

**NATIONAL INSTITUTE OF TECHNOLOGY
KURUKSHETRA-136119**

No. CCN/2013/18

Dated: 12.11.2013

M/s _____

Sub: INVITATION OF QUOTATIONS FOR NETWORKING (SUPPLY, INSTALLATION & COMMISSIONING) IN HEALTH CENTRE & GUEST HOUSE.

1. You are invited to submit your most competitive quotation for the following goods:

Sr.No.	Brief Description & Specifications of Goods	Quantity
1.	Networking (supply, Installation & Commissioning) in Health Centre & Guest House (Technical specifications are attached.)	As per list attached
2.	Necessary literature of the goods may please be sent to facilitate to take decision.	
3.	All duties taxes and other levies payable by the Institute shall be included in the total price. This Institute does not issue Form C or D.	
4.	Payment is normally made by Cheque drawn on State Bank of India within 30 days after receipt of material in good condition and according to specifications.	
5.	The supplier shall deposit Earnest Money alongwith the Quotation amounting to Rs.22000/-in shape of Accounts Payee Demand Draft, Fixed Deposit Receipt, Bankers Cheque or Bank Guarantee from any commercial Bank in favour of the Director, National Institute of Technology, Kurukshetra. The Quotations without Earnest Money shall be rejected, the EMD will remain valid for a period of 45 days beyond the final validity period of quotation. \	
6.	Performance Security @ 10% of the total value of the equipment may be furnished in shape of Demand Draft, Fixed Deposit Receipt or Bank Guarantee from any Commercial Bank in favour of the Director, NIT Kurukshetra valid upto 60 days after the date of completion of warranty period of one year.	
7.	The items must be supplied within delivery period or delivery period extended by the Institute on the request of the supplier on genuine grounds otherwise the penalty for delayed period @ 0.5% of the amount shall be charged for every week or part thereof and the maximum 10%.	
8.	The goods are not required exclusively for Research Purpose. The Duties are payable by the Institute.	
9.	The quotation should remain valid for a period not less than 60 days from the date of submission.	
10.	The right of accepting or rejecting any quotation and to cancel the bidding process and reject all quotations without assigning any reason is reserved with the Institute.	
11.	The due date for receipt of quotation is 02.12.2013 and will be opened on next working day. Please quote on the top of the envelope our Ref. No. and due date of opening.	

Asstt. Registrar(Stores)

Schedule of Requirements for Networking in Health Centre & Guest House

Sr. No.	Item Description	Qty.
1.	Layer 2 Managed Gigabit Switch 24 Port 10/100/1000 with 2 x 10G Ports with three years support	3 Nos
2.	1000BASE-LX SFP transceiver module SMF	2 Nos
3.	1000Base-T SFP transceiver module	2 Nos
4.	Optical Fiber Cable: 6-core Indoor/Outdoor ECCS Armoured, FRLSZH Sheath, Loose-tube, multitube, Gel-filled, 9/125 SM, OS2	280 Mtrs
5.	12-fiber SC-Style, Singlemode , 19-inch, 1U Rack mount Patch Panel (FOPP) pre loaded with SC duplex SM adapter, 12 SC, SM OS2 Pigtails, Splice tray & Splice protectors	2 Nos
6.	SC-LC Style Single mode Duplex, LSZH Sheath, Patch Cord, 3 Meter	4 Nos
7.	Category 6 UTP, 4 Pair with ETL test report for channel and zero bit error, compliant with EIA/TIA 568-C.2 transmission performance specifications and verified by ETL for 400 MHz or higher	8 Box
8.	Cat 6, 24-port unloaded Modular Multimedia Straight Jack Panel for SL series with labels and clear label covers, Height, 1U,	4 Nos
9.	Cat 6 UTP PCB based Jack with Strain relief and bend limiting boot performance bend limiting boot, exceed TIA/EIA-568-C.2, ISO/IEC 11801 standards for Cat 6, white	60 Nos
10.	Cat 6 UTP PCB based Jack with Strain relief and bend limiting boot performance bend limiting boot, exceed TIA/EIA-568-C.2, ISO/IEC 11801 standards for Cat 6, Blue	60 Nos.
11.	Single Port face plate of size 3x3	60 Nos
12.	Back Box -(SMB) For Single and Dual	60 Nos
13.	Cat 6 Equipment Cord, 4-Pair stranded Unshielded conductors, FRPVC sheath, Transparent plug and boot design provide additional space between adjacent plugs , Non-plenum (CM rated)- 4 ft	60 Nos
14.	Cat 6 Equipment Cord, 4-Pair stranded Unshielded conductors, FRPVC sheath, Transparent plug and boot design providing additional space between adjacent plugs , Non-plenum (CM rated)- 7 ft	60 Nos
15.	9U WM Rack with 630mm Depth, 1U Cable Manager, 3-socket PDU and mounting hardware	2 Nos
16.	1" PVC Conduit per meter	650 Mtrs
17.	25 mm HDPE Lubricated Pipe	250 Mtrs
18.	Digging of soft soil	180 Mtrs
19.	Digging of hard soil	70 Mtrs
20.	Laying of HDPE Lubricated Pipe	220 Mtrs
21.	Laying of fiber cable	280 Mtrs
22.	Laying of Conduit	600 Mtrs
23.	Laying of UTP Cable	2235 Mtrs
24.	Installation /Fixing of Patch Panel in Rack	2 Nos
25.	Fixing and Termination of UTP Cable at I/O End	60 Nos
26.	Fixing of LIU	2 Nos
27.	Splicing of Fiber Cores	12 Nos
28.	Installation of Rack	2 Nos
29.	Installation of Switches	3 Nos

