



CONTRACT DATA

A contract between

**SENTECH, Sender Technology Park, Radiokop, Octave Road, Honeydew,
and**

**Appointment of a Service Providers for the Supply and Installation of Data
Centre IT Network Racks at NASREC Facility for a Period of Three (3) years.**

Bid Number: SENT/058/2024-25

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PART C1: AGREEMENTS AND CONTRACT DATA –

Form of Offer and Acceptance Offer

Sentech, identified in the acceptance signature block, has solicited offers to enter in to a contract for the Supply and installation of network racks at Nasrec data centre.

The Bidder, identified in the offer signature block, has examined the documents listed in the Tender Data and addenda thereto as listed in the Bid schedules, and by submitting this offer has accepted the conditions of the Bid.

By the representative of the Bidder, deemed to be duly authorized, signing this part of this form of offer and acceptance, the Bidder offers to perform all of the obligations and liabilities of the Bidder under the Contract including compliance with all its terms and conditions according to their true intent and meaning for an amount to be determined in accordance with the conditions of contract identified in the Contract Data.

THE OFFERED TOTAL OF THE PRICES INCLUSIVE OF APPLICABLE TAXES; (in the Bids applicable currency).

_____ (amount in words);

_____ (amount in figures)

NB: The Prices quoted above is the total Bid offer inclusive of all applicable taxes for the Contract duration. The price must be carried over from the price breakdown / schedule of rates provided in the Bid document.

This offer may be accepted by Sentech by signing the acceptance part of this form of offer and acceptance and returning one copy of this document to the Bidder before the end of the period of validity stated in the Tender Data, whereupon the Bidder becomes the party named as the Bidder in the conditions of contract identified in the Contract Data.

Bidder's Signature(s) _____

Signed by the Bidder at _____ on this the _____ day of _____ 20_____

Name(s) _____

Capacity _____

Address (Domicillium) _____



Acceptance

By signing this part of this form of offer and acceptance, Sentech accepts the Bidder's offer. In consideration thereof, Sentech shall pay the Bidder the amount due in accordance with the conditions of contract identified in the Contract Data. Acceptance of the Bidder's offer by the signature by Sentech shall form an agreement between Sentech and the Bidder upon the terms and conditions contained in this agreement and in the contract that is the subject of this agreement.

The terms of the contract, are contained in:

Part C1 Agreements and contract data, (which includes this agreement)

Part C2 Pricing data

Part C3 Scope of work.

and drawings and documents or parts thereof, which may be incorporated by reference into Parts C1 to C3 above.

Deviations from and amendments to the documents listed in the Tender Data and any addenda thereto as listed in the Bid schedules as well as any changes to the terms of the offer agreed by the Bidder and the employer during this process of offer and acceptance, are contained in the schedule of deviations attached to and forming part of this agreement. No amendments to or deviations from the said documents are valid unless contained in this schedule of deviations.

Failure to fulfil any of these obligations in accordance with those terms shall constitute a repudiation of this agreement.

Sentech's Signature(s) _____

Signed by Sentech at _____ **on this the** _____ **day of** _____ **20** _____

Name(s) _____

Designation _____

SENTECH SOC LIMITED,
Sender Technology Park
Octave Road, Radiokop
Honeydew
Johannesburg

Date _____

Upon acceptance by Sentech of the Bidder's offer, a contract will come into existence.



SCHEDULE OF DEVIATIONS

Notes:

- 1 The extent of deviations from the Bid documents issued by the Sentech before the Bid closing date is limited to those permitted in terms of the conditions of Bid.
- 2 A Bidder's covering letter shall not be included in the final contract document. Should any matter in such letter, which constitutes a deviation as aforesaid, become the subject of agreements reached during the process of offer and acceptance, the outcome of such agreement shall be recorded here.
- 3 Any other matter arises from the process of offer and acceptance either as a confirmation, clarification or change to the Bid documents and which it is agreed by the Parties becomes an obligation of the contract shall also be recorded here.
- 4 Any change or addition to the Bid documents arising from the above agreements and recorded here shall also be incorporated into the Contract.

