



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: 14.06.2019

Subject: Draft Specification for Procurement of 9" High Definition LCD-TFT Video Monitor

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

Dy. Director (Engg.)
Room No. 403,
Directorate General: Doordarshan,
Doordarshan Bhawan,
Copernicus Marg,
New Delhi -110001 (India)
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Draft Specification : Procurement of 9" High Definition LCD-TFT Video Monitor

Specification no: SD 08/2019 Dated 12.06.2019

Due Date to offer Comments: **02.07.2019**

Encl.: As above

Praveen Kumar
Dy. Director (Engg.)
For DG: DD

Specifications for 9" High Definition LCD-TFT Video Monitor

Specifications No.: SD 08/2019

Dated: 12.06.2019

1. SCOPE:

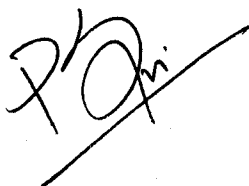
The specifications aim at the procurement of broadcast quality Full HD resolution (1920 x 1080 pixels) 9" active matrix TFT-LCD monitor for professional monitoring applications in studio, outside broadcast (OB), acquisition and field production in Doordarshan network.

2. GENERAL:

- (a) The product of internationally reputed make, meeting the specifications and proven one in the broadcasting field only will be acceptable. The bidder should enclose the product specific user list of the broadcaster to whom the offered product has been supplied. **The tenders without the proper user list shall liable to be rejected.**
- (b) The make and model number of active matrix TFT LCD panel incorporated into the offered monitor, should be mentioned in the compliance statement and in the offered Bill of Material. A certificate from OEM in this respect along with the Data sheet of the active matrix TFT LCD panel used in the monitor should also be enclosed along with the Bid.
- (c) The offered product must have BIS certification. The copy of the same should be enclosed along with the bid.

3. ESSENTIAL FEATURES:

- (a) The offered product should be 9" active matrix TFT-LCD colour monitor with LED back light. It should accept analog composite video (PAL), SD SDI and HD SDI as inputs. The monitor should support 1920X1080/50I (HD) and 720X576/50I (SD) video formats. The monitor should support 4:3 and 16:9 aspect ratio.
- (b) The offered monitor should be broadcast quality with front panel controls. The offered monitor should have lightweight, robust and compact metal body. It should be able to withstand shock and vibrations.
- (c) The LCD panel should be provided 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.



- (d) The monitor should have a high brightness, high-resolution and high contrast active matrix TFT LCD panel with LED back light.
- (e) The monitor should have built-in waveform monitor and Vector scope to display the input signal. Position and size of these should be user adjustable.
- (f) It should have 'H/V delay' and 'blue only' mode for adjustment of the monitor.
- (g) The offered monitor should have the facility to control the display parameters like brightness, contrast and Chroma from front panel.
- (h) The monitor should have various built-in markers like Center Marker, Safety Area Marker and Aspect Marker etc. The monitor should also have audio level display on the screen.
- (i) The monitor should have Tally Lamp fitted over the front panel, which can be lit up via a parallel Tally signal. It should also have monitor control via GPI/ Serial control on a suitable connector. It should also be possible to control the monitor remotely.
- (j) The offered monitor should have a wide viewing angle both in horizontal and vertical direction with no reduction in brightness, picture contrast and colour saturation.
- (k) It should be possible for the user to select the industry standard colour temperature through menu for using the monitor in outdoor and indoor applications.
- (l) The monitor should have a minimum response time for facilitating viewing of fast moving picture like sports events without any delay or lags in opposite direction to the movement.
- (m) The monitor should have built-in speaker for audio monitoring. It should be able to adjust the volume for internal speaker or the headphones from front panel
- (n) The monitor should work in 230±10% Volts, 50 Hz AC power supply. In case of external Power supply necessary power adapter along with the required cable should also be offered.
- (o) The offered product should have Rack mount kit.
- (p) 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 specification 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.

PQ

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

4. TECHNICAL SPECIFICATIONS:

Sr. No.	Parameter	Specification
1)	Display size	: Approx. 9" diagonally
2)	LCD Panel	: Active matrix TFT
3)	Aspect ratio of the LCD panel	: 16:9
4)	Back light	: LED
5)	Resolutions	: 1920 x 1080 pixels
6)	Colour Reproduction	: 16.7 millions or better
7)	Response time (T _{on} +T _{off})	: 25 ms or better
8)	Pixel pitch	: 0.103 (H) x 0.103 (V) mm or better
9)	Contrast Ratio	: 700:1 or better
10)	Selectable Colour temperature	: 3200K,5600K,6500K
11)	Viewing Angle	: 170 degrees in Horizontal & 170 degrees in Vertical or better
12)	Brightness	: 350 cd/sq.m or better
13)	Tally	: On Air Tally lamp mounted in the front panel of the monitor.
14)	Tally Input	: On a suitable connector
15)	Supported aspect ratios of video	: 16:9 and 4:3
16)	Video Inputs	: (i) HD/ SD SDI: 1 or more HD SDI SMPTE 292 in BNC, 1.485Gb/s, 0.8V pp across 75 ohms (1080/50I) and SD SDI SMPTE 259 in BNC, 270Mb/s, 0.8V pp across 75 ohms, auto detection (ii) Analog: 1 or more Composite (PAL) in BNC, 1 V p-p across 75 ohms. (iii) HDMI/DVI: 1
17)	Audio Inputs	: Mini jack/RCA
18)	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, 0.8Vpp across 75 ohms active loop through of selected input
19)	Audio Output	: Mini jack/RCA and built-in speaker
20)	Control I/O	: Serial (RS-232/422)/ GPI/Parallel Interface
21)	Power Consumption	: ≤40 W

Technical Specifications for 9" High Definition LCD-TFT Video Monitor: SD 08/2019 Dt.12.06.2019

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22)	Weight	:	<3.00Kg.
23)	Operating temperature	:	0 °C to +40 °C
24)	Storage temperature	:	-20 °C to +60 °C (no condensing)
25)	Relative Humidity	:	30% to 80% (non-condensing)

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. 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 laid down in the specifications from the principal manufacturer 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 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 should also be submitted along with the bid by the bidder in the above mentioned proforma.

Signature

7. TECHNICAL LITERATURE:

One set of technical manuals/brochures of the offered 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.

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:

- a) 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.
- b) The guarantee should cover all hardware, software and modules of the complete system.

10.DELIVERY PERIOD:

The delivery period will be 03 months.

11.INSPECTION:

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

12.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) OEM Certificate and Data sheet of the active matrix TFT LCD panel used in the monitor as required vide clause no. 2(b).
- f) BIS Certificate as required vide clause no. 2(c).
- g) 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.

A handwritten signature in black ink, appearing to be 'P. Q. in', is written over a horizontal line.

INDICATIVE BILL OF MATERIAL (BOM) REQUIRED

Sl. Nos.	Detail of Items	Qty.
1.	9" Approx. LCD colour Monitor with Analog Composite (PAL) video, HD-SDI and SD- SDI inputs	36 Sets
2.	Brackets for mounting the above monitors in 19" rack	36 Sets
3.	Any other accessories like power cords, AC to DC Power adapter (if required) necessary to make the system fully functional	36 Sets
4.	Operation and Maintenance manual	36 Sets



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

Sr. Nos.	Zone	Location of Doordarshan Centre	Qty.
1.	North Zone (NZ)	CPC, Delhi	10 Sets
2.		DD News, Delhi	26 Sets
		TOTAL QTY.	36 Sets

