



RFQ / TENDER

Tender No: KGG-13025

Vendor No: 11001386

BOARD LIST
BOARD LIST
TRANSNET FREIGHT RAIL
PROCUREMENT DEPARTMENT
2000

Purchaser : E. Mundalamo
Telephone : 011 584 1142
Fax Number:

Please quote reference:
D33/6000600375

Deliver to:
TFR Head Office
Supply Chain Services
2000 Johannesburg

Closing Date : 03.03.2014
Validity Date : 03.06.2014
RFQ No : 6000600375

Ihr Zeichen KGG-13025

FOR TECHNICAL ENQUIRIES WITH REGARDS TO THIS RFQ YOU MAY CONTACT
MR GERT VAN RENSBURG, 083 440 4228

THE RFQ DOCUMENTS ARE OBTAINABLE FROM 26/02/2014 TILL 28/02/2014
THE OFFICE OF TRANSNET FREIGHT
RAIL, TENDER ADVISE CENTRE GROUND FLOOR, INYANDA HOUSE 1, 21 WELLINGTON
ROAD, PARKTOWN. DURING OFFICE HOURS FROM 08:00 TO 15:00 AND RFQ
DOCUMENTS IS FOR FREE.

1. RETURN OF QUOTATION/S:

1.1 QUOTATION/S MUST BE SUBMITTED PUNCTUALLY ON THE CLOSING DATE 03/03/2014 AT 10:00 AND LATE QUOTATIONS WILL NOT BE CONSIDERED.

1.2 IF POSTED/HAND DELIVERY

THE SECRETARY
TRANSNET ACQUISITION COUNCIL
INYANDA HOUSE 1
21 WELLINGTON ROAD
PARKTOWN
JOHANNESBURG
2001

1.3 IF E-MAILED

thuli.mathebula@transnet.net

2. CONDITIONS:

2.2 ANY PURCHASE ORDER PLACED AS A RESULT OF YOUR QUOTATION WILL BE SUBJECT TO THE GENERAL

DATE: SIGNATURE OF TENDERER(S):

CONTACT PERSON: TEL No:

RFQ / TENDER

Tender No: KGG-13025 **Page**
Date : 25.02.2014 **2**

BOARD LIST
TRANSNET FREIGHT RAIL
PROCUREMENT DEPARTMENT

CONDITIONS OF PROMAT QUOTATIONS, CONTRACT AND ORDERS, FORM US7 (REVISED 15 APRIL 1993), TENDER PROCEDURES, FORM CSS N0.5 (REVISED 15 APRIL 1993) AND CONDITIONS MENTIONED HEREIN.

- 2.3 TENDERERS MAY OFFER AN EARLIER VALIDITY DATE, BUT THEIR QUOTATION MAY, IN THAT EVENT, BE DISREGARDED FOR THIS REASON.
- 2.4 TENDERERS ARE REQUIRED TO OFFER ONLY FIRM PRICES. PRICES SUBJECT TO REVIEW IN TERMS OF CLAUSE 33(1) OF FORM US7 WILL ONLY BE CONSIDERED SHOULD THE DELIVERY PERIOD REQUIRED EXCEED 6 MONTHS.
- 2.5 BEST DELIVERY TIME MUST BE OFFERED.
- 2.6 DISCOUNT (TRADE DISCOUNT)/CASH DISCOUNT (CONDITONAL DISCOUNT)/ VALUE ADDED TAX (VAT) MUST BE SHOWN SEPARATELY.
- 2.7 TRANSNET RESERVES THE RIGHT TO NEGOTIATE PRICES AND COMMERCIAL ASPECTS AFTER THE CLOSING DATE OF THE QUOTATION.

"PREVIEW COPY ONLY"

DATE:

SIGNATURE OF TENDERER(S):

RFQ / TENDER

Tender No: KGG-13025 Page
Date : 25.02.2014 3

BOARD LIST
TRANSNET FREIGHT RAIL
PROCUREMENT DEPARTMENT

SCHEDULE OF REQUIREMENTS

TENDERERS SHOULD INSERT THEIR PRICE/S UNDER THE APPROPRIATE HEADINGS HEREUNDER.

