

## TENDER DATA

<b>Project title:</b>	Appointment of a Service Provider to Supply and Deliver, Audio Distribution Amplifiers and 3RU Modular Frames with Monitoring Functionality to Report into NMS System
<b>Bid no:</b>	SENT-031-2022-23

### 1. BACKGROUND

Sentech is a state-owned company and is the largest broadcasting signal distributor in South Africa. Sentech is a licensed Electronic Communications Network Service provider in South Africa. It currently operates many telecommunication networks for Satellite, Television, Radio, Internet and more. As such, Sentech is a global enabler of broadcasting and digital content delivery.

Sentech owns and operates a number of national terrestrial television and radio transmitter networks as a Public Broadcaster, Community and Commercial Broadcaster. Sentech Operates Business Radio and TV services on Ku-band Satellite platforms. Sentech therefore requires Audio Distribution Amplifiers for Contribution and Distribution feeds at our Network Management Centre Technical room to link to existing and future linking solutions. Sentech's current Audio Distribution network parameter configuration and capacity allocation are catering for 250 audio contribution/distribution amplifiers in total.

Sentech is looking for a service provider to provide audio distribution amplifiers with 3RU frames and power supplies for all existing networks at the Network Management Centre Technical room for all radio services, which is this tender's primary focus point.

The requirement to monitor and control by adjusting levels to perform to Sentech Commissioning Specifications for Audio services at National Management Centre networks is as follows:

1. Remote monitoring of Audio presence for Audio Distribution amplifiers on a 24/7 basis into Sentech NMS system.
2. Remote configuration.

### 2. SUBMISSION OF BIDS and CLOSING

This Bid closes at the stipulated date and time as stated in SBD 1 Notice and Invitation to Bid. Bids must be submitted by hand to the Bid Administrator at SENTECH, Octave Road, Radiokop Ext 3, Honeydew, Johannesburg.

Bidders that choose to submit their bid documents before the closing date and time may do so during working hours only (08:30-15:30).

It is the Bidder's responsibility to ensure that their bid submissions reach the Bid Administrator before the bid closing time as no late submissions will be accepted.

Telegraphic, telephonic, telex, facsimile, e-mail and late Bids will not be accepted. Proposals may be opened in public. Bidders will be advised of the outcome by letter, facsimile or e-mail.

This is a two-envelope system for Bid Evaluation. Bidders must submit their proposal and all supporting documentation in a sealed envelope, clearly marked as follows:

**Envelope One** "Original Technical Proposal" and one "Copy of Technical Proposal" together with a soft copy in PDF format of an electronic medium e.g. USB etc. The soft copy will consist of a single PDF

document containing the complete response. The envelope must contain all information and documents relating to the Bid. (Refer to list of returnable documents).

**No Financial Information must be included in Envelope 1.**

**Envelope Two** “Original Financial Proposal” (Contract Date and Pricing schedule/schedule of rates as applicable) together with 1 copy of “Financial Proposal” together with a soft copy in PDF format of an electronic medium e.g. Compact Disk (CD), USB etc. The soft copy will consist of a single PDF document containing the complete Financial Proposal.

Bidders are required to place the sealed **Envelope 1** together **with** the sealed **Envelope 2** into one sealed envelope or container. The sealed envelope or container must be marked with the following information:

- **For Attention**
- **HEAD OF SUPPLY CHAIN MANAGEMENT**
- **BID REFERENCE NO:** ##
- **TECHNICAL AND FINANCIAL PROPOSALS**
- **INSERT CLOSING DATE AND TIME**
- **BIDDER’S NAME AND ADDRESS**

Bidders that combine their Technical Proposal with the Financial Proposal (or any financial information) will be automatically disqualified and not be evaluated further.

The financial proposal will only be opened and evaluated should the technical proposal be found to be responsive, being that the technical proposal has met the minimum technical evaluation criteria that are set out in the Bid Documents.

The Bidders shall insert a table of contents and bind (ring bind or similar method) the proposal documents and verify the page numbers, as Sentech will not accept any liability with regard to any disputes arising from pages that are missing or duplicated in the aforementioned documents.

