

# NATIONAL INSTITUTE OF TECHNOLOGY, TIRUCHIRAPPALLI, TAMIL NADU – 620 015

# **DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING**

Phone: 0431-2503300 Fax: 0431-2500133

# TENDER FOR ADSL/VDSL D-SLAM SERVER CHASSIS BID SYNOPSIS

Tender Reference Number and Date	NITT/ FILE NO: 004/PLAN/2015-16/ECE/Wi-Fi NIT Quarters/		
	ADSL/VDSL D-Slam Server dated 23 <sup>rd</sup> November 2015		
Brief Description of the item to be	Tender for procurement of ADSL/ VDSL Server Chassis to		
purchased	provide intranet/internet connection through twisted pair		
	copper telephone wires to NIT Quarters.		
Type of Tender	Two Bid System		
Cost of Tender Document including	Rs. 150/-		
5% VAT (Non- refundable)			
Our web site address for	The tender document can be downloaded from our website		
downloading the Tender document	www.nitt.edu		
Earnest Money Deposit	Rupees 36,000/- (Rupees Thirty Six Thousand only) payable		
(Refundable)	through Demand Draft drawn in favour of The Director,		
Last Date and Time for receipt of	Tiruchirappalli, Tamil Nadu Payable at Tiruchirappalli  9 <sup>th</sup> December 2015 up to 3 P.M		
tender	9 December 2015 up to 3 P.M		
Mode of submission of Tender	By Speed Post/ Register Post/ Courier/ Hand delivery at the		
IVIOGE OF SUBITISSION OF TENGER	postal dispatch section of NITT at the Administrative building.		
Date, time & venue Opening of	9 <sup>th</sup> December 2015 at 3.30 P.M in Institute Store Section		
Tender	9 December 2013 at 3.301 .Will matitude otore dection		
Date and time of opening of Price	After evaluation of technical bids, the date, time and place of		
bids	opening of the Price bid will be intimated to technically qualified		
	bidders.		
Address for submission of Tender	The Director, National Institute of Technology,		
With a Superscription	Tiruchirappalli-15, Tamil Nadu, India		
	With a Kind attention to:		
	Prof. P.Somaskandan, Associate Professor, Department of		
	Electronics and Communication Engineering, National Institute		
	of Technology, Trichy-15		
Procedure for submission of	Envelope 1: EMD and Cost of Tender document		
Bid(PLEASE REFER DETAILED INSTRUCTIONS REGARDING	Envelope 2: Technical Bid		
INSTRUCTIONS REGARDING SEALING AND MARKING OF BID)	Envelope 3: Price bid Envelope4: Larger size Outer Envelope (Wrapper)		
Contact Person for technical queries	Prof. P.Somaskandan/Dr. M.Bhaskar		
Contact i erson for technical quelles	Associate Professor,		
	Department of Electronics and Communication Engg., National		
	Institute of Technology, Trichy-15		
	E Mail : somas@nitt.edu/bhaskar@nitt.edu		

#### **TENDER NOTICE**

National Institute of Technology, Tiruchirappalli-15 invites sealed Tenders under two Bid systems for the procurement of **ADSL/VDSL server chassis** as per the quantity and specification mentioned in Annexure-1 (Technical Specifications). The tender bids duly-filled in all respects enclosing necessary documents may be addressed to the Director, National Institute Technology, Tiruchirappalli – 620 015 so as to reach **on or before 09-12-2015, 3.00 p.m.**, the tender may be dropped in dispatch section at 'Administrative Block of NIT, Tiruchirappalli-15. Tenderer should sign and seal in all pages of the tender; otherwise the tender will be summarily rejected.

#### 1. TECHNICAL QUALIFYING CRITERIA

The Tenderer must fulfill the following eligibility conditions:

- I. The esteemed vendor whose sales turnover is not less than Rs.20 Lakhs (Rupees Twenty Lakhs) per annum in the past three years for providing intranet/internet network connectionsthrough ADSL/VDSL D-Slam server are eligible to apply. The tenderer should submit copies of supporting documents to prove this condition.
- II. The Firm should have all the necessary registrations of the Govt. under the Shop and Establishment Act. PAN Number, VAT Registration for Tamil Nadu, CST, Service Tax, Sale Tax and Excise Duty (If applicable) etc. enclose document for proof.
- III. A separate Demand Draft/Pay Order of Rs. 150/- (Non-Refundable) drawn in favour of The Director, NIT, Tiruchirappalli -15 payable at Tiruchirappalli-15 towards Tender document fee should be attached with Technical Bid.
- IV. The Technical Bid should be accompanied by Rs. 36,000/- in the form of a bank Demand Draft/Pay Order in favour of The Director NIT, Tiruchirappalli -15 as an Earnest Money Deposit (EMD) for vendors.
- V. The Tenderer should be a supplier of ADSL/VDSL or solution provider for at least three years. The tenderer should submit copies of supporting records to prove the same.
- VI. The tenderer should not have been blacklisted by any State Government/Central Government and/or any Central PSU. Declaration to this effect should be furnished in the Technical Bid. (Annexure –V)

#### 2. MODE OF SUBMISSION

- I. Tenders should be addressed to The Director, National Institute of Technology, Tiruchirappalli-15 by designation only. Send the tenders in a sealed envelope super scribed as "TENDER AGAINST TENDER NOTIFICATION NO: NITT/File No.004/Plan/2015-16/ECE/ Wi-Fi NIT Quarters/ADSL/VDSL D-Slam Server"
- II. Tender should be submitted in the following two separate sealed covers.
  - a. Technical Bid
  - b. Price Bid

Both Covers should be super-scribed accordingly. Tenderers furnishing Technical Bid and Price Bid in the same cover will be summarily rejected. Tenders not accompanied by EMD and tender cost with the technical bid will also be rejected

III. Tender can be submitted in person on or before the due date and time specified in the tender notice. Such tenders may be dropped in the Dispatch section at the

## Administrative Block National Institute of Technology, Tiruchirappalli -15

- IV. Alternatively, the tenderer who prefers to submit the tender through post can dispatch the same through Registered Post or Courier so as to reach the above address on or before the due date and time specified in the Tender Notice. Tenders received after the due date and time, for what so ever reasons will not be considered, and the Director, NIT, Tiruchirappalli-15, will not be liable or responsible for the same.
- V. Tender should be submitted in the prescribed Tender Document obtained from the NIT website.

#### 3. DUE DATE & TIME

The sealed tenders should reach the office of the Director, NIT, Tiruchirappalli-15 on or before as mentioned in the Tender notice. The tenders will be opened at 03.30 p.m. on the same day. If the last day happens to be a holiday, the Tender will be opened on the next working day at the same time. The tender received after due date and time or unsealed or incomplete or by electronic mail will be summarily rejected.

#### 4. COST OF TENDER DOCUMENT

The cost of tender document is Rs.150/- (Rupees one hundred and fifty only). A separate Demand Draft/Pay Order of Rs. 150/- (Non-Refundable) drawn in favour of The Director NIT, Tiruchirappalli -15 payable at Tiruchirappalli-15 towards Tender document fee shall be attached with Technical Bid. The Tender Document is not transferable to any other bidder.

#### **5. EARNEST MONEY DEPOSIT**

- I. Tenderer shall enclose a demand draft/pay order of any nationalized banks/ scheduled bank in favour of The Director NIT, Tiruchirappalli -15 payable at Tiruchirappalli-15 as the non-interest bearing Earnest Money Deposit in Technical cum Commercial Bid. Technical cum Commercial bid without EMD shall be rejected.
- II. Cheques, Bank Guarantees will not be accepted towards EMD.
- III. On opening Technical cum Commercial Bid Envelope, it is found that Earnest Money Deposit is not enclosed, and then the Tender offer will summarily be rejected; unless any category of Tenderer specially exempted by the Government from the payment of Earnest Money Deposit reasons and proof of the same has to be enclosed. Tender without tender form fee will also be summarily rejected.
- IV. The Earnest Money Deposit/Security Deposit will be forfeited if:
  - a. Tenderer withdraws his tender or backs out after acceptance.
  - b. Tenderer fails to remit the Security Deposit.
  - c. Tenderer violates any of the conditions prescribed in the Tender Document.
  - d. Tenderer revises any of the terms quoted, during validity period.

