Additional Terms & Conditions for "Procurement of Electronics items-25-26/03 through GeM"

Ref: GeM Bid No. GEM/2025/B/6950187

Information to Bidder for the "Procurement of Electronics items-25-26/03 through GeM".

dated: 01.12.2025

1.0 Name of work & Type of tender:

Name of Work "Procurement of Electronics items-25-26/03 through GeM".

Type of Tender: Open tender - Two Packet System.

Note: If any bidder has quoted prices in technical bid, therefore, Bid will be summarily rejected.

2.0 Scope of work:

The item/items in this bid should be quoted as per the technical specifications: The details of the specifications along with consignee/site details are also available on website www.railtelindia.com

(The technical specs which are not available on GeM portal for the required product, same is available in uploaded ATC).

- (i) 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. The technical specifications are mentioned in Annexure-I.
- (ii) OEM or Authorized distributor/Partner of OEM should have a registered office in India to provide sales and 24x7 support in India. The certificate to this effect should be submitted. The bidder should be either OEM or his authorized dealer/distributor
- (iii) In case of the authorized distributor/partner certificate from the OEM to this effect should be submitted. If OEM is quoting then OEM should submit the certificate. In the tender, either the manufacturer or its authorized dealer will be considered as valid bidders. In cases where the manufacturer has submitted the bid, the bids of its authorized dealer will not be considered and EMD will be returned. And in case of violations, both infringing bids will be rejected.
- (iv) The equipment offered shall have complete data sheets and detailed description on OEM web sites.
- (v) Hardware and Software offered by OEM (Routers, Switch and SFP's) should have End of Life (EOL) not less than prescribed in Technical Annexure I from the date of Supply. The bidder is required to submit compliance to this clause as per Annexure-VI.
- (vi) The bidder shall upload the compliance of this ATC along with GEM Bid
- 3.0 Bidder shall submit the detailed BOM of the equipment offered duly verified and certified by the respective OEM.

- **4.0** GST registration certificate of vendor should be provided from where goods will be supplied.
- 5.0 Tender Cost: NIL
- 6.0 Estimated cost of the Tender is Rs. 2,34,05,343/- (Tax inclusive).
- 7.0 Earnest Money Deposit (EMD): Earnest Money Deposit (EMD):
 - (a) A sum of Rs.4,68,200/- for respective tendered section should be deposited as in form of Demand Draft in favour of "RailTel Corporation of India Ltd." payable at New Delhi or Online Transfer in RailTel Bank A/c as per detail given below:

Name of Bank: Union Bank of India.

Name of the Account Holder: RailTel Corporation of India Limited

Account Number: 307801010917906

IFSC: **UBIN0530786**

Branch/MICR Code: Connaught Place/110026006

Branch: 1st Floor, 14/15, Rajiv Chowk, Block-F, Connaught Place, New Delhi-110001

- (b) Proof of payment shall be submitted online on GeM portal & Original DD should reach at RailTel Corporation of India Limited, Northern Region office, 6th Floor, Block III, Delhi IT Park, Shastri Park, Delhi-110053 before the date of opening of Tender. No interest is allowed on this Deposit and RailTel Corporation reserves the right to forfeit this Deposit if the successful tenderer fails to submit the Security Deposit required by the terms and conditions of the tender. Tenders not accompanied by Earnest Money Deposit will be summarily rejected.
- (c) The EMD shall be taken from all tenderers against advertised tenders subject to the following exemptions:
 - a. Micro and Small Enterprises (MSEs) registered under Udyam Registration.
 - b. Startups as recognized by Department of Promotion of Industry and Internal Trade (DPIIT).

Note: 1) In case the tenderer falls in this category, the bidder should furnish a certified copy of its valid registration details.

- 2) The tenderer shall submit bid security declaration on non-judicial stamp paper of Rs.100/-as per Annexure-IX on GeM portal failing which bid shall be summarily rejected.
- (d) For small scale units registered with NSIC under single point registration Scheme and participating in this tender enquiry, following exemptions are available: -
 - (i) They are exempted from depositing Earnest money.

These exemptions are applicable provided units are registered with NSIC for tendered item and registration is current and valid. Firms claiming these exemptions are required to submit along with their offer, copy of their current and valid NSIC registration certificate for the tendered item, otherwise their offer would not be considered.

(e) Sellers/ Service provider having annual turnover of INR 500 Crore or more, at least in one of the past three completed financial years are exempted from submission of EMD as per GeM GTC with the bid.

- (f) The bidder seeking EMD exemption, must submit the valid supporting document for the relevant category. 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.
- (g) No exemption is, however, applicable to these units from payment of security deposit/ Performance Bank Guarantee.
- (h) The Bid received without EMD/ documentary proof of exemption of EMD as per above clause will be **summarily rejected**.
 - (i) Earnest Money of the unsuccessful bidder will be discharged/returned as promptly as possible. No interest shall be payable on the EMD.
 - (j) This bid complies with "Public Procurement (preference to make in India) Policy Order, 2017 or latest issued by DIPP and Public Procurement Policy for Micro and Small Enterprises (MSEs) order, 2012" or latest issued by MoSME." The bidders claiming the preference have to submit relevant documents prescribed under relevant order.

8.0 Technical Eligibility/Evaluation/Qualification Criteria:

8.1 Eligibility Criteria for OEM (Router, Switch and SFP's):

- The equipment offered by the OEM or equipment of the same series/family from the same OEM should have been satisfactorily working in Government/PSUs/Telecom Service Providers network for at least 12 months as on opening of bid, in India or Abroad. The certificates from the actual users will have to be submitted online.
- The OEM should have supplied at least 35% of the tendered quantity (rounded to the nearest whole number) of the equipment offered or equipment of the same series/family during last preceding 3 financial years (i.e. current year and three previous financial years) as on opening of bid to Government/PSUs/Telecom Service Providers. OEM should submit self-certificate with proper contact details of clients along with quantities supplied (Firm Name, Contact person, Designation, Telephone Number, Fax, Official mail id etc.). The same should be issued by authorized signatory.
- The OEM should have proven facilities for Engineering, manufacture, assembly, integration and testing of Routers, Switch and SFP's and basic facilities with respect to space, Engineering, Personnel, Test equipment, Manufacture, Training, Repair, Service Center Supports for at least past three years in the country from where the proposed equipment are planned to be supplied. In case OEM is located outside India, it should have training repair and service center facilities in India also. The certificates/Undertaking for the same will have to be submitted online.

(The bidder will have to submit the proof of establishment for the facility)

8.2 Eligibility Criteria for Bidder:

The bidder / OEM (themselves or through reseller(s) having valid authorization of OEM) should have executed projects for supply of the same or similar category Products during preceding 03 (three) financial years (i.e. current year and three previous financial years) as on opening of bid, as per following criteria:

(i) Single Order of at least 35% of estimated bid value; or

- (ii) Two Orders of at least 20% each of estimated bid value; or
- (iii) Three Orders of at least 15% each of estimated bid value.

Satisfactory performance certificate issued by respective Buyer Organization for the above Orders should be uploaded with bid. In case of bunch bids, the Category related to primary product having highest bid value should meet this criterion.

Note: In case a contract is started prior to 03 (three) years, ending on the date of opening of bid, but completed in last 03 (three) years, ending on the date of opening of bid, the completed work shall be considered for fulfilment of credentials.

In case a 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).

The above technical Eligibility Criteria is also applicable for Startup Bidder also.

8.3 Definition of similar work:

#Similar Work# Supply/Supply and Installation of Routers/Switch/SFP's for any Government department or Public Sector Units or public listed companies as per note below

Note: Work experience certificates from private individuals shall not be considered. However, in addition to work experience certificates issued by any Govt. Organization, PSU or any reputed TELCO, 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.

8.4 Financial Criteria for Bidder:

The bidder should have a minimum cumulative turnover from operations in the previous three financial years and the current financial year, at least 150% of the advertised value of the tender. The tenderers shall submit Certificates to this effect which may be an attested Certificate from the concerned department / client or Audited Balance Sheet duly certified by the Chartered Accountant/Certificate from Chartered Accountant duly supported by Audited Balance Sheet. The contact details of CA/Statutory Auditor along with UDIN No.shall be mandatorily mentioned on copy of certified Balance Sheet/Certificate.

Note: Client certificate from other than Govt. Organization should be duly supported by Form 16A/26AS generated through TRACES of Income Tax Department of India.

(i) Credentials if submitted in foreign currency shall be converted into Indian currency i.e., Indian Rupee as under:

The conversion rate of US Dollars into Rupees shall be the daily representative exchangerates published by the Reserve Bank of India for the relevant date. Where, the relevant date shall be as on the last day of month previous to the one on which a tender is invited. In caseof any other

currency, the same shall first be converted to US Dollars as on the last day of month previous to the one in which tender is invited, and the amount so derived in US Dollars shall be converted into Rupees at the aforesaid rate. The conversion rate of such currencies shall be the daily representative exchange rates published by the International Monetary Fund for the relevant date.

8.4.1 Financial Criteria for Startup:

The condition of prior turnover may be relaxed for Startups (as defined by Department of Industrial Policy and Promotion) subject to meeting of quality & technical specifications and making suitable provisions in the bidding document (Rule 173 of GFR 2017). As per Department of Expenditure's OM No. F.20/2/2014-PPD dated 20.09. 2016, relaxation regarding the prior turnover is applicable only to all startups recognized by Department of Industry & Internal Trade (DPIIT) subject to meeting of quality and technical specifications. Startups may be MSMEs or otherwise. Bidder should have authorization specific to this tender from respective OEM as per Annex-VI.

The tenderer must have received annual turnover of minimum 50% of the advertised value of the tender for which they are participating in the past three financial years & current year before the date of opening of tender.

Note: -Firms claiming these relaxations are required to submit along with their offer, a copy of current and valid Start-up registration certificate otherwise their offer would not be considered for relaxation. All other terms & condition will remain the same.

- **8.5** (a) The bidder should not have been blacklisted by any agency /purchaser during the past 5 years and should give an undertaking for the same.
 - (b) The bidder should have positive net worth and should give the CA certificate for the same.
- **8.6** The Tenderer shall quote Total all Inclusive Rate on C.I.P. destination basis clearly Indicating the breakup of rates, applicable duties, taxes, etc.
- **8.7** The Bidder should be OEM or System Integrator authorized by OEM for Supply, Warranty/AMC Support for the Routers, Switch and SFP's.
 - In case of System Integrator, Bidder should have authorization specific to this tender from Routers, Switch and SFP's OEM as per Annex-IV.
- 9.0 Validity of offer: Validity of offer: 90 days (Ninety days only) from the date of opening of tender.

10.0 Issue of Purchase Order:

- 10.1 Prior to the expiry of the period of bid validity, the successful bidder shall be intimated through email. Communication of acceptance of offer is considered complete as soon as it is received and accepted by the bidder either on email of authorized person of bidder or physical acceptance of PO whichever is earlier. Hard copy is to be sent by courier/ by Registered post/ by hand. In the same communication, the successful tenderer is to be instructed to furnish the required performance security within 15 days of issue of PO after finalization of tender. All deliveries will be counted from the date of PO.
- **10.2** Tenderers may be asked for staggered delivery of the stores, if required, based on site requirements and same shall be advised with issue of purchase order.