Bidders are required to complete and sign all the returnable documentation (refer to list of returnable documents) and initial all pages, drawings and brochures which are included in the reply as Sentech will not accept any liability with regard to any disputes arising from pages that are missing or duplicated in the aforementioned documents.

Late submissions will not be considered.

### **3. SIGN AND INITIAL**

Bidders are required to complete and sign the Bid Forms where required and initial the bottom of all pages, drawings and brochures which are included in the submission as Sentech will not accept any liability with regard to any disputes arising from pages that are missing or duplicated in the aforementioned documents.

Only original signatures will be accepted.

### **4. COMPLETION OF BID DOCUMENTS**

Bidders must ensure that they complete all sections of the Bid Documents as per the requirements in the Bid.

Bidders must use only the Bid documents provided by Sentech. Photocopying of the Bid document is permitted however Bidders must not retype or redraft the Bid documents.

### **5. COSTS OF PREPARING THE BID SUBMISSION**

Bidders shall bare all costs associated with the preparation and submission of the proposals. Sentech shall under no circumstances be held responsible or liable for any costs incurred during the bidding process.

## 6. ADMINISTRATIVE RESPONSIVENESS CRITERIA

Bidders are required to ensure that they meet all the Administrative Responsiveness Criteria.

## 7. BBBEE CODES AT SENTECH

Sentech complies with the codes of good practice as prescribed by the DTI, to advance Broad Based Black Economic Empowerment.

## 8. Pre-qualification criteria

With the objective of advancing designated groups, the Bidding condition applicable to this Bid is **\_ BBBEE Level 1 to 4\_** (Specify targeted companies (EME / QSE) or minimum B-BBEE status level of contributor) as contemplated in PPPFA regulations, 2017 sub regulation 4(1). A Bidder must provide documentary evidence to support their compliance with this prequalification criteria. A Bidder that fails to meet any pre-qualifying criteria stipulated in this Bid document is an unacceptable Bid.

## 9. Subcontracting as a condition of Bid

The successful Bidder must subcontract a minimum of   N/A   % of the value of the contract to   N/A   (specify the designated group targeted) as contemplated in the PPPFA regulations, 2017 sub regulation 9(1);

## 10. Transformation Plan

A transformation plan is a record of activities an entity intends to undertake to improve its BBBEE Level through Ownership, Management and Control; Skills Development; Enterprise and Supplier Development and Socio-Economic Development.

Sentech reserves the right to request a BBBEE transformation plan with clearly defined timelines and milestones if the recommended Bidder does not meet Sentech's transformation goals. These milestones must be achieved over the term of the contract. This transformation plan must be submitted within 10 working days from the written request, failing which Sentech reserves the right to withdraw its appointment of the preferred recommended Bidder.

## 11. LOCAL PRODUCTION AND CONTENT

In the case of designated sectors, where in the award of Bids, local production and content is of critical importance, such Bids will contain a specific bidding condition that only locally produced goods, services or works or locally manufactured goods, with a stipulated minimum threshold for local production and content will be considered.

Does this requirement fall under any designated sector as prescribed by the DTI?	N/A	N/A
If yes, specify the sector	N/A	N/A
Specify minimum threshold applicable	N/A	N/A

\*Bidders must fill in the SBD6.2 for Local Content and Production

## 12. EVALUATION CRITERIA

The evaluation criteria are stipulated in 18 below. It is the Bidder's responsibility to ensure that it has responded to the evaluation criteria. Failure to meet the evaluation criteria will result in the Bidder not being evaluated further. Bidders must ensure that they have included all supporting documentation required to support their response to the Bid.

## 13. BRIEFING SESSION

Should there be a compulsory briefing session for this Bid, Bidders must ensure that they attend the briefing session and sign the attendance register, as non-attendance or failure to sign the attendance register will automatically disqualify a Bidder from submitting a proposal for this Bid.

All questions raised by Bidders post the briefing session will be consolidated and shared with all Bidders at least seven (7) calendar days prior to closing.

#### 14. CLARIFICATION

Enquiries related to Bid documents may be addressed to the Bid Administrator and Supply Chain Official as stated in SBD 1 Notice and Invitation to Bid.

#### 15. BID EVALUATION METHOD

This Bid will be evaluated as described in the table below.

