



PRASAR BHARATI
(India's Public Service Broadcaster)

Doordarshan Kendra: Jaipur

TECHNICAL SPECIFICATIONS FOR SITC OF CENTRALIZED DIGITAL CLOCK SYSTEM

1. **Scope:** The following specifications lay down the performance measure for SITC of Centralized Digital Clock System with 12 Slave clocks with high quality digital displays for Doordarshan TV Studio application
2. **General:** The centralized Digital Clock System has to be used in various technical sections of Doordarshan TV studio system such as PCRs, Studios, Earth Station, News Room, VTR and MSR etc. with same time display in all clocks.
3. **Essential Features:** The offered Centralized Digital Clock System should have the following features.
 - a) The offered system should have one master clock and 12 number of Slave clocks, acting as client devices connected through LAN or similar interface and synchronized with either NTP (Network Time Protocol) or similar protocol.
 - b) It should have the facility to set the time and other settings of the Master clock through suitable interface. Such settings whenever made should be transferred to all slave clocks immediately.
 - c) The clock system should operate autonomously and provide software configuration options for time zone offsets, automatic daylight saving time corrections without scheduled operator intervention or maintenance.

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- d) The offered system should utilize SMD Display and should be bright enough to be clearly viewed in a properly lit room environment and the brightness of the SMD display should be fully adjustable via software to allow for the display to be dimmed or brightened remotely. It should allow for large viewing angles, maximum-viewing distances, long life expectancy, and do not require back lighting.
- e) The clock system should provide an internal maintenance free rechargeable battery back-up to retain the internal time in the event of a power outage, and should recover from such power outage as a system without intervention.
- f) It should maintain high accuracy of time.
- g) The Slave clocks should be fully configurable and managed remotely through IP via software, and Configuration should be saved to non-volatile memory.

4. **ACCESSORIES**

All the essential accessories that are required to make the system complete Should be included in the offer. Bidder should ensure completeness of the System.

5. **CONTROL AND CONFIGURATION SOFTWARE**

All the necessary control and configuration software (latest version) should be included in the offer.

6. **COMPLIANCE**

A point-by-point compliance statement in respect of all the points laid down in this specification is to be enclosed along with the offer. Offers without the compliance statement will be rejected.

7. **DOCUMENTATION**

One set of the operational and maintenance manuals for equipment should be enclosed along with the bid for technical evaluation. Offers without the manuals for evaluation will be rejected with the sole responsibility of bidder. The successful bidder has to supply one set of operational and maintenance manual along with the each set of equipment.

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8. **PRICE**

Item wise prices of all the items, which constitute the system, must be quoted separately by the bidder along with the offer. Prices of all the optional items should also be included separately.

9. **GUARANTEE**

The equipment should be warranted for at least five years of trouble-free operation from the date of supply. Any failure within the warranty period after the delivery of equipment should be replenished free of cost at site.

10. **SITC**

The system is to be supplied on Supply, Installation, Testing and Commissioning basis at DDK Jaipur. The complete installation of the system including fixing of clocks, laying of cables in proper conduit etc. is the responsibility of the Firm/Supplier. The Supplier will also ensure restoration of site in the event of any alteration /modification.

11. **TIN / PAN / CST etc.**

Firm must provide TIN/PAN/CST Number etc. with their quotation.

12. Repeat order

The Indenter will have full rights to place a repeat order up to 50% of the total quantity on the same terms & conditions if needed. The supplier will be bound to accept the repeat order.

13. Acceptance of offer and other related communication through Telex/Fax/email:-

The Tenderer shall accept the supply order and other related communication through Telex/Fax/email. However regular orders will be dispatched by post also.

14. Earnest Money:- The Tenderer should enclose an earnest money in the form of DD/Banker's Cheque in favour of Drawing & Disbursing Officer, DDK Jaipur (Payable at Jaipur), issued from a scheduled commercial bank, for at least value of 2% of the total cost. The EMD of L1 & L2 firms will be retained till submission of Security deposit by successful firm and other EMDs will be returned back as per office procedure.

15. Payment Terms: - No advance payment is admissible. The bills may be submitted in duplicate after successful/satisfactory installation & testing of work under the supervision of Engineer In Charge.