## 6. REFUND OF EARNEST MONEY DEPOSIT

- I. The Earnest Money Deposit of the unsuccessful tenders will be returned, after the acceptance of the successful tender, at the expense of the Tenderer within reasonable time. Earnest Money Deposit will not bear any interest thereon.
- II. Earnest Money Deposit shall be refunded to the unsuccessful tenderer. For this purpose, the tenderer is advised to send along with the original tender itself, an Advance Stamped Receipt for the Earnest Money Deposit amount, so as to avoid any delay in refund. The advance stamped receipt shall be in favour of **The Director**, **NIT**, **Tiruchirappalli** -15

# 7. SUBMISSION OF TENDER - TWO COVER SYSTEM A. TECHNICAL BID (IN ENVELOPE-A)

The Technical Bid as prescribed should be filled up, and sealed in a separate cover along with all the enclosures specified. The cover shall be called "Envelope-A"

#### The Technical Bid Envelope should contain the following:

- I. Demand Draft for Earnest Money Deposit along with Advance Stamped Receipt for Refund of EMD.
- II. Documentary proof for the constitution of the tenderer firm with details of the name, address, telephone number, cell phone number, fax number and e-mail address of the tenderer should be furnished.
- III. Documentary proof for the capacity to supply the required quantity. For this purpose, Annual turnover statement, Annual Report and Balance Sheet for the last three years viz., 2012-2013, 2013-2014 and 2014-2015 duly attested by a qualified Company Auditor, should be submitted. (Annexure III). Supply made by the tenderer alone will be considered towards the eligibility criteria.

- IV. Duly attested Copy of PAN and copy of Income Tax return filed up to 2012-15 respect of Indian Tenders.
- V. Duly attested copies of General as well as Central Sales Tax Registration Certificates and Sales Tax Clearance Certificate, as on 31.03.2015.
- VI. Authorization for a Senior Responsible Officer/Representative of the company duly authorizing him to transact business.
- VII. Details of Standard and other Accessories offered as specified in Annexure IV (Compliance form)
- VIII. Declaration duly signed by the tenderer. (Annexure VI)
- IX. The Tenderer should provide onsite warranty/guarantee and Free Service for a period of minimum Three years from the date of installation. Successful vendor should provide warranty against manufacturing defects for a period of three years.
- X. Illustrated pamphlets containing all the Technical Details, Specification of the tendered items should be sent along with the tender. Failure to send detailed pamphlet, brochure, and drawing may result in the rejection of tender.
- XI. The tenderer should attach the Manufacturer Authorization Letter from the OEM and the letter has to be signed by an authorized representative of the OEM. The certificate should be addressed to the Director, NIT, and Tiruchirappalli-15.
- XII. Credentials of the tenderer with his experience for providing intranet/internet network connections through ADSL/VDSL D-Slam server solutions in the last 03 years in the following format.

SI.	Year	Date	of	Name	of	the	Value	Whether full supply was made within
No.		Receipt	of	Institution/			of order	the time stipulated, if not, Give details
		order		organizatio	n/ comp	pany		of delayed offers and reasons thereof.
1								
2								
3								
4								

XIII. The Signed TENDER DOCUMENT which contains Tender document cost, **EMD** and TECHNICAL BID which contains above details in original should be enclosed in full without omitting any paper / pages. This cover should be super scribed as 'Technical Bid Envelope –A'

#### **B. PRICE BID (IN ENVELOPE - B)**

- I. The Price Bid as prescribed in Annexure VII should be filled up and sealed in a separate cover super scribed as "PRICE BID Envelope B" along with Price Bid certification as prescribed in Annexure VI.
- II. Both the Technical Bids and Price Bids should then be put in a single outer cover, duly sealed and super scribed as "TENDER AGAINST TENDER NOTIFICATION NO: NITT/File No.004/Plan/2015-16/ECE/ Wi-Fi NIT Quarters/ADSL/VDSL D-Slam Server"
- III. All items in **Annexure I to V** should be in Envelope -A (meant for Technical Bid) and all items in Annexure VI and VII should be in Envelope -B (meant for Price Bid).
- IV. The Tenders not submitted as specified above will summarily be rejected.

#### 8. PRICE

- I. Basic unit Rate shall be quoted per item as listed in the tender (Annexure VII), shall be inclusive of all charges of installation at NIT, Tiruchirappalli-15. The rates should be indicated clearly both in Figures and in words. If there is variation between the rates in Figures and words the lower rate will be taken for evaluation.
- II. The rate quoted shall be inclusive of rate of all accessories specified in Annexure –I and no separate rate should be quoted for such accessories and others.
- III. Validity of the rates quoted in the Tender will be up to 2 months from the date of opening of Tender.
- IV. ADSL/ VDSL Server Chassis is procured for educational purposes.
- V. Tax component if any should be clearly specified whether inclusive or exclusive and percentages should also be mentioned in the price bid.
- VI. Payment will be made on satisfactory supply and installation. It may be noted that 90% payment will be made after satisfactory supply and 5% will be paid after installation and remaining 5% per cent will be paid after the completion of warranty period or on submission of equivalent bank guarantee

valid till two months after the expiry of warranty period or on retain WIFI Network of security deposit amount till expiry of warranty period.

#### **10. CERTIFICATES**

# **Warranty Certificate**

Successful vendor should furnish **three year comprehensive onsite warranty** and vendor should provide free service from the date of installation/commissioning whichever is later for any manufacturing defects during that period.

#### 11. SITE Visit

The tenderer may visit the site to know about the nature/quantity of work to be done to facilitate quoting during official hours on all working days.

#### 12. OPENING OF TENDER AND EVALUATION THEREON

- I. The tenders received up to 3.00 P.M. on the last day as mentioned in the Tender Notice will be opened at 3.30 P.M. on the same day by the Director, NIT, Tiruchirappalli-15 or by any other officer authorized on his/her behalf at NIT, Tiruchirappalli-15 in the presence of those Tenderer or their representatives who choose to be present at the time of opening.
- II. Representatives who are attending the opening of the Tenders should bring a Letter of Authority from the Tenderer, whom they represent to identify their bonafide.
- III. The Tenders should be submitted only in the form down loaded from the NIT, Tiruchirappalli Website.
- IV. The Tenderers are advised to go through all the terms and conditions carefully. Reporting of any corrections or alteration, etc., after submitting the tender, will not be entertained.
- V. The Director, NIT, Tiruchirappalli-15 reserves the right to accept the whole tender or any part thereof or reject all the tenders, in the interest of the NIT, Tiruchirappalli so require, without assigning any reasons whatsoever and to waive any minor discrepancy in the tenders received.
- VI. If the successful Tenderer fails to deposit the required security Deposit (given in point No. 14) within the time specified or withdraws the tender after intimation of the acceptance of the tender or fails to comply with the conditions above or owing to any other reason, tenderer is unable to execute the contract, the Earnest Money Deposit /Security Deposit by tenderer, will be forfeited along with liability for all damages sustained by the NIT, Tiruchirappalli-15 by reasons of such breach including the liability to pay any difference between the rates accepted by tenderer and those ultimately paid by the NIT, Tiruchirappalli-15 for providing ADSL/VDSL servers chassis i.e. Notional loss suffered by the NIT, Tiruchirappalli-15 such damages, shall be assessed by The Director, NIT, Tiruchirappalli-15 whose decision is final and the amount assessed is recoverable by proceeding under the suitable law.

### 13. TENDER EVALUATION CRITERIA

- I. Tenderers who satisfy the technical and general conditions stipulated in the tender document and who have supplied all the documents/materials required will alone be considered as qualified Tenderers. The tenders of such qualified Tenderers alone will be considered for "Opening the Price Bid in Envelope B".
- II. Lowest price quoted for individual items and it total mentioned in Annexure VII shall be criteria for selection of any technically qualified vendor. However the NIT, Tiruchirappalli-15 reserves the right of placing the orders to any of the Tenderers, without assigning any reason.

#### 14. PAYMENT OF SECURITY DEPOSIT

I. The successful Tenderer should make payment of Security deposit of the 10% of the value of the contract within twenty days (20 days) from the date of receipt of Letter of acceptance of the Tender by way of demand draft / bankers cheque drawn on any Nationalized Bank and payable to, NIT, Tiruchirappalli-15. If the same is not paid within 20 days the order will be cancelled by The Director, NIT, Tiruchirappalli-15.