<p><b>A Two-Envelope system will be followed for Technical and Price offer</b></p>	<p><b>1. Stage 1 – Administrative Responsiveness Evaluation</b> All the Technical Proposals will be evaluated against the <b>Administrative responsiveness requirements</b> as set out in the list of returnable documents.</p> <p><b>2. Stage 2 –Technical Evaluation</b> All proposals that qualify based on administrative responsiveness requirements will be evaluated against the <b>Mandatory Evaluation Criteria</b> in order to qualify for further evaluation.</p> <p><b>Functional Criteria:</b>  Proposals that qualify in the Mandatory Criteria will be evaluated against the Functional Criteria as set out in Section 18.2 below. The functional capability and capacity of the <b>proposed solutions should be evaluated by the bidders</b>. Bidders would therefore be required to conduct the functional tests on their proposed solutions and <b>provide the functional test results</b> as attachments. Proposals must <b>score 85 points or more out of a total of 125</b> points allocated to be considered.</p> <p><b>3. Stage 3 – Price and Preference</b> Financial Proposals for Qualifying Bidders will be opened and evaluated. Bidder's financial offers and BEE certificates will be ranked according to price and preference points from the highest number of points to the lowest.</p>
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#### 16. ADMINISTRATIVE RESPONSIVENESS REQUIREMENTS

To be administratively responsive, Bidders must ensure that they meet all the below mentioned criteria. Bidders that do not meet all the below mentioned criteria may not qualify to be awarded the Bid. Sentech reserves its rights in respect of the below criteria.

- Complete and return all documentation stipulated in the LIST OF RETURNABLE DOCUMENTS.
- All correspondence must be in English.
- Bidders must fill in all sections of this document (where applicable).
- **BLACK INK** must be used when completing the Bid documents.
- Bidders must use only the Bid documents provided by Sentech. Photocopying of the Bid document is permitted however Bidders must not retype or redraft the Bid documents.
- All corrections must be initialled. The use of corrective fluid is strictly prohibited.
- Bidders are required to fill in and sign the Bid Forms and initial all pages, drawings and brochures which are included in the reply as Sentech will not accept any liability with regard to any disputes arising from pages that are missing or duplicated in the aforementioned documents.
- Bidders must complete an attendance register at each compulsory site meeting attended.
- Appointment of a Bidder will be subject to signing, declaration and submission of SBD 1, 3.1, 3.2, 3.3, 4, 5, 6.1, 6.2 8, and 9 depending on applicability.

- Complete and sign the Contract Data.
- Should this be a 2 envelope or 2 stage system, Bidders MUST separate the technical proposal from their financial proposal. The technical and financial proposals must be placed in two separate sealed envelopes.

#### 16.1 AUTOMATIC DISQUALIFICATION

Sentech reserves the right to automatically disqualify Bidders from being awarded this Bid. The following will lead to automatic disqualification:

- Failure to submit a financial proposal, if required.
- The Bidder is or has been involved in any act of corruption or fraud or bribery or collusion or attempt to influence any employee of Sentech to award this Bid or any other Bid to it.

#### 17. TECHNICAL RESPONSIVENESS COMPLIANCE

The Technical Evaluation will encompass evaluation of:

- Mandatory Criteria
- Functional / Technical Criteria

#### 18. TECHNICAL EVALUATION CRITERIA

##### 18.1 Mandatory Eligibility Criteria The following criteria are mandatory to ALL BIDDERS:

Item No.	Mandatory Eligibility Criteria	Attach evidence and provide reference page number in your proposal
1	<b>Frame:</b> 3RU Frame Unit should be mountable in 19" Rack	Specification or datasheet stating the compliance with the requirements.
2	<b>Frame:</b> Frame with all modules should have monitoring solutions and must support at least SNMP v1 (Simple Network Management Protocol version 1) or any of the more recent SNMP versions or software with GPI contacts that can report into Sentech ANT NMS system of any service failure feeding via each audio module in the frame. <b>Requirement will be for monitoring of each Audio distribution amplifier to indicate presence of audio service of cards.</b>	Specification or datasheet stating the compliance with the requirements.
3	Frame should have dual hot-swappable power supplies (PSUs) and fans.	Specification or datasheet stating the compliance with the requirements
4	<b>Frame:</b> Multiple Audio formats can be fitted in a single frame. The number of cards/modules per frame should be able to hold a minimum of 12 and a maximum of 20 modules.	Specification or datasheet stating the compliance with the requirements.

