



**NATIONAL INSTITUTE OF TECHNOLOGY
ROURKELA-769008 (ODISHA)**

(An Institute of National Importance under Ministry of HRD,
Government of India)

TENDER NOTICE NO: - NITR/PW/CC/2020/01

Date: 02.01.2020

e-NOTICE INVITING TENDER (e-NIT)

Bids are invited for supply of Passive Network Equipment at Computer Center, NIT Rourkela. Details of tender can be found from institute website “www.nitrkl.ac.in” under the head “Jobs and Tenders”

Availability of tender documents on website:

<http://www.nitrkl.ac.in/Jobstenders/Equipment/Default.aspx>

Bidding Through: e-Procurement Portal of Ministry of HRD, Govt. of India

<https://mhrd.euniwizarde.com/>

Contact: Prof. Bibhudatta Sahoo, Head, CC;

Ph:.0661-2462671,

email : bd_sahu@nitrkl.ac.in

**Sd/-
Registrar**

An Institute where everyone strives to attain his Potential .



NATIONAL INSTITUTE OF TECHNOLOGY ROURKELA – 769 008, ODISHA

ADVERTISED TENDER ENQUIRY

Department: Computer Centre

Tender Notice No: NITR/PW/CC/2020/01

Date: 02/01/2020

To

Bidding
through
e-Procurement Portal of
Ministry of HRD, Govt. of India
(e-Wizard)

Important Dates

Event	Date	Time
Pre-bid Conference	NA	NA
Last Date of submission of bid	23/01/2020	11:00 AM
Date of opening of techno-commercial bid	24/01/2020	11:00 AM

Dear Sir,

We intend to purchase the commodities specified below and invite quotations in accordance with the terms and conditions detailed in the bid document. If you are interested, kindly send your offer with prices and complete terms within the time mentioned above.

For any query, you may contact

Attention:-

Prof. Bibhudatta Sahoo

HOD, Computer Centre
NATIONAL INSTITUTE OF TECHNOLOGY
ROURKELA – 769 008, ODISHA
Phone : (0661) – 246-2671/2358
E-mail: [hod-cc@nitrkl.ac.in/](mailto:hod-cc@nitrkl.ac.in)
bdsahu@nitrkl.ac.in

Yours sincerely,

Sd/-

Prof. Bibhudatta Sahoo
HOD, Computer Centre

Encl:

- (1) Schedule of requirement, specifications, dates etc.**
- (2) Bid document containing detail terms and conditions.**

1. Schedule of requirements

Sl. No.	Description of Goods/Service	Quantity
01.	Networking hardware – Passive Equipment (as per detail Annexure-I)	Annexure-I

2. Specifications and allied Technical Details

As per Annexure – I

3. Format of Quotation

It is a **two-part** bid with separate techno-commercial and price bids.

4. The bid should be submitted through <https://mhrd.euniwizarde.com/HomePage/ebidSites?siteName=mhrd>

5. Quotations should be valid for a period of **90** days from the closing date of opening of techno-commercial bid.

6. Some important dates:

- | | | | |
|------|---|-------------------------|-----------------------|
| i. | Pre-bid Conference | Date: NA | Time: NA |
| ii. | Last date for submission of bid | Date: 23/01/2020 | Time: 11:00 AM |
| iii. | Opening of Techno-commercial bid | Date: 24/01/2020 | Time: 11:00 AM |

7. **Warranty:** 2 years comprehensive warranty from OEM.

8. **Technical Evaluation Criteria:** As per the detailed equipment technical specifications given in Annexure –I. If required, the bidder may be asked to provide clarification regarding the technical aspects.

