

(Department of Empowerment of Persons with Disability, Ministry of Social Justice Empowerment, Govt. of India)

East coast Road, Muttukadu, Kovalam (post) Chennai-603 112

Website: www.niepmd.tn.nic.in E-mail: niepmd@gmail.com Phone: 044-27472113, 27472046.

TENDER DOCUMENT: ESTABLISHMENT OF SURVEILLANCE SYSTEM FOR NEW G+7 BUILDING IN NIEPMD, CHENNAI FILE NO. NIEPMD/PUR 4 (31)/2023-24

Last date for E-bidding - 02.00 PM. on 29-06-2023

Tender fee - Rs. NIL

EMD Amount - Rs. 1,75,000/-

Date & Time of Opening of

Tender Documents - 04.00 A.M. on 30-06-2023

Tele: 044-27472046/27472113 Telefax: 044-27472389 Email:niepmd@gmail.com

Sd/-

Deputy Registrar (Admin.) Director



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E- Tender is invited through NIC e-procurement portal URL http://eprocure.gov.in/eprocure/app in two bid system from reputed System Integrators having proven track record in implementing surveillance systems. The bidder should have successfully executed work of Supply, Installation & Commissioning of surveillance systems in a single order / agreement for a value not less than Rs.50,00,000/-(Rupees Fifty Lakhs Only) (or) two orders / agreements for values not less than Rs.30,00,000/- each (Rupees Thirty Lakh Only) (or) three orders / agreements for values not less than Rs.20,00,000/- Each (Rupees Twenty Lakhs Only), in the last 3 years as on the scheduled date of tender opening. The applying firm/company must have an annual turnover annually of last 03 financial years not less than 1.5 crores (i.e. FYs 2019-20, 2020-21 & 2021-22 each year). The tender document can also be downloaded from over website www.niepmd.tn.nic.in.

Last date for E-bidding - 02.00 PM. on 29-06-2023

Tender fee - Rs.NIL

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National Institute for Empowerment of Persons with Multiple Disabilities hear after called NIEPMD is a Central Autonomous Body under the Ministry of Social Justice & Empowerment, Government of India. The Institute intends to establish a surveillance system to secure the new G+7 building in its Chennai campus. This surveillance system would be securing/covering all the common areas like lobbies, corridors, terrace, lounge and all the entrances to the building.

The materials to be supplied, installed and commissioned as per the specifications mentioned in the scope of work provided in Tender Notice. Interested bidders can apply on line through NIC e-procurement portal URL http://eprocure.gov.in/eprocure/app". institute's website www.niepmd.tn.nic.in.

Sd/-	Sd/-
Deputy Registrar (Admin)	Director

Date: 08th June 2023



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GENERAL TERMS & CONDITIONS:

- 1. Tender will be available on NIC e-procurement portal URL http://eprocure.gov.in/eprocure/app up to 29th June 2023.
- 2. EMD amount of Rs. 1,75,000/- should be paid online through NEFT or RTGS in NIEPMD account and payment receipt to be uploaded with tender document. Bids without EMD amount shall not be considered for further evaluation Tender received without EMD or lesser amounts will be summarily rejected. No further correspondence will be accepted on the subject.
 - (Micro, Small and Medium Enterprises (MSMEs) as defined in MSE Procurement Policy issued by Department of Micro, Small and Medium Enterprises (MSME) are exempt from submission of EMD and Tender fee. MSME certificate should be submitted to avail this exemption.)
- 3. The tender shall remain open for acceptance for 60 days from the date of opening of tenders by National Institute for the Empowerment of Persons with Multiple Disabilities (NIEPMD). The time limit for acceptance may be extended by NIEPMD at its discretion for such further period, as it may notify
- 4. Technical Bid shall consist of EMD for the required amount as per the tender documents and technical details: Leaflets / information brochures (if any) showing the technical and general details of the material offered shall also be enclosed with the technical bid, scanned copy if any, from tender specifications, clause-wise and commercial terms and conditions should be clearly mentioned in the sheet as specified. The tender form and all annexures and attachments thereto shall be submitted with this bid with each page being consecutively numbered and duly signed by the bidder along with seal of the Contractor.
- 5. Restrictions on Public procurement from countries which share a land border with India on grounds of Defense of India will be applicable with this tender. Ref: F. No.6/18/2019-PPD Min. of Finance, Dept. of exp. PPD dated 23rd July 2020 (Order No. 1&2) and any other Govt. orders on public procurements.
- 6. No alteration or amendments shall be allowed after submission and opening of the tenders.
- 7. The financial bids of technically qualified bidders only will be opened. The time and date of opening of price bids shall be intimated to the technically qualified bidders through e-procurement online.
- 8. The tender will be awarded to the technically qualified bidder with the lowest total cost (both supply and installation together).
- Bidder must submit a certificate of undertaking that he is in position to supply the materials with a credit of 30 days after clear receipt, installation, commissioning and handing over the project to NIEPMD.
- 10. The Director, NIEPMD, reserves all rights to reject any tender including of those tenderers who fail to comply with the instructions without assigning any reason what so ever and does not bind itself to accept the lowest or any specific tender. NIEPMD can also relax the conditions of the tender at the discretion of the competent authority. The decision of Director, NIEPMD in this regard shall be final and binding.
- 11. In case of any dispute arising with regards to this tender or its conclusion, the decision of the Director NIEPMD shall be final and subject to Chennai Jurisdiction.
- 12. The tendered work if awarded, is not transferable.
- 13. Tender not complying with the above conditions are liable to be rejected without any further reference.

