



**Request for Quotation (RFQ) for the supply of a Fibre Optic Link to the CSIR
RFQ 5498/14/08/2019**

Date of issue	31/07/2019
Closing Date and Time	14/08/2019 at 16h30
Contact details	For submission of quotations or any other enquiries: tender@csir.co.za Tel no:012 841 2400

1 INVITATION FOR QUOTATION

Quotations are hereby invited for the supply of a Fibre Optic Link to the CSIR.

2 QUOTATION REQUIREMENTS

See **Annexure A** for specification

3 EVALUATION CRITERIA

- 3.1 Selection of suppliers will be based on the 80/20 preference point system.
- 3.2 Send a valid B-BBEE certificate with quotation. No B-BBEE status will equal zero points.
- 3.3 Indicate CSD number (National Treasury Central Supplier Database) on quotation. If not registered yet on CSD, use www.csd.gov.za to register.
- 3.4 No order will be issued or no contract will be signed without a valid CSD number.

4 PRICING QUOTATION

- 4.1 Price needs to be provided in South African Rand (excl. VAT), with details on price elements that are subject to escalation and exchange rate fluctuations clearly indicated.

- 4.2 Price should include additional cost elements such as freight, insurance until acceptance, duty where applicable, etc.
- 4.3 Payment will be according to the CSIR Payment Terms and Conditions.

5 OTHER TERMS AND CONDITIONS

- 5.1 The supplier shall under no circumstances offer, promise or make any gift, payment, loan, reward, inducement, benefit or other advantage, which may be construed as being made to solicit any favour, to any CSIR employee or its representatives. Such an act shall constitute a material breach of the Agreement and the CSIR shall be entitled to terminate the Agreement forthwith, without prejudice to any of its rights.
- 5.2 A validity period of 90 days will apply to all quotations except where indicated differently on the quote.

6 No goods and/or services should be delivered to the CSIR without an official CSIR Purchase order. CSIR purchase order number must be quoted on the invoice. Invoices without CSIR purchase order numbers will be returned to supplier.

7 Note: This is not a Purchase Order.

Annexure A

Fibre Optic Link Requirements

Summary

CSIR DSC REW has a need for a 100m-long, rugged (including UV protection) fibre optic connection that carries two complete 10-gigabit Ethernet links (full-duplex), as depicted in figure 1.

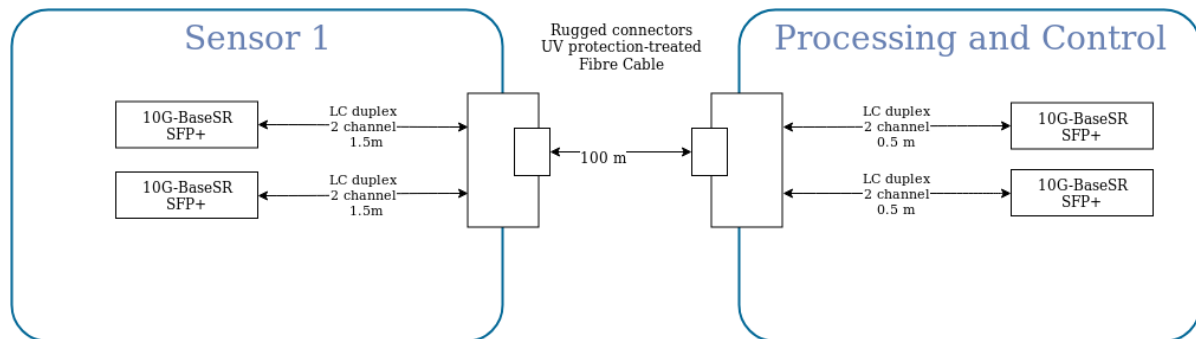


Figure 1. Link Diagram

List of items to be procured:

#	Item	Description	Quantity
1	10GbaseSR Ethernet SFP+	Approved Networks Blade Network BN-CKM-SP-SR 10GBase SR LC, 300 metres, 850nm SFP+ transceiver. 100% Blade Network compatible.	4
2	Fibre-optic pig-tails assembly	Dual SR LC duplex connectors , 4-channel fibre breakout (pig-tail), 1.5 metres to rugged fibre-optic connector bulkhead.	2
3	External fibre-optic cable assembly	Rugged fibre-optic plug, 4-channel fibre cable 100m to rugged fibre-optic plug	1

Requirements

1. The SFP+ must be the Approved Networks, Blade Network BN-CKM-SP-SR.
2. The pig-tails must have a dual LC-duplex connector that is compatible to the SFP+.
3. The pig-tails must have strain relief at all connectors.
4. The pig-tails must be 1.5m long in the sensor.

5. It is preferable to have a single pig-tail component, but 0.5m pigtails can work in the Processing and Control Unit.
6. Include labelling at cable terminations – TBD.
7. The external cable must be:
 - a. 100m in length with suitable reel.
 - b. UV resistant (allow for direct sunlight)
 - c. Survive in -40 to 85 degree operating temperatures.
 - d. Survive 10 to 2000Hz vibration of 15g (EIA/TIA-455-11, Cond. III)
 - e. Survive shocks of 50g for 11ms (EIA/TIA-455-14, Condition A)
8. The rugged fibre connectors (plugs and bulkheads) must:
 - a. Survive in -40 to 85 degree operating temperatures.
 - b. Survive 10 to 2000Hz vibration of 15g (EIA/TIA-455-11, Cond. III)
 - c. Survive shocks of 50g for 11ms (EIA/TIA-455-14, Condition A)
 - d. Survive 8 impacts at 2.5 metres (EIA/TIA-455-2)
 - e. Ingress protection rated to IP68 (Dust tight and complete water immersion to 1 m).
 - f. Provide an insertion loss of 0.1-1.0 dB maximum at 9 to 125 micro-metre wavelengths.
 - g. Provide a return loss of -40dB PC and -55 dB UPC.
 - h. Include dust caps.
 - i. Retain a cable of 181 kg.
 - j. Be flange mounted (bulkhead specific).
 - k. Preferably be hermaphroditic connectors (to combine cables of shorter lengths up to 300 m).
 - l. Survive at least 3000 mating cycles.