11.0 Payment Conditions:

- a) 80% payment against part supply of the ordered quantity. In case bidder completes the supply order for one SOR, he can claim part payment of 80% against each SOR's completed supply of the said SORs. Balance payment shall be made after full supply.
- b) 100% payment on full supply.

The following documents are to be submitted for payment: -

- a. Original Tax Invoice indicating inter alia description and specification of goods, quantity, unit price, total value etc.
- b. Delivery Challan.
- c. E-Way Bill.
- d. Original Consignee receipt for receipt of goods in good condition.
- e. Original Inspection Certificate.
- f. Warranty Certificate of OEM (Routers, Switch and SFP's) and for balance items Warranty Certificate of Bidder.
- g. Proof of PG/SD submission.
- h. Insurance Policy as per Clause-25 of ITB.
- i. Packing list.
- j. Declaration of non-applicability of e-invoicing, if applicable.
- k. Declaration regarding 206AB/206CCA of IT act.
- 1. Railway/Transporters Receipt/Consignment Note.
- m. Bill Passing Authority: Sr. DGM/ Proc. Bill Paying Authority: Sr. DGM /Finance
- 12.0 The tenderers shall submit a certificate on paper stating that they are not liable to be disqualified, and all their statement/documents submitted along with bid are true and factual. The standard format of the certificate to be submitted online by the bidder is enclosed as Annexure-V. Non submission of certificate by the bidder shall result in summarily rejection of his/their bid. 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 the tenderer, the contract shall be terminated. Earnest Money Deposit (EMD), Performance Guarantee (PG) and Security Deposit (SD) of contract forfeited, and agency barred for doing business on RailTel (RCIL) for 2 (Two) years.

13.0 Online Submissions:

The bidder is required to upload and submit the following documents online before due date & time of bid:

- i. Offer letter as per Annexure-II.
- ii. EMD Submission details.
- iii. BOQ of offered equipment.
- iv. Clause wise compliance along with all mentioned documents/annexures for all clauses of GeM Bid and ATC documents.
- v. Data Sheet of offered equipment.
- vi. Financial (Certified copies of audited balance sheets/annual reports of last three preceding financial years) and Technical Eligibility Criteria documents.
- vii. Technical Compliance of all Specification of items as per GeM Bid and ATC documents.
- viii. Certificate from the End user against the Eligibility criteria for OEM para 11.
- ix. Proof of document required against Eligibility criteria of OEM and Bidder vide para 11 & 12 respectively.
- x. OEM Declaration for (Routers, Switch and SFP's) should have End of Life (EOL) as per Annexure-VI.
- xi. MAF/OEM Authorization as per para 12.3 and Annexure-IV.
- xii. Notarized affidavit on a non-judicial stamp paper as per Annexure-V.
- xiii. Compliance to clause-2(v) as per Annexure-VI.
- xiv. Certificate as per Annexure-VII.
- xv. Nil Deviation as per Proforma attached in Annexure-VIII.
- xvi. Bid Security Declaration as per Annexure-IX.
- xvii. Power of Attorney as per clause 14.
 - **NOTE:** i) The bidder is required to give acceptance of all the clauses mentioned in the "Information to the Bidders" document is mandatory. 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 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: _____.

14.0 Power of Attorney:

Power of attorney in favor of the signatory duly authorizing the signatory shall be submitted online before the due date and time of submission of the e-Tender and Original copy is needed to be submitted by the successful bidder before issuance of PO.

15.0 Delivery period: 120 days (One Hundred Twenty days only) from the date of issue of PO at consignee address as per Annexure-X.

(i) Quantum LD:

If the supplier fails to deliver the stores or any installment thereof within the period fixed for such delivery in the contract or as extended or at any time repudiates the contract before the expiry of such period the Purchaser may without prejudice to his other rightsrecover from the Contractor, as agreed, the LD a sum equivalent to 0.5 (half) percent of the prices of any stores (including elements

of taxes, duties, freight, etc.) which the Contractor has failed to deliver, within the period fixed for delivery in the contract or as extended for each week or part of a week, during which the delivery of such stores may be in arrears, where delivery thereof is accepted, after expiry of the aforesaid period. The upper limit for recovery of liquidated damages will be 10% (Ten Percent) of Total contract value provided in the contract.

16.0 Security Deposit/Performance Guarantee:

a. On receipt of the Letter of Acceptance of Tender from the RailTel, the successful Tenderer should give a Performance Guarantee in the form of BG/DD/Banker's Cheque in favour of RailTel Corporation of India Limited payable at New Delhi from State Bank of India/any Nationalized Bank or from any Scheduled Bank, amounting to 5% of the contract/PO value subject to upper ceiling of Rs. 5 Crores rounded off to the nearest higher Rs. 1000 (Thousand) with validity 3 months beyond warranty period of supply.

Note: Performance guarantee for less than Rs. 5 Lacs has to be submitted in the form of DD/Banker's Cheque/NEFT only.

- b. The successful bidder shall have to submit a Performance Guarantee (PG) within 15 (fifteen) days from the date of issue of Letter of Acceptance (LOA). Extension of time for submission of PG beyond 15 (fifteen) days and up to 30 days from the date of issue of LOA may be given by the Authority who is competent to sign the contract agreement. However, a penal interest of 15% per annum shall be charged for the delay beyond 30 (thirty) days, i.e., from 31st day after the date of issue of LOA. In case the contractor fails to submit the requisite PG even after 60 days from the date of issue of LOA, the contract shall be terminated duly forfeiting EMD and other dues, if any payable against that contract. The *failed contractor shall be debarred from participating in retender* for that work.
- c. The Performance Guarantee should be furnished by the successful contractor after a letter of acceptance has been issued. The PBG will be returned only after fulfillment of contractual obligations.
- d. 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 the 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.

It is advised that along with physical BG, online facility has been activated to view the issued BG cover message transmitted to ICICI Bank through SFMS platform. For availability this facility, it is necessary that BG issuing/amending bank send the BG advice in the form of message format IFN 760COV/IFN 767COV via SFMS (Structured Financial Messaging System) as provided by RBI.

In this connection, all the vendors/contractors (applicant of BG) to update below details at time of submission of BG issuance/amendment request to their respective banks with immediate effect for online SFMS confirmation using the plate form:

BG advising message – IFN 760COV/ IFN 767COV via SFMS To mandatorily send the Cover message at the time of BG issuance.

IFSC Code of ICICI Bank to be used (ICIC0000007). Mention the unique reference (RAILTEL6103) in field 7037.

It may please be noted that the issuing bank while issuing/amending the BG, should ensure that the above information is correctly captured in the message i.e., IFN 760COV/IFN 767COV

- e. Performance Guarantee shall be released after satisfactory completion of the work, maintenance period and expiry of the warranty period and issue of the certificate of final acceptance of the entire system.
- f. Wherever the contracts are rescinded, the security deposit should be forfeited and the Performance Guarantee shall be en-cashed and the balance work should be got done separately.
- g. The Engineer shall not make a claim under the Performance Bank Guarantee except for amounts to which the RailTel is entitled under the contract (Notwithstanding, and /or without prejudice to any other provisions in the contract agreement) in the event of:
- (1) Failure by the contractor to extend the validity of the Performance Bank Guarantee as described herein above, in which event the Engineer may claim the full amount of the Performance Bank Guarantee.
- (2) Failure by the contractor to pay RailTel any amount due either as agreed by the contractor or determined under any of the clauses/conditions of the agreement, within thirty days of the service of the notice to this effect by Engineer.
- (3) The contract being determined or rescinded, the Performance Bank Guarantee shall be forfeited in full and shall be absolutely at the disposal of the RailTel Corporation of India Ltd.
- h. No interest shall be paid on the amount of earnest money and Performance Security held by RailTel, at any stage.

17.0 Inspection of material:

- 17.1The Inspection shall be carried out by the Inspecting Authority authorized by RailTel.
- 17.2 In case material/equipment fails during inspection, the fresh lot of the same material/equipment shall be offered without any extra cost, by the manufacturer/supplier. In such a case, the total cost of re-inspection including travel, lodging & boarding of the inspecting officials shall be to manufacturer's / supplier's account/cost.
- 17.3 Inspection of the material including that of raw material if deemed required shall be conducted by approved Govt. inspecting authority of reputed agency like RITES or any other agency/ representative authorized by RailTel in exceptional circumstances. The inspection shall be conducted by inspecting authority as per required test procedures /test plan/specifications for ensuring that the material offered meets the required specifications.
- 17.4 Finished products shall be tested 100% by the factory QC personnel before being offered to RailTel for acceptance to ensure that they meet 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.

The inspection of Electronics items shall be carried out as per specifications.

18.0 Warranty: The materials are to be warranted for 3 years from the date of delivery to the consignee. The supplier shall warrant that stores to be supplied shall be new and free from all defects and faults in material, workmanship and manufacture 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 Cards/Modules 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.

19.0 Variation of Quantities: Option Clause-

- a) Unless otherwise specified in the tender document, the purchaser shall be entitled to increase the order quantity to full tender quantity as well as the option to increase/decrease the quantity by 25% of the order quantity any time within the delivery period of the contract (original/extended). The increase in quantity with respect to the tender quantity can be done even at the time of ordering and the tenderer shall be bound to accept the quantity so ordered.
- b) The purchaser shall be entitled to operate +/-25% option clause in one or more than one installment as long as the total variation in quantity does not exceed the limit of 25% of the ordered quantity.
- c) The purchaser reserves the right to accept the tender with splitting of tender quantity on minimum two firms with the option to increase the quantity to full tendered quantity on any of the firms.
- d) Additionally, the purchaser shall also be entitled to vary the total order quantity of those firms by +25% anytime within the delivery period (including extended delivery period). The increase in quantity with respect to the tender quantity can be done even at the time of ordering and the tenderer shall be bound to accept the quantity so ordered on the basis of his original offer.
- e) Total coverage against the tender considering the orders placed on all the firms in the tender should not increase the tendered quantity by more than 25%.
- f) In case where separate orders for an item for different consignee(s)/ paying authority (ies) are placed on one firm against one tender, total quantity of all such orders be the basis for the purpose of option clause. In such cases, option clause can be operated in any of the orders or for any consignee(s) so long as Delivery Period of any of the order in the tender is alive.

Note: Purchaser's Right to Vary Quantities:

- (A) Up to maximum extent of +/- 50% subject to following condition.
 - i. Up to +25% with no rebate.
 - ii. From +25% to +40% with 2% rebate.
 - iii. From $\pm 40\%$ to $\pm 50\%$ 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.

(C) AMC rates for items under Variation Order will be at same percentage as finalized in the main contract.

20.0 TReDS Platform:

- 20.1 RailTel is registered with m1xchange TReDS platform having buyer registration number "BUYER00001496". The URL for m1xchange platform is https://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.
- 20.2 MSE vendors 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.
- 20.3 MSE vendor hereby agrees to indemnify, hold harmless and keep RailTel and affiliates, Directors, Officers, representative, 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 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.
- 20.4 RailTel shall not be liable for any special, indirect, punitive, incidental or consequential damages or any damages whatsoever (including but not limited to damage 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.
- **21.0** (a) **Public Procurement Policy for Micro and Small Enterprises (MSEs):** Applicable as per Government of India (GOI) guidelines.
 - (b) Make in India (MII): Applicable as per Government of India (GOI) guidelines.