- II. In case the successful tenderer fails to pay security deposit within 20 days from the date of receipt of Letter of acceptance of the tender, his Earnest Money Deposit (EMD) shall be forfeited and the tender will be held as non-responsive.
- III. The Security Deposit will not bear any interest. The Security Deposit furnished by the Tenderer in respect of his Tender will be returned to him after the expiring of the warranty period.
- IV. In case of successful Tenderer, Earnest Money Deposit if paid may be adjusted towards Security Deposit payable. If the Tenderer failed to act upon the Tender conditions or backs out when the Tenders accepted, the security deposit above will also be forfeited by The Director, NIT, Tiruchirappalli-15.

# 15. FORFEITURE OF EARNEST MONEY DEPOSIT

If the Successful Tenderer (referred as "Tenderer") fail to act according to the Tender Conditions or Backs out after the Tender has been accepted, the Earnest Money will be forfeited by The Director, NIT, Tiruchirappalli-15.

#### 17. RELEASE OF PURCHASE ORDER

- I. It is not binding on the part of the Director, NIT, Tiruchirappalli-15 to accept the lowest or any other tender and he reserves the right to reject or accept/cancel any tender fully or partly or retender without assigning any reason, what so ever. The Director, NIT, Tiruchirappalli-15 reserves the right to accept/cancel and place the supply orders to the successful tender / tenderer.
- II. The Director, NIT, Tiruchirappalli-15 also reserves the right to relax or waive any of the tender condition and reject the tender if anyone of the conditions enumerated above is violated or any counter condition is given by the tender.
- III. On receipt of the security deposit remittance as in the Tender Document, NIT, Tiruchirappalli-15 will release the formal purchase order to the Tenderer.

#### 18. EXECUTION OF PURCHASE ORDER

The tenderer should nominate and intimate to NIT, Tiruchirappalli-15 his authorized representative specifically to handle the Purchase order from NIT, Tiruchirappalli-15 and ensure that he fully familiarizes with the terms and conditions of the Tender Purchase Order and the Guidelines, and is responsible to effectively execute the Purchase Order complying all the terms and conditions.

#### 19. DELIVERY

- a) Providing ADSL/VDSL D-slam server solutions for NIT, Tiruchirappalli-15 Campus will have to be completed within 60 days.
- b) The delivery schedule should be strictly adhered. If the tenderer fails to complete the supply and installation within the time stipulated, the order for providing ADSL/VDSL D-slam server solutions will be liable to be cancelled. In such a case, the Security Deposit will be forfeited.
- c) In order to take care of situation arising out of the failure of the tenderer to supply as per the schedule and quality, norms, order for additional quantities will be placed with the other tenderer to make good the shortfall caused by such defaulter and the orders placed with such tenderer will be cancelled with sufficient cause.
- d) Providing ADSL/VDSL D-slam server solutions shall be made by the tenderer in accordance with the terms specified by NIT, Tiruchirappalli -15.

## 20. ASSEMBLING and INSTALLATION

The installation should be done within 60 days from the date of receipt of order for ADSL/VDSL D-slam server solutions at the National Institute of Technology, Tiruchirappalli -15.

#### 21. PAYMENT TERMS

90% payment shall be made within 15 days from the date of supply and 5% on production of satisfactory installation certificate issued by the user department of NIT, Tiruchirappalli-15 and remaining 5% per cent will be paid after the completion of warranty period or on submission of equivalent bank guarantee valid till

two months after the expiry of warranty period or on retainment of security deposit amount till expiry of warranty period.

#### 22. JURISDICTION FOR LEGAL PROCEEDING

**Interpretation**: Interpretation of the clauses in the tender document/ Contract document: In case of any ambiguity/ dispute in the interpretation of any of the clauses in this tender document, Director, NITT's interpretation of the clauses shall be final and binding on all parties.

**Arbitration:** Dispute, if any, arising out of the supply of the Items shall be settled by Arbitration by SOLE Arbitrator to be nominated by the Director, NITT as per the provisions of Indian Arbitration Act 1996. The Place of Arbitration shall be Tiruchirappalli, Tamil Nadu. The decision of the Arbitrator shall be final and binding on both the parties.

**Applicable law, Dispute and Jurisdiction:** The contract shall be governed by the laws and procedures established by Government of India. Any Dispute or difference whatsoever arising between the supplier and purchaser unless resolved amicably, shall be settled by the Court of Law having Jurisdiction over Tiruchirappalli, Tamil Nadu.

#### 23. PENALTY

In the event of failure of the successful tenderer to make the Supply of switches and others within the stipulated time, without prejudice to other remedies under the contract a penalty equivalent to 0.5% (Half Percent) of the value of delayed goods will be levied per week with a maximum of 5% of the contract value. If requested by the tenderer, it is the discretion of the Director, NIT, Tiruchirappalli-15 to grant extension of time with penalty/without penalty and to purchase the stock from any other source at the prevailing market rate at the risk and responsibility of the successful tenderer and to claim any loss sustained by NIT, Tiruchirappalli-15 in the transaction from the tenderer besides forfeiting Earnest Money Deposit and Security Deposit.

#### 24. REJECTION CRITERIA

Tenders with incomplete information subjective and conditional offers as well as partial offers will be liable for rejection. A tender without EMD and tender cost is absolute to be rejected.

#### 25. SAVING CLAUSE

- I. In case any doubt arises on interpretation or otherwise of any point in this tender document, NIT, Tiruchirappalli-15 shall be referred for clarification two days before opening of technical bid. NIT, Tiruchirappalli-15 reserves the right not to answer any or all queries without assigning reasons.
- II. At any time after the issue of the tender documents and before the opening of the tender, the Tender Inviting Authority may make any changes, modifications or amendments to the tender documents and shall send intimation of such change to all those who have purchased the original tender documents.

#### 26. GENERAL

The tenderer while sending their tender should enclose Original Tender Documents in the respective envelopes with the conditions stipulated duly certified and attested by them in token of having accepted the Tender conditions that they understood and accepted them fully. The Tenderer should enclose, proof for carrying out supplies, as specified, to various customers during the last three years, i.e. 2012-2013, 2013-2014 and 2014-2015 turnover details and financial statement, major purchase order copies, and acceptance certificate by customers in the Technical cum commercial Bid. Tenders kept in single cover containing both technical and financial bid will be summarily rejected.

#### 27. OTHER TERMS & CONDITIONS

The bidder should have executed similar ADSL/VDSL D-slam server at prominent places in Tamilnadu. Proof for the same has to be submitted along with the tender document.

Bidder should not quote more than the required number of AP"s as specified in the tender document The bidder has to ensure that there is sufficient signal strength in all the quarters lines (as specified in the tender document) with reasonable throughput.

Bidder has to submit a Manufactures Authorization Letter from the OEM. The letter has to be signed by an authorized representative of the OEM.

**EXEMPTION FROM EXCISE DUTY AND CUSTOMS DUTY:** The NITT being a Research Oriented Higher Technical Institution is exempted from paying Central Excise Duty and eligible for Concessional Rate of Customs Duty. Wherever applicable, we will provide exemption certificate issued by Government of India to enable the vendor to clear the goods without payment of Excise Duty or Clearance of Imports at Concessional Rate of Customs Duty i.e., 5.15% (Basic Customs Duty, 2% Educational Cess on Basic Customs Duty, 1% Higher Education Cess on Education Cess).

**SALES TAX:** For Sales Tax Concession, NITT is not authorized to issue C or D Form Sales Tax Certificate. Hence, the bidder may claim Sales Tax at the Legally Leviable Rate. However, we request the bidder that Tamil Nadu VAT and Central Sales Tax may be charged at concessional rates, if any, applicable to Educational and Research Institutions run without profit motive, for which necessary End User Certificate will be issued at the time of retirement of document.

**SERVICE TAX:** Being an educational institution, NITT is exempted from payment of service tax in respect of following "services received" by NITT (a) Catering Services (b) Security Services (c) House Keeping Services (d) Transportation services and (e) Conduct of examination through outsourced agency. In respect of all other services received by it, NITT is liable to pay service tax.

