
15.	AM/PM conversion at 6 dB below rated output power	2.5 Degree/dB Max.
16.	Harmonic Output	-60 dBc Max.
17.	Spurious at rated output power	-130 dBW / 4 KHz (Max.) for Receive band -65 dBW / 4 KHz (Max.) for Transmit band

18.	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)
19.	Group delay, maximum (a) Linear (b) Parabolic (c) Ripple	0.01 ns /MHz (linear) over any 40 MHz band 0.005 ns /MHz over any 40 MHz band 0.5 ns p-p over any 40 MHz band
20.	Power consumption at rated o/p	1.50 KVA Max.
21.	Power factor	0.95 Min
22.	Operating temp:	-10° C to + 50° C
23.	Relative humidity	95% non condensing
24.	Altitude	Should operate upto 10,000 Feet AMSL
25.	Cooling	Forced air with integral blower and power supply fan.
26.	RF Input connector	N type female
27.	RF Output connector	CPR 137 F/G waveguide flange
28.	RF power monitor connectors	N Type female
29.	Remote monitoring Port	RS 232/422 or 485, Ethernet etc software Specifications.
30.	Protection facilities	OEM should give a detailed account of the protection system like abnormal raise in temperature, reflected power, beam current used in the amplifier and its functioning. All the monitoring and protection system should be of the latest digital processing.
31.	Display	All the parameters should use digital displays; the accuracy of the display should be given in the offer.
32.	Dimensions	Supplier should give the dimensions of the system including RF section and power supply section
33.	Acoustic noise	63 dBa at a distance of 1 M from the front panel

6. Physical, Environmental & Mechanical Specifications

6.1 Power Supply

Following specification is to be followed if not mentioned elsewhere in this document:

Parameter	Specification
(a) Voltage Range	: 220/240 V AC nominal
(b) Frequency	: 48-52 Hz

6.2 Environmental Specifications

Parameter	Specification
(a) Operating Temperature (Indoor)	: 0°C to 45°C
(b) Operating Temperature (Outdoor door)	: - 10°C to 50°C
(c) Storage Temperature	: - 20°C to 60°C
(d) Humidity (Indoor)	: 0 to 85% non- Condensing
(e) Humidity (Outdoor)	: 0 to 100%
(f) Altitude	: Up to 10,000 Feet

6.3 Mechanical Specifications

Indoor equipment shall be rack mounted.

Parameter	Specification
(a) Construction	: Modular approach, EIA RS-310C, 19" rack-mount

7. Complement of Equipment:

- a. The quantity, 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).
- b. The suggestive Bill of Material (BOM) has been provided in **Annexure-I**. The bidder is required to provide the complete list of equipment, software and accessories etc. offered to meet the specifications requirement. The quantity of each item including sub-module 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:

Sl. No.	Description of Item as per Specification (Suggestive BOM)	Description of Item as offered by the Bidder	Qty. per site	Total Quantity as per Suggestive BOM	Make	Model
1	2	3	4	5	6	7

- c. Any substandard equipment included in the offer may result into the rejection of complete offer with the sole responsibility of bidder.
- d. The offer should also include the detailed technical brochure and technical manual containing all the technical specifications of all the offered equipment, accessories, and software etc.
- e. General specifications applicable to all equipment wherever applicable have been given in Clause No. 5.

8. General

8.1 Compliance and Authorization:-

- 8.1.1 The bidder must submit a point-by-point compliance statement in respect of all the points, sub-points and paras laid down in this specification from page 1 onwards along with the offer.
- 8.1.2 In addition to the above, compliance from respective OEMs (not from representatives) in respect of all the equipments listed below should necessarily be given on their letter heads, with reference to the points, sub-points and paras laid down in the technical specifications of TWTA HPA.
- 8.1.3 The OEM's authorization (not from representative) in respect of TWTA HPA listed under Sr. No. 8.1.2 should also be given on their letter heads along with bid (**Annexure II**).
- 8.1.4 Mere signature on a copy of Doordarshan specifications shall not be accepted as a compliance statement.
- 8.1.5 Compliance statement in the format as indicated below shall only be accepted.