1. **Subject** _____

Details _____

2. **Subject** _____

Details _____

3. **Subject** _____

Details _____

4. **Subject** _____

Details _____

By the duly authorised representatives signing this schedule of deviations, Sentech and the Bidder agree to and accept the foregoing schedule of deviations as the only deviations from and amendments to the documents listed in the Tender Data and addenda thereto as listed in the Bid schedules, as well as any confirmation, clarification or changes to the terms of the offer agreed by the Bidder and Sentech during this process of offer and acceptance.

It is expressly agreed that no other matter whether in writing, oral communication or implied during the period between the issue of the Bid documents and the receipt by the Bidder of a completed signed copy of this Agreement shall have any meaning or effect in the contract between the parties arising from this agreement.



Contract Data

Part one - Data provided by Sentech given in all contracts

1. The Purchaser is

SENTECH SOC LIMITED,

Sender Technology Park
Octave Road
Radiokop
Honeydew
Johannesburg

2. General

The National Treasury General Conditions of Contract for goods and services (NT GCC, 2010) or General Conditions of Contract for Works (2015) as issued by National Treasury and the Construction Industry Development Board of the Republic of South Africa apply, respectively.

The goods are specified in the Scope of Work. The Special Conditions of Contract (SCC) are stipulated in the Tender Data.

3. Goods information:

The *Goods Information* is in the document called "Scope of Work" and in the documents and drawings referred to by it.

4. Terms of Delivery

The *Terms of Delivery* are contained in the General Conditions of Contract (GCC) and Special Conditions of Contract.

5. Language

The *language* of this contract is English.

6. Governing Laws and Jurisdiction

The Contract shall be governed by and interpreted according to the laws of the Republic of South Africa.

In the event of a conflict between or inconsistency in the laws applicable in the various provinces of the Republic of South Africa, the law as applied and interpreted in the Gauteng Province shall prevail.

The parties irrevocably submit to the exclusive jurisdiction of the South Gauteng High Court, Johannesburg in respect of any action or proceeding arising from this Bid.

This Bid and all contracts emanating there from will be subject to the General Conditions of Contract issued in accordance with Treasury Regulation 16A published in terms of the Public Finance Management Act, 1999 (Act 1 of 1999). The Special Conditions of Contract are supplementary to that of the General Conditions of Contract. Where, however, the SCC are in conflict with the GCC, the SCC shall prevail.

7. Sub-contracting post award

A Bidder awarded a Bid may only enter into a subcontracting arrangement with the approval of Sentech. The successful bidder may not subcontract more than 25% of the value of the contract to any other enterprise that does not have an equal or higher B-BBEE status level of contributor than the Bidder concerned, unless the contract is subcontracted to an EME that has the capability and ability to execute the subcontract.

8. 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 shall 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.

9. Warranty

The warranty period is 24 months repair / replace PDUs and probes, 20 years for structured cabling months after Delivery.

10. Payment

The method and conditions of payment are contained in the Tender Data, GCC and SCC.

The interest on late payment is 0 % per complete week of delay.

11. Rate of Exchange, Currency Fluctuations and Currency

All bid prices quoted shall be in South African Rands (ZAR). If prices are in a foreign currency, the rate of exchange quoted shall remain fixed throughout the term of the agreement. Bidders will bear the risk of and all cost/s associated with currency fluctuations, therefore Bidders shall be required to manage such risk in their bid price.

12. General - Prices

All prices shall be quoted in ZAR.

Unless written approval has been obtained from Sentech, no adjustment in contract prices will be made.

Applications for price adjustment must be accompanied by documentary evidence in support of any adjustment.

13. Price Negotiations

Sentech reserves the right to negotiate market related prices and discounts. If market-related prices are not agreed to, Sentech reserves the right to cancel the Bid.

14. Liabilities indemnities and insurance

Insurance is required from the Bidder in respect of delivery and transportation where applicable.

15. Disputes

Should any dispute, disagreement or claim arise between the parties ("the dispute") concerning this Agreement, the parties shall try to resolve the dispute by negotiation. This entails one party inviting the other party to meet and attempt to resolve the dispute within fourteen (14) days from the date of the written invitation.