**PAYMENT TERMS:** As a matter of Policy, No advance payment will be made. No part payment will be made. Bills will be paid by way of Account Payee Cheque/ NEFT/ RGTS transfer.

**PERFORMANCE BANK GUARANTEE (PBG):** 1. As Performance Security, the successful bidder shall furnish an unconditional Performance Bank Guarantee (PBG) from a Nationalized Bank or scheduled commercial bank for an amount equal to 10% of the Purchase order value and it should be kept valid for a period of 60 days beyond the completion of the Warranty Period. 2. The Performance Bank Guarantee (PBG), shall be furnished in the Format specified by NITT.

**Manuals:** The bidder/ tenderer should provide, free of cost, all original user's manuals, technical documents, operating manuals, installation manual, Service manual, Circuit Diagram, system toolkit, application notes, user guides, equipment CDs and DVDs, and all printed / electronic media/ drawings, data / calibration certificates that comes with the equipment / items. The supplier shall supply licensed versions of the equipment system. NITT is not responsible for any consequences arising out of patent right problems.

#### 28. SIGNATURE AND SEAL

The Tenderer must sign and affix their Seal in every page of Signed Original Tender.	the Tender Document and the complete
Documents must be submitted only in the respective covers.	
I/We	have gone through the terms and
conditions and will abide by them as laid down above.	•
SIGNATURE & Seal of the Agency :	
Date	

## ANNEXURE - I - TECHNICAL SPECIFICATION (ADSL/VDSL D-SLAM SERVER CHASSIS)

National Institute of Technology, Trichy is spread over 300 acres. We have internet backbone with 1G and intranet servers. All the academic departments are connected through optical fibers with 1G extreme switch. But the residential quarters are 1-2km distance from the servers and distributed in wide area. But all the quarters are provided with telephone lines by underground buried twisted pair copper. To provide intranet and internet through twisted pair copper telephone wire using ADSL/VDSL D-slam server at the exchange side and ADSL/VDSL routers at the quarter's side the tender is called for ADSL/VDSL D-slam server chassis. The maximum number of ADSL connections required is 92 and VDSL connections required is 384.

S. No	NIT, TrichySpecifications		
1a	ADSL:		
1a	G.992.1 Annex A, B, G.dmt and Embedded Operations Channel (EOC)		
	G.992.2 G.lite		
	G.992.3 Annex A, I, J, L, M, ATM Transmission Convergence (ATM-TC), Embedded Operations Channel (EOC), Impulse Noise protection (INP), Latency Path, Loop Diagnostic, Overhead Channe Access, Power Management, Seamless Rate Adaptation (SRA) on-line configuration and spectral mask		
	G.992.5 Annex A, B, I, J, M, L, ATM Transmission Convergence (ATM-TC), Impulse Noise protection (INP), Latency Path, Loop Diagnostic, Power Management, Seamless Rate Adaptation (SRA) on-line configuration and spectral mask		
	G.996.2 Single & Dual Ended Loop Test (SELT & DELT)		
	G.997.1 Embedded Operations Channel (EOC) and Spectral Mask		
	ANSI T1.413 issue 2		
1b	VDSL2:		
	G.993.2		
	G.996.2 Single & Dual Ended Loop Test		
	G.997.1 Embedded Operations Channel (EOC) and Spectral Mask		
2	Standard Compliant		
	RFC1483, 1577, 2364 and 2684		
	ATM Forum Rec UNI 3.0, 3.1 and 4.0		
	ITU-T I.361 and I.371		
	G.703, G.704 and G.804		
3	IPTV		
	IGMP v1, v2, v3 snooping and proxy		
	IGMP multicasting channel limiting		
	IGMP group count/filtering profile		
	IGMP filtering		
	Multicast VLAN (MVLAN)		
	1024 IGMP multicast groups		
	Maximum channel zapping processing time: 250 ms		
	Multiple set-top box per DSL port		
4	Security		
	Per port and per VLAN isolation		
	IEEE 802.1X authentication		
	Rule-based packet filtering (L2 - L4 Access Control List)		

	MAC count limiting
	ARP broadcast filtering
	DHCP broadcast filtering
	VLAN aware DHCP snooping
	NetBiOS filtering
	Anti IP/MAC address spoofing
	TACACS+ remote authentication
	Accounting and Radius server authorization
5	Traffic Management
	8 PVC per DSL port
	UBR, CBR, rt-VBR, nrt-VBR, QoS mechanisms
	ATM Forum TM 4.0 peak cell rate traffic parameter
	Downstream traffic shaping per ATM PVC
	ATM F5 OAM cells for end-to-end loop back test (ITU-T Rec. I.610)
	8 queues with packet priority scheduling (SPQ, WRR)
	DSCP to 802.1p mapping
	Double-Tag PVC
	Bandwidth and broadcast/multicast/unknown unicast control on Gigabit Ethernet ports
	STP: IEEE 802.1d, IEEE 802.1w, IEEE 802.1s
	IP bridge
	Link aggregation control protocol (IEEE 802.3ad)
	IP QoSCoS
	IP multicast forwarding
	DHCP relay option 82 with sub-option 1 and 2
	PPPoE intermediate agent (TR-101)
	Multicast bandwidth control
	L2 - L4 ACL
	Broadcast storm control
	Static multicast
	Unknown multicast flooding
	Loop guard
	MAC aging & rate limit
	DHCP LAN to LAN
6	VLAN
	4094 IEEE 802.1Q compliant VLAN tagging
	VLAN stacking (Q-in-Q)
	VLAN bridge function (multiple PVCs to one VLAN, N:1)
	PVC and VLAN one to one mapping (1:1)
	VLAN trunking (single PVC join multiple VLAN, 1:N)
	GVRP function
7	Network Management
	Local management through a craft terminal
	Web-based management interface
	Cluster management (up to 8 cluster members)
	View-based network management
	Daylight saving