9. Other Qualification criteria:

Eligibility of Bidders:

- i. The bidder should be a Network equipment manufacturer (OEM) / System integrator/ authorized distributor/ Reseller. The manufacturer (OEM) should authorize the distributor for this tender specifically. Documentary proof regarding this must be attached.
- ii. All Passive materials (Fiber & Cat6 UTP) should be same make.
- iii. The OEM should have ISO 9001:2015 & ISO 14001: 2015 Certified. Copy of ISO Certificates need to submit.
- iv. Bidder should quote products of following make:
Legrand, Molex, Systimax, Seimon, Belden, Tyco, AMP
- v. The bidder must have supplied **Passive Networking Equipment** (both for Ethernet and optical fiber, excluding service/ installation) to any Government organizations worth fourty fifty (45) lakh in last 5 years. (Attach Order copy).
- vi. Firms should quote products that are not expected to go into end of sale in next 3 years.
- vii. Bidders must submit a declaration on their letter head that they are not black listed in any Govt. body, undertaking, and PSU or Autonomous bodies. If found the declaration is false their offer will be out rightly rejected and their EMD amount will be forfeited.

- viii. The Vendor shall provide the following information with the bid to provide background information on vendor to Tender Committee.
- a. **The list of clients** (contact details of a person phone/ mob. no. with e-mail ids should be attached) where the bidder/OEM had supplied the similar type of materials (as mentioned in schedule of requirements) with successful installation in last three years.
 - b. **Quality certificate** from a recognized institution for their manufacturing/ assembly/ system integration facilities anywhere located in India or abroad.
 - c. **Delivery period** from the date of placement of the Purchase Order.
 - d. **Customer support** strength by the vendor.
 - e. Possible quicker **availability** of the vendor when problem occurs.
 - f. **Mode of handling complains** (whether by fault ticket/complain even by email or by phone etc.)
 - g. **Validity period** of cost of equipment.
 - h. **Necessary documents** as mentioned in **Annexure -I**
 - i. Any other points may have deemed fit by the committee at time of technical evaluation of bid documents.
 - j. Details of Hardware included in offer.
 - k. Details of Technical Specification and other specifications so as to enable technical assessment of the proposal. Unpriced bid document exactly same as the price bid with full break up without the costs mentioned.
- 10. Financial Bid Evaluation Criteria:** The comparison will be made for the award of contract on the overall price basis.
- 11.** (a) All prices to be quoted on FOR basis (NIT Rourkela) in INR.
(b) GST: GST should be charged at applicable rates against DSIR certificate.
- 12. Bid Security (EMD) and Tender Cost: EMD (Earnest Money Deposit)** need to be submitted through online portal only for **INR 1,00,000/- (Rupees One Lac only)** and Tender cost (Non-refundable) through online mode for **INR 1,000/- (Rupees One Thousand only)**. The EMD (Earnest Money Deposit) of unsuccessful bidders should be returned to them at the earliest and latest on or before the 30th days after the award of the contract. EMD shall bear no interest. Any bid without accompanying with EMD & Tender Cost is liable to be treated as non-responsive and rejected.
- 13. Performance Security: 5% of contract value** in shape of Bank Guarantee/Demand Draft (DD) in favor of "Director, NIT Rourkela" payable at Rourkela from any Scheduled Commercial Bank except Co-operative and Gramin bank. Performance security should remain valid for a period of 60 days beyond the date of completion of all contractual obligations of the supplier including warranty obligation. Performance Security should be submitted within 15 days from the date of receipt of Order. And EMD (Earnest Money deposit) amount of successful bidder will be returned after the receipt of performance security in case of award of contract to successful bidder.
- 14.** Please send your quotations through e-Procurement Portal of Ministry of HRD Portal <https://mhrd.euniwizarde.com/>

15. For technical details, you may contact

Prof. Bibhudatta Sahoo

HOD, Computer Centre

National Institute of Technology, Rourkela – 769 008.

NB: ***Please furnish your Dealership Certificate (must) and Proprietary Nature Certificate (If applicable)***