Note1:Outdoor OFC Laying in trenches (3 ft deep ground digging with soil refilling & route marker in every 30 m) through HDPE or Indoor Laying(Inside the building) through HDPE pipe along the wall

I. Active Components

1. Access Switch

- 10 and 1 Gigabit (10/100/1000) Ethernet uplink flexibility with Small Form-Factor Pluggable Plus (SFP+), providing business continuity and fast transition to 10 Gigabit Ethernet
- 24 ports of Gigabit Ethernet desktop connectivity
 - Stacking module with 40 Gbps of throughput,
 - PoE + with upto 30 W per port

Maximum data transfer rate-1 Gbit/s, Full duplex

Networking- Link aggregation, Jumbo Frames support, Broadcast storm control, DHCP client, DHCP server, IGMP snooping, Auto MDI/MDI-X, Spanning tree protocol

Management features- Switch type: Managed, QoS support, Multicast support

Ports & interfaces- 24 Ethernet LAN (RJ-45) ports

Security- MAC address filtering, SSH/SSL support

Protocols- Management protocols: SNMP 1, RMON 1, RMON 2, RMON 3, RMON 9, Telnet, SNMP 3,SNMP 2c, HTTP

Data link protocols:- Ethernet, Fast Ethernet, Gigabit Ethernet

PoE Support, Rack mounting, Form factor- 1U

Memory: Internal memory-128 MB, Flash memory-64 MB

Connectivity technology-Wired

Certifications: FCC Part 15 class A, EN 55022 Class A

II. Passive Components

1. Optical Fiber Cable

Cable Type	ISO/IEC-11801-OS2 9/125U, indoor/outdoor, IEC 60332-3, IEC 61034-2, IEC60754-2 6- core, single mode, Armoured, loose-tube, Gel Filled, rodent resistant, corrugated steel tape armoured direct burial type
Standard	Reduced water peak standard, GR-20 Core, ITU-T G.652.D, IEC60793-2-50 B1.3
Attenuation	
@1310nm	0.4 dB / Km
@1550nm	0.3 dB / Km
Network Support	
10/100 /1000 Ethernet	2000m
155 Mbps ATM	2000m
1000 base SX	900m
1000 base LX	550m
10Gbps 1000 base-SR	300m
Tensile rating	2700 N
Maximum Crush Resistance	3000N
Operating Temperature	- 20° to +70° C
Others	To meet Gigabit & 10 Gigabit Ethernet performance requirement specified by IEEE 802.3z (1000 Base-X) & IEEE 802.3ae (10G Base-X), CWDM GBIC RoHS compliant

2. UTP Cabling components

All UTP components should be from the same OEM and the OEM should be ISO:9001:2000 and OS 9000 certified.