If the dispute has not been resolved by such negotiation as referred to in this clause above, the Parties shall submit the dispute to the Arbitration Foundation of Southern Africa ("AFSA") for administered mediation, upon the terms set out by the AFSA secretariat.

Failing such resolution, the dispute shall be resolved by arbitration in accordance with the rules and procedures of AFSA by an arbitrator appointed by AFSA. Where the arbitration route is followed, the dispute must be adjudicated within Johannesburg in the English language and finally resolved in accordance with the rules of AFSA, by an arbitrator or arbitrators appointed by that Foundation.

The provisions of this clause shall not preclude any party from obtaining relief from a Court of competent jurisdiction. To this extent, the Parties hereby consent to the jurisdiction of the South Gauteng High Court, Johannesburg, South Africa. The provisions of this clause shall continue to be binding on the Parties, notwithstanding any termination or cancellation of this Agreement.

16. Termination

Sentech shall have the right, at its sole and exclusive discretion, upon written notice to the Bidder, to terminate this Agreement, in whole or in part should the Bidder fail to perform any of its obligations or deliver any deliverable timeously or should Sentech not be satisfied with the quality of any service/s in terms of this Agreement, to the satisfaction of Sentech.



Sentech shall furthermore have the right, as a result of such termination, to appoint a third party to perform the obligations of the Bidder in terms of the Agreement and the Bidder indemnifies Sentech against all costs incurred by Sentech in appointing such third party to fulfil the obligations of the Bidder.

Sentech shall have the right, at its sole and exclusive discretion, to terminate this Agreement, at any time, upon 30 (thirty) days' written notice to the Bidder.

17. Contract Term

This contract will be a once-off until the completion of the project change to 3years.

18. Supplier Due Diligence

Sentech reserves the right to conduct supplier due diligence at any time pre, during and post the contract period. This may include announced or unannounced site visits.

19. Cession

Sentech shall be entitled to cede, delegate, assign, charge, transfer or otherwise dispose of this Agreement or any rights or obligations therein in whole or in part, upon prior written notice to the Bidder.

20. Monitoring and Evaluation

The service delivery and performance of the Bidder will be monitored and evaluated by Sentech at all relevant times. In the event that the Bidder defaults in any manner or form, Sentech reserves the right to blacklist the Bidder on the National Treasury Database of Prohibited Suppliers and Tender Defaulters, and to take such further steps as may be warranted in the circumstances which steps shall be determined at Sentech's sole and exclusive discretion.

21. Protection of Personal Information Act No. 4 of 2013 ("POPI")

Sentech is POPI compliant, and the Bidder will ensure that it conducts itself within the prescripts of the prescribed legislation.

Should Sentech need to collect Personal Information by law or in consideration of the Tender, and the Bidder fail to provide the Personal Information when requested, Sentech may refuse to accept the relevant services from the Bidder, and the Bidder will be notified in this event.

By agreeing to the terms of this Agreement, the Bidder voluntarily authorizes Sentech to process its' personal information (including its' name, credit card & banking details, physical address, telephone numbers, reference letters & any other information it has provided to Sentech) for purposes of Tendering and contracting.

The Bidder consents to the transfer of such personal information to third parties.

This consent is effective immediately and will endure until the relationship between the Bidder and Sentech has been terminated.

The Bidder indemnifies and holds Sentech harmless against any loss, whether direct or indirect, arising out of the failure to process any of its' personal data in accordance with applicable laws.

22. Delay damages

As stipulated in the Special Conditions of Contract.



Sentech's Representative is

Name: Mr. Zunaid Adams

Address: **SENTECH SOC LIMITED**

Sender Technology Park

Octave Road

Radiokop

Honeydew

2040

Johannesburg

Tel No. 0114714400

Sentech's Representative is the Executive: Legal and Regulatory.

Contract Data

Part two - Data provided by the Bidder

Statements given in all contracts

The Bidder is:

Name _____ Address _____

a company / close corporation / partnership duly incorporated in accordance with the laws of the Republic of South Africa.