NATIONAL INSTITUTE OF TECHNOLOGY ROURKELA – 769 008, ODISHA

BID DOCUMENT

1. Instructions to the bidders

- 1.1 Bids are invited on behalf of the Director, National Institute of Technology (NIT), Rourkela – 769008, Odisha, from the intending bidders for supply of the goods/stores/ equipments for the Institute as detailed in the enquiry letter.
- 1.2 The bidders should quote their offer/rates in **BOQ** in clear terms without ambiguity.
- 1.3 In case of any discrepancy between the rates in figures and that in words, the rate in words will be accepted as correct.
- 1.4 The last date for receipt of the bid is marked in the enquiry.
- 1.5 The Bid should be uploaded in MHRD Portal <https://mhrd.euniwizarde.com/> Please follow the guideline of the site.
- 1.6 If a prospective bidder requires any clarification in regard to the bidding documents, he may make a request the concerned officer or faculty member at least 15 days before the deadline for receipt of bids.
- 1.7 Bids received after the deadline of receipt indicated in Para 1.4 above shall not be taken into consideration.
- 1.8 Each bidder shall submit only one bid. A bidder, who submits more than one bid, shall be disqualified and considered nonresponsive.
- 1.9 (In respect of high value plant, machinery etc. of a complex and technical nature). The bids may be submitted in two parts, viz., techno-commercial bid and financial bid.
- 1.10 The bidder has to sign in full at all pages of the scanned part of the bidding document. No over-writing in those pages are acceptable.
- 1.11 Bidders registered with any of the following agencies/ bodies as per Public procurement policy for Micro & Small Enterprises (MSE) order 2012 are exempted categories from payment of EMD provided that the registration Certificate issued by any one of these below mentioned agencies must be valid as on close date of tender. Micro small or medium enterprises who have applied for registration or renewal of registration with any of these agencies/bodies but have not obtained the valid Certificate as on close date of tender are not eligible for exemption.
 - i) Khadi and Village Industries Commission (KVIC)
 - ii) National Small Industries Corporation (NSIC)
 - iii) Any other body specified by Ministry of MSME/GOI

2. INSTRUCTIONS FOR ONLINE BID SUBMISSION

The bidders are required to submit soft copies of their bid electronically on the e-Wizard Portal (<https://mhrd.euniwizarde.com>) using valid Digital Signature Certificates. Below mentioned instructions are meant to guide the bidders for registration on the e-Wizard Portal, prepare their bids in accordance with the requirements and submitting their bids online on the e-Wizard Portal. For more information, bidders may visit the e-Wizard Portal <https://mhrd.euniwizarde.com>

2.1 REGISTRATION PROCESS ON ONLINE PORTAL

1. Bidders to enroll on the e-Procurement module of the portal <https://mhrd.euniwizarde.com> by clicking on the link "Bidder Enrollment". Enrolment on the e-wizard Portal.
2. The bidders to choose a unique username and assign a password for their accounts. Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication from the e-Wizard Portal. Bidders to register upon enrolment their valid Digital Signature Certificate (Class II or Class III Certificates with signing key usage) issued by any Certifying Authority recognized by CCA India with their profile.
3. Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSCs to others which may lead to misuse. Foreign bidders are advised to refer "DSC details for Foreign Bidders" for Digital Signature requirements on the portal.
4. Bidder then logs in to the site through the secured log-in by entering their user ID / password and the password of the DSC / eToken.
5. Bidders must ensure that they have the latest version of Java installed in their local system.

2.2 TENDER DOCUMENTS SEARCH

1. Various built in options are available in the e-Wizard Portal to facilitate bidders to search active tenders by several parameters. These parameters include Tender ID, organization, location, date, value, etc.
2. There is also an option of advanced search for tenders, wherein the bidders may combine a number of search parameters such as organization name, form of contract, location, date, other keywords etc. to search for a tender published on the Online Portal.
3. Once the bidders have selected the tenders they are interested in, they may download the required documents / tender schedules. These tenders can be moved to the respective 'My Tenders' folder. This would enable the Online Portal to intimate the bidders through SMS / e-mail in case there is any corrigendum issued to the tender document.
4. The bidder should make a note of the unique Tender ID assigned to each tender, in case they want to obtain any clarification / help from the Helpdesk.

2.3 BID PREPARATION

1. Bidder should take into account any corrigendum published on the tender document before submitting their bids.
2. Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid.
3. Please note the number of covers in which the bid documents have to be submitted, the number of documents - including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.

4. Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document / schedule and generally, they can be in PDF / XLS / PNG etc. formats. Bid documents may be scanned with 100 dpi with black and white option.