22.0 Taxes & Duties:

The price quoted in the offer should be firm, fixed, indicating the breakup and inclusive of all taxes & duties like import, custom, Anti-Dumping, CGST, SGST, IGST, UTGST etc. The offer should be inclusive of packing, forwarding, freight up to destination, insurance charges.

- **22.1** Bidder shall issue a valid tax invoice to RailTel for availing proper credit of CGST/SGST/IGST/UTGST in case of award of Contract. GST will not be reimbursed in the absence of a valid tax invoice.
- 22.2 For all the taxable supplies made by the vendor, the vendor shall furnish all the details of such taxable supplies in the relevant returns to be filed under GST Act.

- 22.3 If the vendor fails to comply with any of the above, the vendor shall pay to purchaser any expense, interest, or penalty as applicable under the GST Act.
- 22.4 In case of incorrect reporting of the supply made by the vendor in the relevant return, leading to disallowance of input credit to purchaser, the vendor shall be liable to pay applicable interest under the GST Act to the credit of purchaser. The same provisions shall be applicable in case of debit/credit notes.
- 22.5 Tenderer shall quote all-inclusive rates, but there shall be break up of basic price and all type of applicable taxes such as SGST/CGST/IGST/UT GST along with respective HSN/SAC Code under GST Law (Including tax under reverse charges payable by the recipient).
- 22.6 Wherever the law makes it statutory for the Purchaser to deduct any amount towards GST at sources, the same will be deducted and remitted to the concerned authority.
- 22.7 The imposition of any new tax and/or increase/ in the aforesaid taxes, duties levies, after the last stipulated date for the receipt of tender including extensions if any and the bidder there upon necessarily and properly pays such taxes/levies/cess, the bidder shall be reimbursed the amount so paid, provided such payments, if any, is not, in the opinion of RailTel attributable to delay in execution of work within the control of bidder. The bidder shall, within a period of 30 days of the imposition of any such tax or levy or cess, give a written notice thereof to RailTel that the same is given pursuant to this condition, together with all necessary information including details of input credit relating thereto. In the event of non-payment/default in payment of any of the above taxes, RailTel reserves the right to with-hold the dues/payments of bidder and make payment to state/Central Government authorities as may be applicable. However, if the rates are reduced after the last stipulated date for receipt of the tender, the bidder has to pass on the benefits to RailTel.

23.0 Restrictions under Rule 144(xi) of GFR, 2017:

Rule 144(xi) of the General Financial Rules (GFRs) 2017 imposes restrictions on procurement from bidders from countries that share a land border with India. This rule requires such bidders to be registered with the Competent Authority before they can participate in bidding for government tenders.

24.0 Insurance:

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 insure 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.

25.0 Force Majeure:

- (i) A Force Majeure (FM) means extraordinary events or circumstance beyond human control such as an event described as an act of God (like a natural calamity) or events such as a war, strike, riots, crimes (but not including negligence or wrong-doing, predictable/seasonal rain and any other events specifically excluded in the clause). An FM clause in the contract frees both parties from contractual liability or obligation when prevented by such events from fulfilling their obligations under the contract. An FM clause does not excuse a party's non-performance entirely, but only suspends it for the duration of the FM. The firm has to give notice of FM as soon as it occurs, and it cannot be claimed ex-post facto. There may be a FM situation affecting the purchase organization only. In such a situation, the purchase organization is to communicate with the supplier along similar lines as above for further necessary action. If the performance in whole or in part or any obligation under this contract is prevented or delayed by any reason of FM for a period exceeding 90 (Ninety) days, either party may at its option terminate the contract without any financial repercussion on either side.
- (ii) Notwithstanding the punitive provisions contained in the contract for delay or breach of contract, the supplier would not be liable for imposition of any such sanction so long as the delay and/ or failure of the supplier in fulfilling its obligations under the contract is the result of an event covered in the FM clause.

26.0 Breach of Contract, Remedies and Termination:

- (i) In case the contractor is unable to honor important stipulations of the contract or gives notice of his intention of not honoring or his inability to honor such a stipulation, a breach of contract is said to have occurred. Mostly, such breaches occur in relation to the performance of the contract in terms of inability to supply the required quantity or quality. It could also be due to breach of ethical standards or any other stipulation that affects Procuring Entity seriously.
- (ii) The purchaser or its authorized representative is not to enter into correspondence after expiry of the delivery date stipulated in the contract because such a correspondence will keep the contract alive and would amount to abrogation of the purchaser's right and remedies for delays by the contractor. This situation will not allow the purchaser to cancel the contract straight away without first serving a performance notice to the supplier. However, even after expiry of the delivery period of the contract, the purchaser may obtain information regarding past supplies, and so on, from the supplier, simultaneously making it clear to the supplier that calling of such information is not intended to keep the contract valid and it does not amount to waiving the breach and that it is without prejudice to the rights and remedies available to the purchaser under the terms of the contract. As soon as a breach of contract is noticed, a show cause notice should be issued to the contractor reserving the right to implement contractual remedies. If there is an unsatisfactory resolution, remedial action may be taken immediately. The CA may terminate a contract in the following cases.

26.1 Cancellation of Contract for Default:

(i) Without prejudice to any other remedy for breach of contract, such as removal from the list of registered suppliers, by written notice of default sent to the supplier, the contract may be terminated in whole or in part:

- a. If the supplier fails to deliver any or all of the stores within the time period(s) specified in the contract, or any extension thereof granted; and
- b. If the supplier fails to perform any other obligation under the contract within the period specified in the contract or any extension thereof granted.
- c. If the contract is terminated in whole or in part, recourse may be taken to anyone or more of the following actions:
- 1. Forfeiture of the performance security.
- 2. However, the supplier shall continue to fulfill the contract to the extent not terminated.
- (ii) Before cancelling the contract and taking further action, it may be desirable to obtain legal advice.

26.2 Termination of Contract for Insolvency

If the supplier becomes bankrupt or becomes otherwise insolvent or undergoes liquidation or loses substantially the technical or financial capability (based on which he was selected for award of contract), at any time, the contract may be terminated, by giving a written notice to the supplier, without compensation to the supplier, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to RailTel.

26.3 Termination of Contract for Convenience

27.0 Settlement of Dispute:

27.1 For all commercial contracts with Private entities:

In case of any dispute concerning this order both the supplier and RailTel shall try to settle the same amicably through mutual discussion/negotiations. Any unsettled dispute shall be settled in terms of Indian Act of Arbitration and conciliation 1996 or any amendment thereof. Place of arbitration shall be New Delhi. Arbitrator shall be appointed by Managing Director, RailTel Corporation of India Limited.

27.2 For all commercial contracts with Public Enterprises/ Govt. Departments:

In the event of any dispute or difference relating to the interpretation and application of the provisions of the contracts, such dispute or difference shall be referred by either party for Arbitration to the sole Arbitrator in the Department of Public Enterprises to be nominated by the Secretary to the Government of India in-charge of the Department of Public Enterprise. The Arbitration and Conciliation Act, 1996 shall not be applicable to arbitration under this clause. The award of the Arbitrator shall be binding upon the parties to the dispute, provided, however, any party aggrieved by such award may make a further reference for setting aside or revision of the award to the Law Secretary, Department of Legal Affairs, Ministry of Law & Justice, Government of India. Upon such reference the dispute shall be decided by the Law Secretary or the Special Secretary/Additional Secretary, when so authorized by the Law Secretary, whose decision shall bind the Parties finally and conclusively? The Parties to the dispute will share equally the cost of arbitration as intimated by the Arbitrator.

28.0 Other Particulars to be enclosed along with tender:

The following details should also be enclosed along with the tender: -

i) Performance statement of last three years for supply of same or similar items to Railways, BSNL,

MTNL, Government PSU's & Telecom Service Providers. This Performance Statement is to be submitted in the following format: -

Year	PO. No. & Date with descripti on of	Name of the purchas er	Qty. order ed	Date of delivery in the Purchas e Order	Qty. supplied within schedule d date of delivery	Qty. supplied during 1st extensio n	Qty supplied during 2nd extensio n	Qty. supplied during 3rd extensio n
	item			_		_		
1	2	3	4	5	6	7	8	9

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.

• Complete Tender documents duly signed & stamped on each page in token ofacceptance should be submitted online.

29.0 RailTel's Contact Person / Designation: (for General Information):

Mr. Vachaspati Bhardwaj,

Spl. Asstt. General Manager/Projects

Mobile: 9717612008

E-mail ID: vachaspatibhardwaj61@railtelindia.com

Shri Vikas Singh,

Sr. Dy. General Manager

/Procurement

Mobile: 9717644156

E-mail ID: vikas@railtelindia.com

<u>Note</u>: In case, if there is any contradiction between GeM's General Terms & Conditions, RailTel's Additional Terms & Conditions will prevail.

Technical Specifications

1. All Equipment should be:

- i. With 3 Years Warranty.
- ii. Equipped with necessary hardware/software to comply all above required/support features.
- iii. Back-to-Back warranty with respective OEMs for both Hardware and Software. The certificates/Undertaking for the same will have to be submitted along with bid from respective OEM. Hardware and Operating System for Network Devices should be from the same OEM. Disaggregated solution shall not be acceptable.
- iv. OEMs should have their spare depots in India and location & address for same need to be submitted.
- v. OEMs should have 24*7 TAC support in India. Relevant document in support of the same shall be submitted.
- vi. Bidder/OEM can offer third party grey optics, but it should be fully compatible with the offer equipment.
- vii. UL, CE and FCC Certification is not required for PMA. However, they have to produce certificate from standard lab approved/ authorized by Govt. of India that their product are equivalent to UL, CE and FCC and meets all standard and specification of UL, CE and FCC.

2. SOR wise details are as:

SOR Item no.	Item Description	UoM	Qty.	MAF Required	Minimum -End Of Life (yrs)	Offered Make & Model by Bidder
SOR-1	CPE Router Type-I	No.	39	Yes	5	
SOR-2	CPE Router Type-II	No.	5	Yes	5	
SOR-3	PE router-10 G Type-I	No.	30	Yes	8	
SOR-4	Ethernet Access Switch - 1G	No.	2	Yes	5	
SOR-5	Fiber Switch 10G	No.	5	Yes	5	
SOR-6	Fiber Switch	No.	39	Yes	5	
SOR-7	Fiber Switch 40/100G	No.	1	Yes	5	
SOR-8	1G SFP - 10 Km	No.	2	Yes	5	
SOR-9	1G SFP - 20 Km (BIDI)	No.	30	Yes	5	
SOR-10	1G SFP - 40 Km	No.	64	Yes	5	
SOR-11	1G SFP - 40 Km (BIDI)	No.	66	Yes	5	
SOR-12	10G SFP - 10 Km	No.	16	Yes	5	
SOR-13	1G SFP - Electrical	No.	71	Yes	5	
SOR-14	100 G QSFP - 40 Km	No.	46	Yes	5	
SOR-15	Patch cord - SC/APC-LC/PC (5 mtr)	No.	462	No	No	
SOR-16	Patch cord - LC/PC-LC/PC (5 mtr)	No.	70	No	No	
SOR-17	Rack - 6U	No.	1	No	No	

SOR-18	DC Rack Mounted Charger with 6.25 A SMR's (2+1)	No.	3	No	No	
SOR-19	12V/100 AH VLRA Batteries	Set	12	No	No	
SOR-20	OFC - 12F	Km	2.82	No	No	
SOR-21	UPS-1 KVA	No.	1	No	No	
SOR-22	Fire Extinguisher	No.	1	No	No	
SOR-23	Office Desktop	No.	4	No	No	