DEFINITION

- a) The term Institute shall mean NIEPMD, Chennai.
- b) The term Bidder shall mean the bidder selected by the Institute for the supply of materials.



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SCOPE OF WORK Name of the work:

Established a surveillance system to secure the new G+7 building in its Chennai campus. This surveillance system would be securing/covering all the common areas like lobbies, corridors, terrace, lounge and all the entrances to the building.

Completion period:

Within 90 days from the date of LOA / Purchase Order.

Scope of Supply:

- 1. The Bidder has to supply all the materials as per the Bill of materials (Annexure I) and the technical specification (Annexure-II) for the establishment of complete surveillance system covering all the common areas like lobbies, corridors, terrace, lounge and all the entrances of the New Hostel Building.
- 2. Supply, installation and testing of Surveillance cameras, UTP cables and network components required for the Surveillance system for the New G+7 Building as per bill of material enclosed in the Bill of materials (Annexure I).
- 3. The installation of cameras, cables and other network components should be as per the layout approved by NIEPMD. The installation should be as per the TIA standard and all components should be labelled as per the standard.
- 4. In order to avoid usage of cameras and other network components with sub-standard quality, the brand or make of cameras and network components shall be any one make as mentioned against each item in the bill of materials Annexure-I may be supplied.
- 5. The bidder should configure the Surveillance system and integrate with the existing Surveillance system as per the requirements of NIEPMD.

Laying of OFC:

6. Excavation of trenches including clearing of roots of trees etc., up to a depth 1M and width of 0.3 M with Back filling and ramming of the soil in trenches after cable laying/placing HDPE pipe and consolidation of soil as well as disposal of the excess soil. Back filling and ramming of the soil in trenches after cable laying/placing HDPE pipe and consolidation of soil as well as disposal of the excess soil.

OFC through HDPE Pipe:

- 7. HDPE Pipe should be laid at approx. 1 M below the ground level under the earth, wherever it runs through earth. HDPE pipes should be joined with proper couplers which, and any other associated accessory required for the purpose, should be supplied with the cables. The ends of HDPE pipes should also be properly sealed. The installation/maintenance of HDPE pipes should be done using proper tools.
- 8. Wherever Road crossing is needed GI Conduits needs to be used.

Wall Clamping:

9. Proper Clamping should be provided wherever required, for the cable running on the wall and the cable should run through HDPE pipe or conduit. Clamping should be made at every 1 meter of distance by "U" clamp HDPE pipe at duct /trench inserting point should be properly fixed/ grouted.



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Documentation:

10. The bidder should submit a Blue Print/CAD after completion of installation indicating the layout of cabling network of OFC and camera positioning and installation of various devices like racks, switches, IO boxes, power points etc. for the locations as specified. Separate drawings for each floors of the individual buildings and an overall network drawing needs to be submitted.

Feruling and Labelling:

11. The bidder should make sure that all the cables are properly ferruled with identification numbers. Panduit labels to be used for labelling the patch cords. Faceplates to have neatly printed labels.

