Tender Notice No: NFSU/IT CELL/118/NETWORK/IFS BUILDING/2023-24/01 dated: 14/03/2024 Revamping of Networking for three computer labs at IFS building at NFSU, Gandhinagar

National Forensic Sciences University, Sector-9, Gandhinagar-382007, Gujarat

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Revamping of Networking for three computer labs at IFS building at NFSU, Gandhinagar

NOTICE INVITING TENDER

National Forensic Sciences University (An Institution Of National Importance), the erstwhile Gujarat Forensic Sciences University is the brain child of Govt of Gujarat. It was established by the Hon'ble Prime Minister of India Shri. Narendra Modiji, then Chief Minister of Gujarat in 2009 with a sole objective of creating professional experts in the field of Forensic sciences. At a juncture of spiking the number of crimes involving sophisticated technologies and much evolved modus operandi, there was a need for scientists and technocrats. Thereby the resolution of such heinous crimes were more diligently possible. This has been prudently considered by the Govt of Gujarat and the university came into existence as a unique and first of its kind academic institution dedicated to Forensic Sciences across the globe.

Details of existing IT infrastructure

For any Campus IT infrastructure being deployed plays a very important role since digitization and online modalities for operational efficiency is becoming the way of life. Considering the above NFSU has selected technologies which can support their future requirements and fight technology obsolesces. The details of the Infrastructure are mentioned below:

The data centre is hosted on the Ground Floor of the administration building and it consists of Rittal racks supported with in-Row cooling which leads to lesser power consumption and reduction in carbon foot prints which is a step further to the go-green initiative.

The Racks are loaded with the Cisco 9500 series loaded with 10G.

All floor stacks which are built using HP/Aruba's 2920/2930 and Cisco 9200 switches in different buildings are directly connected to the Core in the Star modes and each stack has an uplink of 10G.

Each building is connected to the Admin Building using Fibre cables which terminate in the ground floor rack room of that building and redundancy is built using multiple paths which interconnect the building to the DC in the admin building. Of the four tubes each of 6 cores which are available the first tube is used to connect the ground floor and the second and third tube is used to connect the racks rooms located at the first and second floor of each building. The fourth tube is spare and can be used for expansion. The fibre which was used is the OS2 grade 24 core fibre from Tyco which is now Commscope.

For interconnecting the first and the second floor OS2 grade 6 from Tyco which is now Commscope was used. The 6-core fibres are terminated on the ground floor rack room and

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through fibre patching they connect to the DC over using the 2nd and 3rd tube of the 24-core fibre.

Considering high multimedia and video traffic which is expected to flow over the network in the future NFSU selected the highest category cable which was CAT7A at that point in time. This cable is ready to support Class FA transmission speeds in future whenever the edge switches are upgraded without any change in the cabling.

This decision of NFSU has ensured investment protection for the edge cabling components for at least 25 years. CAT7A cable and accessories which are currently deployed are from Tyco which is now Tyco/Commscope.

All operational data points for Computers, CCTV, AV(Audio-Video) and Wi-Fi are on the same Infrastructure and thus it is ready to host 4K-8K Video traffic using Software-defined Video over Ethernet (SDVoE) without any change or upgradation in the passive components.

Wi-Fi is a prime requirement of educational campuses as they need to support the mobility requirements of the students and staff. Considering this NFSU had planned to deploy mobility solutions to meet the above requirements and Wi-Fi solutions using Aruba's Wi-Fi controllers (7210), Cisco Wi-Fi Controller Catalyst 9800-L and Aruba 302 & Cisco AP 18521-D Access Points are functional in the NFSU Campus.

The firewall is from Fortinet and it is FG-500E-BDL(Active-Active), Forti Analyzer 800G and Forti Authenticator VM.

National Forensic Sciences University Gandhinagar, invites online bids from reputed Manufacturers or their authorized vendors, having registered offices in India who can fulfil the criteria mentioned in the Tender document and have an adequate credential, for the revamping/Upgradation of Active and Passive networking infrastructure at selected Computer Labs @ IFS building, NFSU Gandhinagar.

Interested parties may submit their sealed bids under a Two-Bid system as per **Technical** Specifications given in Annexure I and General Terms & Conditions and other formats given in Annexure II to XIV.

Two covers (Primary bid and Technical Bid) are to be sealed and placed in one large Cover super scribed with tender reference number (Tender Notice No: NFSU/IT CELL/118/NETWORK/IFS BUILDING/2023-24/01) and submitted to "Executive Registrar, National Forensic Sciences University, Gandhinagar, PIN: 382007 on or before _____ at 17.00 Hrs.

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(1) The primary bid will be for Tender fees & EMD and (2) the technical bid will be for all technical documents. After verification of the Primary bid, the technical bid will be opened for evaluation of who is qualified in the primary bid. Online price bids will be opened in respect of those OEMs/Vendors, who are found technically qualified after the evaluation of Technical bids.

Kindly refer to the NFSU website <u>www.nfsu.ac.in</u> for complete tender details. The same is also available in the CPP Portal. [https://eprocure.gov.in/epublish/app]. If there is any corrigendum/addendum, it shall only be published on the NFSU Website and Central Public Procurement Portal.

Executive Registrar, NFSU, Gandhinagar

To

- 1. NFSU Website
- 2. CPP Portal

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TIME EVENTS OF VARIOUS TENDER-RELATED ACTIVITIES

Tender No. & Date	Tender Notice No: NFSU/IT CELL/118/NETWORK/IFS
	BUILDING/2023-24/01 dated: 14/03/2024
Brief Description of	Revamping of Networking for three computer labs at the
Tender	IFS building at NFSU, Gandhinagar
Tender fee	₹ 1,500/-(one thousand and five hundred rupees only by way
(Non-refundable)	of Demand draft from any Nationalized Bank /Commercial
	Bank and paid in favour of "Executive Registrar, National
	Forensic Sciences University", payable at Gandhinagar)
EMD	₹ 1,08,000/-(One Lakh and Eight Thousand rupees only)
Last date & time for	10/04/2024 at 4.00 PM
online bid submission on	
CPPP	
Last date & time for Bid	12/04/2024 at 4.00 PM
submission of technical	
bid, Tender Fee and EMD	
<u>in sealed covers</u>	
Technical Bid opening	15/04/2024 at 4.00 PM
Date & Time	
Two Bid System	Two bids-(i) Primary bid Technical and, in two separate
	envelopes- placed & sealed in one envelope (ii) Price bid is
	online only
Bid validity	180 days from the opening of Price Bid
Submission of bids	Executive Registrar, National Forensic Sciences University,
(by speed post) at	Gandhinagar-382007, Gujarat (State)
Bid opening place	As Above
Any clarification	Telephone No: +91-79- 23977113,
	email: itmanager_gnr@nfsu.ac.in
Last date for submission	18/03/2024
of pre-bid queries	

Note:-

- 1. If the day falls on any Holiday, the date of any of the events mentioned above shall be on the next working day.
- 2. It is the responsibility of the Bidder to ensure that their bids whether sent by post or by courier or dropped by person should reach within the stipulated date & time.
- 3. The bid received after the last date and prescribed time would summarily be rejected. Bids having incomplete information are also liable to be rejected.
- 4. The Executive Registrar, NFSU Gandhinagar reserves the right to reject any or all the bids in full or part without assigning any reason thereof and without giving any compensation. The decision of the NFSU in this regard shall be final and binding to all.
- 5. The addendum/corrigendum if any shall only be published on NFSU's website and CPP Portal.

ANNEXURE-I

TECHNICAL SPECIFICATIONS (Bill of Quantity)

Table 1: List of Items and Services

Sr.	Name	Brief	Unit	Total	Deduction for existing Lab due to re Utilisation of Existing Material	Final Requirement after deduction of OLD material	Quoted product with make, model and part number
1	Cat7 Cable	Cable, Copper, Category 7A, 1000 MHz E10, 4 Pair, Solid, S/FTP, LSOH-1, Violet, Reel, 500 Meter	Mtr	7595	-4725	3000	
2	Switch Side Patch Cord 1 Mtr	Copper, Patch Cord, Tera 4-Pair, RJ45, Category 6A, S/FTP, T568B, Stranded, CM/LSOH-1, Ivory Cable, White Boot, 1 Meter.	Nos	217	-135	82	
3	User Side Patch Cord 2 Mtr	Copper, Patch Cord, Tera 4-Pair, RJ45, Category 6A, S/FTP, T568B, Stranded, CM/LSOH-1, Ivory Cable, White Boot, 2 Meter	Nos	217	-135	82	
4	Patch Panel for Rack	Copper, Patch Panel, Tera / MAX, Empty, Shielded, 24 Openings, Flat, 1U, Black, Fixed Wire Manager	Nos	11	-7	4	
5	Network IO User Side	Copper, Outlet, TERA, Shielded, Category 7A/8, TERA, Flat, Black, Tool-Less, T568A/B, with Door, 22-23 AWG - User Side	Nos	217	-135	82	
6	Network IO Rack Side	Copper, Outlet, TERA, Shielded, Category 7A/8, TERA, Flat, Black, Tool-Less, T568A/B, with Door, 22-23 AWG- Panel Side	Nos	217	-135	82	
7	Face Plat User Side	Faceplate, 10G, British, Single Gang, 2 Openings, MX, White	Nos	217	-135	82	
8	Fibre Cable Single Mode	Cable, 6 Fibre, XGLO, Single mode, OS1/OS2, 8.3/125, Outside Plant, Loose Tube, Armored, MDPE, Black, 1 Kilometer, International	Mtr	75		75	
9	Fibre LIU for Fibre termination on both sides	12 port Fibre, Enclosure, Light Verse Core, Rack Mount, 1U, Fixed Access, 4 Openings, Black - Fully Loaded - (With Required Accessories GLO® Jumper & Pigtails-192 Quick-Pack® RIC Splice Cassette (RSC) - 192LC Blade Patch Fibre Jumpers-8 Fibre, Adapter Plate, Light Verse, Flat, Black Housing, Blank - 24Splice Cassette and Trays-8	Nos	2		2	
10	Fibre Patch Cord	Fibre, Jumper, Duplex, XGLO, Single mode, LC UPC, LC UPC,OS1/OS2,8.3/125, Yellow, LSOH-3C,03 Meter	Nos	4		4	

Sr.	Name	Brief	Unit	Total	Deduction	Final	Quoted
					for existing	Requirement	product
					Lab due to	after	with
					re	deduction of	make,
					Utilisation	OLD material	model
					of Existing Material		and part number
11	24 Port PoE	OS6360-P24X fixed 1RU chassis 24 PoE 1G	Nos	1	Material	1	number
11	Switch	BaseT, 2 fixed RJ45/SFP+ combo	1403	1		1	
	owner.	(1G/10G), 2 fixed 1G/10G SFP+ uplink/VFL					
		ports. Internal AC PSU (380 budget),					
		includes country-specific power cord,					
		guides and 19" rack mount kit.3 Yr premium					
		onsite Support for OS(including					
		replacement in NBD when Required).					
		Includes 24x7 phone support, problem					
		diagnosis, access to support portal,					
		software updates and upgrades. 1 meter					
		long 10Gbs SFP+ direct stacking cable for					
		OS6360 24 and 48 port models.		_			
12	48 Port PoE	OS6360-P48X fixed 1RU chassis 48 PoE 1G	Nos	5	-3	2	
	Switch	BaseT, 2 fixed RJ45/SFP+ combo					
		(16/106), 2 fixed 16/106 SFP+ uplink/VFL					
		ports. Internal AC PSU (760W budget), includes country-specific power cord,					
		guides and 19" rack mount kit.3-Yr Partner					
		Support Plus for OS(including replacement					
		in NBD when Required). Includes 24x7					
		phone support, problem diagnosis, access					
		to support portal, software updates and					
		upgrades. 1 meter long 10Gbs SFP+ direct					
		stacking cable for OS6360 24 and 48 port					
		models					
13	Transceiver	10 Gigabit optical transceiver SFP+).	Nos	6	-2	4	
		Supports mono mode fibre over 1310nm					
		wavelength nominal) with an LC connector.					
44		Typical reach of 10Km					
14	Rack	Wall mounted enclosure of dimension	Nos	3	-2	1	
		600W X15UX600D with front sheet steel glass door, top and bottom cover with cable					
		entry provision, integrated side walls, 1					
		pair of 19" angles with wall mounting					
		provision, captive hardware(pack of 20).					
		Color RAL 7035 230V AC Fan, 90 cfm with					
		1 mts long cable.19" mountable socket					
		strips with 6 nos of 5A universal sockets					
		with 2 mts long power chord.1U 19"					
		Horizontal Cable Manager (Zinc blue					
		plated) Wall Bracket Kit 10mm (pk of 4)					
15	Cable Tray	SIZE: 300MM X 50MM X 16SWG WITH	Mtr	150		150	
		ALL ACCESSORIES LIKE 8MM G.I.FULL					
		THREADED ROD,8MM FASTNER, 8MM					
		NUT AND WASHER, G.I.PERFORATED " C" CHANNEL SIZE: 35MM X 15MM X					
		185WG					
		100110					