IN THIS REGARD THE TENDERER'S ATTENTION IS DIRECTED TO PARAGRAPH 2 OF THE TENDER PROCEDURES OF FORM CSS NO.5.

NB. TENDERERS OFFERING GOODS FROM IMPORTED SUPPLIES MUST SUBMIT THEIR PRICES ON THE DELIVERY BASIS APPEARING UNDER COLUMN (C) OF THIS SCHEDULE OF REQUIREMENTS.

3. EVALUATION CRITERIA

3.1 COMPLIANCE TO SPECIFICATION

3.2 COMPETITIVE PRICING AND B-BBEE

Prices in South African currency
including the cost of packing and packing
materials for delivery as follows:

A:	B:	C:
DIRECT by rail to destination point (Railage a/c)	DIRECT by other means to destination point	EX OVERSEAS WORKS

Item	Qty	Material	Description			
00010	1	V24 Data Tester	<table style="width: 100%; border: none;"> <tr> <td style="width: 33%;">R..... Each</td> <td style="width: 33%;">R..... Each</td> <td style="width: 33%;">R..... Each</td> </tr> </table>	R..... Each	R..... Each	R..... Each
R..... Each	R..... Each	R..... Each				
Delivery Date: 15.04.2014						
FULL DETAILS OF DESCRIPTION						
V24 Data Tester						

DATE:

SIGNATURE OF TENDERER(S):

**DIGITAL TRANSMISSION
ANALYSER**

**SPECIFICATION FOR HANDHELD,
LIGHTWEIGHT, STM-1, ETHERNET AND
2 Mbit/s ANALYSER WITH
DATACOMMUNICATION
FOR FIELD USE**

**SPC-00576
OCTOBER 2008**

Revision 2.00

NON-DISCLOSURE OF INFORMATION

Information contained in this document is proprietary in nature and/or protected by copyright.
Please obtain written permission from the Author prior to reproducing this document, in whole or in part.

TABLE OF CONTENTS

I	DOCUMENT AUTHORISATION	3
II	DISTRIBUTION	3
III	DOCUMENT CHANGE HISTORY.....	3
IV	CHANGES SINCE LAST REVISION	3
V	ABBREVIATIONS, ACRONYMS AND DEFINITIONS.....	4
VI	RELEVANT DOCUMENTATION.....	4
1.	SCOPE.....	5
2.	COMPLIANCE.....	5
3.	TRAINING	5
4.	REPAIR, AFTER SALES SERVICES AND SPARES.....	6
5.	TECHNICAL INFORMATION.....	7
6.	TECHNICAL REQUIREMENTS	7
6.1	Overview.....	7
6.2	Interfaces	7
6.3	Frequency Counter.....	10
6.4	Accessories.....	10
7.	CONSTRUCTIONAL FEATURES.....	10
8.	GUARANTEE	10
9.	PACKING, LABELLING AND DELIVERY	11
10.	HANDBOOKS	11

"PREVIEW COPY ONLY"

DOCUMENT AUTHORISATION

FUNCTION	NAME	TITLE & DIVISION	SIGNATURE	DATE
Compiled by :	Garnet Nel	Technologist	<i>Signed</i> <i>BG Nel</i>	11-Nov-08
Reviewed by :	Errol Pagel	Senior Eng	<i>Signed</i> <i>E Pagel</i>	11-Nov-08
Reviewed by :	Eric van der Merve	Transmission	<i>Signed</i> <i>E van der Merwe</i>	11-Nov-08
Authorised by :	Mike Nuttall	Transmission	<i>Signed</i> <i>M Nuttall</i>	11-Nov-08

DISTRIBUTION

Once updated, a copy of the latest revision will be published in the document management system in use. E-mail to this effect will be sent to the relevant personnel or heads of department.