Warranty:

- 12. One year OEM warranty to be provided for Cameras (S.no: 1 to 3), Passive and Rack components (S.no: 4 to 14) and Switches (S.no: 15 to 16) in the bill of materials (Annexure I).
- 13. The bidder shall provide additional 2 years warranty over and above the 1 year for the products. (This will start after expiry of Initial warranty period. Initial warranty period will start after successful commissioning and handing over of project).
- 14. The bidder shall provide 3 year standard warranty for the Network installation from the date of commissioning of the Surveillance system.
- 15. The complete system including of hardware, networking, any software installed, OFC, UTP, STP, Power cables, hubs, switches, Cameras, Poles etc. will be under comprehensive maintenance with bidder for three years after successful completion of installation, Commissioning and date of handing over the site to institute. The defect liability period will be counted from date of handing over the completed project to NIEPMD and issuing project completion certificate to 03 Years (36 Months).



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TENDER SUBMISSION PROCESS

Interested bidder may submit their quotes by giving all the necessary documents in English or Hindi as specified. The tender must be submitted online through Central Public Procurement Portal e-procurement application only through URL: http://eprocure.gov.in/eprocure/app only. No manual bids will be entertained under any circumstances.

The Tender document attached must be direct, concise, and complete and arranged in an organized and structured manner.

To participate in online bidding process, Bidders must procure a Digital Signature Certificate as per Information Technology Act-2000 using which they can digitally sign and encrypt their electronic bids. Bidders can procure the same from any CCA approved certifying agency, i.e. TCS, Safecrypt, Ncode, eMudhra etc. Bidders who already have a valid Digital Signature Certificate (DSC) need not procure a new DSC.

NIEPMD will not be responsible for delay in online submission due to any reason. For this, bidders are requested to upload the complete bid proposal well advance in time so as to avoid issues like slow speed, choking of web site due to heavy load or any other unforeseen problems.

Bidders are also advised to refer visit any local NIC office or call CPPP 24x7 toll free number 1800-3070-223 or mobile No. 07878007972, 07878007973 for further details about the e-tendering / bidding process.

Procedure for e-payment:

EMD of Rs. 1,75,000 and Tender fee of Rs. 1,000/- should be paid online through NEFT or RTGS in NIEPMD account and payment receipt to be uploaded with technical bid. Technical bids without EMD and Tender Fee shall not be considered for further evaluation. NIEPMD Bank details are as follows:

A/C No. 761297290

Type of Account: Saving Bank

Name of Bank: Indian Bank, Kovalam Branch

IFS Code: IDIB000K122

Branch Code: 01176

Caution: Please ensure that you need to mention the correct beneficiary account number and IFSC code as mentioned above while making payment via RTGS / NEFT. In the event of funds remitted to wrong beneficiary account number, NIEPMD, Chennai or its Bank would not responsible for the same.

Micro, Small and Medium Enterprises (MSMEs) as defined in MSE Procurement Policy issued by Department of Micro, Small and Medium Enterprises (MSME) are exempt from submission of EMD and Tender fee. MSME certificate should be submitted to avail this exemption.



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Special Terms & Conditions:

- 1. The bidder should have successfully executed work of Supply, Installation & Commissioning of surveillance systems in a single order / agreement for a value not less than Rs.50,00,00/-(Rupees Fifty Lakhs Only) (or) two orders / agreements for values not less than Rs.30,00,000/- Each (Rupees Thirty Lakh Only) (or) three orders / agreements for values not less than Rs.20,00,000/- each (Rupees Twenty Lakhs Only) in the last 3 years as on the scheduled date of tender opening. Proof to be uploaded in the Technical Bid.
- 2. The applying Firm/ Company must have an annual turnover of last 03 financial years not less than 1.5 crores annually (i.e. FYs 2019-20, 2020-21 & 2021-22). Proof of certificate for turnover is required to be uploaded with the tender (CA attested certificate and copy of the balance sheet with profit and loss account should be uploaded with technical bid.)
- 3. The applying firm must be registered with GST and the supporting proof for the same is to be uploaded.
- 4. The bidder shall submit the <u>Manufacture Authorization Form (MAF) for Cameras (S.no: 1 to 3)</u>, <u>Passive and Rack components (S.no: 4 to 14) and Switches (S.no: 15 to 16)</u> only as enclosed in the bill of materials (Annexure I). <u>MAF should be provided only in the attached Format in Annexure III in the OEM's letter head</u>. Any changes to the format will be considered invalid. MAF should be provided separately for Cameras, Switch, Passive and Rack and if not provided for any one of the 4 component types, then the bid will be summarily rejected.
- 5. Manufacturer Authorisation Form to be submitted for the bid published with OEM Designation, Phone no and address details. <u>Submitted MAF will be validated with the OEM for its genuineness</u>.
- 6. The bidder must quote for all the items/services mentioned in the tender, Part/incomplete quotes shall be summarily rejected.
- 7. Bidder should have local presence in Chennai /Tamil Nadu & Document proof for 3 years presence in Tamil Nadu to provide immediate on-call support in case of any issues. Document proof to be attached. The Chennai / Tamil Nadu address will be verified by the institute for its correctness for technical qualification.
- 8. Switch, Passive and Rack OEMs should have ISO 9001:2008 & ISO 14001:2004. Document proof to be attached.
- 9. Switch, Passive and Rack OEMs should have Toll-Free number to provide immediate on-call support in case of any issues to be explicitly mentioned in MAF.
- 10. Switch, Passive and Rack OEMs should have a local Service Centre presence in Tamil Nadu for at least 3 years to provide immediate on-call support in case of any issues. Document proof for 3 years presence in Tamil Nadu to be attached.
- 11. All switching components, Passive components and Racks preferred to be from single OEM for seamless integration.
- 12. The bidder must specify item-wise compliance to the technical specifications as mentioned in the technical specification (Annexure II). The make of the quoted items must be clearly specified.
- 13. The bidder should depute network specialist for the Installation, Commissioning and configuration of the hardware equipment such as Switches as per NIEPMD requirements. The bidder should give comprehensive training on site to a group of NIEPMD staffs explaining details of the equipment operation, technical aspects, working and other necessary information to run, operate and troubleshooting.
- 14. Bidder should supply the equipment within the committed period from the date of issuing order.
- 15. Any equipment found defective will be rejected and the same shall be replaced at free of cost by the



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supplier. In case of any dispute, NIEPMD decision shall be final.

- 16. Special Tools/equipment required for successful installation & commissioning of the surveillance system shall be in the scope of the bidder.
- 17. The Contractor should observe all safety rules and regulations in force and ensure that all necessary safety precautions are followed up strictly for the safety of workers engaged in the work.
- 18. The Contractor should engage adequate man power having appropriate skills with the approval of the NIEPMD officials to carry out and complete the works. Any extra time / over time engagement of the man power shall be the contractor's responsibility. No Child labour to be deployed on work.
- 19. All pages of the tender papers should be signed, stamped and dated including the annexures and submitted online through scanned copies.
- 20. The tender received through fax / e-mail or received by post etc. will not be accepted. The parties have to ensure the uploading of bids well in time.
- 21. The total cost quoted should be exclusive of taxes. Applicable taxes to be mentioned separately. Tax applicable at the time of invoice will be paid.
- 22. The price quoted should be valid for Contract period. NIEPMD, may increase or decrease the estimated Quantity and scope of work based of its requirement.
- 23. NIEPMD reserves the right to accept / reject any bidder and to annul the bidding process of any or all bids at any time prior to award of contract without thereby incurring any liability to the affected bidders.
- 24. The tender will be appraised by committee formed by NIEPMD.
- 25. The successful bidder will be required to execute a performance security. A sum of Rs.2,00,000/(Rupees Two Lakh Only) will have to be deposited in the form of Bank Guarantee/Demand Draft
 /NEFT/RTGS on award of the tender by NIEPMD, Chennai as performance security for a period of
 Defect liability period + 02 Months).
- 26. The quality should be maintained strictly. Any deviations in the materials supplied after inspection the bidder is liable to be debarred/blacklisted from future participation in NIEPMD tenders.
- 27. The supply and installation of products shall be carried out strictly in accordance with the terms & conditions and specifications as stipulated in the tender, in the approved workman like manner and as per standard practice. Materials supplied shall be of high quality.
- 28. Payment will be released within thirty working days after the satisfactory receipt of material at NIEPMD, Chennai campus and certification by the concerned coordinator at NIEPMD and no advance payment will be entertained.
- 29. The statutory deductions like TDS, WCT, etc., as per standard norms will be made from the bills.
- 30. NIEPMD shall without prejudice to its other remedies under the contract, deduct from the Contract price, as Liquidated Damages a sum equivalent to 2.5% of the price of delayed Goods or unperformed services for delay of each day until actual delivery or performance, up to a maximum deduction of 20% of the contract price. Once the maximum is reached, NIEPMD may consider termination of the contract and can forfeit the Performance Guarantee amount.