	IEEE 802.3ah OAM
	Support XML-based North Bound Interface
	In-band and out-of-band IP interface for management (Telent, SSH, SFTP)
	SNMP management
	SNMPv1, v2c, v3 agent and traps
	Standard MIBs
	RFC1213 MIB II
	DSL line MIB (RFC2662) and extension line MIB (RFC3440)
	SHDSL line MIB (RFC3276)
	VDSL line MIB (RFC3728)
	VDSL2 line MIB (RFC5650)
	Bridge MIB and extension MIB
	RMON MIB (RFC1757)
	Vendor specific MIBs:
	Chassis management MIB (fan speed, voltage and temperature)
8	Hardware Specifications
8a	Main Chassis
ou	12-slot rack mountable enclosure, specify the size
	Maximum 10 slots for line cards
	2 slots for management and switch cards
	2 DC power input module and filter
	One FAN and dust filter module
	One alarm module
8b	Management Switch Cards
	Failover-enabled network termination card
	Failover-enabled network termination card  Embedded 48G, non-blocking full duplex switching fabric
	Embedded 48G, non-blocking full duplex switching fabric
	Embedded 48G, non-blocking full duplex switching fabric  MSC1224GB supports two 10G (SFP+) and four 1G uplink/subtending interfaces:
	Embedded 48G, non-blocking full duplex switching fabric  MSC1224GB supports two 10G (SFP+) and four 1G uplink/subtending interfaces:  2 optical fiber port (SFP+ modules)
	Embedded 48G, non-blocking full duplex switching fabric  MSC1224GB supports two 10G (SFP+) and four 1G uplink/subtending interfaces:  2 optical fiber port (SFP+ modules)  4 1000 Mbps interface modules (combo design, SFP and copper)
	Embedded 48G, non-blocking full duplex switching fabric  MSC1224GB supports two 10G (SFP+) and four 1G uplink/subtending interfaces:  2 optical fiber port (SFP+ modules)  4 1000 Mbps interface modules (combo design, SFP and copper)  MSC1024GB supports four 1G Ethernet uplink/subtending interfaces:
	Embedded 48G, non-blocking full duplex switching fabric  MSC1224GB supports two 10G (SFP+) and four 1G uplink/subtending interfaces:  2 optical fiber port (SFP+ modules)  4 1000 Mbps interface modules (combo design, SFP and copper)  MSC1024GB supports four 1G Ethernet uplink/subtending interfaces:  4 1000 Mbps interface modules (combo design, SFP and copper)
	Embedded 48G, non-blocking full duplex switching fabric  MSC1224GB supports two 10G (SFP+) and four 1G uplink/subtending interfaces:  2 optical fiber port (SFP+ modules)  4 1000 Mbps interface modules (combo design, SFP and copper)  MSC1024GB supports four 1G Ethernet uplink/subtending interfaces:  4 1000 Mbps interface modules (combo design, SFP and copper)  One mini-RJ11 console port
	Embedded 48G, non-blocking full duplex switching fabric  MSC1224GB supports two 10G (SFP+) and four 1G uplink/subtending interfaces:  2 optical fiber port (SFP+ modules)  4 1000 Mbps interface modules (combo design, SFP and copper)  MSC1024GB supports four 1G Ethernet uplink/subtending interfaces:  4 1000 Mbps interface modules (combo design, SFP and copper)  One mini-RJ11 console port  One 10/100M out-of-band Mgmt interface
	Embedded 48G, non-blocking full duplex switching fabric  MSC1224GB supports two 10G (SFP+) and four 1G uplink/subtending interfaces:  2 optical fiber port (SFP+ modules)  4 1000 Mbps interface modules (combo design, SFP and copper)  MSC1024GB supports four 1G Ethernet uplink/subtending interfaces:  4 1000 Mbps interface modules (combo design, SFP and copper)  One mini-RJ11 console port  One 10/100M out-of-band Mgmt interface  16K MAC addresses
	Embedded 48G, non-blocking full duplex switching fabric  MSC1224GB supports two 10G (SFP+) and four 1G uplink/subtending interfaces:  2 optical fiber port (SFP+ modules)  4 1000 Mbps interface modules (combo design, SFP and copper)  MSC1024GB supports four 1G Ethernet uplink/subtending interfaces:  4 1000 Mbps interface modules (combo design, SFP and copper)  One mini-RJ11 console port  One 10/100M out-of-band Mgmt interface  16K MAC addresses  1024 L2 multicast groups (1K scalability)
	Embedded 48G, non-blocking full duplex switching fabric  MSC1224GB supports two 10G (SFP+) and four 1G uplink/subtending interfaces:  2 optical fiber port (SFP+ modules)  4 1000 Mbps interface modules (combo design, SFP and copper)  MSC1024GB supports four 1G Ethernet uplink/subtending interfaces:  4 1000 Mbps interface modules (combo design, SFP and copper)  One mini-RJ11 console port  One 10/100M out-of-band Mgmt interface  16K MAC addresses  1024 L2 multicast groups (1K scalability)  4K VLANs
8c	Embedded 48G, non-blocking full duplex switching fabric  MSC1224GB supports two 10G (SFP+) and four 1G uplink/subtending interfaces:  2 optical fiber port (SFP+ modules)  4 1000 Mbps interface modules (combo design, SFP and copper)  MSC1024GB supports four 1G Ethernet uplink/subtending interfaces:  4 1000 Mbps interface modules (combo design, SFP and copper)  One mini-RJ11 console port  One 10/100M out-of-band Mgmt interface  16K MAC addresses  1024 L2 multicast groups (1K scalability)  4K VLANs  DSL line card battery saving mode
8c	Embedded 48G, non-blocking full duplex switching fabric  MSC1224GB supports two 10G (SFP+) and four 1G uplink/subtending interfaces:  2 optical fiber port (SFP+ modules)  4 1000 Mbps interface modules (combo design, SFP and copper)  MSC1024GB supports four 1G Ethernet uplink/subtending interfaces:  4 1000 Mbps interface modules (combo design, SFP and copper)  One mini-RJ11 console port  One 10/100M out-of-band Mgmt interface  16K MAC addresses  1024 L2 multicast groups (1K scalability)  4K VLANs  DSL line card battery saving mode  IPv6 capable
8c	Embedded 48G, non-blocking full duplex switching fabric  MSC1224GB supports two 10G (SFP+) and four 1G uplink/subtending interfaces:  2 optical fiber port (SFP+ modules)  4 1000 Mbps interface modules (combo design, SFP and copper)  MSC1024GB supports four 1G Ethernet uplink/subtending interfaces:  4 1000 Mbps interface modules (combo design, SFP and copper)  One mini-RJ11 console port  One 10/100M out-of-band Mgmt interface  16K MAC addresses  1024 L2 multicast groups (1K scalability)  4K VLANs  DSL line card battery saving mode  IPv6 capable  VDSL Line Card—24 port  Hot swappable 24-port VDSL2 line card  G.993.2, G.994.1, G.997.1
8c	Embedded 48G, non-blocking full duplex switching fabric  MSC1224GB supports two 10G (SFP+) and four 1G uplink/subtending interfaces:  2 optical fiber port (SFP+ modules)  4 1000 Mbps interface modules (combo design, SFP and copper)  MSC1024GB supports four 1G Ethernet uplink/subtending interfaces:  4 1000 Mbps interface modules (combo design, SFP and copper)  One mini-RJ11 console port  One 10/100M out-of-band Mgmt interface  16K MAC addresses  1024 L2 multicast groups (1K scalability)  4K VLANs  DSL line card battery saving mode  IPv6 capable  VDSL Line Card—24 port  Hot swappable 24-port VDSL2 line card
8c	Embedded 48G, non-blocking full duplex switching fabric  MSC1224GB supports two 10G (SFP+) and four 1G uplink/subtending interfaces:  2 optical fiber port (SFP+ modules)  4 1000 Mbps interface modules (combo design, SFP and copper)  MSC1024GB supports four 1G Ethernet uplink/subtending interfaces:  4 1000 Mbps interface modules (combo design, SFP and copper)  One mini-RJ11 console port  One 10/100M out-of-band Mgmt interface  16K MAC addresses  1024 L2 multicast groups (1K scalability)  4K VLANs  DSL line card battery saving mode  IPv6 capable  VDSL Line Card—24 port  Hot swappable 24-port VDSL2 line card  G.993.2, G.994.1, G.997.1
8c	Embedded 48G, non-blocking full duplex switching fabric  MSC1224GB supports two 10G (SFP+) and four 1G uplink/subtending interfaces:  2 optical fiber port (SFP+ modules)  4 1000 Mbps interface modules (combo design, SFP and copper)  MSC1024GB supports four 1G Ethernet uplink/subtending interfaces:  4 1000 Mbps interface modules (combo design, SFP and copper)  One mini-RJ11 console port  One 10/100M out-of-band Mgmt interface  16K MAC addresses  1024 L2 multicast groups (1K scalability)  4K VLANs  DSL line card battery saving mode  IPv6 capable  VDSL Line Card—24 port  Hot swappable 24-port VDSL2 line card  G.993.2, G.994.1, G.997.1  Maximum transmission rate up to 100 Mbps/100 Mbps
8c	Embedded 48G, non-blocking full duplex switching fabric  MSC1224GB supports two 10G (SFP+) and four 1G uplink/subtending interfaces:  2 optical fiber port (SFP+ modules)  4 1000 Mbps interface modules (combo design, SFP and copper)  MSC1024GB supports four 1G Ethernet uplink/subtending interfaces:  4 1000 Mbps interface modules (combo design, SFP and copper)  One mini-RJ11 console port  One 10/100M out-of-band Mgmt interface  16K MAC addresses  1024 L2 multicast groups (1K scalability)  4K VLANs  DSL line card battery saving mode  IPv6 capable  VDSL Line Card—24 port  Hot swappable 24-port VDSL2 line card  G.993.2, G.994.1, G.997.1  Maximum transmission rate up to 100 Mbps/100 Mbps  One mini-RJ11 console port