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								

4								
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- 8.1.6 The manufacturer should also record the performance figures of the equipment offered in the quote for which the compliance statement is enclosed.
- 8.1.7 The compliance statement should be supported by highlighted record of these in the technical literature/data sheets enclosed with the tender and a clear reference 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.
- 8.1.8 Data sheets should be submitted in respect of TWTA HPA. 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 above.
- 8.1.9 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.

8.2 Documentation

- 8.2.1 One set of technical manual for TWTA HPA are to be provided along with the tender to facilitate the technical evaluation, otherwise the tender is liable to be ignored.
- 8.2.2 The successful bidder will have to supply set of printed technical manuals and installation manual along with factory test report for TWTA HPA.
- 8.2.3 Technical Manual for TWTA HPA should also be supplied on CD/DVDs with search facility.
- 8.2.4 All offered software should have perpetual validity and should be in the name of Doordarshan. All software backups should also be supplied on CD/DVDs.

8.2.5 The successful bidder must submit the firm's self certified copies of import licenses at the time of commissioning in respect of RF equipment for issuance of operating license for WPC.

- a) 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 at the time of release of PBG.
- b) The successful bidder must ensure that all Invoices bear serial numbers of equipment to meet the requirement of WPC.

8.3 Guarantee

8.3.1 The manufacturer shall guarantee satisfactory working of the offered TWTA HPA system without any fault and defect for three years from the date of receipt of last accepted consignment.

8.3.2 Any defect or failure of any module/equipment during the guarantee period shall be repaired/replaced free of charge by the successful bidder at site. For repairing of any defective module/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.

8.3.3 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. transportation charges would not be paid by DD for transporting the defective/ repaired items, if required to be removed from site, during the guarantee period.

8.3.4 Guarantee period is to be extended corresponding to the outage period if the failure rectification takes more than 15 days time.

8.3.5 Bidder shall provide the guarantee/warranty through the OEM. A certificate duly signed by the OEM on the OEM's letterhead, in this regard of offered TWTA HPA system must be submitted with the offer by the bidder in the format as prescribed in Annexure III.

- 8.3.6 After sales service support for additional 2 (TWO) years for the repairs/maintenance of TWTA HPA system after the completion of guarantee/warranty period shall also be provided by the OEM of the TWTA HPA system either directly or through his representative in India. In this regard a certificate, duly signed by the OEM on the letterhead, must be submitted with the offer by the bidder
- 8.3.7 The successful bidder will be responsible for providing after sales service support of all the offered equipment for Five years from the date of receipt of last accepted consignment including three (3) years warranty period. The bidder must submit undertaking for providing after sales service support for additional Two (2) years after the end of warranty period along with bid.
- 8.3.8 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 2 years after the completion of guarantee/warranty period shall also be provided by the OEM either directly or through its representative in India. A certificate, on the letterhead, in this regard duly signed by the OEM must be submitted with offer by the bidder in the format as prescribed in Annexure V

8.4 Inspection:

- 8.4.1 All equipment to be supplied against the supply order for this tender shall be subjected to pre-dispatch inspection in India. The successful bidder should produce the factory test reports of all the offered equipment to facilitate inspection.
- 8.4.2 The inspection of equipment will be carried out by a team of Doordarshan authorized by Doordarshan Directorate. A draft copy of ATP (Acceptance Test Procedure) must be submitted by the bidder within one month of issue of A/T. ATP should describe the standard test procedure of individual equipment and of the integrated system chain. The factory test report will not be treated as ATP. The accepted ATP with or without changes shall be sent back to the successful bidder and it will also be used for inspection and commissioning of equipment by DD Engineer(s) at site.
- 8.4.3 As the local office/authorized representative/dealer will be nodal point for resolving issues related to testing, the local representative of the

OEM/bidder may also arrange the visit of OEM's Engineer at site if required or any issue with ATP. The factory test report will not be treated as ATP.

