

RailTel's Bid Specific Additional Terms & Conditions (ATC)

Information to Bidder for the “Supply of SFP, Optical Fibre Patchcord, FMS, Attenuator, Adaptor, Router, Switch, 12URack, and 100G QSF for Bhubaneswar Territory ”

Ref: GeM Bid No. GEM/2023/B/3944631

Dated: 12.09.2023

1. The item/items in this bid should be quoted as per the technical specifications given in **Annexure-I**.
2. The GeM bid document is also available on website www.railtelindia.com for information of bidders. However, bidding is to be done on GeM platform only.
3. The material offered shall have complete data sheets and detailed description on OEM web sites. Bidder shall provide duly filled and signed Technical Compliance of the offered material, failing which the bid may get rejected.
4. Priced BOM/SOR shall not be submitted with technical bid, if submitted the bid will be summarily rejected.
5. GSTIN ID of vendor should be provided from where goods will be supplied.

6. Delivery Period:

The bidder has to complete the supply within 60 days from the date of issue of confirmed PO. If material is not supplied within the approved delivery period then penalty of 0.5% of undelivered quantity per week or part thereof for the undelivered portion of SOR subject to the maximum to the 10% of the contract value will be levied.

7. Consignee : Sr. Manager(Tech.). RailTel Corporation of India Ltd. Sr. Manager (Tech.). RailTel Corporation of India Ltd., 1st Floor, Annex Building, B Block, RailVihar, Chandrashekharpur, Bhubaneswar -751023

8. Inspection:

- 8.1 The supplier/manufacturer shall send inspection call letter when the material is ready to be supplied and ready for inspection. The Inspection shall be carried out at supplier's/Manufacturer's premises by the Inspecting Authority.
- 8.2 The supplier/manufacturer shall submit along with inspection call the details of test procedures, test programs, test parameters together with permitted values, etc., and their Quality Assurance Plan.
- 8.3 In case material/equipment fails during inspection, the fresh lot of same material/ equipment shall be offered without any extra cost, by the manufacturer/supplier. In such a case, total cost of re-inspection including travel, lodging & boarding of the inspecting officials shall be born by manufacturer's / supplier's account/cost.
- 8.4 Inspection of the material including that of raw material if deemed required shall be conducted by RailTel's authorised representative at the firm's premises. The inspection shall be conducted by inspecting authority as per required test procedures /test plan for ensuring that the material offered meets the required specifications.
- 8.5 The Inspection of material shall be carried out as per the specifications. The supplier shall make available for inspection all types of equipment's in sufficient number so as to create test set up

for carrying out various tests as per the approved test plan and test set up. Travelling, lodging and boarding expenses of RailTel representative and charges for third party inspection if any shall be borne by RailTel, but necessary facilities to carry out test /witness inspection shall be provided by the manufacturer/supplier, free of cost.

- 8.6 The manufacturer shall maintain stock register (receipt, issue and balance) and defect records for the raw material. The defect records shall be in standard formats and it shall be complied on a daily/ weekly/ monthly basis and it shall be analysed. "NIL" Report shall be segregated from the accepted material. First-in First-out concept shall be implemented in fool proof manner. The batches of the raw material shall be identified and traceable. All relevant documents necessary to ensure trace-ability shall be maintained. The raw material shall be protected from direct exposure to sunlight, moisture, water ingress and heat etc.
- 8.7 Finished products shall be tested 100% by the factory QC personnel before being offered to RailTel for acceptance to ensure that it meets all quality requirements as per the relevant specifications. Duly filled in test formats indicating the results of such tests shall be submitted along with material offered for inspection to RailTel.
- 8.9 It is the prime responsibility of the manufacturer to ensure that all inward goods are procured from approved sources or the authorized dealers of approved sources only.

9. **Earnest Money Deposit (EMD):**

Earnest Money Deposit : Rs.38,000/-

EMD can be submitted in the form of Demand Draft/Pay Order/Banker's Cheque drawn in favour of "RailTel Corporation of India Ltd." payable at Kolkata or online transfer in RailTel Bank Account detail below:

Name of Bank: Union Bank of India, Chowringhee Road Branch

Name of account Holder: RailTel Corporation of India Ltd.

Account Number: 401601010519491

IFSC: UBIN0540161

Branch: 1/1, Camac Street, Ground Floor, Kolkata – 700016

Proof of payment shall be submitted online on GeM portal & original DD should reach at RailTel Corporation of India Ltd., Eastern Region, RailTel Corporation of India Ltd., Eastern Region, 19th Floor, Aurora Waterfront Building, Plot No. 34/1, Block GN, Sector-V, Salt Lake City, Kolkata – 700 091 within 3 days from the date of opening of Tender.

EMD shall be exempted to Micro & small Enterprises registered for the tendered items/ as per the latest Govt. of India guidelines. **Under MSE category, only manufacturers for goods and Service Providers for Services are eligible for exemption from EMD. Traders are excluded from the purview of this Policy** The bidders claiming the preference must submit relevant documents. **The Bid received without EMD /Documentary proof of Exemption of EMD, will be summarily rejected.**

10. **Performance Bank Guarantee/ Security Deposit**

- 10.1 The successful tenderer shall submit 10% of full contractual value including GST of the stores/works detailed in the Acceptance Offer towards security deposit in the form of DD/FDR or irrevocable Bank Guarantee from any scheduled bank for due fulfilment of contract. The instrument shall be valid for three months beyond the warranty period. The Performance Guarantee shall be released after successful completion of contract including warranty period, duly adjusting any dues recoverable from the successful tenderer. Payment of Performance Guarantee in the form of Pay Order/ Demand Draft should be made in favour of "RailTel Corporation of India Ltd" payable at Kolkata only, within 30 days of issue of purchase order.

- 10.2 In case, successful tenderer wishes to furnish security deposit in the form of Performance Bank Guarantee of value equal to Security Deposit, the same should be submitted within 30 days of issue of purchase order, failing which a penal interest of 15% per annum shall be charged for the delay period i.e., beyond 30 (thirty) days from the date of issue of LOA/PO. This PBG should be from a Scheduled Bank and should cover warranty period plus three months for lodging the claim. The performance security Bond will be discharged by the Purchaser after completion of the supplier's performance obligations including any warranty obligations under the contract. PBG format specified in **Annexure-V**.

Note:

A separate advice of the BG will invariably be sent by the BG issuing bank to the RailTel's Bank through SFMS and only after this the BG will become acceptable to RailTel. It is therefore in own interest of bidder to obtain RailTel's bank IFSC code, its branch and address and advise these particulars to the BG issuing bank and request them to send advice of BG through SFMS to the RailTel's Bank.

- 10.3 In case value of Performance Guarantee Rs. 5 Lakhs or less, same should be submitted in the form of DD/Banker cheque/online transfer only.
- 10.4 Performance Guarantee if submitted in the form of Demand Draft/Pay Order/Banker's Cheque drawn in favour of "RailTel Corporation of India Ltd." shall be payable at Kolkata.
- 10.5 PBG Claim period shall be one year later than the expiry date.
11. The bidder should not have been blacklisted by any agency /purchaser during the past 5 years

12. **Eligibility Criteria for Authorized bidder Bidder/OEM:**

12.1 **Technical Eligibility:**

The tenderer must have successfully completed any of the following during last 07 (seven) years, ending last day of month previous to the one in which tender is invited:

- Three similar works each costing not less than the amount equal to 30% of advertised value of the tender,
or
- Two similar works each costing not less than the amount equal to 40% of advertised value of the tender,
or
- One similar work each costing not less than the amount equal to 60% of advertised value of the tender.

Similar Work- Supply of Switch, Router, SFP, passive optical fibre communication accessories like Optical Fibre Patchcord, Optical Fibre adaptor, Optical Fibre attenuator.

Note:

- (i) Work experience certificate from private individual shall not be considered. However, in addition to work experience certificates issued by any Govt. Organization, PSU or any TELCO with work experience certificate issued by Public listed company having average annual turnover of Rs.500 crore and above in last 3 financial years excluding the current financial year, listed on National Stock Exchange or Bombay Stock Exchange, incorporated/registered at least 5 years prior to the date of opening of tender, shall also be considered provided the work experience certificate has been issued by a person authorized by the Public listed company to issue such certificates.

- (ii) In case tenderer submits work experience certificate issued by public listed company, the tenderer shall also submit along with work experience certificate, the relevant copy of work order, bill of quantities, bill wise details of payment received duly certified by Chartered Accountant, TDS certificates for all payments received and copy of final/last bill paid by company in support of above work experience certificate.

12.2 Financial Eligibility:

The bidder should have minimum cumulative turnover of 150% of tendered value or above during the last 3 financial years (i.e. current year and/or three previous financial years). The bidder should provide Audited Balance Sheets / annual reports as documentary evidence and for current year, the Statutory Auditor's certificate for turnover of current year up to the date of bid opening for which Balance Sheet/P&L may not be available. In case of photocopy of Balance Sheet/P&L the same should be certified by Chartered Accountant as true copy.