Sr.	Name	Brief	Unit	Total	Deduction	Final	Quoted
					for existing	Requirement	product
					Lab due to	after	with
					re	deduction of	make,
					Utilisation	OLD material	model
					of Existing		and part
1/	LINDE D.	40 - (1, TCT M 1, UNDE Dis (, Eil ,	44.5	FO	Material	FO	number
16	HDPE Pipe	40mm 6kg ISI Make HDPE Pipe for Fibre	Mtr	50		50	
		Laying Labour					
17		Laying of HDPE Pipe for Fibre	Mtr	50		50	
18		Laying of UTP Cable along with all	Mtr	7595		7595	
10		accessories which includes 32 mm conduits	Will	7595		7595	
		with accessories, Trunking and casing					
		capping as per the requirement (Bidder to					
		select the accessory material as per the					
		specifications defined in section 6) (Actual					
		meter reading generated during the cable					
		testing will be considered for payment)					
19		Laying of Fibre Cable in Pre-Laid Conduits	Mtr	75		75	
-		and TRUNKS	,,,,,	, ,		, 3	
20		Fixing of Rack upto18 U Size with Dressing	Nos	3		3	
21		Fixing of Patch Panel in the Rack along with	Nos	11		11	
		Termination of Cable					
22		Termination of CAT7A IO on the user side	Nos	217		217	
23		Termination of CAT7A IO on the jack	Nos	217		217	
		Panel Side					
24		Fixing of LIU in The Rack	Nos	3		3	
25		Fibre Splicing per core	Nos	36		36	
26		Labelling and Feruling Charges	Nos	217		217	
27		Fibre and Copper Certification Charges	Job	3	-2	1	
		(Third Party). Copper Certification to be					
		done using CAT7A Tester Old Cables are					
		not Included.					
28		Concealed Conduiting charges Labor only	Mtr	150		150	
		including wall cutting and resurfacing					
29		Rework Charges	Job	3		3	
		A - Remove Ios from the Rack Side and					
		User Side.					
		B. Remove All Cables till rack with minimum					
		Damage.					
		C. Remove Patch Panesl from Rack Side.					
		D. Remove Fibre cable & LIU from Rack					

- Payment will be made on basis of actual work done. After completion of work, NFSU committee will verify the actual
 work and certify. Vendor may visit the site location, before bidding. in case of increase in quantity during the
 ongoing execution of work, successful bidder have to take approval of NFSU.
- Civil work is not part of this i.e. Ceiling cutting, Core Cut, tile cutting, furniture cutting etc.
- Vendor needs to remove all I/O, Cables carefully to reutilise. However, for the I/O, Cables are not in condition to use then it is required to use new material and accordingly, proposed quantity may be increased.
- No expenditure over the Administrative Approval & Expenditure Sanction is permissible without approval of NFSU.
 In budgetary works of NFSU excess up to 10 % of Administrative Approval & Expenditure Sanction allowed.

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ANNEXURE-II

GENERAL TERMS AND CONDITIONS

- 1. Tender Fee: An amount of ₹ 1500/-(one thousand and five hundred only) By way of demand draft from any Nationalized Bank /Commercial Bank and paid in favour of "National Forensic Sciences University, Gandhinagar", payable at Gandhinagar).
 - NFSU will give exemption for submission of tender fees who are registered with MSME, NSIC or start-ups as recognised by DIPP. However proper and valid documents in this regard must be submitted by the bidders in support of their claim. The tender fee should be kept in separate covers and placed in the technical bid cover.
- 2. Earnest Money Deposit (EMD): An amount of ₹ 1,08,000/-(One Lakh and Eight Thousand rupees only) in the form of Demand Draft/Bank Guarantee (as per the format in Annexure-XIV) to be enclosed along with the technical bid. The E.M.D. will be drawn in favour of "National Forensic Sciences University, Gandhinagar", payable at "Gandhinagar". The validity of the EMD should be 6 (six) months from the date of issue. Any bid without EMD will not be considered. EMD will be refunded to the unsuccessful bidder after the finalization of the tender process. The EMD of the bidder awarded with the contract will be treated as part of the security deposit towards the Performance Guarantee. No interest is payable on the security deposit. A security deposit shall be forfeited if the selected bidder after the award of the contract fails to execute the same.

NOTE: NFSU Gandhinagar will give exemption for submission of tender fee and EMD who are registered with MSME or Central Purchase Organization or start-ups as recognized by DIPP as per revised rule 170 of GFR -2017 only or as per amendment till date. However proper and valid documents in this regard must be submitted by the bidders in support of their claim.

- 3. Payment Terms & Performance Bank Guarantee (PBG): 90% (value of the delivered items of the purchase order) payment will be made after the successful delivery, verification and certification by the NFSU committee. A balance of 10% of the payment will be made after the completion of the entire work.
- **4**. After receiving of LoI, the successful bidder needs to submit a Performance Bank Guarantee of 5% of the total purchase value valid for a period of 42 Months. No advance/mobilization support is payable against the supply of stores.
- 5. Liquidated Damages: In the event of failure to deliver the stores beyond the specified date, liquidated damages @ 0.5% per week or part thereof in respect of the value of stores will be deducted, subject to a maximum of 10%; alternately the order will be cancelled and the undelivered stores purchased from elsewhere at the risk and expense of the vendor.
- 6. Warranty/Guarantee & On-site skill support: Three years onsite comprehensive OEM warranty for Active Components will start from the date of successful completion of work

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- and be certified by the NFSU committee. The firm has to guarantee the supply of spares for an additional period of two years beyond the warranty period.
- 7. Supply of spares and accessories: Interested vendors must be able to supply adequate spares and consumables during three years of a comprehensive warranty. A vendor should also ensure trouble-free service and performance for another two years beyond the three Warranty Period with adequate spares and accessories.
- 8. Delivery of Stores: The store items are to be supplied and install within 90 days from the date of receipt of the Purchase Order. Delivery may be made in multiple phases but limited to a maximum of three phases. For passive materials like Conduit, Pipe, Cable tray etc to be supplied as per actual site requirement in consultation and approval of NFSU Committee. Accessories included in the labour part of BoQ may be supplied as requirements arise.

9. Price:

- a. The Price should be quoted in INR only.
- b. The price should be quoted" FOR NFSU Gandhinagar" basis. The price should be all-inclusive.
- c. The unit prices should be for the same unit as indicated in the Schedule to tender enquiry and not for any other unit.
- d. Discounts, if any, should be indicated separately/prominently.
- e. Offers should normally be on a fixed and firm price basis. Any clause making price variation will not be acceptable.
- 10. Bid: Primary Bid and Technical Bid should be submitted in two separate sealed envelopes quoting the reference number on the top of the envelope. The tender Fee and EMD are part of the Primary bid and should be in one sealed envelope and the Technical Bid documents in a separate sealed envelope, stapled with the packet containing Technical Bid documents.
- 11. Award of the Contract: The order shall be placed to a successful L1 bidder.
- 12. Acceptance of Tender: The Authority of NFSU Gandhinagar does not bind itself to accept the lowest priced bid and reserves the right to reject any or the entire tender bids received without assigning any reason thereof.
- 13. The addendum/corrigendum if any shall be published on NFSU's Website i.e. www.nfsu.ac.in and CPP Portal.
- 14. Extra Features: If the bidder provides any other extra features on the Hardware or Software which are not mentioned in the tender product specifications, then that shall be highlighted in clear terms, with documentary evidence/literature.
- **15**. **Compliance List:** The proposal should be properly indexed and a compliance list against the technical specifications should be provided.
- 16. Service: In response to ensure the quality of services, the deputed Engineer from the OEM/Vendor shall have qualifications and experience as mentioned in the scope of work of the tender.
- 17. Installation and Commissioning: The supplier must ensure the timely delivery and installation of all the items as per Annexure-I within 90 days from the date of receipt of

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the Purchase Order. If any of the location/buildings is not ready for installation, then Bidder has to install the supplied items at any time whenever it will be ready (in less than 5 working days after intimated by NFSU) within the warranty period of 3 years without any additional charges.

- 18. Site preparation: The supplier shall inform to the NFSU about the site preparation, if any, needed for the installation of equipment, immediately after the receipt of the purchase order. The supplier must provide complete details regarding space and all the other infrastructural requirements needed for the equipment, which the NFSU should arrange before the arrival of the equipment to ensure its timely installation and smooth operation thereafter. The supplier shall visit the NFSU and see the site where the equipment is to be installed and may offer his advice and render assistance to the NFSU in the preparation of the site and other pre-installation requirements.
- 19. The benefit of any downward price revision (revision on account of budget/financial policy, tax revision, EPZ etc.) is to be given to NFSU Gandhinagar by the selected OEM/vendor.
- 20. Past Performance of the Vendors will be judged at the time of Technical Evaluation.
- 21. The NFSU does not bind itself to offer any explanation to those bidders whose technical bids have not been found acceptable by the Technical Evaluation Committee of the NFSU.
- 22. Bidders should enclose the following documents:
 - a. Purchase order to be placed on: Should be mentioned in the quotation with full address, email address, phone number.
 - b. Performa Price Bid (without mentioning the price rate) may be attached with technical bids
- 23. All tenders are to be handed over in sealed covers to the office of Executive Registrar, NFSU, Gandhinagar-382007. The bids (Primary bid and technical bid) once submitted shall be the property of the NFSU and shall not be returned to the vendor in future. For speed post, the Postal Address is as under:

National Forensic Sciences University Sector-9, Gandhinagar-382007, Gujarat-India.

- **24.** Opening of Price Bids: The Price Bid(s) of only those vendor(s) who are found technically qualified will be opened and the same will be opened before the technically qualified vendor(s).
- 25. The tenderer or his/her authorized representative (with a proper authorization letter for attending the opening of technical bids and also for the opening of price bids) may choose to be present at the time of the opening of Technical Bids/Price Bids if invited by NFSU.
- **26. Disqualification of Tender:** The tenders are liable for rejection in the following circumstances:
 - a) If they are not in line with the terms and conditions of this tender notice
 - b) Conditional quotations
 - c) Incomplete tenders
 - d) Tenders without Tender Fee and EMD

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- e) Tenders submitted through Fax or e-mail
- f) If Two Bid System is not followed
- g) Bid received simultaneously from Indian agent on behalf of Principal/OEM and Principal/OEM itself for same item/product/services in the same tender
- h) The Firm need to quote all the charges /prices as per the tender requirement, if any firm quotes nil charges/consideration, the bid shall be treated as an Unresponsive bid and will not be considered.

IMPORTANT

- I. NFSU may accept or reject any or all the bids in part or in full without assigning any reason and does not bind itself to accept the lowest bid. The NFSU at its discretion may change the quantity/upgrade the criteria/drop any item or part thereof at any time before placing the Purchase Order.
- II. A bid submitted with false information will not only be rejected but also the OEM/ vendor will be debarred from participation in future tendering process.
- III. In case of any dispute, the decision of the NFSU of this NFSU shall be final and binding on the bidders.
- IV. In case the due date for opening the tender happens to be a holiday, the same will be opened on the next working day. The timings will however remain unchanged. Please Note that the NFSU remains closed on Saturday & Sunday.
- V. The Bidders are requested to submit the bids after the issue of clarifications only considering the changes made if any. Bidders are fully responsible for incorporating/complying with the changes/amendments issued if any, in their bid.

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ANNEXURE-III

INSTRUCTIONS & SPECIAL CONDITIONS

- 1. **General**: Only reputed Manufacturers/Service provider or their authorized vendors, having registered office in India are invited to quote.
 - A. Compliance under Rule 144 (xi) of the General Financial Rules (GFRs) 2017
 - I. As per Ministry of Finance, Department of Expenditure, Public Procurement Division Order (Public Procurement No.1) issued from file No.6/18/2019-PPD dated 23rd July, 2020 & the Order issued from time to time regarding Restrictions under Rule 144 (xi) of the General Financial Rules (GFRs) 2017, it is directed that any bidder from a country which shares a land border with India will be eligible to bid in any procurement whether of goods, services (including consultancy services and non-consultancy services) or works (including turnkey projects) only if the bidder is registered with the Competent Authority i.e. the Department for Promotion of Industry and Internal Trade (DPIIT).
 - II. "Bidder" (including the term 'tenderer', 'consultant' or 'service provider' in certain contexts) means any person or firm or company, including any member of a consortium or joint venture (that is an association of several persons, or firms or companies), every artificial juridical person not falling in any of the descriptions of bidders stated hereinbefore, including any agency, branch or office controlled by such person, participated in a procurement process.
 - III. "Bidders from a country which shares a land border with India" for the purpose of this Order means:
 - a) An entity incorporated, established or registered in such a country; or
 - b) A subsidiary of an entity incorporated, established or registered in such a country; or
 - c) An entity substantially controlled through entities incorporated, established or registered in such a country; or
 - d) An entity whose beneficial owner is situated in such a country; or
 - e) An Indian (or other) agent of such an entity; or
 - f) A natural person who is the citizen of such a country; or
 - g) A consortium or joint venture where any member of the consortium or joint venture falls under any of the above
 - IV. The beneficial owner for the purpose of above will be as under: -
 - In case of a company or Limited Liability Partnership, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has a controlling ownership interest or who exercise control through other means.

