

Through PB website

**PRASAR BHARTI**  
**(India's Public Service Broadcaster)**  
**Director General : Doordarshan**  
**Doordarshan Bhawan, Copernicus Marg**  
**New Delhi -110001.**

Dated: 06/07/2022

**Subject:** Draft Technical Specifications for Procurement of 32 Input Quad Head Professional Quality High Definition Multi Image Processor.

The Draft specification of the upcoming tender is enclosed herewith to offer comments, if any by prospective bidders/Firms/OEMs.

2. Bidders/OEMs are requested to provide information about available local content (Make in India) in respect of items listed in suggestive BOM along with budgetary quote.

3. Bidders may please submit the above detail on or before due date by e-mail to ddpurchase401@yahoo.co.in or at following Address.

Assistant Engineer  
Room No. 403,  
Directorate General: Doordarshan,  
Doordarshan Bhawan, Copernicus Marg,  
New Delhi -110001 (India)  
Telephone: **011- 2311 4401/4403**

**Specification For:** Draft Technical Specifications for Procurement of 32 Input Quad Head Professional Quality High Definition Multi Image Processor.

**Specification no:** SD 03/2022 Dated: 04.07.2022

**Due Date to offer Comments:** 20.07.2022

Encl.: As above (07 Pages)

Signed by Girish Kumar  
Date: 07-07-2022 09:49:55  
Reason: Approved

(Girish Kumar)  
Assistant Director (Engg)  
Doordarshan Directorate: Doordarshan

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 03/2022

Dated: 04.07.2022

**1. SCOPE:**

The specifications outlined in this document aim at the procurement of Professional Multi Image Display Processors (Multi-Viewers) with 32 inputs and 4 Independent Outputs for broadcast applications in Doordarshan's network.

**2. GENERAL:**

The offered Multi-Viewers should be of a reputed brand, complying with specifications outlined in this document. Only proven products in the broadcasting industry will be acceptable. Bidders should enclose a list of broadcasters/media houses to whom the offered model has been supplied. Bids without a list of users is liable to be rejected. Bidder should not offer a model which is obsolete/end of life.

**3. ESSENTIAL FEATURES:**

- (a) The offered Multi-Viewers are for monitoring of multiple 3G/HD-SDI/SD-SDI sources tiled in a single big display device in Broadcast facilities.
- (b) The Multi-Viewers should accept 32 Video inputs with embedded Audio signals and display them in accordance with layouts created by users.
- (c) The offered Multi-Viewers should be capable of auto sensing 3G, HD and SD Video inputs.
- (d) They should have hot- swappable redundant power supplies and hot-swappable modules.
- (e) The Multi-Viewers should offer simultaneous HDMI and SDI outputs at full 1080i, 1080p at 50/60 Hz resolution on up to 4 Multi-Viewer displays for driving the Plasma or LED-LCD displays.
- (f) The offered system should have quad head outputs with each output available in HDMI and BNC connectors in order to cater to four independent displays simultaneously with either the same or different layouts of the available 32 video inputs
- (g) In addition to video images, the Multi-Viewers should facilitate displaying other information like Time-code, Tally, Source Names,