- 8.4.4 The accepted ATP / approved ATP with or without changes shall be sent back to the successful bidder for their reference, which will be used for inspection and commissioning of ES equipments by DD Engineer(s) at site.

8.5 Delivery Period

Within 5 months from the date of issue of purchase order or 3 months from the date of the decision letter from WPC provided by DD in respect of TWTA HPA, whichever is later?

8.6 Pre-bid Conference

- 8.6.1 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.
- 8.6.2 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.
- 8.6.3 Amendments subsequent to the pre bid conference shall be sent to prospective bidders, who have purchased tender document, by e-mail/ fax/ post.
- 8.6.4 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).

Suggestive Bill of Material (BOM)**Supply of TWTA HPA****for Earth Station-11 Locations**

(Jalandhar, Shimla, Ahmedabad, Bhopal, Bhubaneswar, Chennai, Jaipur, Jammu, Kolkata, Lucknow, and Thirunanthapuram)

(Bidders must submit BOM as per Proforma given in Clause 5)

Sr. No.	Description of Item as per Specification (Suggestive BOM)	Description of Item as offered by Bidder	Qty. per site	Total Qty. as per suggestive BOM	Remarks	Make	Model
A.	High Power Amplifier in 1+1 configuration consisting of:						
a)	400 watt C-Band TWTA with integral lineariser (Indoor type)		2 Nos.	22 Nos.			
b)	Redundancy controller for 1+1 configuration of HPA		1 No.	11 Nos.			
c)	RF ganged waveguide switch system; with rack mounting kit (consisting of coaxial switch ganged with the waveguide output switch along with all necessary dummy loads of required values, coaxial and waveguide interconnects, cooling fans etc.)		1 No.	11 Nos.			
d)	Inter connecting rigid wave guide assembly with bends from each HPA to Waveguide switch.		1 Lot	11 Lots			
e)	Dummy Load (Min 400 Watts, VSWR < 1.1) along with accessories)		1 No.	11 Nos.			
f)	19" wired racks for C-Band TWTA from the C-Band TWTA OEM for mounting eqpt ergonomically and orderly fashion with professional quality MDUs and necessary circuit		1 Set.	11 Set.			

- 8.7.1 Whether documents related to fulfilment of the eligibility criteria as per Clause 3 have been submitted.
- 8.7.2 Whether point-by-point compliance statement of the bidder in respect of all the points, sub-points and Paras laid down in this specification from page 1 onwards along with the offer as given in Clause 8.1.1 has been included.
- 8.7.3 Whether point-by-point compliance statement of OEM in respect of all the points, sub-points and Paras laid down in the specification of respective equipment and their authorization mentioned in Clause 8.1.2 & 8.1.3 have been included. Authorization and Compliance Statement from OEMs will only be acceptable and not from the authorized dealer of the OEMs.
- 8.7.4 Whether the Compliance has been submitted in the prescribed format as given in Clause 8.1.5.
- 8.7.5 Ensure that all equipment and accessories as given in the Suggestive bill of material have been included in the offered BOM.
- 8.7.6 Whether the page numbers of the relevant enclosed technical data sheet/manual against each parameter of the specifications have been given in the compliance statements.
- 8.7.7 Whether the requisite undertakings for after sales support by OEMs and bidder have been submitted.
- 8.7.8 Ensure that no alternate item has been offered.
- 8.7.9 Ensure that the relevant technical brochures containing all the parameters of technical specifications of all the offered equipment and accessories have been included with proper indexing for ease of identification.
- 8.7.10 Ensure that the Un-priced BOM has been included.
- 8.7.11 Any other item mentioned elsewhere in the tender.