Explanation-

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- a) "Controlling ownership interest" means ownership of or entitlement to more than twenty-five per cent of share or capital or profit of the company;
- b) "Control" shall include the right to appoint majority of the directors or to control the management of policy decisions including by virtue of their shareholding or management rights or share holders agreements or voting agreements;
- 2. In case of a partnership firm, the beneficial owner is the natural person (s) who, whether acting alone or together, or through one or more juridical person, has ownership of entitlement to more than fifteen percent of capital or profits of the partnership;
- 3. In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has ownership of or entitlement to more than fifteen percent of the property or capital or profits of such association or body of individuals;
- 4. Where no natural person is identified under (1) or (2) or (3) above, the beneficial owner is the relevant natural person who holds the position of senior managing official;
- 5. In case of a trust, the identification of beneficial owner(s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership
- V. An agent is a person employed to do any act for another or to represent another in dealings with a third person.
- VI. For Works contracts, including Turnkey contracts, the successful bidder shall not be allowed to subcontract works to any contractor from a country, which shares a land border with India unless such contractor is registered with the Competent Authority.

A certificate (duly filled & signed) shall be submitted by bidders in the tender documents regarding their compliance with the said order as per **Annexure X**. If the certificate submitted by a bidder whose bid is accepted is found to be false, this would be a ground for immediate termination and further legal action in accordance with law.

B. Compliance under Rule 153 (iii) of the General Financial Rules (GFRs) 2017

It is mandatory for bidders to quote items having 20% or more local content. Refer revised Public Procurement (Preference to Make in India), Order 2017 P-45021/2/2017-B.E-II dated 16.09.2020 and the order issued from time to time by Department for Promotion of Industry & Internal Trade (DPNFSU), Ministry of Commerce and Industry, Government of India. (Submit duly filled **Annexure XI** for the same).

Also, as per DPIIT, Ministry of Commerce and Industry OM vide no: P-45021/102/2019BE-II-Part(1) (E-50310) dated 04.03.2021, bidders can't claim themselves as Class-I local supplier / Class-II local supplier by claiming the services such as transportation, insurance, installation,

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commissioning, training and after sales service support like AMC/CMC etc. as local value addition.

- 2. Deviation from Specifications: It is in the interest of the tenderer to study the specifications in the tender schedule thoroughly before quoting so that, if the tenderer makes any deviations, the same are prominently brought out in the body of the tender. If you need to add any optional items to your system in order to meet our specifications, you are requested to quote for the total including the option required to suit our requirements. Otherwise, your tender will not be considered at all.
- 3. TENDERERS SHALL SUBMIT ALONG WITH THEIR TENDER: (i) Complete address and tele links for contact persons of manufacturers/service providers/authorized vendor's offices dealing with this purchase. (ii) Name and full address of the manufacturers/service providers/authorized vendors (iii) Country of origin is to be provided for each item. (iv) Purchase order to be placed on: Should be mentioned in the quotation with full address.
- 4. **Performance Bank Guarantee**: The bidders to provide Performance Bank Guarantee of the amount equivalent to the 5% of the cost of contract value from any Nationalized Bank. The Performance Bank Guarantee is required for the entire period of Warranty. Performance Bank Guarantee must remain valid for a period 42 Months.
- 5. **Guarantee:** The tenderer has to declare that the goods sold to the buyer under this contract shall be of the best quality and workmanship and shall be strictly in accordance with the specifications.
- 6. **Patent Rights:** The Supplier shall indemnify NFSU Gandhinagar against all third-party claims of infringement of patent, trademark or industrial design rights, copy rights arising from use of the Goods or any part thereof in India.
- 7. **Indemnity:** The vendor shall indemnify, protect and save NFSU Gandhinagar against all claims, losses, costs, damages, expenses, action suits and other proceedings, resulting from infringement of any law pertaining to patent, trademarks, copyrights etc. or such other statutory infringements in respect of all the equipment(s) supplied by him.
- 8. **Jurisdiction**: All questions, disputes, or differences arising under, out of or in connection with the contract, if concluded, shall be subject to the exclusive jurisdiction at the place from which the acceptance of Tender is issued i.e. Jurisdiction of Gujarat High Court. Acceptance to this effect is also necessary at the time of opening of the Technical Bid.

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ANNEXURE-IV

MINIMUM ELIGIBILITY CRITERIA / PRE-QUALIFICATION CRITERIA

- 1. **Registration Certificate(s):** Certificate of incorporation, PAN, GST, Trade License and so on shall be provided with the bid document.
- 2. Past Experience of the bidder:
 - **a**. The bidder should have a minimum 10 years of working experience in India in the domain of network infrastructure, with a sales and support office in Gujarat. Documentary proof must be submitted.
 - b. Experience in terms of execution of orders.
 - Similar Experience: Completed or substantially completed similar works during last 7 years should be either of the following: -
 - i Three similar completed works each costing not less than the amount equal to 40(forty) percent of the estimated cost; or
 - Two similar completed works each costing not less than the amount equal to 50 (fifty) percent of the estimated cost; or
 - iii One similar completed work costing not less than the amount equal to 80 (eighty) percent of the estimated cost;
 - iv [similar work mean = Deployment of Networking components for building-Campus LAN including active passive Data center and Wi-Fi components On SITC (Supply, Installation, Testing and Commissioning) basis in India within the last 07 years.) having a cable capacity to handle Class FA Traffic
 - v Note: Work experience certificate from the public sector or from public listed company/private company/Trusts having annual turnover of Rs 500 crore and above subject to the same being issued from their Head office by a person of the company duly enclosing his authorisation by the Management for issuing such credentials. Certificate from the private individual shall not be accepted.
- 3. **ISO** Certification, if any: The bidder should have valid ISO 9001 Certification. Valid certificate must be produced along with the bid.
- 4. Annual Average turnover for last three Financial Years: The bidder should have a minimum average turnover of Rs. 144 Lakh during last three financial years. Bidder shall enclose CA Certificate/Audited statement.
- 5. Income Tax Return (ITR) for the last three Financial Years: Bidder shall enclose ITR certificates.
- 6. Non-blacklisting certificate: The bidder should not have been suspended or blacklisted by any Govt. Organization. (An undertaking to this effect must be submitted by the bidder that the firm has not been suspended or blacklisted by any Govt. Organization in the past or as on the date of bidding).
- 7. OEM Qualifications:
 - a. OEM of active components should have registered office and spare depot in India.

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Documentary proof from OEM must be submitted

- **b**. OEM of active components should have Industry presence in India for more than 10 years. Declaration from OEM must be submitted.
- c. OEM of active components should have 24×7 toll-free call centres for providing technical assistance. Documentary proof from OEM must be submitted.
- d. All active networking components (Switch, Transceiver, Stacking Module) must be from a single OEM make.
- e. All passive networking components (except Network Rack and cable tray) components must be from a single OEM make.
- **f**. The OEM of all networking components should be ISO certified organization. Documentary proof needs to be submitted.
- g. All components shall be ROHS compliant. Declaration of ROHS shall be available in product datasheets.

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ANNEXURE-V

TECHNICAL BID

Sr. No	Description	Submitted (Yes/No) (If Yes- Page No.)
1	Certificate of Incorporation / Registration Certificate	
2	Trade License, PAN and GST Certificates	
3	Status of the Tenderer (Attach documents, if registered company/ partnership /propriety ship)	
4	Manufacturer (OEM certificate) or Service Provider / Dealer (Authorization and OEM certificate from Manufactures)	
5	Details of key top official/authorized official with e -mail id and contact number	
6	Experience certificate (Previous Work Orders/Purchase Orders, list of satisfactory clients with address and contact number, completion certificates, etc.)	
7	Technical Compliance Statement, as per Annexure - VI	
8	ISO Certificate, if any	
9	Average turnover of company in last three financial years, if any. Bidder shall enclose CA Certificate/Audited statement as per Annexure - VII	
10	Income Tax Returns of last three financial years	
11	Technical BOQ as per Annexure-I	
12	Declaration as per Annexure - VIII	
13	Undertaking / Self-Certification of non-blacklisting as per Annexure - IX	
14	Certification on compliance under Rule 144 (xi) of the General Financial Rules (GFRs) 2017 as per Annexure-X	
15	Certification on Compliance under Rule 153 (iii) of the General Financial Rules (GFRs) 2017 / Declaration for Local content as per Annexure - XI	
16	All other documents as per Annexure-IV and XIV	
17	Other documents like literature, catalogues etc.,(if any)	

NOTE:

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- 1 Attach all relevant documents in the same serial order as above, properly indexed, and duly signed.
- 2 This is to be submitted in a separate sealed envelope super scribing "TECHNICAL BID", Notice inviting Tender Reference no. and name of the bidder.
- 3 Price bid of that company/firm only will be opened which do technically qualify, for further consideration. Attach all relevant documents in the same serial order as above, properly indexed, duly signed and sealed.

Signature and seal of the Bidder

ANNEXURE - VI

TECHNICAL COMPLIANCE STATEMENT

The bidder needs to provide complete technical details of the offered components. Only mentioning Yes / No in compliance is not acceptable. Cross references to proper technical datasheets/spec sheets/website links need to be provided against each parameter.

Sr.	Name	Brief		
1	Cat7 Cable	Cable, Copper, Category 7A, 1000 MHz E10, 4 Pair, Solid, S/FTP,		
		LSOH-1, Violet, Reel, 500 Meter		
2	Switch Side	Copper, Patch Cord, Tera 4-Pair, RJ45, Category 6A, S/FTP, T568B,		
	Patch Cord 1 Mtr	Stranded, CM/LSOH-1, Ivory Cable, White Boot, 1 Meter.		
3	User Side Patch	Copper, Patch Cord, Tera 4-Pair, RJ45, Category 6A, S/FTP, T568B,		
	Cord 2 Mtr	Stranded, CM/LSOH-1, Ivory Cable, White Boot, 2 Meter		
4	Patch Panel for	Copper, Patch Panel, Tera / MAX, Empty, Shielded, 24 Openings,		
	Rack	Flat, 1U, Black, Fixed Wire Manager		
5	Network IO	Copper, Outlet, TERA, Shielded, Category 7A/8, TERA, Flat, Black,		
	User Side	Tool-Less, T568A/B, with Door, 22-23 AWG - User Side		
6	Network IO Rack	Copper, Outlet, TERA, Shielded, Category 7A/8, TERA, Flat, Black,		
	Side	Tool-Less, T568A/B, with Door, 22-23 AWG- Panel Side		
7	Face Plat User	Faceplate, 10G, British, Single Gang, 2 Openings, MX, White		
	Side			
8	Fibre Cable	Cable, 6 Fibre, XGLO, Single mode, OS1/OS2, 8.3/125, Outside		
	Single Mode	Plant, Loose Tube, Armored, MDPE, Black, 1 Kilometer, International		
9	Fibre LIU for	12 port Fibre, Enclosure, LightVerse Core, Rack Mount, 1U, Fixed		
	Fibre	Access, 4 Openings, Black - Fully Loaded - (With Required		
	termination on	Accessories GLO® Jumper & Pigtails-192 Quick-Pack® RIC Splice		
	both sides	Cassette (RSC) - 192LC Blade Patch Fibre Jumpers-8 Fibre, Adapter		
		Plate, Light Verse, Flat, Black Housing, Blank - 24Splice Cassette		
		and Trays-8		
10	Fibre Patch Cord	Fibre, Jumper, Duplex, XGLO, Single mode, LC UPC, LC UPC,		
		OS1/OS2,8.3/125, Yellow, LSOH-3C,03 Meter		
11	24 Port PoE	OS6360-P24X fixed 1RU chassis 24 PoE 1G BaseT, 2 fixed		
	Switch	RJ45/SFP+ combo (1G/10G), 2 fixed 1G/10G SFP+ uplink/VFL ports.		
		Internal AC PSU (380 budget), includes country-specific power		
		cord, guides and 19" rack mount kit.3 Yr premium onsite Support for		
		OS(including replacement in NBD when Required). Includes 24x7		
		phone support, problem diagnosis, access to support portal, software		
		updates and upgrades. 1 meter long 10Gbs SFP+ direct stacking cable		
		for OS6360 24 and 48 port models.		