- 12.3** Bidder should have authorization specific to this tender from respective OEM as per **Annexure-III**.

- 12.4** The bidder should have registered office in India for a minimum period of 3 years as on schedule date of bid opening. Certificate of incorporation will have to be submitted.

- 12.5** The bidder or their promoters having equity stake or operating partnership in bidder, should not be holding valid License for Telecom Service Provider/ISP/NLD, Services License of Government of India for Telecom Operation.

- 12.6** Performance statement of last three years for supply of material to Railways, BSNL, MTNL, Government PSU's & Telecom Service Providers. This Performance Statement is to be submitted in following format: -

Year	PO No & Date with description of item	Name of the purchaser	Qty. ordered	Date of delivery in the Purchase Order	Qty. Supplied within scheduled date of delivery	Qty. Supplied during 1 st extension	Qty. Supplied during 2 nd extension	Qty. Supplied during 3 rd extension
1	2	3	4	5	6	7	8	9

- 12.6.1** They may be deprived of any order against this tender if the information furnished is found to be incorrect later on. Correct status/supply position of pending orders, if any, should be invariably indicated. Supporting documents are to be enclosed. Photocopies of the supply/purchase orders along with the Inspection Certificates and Receipt Notes should be enclosed for ready reference, along with tender to substantiate their past performance.

- 13 Splitting of Quantity:** Not Applicable.

14 Evaluation Criteria:

- i. The bidder shall quote the materials prices as per the price format given in the tender.
- ii. Bidder should quote for all the items. Non-quoting for all items will render the bid invalid and will not be considered for evaluation. The Offers will be evaluated on total cost.
- iii. The offers for respective Item will be determined on Total Unit Rate on CIP destination basis which will include basic rate, GST, freight, insurance and any other charge or cost quoted by the tenderer.

iv. Offers from the tenderer's not meeting the eligibility criteria will not be considered.

15. **Variation of Quantities at the Time of Award**

15.1 RailTel reserves the right to cancel the tender for full or part quantity tendered without assigning any reason.

15.2 The purchaser reserves the right to increase and / or decrease the order quantity

(A) Up to maximum extent of +/-50% subject to the following conditions:

- i. Up to +25% with no rebate
- ii. From +25% to +40% with 2% rebate
- iii. From 40% to +50% with 4% rebate

(B) For variation beyond +50% of the quantity mentioned in the SOR may be done after proper negotiation with the selected bidder

16. **Warranty:**

The material is to be warranted for 12 months from date of delivery. The tenderer shall warrant that materials to be supplied shall be new and free from all defects and faults in material, workmanship and manufacturing and shall be of the highest grade and consistent with the established and generally accepted standards of materials of the type ordered and shall perform in full conformity with the specifications and drawings.

The supplier shall be responsible for any defects that may develop under the conditions provided by the contract and under proper use, arising from faulty materials, design or workmanship such as corrosion, inadequate quantity of material to meet item requirements, inadequate contact protection, deficiencies in design and/ or otherwise and shall remedy such defects at his own cost when called upon to do so by the Purchaser who shall state in writing in what respect the stores are faulty.

17. **Training:**

Not applicable

18. **Payment Terms:** Payment will be done after submission of the following documents:

- i. Tax Invoice
 - ii. Delivery Challan
 - iii. E-way bill
 - iv. Inspection Certificate
 - v. Consignee's receipt
 - vi. Warranty guarantee certificate of OEM/supplier
 - vii Copy of Performance Guarantee
 - viii. Certificate for the ordered quantity/ material supplied as per specification.
- a) 100% value against full supply of material and accompanied with above mentioned documents.
- b i) 90% of the value of the part supply of material on receipt by the consignee duly inspected and accompanied with above mentioned documents.
- ii) Balance 10% full supply of material.

c) Bill Passing & Paying Authority:

Bill passing Authority is Principal Executive Director, Eastern Region and bill paying Authority is GM/Finance/Eastern Region. Bills to be submitted to RailTel, Eastern Regional office for payment.

19. The tenderer shall submit a notarized affidavit on a non-judicial stamp paper stating that they are not liable to be disqualified and all their statement/documents submitted along with bid are true and factual. Standard format of the affidavit to be submitted by the bidder is enclosed as **Annexure-IV. Non submission of an affidavit by the bidder shall result in summarily rejection of his/their bid.** And it shall be mandatorily incumbent upon the tenderer to identify state and submit the supporting **documents duly self-attested** by which they/he is qualifying the Qualifying Criteria mentioned in the Tender Document. It will not be obligatory on the part of Tender Committee to scrutinize beyond the submitted document of tenderer as far as his qualification for the tender is concerned.

The RailTel (RCIL) reserves the right to verify all statements, information and documents submitted by the bidder in his tender offer, and the bidder shall, when so required by the RailTel (RCIL), make available all such information, evidence and documents as may be necessary for such verification. Any such verification or lack of such verification by the RailTel (RCIL) shall not relieve the bidder of its obligations or liabilities hereunder nor will it affect any rights of the RailTel thereunder.

In case of any wrong information submitted by tenderer, the contract shall be terminated. Performance Guarantee (PG) of contract forfeited and agency barred for doing business on RailTel (RCIL) for 3years.

20. **Online Submissions:**

The bidder is required to upload and submit the following documents on line before due date & time of bid. The due date & time for closing of the bid as per GeM Bid and the bid will be opened as per GeM Bid.

- (i) EMD.
- (ii) Clause wise compliance along with all mentioned documents/annexures for all clauses of GeM Bid and ATC (Information to bidder) documents.
- (iii) Data Sheet of offered item/equipment.
- (iv) Financial (Certified copies of audited balance sheets/annual reports of last three preceding financial years) and Technical Eligibility Criteria documents.
- (v) Technical Compliance of all Specification of items as per ATC documents.
- (vi) Proof of document required against Eligibility criteria of OEM (or) Authorized bidder of OEM vide para 11 / 12 as applicable.
- (vii) MAF/OEM Authorization as per **Annexure-III.**
- (viii) Notarized affidavit on a non-judicial stamp paper as per **Annexure-IV.**
- (ix) Notarized Power of Attorney in name of authorized signatory as per Clause No. 23.

21. **Offline documents:**

Original copy of documents shall be submitted by tenderer offline at RailTel Corporation of India Ltd., 19th Floor, Aurora Waterfront Building, Plot No.GN. 34/1, Block GN, Sector-V, Salt Lake City, Bidhannagar, Kolkata-700091 at any point of time whenever asked for verification.

22. **Insurance**

- 22.1 The Contractor shall take out and keep in force a policy or policies of insurance from the date, the delivery of material starts (including the transit portion) against all liabilities of the contractor or the Purchaser. The contractor shall take out and keep in force a Policy or policies

of Insurance for all materials covered in schedule of requirement irrespective of whether used up in the portion of work already done or kept for the use in the balance portion of the work until such material are provisionally handed over to RailTel. The contractor should ensure the stores brought to site, against risks as required under the Emergency Risk (Goods) Insurance Act in force from time to time up to contract value.

22.2 It may be noted that the beneficiary of the insurance policy should be RailTel or the policies should be pledged in favour of RailTel. The contractor shall keep the policy/policies current till the item/equipment are handed over to the purchaser and I&C of the same.

23 Constitution of Firm and Power of Attorney

23.1 Any individual(s) signing the tender or other documents connected therewith should specify whether he is signing:-

- (a) As sole proprietor of the concern or as attorney of the sole Proprietor.
- (b) As partner or partners of the firm.
- (c) As a Director, Manager or Secretary in the case of Limited Company duly authorized by a resolution passed by Board of Directors or in pursuance of the authority conferred by Memorandum of Association.

23.2 In the case of a firm not registered under the Indian Partnership Act, all the partners or the attorney duly authorized by all of them should sign the tender and all connected documents. The original Power of Attorney or other documents empowering the individual or individuals to sign should be furnished to the Purchaser for verification, if required.

23.3 RailTel will not be bound by Power of Attorney granted by the tenderer or by the changes in the composition of the firm made subsequent to the execution of the contract agreement.

23.4 In case where Power of Attorney partnership deed has not been executed in English, the true and authenticated copies of the translation of the same by Advocate, authorized translators of Courts and licensed Petition Writers should be supplied by the contractor(s), while tendering of the work.

- Note:** 1) The bidder is required to give acceptance of all the clauses of **GeM bid, ATC** and RailTel's Bid Specific **ATC** document. Any deviation / non-acceptance may lead to rejection of the bid.
- 2) Information to Bidder viz. corrigendum /addendum/ amendments etc. for this bid shall be posted on www.railtelindia.com and GeM portal only.
 - 3) This bid is governed by the Specific Additional Terms & Conditions and General Terms & Conditions laid down by the GeM against **GeM Bid No: GEM/2023/B/3944631**
 - 4) After opening of the technical bid no correspondence/submission of document made at the initiative of the bidder will be entertained. However, the purchaser can, if required, ask for clarifications which need to be submitted before a target date. The clarifications submitted as required by the purchaser before the target date will be considered.

