



सत्यम् शिवम् सुन्दरम्

प्रसार भारती  
**PRASAR BHARATI**  
**(Broadcasting Corporation of India)**  
दूरदर्शन महानिदेशालय  
**Directorate General: Doordarshan**  
दूरदर्शन भवन, कोपरनिकस मार्ग,  
**Doordarshan Bhawan, Copernicus Marg**  
नई दिल्ली - ११०००१  
**New Delhi - 110 001**

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

**Dated: 10.07.2019**

**Subject:** Draft Specification for Procurement for 32 input Quad Head Professional Quality High Definition Multi Image Processor.

The Draft specification of the upcoming tenders is enclosed herewith to offer comments, if any and may also submit their budgetary quote by due date at e-mail address [ddpurchase401@yahoo.co.in](mailto:ddpurchase401@yahoo.co.in) or on following Address:


Assistant Engineer  
Room No. 403,  
Directorate General: Doordarshan,  
Doordarshan Bhawan,  
Copernicus Marg,  
New Delhi -110001 (India)  
Telephone: 011- **2311 4401**

Specification For: Draft Technical Specification for Procurement of 32 input Quad Head Professional Quality High Definition Multi Image Processor

Specification no: SD 15/2019 Dated: 08.07.2019

Due Date to offer Comments: 25.07.2019

Encl.: As above (07 Pages)

  
10/07/19  
Prabhat Kumar Singh  
Assistant Engineer  
For DG: DD

PRASAR BHARTI  
BROADCASTING CORPORATION OF INDIA  
DIRECTORATE GENERAL: DOORDARSHAN

**Specifications for 32 Input Quad Head Professional Quality High Definition Multi-Image Processor**

DD Specifications No.: SD 15/2019

Dated: 08.07.2019

**1. SCOPE:**

The specifications aim at the procurement of Professional Multi Image Display Processor (Multi-viewer) with 32 inputs and Four Independent outputs for broadcast application in TV Studios in Doordarshan network.


**2. GENERAL:**

- (a) The offered Multiviewer should be of internationally reputed make, meeting the specifications. Only the proven products in the broadcasting field will be acceptable. The firm should enclose the user list of the broadcasters to whom the offered model has been supplied. The tenders without the model specific user list shall liable to be rejected.

**3. ESSENTIAL FEATURES:**

- (a) The offered Multi-viewer is for simultaneous monitoring of multiple HD/SD-SDI sources tiled in a single big display device in the Broadcast Studio facilities.
- (b) The Multi-viewer should accept 32 numbers of Video with embedded Audio signals and display them as per the layouts created by the user.
- (c) The offered Multi-viewer should be capable of auto sensing the HD and SD Video inputs.
- (d) The offered multi-viewer should simultaneously display the output in HDMI/DVI-I (with HDMI converter) and HD-SDI outputs in BNC connector for driving the Plasma or LED-LCD displays.
- (e) The offered system should have quad head output with each output available in HDMI and BNC connectors to cater to four independent displays simultaneously with either same or different layout of the available 32 video inputs.
- (f) In addition to the video images, the multi-viewer should facilitate displaying other information's like Time-code, Tally, Source names and alarms.
- (g) It should also display the embedded audio signals as bar graphs either on the side of each channel or as overlay on respective Video sources.

*Specifications for 32 Input Quad Head Professional Quality High Definition Multi-Image Processor:  
SD 15/2019 Dated 08.07.2019*