PART C2: PRICING DATA

Price List

NO	ITEM	DESCRIPTION	QTY	UNIT RICE	TOTAL
		RACKS BOM Table			
		DCIM BOM Table		R	R
		AIR Containment BOM Table		R	R
		Electrical BOM Table		R	R
		Structured Network Cabling BOM Table		R	R
				Sub Total	R
				Vat	R
				Total Including Vat	R



PART C3: SCOPE OF WORK
SENTECH’S GOODS INFORMATION

XXXXX

1. TECHNICAL REQUIREMENTS

1.1. Glossary of Terms

Abbreviations	Descriptions
DC	Data Centre
PDU	Power Distribution Units
EPS	Electrical Power Systems
DCIM	Data Center Infrastructure Management
DCMDA	Data Centre Main Distribution Access zone
HVAC	Heating, Ventilation, and Air Conditioning
CRAC	Computer Room Air Conditioning

2. INTRODUCTION

Sentech is currently upgrading the NASREC Data centre to Tier III and intends to appoint a service provide to supply and install 29 data centre network racks, The supplier will be required to install and run data cables between the racks for easy termination of service providers. Sentech has standardised to a large extent on Schneider Electric in electrical and the legacy build project Nasrec. Bidders are requested to consider this standardisation and or offer equivalent. The winning bidder will be required to provide the safety file.

3. SCOPE OF WORK

Sentech requires Twenty-nine (29) Data Centre (DC) network racks to be supplied and installed at its NASREC Facility. The Preferred service provider will supply the data centre network racks and implement and commission the solution with the oversight of Sentech representatives. The critical components of the solution are:

- Data Centre Network Rack Design and Specifications.
- Air containment solution.
- Power Reticulation and Power Distribution Units (Racks).
- Data Center Infrastructure Management System (DCIM).
- Data Cabling Management system.

Note: Handover as-build documents to include all schematic drawings, elements components for serial numbered warranty confirmation. Certificates of compliance where required electrical. Structured cable and fibre conformance test

Commented [NB1]: As-build

3.1. Data Centre Network Racks Design and Specifications

- The supplier must provide a rack space design plan and Layout diagrams for the solution. The diagrams include dimensions, a three-dimensional view, cable management, containment integration with HVAC (with electronic Visio file) and access control, and PDUs. The DC infrastructural integration and distribution must comply with TIA-942 standards.



- Physical Rack view diagrams must show the front and rear view of DCMDA, ITHDA populated with the proposed cable management systems patch panels and management equipment (with electronic Visio files).
- The Racks are for IT Equipment that complies with EIA-310-E Standards to ensure mounting of 19" equipment and RoHS compliance.
- The Supplier shall warrant the Racks and rack accessories for five years to be free from defects in materials and workmanship from the date of purchase.
- The supplier to provide top of the rack cable management rails.
- Equipment racks should be 19" 42u configured 600mm Wide X 1200mm Deep.
- Customer co-location racks must have two-compartment enclosures with dual access control front and rear.
- Five (5) racks must be divide in half to cater for in rack colocation
- Each compartment of the collocation rack must have independent cable and power management and distribution units.
- The racks must cater for front to rear airflow with the front door perforated/honeycomb and the split rear Door rear door fully enclose.
- Two shelves per rack.
- Four (4) way Fans fitted at the bottom.
- The space between the front of the racks must be a minimum of 1.2 meters (cold aisle)
- For rear access, the minimum space will be 0.95 meter minimum from the wall to the Racks.
- All racks must be supplied with normal doors (not stable) front and rear, tool-less removal, and must be reversible to mount on either side.
- The vertical mounting rails shall be easily adjustable to allow different mounting depths, marked on both sides in 1U increments.
- Rack side panels must be half-height one at the bottom and another one at the top .
- Grounding points should be provided on the Rack frame to bond each unit to the building ground externally. All enclosure components are bonded directly to the Rack frame.
- Racks must have separate enclosure openings for data and power in the roof (top of the racks).
- The tolerance weight load per Rack is 1300kg.
- The rack colour must be white, and powder coated, the interior components of the racks are not electroplated, and zinc whiskers are minimized near active equipment.
- Blanking panels shall be provided.
- Roof cable management and trays shall be provided.
- Vertical in-rack cable management and dual PDU mounts must be included.
- All racks must have unique key access locks front and back; the key system must provide a master override.