DOCUMENT CHANGE HISTORY

ISSUE NO.	DATE ISSUED	ISSUED BY	HISTORY DESCRIPTION
1.00	January 2002	BG Nel	New document
2.00	October 2008	BG Nel	Updated specification: a) Spec name change. b) Add clause 6.2.7 G.707 (STM-1) c) Add clause 6.2.8 IEEE 802.3 (10/100BT) Ethernet

CHANGES SINCE LAST REVISION

CLAUSE	DESCRIPTION
All	Converted to ISO format

ABBREVIATIONS, ACRONYMS AND DEFINITIONS

ABBREVIATIONS AND ACRONYMS	DESCRIPTION
AC	Alternating Current
BNC	Bayonet Neill Concelman
DCE	Data Communications Equipment
DTE	Data Terminal Equipment
FAS	Frame Alignment Signal
ITU-T	International Telecommunication Union Telecom. Standard Sector
MFAS	Multi-Frame Alignment Signal
NFAS	Not-Frame Alignment Signal
DEFINITIONS	DESCRIPTION
None	

RELEVANT DOCUMENTATION**APPLICABLE**

DOCUMENT NO.	DESCRIPTION
None	

RELEVANT

DOCUMENT NO.	DESCRIPTION
SPC-00003	Training of TFR Personnel on New Equipment

1. SCOPE

- 1.1 This specification covers the requirements for a portable digital transmission analyser with datacommunication capabilities for field service use, designed to ITU-T recommendations to perform at speeds from 50 bits/second to **155 Mbits/s**.
- 1.2 The instrument shall feature a built-in keyboard for entry of set-up parameters.

2. COMPLIANCE

Tenderers must have a unit available for evaluation if it is requested.

- 2.1 Tenderers must indicate clause-by-clause how their offer complies or does not comply with this specification.
- 2.1.1 A broad statement to the effect that the equipment is in accordance with this specification is not acceptable.
- 2.2 Tenderers must submit their main offers in terms of this specification.
- 2.3 Offers, which include minor deviations from this specification, will be considered at the discretion of Transnet Freight Rail. The tenderer must provide detail of such minor deviation(s) from this specification.
- 2.4 Tenderers may submit alternative offers for equipment considered by them to be equal to or better than that called for in this specification.
- 2.4.1 Such alternative offers must be accompanied by a comprehensive explanation supporting the tenderer's claim regarding the suitability of the equipment.
- 2.4.2 Such alternative offers will be considered at the discretion of Transnet Freight Rail.
- 2.5 Failure to comply with the above requirements may preclude a tender from consideration.

3. TRAINING

- 3.1 An integrated program of formal classroom training and practical hands-on instructions shall be provided to TFR's personnel on the operation and maintenance of the equipment.
- 3.2 **Training Objectives**
- 3.2.1 The training program is intended to accomplish the following fundamental objectives :

3.2.1.1 To perform all operational functions provided by the offered equipment :

- (a) To enable TFR's personnel to operate the equipment properly, and to perform all measurement and testing tasks required to maintain the equipment in proper operating conditions.
- (b) To enable Transnet Freight Rail's personnel to undertake any reconfiguration or software upgrades in the future.

3.2.1.2 Training program

- (a) To achieve these objectives the Tenderer shall propose a training program, preferably at Transnet Freight Rail's premises.
- (b) All training courses shall be conducted in the English language.
- (c) Training material and manuals shall be provided to the trainees.
- (d) The Tenderer shall submit detail regarding the intended training program, indicating the duration of each training module.

3.2.1.3 The cost of training shall include the travelling and subsistence allowances of the instructor.

3.3 Tenderers must quote separately for Training, which must be conducted at the regional installation depots.

3.3.1 Cost per session.

3.3.2 Number of sessions.

3.3.3 Number of candidates that can be accommodated per session.

3.4 Training must comply with Transnet Freight Rail specification No. SPC-0003.

4. REPAIR, AFTER SALES SERVICES AND SPARES

4.1 The Tenderer shall provide repair services for any faulty equipment at the request of Transnet Freight Rail.

4.2 The Tenderer shall state the expected turn-around time for repairing of faulty equipment.

4.3 The Tenderer shall make available to TFR at no cost, swop-out units in the case of units being faulty during the warranty period. Tenders shall indicate the spares and swop-out units that are kept in South Africa.