Technical Specification of SOR Items

SOR-1: CPE Router Type-I

SN	Description	Compliance
1	Architecture:	
1.1	Proposed Routers should support SDWAN ready	
1.2	The router should be a single box configuration for ease of management.	
	It shall support hardware-based VPN (3DES/AES) Encryption, MD5, SHA,	
1.3	SHA-256	
1.4	The router shall support complete Firewall features.	
1.5	Router shall support minimum 100K IPv4 and 50K IPv6 routes.	
	The Router shall have enough "High-performance multicore processors	
1.6	capacity and 4 GB DRAM and 4GB Flash Memory from Day1. so as to	
1.6	efficiently meet all the functionalities laid down in the specifications. It shall have integrated USB port.	
1.7	It shall be supplied with necessary power cards, data cables, connectors,	
	bracket accessories, wire managers and other appropriate accessories.	
	Routers shall be capable of working with 110 – 240 Volts AC nominal at	
1.8	frequency 50 +/- 2 Hz.	
2	Performance:	
2.1	It shall support high performance traffic forwarding with con-current features	
2.1	like firewall and encryption.	
2.2	Router shall support aggregate WAN throughput of 100 Mbps from Day-1 and	
2.2	IPSEC Throughput of 50 Mbps from Day-1	
2.3	It shall support variety of Ethernet Interfaces – 1 RJ45 GigE and 1 SFP GigE	
2.3	port & 4 port LAN 10/100/1000 Mbps port.	
2.4	It shall support other IP Services like GRE tunnelling, ACLs, IPSEC VPNs,	
	Firewalling, NAT services.	
3	High Availability:	
3.1	It shall support non-stop forwarding for fast re-convergence of routing	
3.2	protocols. It shall support VRRP or equivalent	
4	Protocol Support:	
	The router shall have routing protocols like IS-IS, RIP ver1 & RIP Ver.2,	
4.1	OSPF ver2, BGP4.	
4.2	It shall support multicast routing protocols IGMPv1/ v2/v3, PIM	
4.3	It shall support DHCP, IPv6 QoS and IPv6 Multicast, OSPFv3	
5	Quality of Service (QoS) Features:	
5.1	The router shall support the following:	
5.1.1	Classification and Marking: Policy based routing, IP Precedence, DSCP.	
	Congestion Management: WRED, Priority queuing, Class based weighted fair	
5.1.2	queuing.	
5.1.3	Traffic Shaping and Policing for QoS	
6	Security Features:	
6.1	The router shall support GRE Tunnelling & NAT Services.	
6.2	It shall support MD-5 route authentication	
6.3	It shall support AAA support using Radius.	
6.4	It shall support DoS prevention	

6.5	It shall support IP Access list to limit Telnet and SNMP access to router.	
6.6	It shall support multiple privilege level authentications for console and telnet	
0.0	access through Local database or through an external AAA Server.	
6.7	It shall support IEEE 802.1x support for MAC address authentication.	
7	Debug, Alarms & Diagnostics:	
7.1	The router shall have display of input and output error statistics on all	
/.1	interfaces.	
7.2	It shall have display of dynamic ARP table.	
7.3	Trace-route and Ping shall be available.	
8	It should support Network Time Protocol.	
9	Management:	
9.1	The router shall have support for CLI, Telnet and SNMPv3.	
9.2	It shall support Secure Shell for secure connectivity.	
9.3	It shall have to have dedicated console for Local management / login through	
7.5	USB port / RJ45 port / serial	
	Event and System logging: Event and system history logging functions shall	
9.4	be available. The Router shall generate system alarms on events. Facility to	
	put selective logging of events onto a separate hardware where the analysis of	
	log shall be available.	
10	Certification Requirements:	
	"Router/ Router OS should be tested and certified for EAL 2 / NDPP	
	(Network Device Protection Profile) or above under Common Criteria	
	Program for security related functions or under Indian Common Criteria	
	Certification Scheme (IC3S) by STQC, DEIT, Govt. of India."	

SOR 2: CPE Router Type-II

SN	Description	Compliance
1	Architecture:	
1.1	Proposed Routers should support SDWAN ready	
1.2	The router should be a single box configuration for ease of management.	
	It shall support hardware based VPN (3DES/AES) Encryption, MD5, SHA,	
1.3	SHA-256	
1.4	The router shall support complete Firewall features.	
1.5	Router shall support minimum 200K IPv4 and 50K IPv6 routes.	
	The Router shall have enough "High-performance multicore processors	
	capacity and 4 GB DRAM and 4GB Flash Memory from Day1. so as to	
1.6	efficiently meet all the functionalities laid down in the specifications.	
1.7	It shall have integrated USB port.	
	It shall be supplied with necessary power cards, data cables, connectors,	
	bracket accessories, wire managers and other appropriate accessories. Routers	
	shall be capable of working with $110 - 240$ Volts AC nominal at frequency 50	
1.8	+/- 2 Hz.	
2	Performance:	
2.1	It shall support high performance traffic forwarding with con-current features	
۷.1	like firewall and encryption.	

2.2	Router shall support aggregate WAN throughput of 200Mbps from Day-1 and IPSEC Throughput of 50 Mbps from Day-1.	
2.3	It shall support variety of Ethernet Interfaces – 2 SFP GigE ports & 4 port LAN 10/100/1000 Mbps port.	
2.4	It shall support other IP Services like GRE tunneling, ACLs, IPSEC VPNs, Firewalling, NAT services.	
3	High Availability:	
3.1	It shall support non-stop forwarding for fast re-convergence of routing protocols.	
3.2	It shall support VRRP or equivalent	
4	Protocol Support:	
4.1	The router shall have routing protocols like IS-IS, RIP ver1 & RIP Ver.2, OSPF ver2, BGP4.	
4.2	It shall support multicast routing protocols IGMPv1/ v2/v3, PIM	
4.3	It shall support DHCP, IPv6 QoS and IPv6 Multicast, OSPFv3	
5	Quality of Service (QoS) Features:	
5.1	The router shall support the following:	
5.1.1	Classification and Marking: Policy based routing, IP Precedence, DSCP.	
5.1.2	Congestion Management: WRED, Priority queuing, Class based weighted fair queuing.	
5.1.3	Traffic Shaping and Policing for QoS	
6	Security Features:	
6.1	The router shall support GRE Tunneling & NAT Services.	
6.2	It shall support MD-5 route authentication	
6.3	It shall support AAA support using Radius.	
6.4	It shall support DoS prevention	
6.5	It shall support IP Access list to limit Telnet and SNMP access to router.	
6.6	It shall support multiple privilege level authentications for console and telnet access through Local database or through an external AAA Server.	
6.7	It shall support IEEE 802.1x support for MAC address authentication.	
7	Debug, Alarms & Diagnostics:	
7.1	The router shall have display of input and output error statistics on all interfaces.	
7.2	It shall have display of dynamic ARP table.	
7.3	Trace-route and Ping shall be available.	
8	It should support Network Time Protocol.	
9	Management:	
9.1	The router shall have support for CLI, Telnet and SNMPv3.	
9.2	It shall support Secure Shell for secure connectivity.	
9.3	It shall have to have dedicated console for Local management / login through USB port / RJ45 port / Serial	
9.4	Event and System logging: Event and system history logging functions shall be available. The Router shall generate system alarms on events. Facility to put selective logging of events onto a separate hardware where the analysis of log shall be available.	
10	Certification Requirements:	

"Router/ Router OS should be tested and certified for EAL 2 / NDPP
(Network Device Protection Profile) or above under Common Criteria
Program for security related functions or under Indian Common Criteria
Certification Scheme (IC3S) by STQC, DEIT, Govt. of India."

SOR 3: PE Router - 10G Type -I

SN	Description	Compliance
1	The Router shall be designed for continuous operations. The bidder shall furnish the MTBF (Mean Time between Failures) and MTRR (Mean Time to Restore) and predicted and observed values along with calculations by manufacturer.	
2	In case of full system failure, Router shall maintain a trace area in the NVRAM, whichwould be used for analysis /diagnosis of the problem.	
3	Router shall have built in power on diagnostics system to detect hardware failures.	
4	Should have AC/DC power supply arrangement as given below without any external adaptors with redundant power supply:	
	i) AC power supply 100 to 240 V AC with 50 to 60 Hz	
	ii) -48 V DC supply	
	RailTel will specify the requirement of power supply arrangement on the basis of siterequirement as identified during the site survey by the contractor.	
5	Router shall have suitable Visual Indicators for diagnostics and healthy /unhealthystatus of ports & modules.	
6	Router shall have 8 Nos. of Gigabit SFP ports and 4 Nos. RJ45 10/100/1000 Base – TX with 4 Nos. of 10 Gigabit SFP+ ports complying to IEEE 802.3, IEEE 802.3u and 802.3ab standard, supporting half duplex mode, full duplex mode and	
	auto negotiation on each port of 1G to optimize bandwidth.	
7	Router shall have minimum of 52 Gbps (full duplex) forwarding bandwidth at layer 2switching fabric.	
8	Router shall have a minimum of 16000 MAC address space.	
9	Bidder to propose Router having Operating and Storage Temperature as per environmental requirement. However, the Router should be capable of working at temperature 0 to 45 degree (minimum).	
10	It should be possible for the Router to be mounted on a 19-Inch rack. All accessories required for this mounting should be supplied.	
11	Should support jumbo frame.	
12	Shall have the following MPLS features:	
	i. Shall support Static IPv4 and Ipv6 routing. It shall also support OSPFv2 and OSPFv3.	
	ii. Shall also support BGP and ISIS based routing.	
	iii. Shall also support MPLS with RSVP and LDP signaling. It shall support MPLSFRR and L3VRF with upto 128 VRF/L2VPN/VPLS.	
	iv. Shall support a scale of 250 VLAN and shall support Ethernet OAM features likeBFD, 802.3ah, 802.1ag and Y.1731	
	v. Shall support at least 12K MPLS labels	
	vi. Shall support 16K for IPv4 routes and 4K for IPv6 routes.	
	vii. It shall support LSP ping and trace.	

