



प्रसार भारती / PRASAR BHARATI  
भारत का लोक सेवा प्रसारक / India's Public Service Broadcaster  
आकाशवाणी, दिल्ली/ Akashvani, Delhi



S.O./No.J/198/2025-ENGG - AIR DELHI

Date:02.01.2026

Subject: Publication of Draft Technical Specification for Digital Commentary box at Akashvani, Delhi for seeking Vendors/OEMs feedback and budgetary quote.

1. Draft Technical Specification for SITC of Digital Commentary box at Akashvani, Delhi is being uploaded to invite feedback from the Vendors/OEMs dealing with supply of such equipments. The interested parties are requested to provide comments/feedback on this technical specification.
2. The budgetary price offered for SITC of Digital Commentary box with associated equipment may also be submitted.
3. All these information may be provided by E-mail to ddgenbh@prasarbharati.gov.in and enggstorenbh@gmail.com on or before 12.01.2026.

*Jitender*  
02.01.2026

(JITENDER PRUTHI)  
(Dy. Director General (Engg.))



## Technical Specifications of Professional 3-User IP-Based Commentary Unit

### PART-A : Technical Specifications

#### 1. GENERAL SPECIFICATIONS

- a. The equipment shall be a professional 3-user commentary unit suitable for broadcast, sports, news production, and OB operations.
- b. The device shall operate as a standalone commentary box with integrated mixing, routing, monitoring, and talkback functionality.
- c. The system must support IP-based audio transport using Dante and AES67 for interoperability with modern broadcast audio networks.
- d. Dual redundant network architecture must be available to ensure seamless and uninterrupted operation.
- e. The device shall include local analogue and digital audio I/O to maintain functionality even without network connectivity.
- f. The housing shall be rugged, metal-built, suitable for continuous professional use in field and studio environments.
- g. A Windows-compatible remote-control application must be provided for full configuration, routing, gain adjustment, monitoring, and preset management.
- h. All front-panel controls must be intuitive for ease of operation by commentary staff.

#### 2. TECHNICAL SPECIFICATIONS

##### 2.1 Audio Inputs

- a. The unit shall provide three (03) balanced microphone/line inputs on XLR connectors.
- b. Mic Input Gain Range: -40 dB to +40 dB.
- c. Equivalent Input Noise: 125 dBu (22-20 kHz RMS, 300  $\Omega$  terminated)
- d. Each input must support Mic / Line operating modes and 48V Phantom Power.
- e. Microphone inputs must offer remote-adjustable gain as well as local front-panel gain controls.
- f. Each input must include visual overload/clipping indication.
- g. An integrated speech-optimised compressor/limiter shall be provided for each mic channel.

*[Signature]*  
29/12/2025

*[Signature]*  
29/12/25

*[Signature]*  
29/12/25



## 2.2 Headphone Monitoring

- a. Each of the three commentators shall have a dedicated headphone output.
- b. Each headphone position must support a minimum of 4 individually assignable audio sources.
- c. Headphone outputs must support a wide impedance range of 16–1000  $\Omega$  with automatic handling to maintain consistent output level.
- d. Each commentator shall have Left/Right pan control.
- e. The headphone amplifier shall provide  $\text{THD+N} \leq 0.008\%$  at 1 kHz.

## 2.3 Talkback & User Controls

- a. Each commentator position shall include:
  - o 1 Mic ON/OFF button
  - o 4 programmable Talkback buttons
- b. Buttons must support multiple modes such as momentary, latching, and cough.
- c. A built-in Peak Programme Meter (PPM) must be present for programme level indication.
- d. When adjusting microphone gain, the meter shall automatically display the input being adjusted to enable accurate level setting in live conditions.

## 2.4 Internal Processing & Routing

- a. The device shall include a DSP-based routing and mixing engine.
- b. Internal mixing, routing, headphone feeds, and talkback paths must be configurable via software.
- c. The unit must support preset storage and recall.

## 2.5 Network Audio

- a. The device must support Dante and AES67 audio networking.
- b. Minimum 16 network audio channels (combined inputs and outputs) shall be supported.
- c. The unit must feature Primary and Secondary network ports for full Dante redundancy.
- d. Redundant switching must occur without audible interruption.

*Rudra*  
29/12/2025

*Sy...*  
29/12/25  
2

*1512*  
29/12/25



## 2.6 Local I/O (Non-Network)

- a. The device must provide a minimum of 5 analogue audio I/O ports.
- b. The device must have at least 1 AES3 digital input and 1 AES3 digital output.
- c. The device must include minimum 2 GPI and 2 GPO ports for external control, tally, and signalling.

## 2.7 Remote Control Software

- a. Must be compatible with Windows OS.
- b. Software must support:
  - o Gain control
  - o Routing and headphone mixes
  - o Preset save/recall
  - o Talkback button configuration
  - o GPIO configuration

## 2.8 Power Requirements

1. The unit must support multiple power options, including:
  - o AC mains (100–240V)
  - o PoE or PoE+
  - o External DC input (9–15V)
2. The device shall remain operational using any single power source.
3. Power consumption shall not exceed 25W.

## 3. COMPLIANCE

1. The device should support 24-bit / 48 kHz sampling.
2. The device must be fully compatible with Dante Controller and AES67.

## 4. ACCESSORIES

The following accessories shall be provided with the commentator console:

- Power cable
- Minimum 10 m network cable
- User manual / Quick start guide



**5. POE+ ETHERNET SWITCH**

Each Commentator Box shall be supplied with an 8 Port compatible PoE+ Ethernet switch.

**6. WARRANTY:**

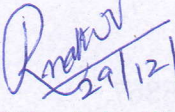
The commentator Box & POE+ switch shall be warranted for three years.

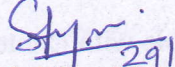
**7. TRAINING :**

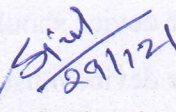
Two day training shall be provided to Akashvani Delhi staff on use of equipment.

**PART-B : Bill of Material**

Sno	Item	Quantity	Reference
1.	Commentary Unit	4 Nos.	Para-1 to 3
2.	POE+ Ethernet Switch	4 Nos.	Para 5
3.	Accessories	4 Set	Para 4
4.	Warranty	3 Years	Para 6
5.	Training	2 days	Para 7

  
29/12/2025  
V Ravindra Nath  
A.E

  
29/12/2025  
Shaktidhar Dhyani  
A.E

  
29/12/25  
Prakash Chandra  
A.E