3.2. Air containment solution (aisle):

- The scope of work is for the design, supply, deliver, installation and testing of the cold aisle air containment for the network racks.
- The bidders must provide clear design of air containment as per the floor plan provided.
- Rack space design plan and Layout diagrams for the proposed solution must include the diagram, containment solution dimensions, and lighting. (Use Visio software or any approved CAD software).

- Build a cold aisle air containment around the network racks.
- The principle is to have a total separation between the hot air and cold air airflows for the HVAC efficiency improvements in energy usage and therefore reduction in energy cost.
- There must be two entrances on the opposite sides for easy access.
- The doors must open manually and close automatically and shall be of a double hinged swing type. The direction shall be left-hand and right-hand outswing.
- The entrance doors of the data centre cold aisle air containment shall be integrated to the existing biometric and card system.
- Containment must be done through enclosed cabinet panels, top and end of row structures.
- The roof ceiling of the containment must open automatically when signal from fire system is received so that the fire extinguishing gases can enter the aisle.
- Cameras to be installed in between rows, preferred on the opposite sides of the aisle. (The scope to be done by others). And DCIM integration 12 cameras
- The solution needs to be integrated with the HVAC system.
- The temperature sensor, humidity sensor and smoke sensor are to be integrated within the contained space and intergrade to the DCIM system.

3.3. Power Reticulation and Power Distribution Units (DPU)

- Each rack must be fitted with two power distribution units at the back of the rack on both sides.
- For the five (5) half divided racks the PDU's must run from the top to the centre of the of the racks and the second one from the centre to the bottom of the racks on both sides.
- The facility has dual power reticulation cabling paths up to the DB for n+1; as such, the in-rack PDUs should make two circuits available so that redundant power supplies can be integrated seamlessly.
- Power will be integrated with the existing facility supply and connected to the DB provided in the room (2 x 500kVA protected UPS).
- vertical mount, Ethernet, USB, serial management/sensor connection ports.
- All Racks will be connected to the protected DB power supply with 5kW per Rack, 2x 32amp breakers per Rack, and dual feeds
- The PDUs must be smart:
 - power rated at 8kVA
 - Must be feature rich and be able to do power metering, switching and remote managed for efficient energy management, cost allocation and etc.
 - Must comply with relevant safety standards to ensure safe operation e.g. isolation breakers.
 - 24 way vertical mountable smart PDUs on both side of the rack for A and B power feeds.
 - C13 IEC PDU Plug, connectors
 - Power rating, 16A, 230 V power socket
- Provide 1.5 meter Straight IEC C13 Socket to Straight IEC C14 Plug Power Cord x 100
- Provide 1.5 meter IEC C13 Socket to IEC C15 power cord x 100
- All electrical components / reticulation must conform SABS approved SANS IEC 60320
 - Earthing and bonded busbars must be provided
 - Norsk

3.4. Data Center Infrastructure Management (DCIM) Systems

The supplier is required to provide data center infrastructure management system that will provide a centralised platform for monitoring and controlling various aspects of data centre's operations to managed and optimize the physical infrastructure.

- The supplier to provide three years support and maintenance
- The system must provide physical infrastructure monitoring that will include racks, power distribution (PDUs), integrating CRAC system.
- DC monitoring and alerts will be provided locally and remotely to view power usage and environmental protection systems such as cooling, fire, flood detection, humidity and airflow.
- The system must be able to manage the lifecycle of data center assets, including inventory, maintenance and disposal.
- Interactive real-time reports and historical usage.
- 1x in-band IP-based access monitoring and alerts (HTTP, SNMP traps) must be configured. And integrated with Enterprise NMS and NOC operations
- 1x out-of-band GSM module configured for SMS alerts.
- The Environment Protection System (EPS) rack controller/monitor system must be deployed in the DCMDA Rack.
- Cabling points to all EPS probes are included and patched via DCMDA.
- 1x Temp, RH probe per racks (29).
- 2x rope flood probe per row
- Provide 200 licenses perpetual and subscription price comparison model and all associated cost per model .
- Provide a proposal on both is cloud or on prem solution.