	PTM bonding
	Customer PSD, RFI notch, single latency in PTM mode and INP
	Trellis coding
	IEEE 802.1ag Connectivity Fault Management (CFM)
	IPv6 capable
8d	VDSL Line Cards— 48port / 24port
	Hot swappable 48-port or 24-port VDSL2 line card over POTS or over ISDN
	G.993.2, G.994.1, G.997.1
	Maximum transmission rate up to 100 Mbps/50 Mbps
	One mini-RJ11 console port
	Two gigabit backplane
	VDSL2 profiles 8a, 8b, 8c, 8d, 12a, 12b and 17a
	Frequency allocation band plan 998 and 997
	PTM bonding
	UPBO and DPBO, Reed Solomon and trellis coding
	IEEE 802.1ag Connectivity Fault Management (CFM)
	ADSL fall back with ADSL/ADSL2/ADSL2+ CPE in Annex A, J, M, L modes
	U0 band, customer PSD, RFI notch, single latency in PTM mode and INP, sub carrier mask in
	fallback mode and TPS-TC under fall back operation
8e	ADSL Line Cards—72port / 48port
	Hot swappable 72-port or 48-port ADSL2/ADSL2+ Annex A or Annex B line card
	Maximum transmission rate up to 24 Mbps/1 Mbps for ADSL2+
	One mini-RJ11 console port
	Spectral mask in G.992.3, G.992.5 and G.997.1
	Embedded Operations Channel (EOC) and overhead channel access in G.992.1, G.992.3 and G.997.1
	Latency path function in G.992.3 and G.992.5
	Annex L and Annex M in G.992.3 and G.992.5
	Loop diagnostic in G.992.3 and G.992.5
	Power management in G.992.3 and G.992.5
	Seamless rate Adaptation (SRA) on-line configuration in G.992.3 and G.992.5
	ADSL2+ 2-port bonding in G.998.1
	IPv6 capable on 72 port ADSL line card
8f	Splitter Chassis with 8 or 16 slot.
	Item dimensions (WxDxH): in mm
9	Physical Specifications
9a	Main Chassis
	Item dimensions (WxDxH): in mm
	Item weight (including all cards and power source): in Kg
9b	Management Switch Card
	Item dimensions (WxDxH):
9c	VDSL Line Card—24 Port
	Item dimensions (WxDxH): in mm
9d	VDSL Line Card—48 port
	Item dimensions (WxDxH): in mm
9e	VDSL Line Card—24 port
	Item dimensions (WxDxH): in mm

9f	ADSL Line Cards—72 port
	Item dimensions (WxDxH): in mm
9g	ADSL Line Cards—48 port
	Item dimension (WxDxH): in mm
9h	Environmental Specifications
	Operating environment:
	Temperature: -40°C to 65°C (-40°F to 149°F)
	Humidity: 10% to 95% (Non-condensing)
	Storage environment:
	Temperature: -40°C to 70°C (-40°F to 158°F)
	Humidity: 10% to 95% (Non-condensing)
	Power Supply: -48V DC
9i	Certification
	CE
	UL 60950, CSA 60950
	FCC part 15 class A
	ITU-T K.20
	ETSI 300 019
	EN55022 class A
	EN55024 class A
	ETSI 300 386 Class A

#### SPECIAL INSTRUCTIONS REGARDING SEALING AND MARKING OF BIDS

Procedure for sealing and marking of bids: The Tender / Bid Cover shall contain the following:

- 1. FIRST envelope should contain the <u>Earnest Money Deposit and Cost of Tender Document</u>. The envelope should be sealed and super scribed as "EMD COVER"
- 2. SECOND envelope should contain the <u>Technical Bid</u> along with enclosures desired in the Tender document. This envelope should be sealed and super scribed as "TECHNICAL BID" Cover.
- 3. THIRD envelope should contain the <u>Price Bid</u>. This envelope should be sealed and super scribed as "PRICE BID" Cover.
- 4.All the above mentioned THREE SEPARATE ENVELOPS are to be sealed and kept in one single Larger size outer envelope (FOURTH envelope) which should also be sealed and super scribed.
- 5. Each of the FOUR ENVELOPS shall be super scribed with following details:

Tender reference Numberf	or Security Services
Due date of tender	and time
Name of the Department inviting this tender	
Name and Complete address of the Bidder	

- 6. If all the THREE inner envelops and the ONE outer envelope (i.e., larger envelope) are not sealed and marked as instructed, NITT will assume no responsibility for the misplacement or premature opening of any of the envelope. An envelope opened prematurely will be rejected.
- 7. There shall NOT be any price indication in the technical bid. If for any reason, it is found that the technical bid reveals the price bid related details in any manner whatsoever, or, the price bid is enclosed in the envelope super scribed, "Technical Bid", the bid document will be summarily rejected in the first instance itself. Any offer containing both the Technical bid and Price bids in the same envelop will also be out rightly rejected.

# **ANNEXURE - II:PROFORMA FOR TECHNICAL BID**

	Item/ Requirement from the Bidder	Bidders Response should be definite,
	none requirement from the Blader	complete and legible
No.		3
1	Details of remittance of Cost of Tender Document:	
'	(1) DD Number (2) Amount (3) Issuing banker	
2	Particulars of remittance of EMD:	
2	(1) DD Number (2) Amount (3) Issuing banker	
3	In case, the bidder claims exemption from EMD and	
3	tender fees, whether valid registration certificate with	
	NSIC has been furnished? (Note: The validity of the	
	NSIC certificate will be verified by NIT, T through	
	online portal maintained by NSIC for verification)	
4	Name and Complete Postal address of the Applicant	
	or Bidder with phone/ Fax/ mobile number	
	·	
5	Website Address of the Bidder firm / company	
	(Optional)	
6	Legal Status/ Constitution of the Bidder:	
	Sole Proprietor or Partnership or Private or Public	
	Limited Company or Others (attach documentary	
	proof)	
7	Classification of the bidder	
	(a) Manufacturer or (b) Authorized Agent or	
	© Authorized Dealer(d) Stockiest or (e) others	
8	Name, address, designation, phone, cell number and	
	E Mail address of the Contract Person	
9	Income Tax Permanent Account Number (PAN	
	Number)(Please Attach self-attested14Xerox	
40	copy)	
10	VAT/ TIN number (PleaseAttach self-attested 14Xerox copy)	
11	Central Sales Tax (CST)Number(PleaseAttach self-	
• •	attested 14Xerox copy)	
	attodiod 1470107 copy)	
12	Service Tax Registration Number (PleaseAttach	
	self-attested 14Xerox copy)	
40	If all the terms of the terms o	
13	If the bidder has already supplier SIMILAR item or	
	similar equipment to NIT, Tiruchy the details of the	
	same	
14	Whether you agreed to abide by the terms and	
	conditions of the tender document? In the event of	
	award of the contract, whether you agrees to give	
	security deposit/ Performance Bank Guarantee	
	against warranty obligations?	
		thorized signatory of Bidder with Seal
	Aut	anonico dignatory of blader with ocal

ramonizou eignator, en ziauen mini eean

Name	 	
Designation	 	

# **ANNEXURE - III - TURN OVER DETAILS**

As per the tender eligibility criteria, the sales turn-over should not be less than Rs.20 **Lakhs (Rupees Twency Lakhs only)** per annum in the past three years for providing ADSL/VDSL D-slam server solutions. These turn-over details will have to be substantiated with the appropriate documentary evidences duly enclosed.

The last three years sales turn-over details are furnished as follows.

Name of the Company / Firm:

SI. No.	Financial Year	Turnover (Rs. In Lakhs)
1	2012-2013	
2	2013-2014	
3	2014-2015	

Proof of the above sales turn-over details should be furnished in the form of audited balance sheet of the tenderer. In case if the Audited balance sheet is not ready, financial statements duly authenticated by the qualified Company Auditor should be enclosed.