Sr.	Name	Brief
12	48 Port PoE	OS6360-P48X fixed 1RU chassis 48 PoE 1G BaseT, 2 fixed
	Switch	RJ45/SFP+ combo (1G/10G), 2 fixed 1G/10G SFP+ uplink/VFL ports.
		Internal AC PSU (760W budget), includes country specific power
		cord, guides and 19" rack mount kit.3 Yr Partner Support Plus for
		OS(including replacement in NBD when Required). Includes 24x7
		phone support, problem diagnosis, access to support portal, software
		updates and upgrades. 1 meter long 10Gbs SFP+ direct stacking cable
		for OS6360 24 and 48 port models
13	Transceiver	10 Gigabit optical transceiver SFP+). Supports monomode fibre over
		1310nm wavelength nominal) with an LC connector. Typical reach of
		10Km
14	Rack	Wall mounted enclosure of dimension 600W X15UX600D with front
		sheet steel glass door, top and bottom cover with cable entry
		provision, integrated side walls, 1 pair of 19" angles with wall
		mounting provision, captive hardware(pack of 20).Color RAL 7035
		230V AC Fan, 90 cfm with 1 mts long cable.19" mountable socket
		strips with 6 nos of 5A universal sockets with 2 mts long power
		chord.1U 19" Horizontal Cable Manager (Zinc blue plated) Wall
		Bracket Kit 10mm (pk of 4)
15	Cable Tray	SIZE: 300MM X 50MM X 16SWG WITH ALL ACCESSORIES LIKE
		8MM G.I.FULL THREADED ROD,8MM FASTNER, 8MM NUT AND
		WASHER, G.I.PERFORATED "C" CHANNEL SIZE: 35MM X 15MM
		X 185W <i>G</i>
16		40mm 6kg ISI Make HDPE Pipe for Fibre Laying
4=		Labour
17		Laying of HDPE Pipe for Fibre
18		Laying of UTP Cable along with all accessories which includes 32 mm
		conduits with accessories, Trunking and casing capping as per the
		requirement(Bidder to select the accessory material as per the
		specifications defined in section 6) (Actual meter reading generated
10		during the cable testing will be considered for payment)
19		Laying of Fibre Cable in Pre Laid Conduits and TRUNKS
20		Fixing of Rack upto 18 U Size with Dressing
21		Fixing of Patch Panel in the Rack along with Termination of Cable
22		Termination of CAT7A IO on the user side
23		Termination of CAT7A IO on the jack Panel Side
24		Fixing of LIU in The Rack
25		Fibre Splicing Per core
26		Labelling and Feruling Charges

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Sr.	Name	Brief
27		Fibre and Copper Certification Charges (Third Party). Copper
		Certification to be done using CAT7A Tester Old Cables are not
		Include.
28		Concealed Conduiting charges Labor only including wall cutting and
		resurfacing
29		Rework Charges
		A - Remove Ios from Rack Side and User Side.
		B. Remove All Cables till rack with minimum Damage.
		C. Remove Patch Panesl from Rack Side.
		D. Remove Fibre cable & LIU from Rack.*Civil work is not part of
		this i.e. Ceiling cutting, Core Cut etc.

Line Item No : 1 Cat7 Cable

Sr. No.	Parameter	Minimum Technical Specification	Compliance (Yes/No)	Deviation	Ref Page
					no.
Α		Eligibility Criteria for OEM supplying			
		Passive Components (UTP)			
1		OEM should have direct presence in			
		India more than at-least 10 years			
		(Supporting documents required)			
2		All passive network components			
		quoted by the bidder should be from a			
		single OEM (Copper).			
3		Material should have been			
		manufactured in OEM" s own			
		manufacturing facilities, not			
		outsourced.			
4		Partner shall be certified by the OEM			
		and shall have valid certifications for			
		the same.			
5		OEM shall provide 25 years of			
		application performance warranty			
		certificate (from OEM via certified			
		installer) after successful testing			
		done by certified installer and			
		material purchase from original source			
		of OEM.			

Sr.	Parameter	Minimum Technical Specification	Compliance	Deviation	Ref
No.			(Yes/No)		Page
					no.
6		OEM should be a member of			
		Telecommunications Industry			
		Association (TIA) Information and			
		Communications Technology (ICT)			
		Companies ICT Green Initiative to			
		support energy efficient environment			
7		OEM should have members			
		participating in International			
		Standard Bodies like EIA-TIA, ISO-			
		IEC (Supporting documents required)			
8		OEM should have supplied the CAT7A			
		Components (Cable+ Accessories) in			
		02 projects of at least 500 nodes in			
		any large institute.			
В		Standards & Regulations			
1		This Section provides a description			
		for a generic structured cabling			
		system based on the latest edition of			
		the applicable standards:			
		ISO-IEC 11801:2002-A1:2008 and			
		A2:2010 and subsequent addendums			
		and revisions			
		EN 50173-1 to -3:2009 and			
		subsequent addendums and revisions			
		EIA-TIA 568-C2 and subsequent			
		addendums and revisions			
2		The objective of the Section is to			
		define the structured cabling			
		independently of the applications,			
		which it can support.			
3		Furthermore, to allow for future			
		demands, the cabling system must be			
		easy to expand and maintain.			
4		The successful bidder shall meet or			
		exceed all requirements for the			
		cabling system described in this			
		document.			

The Cabling system installation shall be realized in accordance with the recommendations made in the relevant standards, manufacturer's recommendations and-or best industry practices This Tender document covers the design, supply, installation, testing and commissioning of a Category 7A cabling system Tenderers shall propose and submit a Category 7A universal cabling system which will function for voice, data and LAN communications, for video applications etc. The cabling system is also open to new applications which require a Class FA - Cat 7A cabling system as defined in the latest editions of the standards: ISO-IEC 11801:2002-A1:2008 The terminology and references in this document as well as the Link-Channel Performance figures for Class FA are based on ISO-IEC 11801:2002-A1:2008 and A2:2010 The data sheets and worranty modules showing the features and the guaranteed values compliant to the requirements of this will be attached by the successful bidder to his tender documents. All proposed components including the patch cords have to be produced by the same manufacturer. This issue will ensure that a « Class FA Channel Warranty » can be obtained from the manufacturer.	Sr. No.	Parameter	Minimum Technical Specification	Compliance (Yes/No)	Deviation	Ref Page no.
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ensure that a « Class FA Channel Warranty » can be obtained from the			1 .			
Warranty » can be obtained from the						
			manufacturer.			

Sr. No.	Parameter	Minimum Technical Specification	Compliance (Yes/No)	Deviation	Ref Page no.
12		Manufacturer should demonstrate			
		guaranteed minimum worst case			
		performance to be compliant with			
		class EA and class FA channel			
		performance according to the ISO-IEC 11801:2002-A1:2008 and A2:2010			
		standard			
13		Components used must be compliant			
		with both the Category 6 and			
		Category 7A standard mentioned			
		above.			
14		The performance of both the			
		components and the link should show			
		stable performance up to 1000MHz in			
		order to allow for possible future			
15		applications The performance of the channel			
15		The performance of the channel should show stable performance			
		Up to 500MHz when using Cat.6A			
		patch cords			
		Up to 1000MHz when using Cat.7A			
		patch cords			
16		The system supplier must be able to			
		demonstrate in house design and			
		manufacturing expertise for all			
		components used (e.g. cables, outlets,			
		panels and cords) in order to ensure			
		compatibility of system elements.			
С		Horizontal distribution cable			
		(CATEGORY 7A)			
1		The horizontal 4 pair cable shall be			
		Category 7A S-FTP to meet the			
		quality and performance criteria			
		necessary to ensure correct operation of the installation in future and			
		compliance with the warranty.			

Sr.	Parameter Minimum Technical Specification			Deviation	Ref
No.			Compliance (Yes/No)		Page
			(, 55, , 15)		no.
2		The installation design and routing of			
		all cables shall take account of the			
		manufacturer limits for the continued			
		performance of the cables and the			
		compliance with the warranty			
3		The cable shall be a 4 twisted pair			
		cable with AWG 23 conductors.			
		Having an external sheathing in a			
		material that does not give off toxic			
		fumes (Zero Halogen) in case of fire			
		and offer flame propagation			
		retardant properties. Traceability			
		numbers should accompany the cable			
		supplied from the manufacturers			
		packaging to assist in quality validation			
		of the installed cable			
4		This very high performance cable shall			
		have an individual and a common			
		screen construction to provide			
		outstanding EMC performance up to			
		1000 MHz			
		All four pairs shall be individually			
		screened with an aluminum foil.			
5		The cable shall be shielded with a			
		tinned copper braid.			
6		All pairs must have impedance of 100			
		Ohms, with a tolerance of + 15 Ohms.			
7		The Bidding Successful bidders			
		should give the following compliance			
		for the details mentioned herewith :			
	Туре	Qualified against IEC 61156-5 and			
		tested up to 1000Mhz or Greater			
	Material:				
а	Conductors	23 AWG solid bare copper or better			
b	Shield	Individually foiled Pairs Plus overall			
		copper braid			

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Sr. No.	Parameter	Minimum Technical Specification	Compliance (Yes/No)	Deviation	Ref Page no.
	Shield Material	Aluminum-Polyester			
С	Insulation	Polyethylene			
	Insulation diameter	should be 1.40mm			
d	Jacket	Low Smoke Zero Halogen (LSZH)			
	Jacket	should be 7.7mm or less			
	Diameter				
е	Operating temperature	-20 Deg. C to +75 Deg. C			
f	Frequency tested up to	Minimum 1000 MHz			
9	Packing	Box of 1000 meters-500 meters			
j	Performance characteristics to be provided along with bid	Attenuation, Pair-to-pair and PS NEXT, ELFEXT and PSELFEXT, Return Loss & ACR			
	ROHS	Should be ROHS compliant			

Line Item No 2 & 3 : Switch Side Patch Cord 1 Mtr / User Side Patch Cord 2 Mtr

Sr.	Parameter	Minimum Technical Specification	Compliance	Deviation	Ref
No.			(Yes/No)		Page
					no.
		Cat6A-TERA-RJ45 Data Patch Cords			
		(1mtr,2 mtr)			
1		In order to achieve backward compatibility			
		in case the OEM is offering TERA			
		Connectors TERA to RJ45 Patch cords			
		should be offered ensuring maximum of			
		10G Speeds.			
2		All patch cord cable shall be made from			
		LSHF-FR material.			
3		All TERA-RJ45 Data patch cords will be			
		full screened. The jacket should be made			
		from LSHF-FR material.			

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4	The TERA-RJ45 cords must be fitted wi	ith
	Category 7A-TERA RJ45 PLUGS, boot	ed
	at each connector	
5	The Category TERA-RJ45 shall	be
	compliant to the ISO-IEC 11801 AMD.2	2 (
	A2: 2010) Category 7A, 6A, 5e	
6	The characteristic impedance of the pai	irs
	must be identical to that of the horizon	tal
	cables. The Patch Cords shall have	α
	guaranteed performance level of great	er
	than 750 insertions without degradation	to
	the performance level of the solution	
7	The cable used for the Patch Cords sh	all
	be S-FTP patch cable. The cable shall be	εα
	4 twisted pair cable with strand	ed
	conductors. Trace ability numbers show	ıld
	accompany the cables supplied from t	he
	manufacturers packaging to assist	in
	quality validation of the installed cable	
8	All pairs must have an impedance of 100	0
	hms.	

Line Item No 4: Patch Panel for Rack

Sr.	Parameter	Minimum Technical	Compliance	Deviation	Ref
No.		Specification	(Yes/No)		Page
					no.
Ε		24 Port Modular Patch Panels			
1		Shall be unloaded with			
		individually replaceable 24 nos.			
		Can accept Cat7A jack			
2		Shall be 19" rack mountable,			
		Straight and of 1U height &			
		complete with all mounting			
		accessories, inbuilt rare support			
		bard			
3		Shall have labels for			
		identification of ports			

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Sr.	Parameter	Minimum Technical	Compliance	Deviation	Ref
No.		Specification	(Yes/No)		Page
_					no.
4		Should have integrated bonding			
		bar for grounding individual			
		jacks			
5		Shall be RoHS Compliant			
6		Shall have minimum 25-Year			
		Extended Product Warranty and			
		System Warranty			
7		Shall be having a 6-port module			
		construction for better cable			
		dressing at the rear			
		Shall have Comprehensive port			
		numbering on front			
9		The Bidding Successful bidders			
		should give the following			
		compliance for the details			
		mentioned herewith:			
	Туре	24-port, Unloaded shielded Jack			
		panel which is Standards-			
		compliant			
α	Ports	24			
b	Port	Modules of 6-ports each,			
	arrangement	arranged 1port × 6.			
С	Category	Should accept Shielded RJ45-			
		Tera Jacks			
d	Circuit	Icons on each of 24-ports			
	Identification	-			
	Scheme				
e	Port	9mm or 12mm Labels on each of			
	Identification	24-ports			
f	Height	1 U (1.75 inches)			
g	Interface	Polyester Moulding Compound,			
_		Black			
h	Panel	Black, powder coated steel			
j	ROHS-ELV	Statement			