2.4 BID SUBMISSION

1. Bidder to log into the site well in advance for bid submission so that he/she upload the bid in time i.e. on or before the bid submission time. Bidder will be responsible for any delay due to other issues.
2. The bidder to digitally sign and upload the required bid documents one by one as indicated in the tender document.
3. Bidder to select the payment option as Online" to pay the tender fee/ EMD wherever applicable and enter details of the instrument.
4. A standard BoQ format has been provided with the tender document to be filled by all the bidders. Bidders to note that they should necessarily submit their financial bids in the prescribed format and no other format is acceptable.
5. The server time (which is displayed on the bidders' dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.
6. All the documents being submitted by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data, which cannot be viewed by unauthorized persons until the time of bid opening.
7. The uploaded tender documents become readable only after the tender opening by the authorized bid openers.
8. Upon the successful and timely submission of bids, the portal will give a successful bid submission message & a bid summary will be displayed with the bid no. and the date & time of submission of the bid with all other relevant details.
9. Kindly add scanned PDF of all relevant documents in a single PDF file of compliance sheet.

2.5 AMENDMENT OF BID DOCUMENT

At any time prior to the deadline for submission of proposals, the institutions reserve the right to add/modify/delete any portion of this document by issuance of a Corrigendum, which would be published on the website and will also be made available to the all the Bidder who have been issued the tender document. The Corrigendum shall be binding on all bidders and will form part of the bid documents.

2.6 ASSISTANCE TO BIDDERS

1. Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a tender or the relevant contact person indicated in the tender.
2. e-Procurement support any queries relating to the process of online bid submission or queries relating to e-Wizard Portal in general may be directed to the **24x7 e-Wizard Helpdesk. The contact number for the helpdesk is 011-49606060, 23710092, 23710091, Er Sanjeet Kumar Jha (+91-8882495599), 9355030626. Amit Kumar Jha 9355030627, 9205898226**

Email Support:

For any eProcurement Application Service Requests and Technical issues related to Document Uploads, Tender Publishing, Issue of Corrigendum, Encryption/Decryption Key issues, Bid Evaluation, Bidder Login issues, New Registration issues, Key Uploads, DSC Key installation, Bid Submission, system users may please mail to Sanjeet Kumar Jha ewizardsanjeet.kumar@gmail.com

3. Conditions of the bid:

- 3.1 The rates quoted should preferably be net, inclusive of all taxes and duties, packing, forwarding, freight, Insurance and all other incidental charges. In case these charges are quoted extra in addition to the quoted rates, the amount thereof or Ad Valorem rate must be specified. Packing, forwarding, freight etc., when quotes separately are reimbursable at actuals. If external agencies are employed, their receipts must be enclosed with the invoice.
- 3.2 Duties and Taxes are to be quoted separately. Ad Valorem rates thereof should be clearly indicated with reference to the relevant Acts and Rules.

It may be noted that the Institute is availing custom duty exemption in terms of Notification No. 51/96 – Customs dt. 23.07.1996, Notification No. - 47/2017- Integrated Tax (Rate) dt. 14.11.2017 and Notification No- 45/2017 – Integrated tax (Rate) dt. 14/11/2017 & Notification No. - 45/2017- Central tax (Rate) dt. 14.11.2017, Notification No. - 45/2017- Union Territory Tax (Rate) dt. 14/11/2017 [Vide DSIR, Ministry of Science and Technology, Government of India, Registration No.: TU/V/RG- CDE (227)/2016, dated: 13.11.2018]

