



सत्यम् शिवम् सुन्दरम्

प्रसार भारती
PRASAR BHARATI
(Broadcasting Corporation of India)

दूरदर्शन महानिदेशालय
Directorate General: Doordarshan

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New Delhi - 110 001

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Dated: 13.05.2019

Subject: Draft Specification for Supply of TWTA HPA for 05 nos. Ku Band DSNGs.

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 for 05 nos. Ku Band DSNGs.

Specification no: SATM/ Ku-Band DSNG_05 Nos. TWTA HPA /May_2019 dated 07.05.2019

Due Date to offer Comments: **27.05.2019**

Encl.: As above (24 Pages.)


13/05/19
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Assistant Engineer
For DG: DD

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Directorate General: Doordarshan
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Specification for
"Supply of TWTA HPA for 5 Nos. Ku-Band DSNGs"

Specification No.: SATM/Ku-Band DSNG_05 Nos. TWTA HPA/May_2019
Date: 07/5/2019

Technical Specifications for Supply of TWTA HPA for DSNGs-05 Nos

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1. Introduction :

This document lays down technical specifications for “Supply of TWTA HPA for 05 DSNGs at Ahmedabad, Bhubaneswar & Jaipur

2. Scope :

- a. The scope of the tender shall include “Supply of 200W TWTA HPA for 05 DSNGs at Ahmedabad, Bhubaneswar & Jaipur for use in existing chain as per details given below:-

S. No.	Name of Station	Quantity
1.	Ahmedabad	One No.
2.	Bhubaneswar	Two Nos.
3.	Jaipur	Two Nos.

- 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 in India, it should be in the business of sales and supply of Broadcast Equipment for at least past three years and must have a valid Dealer Possession License at the time of submission of the bid. 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 TWTA's; and
 - 3.3.2 Supplying at least 10 Nos. of offered HPAs in immediate preceding past five years.
 - 3.3.3 In case, bidder is OEM of Indian origin it must also have a valid Dealer Possession License at the time of submission of bid.
- 3.4 Copies of documentary evidence from OEM i.e. supply order and receipt certificates/delivery challans /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 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 Ahmedabad, Bhubaneswar, Jaipur, 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 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.
- 4.8 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.
- 4.9 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

- 4.10 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.
- 4.11 The successful bidder along with OEM will be responsible for providing after sales support of all the offered items as per Para 8.3.
- 4.12 The local office/authorized representative/dealer in India will be nodal point for resolving issues, related to configuration, testing, and after sales support of the equipment. Details of local office/ authorized representative/ dealer in India including its location are to be provided along with the bid .
- 4.13 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 HPA {Ku-Band 200 W TWTA (Outdoor type)} in (1+0) 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 Ku-band that would be fed to the antenna system.
- (ii) These HPAs are required to be configured in stand alone system (1+0). It should be outdoor type and Antenna 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/remote control panel.
- (v) It should have provision for monitoring the forward RF power, Reflected RF power, Helix current etc. on the front panel display of TWTA HPA ;on the Remote control Panel and 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, Beam voltage, current, TWT over temperature and Heater voltage etc, available in the amplifier and its functioning. All the monitoring and protection system should support the latest digital control.
- (vii) Supplier should give the dimensions of the HPA system.
- (viii) The amplification has to be carried out in two stages i.e. Solid State Intermediate Pre-Amplifier (SSIPPA) and Traveling Wave Tube Amplifier (TWTA).
- (ix) It should have integrated (internal) linearizer.
- (x) All the requisite drivers, software and licenses required for meeting the DD specifications must be pre-loaded and configured by the OEM before supplying equipment to DD.

B. Technical Specifications for TWT Type Ku-Band HPA

The High Power Amplifier is to be used for outdoor purpose for the final power amplification of the digital RF signal in Ku band, to be fed to the antenna after proper processing through filters etc. The following will give a standard specification of the amplifier. Amplification has to be carried out in two stages i.e. SSIPA and TWTA.