We agree to all terms and conditions as mentioned above including the validity of the offer.



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TECHNICAL BID

(To be uploaded)

: Limited / Private Limited / Partnership / Sole proprietor / Others

1. Name and address of the bidder:

(Strike-off not applicable; others please specify)

a) Name of the bidder

c) Full postal address

b) Legal Status

	d) Email address	:		
	e) Contact number	er :		
	f) Website	:		
2.	Total annual turn-	over (value in Rupees)(Last three FYs.):		
	(Copy of Balance	Sheets Audit Statement / IT returns, etc. to b	e attached as proof)	
	Financial Year	Annual Turn-over (in lacs)		
	FY2019-20			
	FY2020-21			
	FY2021-22			
3.	Past supply details	s (as per clause 1 of Special Terms & Condi	tions):	
	(Copy of Purchase proof)	e order/Work order and Completion/Experier	ce certificate to be atta	ched as
		Customer Name	Order Value	Year
	 			



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FINANCIAL BID

(No price to be filled here for reference purpose only. BOQ available in excel sheet in e-tender to be filled up carefully and uploaded)

ESTABLISHMENT OF SURVEILLANCE SYSTEM FOR NEW BUILDING IN NIEPMD, CHENNAI

	Surveillance Syste	em Supply		
S.No	Description	Qty.	Rate	Amount
1	IP Dome Camera as per technical specification	90 Nos		
2	IP Bullet Camera as per technical specification	56 Nos		
3	32 Channel NVR as per technical specification	4 Nos		
4	Category 6 4 pair UTP Cable 305m as per technical specification	40 Box		
5	Category 6 UTP Patch Cord 1 Meter as per technical specification	146 Nos		
6	Category 6 24 Port Unloaded Patch Panel as per technical specification	9 Nos		
7	Category 6 Information outlet for Rack Side as per technical specification	146 Nos		o be filled up
8	RJ45 Connector	150 Nos	in excel BO e- tender	Q available with
9	6 Core SM Outdoor Fiber Optic Cable as per technical specification	500 Mtrs		
10	12 port LIU LC - LC as per technical specification	9 Nos		
11	SM 2mtr LC to LC fiber patch cable as per technical specification	16 Nos		
12	SM 2mtr SC to LC fiber patch cable as per technical specification	1 Nos		
13	Gigabit Media Convertor	1 Nos		



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14	9U Rack as per technical specification	8 Nos	
15	24 Port Gigabit POE Switch With 4 SFP Slots as per technical specification	9 Nos	
16	Single Mode SFP Module as per technical specification	36 Nos	
17	Camera Box	146 Nos	No price to be filled up
18	25mm HDPE pipe for encapsulating the fiber cable	450 Mtrs	here. Price to be filled up in excel BOQ available with e- tender
19	25mm GI conduit for encapsulating the fiber cable while crossing Road	75 Mtrs	
20	25mm PVC pipe with required bends and accessories	2600 Mtrs	
21	32mm PVC pipe with required bends and accessories	1400 Mtrs	
22	8TB Surveillance HDD	16 Nos	

	Installation & Commissioning Charges					
S.No	Description	Qty.	Rate	Amount		
1	IP Dome Camera Installation	90 Nos				
2	IP Bullet Camera Installation	56 Nos	No price to be filled up here. Price to be filled up			
3	32 Channel NVR Installation	4 Nos				
4	Category 6 4 pair UTP Cable 305m Laying	40 Box				
5	Category 6 24 Port Patch Panel Termination	9 Nos	in excel BO	Q available with		
6	RJ45 Connector Fixing	150 Nos	e- tender			
7	9U Rack Fixing	8 Nos				
8	6 Core Single Mode Outdoor Fiber Optic Cable Laying	500 Mtrs				