- 3.3 The goods are required to be delivered at the indenting Department of NIT, Rourkela, and must be reached within **90 days** from the date of placement of the supply of order under the risk and arrangement of the bidder and offers with delivery beyond the above period shall be treated as unresponsive. In case the delivery time is higher, the same must be mentioned clearly in the quotation.
- 3.4 The bid should remain valid for a period of **90 days** from the date of opening. In case your offer has a different validity period that should be clearly mentioned in the quotation.
- 3.5 Conditional discount, if any, offered by the bidder shall not be considered at the time of evaluation.
- 3.6 The goods offered should strictly conform to the specification and technical details mentioned in Annexure-I.
- 3.7 The Institute may like to conduct pre-dispatch inspection of goods, where applicable.
- 3.8 Period of guarantee/warranty, where applicable, should be specified in the bid.
- 3.9 If the successful bidder, on receipt of the supply order, fails to execute the order within the stipulated period, in full or part, it will be open to the Director, NIT Rourkela to recover liquidated damage from the firm at the rate of 1 percent of the value of undelivered goods per month or part thereof, subject to a maximum of 5 percent of the value of undelivered goods. Alternatively, it will also be opened to the Director, to arrange procurement of the required goods from any other source at the risk and expenses of the bidder.
- 3.10 The successful bidder may be required to execute a contract, where applicable.

- 3.11 The bidder has to furnish up to date Income Tax Clearance Certificate along with the bid.
- 3.12 Payment (100 percent) will be made by Account Payee Cheque/Bank Draft, within 30 days from the date of receipt of the goods in good condition or receipt of the bill, commissioning of the equipment, where applicable, whichever is later/latest.
- 3.13 In case of Advance payment, the payment will be made on either in Foreign Demand Draft or Wire Transfer only. The proforma invoice copy need to be sent for advance payment.
- 3.14 In the event of any dispute arising out of the bid or from the resultant contract, the decision of the Director, NIT, Rourkela shall be final.
- 3.15 The bid document/resultant contract will be interpreted under Indian Laws.

General Clauses:

1. All Passive materials (Fiber & Cat6 UTP) should be of same make.
2. The OEM should have ISO 9001:2015 & ISO 14001: 2015 Certified. Copy of ISO Certificates need to submit.
3. Bidder should quote products that are not expected to go into end of sale in next 3 years.
4. Bidder should quote products of following make:
Legrand, Molex, Systimax, Seimon, Belden, Tyco, AMP
5. **Warranty:** 5 years comprehensive warranty from OEM.

Technical Specification of Colorimeter (Spectrophotometer) with accessories

Sl. No.	Description of Product	Qty.(In Mtrs.)
1	Cat6 UTP Cable	50,000
a.	Compliant to TIA / EIA 568-C.2 Category 6 cable Specifications. Supports ultrahigh speed data networks such as Gigabit Ethernet (1000 Base-T and 1000 Base-TX) and beyond.	
b.	Category 6 Unshielded Twisted Pair 100Ohm (305 Mtrs in Reel). Characterized up to 600Mhz. Should be highlighted in the product data sheet.	
c.	Should be 4 pair, 23 AWG, Conductor Dia Norm: 0.574, CM Rated and should have central X-shaped polymer spine maintaining 4 pairs separation.	
d.	Sheath Type: CM Rated , Fire Retardant PVC, Nominal O.D: >= 6.2mm, NPV :65%, D.C. Resistance: 9.38 ohm/100m, Temperature: Max 75°C Propagation Delay: 537.6@100MHz	
e.	Should be UL Listed, ETL verified & 4 Connector Chanel tested. (Documents to be submitted for both)	
f.	The product must be ISO 9001:2015& ISO 14001: 2015 Certified. Certificate copy should be attached.	

Sl. No.	Description of Product	Qty.(In Nos.)
2	CAT6 INFORMATION OUTLET	2,300
a.	Category 6, EIA/TIA 568-C.2, FCC Subpart F 68.5 Compliant, IEC-603-7 Compliant	
b.	All information outlets should accept, 22-24 AWG copper	
c.	Jack should have integrated Spring-loaded shutter for protection against dust when not used and prevents incomplete mating	
d.	Should be UL Listed and ETL verified	
e.	Jack Connector Plastic Housing: Polycarbonate, UL94V-0 rated, Operating Life: Minimum 750 insertion cycles Operating Life: Minimum 200 determinations Contact Material: Copper Alloy IDC Contact Plating: Tin/Lead Plate Contact Force: 100g minimum	

Sl. No.	Description of Product	Qty.(In Nos.)
3	1 Port CAT6 INFORMATION OUTLET FACE PLATE	1,000
4	2 Port CAT6 INFORMATION OUTLET FACE PLATE	700
	Material: VE10 ABS Plastic. Size: 86 x 86mm.	