Line Item No 5 & 6 : Network IO User Side / Network IO Rack Side

No. Specification (Yes/No) D Telecom Outlets (TO) 1 The connector shall be fully	Page no.
1 The connector shall be fully	no.
1 The connector shall be fully	
compliant to the IEC 60603-7-	
71- IEC 61076-3-104 Ed. 2	
standard that define the Cat.7A	
connector to be used to form a	
Class FA channel as specified in	
the ISO-IEC 11801-A2:2010	
standard.	
2 Should be suitable for	
termination of solid Conductor	
Gauge of 24-22 AWG and	
stranded Conductor Gauge of	
26-24 AWG	
3 Contact Base Material should be	
Beryllium copper	
4 Contact Plating Material should	
be Gold	
5 Contact Plating Thickness should	
be 1.27 µm	
6 To ensure protection against	
EMI, all connectors must be	
fully screened with 360° EMC	
protection.	
7 The Bidding Successful bidders	
should give the following	
compliance for the details	
mentioned herewith	
Type Modular Jacks exceeds ISO-	
IEC 11801-A2:2010	
requirements for Category 7A	
component performance @	
1000Mhz	
a Modular Jack 750 mating cycles	
b Modular Jack & Zinc Alloy	
Lacing Fixture	

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Sr. No.	Parameter	Minimum Technical Specification	Compliance (Yes/No)	Deviation	Ref Page no.
С	Wiring blocks	Polycarbonate, with a Flammability Rating of UL 94 V-0			
d	Voltage	150VAC Max			
e	Current	0.75 <i>A</i>			
f	Operating Temp	minus 20 to 60 deg C			
i	Environmental conditions				
i-i	Flowing Mixed gas corrosion resistance	According to IEC 60068-2-60			
i-ii	Performance	Attenuation, NEXT, PS NEXT,			
	Characteristics to	FEXT and Return Loss			
	be provided with				
	bid				
i-iii	ROHS	Should be ROHS compliant			

Line Item No 7 : Face Plat User Side

Sr.	Parameter	Minimum Technical Specification	Compliance	Deviation	Ref
No.			(Yes/No)		Page
					no.
1		One Port face plate along with			
		Faceplate (1) Label (2) Label cover			
		(2) Mounting screw etc			
		Colour White/Ivory			
		Shape: Squre / Rectangle			

Line Item No 8: Fibre Cable Single Mode

Sr	Paramet	Minimum Technical Specification	Complian	Ref Page
	er		ce	No
No			(Yes/No)	
1		1.5 SINGLE mode Optical Fibre Cable		
2		Have a Yellow colored round lead free cable jacket		
		available in OFNR, OFNP and LSOH constructions.		
3		Shall contain a Rip Cord applied longitudinally under		
		the cable jacket for easy cable jacket removal		

Sr	Paramet	Minimum Tech	nical Specification			Complian	Ref Page
No	er					ce	No
4		Chall soutain	a liab+wai	(Yes/No)			
4		Shall contain member locate	a lightwei	_	_		
5		Shall contain b					
5		well as colour-a		• •	ea tibres as		
6					inanamanta		
7		Cables shall have					
/		Fibre will be a		rana counts	07 4, 0, 12,		
8		24, 48, 72, and		antanmanaa	n an am at and		
		Shall meet the: Minimum	Fibre	ertormance			
9			ribre		Single		
		Performance	0.11. T		mode		
		Parameters	Cable Type	T	Outdoor		
		for Qualified Cables	Maximum	1310 nm	0.5		
		Capies	Attenuati	1550 nm	0.5		
			on (dD/l)				
			(dB/km)	\\\	1200		
			Zero	Waveleng	1300-		
			dispersion	th (nm)	1324		
				Slope	<0.093		
			To do o	(nm²-km)	1 4/7		
			Index of	1310 nm	1.467		
			Refractio	1550 nm	1.468		
			n				
		C+b					
		· Ethernet					
		<u>Applications</u>					
10		<u>Supported</u>	Distance				
10		Application	(m)				
11		10GBASE-L	8,000				
11		(1310 nm)	3,000				
12		10GBASE-E	30,000				
15		(1550 nm)	30,000				
13		10 <i>G</i> Fibre	10,000				
		Channel					
		(Serial-1310					
		nm)					

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Sr	Paramet er	Minimum Tech	Ainimum Technical Specification			Complian	Ref Page No
No						(Yes/No)	
14		10 <i>G</i> Fibre	10,000				
		Channel					
		(WDM-1310					
		nm)					
15		1000BASE-	5,000				
		LX (1300 nm)					
16		Fibre Channel	10,000				
		266/1062					
		(1300 nm)					
17		ATM	15,000				
		52/155/622					
		(1300 nm)					
		· Physical					
		Characteristi					
		cs:					
18		Mode and	Singlemod				
		Fibre Type	е				
19		Core Size	8.3 ± 1.0				
		(Microns)					
20		Cladding Size	125 ± 1.0				
		(Microns)					
21		Coating Size	245 ± 10				
		(Microns)					
22		Buffer Size	900 ± 50				
		(Microns)					
23		Core Cladding	≤ 0.8				
		Concentricity					
		(Microns)					
		()					

Line Item No 9: Fibre LIU for Fibre termination both side

Sr	Parame	Minimum Technical Specification	Complia	Ref
•	ter		nce	Page
No			(Yes/No	No
)	
1		1 optical fibre product specifications		
2		In addition to meeting the specifications outlined in ANSI/TIA-568.3-D and ISO/IEC 11801-1, the		

Sr No	Parame ter	Minimum Technical Specification	Complia nce (Yes/No)	Ref Page No
		requirements in this section must also be met for all		
_		applicable optical fibre products as listed below.		
3		1.1 Outlets/Adapters		
4		All optical fibre outlets/adapters shall meet the		
		following characteristics:		
5		Be provided in options that offer interfaces to ST, SC ,		
_		LC, and FC terminated jumpers and pigtails.		
6		Be available with Beige, Aqua, Erika Violet & Blue Adapter colors		
7		Provide for a maximum of 6-Duplex ST, 6-Duplex SC, 6-		
		Quad LC, or 4-Duplex FC on a single adapter plate.		
8		Be available in an LC Shuttered option when Quad LC		
		adapters are used.		
9		Offer a 3 and 4-Duplex ST to SC adapter.		
10		Offer a 12, 24, 72 and 96 Strand MTP to MTP pass through adapter plate		
11		LC, SC and ST universally accept both multimode and single mode connectors.		
12		Include Red, Blue, Black and Clear colored icons for port		
		identification		
13		Be made of high impact flame-retardant thermoplastic.		
14		1.2 SINGLEMODE Pigtails		
15		Be available in standard lengths of 1 meter with custom lengths available upon request		
16		Offer a superior connector polish that meets Telcordia and ISO/IEC specifications for end-face geometry (including radius of curvature, apex offset, and spherical undercut)		
17		Use connectors that are complaint with color coding specifications as listed in ANSI/TIA-568-C.3 and ANSI/TIA-598-C		
18		Utilize precision zirconia ceramic ferrules on connectors		
19		Include dust caps on all assemblies		
20		Be 100% optically tested to meet the following performance specifications:		
21		Parameter		

Sr	Parame	Minimum Technical Specification	Complia	Ref
	ter		nce	Page
No			(Yes/No	No
)	
22		Max. Insertion Loss (dB) 0.40 (0.1 Typical)		
23		Min. Return Loss (dB) 55 (60 Typical)		
24		1.4 FIBRE Enclosures		
25		All interconnect centers, panels and trays (units) shall		
		provide cross-connect, inter-connect, splicing		
		capabilities and contain cable management for		
		supporting and routing the fibre cables/jumpers.		
26		Not be bigger then one rack mount space and		
		accommodate up to 36 ports for SC, LC or ST adapter		
		plates or 18 ports for FC.		
27		Have preloaded adapter plates with ST and SC fibre		
		adapters in 6 and 8-port version, as well as a 12 port		
		version for the SC, and LC adapters.		
28		Have blank adapter plates for future growth of the fibre		
		infrastructure.		
29		Have six and eight port fibre adapter plates, which allow		
		for color coding connectors.		
30		Have fibre adapter plates with snap-in installation and		
		one-finger removal.		
31		Accommodate hybrid adapter plates for ST-to-SC or SC-		
		to-ST connections.		
32		Be modular in design with internal fibre managers that		
		provide slack storage to comply with fibre bend radius		
		and the recommended slack storage length.		
33		Have a snap-on front shield to be used as a labeling		
		surface and to protect jumpers. This shield can also		
		relocate to another position during termination to		
		maintain circuit identification.		
34		Accommodates a splice tray for mechanical or fusion		
		splices.		
35		Be available with a drawer mechanism, which allows the		
		panel to slide forward or to the rear, and has defeatable		
		latches to allow removal from the rack or cabinet.		
36		Must be certified by Underwriters Laboratories to		
		United States Standards and C22.2 Canadian		
		Telecommunications Standards.		

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Line Item no 10 : Fibre Patch Cord

Sr. No	Parameter	Minimum Technical Specification	Compliance (Yes/No)	Ref Page No
1		1.3 SINGLEMODE Patch Cords		
		Be available in standard lengths of 1, 2, 3 and		
		5 meters with custom lengths available upon		
2		request		
		Utilize duplex singlemode fibre cable that is		
		available in OFNR, ONFP and LSOH grade and		
		meets the requirements of NEC/NFPA 70		
3		Section 770-51(B)		
		Have a push-pull boot design to enhance		
		installation and removal in high density		
4		patching environments.		
		Have a rotating latch design to aid in polarity		
		changes that does not damage the connector		
5		or the cable.		
6		Have an available APC face geometry		
		Offer a superior connector polish that meets		
		Telcordia and ISO/IEC specifications for		
		end-face geometry (including radius of		
		curvature, apex offset, and spherical		
7		undercut)		
		Use cable and connectors that are complaint		
		with color coding specifications as listed in		
8		ANSI/TIA-568-C.3 and ANSI/TIA-598-C		
		Utilize precision zirconia ceramic ferrules on		
9		connectors		
10		Include dust caps on all assemblies		
		Be 100% optically tested to meet the		
11		following performance specifications:		
12		Parameter		
13		Max. Insertion Loss (dB) 0.40 (0.1 Typical)		
14		Min. Return Loss (dB) 55 (60 Typical)		

Line Item No 11: 24 Port PoE Switch

Sr. No.	Parameters	Minimum Technical Specification	Compliance (Yes/No)	Ref. Page No
1	Port Density	24 X 1G RJ-45 PoE+ Ports with 380W power budget		
		$2 \times 1G/10G$ SFP+ Ports and $2 \times 1G$ SFP/Base- T Combo Ports upgradable to $2 \times 10G$ SFP+ Ports		
2	Power Supply	Internal Power Supply		
3	Virtual Chassis/ Stacking Option	Upto 4 Switches or more		
4	RAM	1 GB or better		
5	Flash	1 GB or better		
6	Switching Capacity and forwarding Rate	128 Gbps or better and 68 Mpps or better		
7	Latency & MTBF	Latency: 4 µs MTBF: 1447 k hours		
8	Layer 2 Features	Mac Address:16K or more VLAN: 4K or more System Policies: 1.5K or more Max Jumbo Frame: 9216 bytes Multicast Group: up to 1000		
10	Quality of Service	Auto QoS for switch management traffic, Policy-based QoS, Traffic Prioritization, Priority Queues: Eight hardware-based queues per port, SPQ, WRR		
11	Protocol Support	Static Routing, MSTP, RSTP, PVST+,IPv6 Tunneling, LACP, LAG, IGMPv3, DHCP, DHCP82,DHCP Relay for IPv4/IPv6,Multiple microcode image support with fallback recovery, ARP,SDN support through Restful API and openflow 1.3.1		
12	Management	Loopback IP address support for management per service, Policy- and port-based mirroring, Remote port mirroring,		

Sr. No.	Parameters	Minimum Technical Specification	Compliance (Yes/No)	Ref. Page No
		sFlow v5 and Remote Monitoring (RMON),		
		Unidirectional Link Detection		
		(UDLD), Digital Diagnostic Monitoring		
		(DDM), LLDP-MED, NTP, MVRP, SNMP, sflow		
13	Carrie .	or equivalent		
13	Security	Dynamic change of authentication (CoA),MAC-based authentication for non-		
		IEEE 802.1X hosts, MAC address lockdown,		
		Prevention from ARP attacks, Web based		
		Authentication, Autosensing IEEE 802.1X		
		multi-client,		
		multi-VLAN support,RFC 1321 MD5, RFC		
		2284 PPP EAP,RFC 1826/1827/4303/4305		
		Encapsulating Payload (ESP) and crypto		
		algorithms, RFC 2104 HMAC Message		
		Authentication, Built-in CPU protection		
		against malicious attacks		
14	Resiliency	Unified management, control and virtual		
		chassis technology, Virtual Chassis 1+N		
		redundant supervisor manager, Virtual		
		Chassis In-Service Software Upgrade		
		(ISSU), Smart continuous switching		
		technology, IEEE 802.3ad/802.1AX Link		
		Aggregation Control Protocol (LACP) and static LAC		
		Control Protocol (LACP) and static LAG groups across modules		
15	Operating	Temperature: 0 to 45Deg		
	Temperature	Humidity: 5% to 95% (non-condensing)		
	and Humidity	Trainierry' ere to yere (new concentrity)		
16	Safety	CE, EN 55022, RoHS, WEEE		
	Certifications	US UL 60950, CSA22.2		
		FIPS 140-2		
		EN 60825-1/2 Laser, IEC 62368-1		
17	SFP	SFP should be of same make as switch.		
18		The Switch shall work with on premise and		
		cloud based NMS without change in		
		hardware/software/OS Image.		