- (h) The offered Multi Image Display Processor should facilitate displaying the internally generated Analog & digital Real time clocks.
- (i) It should have facility to customize the layouts by the user to suit their specific requirements. The computer interface and software required for customizing the layouts should be user friendly and should be part of the offer.
- (j) The bidder has to quote for all options so that the completeness of the system can be ensured by suitably picking the required options.
- (k) The offered system should generate alarms like Video loss, Freeze Picture, incorrect luminance/black level, Audio loss, silence and excessive audio.
- (l) The offered equipment should be from an internationally reputed manufacturer and the quoted model should be field proven and in use by leading broadcasters.
- (m) The bidder should essentially submit the list of the broadcasters to whom the quoted model has been supplied. The tenders without proper user list are liable to be rejected.
- (n) The offered Multi-viewer should support tally for all the inputs and for Program output through serial port with RS 422 option or GPI inputs. The Multi-viewer should also accept inputs from Digital Production Switchers of various makes for tally display.
- (o) The Bill of Material required is given in **Appendix-I**. The bidder is required to provide the complete list of items & accessories etc. offered to meet the specifications requirement in the following proforma:

Sr. No.	Description/Name of the item	Make	Model	Part No., if any	Qty.
1.	2.	3.	4.	5.	6.

- (p) The equipment are being procured for various Doordarshan centres as per **Appendix-II**.

#### 4. TECHNICAL SPECIFICATIONS:

Sr. No.	Parameters/ Specifications	Parameters/Specifications Values
1)	Video Inputs	: 32 or more
2)	Connectors	: BNC or Mini DIN 1.0/2.3
3)	Serial Digital Interface	: Auto detecting inputs 3G/HD/SD-SDI
4)	Serial Digital Standards	: SMPTE 424M,292M,259M
5)	Equalization	: 200 m or more for SD SDI and 100 m or more for HD SDI
6)	Return Loss	: >15db upto 1.5 Gbps

Specifications for 32 Input Quad Head Professional Quality High Definition Multi-Image Processor:  
SD 15/2019 Dated 08.07.2019

7)	Audio	: Embedded Audio (SMPTE-272M-A)
8)	Input Impedance	: 75 ohms
9)	Control	: Configurable through computer interface
10)	Alarms	: No audio, audio high/low, no video, video black, video frozen.
11)	Black Burst	: PAL 0.45 Vp-p, Tri: 0.6 Vp-p
12)	Number of Heads	: Four (Four simultaneous outputs giving four Independent layouts on same type of connectors)
13)	Output Connectors	: 4x DVI-I with HDMI Converter or HDMI and 4x HD/SD-SDI on BNC/mini DIN 1.0/2.3 along with standalone BNC to HDMI Converter
14)	Analog Audio output	: For Monitoring purpose
15)	Output Resolution	: 3G/1.5G (including 1920x1080i, 1920x1080p)
16)	On screen display	: Borders, Labels, fonts, tally, Clock faces, Logos, UMD
17)	Control Interface for Tally	: RS232 with RS422 or 485 option and GPI for tally and other controls
18)	Control Interface for System Configuration	: RJ 45
19)	Power Consumption	: ≤600 W
20)	Weight	: ≤15 Kg

## 5. ACCESSORIES:

All the accessories such as power cables, AC to DC adopter etc. required to complete the system should be offered by the firm and **the firm should certify the completeness of the system in all respect.** All the optional items should be quoted separately. Firm must provide enough details about such optional items to decide its utility.

## 6. COMPLIANCE:

- (a) **A point by point full compliance statement in respect to all the parameters related to the concerned equipment/item(s) laid down in the specifications from the respective principal manufacturers is to be enclosed along with the offer in the format given below. Mere signature on the copy of DD specifications shall not be accepted as a compliance statement.**

**The figures so mentioned should be supported by record of these in the technical literature enclosed with the tender and reference to the page number of enclosed literature for all features and technical**

*Specifications for 32 Input Quad Head Professional Quality High Definition Multi-Image Processor: SD 15/2019 Dated 08.07.2019*

*P. Anil*

**specifications should be mentioned in the relevant column.** Offers without the compliance statement or with incomplete compliance statement will liable to be rejected with the sole responsibility of the bidder. **Any deviation from the specification detailed in the compliance statement is to be highlighted separately.**