S.No	Parameter	:	Required Specification
1.1	Type of HPA	:	Outdoor type 200 Watt TWT
1.2	a. Input Frequency b. Output Frequency	:	13.75 GHz to 14.5 GHz, 13.75 GHz to 14.5 GHz
1.3	Output Power a. TWT b. At flange	:	200 Watt (Min.) At flange 170 Watt (Min.)
1.4	Gain at Rated Power	:	67 dB (min.) 70 dB (min.) with SSIPA
1.5	Gain Variation a. Narrow Band b. Full Band	:	1 dB max. over any 80 MHz 2.5 dB max.
1.6	Gain Slope	:	+/- 0.04 dB per MHz (Max.)
1.7	Gain Stability	:	+/- 0.25dB (Max.) over 24 hrs. at constant drive & temperature +/- 2.0 dB (Max.) Over Operating Temp. Range at any frequency.
1.8	Inter Modulation	:	-24 dBc or better with two equal carriers at 4 dB output back off (with linearizer) -18 dBc or better with two equal carrier at 4 dB output back off (OBO)
1.9	Harmonic Output	:	- 60 dBc Max.
2.0	Group Delay, max. a. Linear b. Parabolic c. Ripple	:	0.02 ns Per MHz over any 40 MHz Band 0.015 ns /MHz ² over any 40 MHz Band 0.75 ns pk-pk ripple max. over any 40 MHz Band
2.1	VSWR	:	Input 1.3 : 1 (Max.) Output 1.3 : 1 (Max.) Load 2.2 : 1 (Max.)
2.2	Power Supply	:	100V-240V AC, Single Phase.
2.3	Frequency	:	48-52 Hz
2.4	Power Factor	:	0.95 (Min.)
2.5	a. Power Consumption b. Power Connector	:	Less than 1000 watts. IEC-3 pin (Indian Standard)
2.6	Cooling	:	Forced Air
2.7	Noise Density (max.) a) Receive Band (10.7 to 12.75	:	-120 dBW / 4 KHz

b)	GHz) Transmit Band (13.75 to 14.5 GHz)	:	-65 dBW / 4 KHz
2.8	RF Connectors a. RF Input connector b. RF Output connector c. RF Monitoring Connector		N-type female (standard) WR-75 Wave Guide flange(Grooved) N-type female (standard)
3.0	Monitoring and Control		
3.1	External Remote Controller (Standard 19" Rack Mountable)	:	<p>i. Controls: Local/Remote, Power On/Off, HV On/Off, Fault reset, RF Inhibit, Heater standby, RF alarm/ fault settings, RF power level, Menu selector.</p> <p>ii. Configuration: It should be capable of use in Single thread as well as Redundant configurations.</p> <p>iii. Monitoring: RF Output Power, RF Reflected Power, Helix current, Helix Voltage, Fault Identification, TWT temperature, Filament time delay countdown.</p> <p>iv. Hardware interface: Ethernet port, serial ports: RS 232 and RS 422/485 with required software.</p> <p>v. Status Displays: Local/Remote, Standby, Transmit on/off, Heater time delay</p>

6. PHYSICAL, ENVIRONMENTAL & MECHANICAL SPECIFICATIONS

6.1 *Power Supply*

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

- | | |
|-------------------|----------------------------|
| (a) Voltage Range | 100V-240V AC, Single Phase |
| (b) Frequency | 50Hz ±2HZ |

6.2 *Environmental Specifications*

Parameter	Specification
(a) Operating Temperature (Outdoor):	-40°C to 60°C
(b) Storage Temperature:	-20°C to 60°C
(c) Humidity :	95% min. non-condensing
(d) Altitude:	0 to 3000 m
(e) Derating :	2°C/ 1000 ft.

6.3 *Mechanical Specifications*

Equipment shall be Hub/Antenna mountable

Parameter	Specification
(a) Construction:	Modular approach,
(b) Cooling:	Internal Circulation Fans

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								

- 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 Indian bidder must submit the firm's self certified copies of import licenses 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/ Warranty

8.3.1 The manufacturer shall give guarantee/ Warranty for 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/ Warranty period shall be repaired/replaced free of charge by the successful bidder/ dealer/ authorized representative at site, if possible. For repairing of any defective module/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.

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/ Warranty period.

8.3.4 Guarantee/ Warranty period is to be extended corresponding to the outage period if the failure rectification takes more than 15 working 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 IV.