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Sr. No.	Parameters	Minimum Technical Specification	Compliance	Ref.
			(Yes/No)	Page
				No
19		3 Years onsite from OEM with Toll free		
		number for support in India		

Line Item No 12: 48 Port PoE Switch

Sr. No	. Parameters	Minimum specification	Compliance (Yes/No)	Ref Page No
1	Port Density	48 X 1G RJ-45 PoE+ Ports with 760W power		
		budget. It should support Multigig on minimum 2 Ports out of 48 Ports.		
		2 x 1G/10G SFP+ Ports and 2 x 1G SFP/Base-		
		T Combo Ports upgradable to 2 x 10G SFP+		
		Ports.		
2	Power Supply	Internal Power Supply		
3	Virtual	Upto 4 Switches or more		
	Chassis/			
	Stacking			
	Option			
4	RAM	1 GB or better		
5	Flash	1 GB or better		
6	Switching	182 Gbps or better and 135 Mpps or better		
	Capacity and			
	forwarding			
	Rate			
7	Latency &	Latency: < 4 µs		
	MTBF	MTBF: 789 k hours		
8	Layer 2	Mac Address:16K or more		
	Features	VLAN: 4K or more		
		System Policies: 1.5K or more		
		Max Jumbo Frame: 9216 bytes		
		Multicast Group: up to 1000		
10	Quality of	Auto QoS for switch management traffic,		
	Service	Policy-based QoS, Traffic Prioritization,		
		Priority Queues: Eight hardware-based		
		queues per port, SPQ, WRR		
11	Protocol	Static Routing, MSTP, RSTP, PVST+,IPv6		
	Support	Tunneling, LACP, LAG, IGMPv3, DHCP,		

Sr. No.	Parameters	Minimum specification	Compliance (Yes/No)	Ref Page No
		DHCP82,DHCP Relay for IPv4/IPv6,Multiple		
		microcode image support with fallback		
		recovery, ARP,SDN support through Restful		
		API and openflow 1.3.1		
12	Management	Loopback IP address support for		
		management per service, Policy- and port-		
		based mirroring, Remote port mirroring,		
		sFlow v5 and Remote Monitoring (RMON),		
		Unidirectional Link Detection (UDLD),Digital		
		Diagnostic Monitoring (DDM), LLDP-MED,		
		NTP,MVRP, SNMP, sflow or equivalent		
13	Security	Dynamic change of authentication		
		(CoA),MAC-based authentication for non-		
		IEEE 802.1X hosts, MAC address lockdown,		
		Prevention from ARP attacks, Web based		
		Authentication, Autosensing IEEE 802.1X		
		multi-client, multi-VLAN support, RFC 1321		
		MD5, RFC 2284 PPP EAP,RFC		
		1826/1827/4303/4305 Encapsulating		
		Payload (ESP) and crypto algorithms, RFC		
		2104 HMAC Message Authentication, Built-		
		in CPU protection against malicious attacks		
14	Resiliency	Unified management, control and virtual		
		chassis technology, Virtual Chassis 1+N		
		redundant supervisor manager, Virtual		
		Chassis In-Service Software Upgrade		
		(ISSU), Smart continuous switching		
		technology, IEEE 802.3ad/802.1AX Link		
		Aggregation		
		Control Protocol (LACP) and static LAG		
		groups across modules		
15	Operating	Temperature: 0 to 45Deg		
	Temperature	Humidity: 5% to 95% (non-condensing)		
	and Humditiy	, , , , , ,		
16	Safety	CE, EN 55022, RoHS, WEEE		
	Certifications	US UL 60950, CSA22.2		
		FIPS 140-2		
		EN 60825-1/2 Laser, IEC 62368-1		
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Sr. No.	Parameters	Minimum specification	Compliance (Yes/No)	Ref Page No
17	SFP	SFP should be of same make as switch.		
18		The Switch shall work with on-premise and cloud based NMS without change in hardware/software/OS Image.		
19		3 Years onsite warranty from OEM with Toll free number for support in India		

Line Item No 12 : Transceiver

Sr.	Parameter	Minimum Technical	Compliance	Deviation	Ref Page
No.		Specification	(Yes/No)		no.
1		SFP should be of same make			
		as switch.			

Line Item No 14 : Rack

Sr. No.	Parameter	Minimum Technical Specification	Compliance (Yes/No)	Ref Page
				no.
1	OEM	ISO 14001 for Environmental management		
	Certificate	system		
		ISO 45001 For Occupational health and safety		
		management system		
		ISO 9001 Quality management system		
		OEM Have direct service office in Gujarat		
2	Product	comply with EIA 310 ,DIN 41494 , IEC		
	compliance	297standards		
3	Construction	Welded		
4	Material	CRCA Sheet		
5	Depth	600 mm Minimum		
6	Width	600 mm Minimum		
7	Colour	RAL 7035 With electro-phoretic (EC) dip coat		
		primed to 20 microns and then powder coated to		
		RAL 7035 textured pure polyester (PP) to		
		average 80 to 120 microns		
8	Front door	Glass door with 4mm Thickness with lock and		
		key arrangement		
9	Cooling	Fan at Top 90 CFM		
10	Cable entry	Top and bottom		

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Sr. No.	Parameter	Minimum Technical Specification	Compliance (Yes/No)	Ref Page no.
11	Cable	Horizontal - 2 Nos With captive Hardware		
	manager	packet of 20 Nos		
12	PANEL	Horizontal - 5Amp 5 Socket with fuse		

Line Item No 15: Cable Tray

Sr.	Parameter	Minimum Technical Specification	Compliance	Deviation	Ref
No.			(Yes/No)		Page
					no.
1		Providing and fixing approved make			
		Perforated C type cable tray. Made			
		from CR sheet steel. The cable tray			
		should be single or double bended as per			
		required and as per IS 2062-1079 and			
		shall be coated with hot dip galvanizing			
		as per IS 2629-4759. With coupler plate			
		- Fish plate and GI hardware like nut -			
		bolt and washers etc. erected on existing			
		support as per Specification and as per			
		instruction of engineer in charge.			

Line Item No 16: HDPE Pipe

Sr.	Parameter	Minimum Technical	Compliance	Deviation	Ref
No.		Specification	(Yes/No)		Page no.
1		40mm 6 Kg ISI Make HDPE			
		Pipe for Fibre Laying			

Line Item No 18: Laying of UTP Cable along with all accessories which includes 32 mm conduits with accessories, Trunking and casing capping as per the requirement (Bidder to select the accessory material as per the specifications defined in bid) (Actual meter reading generated during the cable testing will be considered for payment).

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Sr.	Parameter	Minimum Technical Specification	Compliance	Deviation	Ref
No.			(Yes/No)		Page
					no.
1.	Conduits and	UPVC HMS Type 32" Conduits and			
	accessories	accessories manufactured in			
		accordance with IS: 9537 Part 3, BS:			
		EN 61386-21 for UPVC conduits, IS:			
		3419 and BS: 4607 for UPVC fittings.			
2.	Trunking	Trunking (100×100 & 100×50 mm)			
		manufactured in accordance with			
		Indian Standards IS: 14927 Part 2			
		and BS: EN 50085-2-1. Consisting of			
3.	Casing	16×16 Casing capping with			
	Capping	accessories like Coupler; Elbow ; T			
		etc.			
		25×16 Casing Capping with			
		accessories like Coupler; Elbow ; T			
		etc.			

Line Item No 27: Fibre and Copper Certification Charges (Third Party). Copper Certification to be done using CATTA Tester.

Sr	Paramete	Specifications	Complianc	Deviatio	Ref
No	r		e	n	Page
			(Yes/No)		no.
A		TESTING			
1		The manufacturer of the cabling system shall			
		provide copper (Data) and optical fibre			
		testing procedures that clearly describes			
		the tools and settings to be used to ensure			
		correct measurements of the system.			
В		Testing of Class FA			
1		The specific Class FA testing procedure			
		edited by the cabling system manufacturer			
		has to be strictly followed to ensure correct			
		measurement and validity of the warranty.			
2		To avoid being obliged to test against Class			
		EA figures, each Cat7A connector shall be			
		quality checked on continuity of pins 36, 45			
		(full testing of all connector components			
		during production - No Sampling allowed)			

Sr	Paramete	Specifications	Complianc	Deviatio	Ref
No	r	•	е	n	Page
			(Yes/No)		no.
3		100 % of the installed horizontal links have			
		to be tested. The testing procedure has to			
		comply with the standard ISO-IEC 11801-			
		A1:2008 A2:2010, according to the			
		procedure for "Channel". The measurements			
		shall be done using a Level iv testing			
		equipment suitable to test Class F links up to			
		600-1000 MHz as defined in the			
		manufacturer test procedure			
4		The testing equipment must be yearly			
		calibrated by the manufacturer and the copy			
		of the calibration certificate must be			
_		included in the warranty request.			
5		The following parameters have to be			
_		tested:			
I		Pair continuity (wire map)			
Ii T::		Pair length			
Iii		DC Loop resistance per pair			
Iv V		Insertion loss (Attenuation) per pair			
V		NEXT and Power sum NEXT for every pair combination			
Vi					
VI		FEXT and Powersum FEXT for every pair combination			
Vii		The ACR (ratio NEXT- insertion loss) for			
V 11		every pair combination			
Vii		Return Loss (impedance match,			
i		retransmitted signal)			
Īx					
		channels have to be collected in a			
		test result in electronic format to facilitate			
		the certification procedure.			
X		Apart from all the test results mentioned			
		above, a few more documents have to be			
		added to the file: a list of material used for			
		the project, a design of the network, a Cable			
		schedule per distributor and finally all the			
Ι×		The complete test results of all the installed channels have to be collected in a certification file. It is preferred to have the test result in electronic format to facilitate the certification procedure. Apart from all the test results mentioned above, a few more documents have to be added to the file: a list of material used for the project, a design of the network, a Cable			

Sr No	Paramete r	Specifications	Complianc e (Yes/No)	Deviatio n	Ref Page no.
		necessary co-ordinates of the persons responsible of the project			
С		FIBRE TESTING (SM)			
1		The procedure shall comply with the ISO-IEC 14763-3 standard and to the successful bidder testing procedure.			
2		The ISO-IEC 14763 standard specifies the implementation and operation of customer premises cabling.			
3		The part 3 of this ISO document (14763-3) details test procedures for optical fibre cabling designed in accordance with ISO-IEC 11801:2002 and installed according to the recommendations of ISO-IEC 14763-2 (Planning and installation of customer premises cabling).			
4		Fibre-optic Tests applied to links and exclude equipment and work area cord.			
5		OF Attenuation testing is used to verify the initial performance of the installed link.			
6		All 100 % of the installed OF links have to be tested and must pass the acceptance criteria.			
7		The attenuation of the link is measured using the insertion loss method. This method uses an optical source and an optical power meter to compare the difference between two optical power levels.			
8		When testing Single Mode optical fibre links with a <u>Light Source and a Power Meter</u> , this measurement kit has to be capable of operating at 1550nm and 1310nm for Single Mode			
9		The test scenario with a Light Source and a Power Meter shall be one of the following for each link:			

Sr	Paramete	Specifications	Complianc	Deviatio	Ref
No	r		e	n	Page
			(Yes/No)		no.
10		Single direction @ 1550nm and @ 1310nm			
		for single mode fibres			
11		The use of certification tool is			
		recommended. Those tools are capable of			
		producing a report logging the time of the			
		test the link identification under test, the			
		link length, the attenuation at the window			
		tested and the acceptable link attenuation.			
		The report shall also identify in which			
		direction the testing was implemented.			
13		When testing with basic optical source and			
		power meter, the operator will fill up a			
		report logging the time of the test, the			
		link identification under test, the link			
		length and attenuation at the window			
		tested			
14		The report shall also identify in which			
		direction the testing was implemented.			
15		Acceptable link attenuation (To be			
		calculated)			
16		The measured attenuation of the links shall			
		have a lower value than the acceptable link			
		attenuation calculated			
D		PROCEDURES			
1		Installation Guide			
		All the components have to be installed			
		according to the procedures prescribed by			
		the supplier. During the whole period of			
		installation, the installer has to put an			
		Installation Guide at the disposal of the			
		client, so that he can verify the compliance			
		of the installation to the guidelines of the			
		supplier.			
4		MANAGEMENT OF THE PROJECT			
i		Design of the Project			
		The successful bidder will first make a site			
		survey. This will allow him to propose a			

Sr	Paramete	Specifications	Complianc	Deviatio	Ref
No	r		e	n	Page
			(Yes/No)		no.
		complete turnkey solution without any			
		additional costs for unforeseen labour. If			
		possible, the installer will try to use the			
		existing infrastructure as much as possible.			
		If cable supports or cable trays are lacking,			
		then the successful bidder will have to			
		evaluate the necessary quantities and price			
		and take up a detailed description in his			
		offer.			
ii		To ensure the transparency of the			
		installation and the maintenance of the			
		structured cabling, the successful bidder has			
		to develop a numbering and labelling scheme			
		in agreement with the owner or his			
		representative in order to identify all the			
		components without ambiguity. After the			
		temporary reception of the project, all the			
		cabinets" layouts and the drawings of the			
		building will be completed referring to this			
		numbering scheme.			
5		Project Management			
i		For the complete duration of the project			
		the successful bidder will appoint a Project			
		Manager, who will work on his behalf. He			
		will be the single point of contact to ensure			
		a smooth co-ordination with the Customer			
ii		For project with an estimated duration over			
		2 weeks, the successful bidder will appoint a			
		Site Manager, who will be permanently			
		present on site on behalf of the successful			
		bidder. The Site Manager will report to the			
		Project Manager, in order to ensure that the			
		correct information is communicated from			
		the commencement of the project until the			
		hand-over of the network to the client			

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ANNEXURE-VII

FINANCIAL INFORMATION

Details to be furnished duly supported by figures in Balance Sheet/Profit & Loss Account for the last three preceding years (Financial years) duly certified by the Chartered Accountant, as submitted by the applicant to the Income Tax Department (copies to be attached).