Item No.	Mandatory Eligibility Criteria	Attach evidence and provide reference page number in your proposal
5	<b>Frame:</b> Frames should be able to be populated with analogue audio as well as AES cards/Modules via extender cards and can be fitted within 3 RU frame.	Specification or datasheet stating the compliance with the requirements.
6	<b>Frame:</b> Frame should allow for easy configuration and level adjustments on front panel or remotely via the Ethernet.	Specification or datasheet stating the compliance with the requirements.
7	<b>Frame:</b> Different Modules for the air-cooled frame should be hot swappable.	Specification or datasheet stating the compliance with the requirements.
8	<b>Frame:</b> Redundant Ethernet connection on frame.	Specification or datasheet stating the compliance with the requirements.
9	Solutions must comply with the following:  <b>Frame:</b>  All frames should be able to communicate via ethernet the monitoring status of each channel on a module in a frame if service is present or not to an ethernet switch been supplied connect to all frames been monitored and NMS to connect to ethernet switch.	Specification or datasheet stating the compliance with the requirements.
10	<b>Frame:</b> The software (Operating System, Web Application etc.) which are running on the solutions should be supported for bug fixes, security patches, updates etc.	Specification or datasheet stating the compliance with the requirements.
11	<b>Frame:</b> Rear panels and extender cards [For repair and maintenance task as required on Module] for Audio distribution cards to be provided as per frame design.	Specification or datasheet stating the compliance with the requirements.
12	<b>Frame:</b> Power Input Range. (220-240 Volts)	Specification or datasheet stating the compliance with the requirements.
13	<b>Frame:</b> Operating Temperature Range (35-45 Degrees)	Specification or datasheet stating the compliance with the requirements.
14	<b>Audio Distribution Amplifier:</b> 250 Audio distribution amplifiers to be supplied.	Specification or datasheet stating the compliance with the requirements.

Item No.	Mandatory Eligibility Criteria	Attach evidence and provide reference page number in your proposal
15	<b>Audio Distribution Amplifier:</b> analogue audio DA that can be configured for single (mono) or dual channel (stereo) operation.	Specification or datasheet stating the compliance with the requirements.
16	<b>Audio Distribution Amplifier:</b> Single or dual analogue audio input(s).	Specification or datasheet stating the compliance with the requirements.
17	<b>Audio Distribution Amplifier:</b> Single channel 8-output or dual channel (stereo) 4-output is the minimum requirement.	Specification or datasheet stating the compliance with the requirements.
18	<b>Audio Distribution Amplifier:</b> Balanced inputs and outputs	Specification or datasheet stating the compliance with the requirements.
19	<b>Audio Distribution Amplifier:</b> A wide range of level gain control is possible and controlled from the card edge, (-8 to +32 dB)	Specification or datasheet stating the compliance with the requirements.
20	<b>Audio Distribution Amplifier:</b> A signal status is also available indicating the presence of the input signal(s) Status LED and remote reporting of presence and overload on card.	Specification or datasheet stating the compliance with the requirements.
21	<b>Audio Distribution Amplifier:</b>  Solutions must comply with the following or better.  Input - Balanced  Signal: - analogue  audio Impedance: .....> 20 k $\Omega$  Common mode rejection: .....> 50 Db	Specification or datasheet stating the compliance with the requirements.