Sl. No.	Description of Product	Qty.(In Nos.)
5	CAT6 INFORMATION OUTLET Back Box	1,700
a.	Materials – ABS Plastic	
b.	Size – 86 x 86 mm	
c.	Color – White	
d.	Should have 3 cut out provision for cable entry.	

Sl. No.	Description of Product	Qty.(In Nos.)
6	CAT6 24 PORT JACK PANEL (Loaded)	30
a.	Should Be made of cold rolled steel and conform to TIA / EIA 568-C.2 Component Compliant	
b.	Each Ports should be with individual spring loaded shuttered for dust protection. Each port (jack) and individual replaceable.	
c.	Wire Accommodation: 22-24 AWG solid. Should be ETL Verified for Category 6 Component Compliance, UL Listed & RoHS Compliance.	
d.	Should have integral rear cable management shelf.	
e.	Takes the following plugs: RJ 11 (4 contacts), RJ 12 (6 contacts), RJ 45 (9 contacts).	
f.	Voltage Proof : 1000 V D.C. or A.C Peak and Also 1500V D.C or A.C Peak	
g.	Commercial Standards: TIA/EIA-568-B.2-1 Component Compliant FCC Subpart F 68.5 Compliant IEC-603-7 Compliant ISO 11801 Class E Compliant ETL Verified for Category 6 Component Compliance	

Sl. No.	Description of Product	Qty.(In Nos.)
7	CAT6 UTP PATCH CORDS 0.5 Mtr	1,800
8	CAT6 UTP PATCH CORDS 1 Mtr	500
9	CAT6 UTP PATCH CORDS 3 Mtrs	200
a.	Cable 4 Pairs 24 AWG copper with RJ45 Clear Polycarbonate Plug	
b.	The Jacket most Low Smoke Zero Halogen (LS0H)	
c.	Minimum comply with proposed ANSI/TIA/EIA-568-C.2	
d.	MIN operating life: 750 insertion cycles RJ45 plug and boot material: Clear polycarbonate Contact material: 0.35mm thick copper alloy Contact plating: Selective gold RJ45 plug dimensions compliant : ISO/IEC 60603-7-4 & FCC 47 Part 68	
e.	Pre-terminated with WE8W plugs. Slim clear anti-snag slip on boots. Suitable for EIA 568A or 568B wiring, ETL Verified & RoHS Compliant	
f.	Commercial Standards ISO/IEC 11801:2002/Amd 2:2010 Cat 6-, TIA-568-C.2 Cat 6	
g.	Fire Propagation Tests: LS0H Sheath: CSA FT1, IEC 60332-1, IEC 61034	

Sl. No.	Description of Product	Qty.(In Mtrs.)
10	12 Core single mode Unitube Single Jacket Armored Fiber Cable	4000
a.	Cable Type : 12 Core Optical Fibre Cable, Single Mode, Unitube, Armoured, Gel filled cable. Complying to : ISO.IEC 11801 - 2nd Edition, type OS2; EIA/TIA 568- C.3.;ITU-T REC G 652D, IEC 60793/60794, TIA 568, EIA 455 spec. Suitable for use in direct burial, outdoor ducts and backbone cabling.	
b.	Armour : Corrugated Steel Tape Armour -Thickness > 0.15mm	
c.	Water Blocking : Thixotropic Gel (Tube), Petroleum Jelly (Interstices)	
d.	Attenuation : @ 1310nm <=0.35 db/Km MAX	
e.	@1550nm <=0.22 db/Km MAX	
f.	Attenuation Discontinuity : Both Windows <0.10dB	
g.	Fibre protection(Tube): Polybutylene Terephthalate (PBT)	
h.	Loose tube material : Single PBTP Loose tube filled with water blocking Thixotropic gel	
i.	Jacket material : UV Stabilized Polyethylene (HDPE Black)	
j.	Peripheral Strength Member : Two Steel wires	
k.	Tensile Strength: 1500N	
l.	Crush Resistance: 2000N/10 cm	
m.	Cable Diameter : 9mm ± 10%	
n.	Max. Bending Radius (during installation): 20 X Overall diameters	
o.	Cable weight Kg/Km : 90 kg/km ± 10%	
p.	Operating Temperature: .-20 Degree C to +70 Degree C	