- 4.4 The Tender shall provide full maintenance support in case of faults occurring up to the expiry of the guarantee period. The cost of this support shall be included in the price of the equipment and software offered.
- 4.5 After sales support expertise shall be available to assist in the following tasks (details of the support offered shall be given in the offer) :
- 4.5.1 Hardware and software upgrades.
 - 4.5.2 Handling of trouble reports.
 - 4.5.3 Requirements for new functions within the equipment.
 - 4.5.4 Assistance to the operation and maintenance staff in unusual fault situations.
- 4.6 The Tenderer shall indicate whether a remote diagnostics facility from the supplier's premises via a dial-up modem facility is available for the software-based equipment.

5. TECHNICAL INFORMATION

Tenderers must submit detailed descriptive literature, including illustrations and specifications accompanied by sufficient information to demonstrate how the equipment offered will meet the requirements of TFR.

6. TECHNICAL REQUIREMENTS

6.1 Overview

- 6.1.1 The instrument shall generate test data/patterns for transmission according to ITU-T specifications O151, O152 and O153.
- 6.1.2 The offered unit must do error measurements compliant to ITU-T standards specified in G.821, G.826, G.829 and M.2100.
- 6.1.3 The results must be extractable to a printer and Windows based software.
- 6.1.4 Power requirements. The unit must be powered from 220/250 volt AC via a battery charger/eliminator. The charger/eliminator must be supplied as part of the unit. Internal batteries shall be rechargeable batteries.

6.2 Interfaces

- 6.2.1 V24/V28 (RS232) : The unit must be able to :
 - 6.2.1.1 Accommodate synchronous and asynchronous protocols.

- 6.2.1.2 Be configured as a DTE or a DCE.
- 6.2.1.3 Configure the clock to house an external clock.
- 6.2.1.4 Support all control lines and force control lines to wanted conditions.
- 6.2.1.5 Support a minimum test rate of 38,4 kbps for asynchronous and 64 kbps for synchronous protocol.
- 6.2.1.6 Display status of interface on a panel.
- 6.2.2 V.11/X.21 : The unit must be able to :
 - 6.2.2.1 Configure this interface to be a DCE or a DTE.
 - 6.2.2.2 Support all control lines as specified in ITU-T V.11.
 - 6.2.2.3 Support a test rates from 300 bps to $n \times 64$ kbps where $n=1$ to 32.
 - 6.2.2.4 Display status of interface on a panel.
- 6.2.3 G.703 (2 Mbit/s) : The unit shall provide 2,048 Mbits/s 75 ohm BNC coaxial and 120 ohm connectors terminating on 4 mm sockets. The clock must be configurable as internal (variable from 1,5 Mbit/s to 2,5 Mbit/s), recovered/received clock or external clock.
 - 6.2.3.1 The unit must house two G.703; 2 Mbit/s interfaces and shall be capable of drop and insert functionalities.
 - 6.2.3.2 The status of the interface must be displayed.
- 6.2.4 G.703 (2 Mbit/s) FRAMED : This interface must comply to the following :
 - 6.2.4.1 Terminate on a 75 ohm BNC coaxial connector and a 120 ohm 4 mm socket.
 - 6.2.4.2 The interface shall support framing of the 2 Mbit/s according to ITU-T G.704.
 - 6.2.4.3 The unit must allow for the customising of the FAS, MFAS and NFAS words of the 2 Mbit/s frame.
 - 6.2.4.4 The signalling content of all the timeslots for both 2 Mbit/s interfaces must be displayed simultaneously on a single display.
 - 6.2.4.5 The 2 Mbit/s interface must be configurable for a terminated, bridge and monitor measurement.