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- (h) The MVWs should also display embedded audio signals as bar graphs either on the side of each channel vertically, horizontally and/or as overlays on respective Video sources. They should be capable of Dolby E metadata extraction for metering and Content Alarming.
- (i) The offered Multi Image Display Processor should offer layout flexibility, with unlimited signal repetition and sizing across all displays, without blocking, grouping restrictions or bandwidth restrictions.
- (j) They should facilitate displaying internally generated Analog & Digital Real time clocks along 32 Video PIPS. Analog, Digital clocks/timers (with date) should be displayed with programmable offsets and configurable colors. The Clocks/Timers should be enabled to be driven by LTC, referenced internally, or to an NTP server.
- (k) They should have the capability of customizing layouts by users to suit their specific requirements. Any computer interface and software required for customizing the layouts should be user friendly and be part of the offer. They should also be accompanied by a Remote Control Panel capable of connecting a mouse and keyboard to recall layouts.
- (l) The bidder has to quote for all options for ensuring completeness of the system.
- (m) The offered product should generate alarms like Video Loss, Freeze Picture, Incorrect Luminance/Black Level, Audio Loss, Silence, Excessive Audio and Definable Zone based monitoring inside the PIP to detect Video Freeze and Video Black, Audio Overload, Out of Phase and Mono, Metadata loss (CC, Subtitling, Vchip), loudness on every input. They should support multi color and blinking statuses based on severity, latching and status messages.
- (n) They should offer Text Labels (UMDs) which can be displayed inside or outside windows. They should be enabled with Dynamic Text which can be driven third-party Routers. Text Fonts should be flexible and support UNICODE for multilingual texts.
- (o) The offered Multi-Viewers should support Tally for all inputs and Program Output through Serial Ports with RS 422 option or GPI inputs or RJ45. The Multi-Viewers should also accept inputs from Digital Production Switchers of various brands for Tally display.
- (p) The indicative Bill of Material required is given in **Appendix-I**. The bidder is required to provide a complete list of items & accessories etc. offered to comply with the specifications outlined in this document, in the following proforma:

Sr. No.	Description of Equipment	Brand	Model No.	Part No., if any	Qty.	Remarks
1.	2.	3.	4.	5.	6.	7.

- (q) Doordarshan Centres (Consignees) where the equipment has to be installed are mentioned in **Appendix-II**.

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**4. TECHNICAL SPECIFICATIONS:**

Sr. No.	Parameters/ Specifications	Parameters/Specifications Values
1)	Video Inputs	: 32 or more
2)	Input Connectors /cables	: BNC or Mini DIN 1.0/2.3 [1 ft Cable with one end BNC connector and other end SMA (mini BNC) for all inputs if back plate is with SMA.]
3)	Serial Digital Interface	: Auto detecting inputs 3G/HD-SDI/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 up to 1.5 GHz
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/mini DIN 1.0/2.3 to HDMI Converter as suitable
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, Vertical and Horizontal Audio Bars
17)	Control Interface for Tally	: RS232 with RS422 or 485, RJ45 option and GPI for tally and other
18)	Control Interface for System Configuration	: RJ 45

**5. ACCESSORIES:**

All accessories such as power cables, AC to DC adapter, etc. required to complete the system should be offered by the bidder who should also certify the completeness of the system. All optional items should be

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572065/2022/Studio Design Section - The DD bidder must provide details about optional items in order to enable Doordarshan to decide their utility. 1 ft Cable with one end BNC connector and other end SMA (mini BNC) wherever essential to be provided.

## 6. COMPLIANCE:

- (a) Authorization from principal manufacturer should also necessarily be submitted along with the bid.
- (b) A point by point full compliance statement in respect of all parameters, from the principal manufacturers in the format given below, is to be part of the bid. Mere signature on the copy of DD specifications shall not be accepted as a compliance statement.

The above information should be supported by technical literature / data sheets enclosed with the bid. Reference to the page number should be mentioned in the relevant column. Bids without compliance statement or with incomplete compliance statement are liable to be rejected at the sole responsibility of the bidder. Any deviation from specifications 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, required to make the system Compliant to DD specs.	Features in the offered Product which exceed DD specs.	Remarks, if any
1.	2.	3.	4.	5.	6.	7.	8.	9.

- (c) A separate point by point compliance statement duly signed by the bidder in respect of all points laid down in the specifications for all equipment should be submitted as part of the bid in the above mentioned proforma.

## 7. TECHNICAL LITERATURE:

One set of electronic technical and operations manual for the equipment is to be provided on a non-returnable basis along with the bid to facilitate evaluation in the absence such literature the bid is liable to be ignored. The successful bidder will have to supply an additional set of electronic technical, operational and maintenance manuals with respect to all equipment with the final delivery of the system to Doordarshan.