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9	12 Port LIU OFC Splicing	9 Nos	
10	Gigabyte Media Convertor Installation	1 Nos	
11	Road Cutting (Depth 1m; Width 0.3m)	75 Mtrs	
12	Soft Soil Digging (Depth 1m; Width 0.3m)	450 Mtrs	
13	24 Port Gigabit POE Switch With 4 SFP Slots Installation	9 Nos	No price to be filled up here. Price to be filled up
14	Single Mode SFP Module Installation	36 Nos	in excel BOQ available with e- tender
15	Camera Box Fixing	146 Nos	
16	25mm HDPE pipe Laying	450 Mtrs	
17	25mm GI Conduit Laying	75 Mtrs	
18	25mm PVC Pipe Laying	2600 Mtrs	
19	32mm PVC Pipe Laying	1400 Mtrs	
20	Project Testing, Management, Documentation (CAD Network drawing for each floor of individual buildings and for overall campus)	1 LS	

Signature and seal of the bidder



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CHECK LIST

The Technical Bid shall be summarily rejected, if these documents are not uploaded. Documents must be uploaded in following serial order only. All Documents must be signed and sealed by the Authorized person of the bidder.

S. No.	Particulars	Type of document	Yes/No
1.	Signed and sealed copy of the TECHNICAL BID with Name, address & telephone number of the bidder (as mentioned in "TECHNICAL BID" section)	As per format	
2.	Authorization letter with Name, designation, address & telephone number of the authorized person	Certification Letter	
3.	Name, address & telephone number of Directors / Partners, e-mail address	Certification Letter	
4.	Receipt for EMD payment of Rs. 1,75,000/- (Rupees One Lakh Seventy Five Thousand Only) to be uploaded. (attach MSME certificate for exemption)	Proof	
5.	Firm / Company Registration certificate (Copy to be uploaded)	Proof	
6.	Undertaking by the bidder to be uploaded stating that the firm / company has not been black listed by any Central Govt. / State Govt. / PSU agencies.	Undertaking Letter	
7.	Undertaking by the bidder to be uploaded that they have read and understand all the term and conditions mentioned in the tender document.	Undertaking Letter	
8.	Copy of appropriate PAN Card and GST Registration	Proof	
9.	Undertaking to supply on credit of 30 days after clear receipt of materials. (Self-Certificate on company letter head to be uploaded)	Undertaking Letter	
10.	Copy of Income Tax Return of the firm/company/agency (Individual in case sole proprietary firm) for last 03 financial years.	Proof	
11.	Certified copies of balance sheets along with profit & loss account of the bidder in support of 3 years annual financial turnover, The applying Firm/ Company must	Proof	



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	have an annual turnover of last 03 financial years not less than (Annually) Rs. 1.8 crores (i.e. FY2019-20, FY2020-21, FY2021-22).	
12.	Copy of Purchase order/Work order and Completion/Experience certificate for Supply, Installation & Commissioning of surveillance systems in a single order / agreement for a value not less than Rs.28,00,00/-(Rupees Twenty Eight Lakhs Only) (or) two orders / agreements for values not less than Rs.17,50,00/-(Rupees Seventeen Lakhs and Fifty Thousand Only) (or) three orders / agreements for values not less than Rs.14,00,00/-(Rupees Fourteen Lakhs Only), in the last 3 years as on the scheduled date of tender opening	Proof
13.	Address of the office at Chennai / Tamilnadu	Proof
14.	Proof for Bidder's 3 years presence in Tamil Nadu	Proof
15.	Proof of OEMs service Centers in Chennai / Tamilnadu	Proof
16.	Manufacture Authorization Form (MAF) for <u>Cameras</u> strictly in the format mentioned in Annexure – III in OEM's letter head. (Any changes to the format will be considered invalid)	Certification Letter
17.	Manufacture Authorization Form (MAF) for <u>Passive</u> components (CAT6 and Fiber related components) strictly in the format mentioned in Annexure – III in OEM's letter head. (Any changes to the format will be considered invalid)	Certification Letter
18.	Manufacture Authorization Form (MAF) for <u>Racks</u> strictly in the format mentioned in Annexure – III in OEM's letter head. (Any changes to the format will be considered invalid)	Certification Letter
19.	Manufacture Authorization Form (MAF) for <u>Switches</u> strictly in the format mentioned in Annexure – III in OEM's letter head. (Any changes to the format will be considered invalid)	Certification Letter
20.	Provide proof for 3 years' Service center presence in Tamil Nadu for the Switch, Passive and Rack OEMs (individually)	Proof
21.	Copy of ISO 9001:2008 & ISO 14001:2004 for the Switch, Passive and Rack OEMs (individually)	Proof