SI.	Details	Year Ending 31st March				
No.		Year 1	Year 2	Year 3		
01	Gross annual turnover in the similar works					
02	Profit (+) / Loss (-)					

- 1. Income Tax Return
- 2. Audited Account of the company for last three years
- 3. Income Tax, PAN Details
- 4. GST No.

This is to certify that to the best of my knowledge and belief, the aforesaid facts and figures are correct and in conformity with the books of accounts of the establishment.

Dated:

Signature of Chartered Accountant (with seal and membership number)

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ANNEXURE - VIII

Company Seal: -----

	DECLARATION
1.	I,Son /Daughter of Shri
	Proprietor/Partner/CEO/MD/Director/Authorized
	Signatory of M/sam competent to sign
	this declaration and execute this tender document.
2.	Tender ref no: dated: I
	have carefully read and understood all the terms and conditions of the tender and hereby convey my acceptance of the same.
3.	The information/ documents furnished along with the above application are true and authentic to the best of my knowledge and belief.
4.	I/we am/are well aware of the fact that furnishing of any false information/ fabricated
	document would lead to rejection of my tender at any stage besides liabilities towards prosecution under appropriate law.
5.	Each page of the tender document and papers submitted by my Company is authenticated,
	sealed and signed, and I take full responsibility for the entire documents submitted.
Sig	gnature of the Authorized Person
Da	te:
Fu	Name:
Pla	ice:

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ANNEXURE - IX

	UNDERTAKING REGARDING	BLACKLISTING	/ NON-DEBARMENT
--	-----------------------	--------------	-----------------

(On Company / firm's Letterhead)

Date: -----

Company Seal: -----

Full Name: ------

I/We hereby	confirm and dec	clare that w	ve, M/	's				-, is not
blacklisted/	Deregistered/	debarred	by d	any	Government	department/	Public	Sector
Undertaking/Private Sector/or any other agency for which we have Executed/Undertaken								
the works/ Services as on date.								
Signature of	the Authorized I	Person						

Signature and seal of Bidder

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ANNEXURE-X

(For Goods/Service Contracts)

(On Company / firm's Let	terhead)
Tender No:	Dated:
<u>CERTIFICATE</u>	
I/we have read the clause regarding restrictions on pr	rocurement from a bidder of a country
which shares a land border with India; I/we hereby cer	tify that this bidder is not from such a
country and is eligible to be considered.	
OR (whichever is applicab	le)
I/we have read the clause regarding restrictions on pr	rocurement from a bidder of a country
which shares a land border with India; I/we here(Name of Country) and has been register	by certify that this bidder is from red with the Competent Authority. I/we
also certify that this bidder fulfils all the requirement considered.	nts in this regard and is eligible to be
(Copy/ evidence of valid registration by the Compet	ent Authority is to be attached with
the bid document)	·
Signature of the Authorized Person	
Date:	
Full Name:	
Place:	
Company Seal:	

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ANNEXURE-X

(For Works Contracts, including Turnkey contracts)

(On Company / firm's Letterhead)
Tender No:
CERTIFICATE
I/we have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India and on sub-contracting to contractors from such countries and hereby certify that this bidder is not from such a country and will not subcontract any work to a contractor from such countries unless such contractor is registered with the Competent Authority.
OR (whichever is applicable)
I/we have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India and on sub-contracting to contractors from such countries; I/we hereby certify that this bidder is from
Signature of the Authorized Person Date: Full Name: Place:
Company Seal:

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ANNEXURE-XI

DECLARATION OF LOCAL CONTENT

(To be given on Company Letter Head-For tender value upto Rs.10 Crores)

(To	be giver	by Statutory Auditor/Cos	t Auditor/ Practising Cost Accountant/ Practising						
Ch	artered Ad	ccountant for tender value in	excess of Rs.10 Crores)						
Te	nder No:		Dated:						
То									
Th	e Executiv	e Registrar,							
Na	tional Fore	ensic Sciences University,							
Ga	ndhinagar								
PI	N: 382007								
Su	bject: Dec	claration of Local Content-re	eg.						
1.	Country o	f origin of Goods being offer	ed:						
2.	We hereb	y declare that items offered	l has% local content.						
	(Clarifica	tion for Local content calculat	tion as per OM No: P-45021/102/2019-BE-IIPart (1)						
	(E-50310)), dated 4^{th} March 2021 of C	Department of Promotion of Industry and Internal						
	Trade, Mi	nistry of Commerce and Indu	stry, Govt. of India.)						
3.	The detai	Is of the location(s) at which	n local value addition is made are given in the below						
	table;								
	SI. No.	Name of the item	Location(s) of local value addition						
	1	2	3						

"Local Content" means the amount of value added in India which shall, unless otherwise prescribed by the Nodal Ministry, be the total value of the item procured (excluding net domestic indirect taxes) minus the value of the imported content in the item (including all customs duties) as a proportion of the total value, in percent.

Important:

"False declaration will be in breach of Code of Integrity under Rule 175(1)(i)(h) of the General Financial Rules 2017 for which a bidder or its successors can be debarred for up to two years as per Rule 151(iii) of the General Financial Rules 2017 along with such other actions as may be permissible under law."

Date:

Yours faithfully,

(Signature of the bidder, with Official Seal)

Tender Notice No: NFSU/IT CELL/118/NETWORK/IFS BUILDING/2023-24/01 dated: 14/03/2024 Revamping of Networking for three computer labs at IFS building at NFSU, Gandhinagar

ANNEXURE-XII

FINANCIAL BID FORMAT (to be filled online only)

Tender Notice No: NFSU/IT CELL/118/NETWORK/IFS BUILDING/2023-24/01 dated: 14/03/2024

Networking of newly constructed buildings at residential areas of NFSU Gandhinagar

List of Items and Services: -

					Amount in INR				
Sr	Name	Brief	Uni	Qty	Unit	Taxe	Unit	Total	
			t		Price	s	Price	Amoun	
					withou		with	t with	
					+		Taxe	Taxes	
					Taxes		s		
				A	В	С	D=	E=	
							(B+C)	(A×D)	
1	Cat7 Cable	Cable, Copper, Category 7A, 1000	Mtr	3000					
		MHz E10, 4 Pair, Solid, S/FTP,							
		LSOH-1, Violet, Reel, 500 Meter							
2	Switch	Copper, Patch Cord, Tera 4-Pair,	Nos	82					
	Side Patch	RJ45, Category 6A, S/FTP,							
	Cord 1	T568B, Stranded, CM/LSOH-1,							
	Mtr	Ivory Cable, White Boot, 1 Meter.							
3	User Side	Copper, Patch Cord, Tera 4-Pair,	Nos	82					
	Patch Cord	RJ45, Category 6A, S/FTP,							
	2 Mtr	T568B, Stranded, CM/LSOH-1,							
		Ivory Cable, White Boot, 2 Meter							
4	Patch	Copper, Patch Panel, Tera / MAX,	Nos	4					
	Panel for	Empty, Shielded, 24 Openings,							
	Rack	Flat, 1U, Black, Fixed Wire							
		Manager							
5	Network	Copper, Outlet, TERA, Shielded,	Nos	82					
	IO User	Category 7A/8, TERA, Flat, Black,							
	Side	Tool-Less, T568A/B, with Door,							
		22-23 AWG - User Side							
6	Network	Copper, Outlet, TERA, Shielded,	Nos	82					
	IO Rack	Category 7A/8, TERA, Flat, Black,							
	Side	Tool-Less, T568A/B, with Door,							
		22-23 AWG- Panel Side							

					Amount in INR			
Sr	Name	Brief	Uni †	Qty	Unit Price withou t Taxes	Taxe s	Unit Price with Taxe s	Total Amoun t with Taxes
				A	В	С	D= (B+C)	E= (AxD)
7		Faceplate, 10G, British, Single Gang, 2 Openings, MX, White	Nos	82				
8	Fibre Cable Single Mode	Cable, 6 Fibre, XGLO, Singlemode, OS1/OS2, 8.3/125, Outside Plant, Loose Tube, Armored, MDPE, Black, 1 Kilometer, International		75				
10	terminatio n on both sides Fibre	LightVerse Core, Rack Mount, 1U, Fixed Access, 4 Openings, Black - Fully Loaded - (With Required Accessories GLO® Jumper & Pigtails - 192 Quick-Pack® RIC Splice Cassette (RSC) - 192 LC Blade Patch Fibre Jumpers - 8 Fibre, Adapter Plate, Light Verse, Flat, Black Housing, Blank - 24 Splice Cassette and Trays - 8 Fibre, Jumper, Duplex, XGLO, Singlemode, LC UPC, LC UPC, OS1/OS2,8.3/125, Yellow, LSOH-	Nos	4				
11		3C,03 Meter OS6360-P24X fixed 1RU chassis 24 PoE 1G BaseT, 2 fixed RJ45/SFP+ combo (1G/10G), 2 fixed 1G/10G SFP+ uplink/VFL ports. Internal AC PSU (380 budget), includes country specific power cord, guides and 19" rack mount kit. 3 Yr premium onsite Support for OS(including replacement in NBD when Required). Includes 24x7		1				

Total Amoun
ماد: ب
t with
Taxes
E=
(A×D)

					Amount in INR			
Sr	Name	Brief	Uni	Qty	Unit	Taxe	Unit	Total
.		5.1.5,	†	۷.7	Price	s	Price	Amoun
					withou		with	t with
					†		Taxe	Taxes
					Taxes		s	
				Α	В	С	D=	E=
							(B+C)	(AxD)
		pair of 19" angles with wall						
		mounting provision, captive						
		hardware(pack of 20).Color RAL						
		7035						
		230V AC Fan, 90 cfm with 1 mts						
		long cable.						
		19" mountable socket strips with 6						
		nos of 5A universal sockets with 2						
		mts long power chord.						
		1U 19" Horizontal Cable Manager						
		(Zinc blue plated)						
		Wall Bracket Kit 10mm (pk of 4)						
15	Cable Tray	SIZE: 300MM X 50MM X 165WG	Mtr	150				
		WITH ALL ACCESSORIES LIKE						
		8MM G.I.FULL THREADED ROD,						
		8MM FASTNER, 8MM NUT AND						
		WASHER,						
		G.I.PERFORATED " C" CHANNEL						
		SIZE: 35MM X 15MM X 18SWG						
		(Supply Installation Testing and						
		Commissioning all including)						
16		40mm 6kg ISI Make HDPE Pipe for	Mtr	50				
		Fibre Laying						
		Labour						
17		Laying of HDPE Pipe for Fibre	Mtr	50				
18		Laying of UTP Cable along with all	Mtr	7595				
		accessories which includes 32 mm						
		conduits with accessories,						
		Trunking and casing capping as per						
		the requirement (Bidder to select						
		the accessory material as per the						
		specifications defined in section 6)						
		(Actual meter reading generated						

					Amount in INR			
Sr	Name	Brief	Uni †	Qty	Unit Price withou t Taxes	Taxe s	Unit Price with Taxe s	Total Amoun t with Taxes
				A	В	С	D= (B+C)	E= (AxD)
		during the cable testing will be considered for payment)						
19		Laying of Fibre Cable in Pre Laid Conduits and TRUNKS	Mtr	75				
20		Fixing of Rack upto 18 U Size with Dressing	Nos	3				
21		Fixing of Patch Panel in the Rack along with Termination of Cable	Nos	11				
22		Termination of CAT7A IO on the user side	Nos	217				
23		Termination of CAT7A IO on the jack Panel Side	Nos	217				
24		Fixing of LIU in The Rack	Nos	3				
25		Fibre Splicing Per core	Nos	36				
26		Labelling and Feruling Charges	Nos	217				
27		Fibre and Copper Certification Charges (Third Party). Copper Certification to be done using CAT7A Tester Old Cables are not Include.		1				
28		Concealed Conduiting charges Labor only including wall cutting and resurfacing		150				
29		Rework A - Remove Ios from Rack Side and User B. Remove All Cables till rack with minimum Damage. C. Remove Patch Panesl from Rack Side. D. Remove Fibre cable & LIU from Rack.		3				

Tender Notice No: NFSU/IT CELL/118/NETWORK/IFS BUILDING/2023-24/01 dated: 14/03/2024 Revamping of Networking for three computer labs at IFS building at NFSU, Gandhinagar

					Amount in INR			2
Sr	Name	Brief	Uni	Qty	Unit	Taxe	Unit	Total
			+		Price	s	Price	Amoun
					withou		with	t with
					t		Taxe	Taxes
					Taxes		s	
				Α	В	С	D=	E=
							(B+C)	(AxD)
		*Civil work is not part of this i.e.						
		Ceiling cutting, Core Cut etc.						
		Total						
		Total with GST						
		In words: Rupees (with Taxes)						
	CAMC Cost for 4th year							
		CAMC Cost for 5th year						

In words: Rupees	(with Taxes)		

- 1. Non-conformities between Figures and Words:
 - a. If, in the price structure quoted for the required goods, there is a discrepancy between the unit price and total price (which is obtained by multiplying the unit price by the quantity), the unit price shall prevail and the total price shall be corrected accordingly;
 - b. If there is an error in a total corresponding to the addition or subtraction of subtotals, the sub-totals shall prevail and the total shall be corrected; and
 - c. If there is a discrepancy between words and figures, the amount in words shall prevail.
- 2. L1 bidder will be decided based on the **Total with GST** mentioned in **FINANCIAL BID**.