Item No.	Mandatory Eligibility Criteria	Attach evidence and provide reference page number in your proposal
22	<b>Audio Distribution Amplifier:</b>  Solutions must comply with the following or better.  Output. - Balanced  Signal: .....balanced analogue  Audio Impedance: .....< 50 $\Omega$  Solutions must comply with the following or better.	Specification or datasheet stating the compliance with the requirements.
23	<b>Audio Distribution Amplifier:</b>  Solutions must comply with the following or better:  Processing performance  Gain: ..... -8 to +32 dB Max.  Level: ..... +25 dBu  SNR: ..... < -95 dBu  20 Hz to 20 kHz unweighted  Distortion: ..... < -85 dB (20 Hz to 20 kHz) @ +23 dBu  Freq. response: ..... $\pm 0.2$ dB (20 Hz to 20 kHz)  Crosstalk:..... 100 Db	Specification or datasheet stating the compliance with the requirements.
24	<b>Audio Distribution Amplifier:</b>  Module or software made available for the GPI contacts to be converted to SNMP if frame only has GPI contacts on audio amplifier or frame as output, for not having SNMP protocol output for Sentech NMS system.	Specification or datasheet stating the compliance with the requirements.

Item No.	Mandatory Eligibility Criteria	Attach evidence and provide reference page number in your proposal
25	<b>Audio Distribution Amplifier:</b>  Solutions must comply with the following signal delay and Signal Threshold.  NO SIGNAL DELAY menu - Signal absence is declared when the signal level is lower than the signal threshold during the selected period, which can be adjusted from 0 to 300 s. The default value is set to 60 s.  SIGNAL THRESHOLD menu - The presence signal threshold can be adjusted from -48 to -24 dBu by 6 dBu steps. The default value is -36 dBu  OVERLOAD THRESHOLD menu - The overload signal threshold can be set from -9 to +24 dBu. The default value is +24 dBu	Specification or datasheet stating the compliance with the requirements.
26	<b>Audio Distribution Amplifier:</b> Remote monitoring control	Specification or datasheet stating the compliance with the requirements.

**NOTE: Bidders that do not comply with all the above criteria will not be evaluated further.**

## 18.2 Functional Criteria

Item No.	Functionality Criteria	Maximum allowable Points	Points allocation	Proof Required
1	Company experience in years	10	Less than 5 years = 1;  More than 5 years = 5;  More than 10 years = 10	<i>Please include a mix of project references from the oldest projects to newest projects</i>

Item No.	Functionality Criteria	Maximum allowable Points	Points allocation	Proof Required
2	Company combined audio amplifier installations.	10	Less than 1 installation over the last 15 years = 1  Between 2 & 3 installations over the last 15 years = 5  More than 4 installations over the last 15 years = 10	Attach project reference sheet with details of installed installation per client/customer
3	Audio test level result, to be done at 1 kHz at a test level of +6dB, results to be provided in table format for both channels.	10	Between 0.2 & 0.5dB = 5  Better than 0.19dB = 10	Test results, Specification or Datasheet stating the compliance with the requirements.
4	Frequency sweep 20Hz to 20kHz (British Telecom spec EPS84) at default test value of -10dB, to provide a frequency response graph displaying result from 20 Hz to 20kHz for each channel.	10	Above 2dB = 1  Between 0.5 & 1 dB = 3  Between 0.2 & 0.49 dB = 5  Better than 0.19 dB = 10	Test results, Specification or Datasheet stating the compliance with the requirements.
5	Crosstalk 40, 100, 315, 1kHz, 6.3kHz, 10kHz at a test level of +6dB  Results to be provided in a table format.	10	Between -30 & -35 dB = 5  Between -36 & -39 dB = 7  Better than -40 dB = 10	Test results, Specification or Datasheet stating the compliance with the requirements.
6	Distortion test to be done at 100Hz and a level of +9dB, 1kHz to be done at -10dB, 1kHz to be done at +9dB. Results to be provided in table form.	10	Above 1.5 % = 1  Between 0.5 & 1.49% = 5  Better than 0.49% = 10	Test results, Specification or Datasheet stating the compliance with the requirements.
7	Noise RMS Test to be done at A weighted and unweighted and results to be provided in table format.	10	Between -49 & -50dB = 1  Between -51 & -53dB = 5  Better than -54dB = 10	Test results, Specification or Datasheet stating the compliance with the requirements.