Sl. No.	Description of Product	Qty.(In Nos.)
11	24 Port Rack Mount LIU(Fiber Patch Panel)	15
a.	Rack Mount : Should support 19" rack mounted and Wall Mount with 1U height, with 4 Cable entry/exit points	
b.	Accommodation and Supports : Capable of supporting SC and LC interface – Should support up to 24 Port with SC Adapter & up to 48 Port with LC Adapter	
c.	Materials : Powder coated Cold Rolled Steel CRS	
d.	Management rings within the system.	
e.	Fiber Adapter : Dimensions: 86 x 33mm Plate Material: Black Electroplate or Thermoplastic	
f.	For 24 Port - 4 x 6 Pack SC Adapter. Blank Adapters plate to supplied as per the requirement	
g.	Technical Information : Housing: Polymer Alignment sleeve: Zirconia Ceramic or Phosphor Bronze Operating Temperature: -40 to +85°C Durability: 200 cycles min. RoHS Compliant	
h.	Fiber Splice Tray : Each LIU should have splice tray	

Sl. No.	Description of Product	Qty.(In Nos.)
12	12 Port Wall Mount LIU(Fiber Patch Panel)	10
a.	Wall Mount : Should supply with Wall Mount accessories with 4 Cable entry/exit points	
b.	Accommodation and Supports : Capable of supporting SC and LC interface – Should support up to 6 & 12 Port with SC Duplex Adapter & up to 24 Port with LC quad Adapter	
c.	Materials : Powder coated Cold Rolled Steel CRS. Rugged steel construction in graphite finish. Dimensions: 305mm W x 254mm D x 43mm H	
d.	Management rings within the system to accommodate excess fiber cordage behind the through adapters and maintain fiber bend radius.	
e.	Fiber Adapter : Should be Duplex Adapter with shuttered feature and lockable. Utilizes standard NTT-SC and Bellcore 326 compliant	
f.	Should supply with 6 x Duplex SC SM Adapter. Blank Adapters panel to supplied as per the requirement	
g.	Technical Information : Meets TIA/EIA 568-C.3 and IEC 874-109 standards RoHS Compliant	
h.	Fiber Splice Tray : Each LIU should have splice tray Material: ABS polymer Fiber Termination Options: Direct, Fusion Splice, Mechanical Splice, Pre-Terminated MTP Dimensions: 168mm W x 124mm D x 13mm H	

Sl. No.	Description of Product	Qty.(In Nos.)
13	Pigtail SC SM OS2 1.5M LSZH	400
a.	Materials : LC type connector with LSOH Jacket - Reduces toxic / corrosive	
b.	Length: 1.5 Mtrs length	
c.	Testing: 100% Factory polished, tested and Guaranteed Performance	
d.	Technical Information: Cable: 900um Buffered Outside Diameter: 900um Buffer Diameter: 900um tight buffer Minimum bend radius: install: 30 mm Operating Temperature: -20°C to 75°C Retention Strength: 100N RoHS Compliance	
e.	Commercial Standards: ISO/IEC 1108:2008. ANSI/TIA/EIA-568-C.3, EIA 492, Telecordia GR-409, ICEA-596, OS2-STD ITU-T-G652 D	

Sl. No.	Description of Product	Qty.(In Nos.)
14	SC-LC Single mode (9/125)Duplex fiber patch cord 1mtr	150
15	SC-LC Single mode (9/125)Duplex fiber patch cord 3mtrS	50
16	SC-SC Single mode (9/125)Duplex fiber patch cord 1mtr	50
a.	Type of connectors: Duplex SC-LC & SC-SC type connector.	
b.	FO Patch Cable : Single Mode 9/125 Microns FO Patch Cord	
c.	Length : Minimum 1 meter	
d.	Polishing : 100% Factory polished and tested	
e.	Strength Member : Aramid Yarn	
f.	Insertion Loss : Less than 0.35dB per connector	
g.	Attenuation : 0.4dB/km over 1310nm to 1625nm	
h.	Standards : ROHS Compliant	
i.	Jacket Material: LS0H IEC 61034-1 & 2, IEC-60332-1, IEC-60754- 1 & 2	