 CAMC price will not be considered in the financial evaluation.
- 3. The price bid of any other form submitted by the bidder (other than in this format specified in the tender) will be rejected.

Signature of the bidder along with seal

Tender Notice No: NFSU/IT CELL/118/NETWORK/IFS BUILDING/2023-24/01 dated: 14/03/2024

Revamping of Networking for three computer labs at IFS building at NFSU, Gandhinagar

ANNEXURE-XIII

Scope of Work:

- Supply, Installation, Configuration, Commissioning and upgradation of the Network as per the requirement of the NFSU. Complete Network Infrastructure shall be provided with Three (3) years comprehensive onsite warranty along with operation and Maintenance (inclusive of Labour and Parts). The warranty period is defined in clause no. 5 of Annexure II.
- Bidder must ensure the supplied Aggregation Switches and Transceiver modules should be integrated with the existing NFSU Core Switches without affecting the performance and uptime of the NFSU network.
- 3. The bidder should provide an onsite comprehensive warranty for **Three years** on all active components from the date of installation as mentioned in **Annexure-XII**. All products should have 3 years 8 x 5 x NBD (Next Business Day) support commitment with the back-to-back agreement with OEM. In case of equipment failure, NFSU Gandhinagar should be able to log cases with the OEM **both** through the bidder and directly without bidder intervention. An emergency response team should be available from OEM directly in case of any critical failures. OEM must have 24*7 TAC support to address and rectify the issue/problems occurring during the entire warranty period. The latest software upgrade for all products should be available free without any additional cost during the warranty.
- 4. The bidder will be liable for any hardware and software up-gradation for maintenance without any extra cost during the warranty period. The technical bid must contain the make, model and part number of all supplied components along with the supported part code.
- 5. In case of any future expansion / up-gradation within the warranty period, necessary changes in the configuration have to be done by the selected bidder for smooth integration/migration at no additional cost.
- 6. Replacement of defective equipment and shipment of the same should be the responsibility of the selected bidder without any financial commitment from NFSU Gandhinagar. The same has to complete within five working days after reporting the problem.
- 7. The bidder should provide support and assistance for the resolution of major technical problems or technical issues with a highly qualified technical team at the backend to support the onsite team.
- 8. The bidder is responsible for all unpacking, assembling, wiring, installation, cabling between equipment and components and connection to power supplies. They will test all Systems operations and perform all the necessary setup, configuration and customization for successful operation of the Network at site.
- All the functionality, features and configuration shall be documented for all the equipment/components and shall be demonstrated with respect to the documentation prepared.

- 10. The bidder shall bear for any damage occurring during supply, installation, testing, commissioning & activation of network components, computer hardware etc. The same has to be rectified by the agency at their own cost. In case the agency fails to do rectification, the same shall be rectified by the NFSU and the involved cost will be recovered from the agency.
- 11. One dedicated onsite network support Engineer/Manager to be posted during the installation of the work.
- 12. All OFC and UTP cable segments should be marked with the ferrules at both ends. Marking of information outlets corresponding to the jack panel port should also be done properly.
- 13. Installation of Network Racks shall be carried out strictly in accordance with specifications mentioned by original equipment manufacturers.
- 14. Work (i.e. Supply and Installation) has to be completed within 90 days from the date of issue of the purchase order by the NFSU.
- 15. Since most of the installation locations are in academic buildings, special arrangements have to be made by the bidder for executing this project without disturbing the other classes. Working hours may have to be rescheduled accordingly with the concurrence of IT System Manager, NFSU, Gandhinagar.
- 16. The selected bidder has to provide a **Three-years** comprehensive onsite warranty for all the networking items supplied and work done.
- 17. The vendor may visit the site on any working day in coordination with IT System Manager before the submission of the tender.
- 18. Work should be carried out with the guidance of IT System Manager, NFSU, Gandhinagar. For any technical dispute arising at any time during the execution of the work, the decision of IT System Manager will be the final.
- 19. Service quantities mentioned in the tender are tentative. Payment will be made on the basis of exact quantities installed and certified by the NFSU Committee.
- 20. Materials such as pipe, nuts and bolts etc. if required for the installation of the above item and other fixation work will have to be supplied by the vendor free of cost.
- 21. Adequate spare should be maintained at the site during the whole warranty period.
- 22. NFSU has the right to inspect and/or to test the material to confirm their conformity with the contract and in case any inspected/tested goods fail to perform with respect to the specifications, NFSU may reject them and the supplier shall either replace the rejected goods or make alteration necessary to meet the specifications free of cost to the NFSU.
- 23. The bidder is responsible for all unpacking, assembling, wiring, installation, and cabling between equipment and components. They will test all Systems operations and perform all the necessary setup, configuration and customization for the successful operation of the Network at the site.
- 24. The bidder shall use their own sets of tools, tackles, etc. required for testing, commissioning and warranty maintenance of the system.

- 25. The bidder shall bear for any damage occurring during supply, installation, testing, commissioning & activation of network components, computer hardware etc. The same has to be rectified by agency at their own cost. In case agency fails to do rectification, the same shall be rectified by the NFSU and involved cost will be recovered from the agency.
- 26. All the work shall be done in a conscientious manner as per the OEM guidelines and best industry practices. The system shall be subjected to inspection at various stages. The bidder shall follow all Safety Regulations and practices.
- 27. All items supplied must have a comprehensive onsite OEM warranty for a period of Three years.
- 28. Complete delivery of all materials has to be accomplished within four weeks of receipt of the purchase order, failing which Liquidation Damage (LD) @ 0.5% per week of 100% of total order value will be imposed as per NFSU purchase rules.
- 29. In any case total liquidated damage will be capped at 5% of the PO value.
- 30. The quality of the Optical Fibre Cable Plant depends upon the quality of individual items of work involved i.e. care while jointing/splicing in the fibre patch panels and the documentation of OFC cable plant for each location individually. In order to ensure quality in cable laying work, each component of work needs attention. The work shall be carried out strictly in accordance with specifications laid down to achieve the requisite quality aim.
- 31. The bidder is responsible for dismantling the existing network infrastructure (If anything found during installation) and brings back the same to IT System Manager-NFSU if it is not going to re-install or spare.
- 32. Any additional item which is not specified in the Bill of Quantity listed in Annexure-I but required between the integration of the supplied items by the bidder with the NFSU network needs to be supplied and installed by the bidder at no extra cost to the NFSU.
- 33. The scope of the work includes laying of OFC through) HDPE pipe by concealed method and associated works along with maintenance of the same for a period of three year from the completion of the entire project. In case concealed piping method is not feasible then NFSU committee will decide the methodology.
- 34. Manual trenching depth should be a minimum of 165 cm for normal and hard soil, a minimum of 100 cm for concrete areas and the boring / tunnelling method should be used in case of the crossing of concrete/bituminous roads at 165 cm (minimum) depth. The trench must be refilled with soft soil or recementing to be done depending on the type of trench after laying the OFC through the HDPE duct. Aesthetics must be maintained with the existing construction while excavating or refilling the cable trench.
- 35. The bidder is fully responsible for taking all possible safety precautions during the preparation of underground cable pathways and for keeping the construction site in a safe condition. If any damages occur to other service lines like electrical, water pipelines, drainage, sewerage, or any part of an existing structure, building or element then the same has to be informed immediately to IT System Manager-NFSU and to be restored by the bidder without any extra cost, failing which NFSU, Gandhinagar will be at liberty to rectify and restore the damages at the risk & cost of the bidder.

- 36. Route markers are also to be transported and placed along the OFC cable route at 20 meters apart and where the route changes direction like road crossings etc.
- 37. Specialised civil work i.e Ceiling, core cutting will be executed by NFSU and not part of this bid.
- 38. **Documentation**, **Acceptance and Testing**: The purpose of acceptance and testing is to verify the integrity of measurement and quality of work done. A complete As-Built Document (ABD) report consisting of mainly below below-mentioned points needs to be submitted after the completion of this project.
 - a Location of Network Racks,
 - b Details of UTP and Fibre terminations in Patch Panels,
 - UTP Patch Panel to User points connectivity details both are in pictorial and tabular formats),
 - d Optical loss test using both Laser Source Power Meter test (LSPM) and OTDR of each fibre core.
 - e Marking of fibre cores and UTP terminations at respective Patch Panel as well as in the user side I/O points.

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Revamping of Networking for three computer labs at IFS building at NFSU, Gandhinagar

ANNEXURE- XIV

MODEL BANK GUARANTEE FORMAT FOR FURNISHING EMD

Where	IS		(†	hereinafter	called	the "t	enderei	r") has	s subm	itted
their	offer	dated				for	the	SI	apply	of
			(hereir	nafter called	d the "	'tender") agains	st the	purcho	ıser's
tender	Notice No.			K	NOW .	ALL ME	N by th	iese pr	resents	tha
WE				of					h	aving
our reg	gistered of	fice at	•••••					are	bound	unto
		(h	ereinafter	called the	"Pur	chaser") in	the	sum	of
		1	for which p	ayment will d	and tru	ly to be	made to	the s	aid	
Purchas	ser, the Ban	k binds itse	lf, its succe	essors and as	ssigns b	y these	presen	ts. Sea	led wit	h the
Commo	n Seal of th	e said Bank	this	Day	of		20	۱	ı	
THE C	ONDITION	IS OF THIS	OBLIGAT	TON ARE						
(1)	If the tend	erer withdr	aws or ame	ends, impairs	or der	ogates 1	rom the	z tende	er in an	У
	respect wit	hin the peri	od of validi	ity of this te	ender.					
(2)	If the tend	erer having	been notif	ied of the ac	cceptan	ice of hi	s tende	r by th	ie	
	Purchaser c	luring the pe	eriod of its	validity:						
	(a) If the	tenderer fa	ils to furnis	sh the Perfo	rmance	Securi [.]	ty for t	ne due		
	perform	nance of the	z contract.							

(b) Fails or refuses to accept/execute the contract.

We undertake to pay the Purchaser up to the above amount upon receipt of its first written demand, without the Purchaser having to substantiate its demand, provided that in its demand the Purchaser will note that the amount claimed by it is due to it owing to the occurrence of one or both the two conditions, specifying the occurred condition or conditions.

This guarantee will remain in force up to and including 45 days after the period of tender validity and any demand in respect thereof should reach the Bank not later than the above date.

(Signature of the authorized officer of the Bank)
Name and designation of the officer
Seal, name & address of the Bank and Address of the Branch

Tender Notice No: NFSU/IT CELL/118/NETWORK/IFS BUILDING/2023-24/01 dated: 14/03/2024 Revamping of Networking for three computer labs at IFS building at NFSU, Gandhinagar

Checklist (Bidder should fill up Yes or No without fail)

5.No	Bid Enclosures	Yes/ No					
Technical Bid (Envelope-A) contains the following documents							
1	Tender fee of Rs. 1500/- / Exemption certificate						
2	EMD of $\stackrel{\scriptstyle *}{_{\sim}}$ 1,08,000/-(One Lakh and Eight Thousand rupees only) as per Annexure-XVI						
3	Technical Bid as per Annexure-V along with all supporting annexures, documents etc. as mentioned in the Tender document as per given sequence						
4	Signed Notice Inviting Tender (NIT) and corrigenda thereon, if any						
5	Any other supporting/ Additional Document/ Information						
Financial Bid (online)							
1	Price Bid (As per the format given at Annexure-XII)						

Note: All pages of the bid documents must be serially numbered and signed.

* * * * * * * * * * * * * * * *