	viii. It shall support 8 hardware queues per port and shall support ingress policing
	and
	egress shaping.
	ix. Should support Segment routing, TI-LFA, R-LFA, MPLS-TE
	x. Shall support MPLS based L3, L2 VPN & VPLS services.
	xi. It shall also support SYNC Ethernet / IEEE 1588V2 (PTP) and SNMPv3.
	xii. Shall support remote telnet and SSH capabilities and it shall be possible to
	integrate
	with NMS system
	xiii. Shall conform to UL 60950 or IEC 60950 Standards for safety requirements\
	of IT
	Equipment.
	xiv. Shall conform to EN55022 Class A/B or CISPR22 Class A/B or CE Class A/B
	forEMC for (Electro Magnetic Compatibility).
13	Shall have the following features. All software's/hardware's/License required for
	this must be supplied along with the Router.
	i. Link Aggregation Control (LCAP) as per IEEE 802.3ad.
	ii. Support for IEEE 802.1Q VLAN on all ports.
	iii. Support for minimum 256 VLANs.
	iv. Support for IEEE 802.1 D spanning tree protocol / 802.1 s MSTP
	v. Support for IEEE 802.1 s MSTP.
	vi. Support Dynamic Host Configuration Protocol (DHCP).
	vii. Support Auto –MDIX (Media Dependent Interface Cross over)
	viii. Support Inter VLAN IP routing for full layer -3 routing.
	ix. Support for IPv6.
	**
	x. Support Strict Priority Queuing.
	xi. Support Network Time Protocol (NTP) / Simple Network Time Protocol (SNTP)
	based.
	xii. RFC 1305 / 2030 for synchronization of date & time from the Central NTP
	Server.
	xiii. Support RADIUS protocol for console access restriction and authentication as
	per RFC 2138.
	xiv. Support 4 group of embedded RMON (history, static's and alarms). or
	advancedlevel monitoring like Performce monitoring, Statistics, Alarm logging
	and eventmanagement, Telemetry and SNMP Polling of data
	xv. Support multiple privilege level to provide different level of access on console
	port
	and telnet sessions
	xvi. Support classification and scheduling as per IEEE 802.1P on all ports.
	xvii. Support Port Spanning functionally for measurements using a networks
	analyzer.
	xviii. Support all the standard MIBs (MIB-I&II).
	xix. Support for console port Interface for configuration and diagnostics purposes.
	xx. Support Port Spanning functionally for measurements using a networks
	analyzer.
	xxi. ITU-T G.8032 Ethernet Ring Protection designed for loop protection and fast
	convergence times (sub 50 ms) in ring topologies
1	

	xxii. Should support multiple Ring up to 8 ring (Main and Sub Ring) protection	
	failover within 50 ms (up to 10 Router in ring) or ITU-T G.8032 v2 (Confirmed	
	roadmap within a year time is also acceptable for ITU-T G.8032 v2 with no additional	
	cost to RailTel).	
	xxiii. Should support Optical Transceiver Digital Diagnostic Monitoring.	
	xxiv. Priority queues: Eight hardware-based queues per port for flexible QoS	
	management	
	xxv. Traffic prioritization: Flow-based QoS with internal and external (a.k.a., remarking) prioritization	
	xxvi. Bandwidth management: Flow-based bandwidth management, ingress rate	
	limiting; egress rate shaping per port.	
	xxvii. Queue management: Configurable scheduling algorithms — Strict Priority	
	Queuing (SPQ), Weighted Round Robin(WRR) and Deficit Round Robin (DRR)	
	orbetter. Rack Mountable clamps for standard 19 inch Rack for each item.	
	xxviii. The following Metro Ethernet features should support:	
	1. IEEE 802.1ad Provider Bridge.	
	2. Transparent LAN Services with Service VLAN (SVLAN) and Customer VLAN	
	(CVLAN) concept.	
	3. CVLAN to SVLAN translation and mapping	
	4. IEEE 802.1ag Ethernet OAM: Connectivity Fault Management (Support 32	
	MEPs).	
	5. Ethernet OAM compliant with IEEE 802.3ah.	
	6. ITU-T G.8032 Ethernet Ring Protection designed for loop protection and fast	
	convergence times (sub 50 ms) in ring topologies.	
	7. Should support Optical Transceiver Digital Diagnostic Monitoring.	
	8. Router should support minimum of 4000 Ethernet flow points (EFP) or	
	equivalent functionality.	
	9. L2 Protocol Tunneling.	
1.4	-	
14	Router shall have support of following Standards:	
	I. IEEE 802.1D (STP) / 802.1 s MSTP	
	II. IEEE 802.1p (CoS)	
	III. IEEE 802.1Q (VLANs)	
	IV. IEEE 802.1ag (Connectivity Fault Management)	
L	V. IEEE 802.1s (MSTP)	
	VI. IEEE 802.3x (Flow Control)	
	VII. IEEE 802.3z (Gigabit Ethernet)	
	VIII. IEEE 802.3ab (1000Base-T)	1
	IX. IEEE 802.3ac (VLAN Tagging)	Į.
	X. IEEE 802.3ad (Link Aggregation)	
	XI. IEEE 802.3au (Link Aggregation) XI. IEEE 802.3ae (10 Gigabit Ethernet)	
	XII. IEEE 802.3ah XIII. ITU-T G.8032/Y.1344 2010: Ethernet Ring	
1.5	-	
15	Router shall have the following Certifications:	
	i. The model of the Routers series shall have MEF-(9 & 14)/CE2.0 or IEEE	
	standardsor higher certification from authorized agencies.	
	ii. Deleted.	
	iii. CE / FCC.	

	iv. Shall conform to UL 60950 or IEC 60950 or EN 60950 Standards for safety	
	requirements of IT Equipment.	
	v. Shall Confirm relevant standards of EN/CE/FCC for EMC for (Electro Magnetic	
	Compatibility).	
	vi. Deleted.	
16	OEM should have a valid ISO 9001 & ISO 14001 certification on the date of	
	opening	
	of bid	
17	IPv6 feature should be ready from day 1.	
	"Router/ Router OS should be tested and certified for EAL 2 / NDPP (Network	
18	DeviceProtection Profile) or above under Common Criteria Program for security	
	related functions or under Indian Common Criteria Certification Scheme (IC3S)	
	by STQC, DEIT, Govt. of India."	

SOR 4: Ethernet Access Switch - 1G

SN	Specification
1	The switch should have minimum 24 x 10/100/1000BASE-T ports, 4 x 1G (minimum) SFP ports.
2	Switching capacity should be 56 Gbps or better; forwarding rate 41.7 MPPS or better
3	Should have support for 802.3x flow control.
4	Should support 802.1D spanning tree control / RSTP support, flow or netflow.
5	Should support management features like Web-based GUI, SNMP, TFTP Client, System Log, DHCP/BootP.
6	Should support Auto MDI-II/MDI-X uplink for all the twisted pair ports.
7	Should support 802.1Q VLAN, 802.1p Priority queues.
8	Should support port mirroring.
9	Should support jumbo frame.
10	Should support console port or telnet and web GUI based management.
11	Should have AC power supply arrangement as given below in chassis without any external adaptorswinedundant power supply (RPS): AC power supply 100 to 240 V AC with 50 to 60 Hz.
12	Should support 16000 entries in MAC table.
13	Should support Port-based VLAN, 802.1Q Tagged VLAN & Voice VLAN along with Management VLAN.
14	Should support spanning-tree root guard or similar functionality.
15	Should support spanning-tree Port Fast guard for fast convergence or similar functionality

16	Should support security features like SSL (HTTPS)/SSH, Broadcast/Multicast/ Unicast Storm Control, DoS Attack Prevention.
17	Should support Quality of Service (QoS) like Priority Queue, Class of Service (CoS), Rate Limiting (Bandwidth Control), Strict Priority Queue (SPQ), Weighted Round Robin (WRR)/ Shaped Round Robin (SRR).
18	IPv6 feature should be ready from day 1.
19	Switch shall be with Rack Mountable clamps for standard 19-inch rack mountable.
20	Minimum Operating Temperature 0 to 50 degree.
21	Switch should support LLDP or similar functionality.
22	Switch should have EMI CERTIFICATE as per EN/FCC/IC/CE.
23	Switch should have SAFETY CERTIFICATE as per UL/ IEC/EN 60950
24	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
25	Should support following for min. 64 Groups:
	i) IGMP Snooping,
	ii) IGMP v1/v2/v3 awareness Snooping,
	iii) IGMP Snooping Queried
	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.

SOR 5: Fiber Switch - 10G

SN	Specification
1	Should have minimum 24 x GE SFP based ports.
2	Should have minimum 4 nos. SFP+ based 10 GE ports.
3	Should have at least 64 Gbps full duplex line rate traffic.
4	Should have support for 802.3x flow control.
5	Should support 802.1D spanning tree control/RSTP support and MSTP support.
6	Should support management features viz. Web-based GUI/SSH, SNMP, TFTP Client System Log.
7	Should support Auto MDI-II/MDI-X uplink for all the twisted pair ports.

8	Should support 802.1Q VLAN, 802.1p Priority queues.
9	Should support port mirroring, jumbo frame & should have at least 16K MAC address
10	Should support console port and telnet-based management.
11	Should have power supply arrangement as given below in chassis without any external adaptors with redundant power supply (RPS): (i) AC power supply 100 to 240 V AC with 50 to 60 Hz (ii) -48 V DC Supply DC power supply should work as a redundant power supply to power on the switch in case
12	failure of AC power supply. Should support Port-based VLAN, 802.1Q Tagged VLAN along with Management VLAN
13	Should support ITU-T G.8032 Ethernet Ring protection for Loop Protection and fast convergence time (Sub 50 ms) in ring topologies/ IEEE 802.1W RSTP for Sub Second failover. Industry Standard IEEE 802.1W RSTP is standard for Ring /STP topology.
14	Switch should support Surge Protection on power input and on Ethernet ports as per EN61000-4-5 standard and as per requirement at Indian Railway Station.
15	Should support Quality of Service (QoS) features viz. Priority Queue, Class of Service (CoS), Rate Limiting (Bandwidth Control), Strict Priority Queue (SPQ), Weighted Round Robin (WRR) or better, DOS attack prevention.
16	IPv6 feature should be ready from day 1.
17	Minimum Operating Temperature 0 to 50 degree.
18	It should have safety certificates as per UL/IEC/EN 60950. The switch should have EMC certification as per EN/CE/FCC standards.
19	Switch shall be with Rack Mountable clamps for standard 19-inch rack mountable.
20	The Switch shall be designed for continuous operations.
21	Should support port Trunking of at least 2 Nos. GE/10GE ports.
22	Switch should support LLDP or similar functionality.
23	Should support following security features viz.: i) SSL (HTTPS)/SSH, ii) Broadcast/Multicast/Unicast Storm Control, iii) DoS Attack Prevention/ DAI
24	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 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.

SOR 6: Fiber Switch

CNI	Description
SN	Description
2	Should have minimum 24 x 1G SFP based ports Should have minimum 4 nos. SFP+ based 10G Ports.
3	Should have at least 128 Gbps full duplex line rate traffic.
4	Should have support for 802.3x flow control.
5	Should support 802.1 D spanning tree control/RSTP support and MSTP support.
6	Should support management features viz. Web-based GUI/SSH, SNMP, TFTP Client System Log.
7	Should support Auto MDI-II/MDI-X uplink for all the twisted pair ports.
8	Should support 802.1Q VLAN, 802.1p Priority queues.
9	Should support port mirroring, jumbo frame & should have at least 16K MAC address.
10	Should support console port and telnet-based management.
11	Should have AC & -48V DC power supply arrangement as given below in the switch without any external adaptors for redundant power supply. Switch should have built-in 1+1 redundant power supply (AC & -48V DC).
12	Should support Port-based VLAN, 802.1Q Tagged VLAN along with Management VLAN.
13	Should support ITU-T G.8032 Ethernet Ring protection for Loop Protection and fast convergence time (Sub 50 ms) in ring topologies/ IEEE 802.1W RSTP for Sub Second failover, Industry Standard IEEE 802.1W RSTP is standard for Ring /STP topology.
14	Switch should support Surge Protection on power input and on Ethernet ports as per EN61000-4-5 standard and as per requirement at Indian Railway Station.
15	Should support Quality of Service (QoS) features viz. Priority Queue, Class of Service (CoS), Rate Limiting (Bandwidth Control), Strict Priority Queue (SPQ), Weighted Round Robin (WRR) or better, DOS attack prevention.
16	IPv6 feature should be ready from day 1.
17	Minimum Operating Temperature 0 to 45 degree.
18	The Switch should have CE/EMC & CE-LVD/RoHS certified
19	Switch shall be with Rack Mountable clams for standard 19-inch rack mountable.
20	The Switch shall be designed for continuous operations.
21	Switch should support LLDP or similar functionality.
22	Switch should support following security features viz: i)SSL (HTTPS)/SSH, ii) Broadcast/Multicast/Unicast Storm Control, iii) Optical Power SFP threshold alarms iv) DoS Attack prevention/DAI
23	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
24	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.