- 6.2.4.6 Cyclic Redundancy Check (CRC-4) must be configurable to be on or off.
- 6.2.4.7 The unit must support the measurement of slips.
- 6.2.4.8 The frequency of the incoming 2 Mbit/s stream must be displayed in real time. The maximum frequency variation must be shown as a maximum upper frequency and a maximum lower frequency.
- 6.2.5 The front panel set-up shall be stored in a non-volatile memory. The instrument shall return to its setting as it were before a mains interruption upon the restoration of the mains power.
- 6.2.6 Measuring periods. It shall be possible to select various measuring periods. The minimum requirements are: 1 minute, 15 minutes, 1 hour, 24 hours, and continuous measurements.
- 6.2.7 G.707 (STM-1): The unit shall provide the following features:
 - 6.2.7.1 Electrical and optical interfaces (1310nm & 1550nm)
 - 6.2.7.2 Selectable payload mappings, including: VC-4 bulk, VC-3 bulk, 34 Mbit/s and VC-12 bulk
 - 6.2.7.3 Monitor and manipulation of the following SDH overhead bytes: J0, E1, F1, D1-D12, K1, K2, S1, G1, J1, C2, F2, F3, K3, N1, N2
 - 6.2.7.4 Insertion of the following alarms & errors: RS-BIP (B1), MS-BIP (B2), HP-BIP (B3), MS-REI, HP-REI, LP-BIP-2, LP-REI, Bit Error, Code Error, LOF, OOF, MS-AIS, MS-RDI, AU-AIS, AU-LOP, LP-UNEQ.
 - 6.2.7.5 The unit must support measurement and generation of positive and negative high-order (AU) and low-order (TU) path pointer movements.
 - 6.2.7.6 The test equipment must provide the user with a means of measuring service disruption in order to evaluate Automatic Protection Switching
- 6.2.8 IEEE 802.3 (10/100BT) Ethernet:
 - 6.2.8.1 Generate from 0.01% to 100% of full line rate traffic on 10/100BT network interfaces.
 - 6.2.8.2 Perform RFC2544 automated measurement

- 6.2.8.3 Accurately measures Ethernet throughput on Layer 1, 2 and 3 networks with VLAN support.
- 6.2.8.4 Selectable frame sizes from 64 to 1518 bytes.
- 6.2.8.5 Results to include: Throughput rate (with minimum 5kbps resolution), Frame Loss counter, Out of Sequence Frame counter, Inter-frame gap variation measurement (frame jitter).
- 6.2.8.6 Upgradeable to 100% full line rate 1000BT and GigE optical network interface.

6.3 Frequency Counter

The instrument shall be capable of measuring the transmit and receive clock rates for all PDH & SDH interfaces.

6.4 Accessories

- 6.4.1 The instrument shall be supplied as standard with a mains lead and Operator's handbook.
- 6.4.2 An optional soft-case shall be available to carry the main unit with space for interface cables.

7. CONSTRUCTIONAL FEATURES

- 7.1 The unit must be designed for easy maintenance with all components easily accessible.
- 7.2 The functions of all controls and switches must be clearly and permanently marked in English.
- 7.3 The unit must be compact and the tenderers must state the principal dimensions and mass of the equipment offered.

8. GUARANTEE

- 8.1 The tenderer shall guarantee that the equipment will give satisfactory service for a period of one year from the date of delivery to the various destinations indicated in the tender and to replace or repair with a minimum of delay and free of charge any components that may fail during this period, fair wear and tear excluded.
- 8.2 The tenderer shall guarantee the availability of spares and full repair facilities for a minimum period of four years after date of delivery.

9. PACKING, LABELLING AND DELIVERY

9.1 The successful tenderer must deliver the equipment to the :

Chief Executive
Room _____

9.2 The equipment must be well packed in shock-absorbing material in sturdy containers.

9.3 All packages shall be clearly labelled with the name and address of the consignee and contract numbers.

9.4 Tenderers must state clearly delivery terms, as this may be an important factor in the adjudication of the tender.

10. HANDBOOKS

10.1 One complete copy of the operating manuals shall be supplied with each unit.

10.2 The service, calibration and repair manuals shall be tendered as optional equipment.

END OF DOCUMENT