In case, if any contradiction between GeM Bid, Additional Terms & Conditions, RailTel's Bid Specific Additional Terms & Conditions and General Terms & Conditions, RailTel's Bid Specific Additional Terms & Conditions and General conditions will prevail.

24. **Long Term Maintenance Support/AMC:**
Not used

25. **DENIAL CLAUSE** - Supplier will not be entitled to any benefit of upward statutory variations in GST rates Announced after expiry of the original Delivery Period as per purchase order & in Case of reduction in GST rates if any, benefit will be passed on to RailTel at any stage of the contract.

26. Contact Details for general Information:

RailTel Contact-I :Shri P D James, Asstt.GM (Mobile: 9007044114)

RailTel Contact-II :1. Shri Bandaru Manohar, Sr. Manager/Bhubaneswar (Mobile: 7085059032)

27 Trade Receivables Discounting System (TReDS):

TReDS feature is available on m1xchange portal, URL: <https://www.m1xchange.com>.

- i. RailTel is registered with m1xchange TReDS Platform having Buyer registration Number "BUYER00001496". The URL for m1xchange Platform is <https://www.m1xchange.com> MSE suppliers/vendors are required to register themselves on m1xchange Platform for availing the facility of bill discounting on TReDS portal. The bidder is mandatorily required to submit its TReDS registration number (as provided by M1xchange portal) and GRN (Goods/Service Receipt Note) Number (as provided by RailTel on delivery of Goods/ Service) while submitting the invoices if requires to avail TReDS facility.
- ii. MSE Vendor will bear all costs relating to availing the facility of discounting on TReDS platform including but not limited to Registration charges, Transaction charges for financing, Discounting Charges, Interest on financing. or any other charges known by any name shall be borne by MSE Vendor.
- iii. MSE Vendor hereby agrees to indemnify, hold harmless and keep RailTel and its affiliates, Directors, officers, representatives, agents and employees indemnified, from any and all damages, losses, claims and liabilities (including legal costs) which may arise from Sellers submission, posting or display, participation, in any manner, on the TReDS Platform or from the use of Services or from the Buyer's breach of any of the terms and conditions of the Usage Terms or of this Agreement and any Applicable Law on a full indemnity basis.
- iv. RailTel shall not be liable for any special, indirect, punitive, incidental, or consequential damages or any damages whatsoever (including but not limited to damages for loss of profits or savings, business interruption, loss of information), whether in contract, tort, equity or otherwise or any other damages resulting from using TReDS platform for discounting their (MSE Vendor's) invoices.

Annexure-I**Schedule of Requirement(SOR)**

SOR item No	Item	Qty.	Unit
1	1G UD SFP 40 Km. range, Multi-Vendor MSA Compatible with OEM Equipment of CISCO, Juniper, D-Link, Nokia, Ciena etc.as per technical specification attached.	60	Nos
2	1G BD SFP 20 Km. range, Multi-Vendor MSA Compatible with OEM Equipment of CISCO, Juniper, D-Link, Nokia, Ciena etc. as per technical specification attached.	10	Pair
3	1G BD SFP 40 Km. range, Multi-Vendor MSA Compatible with OEM Equipment of CISCO, Juniper, D-Link, Nokia, Ciena etc. as per technical specification attached.	12	Pair
4	1G BD SFP 80 Km. range, Multi-Vendor MSA Compatible with OEM Equipment of CISCO, Juniper, D-Link, Nokia, Ciena etc. as per technical specification attached.	10	Pair
5	10G BD SFP 20 Km. range, Multi-Vendor MSA Compatible with attached Equipment of CISCO, Juniper, D-Link, Nokia, Ciena etc. as per technical specification attached.	10	Pair
6	10G BD SFP 60 Km. range, Multi-Vendor MSA Compatible with OEM Equipments of CISCO, Juniper, D-Link, Nokia, Ciena etc. as per technical specification attached.	14	Pair
7	10G UD SFP 40 Km. range, Multi-Vendor MSA Compatible with OEM Equipments of CISCO, Juniper, D-Link, Nokia, Ciena etc. as per technical specification attached.	10	Nos
8	Single mode patchcord with LC/PC - E2000 connector, 5 Mtrs. Length as per technical specification attached.	15	Nos
9	Single mode Patchcord with LC/PC- LC/PC connector, 2 M. length as per technical specification attached.	231	Nos
10	Single mode Patchcord with LC/PC- LC/PC connector, 5 mtr. Length as per technical specification attached.	216	Nos
11	Single Mode Patch Cord with LC/PC - LC/PC connector, 10 mtr. Length as per technical specification attached.	165	Nos
12	Single Mode Patch with Cord LC/PC- LC/PC connector, 20 mtr. Length as per technical specification attached.	60	Nos
13	Single Mode Patchcord with FC/PC - LC/PC connector, 10 mtr. Length as per technical specification attached.	95	Nos
14	Single Mode Patchcord with FC/PC - LC/PC connector, 20 mtr. Length as per technical specification attached.	8	Nos
15	Single Mode Patchcord with FC/PC -FC/PC connector, 10 mtr. Length as per technical specification attached.	30	Nos
16	Single Mode Patchcord with SC/PC - LC/PC connector, 20 mtr. Length as per technical specification attached.	85	Nos

17	Single Mode Patchcord with FC/PC - SC/PC connector, 10 mtr. Length as per technical specification attached.	45	Nos
18	Single Mode Patchcord with SC/PC - SC/PC connector, 10 mtr. Length as per technical specification attached.	45	Nos
19	FC/PC - FC/PC Type adaptor as per technical specification attached.	50	Nos
20	SC/PC - SC/PC Type adaptor as per technical specification attached.	10	Nos
21	LC/PC- LC/PC Type adaptor as per technical specification attached.	51	Nos
22	5 dB LC/PC type attenuator as per technical specification attached.	124	Nos
23	7 dB Attenuator type LC/PC as per technical specification attached.	5	Nos
24	10 dB LC/PC type attenuator as per technical specification attached.	70	Nos
25	2 dB LC/PC type attenuator as per technical specification attached.	39	Nos
26	19 inch, wall mountable 12U Rack of size (600 mm x 600 mm.) (H x D) with cable manager, PDU, mounting accessories etc. as per as per technical specification attached.	2	Nos
27	Rack Mountable, fully Loaded 24 Fiber FMS with FC /PC type adaptor as per technical specification attached.	4	Nos
28	Rack mountable, fully loaded 24 Fibre FMS with SC/PC type adaptor as per technical specification attached.	6	Nos
29	Rack mountable, fully loaded, 48 Fibre FMS with SC/PC type adaptor as per technical specification attached.	3	Nos
30	100G QSFP 28-ER of 40 Km Range as per Technical Specification attached. Warranty :3 years.	2	Nos
32	Supply of 24 Port Type-G Switch as per technical specification attached. Warranty: 3 Years	1	No.
33	10G UD SFP of 20 Km Range Multi-Vendor MSA Compatible with OEM Equipment of CISCO, Juniper, D-Link, Nokia, Ciena etc.as per technical specification attached.	156	Nos
34	1G UD SFP of 20 Km Range Multi-Vendor MSA Compatible with OEM Equipment of CISCO, Juniper, D-Link, Nokia, Ciena etc. as per technical specification attached.	200	Nos

Technical Specification**SOR Item No. 1 : 1G UD SFP 40KM:**

Srl. No.	Technical Specification	Compliance (Complied/ Not complied)
1	Multi-Vendor MSA Compatible with OEM Equipment of CISCO, Juniper, D-Link, Nokia, Ciena etc.	
2	Should support 40 km optical distance on dual fiber	
3	Should have LC type connector	
4	Rate shall be quoted in the unit Nos.	
5	Should have 1 Gigabit Ethernet capacity on single mode fiber.	
6	Should support Digital Diagnostic Monitoring feature with following operating parameters: Transceiver temperature" 0 ~ 70 deg. C Laser bias current Transmitted optical power: 0 ~ -5dBm Received optical power: -23dBm Transceiver supply voltage: 3.3V It also provides a sophisticated system of alarm and warning flags	
7	OEM should be having valid ISO 9000 certificate	
8	Should have CE and FCC and UL or equivalent regulatory Certificate	
9	Operating temperature of the SFP should be minimum 0 to 70°C (23 to 149 °F)	
10	Complies with SFF-8431 SFP+ MSA (Multi-Source Agreements Standards)	
11	1310 nm Hot Pluggable Module	
12	Should support 1000BASE LX@1.25G or 100 BASE-LX @1.25G	
13	Warranty: 1 year	