Sl. No.	Description of Product	Qty.(In Nos.)
17	6 U Rack	30
a.	Racks manufactured out of steel sheet punched, formed, welded and Powder coated	
b.	Rack should be manufactured by ISO 14001 Certified Company & Should be UL Certified.	
c.	Standard for Racks configuration will be welded frame and vented top cover	
d.	Rack should have Front Toughened Glass Door with lock & Key	
e.	Rack should be 6U(1U=44.45 mm) in Height, minimum 550MM Width, 500MM Depth	
f.	Rack should Conform to DIN 41494 or Equivalent EIA /ISO / EN/CEA Standard	
g.	Rack should have Adjustable mounting depth,	
h.	Rack 4 No Adjustable, 19" verticals with Punched 10mm Square Hole and Universal 12.7mm-15.875mm-15.875mm alternating hole pattern offers greater mounting flexibility, maximizes usable mounting space.	
i.	Rack should have Numbered U positions,	
j.	Rack should have 100% assured compatibility with all equipments conforming to DIN 41494 (General industrial standard for equipments)	
k.	Powder coated finish with seven Tank pretreatment process meeting IS	
l.	Rack should have Proper Grounding & Bonding	
m.	Rack should have one catiliver shelf	
n.	Rack should have Fan module Mount Provision on top Cover with 2 fans	
o.	Rack Should have 1Ph, 230V, 8A, 2U standard rack mount power distribution unit with 6 X Indian Round Pin 5A, Inlet Plug type 6A Indian Round Pin, 8A Fuse - PDU Rating 1.8KVA	
p.	Rack should have 1 No Horizontal Cable Organizer with Plastic Loops.	
q.	Rack should have provision for cable entry Exit from Both top & Bottom.	
r.	Rack should have 1 Packet of Mounting hardware, Pack of 10	

Sl. No.	Description of Product	Qty.(In Nos.)
18	12 U Rack	20
a.	Racks manufactured out of steel sheet punched, formed, welded and Powder coated	
b.	Rack should be manufactured by ISO 14001 Certified Company & Should be UL Certified.	
c.	Standard for Racks configuration will be welded frame and vented top cover	
d.	Rack should have Front Toughened Glass Door with lock & Key	
e.	Rack should be 12U(1U=44.45 mm) in Height, minimum 550MM Width, 600MM Depth	
f.	Rack should Conform to DIN 41494 or Equivalent EIA /ISO / EN/CEA Standard	
g.	Rack should have Adjustable mounting depth,	
h.	Rack 4 No Adjustable, 19" verticals with Punched 10mm Square Hole and Universal 12.7mm-15.875mm-15.875mm alternating hole pattern offers greater mounting flexibility, maximizes usable mounting space.	
i.	Rack should have Numbered U positions,	
j.	Rack should have 100% assured compatibility with all equipment conforming to DIN 41494 (General industrial standard for equipment)	
k.	Powder coated finish with seven Tank pretreatment process meeting IS	
l.	Rack should have Proper Grounding & Bonding	
m.	Rack should have one catiliver shelf	
n.	Rack should have Fan module Mount Provision on top Cover with 2 fans	
o.	Rack Should have 1Ph, 230V, 8A, 2U standard rack mount power distribution unit with 6 X Indian Round Pin 5A, Inlet Plug type 6A Indian Round Pin, 8A Fuse - PDU Rating 1.8KVA	
p.	Rack should have 1 No Horizontal Cable Organizer with Plastic Loops.	
q.	Rack should have provision for cable entry Exit from Both top & Bottom.	
r.	Rack should have 1 Packet of Mounting hardware, Pack of 10	

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