2.1 Cat 6 Cord

1	Length shall be 4/7/10/15 feet
2	All patch cords shall conform to Category 6 & conductor shall be stranded 26 AWG or better
3	Shall support network line speeds up to 1 Gbps
4	Shall have RJ-45 jacks with transparent plugs at both the ends
5	All patch cords shall be factory crimped and packed.
6	Shall be CM rated
7	Shall support applications such as 155 Mbps ATM, token ring & VOIP.
8	Patch cord shall be fire retardant or better
9	Shall have minimum 20-Year Extended Product Warranty and system warranty

2.2 Cat 6 UTP PCB based Jack

1	Shall conform to Category-6 as per the EIA/TIA-568C.2
2	Shall support network line speeds up to 1 Gbps
3	Shall have RJ-45 type connector with bend limiting boot for securing IDC contacts from external forces
4	Shall be of high performance type
5	Shall Snap into standard faceplates, surface-mount boxes, consolidation point boxes, and Modular Panels
6	Shall be mountable either at 90 degrees (straight) or 45 degrees (angled) in any faceplate.
7	Shall have minimum 20-Year Extended Product Warranty and system warranty

2.3 Single Port face plate

1	single Port (RJ45) square plate, dimension as per commercially available modular office furniture.
2	spring shuttered front access for preventing ingress of dust
3	Shall have Write on labels in transparent plastic window along with the plate
4	Shall have Screw hole covers along with the plate
5	Shall be able to support variety of jacks – UTP and STP Information outlets

2.4 Cat 6, 24-port unloaded Modular Multimedia Straight Jack Panel

1	Shall be unloaded with individually replaceable 24 nos. Category-6 I/O Jacks
2	Shall be 19" rack mountable and of 1U height & complete with all mounting accessories, UL listed (UL Certificate required)
3	labels for identification of ports and have integrated bonding bar or other mechanism for grounding
4	minimum 20-Year Extended Product Warranty and System Warranty
5	capable of transmitting 1 Gigabit Ethernet over 100m channel
6	Comprehensive port numbering on front
7	suitable for loading Cat 6A shielded & Cat 6 unshielded jacks.
	Minimum 20-year extended product and system warrantee

2.5 12-fiber SC-Style, Single mode , 19-inch, 1U Rack mount Patch Panel (FOPP)

1	Shall have 12/24 nos. of ISO/IEC-11801-OS2 Pigtails with SC Type Connectors
2	Shall have all accessories including coupler plates pre-loaded with duplex SC couplers (OS2), pigtails for terminating fibres on the FOPP
3	Shall be Front Patching Type, 1U high and rack mountable on standard 19" rack

	with mounting arrangements
4	Shall be supplied with fusion splicing kit for termination of fiber.
5	Shall be made of powder coated steel
6	Shall be slide-out type drawer enclosure for Easy access to splicing tray, Easy access to back side of the connector and have labels for better identification
7	Shall have trays with hinges(book type) which allows facilitates easy Fibre management and greater access during installation and rework
8	Shall have all necessary accessories for fiber management inside such as Fibre guides, radius controls & secure tie downs within the FOPP

2.6 Fiber Optic Patch Cable (SC-LC)

1	Length: 3 meters/5/10/15
2	All patch cords shall conform to EIA/TIA-568C.3 and ISO/IEC-11801
3	Duplex Single Mode Fiber Optic Patch Cords OS2 9μ
4	support of network line speeds up to 10 Gbps
5	SC Connector jacks at one end and LC connector on the other end
6	All patch cords shall be factory terminated and packed.
7	Conform to Low-Smoke & Zero-Halogen
8	minimum 20-Year Extended Product Warranty and system warranty

Terms & Conditions:

1. Warranty period: 3 years from the date of signing the contract with eligible system integrator / authorized partner of the OEM.
2. The Participating System Integrator must be authorized partner of the active components OEM and must produce a letter of authorization from the OEM. Any bids without valid authorization letter would be summarily rejected.
3. The authorized partner should have OEM certified engineer on their role to ensure best support to the Institute.
4. Quotations must be accompanied with printed technical brochure /catalogue and specification data sheet pertaining to the quoted items.
5. The bidder must ensure proper full support on 24x7 x 365 basis.
6. The bidder senior support / services team must meet the technical team of the Institute and conduct a monthly review with regards to support being provided by the bidder and must maintain records of the same.
7. The system integrator/bidder should have experience of executing similar projects. The bidder must furnish client list of last three years along with copies of purchase order for similar projects.
8. Bidders are requested to visit the institute for inspecting the site prior to submission of bid to ensure the compatibility of the quoted items with the existing switching architecture.
9. Performance security @10% of the total value of the project will be furnished.
10. The project must be completed within 6-8 weeks from the issue of purchase order failing which a penalty of 0.5 % per week of the total cost will be charged.
11. The payment will be released after successful implementation and commissioning of project.
12. The bidder will impart technical training to five personals of NIT Kurukshetra.
13. This is a turnkey project and includes installation, execution & commissioning of the project. The bidder is required to offer the quotation for all items included in schedule of the requirement.