SOR Item No.2 : 1G BD SFP 20 KM:

Srl. No.	Technical Specification	Compliance (Complied/ Not complied)
1	Multi-Vendor MSA Compatible with OEM Equipment of CISCO, Juniper, D-Link, Nokia, Ciena etc.	
2	Should support 10 – 20 km optical distance on single fiber	
3	Should have LC type connector	
4	Should quote rate in pair (BX U & D)	

5	Should have 01 Gigabit Ethernet capacity on single mode fiber.	
6	Should support Digital Diagnostic Monitoring feature with following operating parameters: Transceiver temperature” 0 ~ 70 degC Laser bias current Transmitted optical power: 0 ~ -5dBm Received optical power: -17 dBm Transceiver supply voltage: 3.3V It also provides a sophisticated system of alarm and warning flags	
7	OEM should be having valid ISO 9000 Certificate	
8	Should have CE and FCC and UL or equivalent regulatory Certificate	
9	Operating temperature of the SFP should be minimum 0 to 70°C (23 to 149 °F)	
10	Complies with SFF-8431 SFP+ MSA (Multi-Source Agreements Standards)	
11	Complies with 1310nm/1550nm DFB laser transmitter & CPRI Option 7, 8	
12	Should support 1G to 1.25Gb/s Multi-Rate & 2-wire interface for management and diagnostic monitor compliant with SFF-8472	
13	Warranty : 1 Year	

SOR Item No. 3 : 1G BD SFP 40 KM :

Srl. No.	Technical Specification	Compliance (Complied/ Not complied)
1	SFP module should comply with multi-source agreement (MSA), enabling compatibility with equipment of CISCO, Juniper, D-Link, Nokia, Ciena etc.	
2	Should support 20-40 km optical distance on single fiber	
3	Should support 1310/1550 wavelength	
4.	Transmitted Optical Power range : 5.00 dBm. ~- 11.00 dBm. Received Optical Power range : 0.00 dBm. ~ - 32 dBm.	
5	Should have LC type connector.	
6	Should have 1 Gigabit Ethernet capacity on single mode fiber.	
7	Should support DDMI feature.	
8	OEM should be having valid ISO 9000 & ISO 14000 certification on the date of opening of bid.	
9	Should have CE and FCC or equivalent regulatory compliances.	

10	Operating Temperature of the SFP Should be mini 0 to 65 °C (23 to 149 °F)	
11	Warranty : 1 Year	

SOR Item No. 4 : 1G BD SFP 80KM:

Srl. No.	Technical Specification	Compliance (Complied/ Not complied)
1	SFP module should comply with multi-source agreement (MSA), enabling compatibility with CISCO, Juniper, D-Link, Nokia, Ciena etc.	
2	Should support 60-80 km optical distance on single fiber	
3	Should support 1310/1550 wavelength	
4	Transmitted Optical Power range : 5.00 dBm. ~- 11.00 dBm. Received Optical Power range : 0.00 dBm. ~ - 32 dBm.	
5	Should have LC type connector.	
6	Should have 1 Gigabit Ethernet capacity on single mode fiber.	
7	Should support DDMI feature.	
8	OEM should be having valid ISO 9000 & ISO 14000 certification on the date of opening of bid.	
9	Should have CE and FCC or equivalent regulatory compliances.	
10	Operating Temperature of the SFP Should be mini 0 to 65 °C (23 to 149 °F)	
11	Warranty : 1 Year	

SOR Item No. 5 : 10G BD SFP 20KM :

Srl. No.	Technical Specification	Compliance (Complied/ Not complied)
1	SFP module should comply with multi-source agreement (MSA), enabling compatibility with equipment of CISCO, Juniper, D-Link, Nokia, Ciena etc.	
2	Should support 10 - 20km. optical distance on single fiber	
3	Should have LC type connector	
4	Transmitted Optical Power range : 5.00 dBm. ~- 4.00 dBm. Received Optical Power range : 1.50 dBm. ~ - 17 dBm.	
5	Should quote rate in pair (BX U & D)	
6	Should have 10 Gigabit Ethernet capacity on single mode fiber.	
7	Should support Digital Diagnostic Monitoring feature with following operating parameters: Transceiver temperature" 0 ~ 70 degC Laser bias current	

	Transceiver supply voltage: 3.3V It also provides a sophisticated system of alarm and warning flags	
8	OEM should be having valid ISO 9000 Certificate	
9	Should have CE and FCC and UL or equivalent regulatory compliances	
10	Operating temperature of the SFP should be minimum 0 to 70°C (23 to 149 °F)	
11	Complies with SFF-8431 SFP+ MSA (Multi-Source Agreements Standards)	
12	Complies with 1270nm & 1330nm DFB laser transmitter & CPRI Option 7, 8	
13	Should support 9.83G to 11.32Gb/s Multi-Rate & 2-wire interface for management and diagnostic monitor compliant with SFF-8472	
14	Warranty : 1 Year	

SOR Item No. 6 : 10G BD SFP 60 KM :

Srl. No.	Technical Specification	Compliance (Complied/ Not complied)
1	SFP module should comply with multi-source agreement (MSA), enabling compatibility with equipment of CISCO, Juniper, D-Link, Nokia, Ciena etc.	
2	Should support 40-60 km optical distance on single fiber	
3	Should have LC type connector	
4	Should have 10 Gigabit Ethernet capacity on single mode fiber	
5	Should support Digital Diagnostic Monitoring feature with following operating parameters: Transceiver temperature" 0 ~ 70 degC Laser bias current Transmitted optical power: 0 ~ +5dB Received optical power: -22dBm Transceiver supply voltage: 3.3V It also provides a sophisticated system of alarm and warning flags	
6	OEM should be having valid ISO 9000 certificate	
7	Should have CE and FCC and UL or equivalent regulatory Certificate	
8	Operating temperature of the SFP should be minimum 0 to 70°C (23 to 149 °F)	
9	Tx/Rx wavelength should be either in the range of 1300nm or 1500nm.	

10	For Tx/Rx wavelength in the range of 1300 nm (eg.1270nm/1330nm/1550nm) power budget should be minimum 22 dBm	
11	Complies with SFF-8431 SFP+ MSA (Multi-Source Agreements Standards)	
12	Complies with 1550nm DFB laser transmitter & CPRI Option 7, 8	
13	Should support 9.83G to 11.32Gb/s Multi-Rate & 2-wire interface for management and diagnostic monitor compliant with SFF-8472	
14	Warranty : 1 Year	

SOR Item No. 7: 10G UD SFP 40 KM :

Srl. No.	Technical Specification	Compliance (Complied/ Not complied)
1	SFP module should comply with multi-source agreement (MSA), enabling compatibility with equipment of CISCO, Juniper, D-Link, Nokia, Ciena etc.	
2	Should support 40 Km. on dual Fiber	
3	Should support 1310/1550 nm wavelength	
4	Transmitted Optical Power range : 6.00 dBm. ~- 1.00 dBm. Received Optical Power range : 1 dBm. ~ -20.00 dBm.	
5	Should have LC type connector.	
6	Should have 10Gigabit Ethernet capacities on single mode fiber.	
7	Should support DDMI/DOM feature. Option should be available for SFP+.	
8	OEM should be having valid ISO 9000 & ISO 14000 certification on the date of opening of bid.	
9	Should have CE and FCC and UL or equivalent regulatory compliances.	
10	Operating temperature of the SFP should be minimum 0 to 65 °C (23 to 149 °F)	
11	Warranty : 1 Year	

SOR Item No. 8 : Single Mode Patchcord LC/PC-E2000 5 mtr.:

Srl. No.	Parameter	Specification	Compliance (Yes/No)
1	Connector type, Connector End A	LC/PC	
2	Connector type, Connector End B	E2000	
3	Cable type	Simplex	

4	Fiber type	Single Mode 9/125 micron	
5	Cable Size, Outer dia (in mm)	3	
6	Cord Length (in m)	5	
7	Jacket material (Sheath material)	LSZH	
8	Cable colour	Yellow	
9	Operating temperature	-20 deg.C to +60 deg C	
10	Connector Insertion loss, Max. (in dB)	0.2	
11	Connector Return loss , Min. (in dB)	55	
12	Material of Ferrule	Zirconia Ceramic, Pre Radiused and pre polished	
13	Durability	500Mating cycle	
14	Fibre for Patch Cord	G657.1A	
15	Warranty	1 Year	

SOR Item No. 9 to 12 : Single Mode Patchcord LC/PC-LC/PC Patch Cord 2mtr./5 mtr./10 mtr./20 mtr.:

Srl. No.	Parameter	Specification	Compliance (Yes/No)
1	Connector type, Connector End A	LC/PC	
2	Connector type, Connector End B	LC/PC	
3	Cable type	Simplex	
4	Fiber type	Single Mode 9/125 micron	
5	Cable Size, Outer dia (in mm)	0.9 / 3	
6	Cord Length (in m)	2/5/10/20	
7	Jacket material (Sheath material)	LSZH / PVC	
8	Cable colour	Yellow	
9	Operating temperature	-10 deg C to +60 deg C	
10	Connector Insertion loss, Max. (in dB)	0.2 / 0.3	
11	Connector Return loss , Min. (in dB)	50 / 55	
12	Material of Ferrule	Zirconia Ceramic, Pre Radiused and pre polished	
13	Durability	200 Mating cycle	
14	Warranty	1 Year	

SOR item Nos. 13 & 14 : Single Mode Patchcord FC/PC-LC/PC Patch Cord 10 mtr./20 mtr.:

Srl. No	Parameter	Specification	Compliance (Yes/No)
1	Connector type, Connector End A	FC/PC	
2	Connector type, Connector End B	LC/PC	
3	Cable type	Simplex	
4	Fiber type	Single Mode 9/125 micron	
5	Cable Size, Outer dia (in mm)	3	
6	Cord Length (in m)	10/20	
7	Jacket material (Sheath material)	PVC	
8	Cable colour	Yellow	
9	Operating temperature	-10 deg.C to +60 deg C	
10	Connector Insertion loss, Max. (in dB)	0.3	
11	Connector Return loss , Min. (in dB)	50	
12	Material of Ferrule	Zirconia Ceramic, Pre Radiused and pre polished	
13	Durability	500 Mating cycle	
14	Warranty	1 Year	

SOR Item No.15 : Single Mode Patchcord FC/PC-FC/PC Patch Cord 10 mtr.:

Srl. No.	Parameter	Specification	Compliance (Yes/No)
1	Connector type, Connector End A	FC/PC	
2	Connector type, Connector End B	FC/PC	
3	Cable type	Simplex	
4	Fiber type	Single Mode 9/125 micron	
5	Cable Size, Outer dia (in mm)	0.9 / 3	
6	Cord Length (in m)	10	
7	Jacket material (Sheath material)	LSZH / PVC	
8	Cable colour	Yellow	
9	Operating temperature	-10 deg C to +60 deg C	
10	Connector Insertion loss, Max. (in dB)	0.2 / 0.3	
11	Connector Return loss , Min. (in dB)	50 / 55	

12	Material of Ferrule	Zirconia Ceramic, Pre Radiused and pre polished	
13	Durability	200 Mating cycle	
14	Warranty	1 Year	

SOR Item No.16 : Single Mode Patchcord SC/PC-LC/PC Patch Cord 20 mtr.:

Srl. No.	Parameter	Specification	Compliance (Yes/No.)
1	Connector type, Connector End A	SC/PC	
2	Connector type, Connector End B	LC/PC	
3	Cable type	Simplex	
4	Fiber type	Single Mode 9/125 micron	
5	Cable Size, Outer dia (in mm)	3	
6	Cord Length (in m)	20	
7	Jacket material (Sheath material)	LSZH / PVC	
8	Cable colour	Yellow	
9	Operating temperature	-10 deg.C to +60 deg C	
10	Connector Insertion loss, Max. (in dB)	0.3	
11	Connector Return loss , Min. (in dB)	50	
12	Material of Ferrule	Zirconia Ceramic, Pre Radiused and pre polished	
13	Durability	500 Mating cycle	
14	Warranty	1 Year	

SOR Item No. 17: Single Mode Patchcord FC/PC-SC/PC Patch Cord 10 mtr.:

Srl. No.	Parameter	Specification	Compliance (Yes/No)
1	Connector type, Connector End A	FC/PC	
2	Connector type, Connector End B	SC/PC	
3	Cable type	Simplex	
4	Fiber type	Single Mode 9/125 micron	
5	Cable Size, Outer dia (in mm)	3/1.2	
6	Cord Length (in m)	10	
7	Jacket material (Sheath material)	LSZH / PVC	
8	Cable colour	Yellow	
9	Operating temperature	-10 deg.C to +60 deg C	

10	Connector Insertion loss, Max. (in dB)	0.3	
11	Connector Return loss , Min. (in dB)	50	
12	Material of Ferrule	Zirconia Ceramic, Pre Radiused and pre polished	
13	Durability	200 Mating cycle	
14	Warranty	1 Year	

SOR Item No.18: Single Mode Patchcord SC/PC-SC/PC Patch Cord 10 mtr. :

Srl. No.	Parameter	Specification	Compliance (Yes/No)
1	Connector type, Connector End A	SC/PC	
2	Connector type, Connector End B	SC/PC	
3	Cable type	Simplex	
4	Fiber type	Single Mode 9/125 micron	
5	Cable Size, Outer dia (in mm)	0.9/1.2/1.6/2/3	
6	Cord Length (in m)	10	
7	Jacket material (Sheath material)	LSZH / PVC	
8	Cable colour	Yellow	
9	Operating temperature	-10 deg.C to +60 deg C	
10	Connector Insertion loss, Max. (in dB)	0.3	
11	Connector Return loss , Min. (in dB)	50 / 55	
12	Material of Ferrule	Zirconia Ceramic, Pre Radiused and pre polished	
13	Durability	200 Mating cycle	
14	Warranty	1 Year	

SOR Item No.19: FC/PC – FC/PC Type adaptor:

Srl. No.	Parameter	Specification	Compliance (Yes/No)
1	Connectors	FC (female) to FC (female)	
2	Body material	Metal	
3	Mounting	Free standing or bulkhead 8.5mm hole (.34in)	
4	Alignment sleeve material	Zirconia Ceramic	
5	Channels	Simplex	
6	Precision	Single mode	

7	Colour	Metal	
8	Insertion Loss (IL)-	<0.2dB	
9	Durability	- <0.1dB change after 500 mating	
10	Operating Temperature	-4 ° C to +75 ° C (+25 ° F to +165 ° F)	
11	Warranty	1 Year	

SOR Item No.20: SC/PC-SC/PC Type adaptor:

Srl. No.	Parameter	Specification	Compliance (Yes/No)
1	Configuration	Simplex	
2	FO Connector	SC/PC	
4	Fiber Mode	Single Mode (SM)	
5	Attenuation Tolerance	±0.5dB	
6	Return Loss	:≥55dB	
7	Sleeve material	Zirconia-Ceramic / Phosphor-Bronze	
	Warranty	1 Year	

SOR Item No.21: LC/PC-LC/PC Type adaptor:

Srl. No.	Specification	Compliance (Yes/No.)
1	Operating Temperature	-40°C to +85°C -40°C
2	Connection Durability	500 Mating
3	Insertion Loss	< 0.3 dB
4	Warranty	1 Year

SOR Item No. 22 to 25: 5 dB / 7 dB/ 10 dB/ 2 dB LC/PC Type attenuator:

Srl. No.	Specification	Compliance (Yes/No.)
1	Connector First End	LC, Male
2	Connector Second End	LC, Female
3	Attenuation	05dB/ 7 DB/ 10 dB/ 2 dB
4	Cable Mode	Simplex
5	Media	SMF
6	Standard	OS1
7	Compatible OEM	Industry standard
8	Warranty	1 Year

SOR Item No. 26: 19 Inch Wall Mountable 12U Rack:

Srl. No.	Technical specification	Compliance (Yes/No)
1	Type of Racks: Wall mount racks, Size of Rack Enclosure- 12U, Depth of the Rack (mm)- 600	
2	Mount Type: Wall mount, Front glass Door: Yes, Type of glass used in front door: Transparent Toughened Glass.	
3	Material used for rear door: Cold Rolled Steel Metal, Rear Door: Yes.	
4	Side Panels: Fixed type	
5	Secure Locks for doors: Available, Keyboard Tray Sliding and Rotary: No.	
6	Shelf For CRT/TFT Display: No.	
7	Cable Channel in rear side for cable management: Yes, Support cable entry from top or bottom: Yes.	
8	Number of Horizontal cable managers: 2, Numbers of Modem trays: 2	
9	Number of Fan for Heat dissipation (no's): 2, Number of fan trays: 1.	
10	Heavy Duty Caster Wheels: yes. If yes, then Front Break Options: Available	
11	Load Bearing Capacity (Kgs): 100.	
12	PDU Power Strips of 6x5A with MCB protections: Yes.	
13	Copper Earthing Strip -Yes.	
14	Warranty : 1 Year	

SOR Item No. 27 to 29 : Rack Mountable fully Loaded 24F /48F FMS

Srl. No.	Technical specification	Compliance (Yes/No.)
1	The body of FDMS shall be made of MS Steel with thickness of not less than 1.6mm.	
2	It should be mountable in standard 19" rack and of slider type (provision for 21" Clamps).	
3	FDMS should be supplied with required number of splice trays based on the fiber count	
4	FDMS should be able to or have slack to store incoming cable of length 2M under the splice trays	
5	It should be supplied with 48/24 Nos. of pigtails of respective type of connector (as per SOR) of minimum 1.5 meter length.	
7	Colour coded pigtails (900 μm tight jacket) shall be provided for easy identification.	
8	FDMS should be supplied with adapter plates in such a way that it can be easily removable without disturbing other plates.	
9	The FDMS should be supplied with arrangement of required Nos. of adapters (as per requirement).	
10	The adaptors shall be fixed in such a way that these shall be easily accessible protecting the eye from direct exposure to laser.	
11	There should be minimum two nos. of trays for the provision of termination of the fibers & sufficient space for routing of the fibers in the trays.	
12	Trays shall be numbered bottom to top (tray no. 1 is lower most).	
13	Pigtails shall be labeled through colour coding/ferruling.	

