

4G LTE

**TENDER
NOTICE**




Title: Supply of Fiber Optic Cable (FOC) materials

Tender No: KTRN/ADMIN/S/2020/11/001

Date of issue: **11th November 2020**

Date of bid submission: **30th November 2020**

Kigali Heights, 7th Floor
Procurement@ktrn.rw | www.ktrn.rw

Also Find us at   



I. INTRODUCTION

KT Rwanda Networks Ltd (KTRN) is the only 4G LTE infrastructure company in Rwanda, jointly invested by the Government of Rwanda and Korea Telecom (KT) exclusively for wholesale provision of universal mobile broadband network in Rwanda using 4G LTE technology. The wholesale network service for mobile broadband will help to promote healthy competition for advanced retail services and solutions, and will benefit consumers, enterprises and the nation in transforming Rwanda into the ICT hub of East Africa. The company also provides wholesale fixed services based on its national wide fiber infrastructure to licensed operators in Rwanda

II. PROJECT SUMMARY

KTRN is looking for a competent company that fulfills the stated requirements to supply offer Fiber Optic Cable (FOC) materials

Below are the Items required;

A	Civil Works (FOC) Materials LOT 1		Quantity Required
1	Supply of GI Pipes (¢ 100)	Meter	1,968
B FOC Materials LOT 2			
1	GBIC Module (10km)	Each	200
2	GBIC Module (40km)	Each	40
3	GBIC Module (80km)	Each	14
4	8CORE FIBER OPTICAL CABLE	Meter	188,203
5	FIBER JUMPER CORD 3M (LC-LC)	Each	600

III. TECHNICAL SPECIFICATION FOR THE REQUIRED ITMES

GI Pipes specifications

Dimensions & Nominal Mass of Medium Quality Steel Tubes as per IS 1239.

Description:

Nominal Bore in mm	Outside Diameter in mm		Thickness in mm	Mass of Screwed & Socketed tube (kg/m).
	Maximum	Minimum		
50mm	60.8	59.7	3.6	5.10
100mm	115.0	113.10	4.5	12.50

SFP 40/80 Km
Product Series: Fiber Optical Transceiver
Form Factor: SFP
Data Rate:1.25 Gb/s
Media type: SMF
Description:1.25Gb/s SFP Transceiver Module, Single-mode, 1550nm, LC
Wavelength:1550 nm
Max Distance:40/80 km
Connector: Duplex LC
Application:1G Fiber Channel, Switch to Switch Interface Gigabit Ethernet, Switched Backplane Applications Broadband aggregation and wireless infrastructure Router/Server Interface
Compatible Brand: CISCO/HUAWEI/D-LINK/RUIJIE/TP-LINK/NETGEAR/NOTEL NETWORK/ZTE/Juniper
SFP 10/20 Km
Product Series: Fiber Optical Transceiver
Form Factor: SFP
Data Rate: 1.25 Gb/s
Media type: SMF
Description:1.25G SFP LX Transceiver Module, Single-mode, 1310nm, LC,
Wavelength:1310 nm
Max Distance:10/20 km
Connector: Duplex LC
Application:1G Fiber Channel, Switch to Switch Interface Gigabit Ethernet, Switched Backplane Applications Broadband aggregation and wireless infrastructure Router/Server Interface
Compatible Brand: CISCO/HUAWEI/D-LINK/RUIJIE/TP-LINK/NETGEAR/NOTEL NETWORK/ZTE/ Juniper
8 Cores Fiber Optic Cable or (X Cores)

Underground, Single mode optical fiber cables for use at long wavelength suitable for long haul optical transmission system, loose tube (jelly filled), dry core design, non-metallic strength member.

Properties	Nominal Value
Optical Characteristics	
Bending loss @1625nm	≤ 0.05 dB
60mm mandrel, 100 turns	
Cut off wavelength (λ_{cc})	≤ 1260nm
Attenuation uniformity	≤ 0.05 dB
Chromatic dispersion coefficient @1290~1330nm	≤ 2.8 ps/nm.km
@1550nm	≤ 18 ps/nm.km
Zero dispersion wavelength	1300~1322nm
Zero dispersion slope @1300~1322nm	≤ 0.092 ps/nm ² .km
@1550nm	≤ 0.065 ps/nm ² .km
PMD (maximum individual fiber)	≤ 0.2 ps/ $\sqrt{\text{km}}$
Maximum PMD Link value	≤ 0.1 ps/ $\sqrt{\text{km}}$
Attenuation coefficient	
@1310nm	≤ 0.35 dB/km
@1383nm	≤ 0.30 dB/km
@1550nm	≤ 0.21 dB/km
@1625nm	≤ 0.24 dB/km
Geometrical characteristics	
Effective group index (step index)	

@1310nm	1.467
@1550nm & @1625nm	1.468
Mode field diameter @1310nm	$9.2 \pm 0.3 \mu\text{m}$
Core/Clad concentricity error	$\leq 0.5 \mu\text{m}$
Cladding diameter	$125 \pm 0.5 \mu\text{m}$
Cladding non-circularity	$\leq 0.7 \%$
Coating diameter (<u>Uncoloured</u>)	$245 \pm 6 \mu\text{m}$
Mechanical and Environmental Properties	
	Bending radius: 20×cable diameter
Repeated bending	- Bending cycles: 20
2000 m per drum	
Fiber Jumper Cord 3m & 10m: LC/LC-SM-PC/PC	
○ Model:	
OJC-A1-LC/LC-SM-3-PC/PC-SP	
OJC-A1-LC/LC-SM-10-PC/PC-DP	
Item: Optical Jumper Core	
Model no: AJW-OJC	
Insertion Loss: $\leq 0.2\text{dB}$	
Return Loss: $\geq 50\text{dB}$	
Optical Fiber: Single Mode	
External diameter of cable: 2.0mm	
Length: 3M and 10M	

REQUIREMENTS TO BID

1. Trade license of the similar works
2. Valid RRA Tax clearance Certificate
3. Detailed company profile,
4. References for similar works
5. Indicate delivery time per each lot.
6. Bids submission

Well, scanned bids, properly bound and presented in one file not exceed ten Megabytes (10MB) must be sent by email on procurement@ktrn.rw

_____ no later than November 30th, 2020, at 10:00am local time. Late bids will be rejected.

Please note that there will be no public opening due to the COVID-19 pandemic.

For any inquiry you can write to Mike.Bwatete@ktrn.rw

In at least 2 days before the bids submission deadline.

Done at Kigali, on 11th November 2020.