# ANNEXURE - IV (TECHNICAL COMPLIANCE FORM)

Technical Compliance Statement for ADSL/VDSL D-slam server chassis listed for NIT Trichy							
(To be completed by respective vendor, signed and stamped)							
		COMF		DEVIATION			
SI. No.	DESCRIPTION	YES	NO	OR ADDITIONAL INFO			
1a	ADSL:						
	G.992.1 Annex A, B, G.dmt and Embedded Operations Channel (EOC)						
	G.992.2 G. lite						
	G.992.3 Annex A, I, J, L, M, ATM Transmission Convergence (ATM-TC), Embedded Operations Channel (EOC), Impulse Noise protection (INP), Latency Path, Loop Diagnostic, Overhead Channel Access, Power Management, Seamless Rate Adaptation (SRA) on-line configuration and spectral mask						
	G.992.5 Annex A, B, I, J, M, L, ATM Transmission Convergence (ATM-TC), Impulse Noise protection (INP), Latency Path, Loop Diagnostic, Power Management, Seamless Rate Adaptation (SRA) on-line configuration and spectral mask G.996.2 Single & Dual Ended Loop Test (SELT & DELT) G.997.1 Embedded Operations Channel (EOC) and Spectral Mask						
	ANSI T1.413 issue 2						
1b	VDSL2:						
	G.993.2						
	G.996.2 Single & Dual Ended Loop Test						
	G.997.1 Embedded Operations Channel (EOC) and Spectral Mask						
2	Standard Compliant						
	RFC1483, 1577, 2364 and 2684						
	ATM Forum Rec UNI 3.0, 3.1 and 4.0						
	ITU-T I.361 and I.371						
	G.703, G.704 and G.804						
3	IPTV						
	IGMP v1, v2, v3 snooping and proxy						
	IGMP multicasting channel limiting						
	IGMP group count/filtering profile						
	IGMP filtering						
	Multicast VLAN (MVLAN)						
	1024 IGMP multicast groups						
	Maximum channel zapping processing time: 250 ms						
	Multiple set-top box per DSL port						
4	Security						
	Per port and per VLAN isolation						
	IEEE 802.1X authentication						
	Rule-based packet filtering (L2 - L4 Access Control List)						
	MAC count limiting						
	ARP broadcast filtering						
	DHCP broadcast filtering						
	VLAN aware DHCP snooping						
	NetBiOS filtering						
	Anti IP/MAC address spoofing						
	TACACS+ remote authentication						
F	Accounting and Radius server authorization						
5	Traffic Management  8 PVC per DSL port						
	UBR, CBR, rt-VBR, nrt-VBR, QoS mechanisms						
	ATM Forum TM 4.0 peak cell rate traffic parameter						
	ATM FORUM TW 4.0 peak cell rate trainc parameter	I					

	D		
	Downstream traffic shaping per ATM PVC		
	ATM F5 OAM cells for end-to-end loop back test (ITU-T Rec. I.610)		
	8 queues with packet priority scheduling (SPQ, WRR)		
	DSCP to 802.1p mapping		
	Double-Tag PVC		
	Bandwidth and broadcast/multicast/unknown unicast control on		
	Gigabit Ethernet ports		
	STP: IEEE 802.1d, IEEE 802.1w, IEEE 802.1s		
	IP bridge		
	Link aggregation control protocol (IEEE 802.3ad)		
	IP QoSCoS		
	IP multicast forwarding		
	DHCP relay option 82 with sub-option 1 and 2		
	PPPoE intermediate agent (TR-101)		
	Multicast bandwidth control		
	L2 - L4 ACL		
	Broadcast storm control		
	Static multicast		
	Unknown multicast flooding		
	Loop guard		
	MAC aging & rate limit		
	DHCP LAN to LAN		
6	VLAN		
	4094 IEEE 802.1Q compliant VLAN tagging		
	VLAN stacking (Q-in-Q)		
	VLAN bridge function (multiple PVCs to one VLAN, N:1)		
	PVC and VLAN one to one mapping (1:1)		
	VLAN trunking (single PVC join multiple VLAN, 1:N)		
	GVRP function		
7	Network Management		
	Local management through a craft terminal		
	Web-based management interface		
	Cluster management (up to 8 cluster members)		
	View-based network management		
	Daylight saving		
	IEEE 802.3ah OAM		
	Support XML-based North Bound Interface		
	In-band and out-of-band IP interface for management (Telent,		
	SSH, SFTP)		
	SNMP management		
	SNMPv1, v2c, v3 agent and traps		
	Standard MIBs		
	RFC1213 MIB II		
	DSL line MIB (RFC2662) and extension line MIB (RFC3440)		
	SHDSL line MIB (RFC3276)	+	
	,	-	
	VDSL line MIB (RFC3728)	1	
	VDSL2 line MIB (RFC5650)	1	
-	Bridge MIB and extension MIB	1	
<u> </u>	RMON MIB (RFC1757)	-	
	Vendor specific MIBs:	-	
	Chassis management MIB (fan speed, voltage and temperature)		
8	Hardware Specifications		
8a	Main Chassis		
	12-slot rack mountable enclosure		
	Maximum 10 slots for line cards		
	2 slots for management and switch cards		
1	2 DC power input module and filter		

	One FAN and dust filter module		
	One alarm module		
8b	Management Switch Cards		
	Failover-enabled network termination card		
	Embedded 48G, non-blocking full duplex switching fabric		
	MSC1224GB supports two 10G (SFP+) and four 1G		
	uplink/subtending interfaces:		
	2 optical fiber port (SFP+ modules)		
	4 1000 Mbps interface modules (combo design, SFP and copper)		
	MSC1024GB supports four 1G Ethernet uplink/subtending		
	interfaces:		
	4 1000 Mbps interface modules (combo design, SFP and copper)		
	One mini-RJ11 console port		
	One 10/100M out-of-band Mgmt interface		
	16K MAC addresses		
	1024 L2 multicast groups (1K scalability)		
	4K VLANs		
	DSL line card battery saving mode		
	IPv6 capable		
8c	VDSL Line Card—24 port		
	Hot swappable 24-port VDSL2 line card		
	G.993.2, G.994.1, G.997.1		
	Maximum transmission rate up to 100 Mbps/100 Mbps		
	One mini-RJ11 console port		
	Two gigabit backplane		
	VDSL2 profiles 8a, 8b, 8c, 8d, 12a, 12b, 17a and 30a		
	Frequency allocation band plan 998 and 997		
	PTM bonding		
	Customer PSD, RFI notch, single latency in PTM mode and INP		
	Trellis coding		
	IEEE 802.1ag Connectivity Fault Management (CFM)		
	IPv6 capable		
8d	VDSL Line Cards— 48port / 24port		
	Hot swappable 48-port or 24-port VDSL2 line card over POTS or		
	over ISDN		
	G.993.2, G.994.1, G.997.1		
	Maximum transmission rate up to 100 Mbps/50 Mbps		
	One mini-RJ11 console port		
	Two gigabit backplane		
	VDSL2 profiles 8a, 8b, 8c, 8d, 12a, 12b and 17a		
	Frequency allocation band plan 998 and 997		
	PTM bonding		
	UPBO and DPBO, Reed Solomon and trellis coding		
	IEEE 802.1ag Connectivity Fault Management (CFM)		
	ADSL fall back with ADSL/ADSL2/ADSL2+ CPE in Annex A, J, M,		
	L modes U0 band, customer PSD, RFI notch, single latency in PTM mode		
	and INP, sub carrier mask in fallback mode and TPS-TC under fall		
	back operation		
8e	ADSL Line Cards— 72port / 48port		
- 55	Hot swappable 72-port or 48-port ADSL2/ADSL2+ Annex A or		
	Annex B line card		
	Maximum transmission rate up to 24 Mbps/1 Mbps for ADSL2+		
	One mini-RJ11 console port		
	Spectral mask in G.992.3, G.992.5 and G.997.1		
	Embedded Operations Channel (EOC) and overhead channel		
	access in G.992.1, G.992.3 and G.997.1		
	Latency path function in G.992.3 and G.992.5		