Sr. No of DD specs.	DD specs.	Compliance (Yes/No)	Performance Fig. of equipment Offered.	Reference to the Page Number of enclosed literature	Deviations, in case of non-compliance	Optional items if any reqd. to make the sys. Compliant to DD specs.	Features in the offered Product which exceeds DD specs.
1	2	3	4	5	6	7	8

- (b) **In addition to above, a separate point by point compliance statement duly signed by the bidder in respect of all the points laid down in the specifications for all the equipment/item(s) should also be submitted along with the bid by the bidder in the above mentioned proforma.**

## **7. TECHNICAL LITERATURE:**

One set of technical manuals/brochures for all the equipment are required to be provided along with the tender to facilitate the technical evaluation, otherwise the tender is liable to be ignored. The successful bidder will have to supply a set of technical, user and installation manuals with respect to each of the equipment.

## **8. DEMONSTRATION:**

If necessary, the bidder may be asked for demonstration of the offered system as part of the technical evaluation. In such case the bidder will have to make suitable arrangement for the demonstration of the offered system at Doordarshan Bhawan, New Delhi, on notice of 15 days. Accordingly the bidder should be in readiness for demonstration.

## **9. GUARANTEE:**

- With reference to the clause no.8.2 of the "General Terms And Conditions (GTC)" under ANNEXURE-II of tender document, the complete system including all items/equipment should be guaranteed for **three years** of trouble free operation from the date of commissioning. In case of any item or equipment failure including software and hardware within this period shall be rectified or replaced free of cost to Doordarshan.
- The guarantee should cover all hardware, software and modules of the complete system.

## **10. TRAINING:**

The bidder should offer 03 days operation and maintenance training on the offered equipment for Doordarshan Engineers. The bidder has to provide the comprehensive training material in the form of hard copies, as well as soft copies to the trainees during the training session.

The training will be conducted at one Doordarshan Centre in each concerned Zone as indicated in **Appendix-I (B)**.

## **11. DELIVERY PERIOD:**

The delivery period will be 03 months.

## **12. INSPECTION:**

The equipment shall be subjected to inspection by Doordarshan officials at New Delhi.

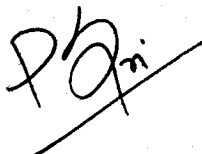
## **13. ENCLOSURES:**

The bidder must necessarily upload the following documents along with the technical bid:

- a) Compliance statement with respect to all the points of the specifications duly signed by the OEM should be submitted for offered equipment/item(s) in the proforma mentioned in clause no. 6.(a). The reference to the page number of enclosed literature for all features and technical specifications should be essentially mentioned in the relevant column of the compliance statement.
- b) A separate point by point compliance statement duly signed by the bidder in respect of all the points laid down in the specifications for the offered equipment/item(s) in the proforma mentioned in clause no. 6.(b).
- c) Technical manuals/detailed technical literature/catalogues for the offered equipment/item(s) for substantiating the model no. and technical specifications.
- d) Model specific user list of the offered product(s).
- e) Any other document mentioned elsewhere in the tender document.

**The tender is liable to be rejected in the absence of the above enclosures with the sole responsibility of the bidder.**

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**Appendix - I****INDICATIVE BILL OF MATERIAL**

<b>Sr. Nos.</b>	<b>Description of Items</b>	<b>Quantity</b>
1.	32 Input Quad Head Professional Quality High Definition Multi-Image Processor with required accessories and rack mount kit.	2 Sets
2.	Operation manual/User Guide/ Technical Manual/ Installation Manual etc.	2 Sets
3.	Service & Maintenance Manuals	2 Sets



**EQUIPMENT ARE BEING PROCURED FOR THE FOLLOWING  
DOORDARSHAN CENTRES**

<b>Sr. No.</b>	<b>Zone</b>	<b>Location of Doordarshan Centre</b>	<b>Qty.</b>
1.	<b>North Zone (NZ)</b>	DD News, Delhi	2 Sets
<b>Total</b>			<b>2 Sets</b>