Table 1: DCIM and Probes

PATCH LEAD SPECIFICATIONS			
NO	ITEM DESCRIPTION		QUANTITY REQUIRED
	Cameras	IP HD	12
	Temperature	PUE	29
	Flood	Below raised floor	2
	Humidity	PUE	30
	Appliance	Standard extension for 3 years	1
	DCIM Software per 200 nodes (CRAC,PDU,PUE, UPS, STG, Operations, Changes, Config)	Once off, perpetual	200
	Software Maintenance, Installation Configuration and updates	5 years, indicate standard and extension	1
	GSM Module	Out of band Alerts SMS	1
	Optional	Cloud instance	

3.5. Data Center Structured Data Network Cabling And Management system:



The supplier is required to provide Fiber and copper (ethernet) cable termination from the Data Center main distribution racks to adjacent and horizontal network racks.

- Two Rack per aisle reserved for a DC Main Distribution Zone (DCMDA) housing cable the management system, the patch connectivity between rooms (Telkom and Satellite)
- The design incorporated existing cable trays and raceways that will be used as best as possible and integrated with the racks for top-of-rack cable ingress and egress.
- They will be two aisle as indicate on the floor plan.
- 42u rack will be reserved for the DCIM and patch panels in an end-of-row (EOR) deployment.
- Each aisle must have one distribution rack installed with Fiber and copper patch panels.
- Aisle must linked through their distribution racks.
- The main distribution zone must be linked with service provide termination (Telecom) room and the adjacent old Data Center as shown on the floor.
- Each rack must be installed that 24 port cat patch panel
- All cable must be well labelled and numbered and the scheme must part of the handed over documents.
- All patch panels are modular and unit-replaceable.
- All brush panels are included
- The data cabling infrastructure deployed must be Kroner certified with a 20-year warranty.

3.6. Fiber Specification:

- Each rack must be installed with two 24 core Fiber LC patch panel.
- 8 core single mode spliced for cross connect between racks.
- 8 core multi-mode om4 spliced for cross connect between racks.
- Each rack the A side of the patch panel must be installed in to the Main Distribution and Side-B into the rack.
- Low Smoke Zero Halogen (LSZH) rated.
- Supply Fiber patch lead as per the table below.

Table 1: Single mode patch lead

PATCH LEAD SPECIFICATIONS			
NO	ITEM DESCRIPTION	LENGTH IN METERS	QUANTITY REQUIRED
1.	Single Mode LC-LC	1m	30
2.	Single Mode LC-LC	2m	30
3.	Single Mode LC-LC	3m	30
4.	Single Mode LC-LC	5m	30

Table 2: Multi-mode patch lead

PATCH LEAD SPECIFICATIONS			
NO	ITEM DESCRIPTION	LENGTH IN METERS	QUANTITY REQUIRED
1.	Multi-Mode LC-LC, OM4	1m	30
2.	Multi-Mode LC-LC, OM4	2m	30
3.	Multi-Mode LC-LC, OM4	3m	30
4.	Single Mode LC-LC, OM4	5m	30

3.7. Ethernet Specification:

- Each rack must be installed with 24 port CAT.6A patch panel.
- 4 port patched per racks
- Supply Cat 6a patch lead as per the table below.
- CAT6A krone certifications

CAT 6A PATCH LEAD SPECIFICATIONS			
NO	ITEM DESCRIPTION	LENGTH IN METERS	QUANTITY REQUIRED
1.	CAT6A patch Lead	1m	30
2.	CAT6A patch Lead	2m	30
3.	CAT6A patch Lead	3m	30
4.	CAT6A patch Lead	5m	30

3.8. OHS REQUIREMENTS

The client Sentech will issue at a later stage a safety file plan/ requirement (file spec) or specification to be followed by the contractor as an annexure to develop the file for evaluation by the client's OHS department. This document will be compiled by contractor upon their appointment.