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22.	Signed and sealed copy of the FINANCIAL BID (as mentioned in "FINANCIAL BID" section)	As per format	
23.	Signed and sealed copy of the Technical Specification with compliance details filled for all the line items (as mentioned in Annexure - II section)	As per format	
24.	Copy of NIT duly signed and stamped by the bidder on all pages must be uploaded as agreement of understanding of all the terms and conditions mentioned in NIT.	Signed & Sealed Document	
25.	Any other document, information, deceleration, or undertaking asked in NIT (Pl. read the NIT document carefully. Non submission of information asked in NIT may lead to rejection of bid.)	Proof	
26.	Photocopy of valid NSIC/SSI/DGS&D/MSME/Make in India/Startup India Registration Certificate / Review Certificate to be uploaded in case of claiming Tender Fees, EMD exemption. (Original copies may be verified during technical evaluation.)	Proof	



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ANNEXURE - I

	Bill of Materials		
	Surveillance System Supply		
S.No.	Description	Qty	UOM
	nical specifications provided in Annexure II		
Came			
1	IP Dome Camera as per technical specification Make: Hikvision, Pelco, Axis, Bosch, Honeywell	90	Nos
2	IP Bullet Camera as per technical specification Make: Hikvision, Pelco, Axis, Bosch, Honeywell	56	Nos
3	32 Channel NVR as per technical specification Make: Hikvision, Pelco, Axis, Bosch, Honeywell	4	Nos
Dancis			1
Passiv	re and Rack components		
4	Category 6 4 pair UTP Cable 305m as per technical specification	40	Box
	Make: D-Link, Commscope, Systimax, AMP, R&M Category 6 UTP Patch Cord 1 Meter as per technical		
5	specification	146	Nos
5	Make: D-Link, Commscope, Systimax, AMP, R&M	140	
	Category 6 24 Port Unloaded Patch Panel as per technical		
6	specification	9	Nos
U	Make: D-Link, Commscope, Systimax, AMP, R&M	9	1105
	Category 6 Information outlet for Rack Side as per technical		
7	specification	146	Nos
,	Make: D-Link, Commscope, Systimax, AMP, R&M	140	1403
	RJ45 Connector		
8	Make: D-Link, Commscope, Systimax, AMP, R&M	150	Nos
	6 Core SM Outdoor Fiber Optic Cable as per technical		
9	specification	500	Mtrs
Ū	Make: D-Link, Commscope, Systimax, AMP, R&M		171610
4.0	12 port LIU LC - LC as per technical specification		
10	Make: D-Link, Commscope, Systimax, AMP, R&M	9	Nos
	SM 2mtr LC to LC fiber patch cable as per technical		
11	specification	16	Nos
	Make: D-Link, Commscope, Systimax, AMP, R&M		
	SM 2mtr SC to LC fiber patch cable as per technical		
12	specification	1	Nos
	Make: D-Link, Commscope, Systimax, AMP, R&M		
40	Gigabit Media Convertor		N1 -
13	Make: D-Link, Commscope, Systimax, AMP, R&M	1	Nos
4.4	9U Rack as per technical specification	0	NI
14	Make: D-Link, Netrack, APC, President, Valrack	8	Nos



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Switc	hes		
15	24 Port Gigabit POE Switch With 4 SFP Slots as per technical specification Make: D-Link, Aruba, Cisco, Juniper, Linksys	9	Nos
16	Single Mode SFP Module as per technical specification Make: D-Link, Aruba, Cisco, Juniper, Linksys	36	Nos
PVC a	and Conduits		
17	Camera Box Make : ISI Branded	146	Nos
18	25mm HDPE pipe for encapsulating the fibre cable Make: ISI Branded	450	Mtrs
19	25mm GI conduit for encapsulating the fibre cable while crossing Road Make: ISI Branded	75	Mtrs
20	25mm PVC pipe with required bends and accessories Make: ISI Branded	2600	Mtrs
21	32mm PVC pipe with required bends and accessories Make: ISI Branded	1400	Mtrs
Other	'S		
22	8TB Surveillance HDD Make: Western Digital, SanDisk, Seagate, Toshiba, Hikvision	16	Nos