	breakers.						
g)	Essential item/work to complete the installation of HPA system		1 lot	11 lots			
B.	<u>Training</u>						
a)	In India: One day on site training (including Theoretical (along with basic study material) & Practical training, hands on experience) on HPA for Doordarshan personnel at each site. (Note: Training will not be treated as part of the delivery period)		1 Lot	11 Lots			
C.	<u>Documentation</u>						
	Equipment manuals consisting of:		1 Lot	11 Lots			
a)	Operation/User Manual and installation manual Hard copy and Soft copy on CDs with Search facility for all the supplied equipment. (2 Sets for each Kendra, 1 Set for DG:DD and 1 Set each for ADG(NZ), ADG(SZ), ADG(EZ) and ADG(WZ))						
b)	All software backups are to be supplied on CDs.						
c)	Firm's self certified copies of import license in respect of RF Equipment HPA system etc. for issuance of operating license from WPC. – 4 Sets for each site						

OEM's 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 of OEM

*To be submitted by the bidder in case bidder is not the OEM.

OEM'S LETTER HEAD

CERTIFICATE FOR GUARANTEE**Date:****Tender No. :**

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

1. The offered TWTA HPA System shall be guaranteed for satisfactory working without any fault and defect for three years from the date of receipt of last accepted consignment.
2. Any defect or failure of any module/equipment during the guarantee period shall be repaired/replaced free of charge. at-site. For repairing of any defective module/equipment during guarantee period, the defective module or equipment requiring repairs will be handed over to M/s<Name of local office/local authorized representative/dealer> who will arrange repairs locally at site or send/export the defective modules to our factory and re-import/send back after repairs.
3. It is the responsibility of M/s<Name of local office/local authorized representative/dealer> to arrange the repair/ replacement of faulty items for Doordarshan i.e. transportation charges are not to be paid by DD for transporting the defective/ repaired items, if required to be removed from site, during the guarantee period.
4. Guarantee period of the equipment would be extended corresponding to the outage period if the failure rectification takes more than 15 days time.
5. After sales service support for additional 2 (TWO) years for the repairs/maintenance of supplied equipment after the completion of guarantee/warranty period shall also be provided by M/s<Name of the OEM of the TWTA HPA System > either directly or through M/s<Name of OEM's representative in India>. In this regard a certificate, duly signed by the OEM on the letterhead, must be submitted with the offer by the bidder.
6. All offered software will be licensed to Doordarshan on perpetual basis without specifying any time limit or without specifying end of life of the software. Software upgrades within warranty period will be supplied free of cost

Signature

.....

....

Name & Designation of authorized

signatory.....

Name of the OEM -

.....
Stamp of the OEM

Annexure IV

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 three (3) 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	After sales & support office address	Telephone/ Fax	Email of concerned personnel
1				

Signature

.....

Name & Designation of authorized signatory.....

Name of the OEM -

.....

Stamp of the OEM

BIDDER LETTER HEAD

DECLARATION BY THE BIDDER

1. Bill of Material (BOM)- : [Yes/No]
2. Bidder's compliance (As per specs clause no. 8.1.1) : [Yes/No]
3. The copy of Dealer Possession License in case of possession of RF equipment (as per clause no. 3.6) : [Yes/No]
4. Copy of the Memorandum of Understanding (MOU) (if any) of partnership (as per clause no. 3.7) : [Yes/No]
5. OEM Compliance for following equipment from their respective OEMs (as per clause no. 8.1.2):

S. No.	Name of equipment	Name of OEM	OEM compliance submitted (Yes/ No)
i.	400 W TWTA HPA		
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.	400 W TWTA HPA		
ii.			

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

S.No.	Name of equipment	Name of OEM	Guarantee certificate submitted (Yes/ No)
i.	400 W TWTA HPA		
ii.			

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.	400 W TWTA HPA		
ii.			

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 of the bidder