## 8. DEMONSTRATION:

If necessary, the bidder may be asked to demonstrate the offered system, as part of the technical evaluation. In such case the bidder will have to make arrangements for the demonstration of the offered system

Specifications for 3.2 Input Quad Head Professional Quality High Definition Multi-Image Processor:  
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*Shankar*  
04/07/2022

*Yash*  
5/7/22

*Yash*

*SD 4/7*



## 9. WARRANTY:

- a) The system should carry a warranty of three years from the date of accepted consignment at the consignee's premises. In the eventuality of any equipment including software failing during this period, such fault shall need to be rectified or the relevant part / equipment replaced free of cost to Doordarshan. The OEM will be required to give undertaking to this effect along with the bid.
- b) After sales service support for an additional 02 (two) years for repairs/maintenance/replacement of the offered system after the completion of warranty period should also be provided. The OEM will need to give an undertaking to this effect along with the bid.
- c) Warranty should cover all hardware, software and modules of the complete system.
- d) Bidders are required to submit details of after sales service arrangements for the equipment including that of infrastructural facilities available in India.

## 10. TRAINING: Online

The bidder should offer 03 days online training for operations and maintenance to Doordarshan Engineers. Comprehensive training material in the form of soft copies should be available for trainees during the training session.

## 11. DELIVERY PERIOD:

The delivery period will be 03 months from the date of placement of Order. The training is excluded from the Delivery period.

## 12. INSPECTION:

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

## 13. ENCLOSURES:

The bidder must necessarily submit the enclosures, as specified in this document, alongwith the technical bid. The bid is liable to be rejected in the absence of the above enclosures at the sole responsibility of the bidder.

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4/7 Feb

Appendix – I**INDICATIVE BILL OF MATERIAL (BOM)**

<b>Sr. Nos.</b>	<b>Description of Items</b>	<b>Quantity</b>
1.	32 Inputs Quad Head Professional Quality High Definition Multi-Image Processors with required accessories and rack mount kits. 1 ft Cable with one end BNC connector and other end SMA (mini BNC) – 32 No with each Multi-Viewers	101 Sets
2.	Operation Manuals/User Guides/ Technical Manuals/ Installation Manuals, etc.	101 Sets
3.	Service & Maintenance Manuals	101 Sets

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## Appendix-II

EQUIPMENT SHALL BE INSTALLED AT THE FOLLOWING  
DOORDARSHAN CENTRES

Sl. No.	Zone	Location of Doordarshan Centre	Total Qty.
1.	East Zone (EZ)	BHUBANESHWAR-DDK	3
2.		KOLKATA-DDK	3
3.		PATNA-DDK	3
4.		RANCHI-DDK	3
5.		GUWAHATI-DDK	3
6.		AIZWAL-DDK	2
7.		IMPHAL-DDK	2
8.		ITANAGAR-DDK	2
9.		KOHIMA-DDK	2
10.		SHILLONG-DDK	2
11.		AGARTALA-DDK	2
12.	North Zone (NZ)	JALANDHAR-DDK	4
13.		SRINAGAR-DDK	3
14.		CHANDIGARH-DDK	2
15.		DEHRADUN-DDK	3
16.		JAIPUR-DDK	3
17.		LUCKNOW-DDK	4
18.		SHIMLA-DDK	2
19.		DELHI-DDK	2
20.		DELHI-DD NEWS	5
21.		DELHI- CPC	2
22.		JAMMU-DDK	2
23.		LEH-DDK	2
24.	South Zone (SZ)	VARANASI- DDK	1
25.		BANGALORE-DDK	3
26.		CHENNAI-DDK	4
27.		HYDERABAD-DDK	3
28.		TRIVANDRUM-DDK	3
29.		VIJAYWADA-DDK	3
30.		PORT BLAIR-DDK	2
31.	West Zone (WZ)	PUDUCHERRY-DDK	2
32.		AHMEDABAD-DDK	4
33.		MUMBAI-DDK	5
34.		BHOPAL-DDK	3
35.		RAIPUR-DDK	3
36.		PANAJI-DDK	2
37.		RAJKOT	1
38.		INDORE	1
		<b>TOTAL QTY.</b>	<b>101 Sets</b>

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Processor: SD 03/2022 Dated 04.07.2022

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