

**PRASAR BHARATI
DIRECTORATE GENERAL: ALL INDIA RADIO
(PLANNING & DEVELOPMENT UNIT)**

Specification for Supply of 08 Channel Stream Converter

ADD. DIRECTOR GENERAL-E : ADG-E.(NZ & NEZ) AIR&DD
SPECIFICATION NO : TC/SPEC/1/2021/DTH-Exp./IEBR
DATE OF APPROVAL : 29/04/2021
NO OF PAGES : 10
APPROVAL FILE NO. : efile -1/1/2021-SCD/08-SC

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Subject: Specification for Supply of 08 Channel Stream Converter

INTRODUCTION:-

All India Radio generates More than 200 Live Audio Streams of its Radio Channels for listeners. Now, 08 channels among different live streams are to be incorporated into DTH setup for contribution to DD Free Dish through Satellite. The Radio Programmes uplinked on DD Free Dish will be received by listeners through their Receive Terminal of Ku Band. The required 08 Channel Live Audio Stream Converter can generate AES/EBU Digital out-put as per the selection of Live Audio Stream URLs from said channels.

A Block diagram from Stream Converter to Encoder (DHT / Earth Station) at
Page 10.



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SECTION-A

1. BILL OF MATERIAL:

AIR requires following Equipment as per specifications detailed under section A & B. Tenderer shall quote price of each item separately with necessary breakup keeping in view of the following.

- (i) Make and Model of Each Item is to be mentioned.
- (ii) Indenter reserve full right to choose schedule the quantities of Equipments/Service etc. at the time of placing order.
- (iii) All items mentioned under mandatory items will be taken into consideration for ranking purpose.

(B) Present requirement are for Zonal office (NZ & NEZ).

Mandatory Items

S.No.	Item	Quantity	Reference Section
1.	08 Channel Live Stream Converter	2 Nos	B
2.	Manuals	2 sets	A-8

2. Quantity:

Total Quantity is to be as per BOM at Section A -1



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LOCATION FOR SUPPLY :-

Supply at DTH, Doordarshan, Todapur (Through AIR, NBH, Delhi) /
AIR Guwahati

Warranty: 1 Year after Supply

3. SCOPE:

The scope of this tender includes supply of the equipment as per specifications, technical requirements and quantities as detailed in the tender.

4. ELIGIBILITY:

The bidder shall have experience to supply of broadcasting equipment.

5. SCHEDULE OF MATERIAL:-

A comprehensive schedule of material offered shall be attached with the offer as mentioned in Section A-1 in the same format as price bid minus the price. Price against each item as indicated in Section A-1(Bill of Material) shall be mentioned separately item wise.

6. COMPLIANCE

The compliance from Original Equipment Manufacturer (OEM) only will be considered. While complying to the specification, it may be noted that just mentioning 'complied' will not suffice. Compliance should be supported by proper data / documentation and should substantiate the specifications. In compliance statement each specification item complied, reference of compliance documents page no. etc. should be indicated.



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Each page of the datasheet / specification shall be duly signed, with seal, by both the OEM and tenderer. The full name, Postal and Telephone contact details including E-mails address of the person signing on behalf of OEM must be indicated on at least one of the pages. Bids not complying with the above shall be rejected.

7. INSPECTION:

Inspection of the Equipments and Testing of the installed Equipment shall be done as per mutually accepted by AIR and tenderer. The performance certificate along with measurements taken on equipment (duly certified by OEM) is required to be submitted by the tenderer.

After completion of Installation of equipment at the Station, AIR, representative shall issue Test Certificate for supplied equipment. The tenderer shall provide one day training to AIR Engineers on Setting up, Configuration, Operation and Maintenance of the Equipments at each Station.

8. MANUAL/ DOCUMENTATION & TEST CERTIFICATES

Manual: 1 set for station, 1 Set for Directorate & 1 Set for Zonal Office. Each manual shall consist of the following.