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16. After Sales Service: - The tenders of only those firms will be accepted/considered, which ensures in writing to provide after sales service for at least Ten Years from the date of completion of work.
17. Security deposit:- The successful firm has to submit a security deposit in the form of Bank Guarantee for a value of 5% of the total material cost ,issued by a scheduled commercial bank, in favour of Drawing & Disbursing Officer, DDK Jaipur (Payable at Jaipur).
18. Arbitration:-
19. **Arbitration:** If any dispute, difference, question or disagreement shall at any time, hereafter arise, between the parties hereto or the respective representatives or assignees in connection with or arising out of the contract or in respect of meaning of specifications, design, drawings, estimates, schedules, annexure, orders, instructions the construction, interpretation of this agreement, application of provisions thereof or anything hereunder contained or arising or as to the rights, liabilities or duties of the said parties hereunder or any matter whatsoever incidental to his contract or otherwise concerning the works of execution or failure to execute the same, whether during the progress or works of stipulated / extended period or before or after the completion or abandonment thereof, it shall be referred to the sole arbitration of the person appointed by the Drawing & Disbursing Officer, O/O DDG (E) DDK Jaipur. There will be no objection to any such appointment that the arbitrator so appointed is an employee of this organization or that he had to deal with the matters to which the contract relates and that in the course of his duties as this organization's employee he had expressed views of all or any of the matters in dispute or difference.

If any arbitrator to whom the matter is referred dies or refuse to act or resigns for any reason from the position of the arbitrator. It shall be lawful for the Drawing & Disbursing Officer, O/O DDG (E) DDK Jaipur to appoint another person to act as arbitrator in the manner aforesaid. Such person shall be entitled to proceed with the reference from the stage at which it was left by his predecessor if both the parties consent to Drawing & Disbursing Officer, O/O DDG (E) DDK Jaipur o this effect failing which the arbitrator will be entitled to proceed de-novo.

It is a further term of this contract that no person other than the person appointed by the Drawing & Disbursing Officer, O/O DDG (E) DDK Jaipur as aforesaid shall act as arbitrator and that, if for any reason that is not possible, the matter is not to be referred to the arbitration at all. The arbitrator(s) may from time to time, with the written consent of all the parties to the contract enlarge the time for making and publishing the award.

It is a term of the contract that the party invoking arbitration shall specify the disputes to be referred to arbitration under the clause. It is also term of the contract that the contractor shall not stop work under this contract and work shall continue as expected to continue whether the arbitration proceedings have commenced or not. The arbitrator shall give reasonable award in respect or each dispute or difference referred to him. The award as aforesaid shall be final and binding on all the parties to the contract in accordance with the law. The venue of the arbitration shall be at Jaipur(India). Subject to as aforesaid, the provision of the Indian Arbitration Act, 1940 and any statutory modifications or re-enactments thereof and rules made there under and for the time being in force shall apply to the arbitration proceedings under this clause.

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Technical Specifications of Master Clock:

S. No.	Specifications	Remarks
1	It should have Microprocessor control system	
2	Wired communication system between Master and Slave clocks	
3	Real Time clock back up for GPS reception	
4	Automatic synchronization of Real Time Clock from GPS Receiver	
5	Automatic intensity control to daylight saving time	
6	Master clock shall also have facility of interface with a PC through Software	
7	Front Panel LED indicators for communication health	
8	One second flash on time display	
9	Mounting	19" Rack mounting
10	Case material	Powder coated galvanized Iron
11	Power Supply	110-240V AC,1Ø
12	Operating Temperature	10°C-70°C
13	Size	1RU or 2RU Maximum

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Technical Specifications of Slave Clocks:

S. No.	Specifications	Values
1.	Display type	LED (Diffused), 7 Segment Display
2.	Display Format	24 Hour with hour, minutes and seconds hh:mm:ss
3.	Display Character size:	≈4" (10.2cm), 6 digit
4.	LED Colour	Red
5.	Chassis	Powder coated, non rusting, welded steel chassis
6.	Power options	PoE (to IEEE 802.3af standard),AC input, IEC power cord DC Input
7.	Accuracy	± within 50 milliseconds of the UTC time
8	No. of sides	Single Sided display
9	Dimensions (LxDxH)	400mmX100mmX150mm Approximately
10	Pixel Size	SMD (Rectangular)
11	Center to Center Pixel Spacing	8-10mm
12	Viewing Angle	Horizontal 100°-110° ,Vertical 40°-45°
13	Viewing Distance	30-35 meters
14	Mounting	Wall mounting
15	Case material	Powder coated galvanized Iron
16	Power Supply	110-240V AC,1Ø or DC supply through network system(optional)
17	Operating Temperature	10°C-70°C

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Annexure

Sr.no.	Description of item	Qty	Rate in Rs	VAT/ST	Total amount in Rs
1	Master Clock with Battery Backup	01			
2	GPS Antenna suitable for above Master Clock, with receiver	01 Set			
3	Slave Clock	12			
4	Network cable	As per requirement In meters			
5	Installation charges	One Job			

Note: - The quoted Master Clock and Slave Clocks shall meet the technical specifications quoted on previous page.

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