14	Adaptors shall be numbered Bottom to Top or Left to Right in ascending order.	
15	All adaptors shall be provided with dust protection caps.	
16	Important Do's and Don'ts about the operation of the FDMS shall be clearly indicated at convenient place on the FDMS.	
17	The FDMS shall be manufactured as per latest state of art technology.	
18	The FDMS shall be protected against the entry of dust and insects, rodents etc.	
19	Body should be of MS steel; powder coating painting (min. 70 micrometer thickness) shall be provided with rust resistance paint.	
20	Marking: The marking on the system shall be indelible and following minimum information shall be provided by way of engraving or Laser printing method: a) Manufacturer's name & date/ year of production. b) Model No./Batch No./ Serial No. c) Capacity i.e. No. of cables and the fibers. d) Identification details/ cables/ Fiber/ labeling facility.	
21	Operating Temperature: -40°C to +85°C.	
22	Insertion Loss: Insertion Loss of complete patch cord including adapter when tested from each direction in all conditions of operations: ≤ 0.3 dB Insertion Loss of Adaptors: ≤ 0.1 dB	
23	Return Loss for each connector of patch cord: ≥ 50 dB	
24	The connectors must be make of reputed OEMs R&M, H&S, Commscope etc.	
25	Mounting & splicing accessories to be supplied along with FDMS	
26	Warranty : 1 Year	

SOR Item No. 30: 100G QSFP28-ER 40 Km:

Srl. No.	Technical specification	Compliance (Yes/No):
1	Optics Should be compatible with OEM equipment of Cisco, Juniper, D-Link, Nokia, Ciena, WatchDog	
2	Optics Should support up to 40 km optical distance on single mode fiber(ER type)	
3	Connector type Dual LC	
4	Signalling rate, each channel 25.78125 GBd +/-100 ppm	
5	Transmitter Type: 4x26 Gb/s EML-Cooled LAN WDM transmitter	
6	Standards compliance (Ethernet/OTN Standard, for e.g. 100GBASE-LR4) IEEE 802.3ba-2010	
7	Operating Temperature (range) 0° C to 70° C	
8	Transmitter output power, each channel (minimum, maximum) - 2.9dBm - 7.0 dBm	
9	Cable type SMF	
10	Receiver input power, each channel (minimum, maximum) – 20.9dBm,4.0 dBm	

11	Transmitter wavelengths (range)	
	1294.53nm ~ 1296.59 nm	
	1299.02nm ~1301.09 nm	
	1303.54nm ~ 1305.63 nm	
	1308.09nm ~ 1310.19 nm	
12	Should support below Digital Diagnostic Monitoring features	
	Transceiver temperature	
	Laser bias current (4-Channel)	
	Transmitted optical power (4-Channel)	
	Received optical power (4-Channel)	
	Transceiver supply voltage	
	Power consumption < 4.5W	
13	Warranty : 3 Years	

SOR Item No.31: Type-C Router:

Srl. No.	Feature Description		Compliance (Yes/No)
1	Hardware Features	The device should be 19" rack mountable. mounting accessories are to be provided.	
		Should have minimum 4 Gig of RAM and 8 GB flash	
		The device should have min 6 x 1000BaseT and 2 x 1G SFP ports, out of which 4 x 1000BaseT and 2 x 1G SFP must be capable of routed WAN connectivity	
		The device should be RoHS 2 complaint, NDPP certified	
		The MTBF of the device should be at least 25 years to minimize device failure after deployment	
2	Performance	The device should have minimum 200 Kpps of routing performance for 64 byte packet size	
		The device should support IPsec performance of 100 Mbps for IMIX packets	
3	Device Routing Features	The device should have IPv4 and IPv6 routing capabilities	
		The device should support OSPF, IS-IS, and BGP	
		Multicast Support – IGMP, PIM-SM, SSM	
		The device should support virtual routers for multitenancy in future	
		The device should support ECMP and Policy based routing	
4	Switching features	The device should support VLAN, STP, RSTP and LLDP	
5	IPsec features	The device should support Site to Site and Multi-Site IPsec capabilities	
		IPv4 and IPv6 IPEC VPN	
		IPsec authentication algorithms: MD5, SHA-1, SHA-128, SHA-256	
		The device should support DES and 3DES encryption capabilities	
		The device should support GRE	

6	QOS Features	The device should support 802.1p, DSCP, WRED, Hierarchal shaping and policing	
7	MPLS Features	The device should support MPLS – L2 VPN, L3VPN, Pseudo wire, VPLS, RSVP-TE and FRR	
8	Application security Features	The device should support Application level visibility, Quality of service and security with control	
9	OAM Features	IEEE 802.3ah Link Fault Management (LFM) IEEE 802.1ag Connectivity Fault Management (CFM), IP Monitoring, Flow Monitoring, BFD	
10	Management Features	The device should support ZTP, SNMP, SSH, telnet capabilities	
		Should be manageable using CLI and GUI	
		Should support debugging capabilities and usage capabilities of bandwidth and application	
11	Role based Access Control (RBAC)	Multiple Hierarchical levels	
		GUI support for Administration, Operations and Management	
12	SD-WAN Scale and Support	Should support at least 200 VPN tunnels	
		Should be capable to supporting at least 50 Mbps of SDWAN throughput (measured with 44KB Page Size of HTTP traffic) with encryption and Application QoS	
		The device should be capable of working as SD-WAN CPE for remote site only by adding license	
13	Warranty & Other	The device should be provided with advanced hardware replacement warranty and ongoing software upgrades for all major and minor releases for a period of 3 years. OEM certificate to be produced confirming back-to-back support agreement with OEM. Supplier shall provide Installation & commissioning technical support.	

SOR Item No. 32: Supply of 24 Port Type-G Switch:

Srl. No.	Technical Specifications	Compliance (Yes/No)
1	Should have 24 ports 10/100/1000 Mbps Base T	
2	Should have support for 4 ports 10G SFP+ Based Gigabit ports.	
3	Should have at least 128Gbps switching fabric	
4	Should support at least 16Kentries in the MAC table	
5	Should support at least 1K ARP entries	
6	Packet forwarding rates 95 million PPS	
7	Should Support 1000 minimum VLANs.	
8	Should have internal AC Power Supply 100 to 240 V AC with 50 to 60 Hz and equipped with 3 pin plug	
9	Should support Dual Images	
10	Should support port mirroring and jumbo frame	
11	Should support following for min. 64 Groups :	

	i) IGMP Snooping, ii) IGMP v1/v2/v3 awareness Snooping, iii) IGMP Snooping Queried	
12	Should support RSTP, Spanning-tree root guard, Port Fast, Loopback Detection and BPDU Guard/Filter or similar functionalities	
13	Switch should support:	
	i) Switch should have IP SLA monitoring (or equivalent functionality) for Latency, Packet drop, Jitter etc. and should also support SNMP polling for IP SLA monitoring.	
	ii) Switch should support advance routing features like RIP/OSPF if required by upgrading OS/License	
14	Should support following security features viz.:	
	i) Web Management (HTTPS),	
	ii) Broadcast/Multicast/Unicast Storm Control,	
	iii) Control plane DoS Attack Prevention	
15	Switch should support following SNMP traps or Syslog	
	i) Interface UP & Down	
	ii) Optical power SFP threshold alarms	
	iii) STP Topology Changes and New root bridge	
	iv) LLDP table changes	
	v) Threshold alarms for Temperature.	
16	Switch should comply to following Temperature performance parameters:	
	i) Operating Temperature - min -0 to 40 °C (23 to 122 °F)	
	ii) Storage Temperature - min -0 to 70 °C (-40 to 158 °F)	
17	It shall support MAC address notification to allow administrators to be notified of users added to or removed from the network.	
18	The switch shall be designed for continuous operations.	
19	It should support IPv6/v4-L3 and IPv6-Multicast functionalities/features	
20	Safety Requirement: -	
	Switch should have safety compliance of UL.	
21	Electromagnetic Compatibility (EMC) Requirements: -	
	Switch should have EMC compliance of CE and FCC.	
22	The LAN switch shall support a console port or auxiliary/Ethernet port for the purpose of local and remote configuration and diagnostics	
23	IPv6 feature should be ready from day 1	
24	Qualitative Requirements: -	
	The equipment shall be manufactured in accordance with the international standards ISO 9000:2008 or later for which the manufacturer shall be duly accredited. A quality plan describing the quality assurance system followed by the manufacturer shall be required to be submitted	
	The MTBF (Mean Time Between Failure) and MTTR (Mean Time To Repair) predicted and observed values shall be furnished along with calculations by the manufacturer	
25	The switch should be NDPP / NDcPP certified	
26	Warranty & Other : The device should be provided with advanced hardware replacement warranty and ongoing software upgrades for all major and minor releases for a period of 3 years. OEM certificate to be produced confirming back to-back support agreement with OEM.	
	Note :- 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 included in the offer. Supplier shall provide Installation & commissioning technical support.	
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SOR Item No. 33: 10G UD SFP of 20KM:

Srl. No.	Technical specification	Compliance (Yes/No)
1	Should be Multi-vendor MSA compatible with OEM equipment of Cisco, Juniper, D Link, Nokia, Ciena etc.	
2	Should support 10 - 20 km. optical distance on dual fiber	
3	Should have LC type connector	
4	Should have 10 Gigabit Ethernet capacity on single mode fiber	
5	Should support Digital Diagnostic Monitoring feature with following operating parameters: Transceiver temperature" 0 ~ 70 degC Laser bias current Transmitted optical power: 0 ~ -5dBm Received optical power: -13dBm Transceiver supply voltage: 3.3V It also provides a sophisticated system of alarm and warning flags	
6	OEM should be having valid ISO 9000 Certificate	
7	Should have CE and FCC and UL or equivalent regulatory Certificate	
8	Operating temperature of the SFP should be minimum 0 to 70°C (23 to 149 °F)	
9	Complies with SFF-8431 SFP+ MSA (Multi-Source Agreements Standards)	
10	Complies with 1310nm DFB laser transmitter & CPRI Option 7, 8	
11	Should support 9.83G to 11.32Gb/s Multi-Rate & 2-wire interface for management and diagnostic monitor compliant with SFF-8472	
12	Warranty : 1 Year	

SOR Item No. 34: 1G UD SFP of 20KM:

Srl. No.	Technical specification	Compliance (yes/ No)
1	Should be Multi-vendor MSA compatible with OEM equipment of Cisco, Juniper, D Link, Nokia, Ciena etc.	
2	Should support 10 - 20 km. optical distance on dual fiber	
3	Should have LC type connector	
4	Should have 1 Gigabit Ethernet capacity on single mode fiber	
5	Should support Digital Diagnostic Monitoring feature with following operating parameters: Transceiver temperature" 0 ~ 70 degC Laser bias current	

	Transmitted optical power: 0 ~ -5dBm Received optical power: -13dBm Transceiver supply voltage: 3.3V It also provides a sophisticated system of alarm and warning flags	
6	OEM should be having valid ISO 9000 Certificate	
7	Should have CE and FCC and UL regulatory Certificate	
8	Operating temperature of the SFP should be minimum 0 to 70°C (23 to 149 °F)	
9	Complies with SFF-8431 SFP+ MSA (Multi-Source Agreements Standards)	
10	Complies with 1310nm DFB laser transmitter & CPRI Option 7, 8	
11	Warranty : 1 Year	

Annexure-II

PROFORMA FOR THE LONG-TERM MAINTENANCE SUPPORT
Not used

Annexure-III

**Principal Executive Director,
Eastern Region,
RailTel Corporation of India Ltd.**

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Subject: Manufacturer Authorisation form (MAF) to M/s for
Ref: GeM Bid No. GEM/2023/B/3944631 dated 12.09.2023

Dear Sir,

We, M/s....., are established and reputed manufacturer and service provider of, having our registered office at

We hereby authorise M/s (bidder name), Office to participate in bid and subsequently upon award of the bid to execute the supply of our range of products against your above said bid.

We further extend our warranty for years for our range of products offered by M/s against the above-said bid.

Thanking you,
Best regards,

Authorised Signatory

Annexure-IV

FORMAT FOR AFFIDAVIT TO BE UPLOADED BY TENDERER ALONG WITH THE TENDER DOCUMENTS

(To be executed in presence of Public notary on non-judicial stamp paper of the value of Rs.100/- . The stamp paper has to be in the name of the tenderer)**

I..... (Name and designation)** appointed as the attorney/authorized signatory of the tenderer (including its constituents),
M/s. _____ (hereinafter called the tenderer) for the purpose of the Tender documents for the work of _____ as per the tender No. _____ of (RailTel Corporation of India Ltd., Eastern Region), do hereby solemnly affirm and state on the behalf of the tenderer including its constituents as under:

- (i) I/We the tenderer (s) am/are signing this document after carefully reading the contents.
- (ii) I/we the tenderer(s) also accept all the conditions of the tender and have signed all the pages in confirmation thereof.
- (iii) I/We hereby declare that I/We have downloaded the tender documents from RailTel's website www.railtelindia.com or GeM Portal gem.gov.in. I/We have verified the content of the document from the website and there is no addition, no deletion or no alteration to the content of the tender document. In case of any discrepancy noticed at any stage i.e. evaluation of tenderer's, execution of work or final payment of the contract, the master copy available with the railway Administration shall be final and binding upon me/us.
- (iv) I/We declare and certify that I/we have not made any misleading or false representation in the forms, statements and attachments in proof of the qualification requirements.
- (v) **I/We also understand that my/our offer will be evaluated based on the documents/credentials submitted along with the offer and same shall be binding upon me/us.**
- (vi) **I/We declare that the information and documents submitted along with the tender by me/us are correct and I/we are fully responsible for the correctness of the information and documents submitted by us.**
- (vii) I/We undersigned that if the certificates regarding eligibility criteria submitted by us are found to be forged/false or incorrect at any time during process for evaluation of tenders, it shall lead to forfeiture of the tender EMD besides banning of business for five year on entire RailTel Corporation of India Limited. Further, I/we (*insert name of the tenderer*) ** _____ and all my/our constituents understand that my/our offer shall be summarily rejected.
- (viii) I/we also understand that if the certificates submitted by us are found to be false/forged or incorrect at any time after the award of the contract, it will lead to termination of the contract, along with forfeiture of EMD and Performance Guarantee besides any other action provided in the contract including banning of business for five year on entire RailTel Corporation of India Limited.

**DEPONENT
SEAL AND SIGNATURE
OF THE TENDERER**

VERIFICATION

I/We above named tenderer do hereby solemnly affirm and verify that the contents of my/our above affidavit are true and correct. Nothing has been concealed and no part of it is false.

**DEPONENT
SEAL AND SIGNATURE
OF THE TENDERER**

Place:

Dated:

** The contents in Italics are only for guidance purpose. Details as appropriate are to be filled in suitably by tenderer. Attestation before Magistrate/Notary Public.

PROFORMA FOR PERFORMANCE BANK GUARANTEE BOND

(On Stamp Paper of Rs One Hundred)

(To be used by approved Scheduled Banks)

1. In consideration of the RailTel Corporation of India Limited 19th Floor, Aurora Water Front Building, GN. 34/1, Block GN, Sector-V, Salt Lake City, Bidhannagar, Kolkata-700091 (Herein after called RailTel) having agreed to exempt
.....(Hereinafter called “the said Contractor(s)”) from the demand, under the terms and conditions of an Purchase Order/LOA No.....dated.....made between.....
.....and..... for (hereinafter called “ the said Agreement”) of security deposit for the due fulfillment by the said Contractor (s) of the terms and conditions contained in the said Agreement, on production of a Bank Guarantee for Rs.(Rs only). We (indicate the name of the Bank) hereinafter referred to as “the Bank”) at the request of Contractor(s) do hereby undertake to pay the RailTel an amount not exceeding Rs. against any loss or damage caused to or suffered or would be caused to or suffered by the RailTel by reason of any breach by the said Contractor(s) of any of the terms or conditions contained in the said Agreement.
2. We, Bank do hereby undertake to pay the amounts due and payable under this Guarantee without any demur, merely on demand from the RailTel stating that the amount is claimed is due by way of loss or damage caused to or would be caused to or suffered by the RailTel by reason of breach by the said Contractor(s) of any of terms or conditions contained in the said Agreement or by reason of the Contractor(s) failure to perform the said Agreement. Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs
.....
3. We, bank undertake to pay to the RailTel any money so demanded notwithstanding any dispute or disputes raised by the Contractor(s) / Bidder(s) in any suit or proceedings pending before any court or Tribunal relating thereto our liability under this present being, absolute and unequivocal. The payment so made by us under this Bond shall be a valid discharge of our liability for payment there under and the Contractor(s) / Bidder(s) shall have no claim against us for making such payment.
4. We,..... Bank further agree that the Guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Agreement and that it shall continue to be enforceable till all the dues of the RailTel under or by virtue of the said Agreement have been fully paid and its claims satisfied or discharged or till RailTel certifies that the terms and conditions of the said Agreement have been fully and properly carried out by the said Contractor(s) and accordingly discharges this Guarantee. Unless a demand or claim under the Guarantee is made on us in writing on or before the We shall be discharged from all liability under this Guarantee thereafter.
5. We,..... (indicate the name of Bank) further agree with the RailTel that the RailTel shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the Agreement or to extend time of to postpone for any time or from time to time any of the powers exercisable by the RailTel against the said contractor(s) and to forbear or enforce any of the terms and conditions relating to the said Agreement and we shall not be relieved from our liability by reason of any such variation, or extension to the said Contractor(s) or for any forbearance, act or omission on the part of RailTel or any indulgence by the RailTel

to the said Contractor(s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have affect of so relieving us.