SOR 7 : FIber Switch - 40/100G:

SN	Specification
1	Should have minimum 24 x 10GE SFP based ports. All 10G interfaces shall be of SFP+ type and shall support LR/ER/ZR.
2	Should have minimum 4 Nos. 100GE QSFP28 based ports.
3	Should have at least 1280 Gbps switching capacity with minimum 950 Mpps packet forwarding rate.
4	Should have support for 802.3x flow control, Console port.
5	Should support 802.1D spanning tree control, RSTP support and MSTP support.
6	Should support management features viz. Web-based GUI/SSH, SNMP, TFTP Client System Log.
7	It shall support IGMP snooping v1, v2 and v3, IGMP Proxy, IGMP Qurier and MLD/MLD Qurier.
8	It shall have supports L2/L3/L4 QoS/CoS solutions help ensure that critical network services such as VoIP, ERP, Intranet, and video conferencing are served with proper priority.
9	It shall support Optical Transceiver Digital Diagnostic Monitoring and link layer monitoring through 802.3ah or UDLD/IPSLA/TWAMP. There shall be 8 or better hardware-based queues per port for flexible QoS management.
10	The switch should support QOS based on Switch port, 802.1p priority queues, vLAN ID, MAC addresses, IPv4/IPv6 addresses, DSCP, ToS, Protocol type, TCP/UDP ports, IPv6 traffic class. It should support Time-Based QOS
11	It shall support for SSHv2, SSL v2/v3, SNMPv3 to provide network security by encrypting administrator traffic during Telnet, SSH and SNMP sessions. It shall support IMPB, DHCP snooping, IPSG and dynamic/static ARP inspection.
12	The switch shall be able to work on both IPv4 and IPv6 (dual stack) from day one. It shall support Port Mirroring (minimum 4 mirror session) based on port basis/ VLAN basis to support intrusion prevention system deployment in different VLANs.
13	It shall support RADIUS authentication to enable centralized control of the switch. Should support MAC address notification to allow administrators to be notified of users added to or removed from the network. Shall support port security up to 1K MAC address to secure the access to an access or trunk port based on MAC address.
14	It shall support multilevel security on console access (Console port) to prevent unauthorized users from altering the switch configuration.
15	It shall support BPDU filtering feature, Spanning-Tree Root Guard (STRG), UDLD or similar Mechanism.
16	It shall support Web based or Trivial File Transfer Protocol (TFTP) and FTP, SCP. SNTP/NTP, RMON v1 and v2 standards and 4 RMON groups, SNMPv1, SNMPv2c, and SNMPv3.
17	It should support routing protocol static and RIP/OSPF.
18	Shall Support Loopback Detection, default routing and static routing Support for 128 static IPv4 routes and Support 64 static IPv6 routes
19	It should support Port-based VLAN, MAC-based VLAN, VLAN Trunking, Voice VLAN, Private VLAN, GVRP, GARP/VTP, IP-Subnet Based VLAN and ISM VLAN (MVR)/IGMP filtering, Guest VLAN, MAC Authentication Bypass (MAB).

20 Should support ITU-T G.8032 Ethernet Ring protection for Loop Protection and fast convergence time (Sub 50 ms) in ring topologies/ IEEE 802.1W RSTP for Sub Second failover. Industry Standard IEEE 802.1W RSTP is standard for Ring /STP topology. 21 Bandwidth management: Flow-based bandwidth management, ingress rate-limiting; egress rate shaping per port, Time based ACL. It shall support access list based on IPv4/v6 address, VLAN, MAC Address, DSCP, TCP/UDP 22 Port no. Should support ICMPv4, ICMPv6, Telnet v4, Telnet v6, SNMP v4 and SNMP v6, PVST or equivalent. Should support MAC Flapping, duplicate address inspection, traffic segmentation, DOS attack 23 prevention. Should support sFlow or Netflow, IPv6 Neighbor Discovery (ND). 24 It should support DHCP Client, DHCP Server and DHCP Relay with option 82. Should support IEEE 802.1ag Ethernet OAM: Connectivity Fault management. Should Support Ethernet OAM compliant with IEEE 802.3ah/Y.1731, L2 Protocol Tunnelling for STP. Should support port and vlan mirroring, jumbo frame and should have at least 32K MAC 25 address. Switch should have dual image. 26 Minimum Operating Temperature 0 to 50 degree. 27 It should have safety certificates as per UL/IEC/EN 60950. The switch should have EMC 28 certification as per EN/CE/FCC standards. 29 Switch shall be with Rack Mountable clamps for standard 19-inch rack mountable. The Switch shall be designed for continuous operations. 30 31 Switch should support following SNMP traps or syslog i) Interface UP & Down ii) Optical Power SFP threshold alarms STP Topology Changes and New root bridge iii) LLDP table changes iv) v) Threshold alarm for temperature Ethernet OAM SNMP alarms. 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.

SOR 8 : 1G SFP - 10 Km

SN	Description
1	SFP modules should comply with multi-source agreement (MSA), enabling compatibility with other vendors equipment.
2	Should support 10 km optical distance (1550/1310 nm) on dual fiber.
3	Should have LC type connector.
4	Should have 1 Gigabit Ethernet capacity on single mode fibre.
5	Should support DDMI feature.
6	OEM Should be having valid ISO 9000 & ISO 14000 certification on the date of opening of bid.
7	Should have CE and FCC regulatory compliances.
8	Operating Temperature of the SFP Should be mini 0 to 65 °C (23 to 149 °F)

SOR 9: 1G SFP - 20 Km (BIDI)

SN	Description
1	SFP modules should comply with multi-source agreement (MSA), enabling compatibility with other vendors equipment.
2	Should support 20 km optical distance on single fiber.
3	Should have LC type connector.
4	Should have capacity of bidirectional transmission.
5	Should have 1 Gigabit Ethernet capacity on single mode fiber.
6	Should support DDMI feature.
7	OEM should be having valid ISO 9000 & ISO 14000 certification on the date of opening of bid.

SOR 10: 1G SFP - 40 Km

SN	Description
1	SFP modules should comply with multi-source agreement (MSA), enabling compatibility with other vendors equipment.
2	Should support 20-40 km optical distance (1550 nm) on dual fiber.
3	Should have LC type connector.
4	Should have 1 Gigabit Ethernet capacity on single mode fibre.
5	Should support DDMI feature.
6	OEM Should be having valid ISO 9000 & ISO 14000 certification on the date of opening of bid.
7	Should have CE and FCC regulatory compliance's.
8	Operating Temperature of the SFP Should be mini 0 to 65 °C (23 to 149 °F)

SOR 11: 1G SFP - 40 Km (BIDI)

SN	Description
1	SFP modules should comply with multi-source agreement (MSA), enabling compatibility with other vendors equipment.
2	Should support 20-40 km optical distance on single fiber
3	Should have LC type connector.
4	Should have 1 Gigabit Ethernet capacity on single mode fiber.
5	Should support DDMI feature.
6	OEM should be having valid ISO 9000 & ISO 14000 certification on the date of opening of bid.
7	Should have CE and FCC regulatory compliances.
8	Operating Temperature of the SFP Should be mini 0 to 65 °C (23 to 149 °F)

SOR 12: 10G SFP+ - 10 Km

SN	Description
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1	SFP modules should comply with multi-source agreement (MSA), enabling compatibility with other vendors equipment.
2	Should support 10 kms optical distance on dual fiber
3	Should have LC type connector
4	Should have 10 Gigabit Ethernet capacities on single mode module fiber.
5	Should support DDMI feature. Option should be available for both SFP+ and XFP
6	Should should be having valid ISO 9000 & ISO 14000 certification on the date of opening of bid.
7	Should have CE and FCC regulatory compliances.
8	Operating Temperature of the SFP Should be mini 0 to 65 °C (23 to 149 °F)

SOR 13: 1G SFP - Electrical

SN	Description
1	SFP modules should comply with multi-source agreement (MSA), enabling compatibility with other vendors equipment.
2	Should support 90 meter distance on copper cable.
3	Should have RJ45 Connector
4	Should have 1 Gigabit Ethernet capacities
5	Should should be having valid ISO 9000 & ISO 14000 certification on the date of opening of bid.
6	Should have CE and FCC regulatory compliances.
7	Operating Temperature of the SFP Should be mini 0 to 65 °C (23 to 149 °F)

SOR 14: 100G QSFP - 40 Km

SN	Parameter	Value	
1	Module Form Factor	QSFP+	
2	Aggregate Data Rate 100 Gb/s		
3	Link Length Supported	40 KM	
4	Protocols Supported Typical applications include OTN OTU4, 100G Eth		
5	Fiber type	Dual Fibre, Duplex LC Connector	
6	Operating temperature range	0°C to 70°C	
7	Power dissipation	< 4 W	
8	Average Launch Power	-2.5 dBm to 4.5 dBm	
9	9 Receiver Sensitivity - 18.5 dBm or better		

10	Should have RoHS-6 Compliant	
11	The offered QSFP should be compatible with IP/MPLS Router offered as per SOR Item no. 1.	
12	Built in Digital Diagonistic Function	
13	OEM must have ISO 9001 & 14001 Certificates	
14	Product must be IEC 60825 (Laser Safety) and IEC 60950 (Electrical Safety) certified by CSA or equivalent	
15	Manufacturer should be able to provide Factory test report for supplied transceiver parts.	