- a) Manual for operation, configuration, maintenance of each equipment, sub system, NMS, accessories and complete integrated link along with drawings and wiring diagram for the system. (both hard & soft copies)
- b) Test procedures for parameters measured at subsystem and integrated system levels.



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- c) Test records / reports of all the measurements performed for each equipment and integrated system.

9. DELIVERY PERIOD:-

The Delivery Period for Supply and handing over of complete installation at site shall be One month from the date of issue of PO.

10. GENERAL REQUIREMENTS:

a. Technical / General Details

- i) The Tenderer, in order to enable the indenter to carry out the full Technical Evaluation of the Tender, should give all the details required to ascertain full merits and demerits of the technical offer. Apart from printed technical data/specs of the equipment from the OEM, Block schematic upto the sub-system, interconnection and wiring diagram should be give.
- ii) The tenderer may be asked to demonstrate the equipment to show compliance to AIR's specification at the technical evaluation stage.
- iii) This equipment shall be of state of art technology, capable for 24 x7 operation. It should be incorporated with standard feature of safety and protection.
- iv) The tenderer shall ensure that the equipments offered fully incorporate the standard feature of safety and protection including shielding from EMI/RFI as the receive end of the link will be installed at transmitter site.



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- v) Apart from printed technical data/specs of the equipment, Block schematic upto the sub-system, interconnection and wiring diagram, photograph etc. must also be attached with the offer.
- vi) After Acceptance of the tender, the successful tenderer shall also provide detailed plans of supply of material.
- vii) The successful tenderer shall fully discharge all obligations under the Indian Workmen's Compensation Act as far as it affects the workmen under his employment.
- viii) Maintenance support including availability of spares for baseband equipment is to be ensured for at least 5 years from the date of supply. Details of the same should be mentioned in the tender. If at any stage during next five years the manufacturer proposes to stop production of these equipment and spares, supplier shall intimate AIR in advance to enable AIR to stock the critical items of spares for the life of the equipment
- ix) The tenderer shall mention the source of supply (with proper authorization) for major and critical components/ spares so that no difficulty is encountered later on in procuring the spares for maintenance/repair of these equipment.
- x) The firm/tenderer must ensure repairs within 72 hours at site & in case the equipment cannot be repaired at site then the firm shall bear all the charges including to & fro freight charges to repair the equipment within or outside the country during the warranty period.



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11. ENVIRONMENTAL & POWER SUPPLY

- a) Ambient Temperature:- 0° C to +40°
- b) Relative Humidity : Upto 95% non condensing at 40° C
- c) Safety/Features : Standard features for safety & protection have to be build in/ incorporated for both personnel/equipment.
- d)Power Supply : 230 VAC± 10%, single phase, 48-52 Hz.



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SECTION -B

TECHNICAL SPECIFICATIONS

08 Channel AUDIO STREAM CONVERTER:

S.No.	Parameter	Specification
1.	Audio Input	Live Audio from Internet Stream
2.	Encoding rate	Independent 8 Audio Stream from data rate 32 kbps to 256 kbps
3.	IP Stream support	MPEG2,HLS, UDP & RTMP
4.	Interface	2 x RJ45
5.	Digital Audio Output	8 AES/EBU Output, 110 Ohms, Balanced
6.	Mode	Stereo
7.	Sampling frequency	48 KHz
8.	Audio Frequency Range	100 Hz to 15 KHz,±0.5dB
9.	Distortion	<0.1 % from 100Hz to 15KHz
10.	Signal to noise ratio	≥ 80 dB
11.	System Management	100/1000BaseT Ethernet Management Interface
12.	Rack Mounting Unit	19"
13.	Input power	230 VAC normal, 50 Hz
14.	Operating temperature	0 to + 40° C