- 6. This Guarantee will not be discharged due to the change in the Constitution of the Bank or the Contractor(s) Supplier(s).
- 7. We, (indicate the name of Bank) lastly undertake not to revoke this Guarantee during its currency except with the previous consent of the RailTel in writing.
- 8. Notwithstanding anything contained herein,
 - 1. Our liability under the Bank guarantee shall not exceed Rs. (In Rupees)
 - 2. This Bank Guarantee shall be valid up toand
 - 3. We are liable to pay the guaranteed and or any part thereof under this Bank Guarantee only and only if you serve upon is a written claims or demand or before (date of expiry of guarantee).

Dated the day of 2023

for
(indicate the name of the Bank)

Witness

- 1. Signature
 Name
- 2. Signature
 Name

General Conditions:

1. Tenderers Address

Tenderer shall state in the tender his postal address fully and clearly. Any communication sent to the Tenderers by post at his said address shall be deemed to have reached the tenderer duly & timely, notwithstanding the fact the communication could not reach the tenderer at all or in time for whatever reason. Important documents shall be sent by Registered post.

2. Law governing the contract.

The contract shall be governed by the law for the time being in force in the Republic of India. Compliance to regulations and bye-laws-The contractor shall conform to the provision of any statute relating to the works and regulations and bye-laws of any local authority and of any water and lighting companies or undertakings, with whose system the work is proposed to be connected and shall before making any variation from the drawings or the specifications that may be necessitated by so confirming give to the Engineer notice specifying the variation proposed to be made and the reason for making the variation and shall not carry out such variation until he has received instructions from the Engineer in respect thereof. The Contractor shall be bound to give all notices required by statute, regulation or bye-laws as aforesaid and to pay all fees and taxes payable to any authority in respect thereof.

3. Force Majeure clause:-

If at any time, during the continuance of this contract, the performance, in whole or part, by either party, of any obligation under this contract shall be prevented or delayed by reason of any war, hostility, act of the public enemy, Civil Commotion, Sabotage, Fires, Floods, Earth quakes, explosions, strikes, epidemics, quarantine restrictions, lockouts, any statute, statutory rules/regulation, order of requisitions issued by any Government Department of Competent Authority or acts of God (here-in-after referred to as event) then provided notice of the happening of any such event is given by either party to the other within twenty one days from the date of occurrence thereof, neither party shall, by reason of such event, be entitled to terminate this contract nor shall either party have any claim for damage against the other in respect of such non- performance or delay in performance, and the obligations under the contract shall be resumed as soon as practicable after such event has come to an end or ceased to exist, Provided further that if the performance in whole or part of any obligation under this contract of prevented or delayed by reason of any such event beyond a period as mutually agreed to by the RailTel and the Contractor after any event or 60 days in the absence of such an agreement whichever is more, either party may at its option to terminate the contract provided also that if the contract is so terminated under this clause the RailTel may at the time of such termination take over from the Contractor at prices as provided for in the contract, all works executed or works under execution.

4. Illegal Gratification:

Any bribe, commission, gift or advantage given, promised or offered by or on behalf to the contractor or his partner, agent or servant or anyone on his behalf to any officer or employees of the RailTel, or to any person on his behalf in relation to obtaining or the

execution of this or any other contract with the RailTel shall, in addition or any criminal liability which he may incur, subject the contractor to the rescission of the contract and all other contracts with the RailTel and to the payment of any loss or damage resulting from such decision and the RailTel shall be entitled to deduct the amounts so payable from any moneys due to the Contractor (s) under this contract or any other contracts with the RailTel.

The contractor shall not lend or borrow from or have or enter into any monetary dealings or transactions either directly or indirectly with any employee of the RailTel and if he shall do so, the RailTel shall be entitled forthwith to rescind the contract and all other contracts with the RailTel. Any question or dispute as to the commission or any shall offence or compensation payable to the RailTel under this clause shall be settled by the Regional General Manager of RailTel, in such a manner as shall consider fit and sufficient and his decision shall be final and conclusive. In the event of rescission of the contract under this clause, the contractor will not be paid any compensation whatsoever except payment for the work done up to date of rescission.

5. LABOUR

Wages to Labour- The contractor shall be responsible to ensure compliance with the provisions of the Minimum Wages Act, 1948 (hereinafter referred to as the "said Act") and the Rules made there- under in respect of any employees directly or through petty contractors or sub contractors employed by him on road construction or in building operations or in stone breaking or stone crushing for the purpose of carrying out this contract. If in compliance with the terms of the contract, the contractor supplied any labour to be used wholly or partly under the direct orders and control of the RailTel whether in connection with any work being executed by the contractor or otherwise for the purpose of the RailTel such labour shall, for the purpose of the clause, still be deemed to be persons employed by the contractor. If any moneys shall as a result of any claim or application made under the said Act be directed to be paid by the RailTel, such moneys shall be deemed to be moneys payable to the RailTel by the Contractor and on failure by the contractor to repay any moneys paid by it as aforesaid with seven days after the same shall have been demanded, the RailTel shall be entitled to recover the same form any moneys due or accruing to the contractor under this or any other contractor with the RailTel.

6. TERMINATION OF CONTRACT OWING TO DEFAULT OF CONTRACTOR:

The purchaser may, without prejudice to any other remedy for breach of contract, by written notice of default, sent to the Tenderer, terminate this contract in whole or in part.

- a) If the tenderer fails to deliver any or all of the goods within the time period(s) specified in the contract.
- b) If the tenderer fails to perform any other obligation(s) under the contract; and
- c) If the tenderer, in either of the above circumstance(s) does not remedy his failure within a period of 30 days (or such longer period as the Purchaser may authorize in writing) after receipt of the default notice from the Purchaser.

7. RIGHT OF RAILTEL AFTER TERMINATION OF CONTRACT OWING TO DEFAULT OF CONTRACTOR:

- a) The contractor shall have no claim to compensation for any loss sustained by him by reason of his having purchased or procured any materials or entered into any commitments or made any advances on account of or with a view to the execution of the works or the performance of the contract and contractor shall not be entitled to recover or be paid any sum for any works thereto not actually performed under the contract, unless or until the Engineer shall have certified the performance of such work

and the value payable in respect thereof and the Contractor shall only be entitled to be paid the value so certified.

- b) The Engineer or Engineer's Representative shall be entitled to take possession of any materials, tools, implements, machinery or buildings on the works or on the property on which these are being or ought to have been executed, and to retain the employ the same in further execution of the works without the contractor being entitled to any compensation for the use and employment thereof or for wear and tear or destruction thereof.
- c) The Engineer shall, as soon as may be practicable after removal of the contractor fix and determine expert or by or after reference to the parties or after such investigation or enquiries as he may consider fit to make or institute and shall certify what amount (if any) has at the time of termination of the contract been reasonably earned by or would reasonably accrue to the Contractor in respect of the work then actually done by him under the contract what was the value of any unused or partially use materials, any constructional plants and any temporary works upon the site. The legitimate amount due to the contractor after making necessary deductions and certified by the Engineer should be released expeditiously.

8. SETTLEMENT OF DISPUTE AND ARBITRATION: -

Any dispute or difference whatsoever arising between the parties out of relating to the construction, meaning, scope, operation or effect of this contract or the validity or the breach thereof shall be settled by a sole arbitrator in accordance with provisions contained in Arbitration and Conciliation Act, 1996 as amended and the award made in pursuance thereof shall be binding on the parties. The venue of such arbitration or proceedings thereof shall be New Delhi.

- All arbitration proceedings shall be conducted in English. Resources against any Arbitral award so rendered may be entered into court having jurisdiction or application may be made to such court for the order of enforcement as the case may be.
- The arbitrator will be appointed by the Chairman & Managing Director of RailTel Corporation of India Ltd.
- Each of the parties agree that notwithstanding that the matter may be referred to Arbitrator as provided therein, the parties shall nevertheless pending the resolution of the controversy or disagreement continue to fulfill their obligation under this agreement so far as they are reasonably able to do so.