	Annex L and Annex M in G.992.3 and G.992.5			
	Loop diagnostic in G.992.3 and G.992.5			
	Power management in G.992.3 and G.992.5			
	Seamless rate Adaptation (SRA) on-line configuration in G.992.3			
	and G.992.5			
	ADSL2+ 2-port bonding in G.998.1			
	IPv6 capable on 72 port ADSL line card			
8f	Splitter Chassis with 8 or 16 slot.		I	
	Item dimensions (WxDxH): in mm			
9	Physical Specifications			
9a	Main Chassis			
	Item dimensions (WxDxH): in mm			
	Item weight (including all cards and power source): in Kg			
9b	Management Switch Card			
	Item dimensions (WxDxH):			
9с	VDSL Line Card—24 Port			
	Item dimensions (WxDxH): in mm			
9d	VDSL Line Card—48 port			
	Item dimensions (WxDxH): in mm			
9e	ADSL Line Cards—72 port			
	Item dimensions (WxDxH): in mm			
9f	ADSL Line Cards—48 port			
	L			
	Item dimension (WxDxH): in mm			
SI.		COMF	PLIED	DEVIATION OR
SI. No.	DESCRIPTION	COMF	PLIED	
				OR ADDITIONAL
No.	DESCRIPTION			OR ADDITIONAL
No.	DESCRIPTION  Environmental Specifications			OR ADDITIONAL
No.	DESCRIPTION  Environmental Specifications  Operating environment:			OR ADDITIONAL
No.	DESCRIPTION  Environmental Specifications Operating environment: Temperature: -40°C to 65°C (-40°F to 149°F) Humidity: 10% to 95% (Non-condensing) Storage environment:			OR ADDITIONAL
No.	DESCRIPTION  Environmental Specifications  Operating environment:  Temperature: -40°C to 65°C (-40°F to 149°F)  Humidity: 10% to 95% (Non-condensing)			OR ADDITIONAL
No.	DESCRIPTION  Environmental Specifications Operating environment: Temperature: -40°C to 65°C (-40°F to 149°F) Humidity: 10% to 95% (Non-condensing) Storage environment: Temperature: -40°C to 70°C (-40°F to 158°F) Humidity: 10% to 95% (Non-condensing)			OR ADDITIONAL
No.	DESCRIPTION  Environmental Specifications  Operating environment:  Temperature: -40°C to 65°C (-40°F to 149°F)  Humidity: 10% to 95% (Non-condensing)  Storage environment:  Temperature: -40°C to 70°C (-40°F to 158°F)  Humidity: 10% to 95% (Non-condensing)  Power Supply: -48V DC			OR ADDITIONAL
No.	DESCRIPTION  Environmental Specifications Operating environment: Temperature: -40°C to 65°C (-40°F to 149°F) Humidity: 10% to 95% (Non-condensing) Storage environment: Temperature: -40°C to 70°C (-40°F to 158°F) Humidity: 10% to 95% (Non-condensing)			OR ADDITIONAL
<b>No.</b> 9h	DESCRIPTION  Environmental Specifications  Operating environment:  Temperature: -40°C to 65°C (-40°F to 149°F)  Humidity: 10% to 95% (Non-condensing)  Storage environment:  Temperature: -40°C to 70°C (-40°F to 158°F)  Humidity: 10% to 95% (Non-condensing)  Power Supply: -48V DC			OR ADDITIONAL
<b>No.</b> 9h	DESCRIPTION  Environmental Specifications Operating environment: Temperature: -40°C to 65°C (-40°F to 149°F) Humidity: 10% to 95% (Non-condensing) Storage environment: Temperature: -40°C to 70°C (-40°F to 158°F) Humidity: 10% to 95% (Non-condensing) Power Supply: -48V DC Certification			OR ADDITIONAL
<b>No.</b> 9h	DESCRIPTION  Environmental Specifications Operating environment: Temperature: -40°C to 65°C (-40°F to 149°F) Humidity: 10% to 95% (Non-condensing) Storage environment: Temperature: -40°C to 70°C (-40°F to 158°F) Humidity: 10% to 95% (Non-condensing) Power Supply: -48V DC Certification CE			OR ADDITIONAL
<b>No.</b> 9h	DESCRIPTION  Environmental Specifications Operating environment: Temperature: -40°C to 65°C (-40°F to 149°F) Humidity: 10% to 95% (Non-condensing) Storage environment: Temperature: -40°C to 70°C (-40°F to 158°F) Humidity: 10% to 95% (Non-condensing) Power Supply: -48V DC Certification CE UL 60950, CSA 60950			OR ADDITIONAL
<b>No.</b> 9h	DESCRIPTION  Environmental Specifications Operating environment: Temperature: -40°C to 65°C (-40°F to 149°F) Humidity: 10% to 95% (Non-condensing) Storage environment: Temperature: -40°C to 70°C (-40°F to 158°F) Humidity: 10% to 95% (Non-condensing) Power Supply: -48V DC Certification CE UL 60950, CSA 60950 FCC part 15 class A			OR ADDITIONAL
<b>No.</b> 9h	DESCRIPTION  Environmental Specifications Operating environment: Temperature: -40°C to 65°C (-40°F to 149°F) Humidity: 10% to 95% (Non-condensing) Storage environment: Temperature: -40°C to 70°C (-40°F to 158°F) Humidity: 10% to 95% (Non-condensing) Power Supply: -48V DC Certification CE UL 60950, CSA 60950 FCC part 15 class A ITU-T K.20			OR ADDITIONAL
<b>No.</b> 9h	DESCRIPTION  Environmental Specifications Operating environment: Temperature: -40°C to 65°C (-40°F to 149°F) Humidity: 10% to 95% (Non-condensing) Storage environment: Temperature: -40°C to 70°C (-40°F to 158°F) Humidity: 10% to 95% (Non-condensing) Power Supply: -48V DC Certification CE UL 60950, CSA 60950 FCC part 15 class A ITU-T K.20 ETSI 300 019 EN55022 class A EN55024 class A			OR ADDITIONAL
<b>No.</b> 9h	DESCRIPTION  Environmental Specifications Operating environment: Temperature: -40°C to 65°C (-40°F to 149°F) Humidity: 10% to 95% (Non-condensing) Storage environment: Temperature: -40°C to 70°C (-40°F to 158°F) Humidity: 10% to 95% (Non-condensing) Power Supply: -48V DC Certification CE UL 60950, CSA 60950 FCC part 15 class A ITU-T K.20 ETSI 300 019 EN55022 class A			OR ADDITIONAL

# ANNEXURE -V

# **DECLARATION**

I/We having our office at declare that I/we have never been blacklisted by any State

Government/Central Government or any State/Central PSU.

Signature :	
Name :	
Designation :	
Name of the Agency :	
Address of the tenderer :	
Seal of tenderer :	
Date:	
Place:	

# ANNEXURE – VI PRICE BID CERTIFICATION

To,
The Director
NIT,Tiruchirappalli -15
I/We of
hereby agree on the acceptance of this tender by Director, NIT, Tiruchirappalli-15 for Providing ADSL/VDS
D – slam server Solutions in accordance with the terms and conditions of contract stated in the tender
document, providing ADSL/VDSL D – slam server solutions in NIT, Tiruchirappalli-15 campus hereunder
named of the quality and sort and at the rates or price specified in Annexure – VII.
Signature :
Name :
Designation:
Name of the Agency :
Address of the tenderer :
Seal of tenderer :
Date:
Place:

# **ANNEXURE - VII: PRICE BID FORMAT FOR INDIGENOUS PURCHASES**

Tender No. & Date:

Name of the Bidder:

S. No.	Description of the item to be procured	Unit	Quantity	Basic Price in Rupees (Excluding all taxes and duties)	Excise Duty %	VAT/ CST in %	Service Tax in %	Total Amount in Rupees (Inclusive of all taxes and duties)
1	Supply Portion/							
	Main item(under							
	the letter head of							
	the bidder							
	Individual Item wise							
	break price shall be							
	attached as an							
	Annexure to this price bid)							
2	Additional /							
_	Optional							
	items/Accessories							
	and Spares							
	etc.,(Individual Item							
	wise break price							
	shall be attached							
	as an Annexure to							
	this price bid)							
3	Installation and							
	Commissioning							
_	Charges, if any		.,					
4.	Packing and Forward							
5.	Freight and Transit Ir		e Charges, if	any				
6.	Any other charges, if			<del></del>				
7.	TOTAL ALLINCLU commissioned at N				Supplied, F.O.R. De			

Additionized digitatory of Blade	or with ooal
Name	
Designation	

Authorized signatory of Ridder with Seal

Note 1: NITT is eligible for exemption from Excise Duty and Concessional Customs Duty. Please refer the tender document. As regards Service tax, As regards, sales tax NITT is not authorized to issue C or D forms for concessional VAT. However, it can issue end user certificate for claiming concessional VAT. Note 2: Price bid Format should be supported with separate sheet duly typed and signed on the letter head of the bidding firm/ company indicating details i.e., different components/ parts/ units of the equipment (if any) with number, name and price of each part.

Note 3: DGS&D rate contract: If any of the items proposed to be procured under this tender is already under DGS&D (Director General of Supplies and Disposal) Rate Contract, the bidder may give us the advantage of rate contract rate, as ours is a premier educational and research institution sponsored by the Government.