

**CORRIGENDUM – 2**

**Subject : Corrigendum No. 2 dated 21.02.2020**  
**Modification in Chapter –IV “TECHNICAL SPECIFICATION”**

**E-Tender No : RAILTEL/WR/E-Tender/OT/2019-20/SFP-R2 Dtd:13.02.2020**

**Name of the Work :-** Supply of SFP/XFP on RailTel Corporation of India Ltd., Western Region, Mumbai.

**NOTE :- Please submit your offer, as per revised Technical Specification, given in revised Chapter-IV here below :-**

**REVISED CHAPTER IV****TECHNICAL SPECIFICATIONS**

In the specification, wherever support for a feature has been asked for, it will mean that the feature should be available, without RailTel requiring any other hardware /software/ licenses. Thus all hardware/software/ licenses required for enabling the support /feature shall be deemed as included in the offer. All the material shall comply respective standards. SOR item-wise specification are as follows :-

**SOR item 1. QSFP+ 40Gbps 40KM**

Parameter	Value
Module Form Factor	QSFP+
Aggregate Data Rate	40 Gb/s
Link Length Supported	40 Km
Protocols Supported	Ethernet
Fiber type	Dual Fibre, Duplex LC Connector
Operating Temperature range	0°C to 70°C
Storage Temperature Range	- 40°C to 85°C
Power dissipation	< 3.5W
Average Launch Power	-2.7 dbm to 4.5 dbm
Receiver Sensitivity	- 18 dbm or better
Should have RoHS-6 Compliant	Yes
Should have XLPPi Electrical Interface	Yes
Built in Digital diagnostic Function	Yes
Product must be IEC 60825(Laser Safety) and IEC 60950(Electrical Safety) certified by CSA or equivalent	Yes
Manufacturer should be able to provide Factory test report for supplied transceiver parts.	Yes
Make	Juniper / Finisar / Arista

*21/02/2020*

**SOR item 2. SFP+ 10Gbps BIDI 10KM**

Parameter	Value
Module Form Factor	SFP+
Aggregate Data Rate	10 Gb/s or more
Link Length Support	10 Km or more
Protocols Supported	Ethernet
Fiber type	Single Fibre, Simplex LC Connector
Temperature range	Operating range is 0 to 70°C. Storage range is -40°C to +85°C.
Power dissipation	< 2 W
Receiver Sensitivity (OMA) @ 10.5Gb/s	Max -12.6 dbm or better
Wavelength Range	1260-1340 nm
Average Launch Power Transmitter	Min. -8.2 dbm & Max +0.5 dbm or better
Built in Digital diagnostics Function	Yes
Should have RoHS Compliant	Yes
Product must be IEC 60825(Laser Safety) and IEC 60950(Electrical Safety) certified by CSA or equivalent	Yes
Manufacturer should be able to provide Factory test report for supplied transceiver parts.	Yes
Make	Juniper / Finisar / Arista / Accelink / XGIGA /Apac Opto Electronics

**SOR item 3. SFP+ 10Gbps BIDI 20KM**

Parameter	Value
Module Form Factor	SFP+
Aggregate Data Rate	10 Gb/s or more
Link Length	20 Km or more
Protocols Supported	Ethernet
Fiber type	Single Fibre, Simplex LC Connector
Temperature range	Operating range is 0 to 70°C. Storage range is -40°C to +85°C.
Power dissipation	< 2W
Receiver Sensitivity (OMA) @ 10.5Gb/s	Max -14 dbm or better
Wavelength Range	1260-1340 nm
Average Launch Power Transmitter	Min. -1.0 dbm & Max 4.5 dbm or better
Built in Digital diagnostic Function	YES
Should have RoHS-6 Compliant	YES
Product must be IEC 60825(Laser Safety) and IEC 60950(Electrical Safety) certified by CSA or equivalent	YES
Manufacturer should be able to provide Factory test report for supplied transceiver parts.	YES
Make	Juniper / Finisar / Arista / Accelink / XGIGA /Apac Opto Electronics

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**SOR item 4. XFP 10Gbps 10KM**

Parameter	Value
Module Form Factor	XFP
Aggregate Data Rate	10 Gb/s
Maximum Link Length	10 Km.
Protocols Supported	OTN/FEC protocols OTU1e & OTU2e
Fiber type	Dual Fibre, Duplex LC Connector
Temperature range	-5°C to 70°C
Power dissipation	< 2W
Receiver Sensitivity (OMA)@ 10.5Gb/s	Max -12.6 dbm
Transmitter & Dispersion Penalty (TDP)	Max 3.2 dbm
Average Launch Power	Min. -6.0 dbm & Max 0.5 dbm
Should have RoHS-6 Compliant	Yes
Built in Digital Diagnostic Function	Yes
Product must be IEC 60825(Laser Safety) and IEC 60950(Electrical Safety) certified by CSA or equivalent	Yes
Manufacturer should be able to provide Factory test report for supplied transceiver parts.	Yes
Make	Juniper / Finisar / Arista / Accelink / XGIGA /Apac Opto Electronics

**SOR item 5. SFP+ 10Gbps BIDI 40KM**

Parameter	Value
Module Form Factor	SFP+
Aggregate Data Rate	10 Gb/s or more
Link Length	40 Km or more
Protocols Supported	Ethernet
Fiber type	Single Fibre, Simplex LC Connector
Temperature range	Operating range is 0 to 70°C. Storage range is -40°C to +85°C.
Power dissipation	< 2W
Receiver Sensitivity (OMA)@ 10.5Gb/s	Max -15 dbm or better
Wavelength Range	1260-1340 nm
Average Launch Power Transmitter	Min. -2.7 dbm & Max 4.5 dbm or better
Should have RoHS-6 Compliant	Yes
Built in Digital Diagnostic Function	Yes
Product must be IEC 60825(Laser Safety) and IEC 60950(Electrical Safety) certified by CSA or equivalent	Yes
Manufacturer should be able to provide Factory test report for supplied transceiver parts.	Yes
Make	Juniper / Finisar / Arista / Accelink / XGIGA /Apac Opto Electronics

**Note :-**

1. All other terms and condition of Tender shall remain same.
2. For submission of Bid, please refer Revised Technical Specification only.

*[Signature]*  
21/02/2020