INTER-CONNECTING CABLES, CONNECTORS AND ACCESSORIES

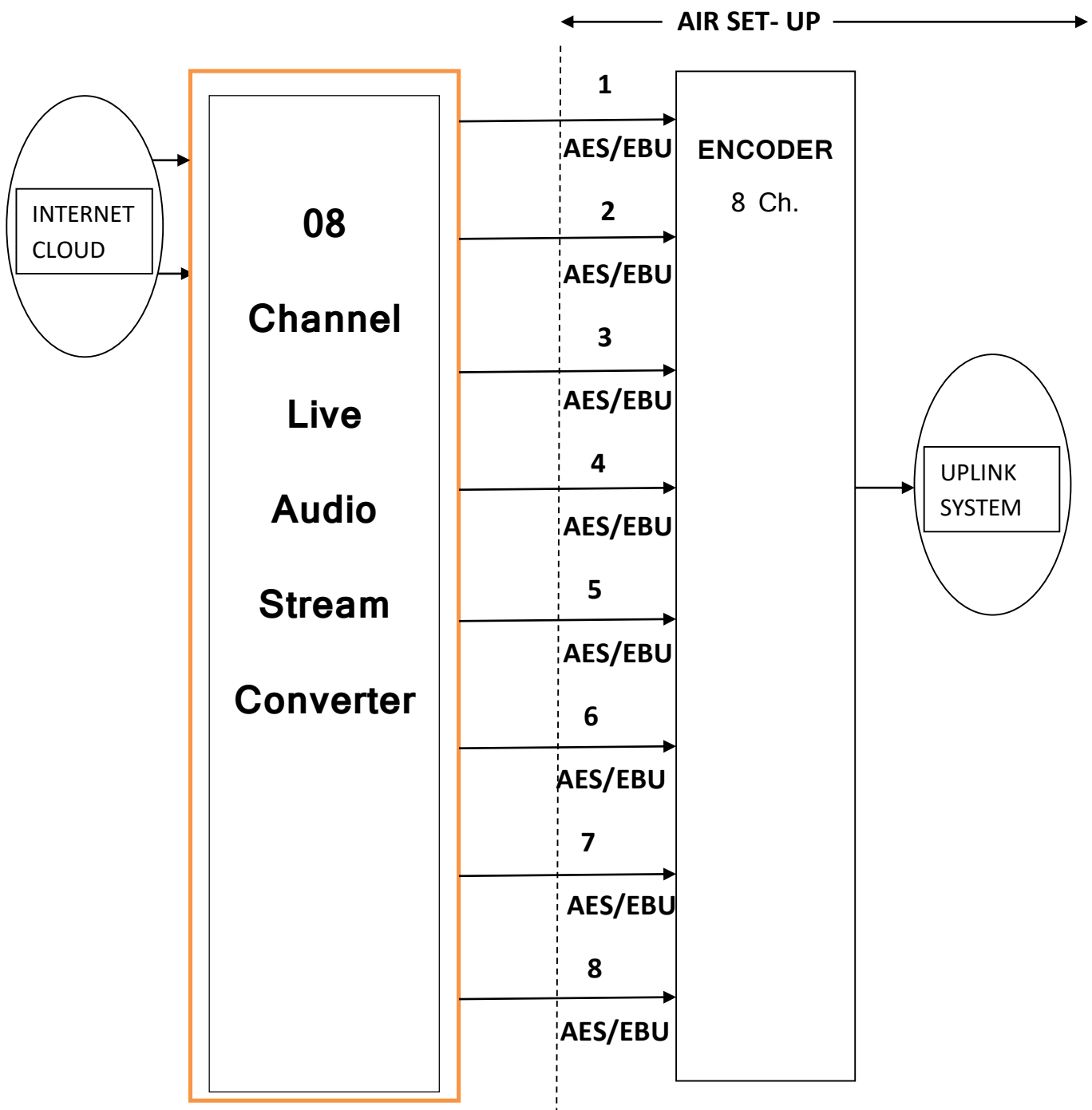
Interconnecting Ethernet & Audio cables, power supply cables, connectors, and other accessories required for the monitoring system shall be included in the tender.



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Annexure

Block diagram from Stream Converter to Encoder (DHT/Earth Station)



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