SOR 15: Patch cord - SC/APC-LC/PC (5 mtr)

SOR 16: Patch cord - LC/PC-LC/PC (5 mtr)

The Patch cords for SOR-22 & SOR-38 should be confirming to TEC NO.: TEC/GR/TX OFJ-01/05/NOV-09 with latest amendment No. TEC/T/OFC-OFJ/155/2013. However, the Patch cords should have the following:

- i) Operating Temperature: -40°C to +85°C.
- ii) Insertion Loss:
 - a) Insertion Loss of complete patch cord including adapter when tested from each direction in all conditions of operations: $\leq 0.3 \text{ dB}$
 - b) Insertion Loss of Adaptors: $\leq 0.1 \text{ dB}$
- iii) Return Loss for each connector of patch cord:
 - a) FC-PC : \geq 50 dB
 - b) SC-PC : \geq 50 dB
 - c) SC-APC : \geq 65 dB
 - d) LC: $\geq 50 \text{ dB}$
 - e) $E2K/APC : \ge 60 dB$
- iv) The length and type of connector of each Patch Cord: As per SOR.
- V) The connectors must be make of reputed OEMs 3M, Huber-Shuner, R&M, TE Connectivity/Raychem. any other CACT approved Manufacturer/s having a valid approval against specification number TEC/GR/TX/OFJ-01-NOV.09 for the tendered connected type.

vi)Connector Body:

- a) FC-PC: Ni plated brass body (Ni plating shall be as per BIS Standards)
- b) SC-PC & SC-APC : Engineering thermoplastic (Glass filled PBT: Polybutylene Terephthalate)
- c) LC: PEI (Polyetherimide)/ PPS (Polyphenylene Sulphide)
- vii) Color of connector body:
 - a) FC-PC connector: Ni plated Brass
 - b) SC-PC connector: Blue

c) SC-APC connector: Green

d) LC connector: Blue viii)Radius of curvature:

a) FC-PC: 10 to 25 mm
b) SC-PC: 10 to 25 mm
c) SC-APC: 5 to 12 mm
d) LC: 10 to 25 mm

ix) Minimum bending radius of the cable:

a) Loaded: 50 mmb) Unloaded: 30 mm

SOR 17: Rack 6U

No.	Item Description		
1	Type Closed Telecom Rack wall mounted		
2	Dimension 6U (Height) x 550mm (Width) x 500 mm (Depth)		
3	Mounting	Rack should have wall mounting provision with heavy wall brackets and fastners.	
4	Front door	Rack should have front door tough and transparent glass fitted on MS/CRCA sheet on sides with Lock and key.	
5	Rear Cover	Rear Bolted cover	
6	Top & Bottom	Rack top and bottom should be MS/CRCA steel made with cable entry provision with glands at both side.	
7	Fan module	Compact fan module of 90 CFM working on 230VAC 1nos.with each rack properly fitted atop of rack	
8	Earthing Provision	Rack Should have earthing provisions.	
9	Cable manager	Ino.horizontal cable manager with cable loops to be provided with each rack.	
10	Power	PDU is of 4 Sockets of branded make such as Havells or equivalent	
	Distribution Unit	with 6Amp with switch.	
11	Material used	CRCA/MS with Thickness varying from 0.8 mm or higher.	
12		fitted with one modem tray19"	
13	The good quality powder coating light grey in colour shall be used for painting of the rack.		
14	"RAILTEL along with Year" in bold and easily recognizable fonts should be written at the		
	front top of the rack preferably in black or blue color.		
15	OEM should have a valid ISO 9001 certification on the date of opening of bid.		
16	Rack should also comply with EIA 310/DIN 41494 standards.		

SOR 18: DC Rack mounted Charger with 6.25A SMR's (2+1):

No.	Specification Description	
1	The charger should be mountable on standard telecom rack i.e. 600x400 mm (width x depth).	
2	It should be capable of working in ambient temperature of -5 to +52 degree C.	

It should be capable of working within the input AC voltage range 165 to 260 V and frequency range of 47 to 53Hz.		
Indication for availability of AC mains to the unit should be provided as LCD display or in the form of LED.		
The nominal output DC Voltage should be 48 to 52V with a range of 48 to 56V.		
The output current should be 12.5A with 6.25A (min.) SMRs in 2+1 Configuration. In case the higher capacity SMRs are being provided, these should be in N+1 configuration where N indicates the numbers of SMRs being provided to cater the rated load (12.5A or higher) of the unit. The SMRS shall work on current sharing basis for a maximum combined output of 18.75A of main + stand-by SMR's.		
The output load & line regulation should be +/-1%.		
The output ripples should not be more than +/-3%.		
All the circuit breakers and fuses provided on the unit should be of proper rating and well leveled.		
The unit should be provided with following potential Free contacts (Normally open) for extending the alarms to the NMS: i) AC mains fail ii) Group alarm iii) Low DC alarm		
The Group alarm as indicated in item No. 6 above shall also be available in case any of the SMR gets faulty in addition to other problems related with input/output supply or unit.		
The Low DC alarm shall either be fixed at 46 V or should be adjustable between 42 to 47V.		
There should be an arrangement of earthing at the unit on its body.		
The following protections should be provided with the unit: i) Transient and surge protection ii) Lightening protection iii) Over voltage protection at input and Output iv) Overload protection at output v) Reverse battery protection. vi) Battery LVD (preferably adjustable and in case fix then 41.5 V DC).		
The charger should have an arrangement for the charging of the batteries (48 V up to 42 AH) with LVDS.		
There should be built in protection against high surge and transient, there should be delay in input switching upon mains recovery to protect the charger from high surges and transient, upon switching on.		
There should be protection against lightening and it should be possible to replace the protection tube without opening the unit (external arrangement).		
There should be digital display/analogue meter to display the values of, input & output voltage, battery voltage, load Current and charging current.		

SOR 19: 12V/42 AH VRLA Batteries:

S.No.	Specification Description	
1	The battery set should consist of VRLA (maintenance free)/SMF batteries.	
2	The one set of battery should consist of 4 Nos. of 12V, 42AH capacity batteries	
3	It should be capable to work on High Temperature Ranging from 270C to 520C.	

SOR 20: 12F OFC Unarmoured

- i. Supply of 12F unarmored OFC (Metal free).
- ii. Fibre should be as per ITU specs G 652D (03/03 or latest).

SOR 21 : UPS - 1KVA

SN	Specification		
i.	Capacity 1KVA/900 W, better as per actual requirement		
ii.	Technology	IGBT	
iii.	Wave form Pure Sine wave		
iv.	Display	LCD/LED	
v.	Input power factor correction	0.9	
vi.	Input configuration	1Ph, L-N+PE	
vii.	Output Power factor	0.9 or better	
viii.	frequency (Input)	50Hz frequency	
ix.	frequency (output)	50Hz +/- 0.5Hz frequency	
х.	Voltage Range (Bypass)	230VAC+/-15%	
xi.	V threshold 3% max full linear load, 6% max on Nonlinear		
xii.	. Crest factor 3.0 or better		
xiii.	AC-AC Efficiency	85% or better	
xiv.	Transfer time Main-Battery	0	
XV.	Transfer time Inverter-Bypass 4 m sec		
xvi.	Emergency Power off function		
xvii.	Monitoring software for Battery, health of UPS, any critical parameter change		
xviii.	Communication	SNMP V1/V2/V3	
xix.	Port	USB	
XX.	Battery Type	SMF	
xxi.	Battery backup	30 Minutes. on full load (Single bank) with 800 (minimum)VAH battery size (Battery to be installed in separate floor mount cabinet)	
xxii.	Environmental Parameter		
A	Operating Temperature Range 0-40 deg		
В	Over Temperature, Load on Battery, Battery on Charge, Battery low, Mains on	Indication required	

SN	Specification		
С	Input AC mains and output power inbuilt		
	supply surge protection		
D	Humidity	0% to 95% non-condensing	
Е	Noise Level 50 dBA max		
F	Size Floor mounted		
xxiii	i Protection IP20		
•			
A	Mechanical Parameter EMI or equivalent BIS/IS standard		
В	Safety EN or equivalent BIS/IS/IEC standard		
С	Performance IEC/EN or equivalent BIS/IS standard		
	Voltage Range 175-276 VAC (1-phase) @ 100% load		

SOR 22 : Fire Extinguisher

- 1. Propellent as per clause 5*2 of IS 16018 : Carbon Di-Oxide
- 2. Nominal Charge of CO2 Based Wheeled Fire Extinguishers in Kgs: 4.5 kilogram
- 3. Suitable for Type of Fire : Class B ,Class C ,Class E.
- 4. Cylinder/Vessel Material Seamless Manganese Steel as per IS 7285.
- 5. Cylinder/Vessel Pressure High Pressure Cylinders (service pressure more than 2.5 MPa)
- 6. Operating Temperature, Wheeled fire extinguishers shall be capable of operating reliably within one of the following temperature ranges, and these temperature range selected shall be marked on the extinguisher+5°C to +55°C.

SOR - 23 : Desktop PC

SN	Category	Feature/Description/Parameter	Description of Requirement/Specifications
1	Processor	Processor Make	Intel
2		Generation	11.0 or higher
3		Processor Description	Intel Core i3 or higher
4	Mother Board	Chipset Series	Intel H/B/Q Series
5	Memory	Type of RAM	DDR4
6		RAM Size (GB)	8 or more
7	Graphics	Graphics Type	Integrated
8	Storage	SDD Capacity	500GB or more
9	Connectivity	Wireless Connectivity and Bluetooth	Yes
10		Number of Ethernet ports	1 or more
11		Type of Ethernet Ports	10/100/1000 on board integrated Gigabit port
12	Ports	USB Port	2 or more
13		HDMI Port	1 or more
14	Operating System	Operating System (Factory pre-loaded)	Windows 11 or higher

15	Display	LED Backlit Monitor size (inches)	19.5 inch or more
16		Monitor Resolution (Pixels)	1920 x1080 (FHD) or more
17		Availability of Speakers integrated with Display	Yes
18	Input Devices	Mouse Connectivity	Wireless
19		Type of mouse	Optical Scroll
20		Keyboard Connectivity	Wireless
21		Availability of Webcam integrated with Display	Yes
22	Warranty	On-Site	Minimum 3 Years

OFFER LETTER

Sr. Dy. General Manager/Proc., Northern Region, RailTel 6th Floor, 3rd Block, Delhi Technology Park, Shastri Park, New Delhi, Delhi-110053

1. 2

Ref:- Tender No. GEM/2025/B/xx Dated: dd. .10.2025

It is hereby confirmed that we have understood the terms and conditions of the Tender, have thoroughly examined the specifications, are aware of the nature of the goods & services required and our offer is to supply goods & services strictly in accordance with the requirements, terms & conditions of this Tender. We agree to abide by the terms and conditions of the tender if the contract is awarded to us.

cont	tract is awarded to us.			
	We hereby offer to supply the goods and specify in the purchase order at the price qua period of 90 days from the date of opening	oted and agree to hold		
tend preju or de	Online payment vide transaction No	MD has been paid through of Earnest Money withdraw or modify	ngh the details a shall stand fo the offer within	ns mentioned in rfeited without validity period
		SIGNATURE OF Date:	SUPPLIER (S)	
		CONTTRACTOR	(S) ADDRESS	S
SIG	NATURE OF WITNESS:			

Annexure-III

PROFORMA FOR PERFORMANCE BANK GUARANTEE PERFORMANCE BANK GAURANTEE 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., 6th Floor, 3 rd Block, Delhi-IT-Park, Shastri Park, New Delhi-110053 (Herein after called RailTel) having agreed to exempt(Hereinafter called "the said
	Contractor(s)") from the demand, under the terms and conditions of an Agreement No
2.	We,
3.	We,
4.	We,
5.	We,

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.

This Guarantee will Contractor(s) / Tend	•	e to the change in the Constitution of the Bank or the
invokable at our pla	ace of business at	Bank further agree that this guarantee shall be/New Delhi (indicate detailed address The branch at New delhi is being advised accordingly.
`	of Bank) lastly undertake onsent of the RailTel in	e not to revoke this Guarantee during its currency except writing.
Dated the day of	MM, 2025	
		for

Witness:

- 1. Signature Name
- 2. Signature Nam

Manufacturer Authorization form (MAF)

Sr. Dy. General Manager/Proc., RailTel Corporation of India Ltd. 6th Floor, 3rd Block, Delhi Technology Park, Shastri Park, Delhi – 110053.	Date:
Subject: Manufacturer Authorization form (MRef: Tender No. GEM/2025/B/xx dated dd	AAF) to M/s for
	and reputed manufacturer and service provider of having our registered office at
We hereby authorize M/s to execute the "Procurement of Electronics It your above said bid.	(bidder name), Office to participate in bid and subsequently upon award of the bid tems-25-26/03 through GeM " of our range of products against ears for our range of products offered by M/s
against the above-said bid.	als for our range or products offered by 1475
Thanking you, Best regards,	
Authorised Signatory	

FORMAT FOR AFFIDAVIT TO BE UPLOADED BY TENDERER ALONGWITH THE TENDER DOCUMENTS

	ecuted in presence of Public notary on non-judicial stamp paper of the value of Rs.100/ The er has to be in the name of the tenderer)**
Ι	(Name and designation)** appointed as the attorney/authorized
M/s	the tenderer (including its constituents), (hereinafter called the tenderer) for the purpose of the cuments for the work of ender No. Of (Railway) do hereby solemnly affirm and state on the behalf
Tender do	cuments for the work of
as per ine i	ender No of (Railway), do hereby solemnly affirm and state on the behalf erer 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 electronic-tender portal. 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 tenderers, 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 IR. 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/SD and Performance Guarantee besides any other action provided in the contract including banning of business for five year on entire IR.