Item No.	Functionality Criteria	Maximum allowable Points	Points allocation	Proof Required
8	Phase response results to be done at 40Hz, 100Hz, 1kHz, 6.3kHz, 10kHz, 15kHz (Mean) at 0dB and results to be provided in table format.	10	Between 2.1 & 3 deg = 3  Between 1 & 2 deg = 5  Less than 1 deg = 10	Test results, Specification or Datasheet stating the compliance with the requirements.
9	Frame should have dual hot-swappable power supplies (PSUs) and fans. Remove one power supply (hot swappable) and test if audio distribution amplifiers remain functional with no service lost.	10	If service fails with one power supply removed and result is "no audio" = 0  If service remains on with one power supply removed and result is "audio on" = 10	Test results, Specification or Datasheet stating the compliance with the requirements.
10	Audio distribution amplifiers mounted in the frame should be hot swappable and test time to restore service, also the testing of an audio distribution amplifier added to an extender card for fault tracing while extender out of frame.	10	If no = 0  If yes = 8  If yes and can be connected to extender card = 10	Test results, Specification or Datasheet stating the compliance with the requirements.
11	Preferable with Phoenix screw green terminal socket on Rear panels.	5	If Phoenix no = 0  If Phoenix connectors yes = 5	
12	Frame with all modules should have monitoring solutions and must support at least SNMP v1 (Simple Network Management Protocol version 1) or any of the more recent SNMP versions or software with GPI contacts that can report into Sentech NMS system of audio distribution amplifier service failure or no input feed from customers.	10	No option for reporting into NMS system = 0  Software with GPI contacts that can report into NMS system = 5  SNMP V1 software to report into NMS system = 7  Latest SNMP software to report into NMS system = 10	

Item No.	Functionality Criteria	Maximum allowable Points	Points allocation	Proof Required
13	Requirement will be for monitoring of each Audio distribution amplifier to indicate presence of audio service of card in frame. This needs to be tested and provide alarms that are generated based mainly on threshold level set and duration [Signal absence is declared when the level is lower than the signal threshold -40dBu S during the selected period the service is off for default value of 60 seconds.]	10	<p>No option for monitoring of audio cards on frame = 0</p> <p>Basic monitoring with led only and threshold levels that can be adjusted for signal absence for 60 seconds at -40dBu S on each audio amplifiers in frame = 5</p> <p>Advanced monitoring of audio amplifiers with threshold levels and timing that can be adjusted and reported into NMS = 10</p>	Test results, Specification or Datasheet stating the compliance with the requirements.
	<b>Total</b>	125 Points		

**Table 1: Functional Criteria**

*Total minimum qualifying functional score is 85 points.*

### 19. Evaluation of Price and Preference

This Bid will be evaluated on a points system based on weighted average score for Price and Preference as per Preferential Procurement Framework Act of 2000 (Act 5 of 2000).

### 20. Preference Point allocation – 80/20

Price / Preference	Weighting percentage
<b>Preference:</b>	<b>20%</b>
<b>Price:</b>	<b>80 %</b>
<b>Total must equal:</b>	<b>100%</b>

80/20-point scoring system			
Preference: 20 Points		Price: 80 points	
Other: B-BBEE Status Level Contributor			
B-BBEE Level	Number of Points	Price:	100 % (of 80)
1	20	Quality / Functionality:	0 % (of 80)
2	18		
3	14		
4	12		
5	8		
6	6		
7	4		
8	2		
Non-Compliant contributor	0		
		Total must equal:	<b>100% (of 80)</b>

### 21. Price Calculation 80/20

The following formula will be used to calculate the points for price.

$$P_s = 80 \left[ \frac{1 - (P_t - P_{min})}{P_{min}} \right]$$

Where:

$P_s$	=	Points scored for price of bid under consideration
$P_t$	=	Rand value of bid under consideration
$P_{min}$	=	Rand value of lowest acceptable bid

**22. Declaration of Authority**

The undersigned, who warrants that he / she is duly authorised to do so on behalf of the enterprise, confirms that the contents of this Bid Data is understood and all requirements will be adhered to.

Name of Bidder	Signature	Date	Designation

# **TABLE 1: REFERENCES**

**Please complete the customer reference table and relevant Contact telephone number and attach reference letters.**

Customer		Service Provided	Contact Person	Contact no.	tel.	Contractual commencement date	Contractual completion date
1							
2							
3							
4							

Customer		Service Provided	Contact Person	Contact no.	tel.	Contractual commencement date	Contractual completion date
5							

Name of Tenderer	Signature	Date