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 by Doordarshan before acceptance of the equipment. 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 Engineers authorized by Doordarshan Directorate. A draft copy of ATP (Acceptance Test Procedure) must be submitted by the bidder within 15 days of issue of A/T for approval by Doordarshan. ATP should describe the standard test procedure of individual equipment based on DD specifications. The factory test report will not be treated as ATP. The accepted ATP/approved 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 DD premises in Delhi/ consignee site/bidder premises in India..

8.4.3 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.

8.4.4 In case the bidder is of FOB bid directly from foreign OEM not based in India :

- (1) Its local office /authorized representative/dealer in India shall facilitate the inspection by DD Engineers at DD premises in Delhi/consignee site.
- (2) OEM has to submit one advance sample equipment within 45 days of issue of A/T in accordance with clause no. 11.10 (Delivery linked with approval of advance sample) of DGS&D manual. The advance sample shall be inspected as per approval ATP within 10 working days from the date of receipt of advance sample at the inspection site.
- (3) The approval of the acceptance of sample equipment shall be intimated by DD to the supplier/ authorized representative or dealer in India after which the supplier shall deliver the equipment as per A/T.
- (4) Thereafter, post delivery inspection shall be carried out on receipt of equipment before accepting and issue of Inspection Note accordingly.

8.5 Testing and configuration at site :

8.5.1 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.

8.5.2 However, the local representative of the OEM/bidder shall be responsible for resolving any issues related to hardware, software, licenses and configuration of the TWTA HPA system.

8.5.3 If required, local representative of the OEM/bidder may resolve issues related to hardware, software, licenses and configuration through OEM.

8.6 Delivery Period

Within 6 months from the date of issue of purchase order or 5 months from the date of the decision letter from WPC provided by DD in respect of TWTA HPA, whichever is later.

8.7 Pre-bid Conference

- 8.7.1 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.
- 8.7.2 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.
- 8.7.3 Amendments subsequent to the pre bid conference shall be sent to prospective bidders, who have purchased tender document, by e-mail/ fax/ post.
- 8.7.4 It shall be bidder's responsibility to check for any amendments/ addendum on the website before submitting their duly completed bids.

8.8 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).

- 8.8.1 Whether documents related to fulfilment of the eligibility criteria as per Clause 3 have been submitted.
- 8.8.2 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.
- 8.8.3 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.

- 8.8.4 Whether the Compliance has been submitted in the prescribed format as given in Clause 8.1.5.
- 8.8.5 Ensure that all equipment and accessories as given in the Suggestive bill of material have been included in the offered BOM.
- 8.8.6 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.
- 8.8.7 Whether the requisite undertakings for after sales support by OEMs and bidder have been submitted.
- 8.8.8 Ensure that no alternate item has been offered.
- 8.8.9 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.
- 8.8.10 Ensure that the Un-priced BOM has been included.
- 8.8.11 Any other item mentioned elsewhere in the tender.

Suggestive Bill of Material (BOM)**Supply of TWTA HPA****for 05 Nos. DSNGs**

(, Ahmedabad, Bhubaneswar, Jaipur,)

(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	Total Qty. as per suggestive BOM	Rema-rks	Make	Model
A.	High Power Amplifier in (1+0) / (1+1) configuration consisting of:					
a)	200 watt C-Band TWTA with integral lineariser (Outdoor type)		05 Nos.			
b)	Remote Control Panel for HPA		05 Nos.			
c)	Essential items including standard accessories to complete the installation of HPA.		05 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)		03 Lots			
C.	<u>Documentation</u>					
	Equipment manuals consisting of:		1 Lots			
a)	Operation/User Manual, installation manual and Factory test Report. Hard copy and Soft copy on CDs					

	with Search facility for all the supplied equipment. (2 Sets to be supplied for each DSNG, 1 Set to be supplied at DG: DD and 1 Set to be supplied at each zonal office ADG (NZ), ADG (EZ), 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

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 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 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

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.	200 W TWTA HPA		
ii.	Remote Control Panel for HPA		

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.	200 W TWTA HPA		
ii.	Remote Control for HPA		

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

S.No.	Name of equipment	pk of OEM	Guarantee certificate submitted (Yes/ No)
i.	200 W TWTA HPA		
ii.	Remote Control Panel for HPA		

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.	Remote Control Panel for HPA		

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

- i. 200 W TWTA HPA
ii. Remote Control Panel
iii.

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