DEPONENT SEAL AND SIGNATURE

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.

OEM'S UNDERTAKING ON LETTER HEAD FOR PROVEN FACILITY, BLACKLISTING, MALICIOUS CODE, IPR & RESTRICTION ON COMPANIES FROM LAND BORDER SHARING COUNTRIES WITHINDIA

(To be signed by the OEM)

		Sr. Dy. GM/Proc., RailTel Corporation of India Limited, Shastri Park, 6 th floor, IIIrd Block, Delhi Technological Park, Shastri Park, New Delhi-110053
	E-Te	nder No. GEM/2025/B/xx dated: dd10.2025
	Sub:	OEM undertaking
	Dear	Sir,
		Over and above all our earlier conformations and submissions as per your requirements of the RFP, we confirm that,
	A.	I/We undertake/Certify that
		"I/We have proven facilities at
	B. C.	I/We have not been black-listed or debarred currently by Central Govt./State Govt./CPSU in India or anywhere globally by Government for security reasons either in Individual capacity or as a member of partnership firm/LLP/JV/Society/Trust. I/We Certify that,
	(i)	All proposed hardware and software components in scope of supplies when shipped by, does not contain embedded malicious code that would activate procedures to: -
		 a. Inhibit the desired and designed function of the equipment. b. Cause physical damage to the user or equipment during the exploitation. c. Tap information resident or transient in the equipment/networks.
(ii)	I/We, will be considered to be in breach in case physical damage or malfunctioning is caused due to activation of any such malicious code in embedded software and thus be liable to repair, replace or refund the price of the infected software if reported (or, upon request, return) to the party supplying the software to Customer, if different than

- (i) Security breach or damages to system, if any, so caused by any embedded malicious code or otherwise, due to the act of either OEM or bidder or both, the OEM as well as the bidder would be considered liable jointly or severally and shall be banned for conducting any business with RailTel. Also the present contract, may liable to be terminated by the purchaser.
- D. I/We have read the clause regarding restrictions on procurement from a OEMs of a country which shares a land border with India; I certify that I/We is/are not from such a country or,if from such a country, has been registered with the Competent Authority, I/We hereby certify that I/We fulfils all requirements in this regard and is eligible to be considered.
- E. Offered Hardware and Software (Routers, Switch and SFP's) are having End of Life (EOL) not less than years from the date of Supply as prescribed in Annexure I i.e Item No. __ for not less than __ years & Item No. __ for not less than __ years.

Place:

Date: Seal and signature of the authorized representative of OEM

Name and Designation of the authorized representative of OEM

GUIDLINES REGARDING PROVISION FOR PROCUREMENT FROM A BIDDER WHICH SHARES A LAND BORDER WITH INDIA

- I. Any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority [The Competent Authority for the purpose of registration under this Order shall be the Registration Committee constituted by the Department for Promotion of Industry and Internal Trade (DPIIT)].
- II. "Bidder" (including the term 'tenderer', 'consultant' or 'service provider' in certain contexts) means any person or firm or company, including any member of a consortium or joint venture (that is an association of several persons, or firms or companies), every artificial juridical person not falling in any of the descriptions of bidders stated hereinbefore, including any agency branch or office controlled by such person, participating in a procurement process.
- III. "Bidder from a country which shares a land border with India" for the purpose of this Order means: -
 - 1. An entity incorporated, established or registered in such a country; or
 - 2. A subsidiary of an entity incorporated, established or registered in such a country; or
 - 3. An entity substantially controlled through entities incorporated, established or registered in such a country; or
 - 4. An entity whose beneficial owner is situated in such a country; or
 - 5. An Indian (or other) agent of such an entity; or
 - 6. A natural person who is a citizen of such a country; or
 - 7. A consortium or joint venture where any member of the consortium or joint venture falls under any of the above.
- IV. The beneficial owner for the purpose of (III) above will be as under:
 - 1. In case of a company or Limited Liability Partnership, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has a controlling ownership interest or who exercises control through other means. Explanation
 - a. "Controlling ownership interest" means ownership of or entitlement to more than twenty-five per cent. of shares or capital or profits of the company;
 - b. "Control" shall include the right to appoint majority of the directors or to control the management or policy decisions including by virtue of their shareholding or management rights or shareholders agreements or voting agreements;
 - 2. In case of a partnership firm, the beneficial owner is the natural person(s) who, whether acting alone or together, or through one or more juridical person, has ownership of entitlement to more than fifteen percent of capital or profits of the partnership;
 - 3. In case of an unincorporated association or body of individuals, the beneficial owner is the natural

person(s), who, whether acting alone or together, or through one or more juridical person, has ownership of or entitlement to more than fifteen percent of the property or capital or profits of such association or body of individuals;

- 4. Where no natural person is identified under (1) or (2) or (3) above, the beneficial owner is the relevant natural person who holds the position of senior managing official;
- 5. In case of a trust, the identification of beneficial owner(s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership.
- V. An Agent is a person employed to do any act for another, or to represent another in dealings with third person.
- VI. The successful bidder shall not be allowed to sub-contract works to any contractor from a country which shares a land border with India unless such contractor is registered with the Competent Authority.

Certificate to be given by the Tenderer:

"I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I certify that I am not from such a country or, if from such a country, I have been registered with the Competent Authority. I hereby certify that I fulfill all requirements in this regard and I am eligible to be considered. [Where applicable, evidence of valid registration by the Competent Authority shall be attached.]"

Certificate to be given by Tenderer for Works involving possibility of sub-contracting:

"I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India and on sub-contracting to contractors from such countries; I certify that I am not from such a country or, if from such a country, I have been registered with the Competent Authority and will not sub-contract any work to a contractor from such countries unless such contractor is registered with the Competent Authority. I hereby certify that I fulfill all requirements in this regard and I am eligible to be considered. [Where applicable, evidence of valid registration by the Competent Authority shall be attached.]"

PROFORMA FOR "NIL DEVIATION COMPLIANCE UNDERTAKING (To be signed by the Bidder)

To, Sr. Dy. General Manager/Proc., RailTel Corporation of India Limited 6th Floor, IIIrd Block, Delhi Technology Park, Shastri Park, New Delhi-110053

Tender Reference No.:

Sub: NIL Deviation Compliance

Over and above all our earlier conformations and submissions as per your requirements of the tender, we confirm that,

- 1. All SOR item proposed in scope supplies are compliant to the technical specifications of the equipment as mentioned in the Annexure-I of ITB Document.
- 2. We will also ensure our unconditional compliance of all the terms and conditions as mentioned in the Tender document including all corrigenda.
- 3. List of deviations (Partial Compliance and Non-compliance) from terms and conditions as mentioned in the Tender document including all corrigenda, if any, is enclosed as Annexure with this form. We understand that any partial compliance or non-compliance, may result in REJECTION of our bid.

Seal and signature of the bidder

Place:

Date:

(This letter should be on the letterhead of the bidder duly signed by an authorized signatory)

Format for Bid Security Declaration

(On Non-judicial stamp paper of Rs. 100/-)

Whereas, I/We (Name of Agency) has submitted bid for (Name of Work and Tender No.) and whereas Earnest Money Deposit is being exempted in the aforesaid tender to give relief to the bidders as per Govt. of India guidelines due to severe financial crunch on account of slowdown in the economy due to the pandemic,
I/We hereby submit the following "Bid Security Declaration" in lieu of exemption from submitting Earnest Money Deposit:-
 If I/We withdraw or modify my/our bid during the bid validity period (including extended validity of tender) specified in the tender documents;
Or
 If, after the award of work, I/We fail to accept LOA/LOI, or to sign the contract agreement or fail to submit performance guarantee or fail to commence the work within stipulated time period prescribed in tender documents;
Or
3) If I/We furnish any incorrect or false statement / information/ document; Or
4) If I/We hide any relevant information or do not disclose any material fact in the tender; Or
5) If I/We commit any breach of integrity Pact;
I/We may be disqualified and banned for a period of three years and shall not be eligible to bid for future tenders in RailTel Corporation of India Ltd. for the period of three years from date of issue of such orders.
(Signed by the Authorized Representative of Firm)
Name of Authorized Representative
Name of Firm
Date

Annexure - X

Consignee Details:

Sl. No.	Territory	Consignee Address	Contact Person	State/ GST No.
1	Delhi- NOC	RailTel corporation of India Ltd, 2 nd Floor, Microwave Complex, Thompson Road, New Delhi-100002	Shri Nitin Kumar/ Sr. Manager/Store/ NOC/New Delhi Mob.9001044118	Delhi/ 07AABCR7176C2ZE

Note: Material may be diverted before supply to any other location in Northern Region as per discretion of Railtel.

CHECK LIST (To be Filled up & uploaded)

List of Documents to be Submitted (Online):

SN	Have you submitted the following documents?	Submitted /Complied or Not	Page No./ref No. of Offer
1.	Offer letter as per Annexure-II & as per clause no. 13(i) of ITB.		
2.	EMD Submission details as per clause no. 7 of ITB.		
3.	BOQ of offered equipment as per clause no. 13(iii) of ITB.		
4.	Clause wise compliance along with all mentioned documents/annexures for all clauses of GeM Bid and ATC documents as per clause no. 13(iv) of ITB.		
5.	Data Sheet of offered equipment as per clause no. 13(v) of ITB.		
6.	Financial (Certified copies of audited balance sheets/annual reports for the last three years preceding financial terms) and Technical Eligibility Criteria documents as per clause no. 8.4 of ITB.		
7.	Technical Compliance of all Specification of items as per GeM Bid and ATC documents as per clause no. 13(vii) of ITB.		
8.	Certificate from the End user against the Eligibility criteria for OEM as per para 8.1 of ITB.		
9.	Proof of document required against Eligibility criteria of OEM and Bidder vide paras 8.2 & 8.3 respectively.		
10.	OEM declaration (Routers, Switch and SFP's) should have End of Life (EOL) as per Annexure - I, Annexure-VI & as per clause no. 2(v) of ITB.		
11.	MAF/OEM Authorization as per para 8.7 and Annexure-IV of ITB.		
	Notarized affidavit on a non-judicial stamp paper as per Annexure-V & as per clause no. 12 of ITB.		
	Certificate as per Annexure-VI & as per clause no. 13(xiii) of ITB.		
	Nil Deviation as per Proforma attached in Annexure-VIII & as per clause no. 13 (xv) of ITB.		
15.	Bid Security Declaration as per Annexure-IX of ITB.		
16.	Power of Attorney as per clause no. 14 of ITB.		