	Installation & Commissioning Charges		
S.No.	Description	Qty	UOM
Camer	as		
1	IP Dome Camera Installation	90	Nos
2	IP Bullet Camera Installation	56	Nos
3	32 Channel NVR Installation	4	Nos
CATC	and Dealt commonants		
	and Rack components		
4	Category 6 4 pair UTP Cable 305m Laying	40	Box
5	Category 6 24 Port Patch Panel Termination	9	Nos
6	RJ45 Connector Fixing	150	Nos
7	9U Rack Fixing	8	Nos
OEC a	nd related components		
8	6 Core Single Mode Outdoor Fiber Optic Cable Laying	500	Mtrs
9	12 Port LIU OFC Splicing	9	Nos
10	Gigabyte Media Convertor Installation	1	Nos
11	Road Cutting	75	Mtrs
12	Soft Soil Digging	450	Mtrs



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Switc	Switches					
13	24 Port Gigabit POE Switch With 4 SFP Slots Installation	9	Nos			
14	Single Mode SFP Module Installation	36	Nos			
PVC a	and Conduits					
15	Camera Box Fixing	146	Mtrs			
16	25mm HDPE pipe Laying	450	Mtrs			
17	25mm GI Conduit Laying	75	Mtrs			
18	25mm PVC Pipe Laying	2600	Mtrs			
19	32mm PVC Pipe Laying	1400	Mtrs			
Other	S		•			
20	Project Testing, Management, Documentation	1	LS			



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<u>Annexure – II</u>

Technical Specifications / Compliance

(The following Technical Specifications Compliance shall be furnished and signed copy to be submitted by all bidders)

1.	I۲	Dome	Camera	

Quoted Make: _____

Make: Hikvision, Pelco, Axis, Bosch, Honeywell

S.No	Description	Minimum Specification	Compliance
			(Yes/No)
1	Megapixel resolution	5 MP	
2	Lens Type	Vari-Focal Motorized Lens	
3	Image sensor	1/2.7" Progressive Scan CMOS	
4	Focal Length & FOV	2.7 to 13.5 mm: horizontal FOV 103° to 32°, vertical FOV 73° to 24°, diagonal FOV 142° to 40°	
Illumi	nator		
5	IR Range	2.7 to 13.5 mm: up to 60 m	
6	Min. Illumination	Color: 0.003 Lux @ (F1.4, AGC ON), B/W: 0 Lux with IR	
7	Streaming Support	Four Streaming	
8	Angle Adjustment	Pan: 0° to 360°, tilt: 0° to 90°, rotate: 0° to 360°	
9	Video analytics	Motion detection, video tampering alarm, exception	
Video			
10	Max. Resolution	2592 × 1944	
11	Main Stream	50 Hz: 25 fps (2592 × 1944, 2688 × 1520, 1920 × 1080, 1280 × 720)	



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S.No	Description	Minimum Specification	Compliance
			(Yes/No)
12	Sub-Stream	50 Hz: 25 fps (640 × 480, 640 × 360)	
13	Third Stream	50 Hz: 10 fps (1920 × 1080, 1280 × 720, 640 × 480, 640 × 360)	
14	Fourth Stream	50 Hz: 10 fps (1280 × 720, 640 × 480, 640 × 360)	
15	Region of Interest (ROI)	5 fixed regions for main stream and substream	
16	General Function	Anti-flicker, heartbeat, mirror, privacy mask, flash log, password reset via email, pixel counter	
17	Resolutions and frame rates	Main stream: H.265/H.264/H.264+/H.265+ Sub-stream: H.265/H.264/MJPEG Third stream: H.265/H.264 Fourth stream: H.265/H.264/MJPEG *Third stream and fourth stream are supported under certain settings.	
Audio	•		
18	Environment Noise Filtering	Yes	
19	Audio Sampling Rate	8 kHz/16 kHz/32 kHz/44.1 kHz/48 kHz	
20	Audio Compression	G.711ulaw/G.711alaw/ G.722.1/G.726/MP2L2/ PCM/MP3/AAC	
21	Audio Bit Rate	64 Kbps (G.711ulaw/G.711alaw)/16 Kbps (G.722.1)/16 Kbps (G.726)/32 to 192 Kbps (MP2L2)/8 to 320 Kbps (MP3)/16 to 64 Kbps (AAC)	
22	Protocol Support	TCP/IP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, RTSP, NTP, UPnP, SMTP, IGMP, 802.1X, QoS, IPv4, IPv6, UDP, SSL/TLS, PPPoE, ARP, SNMP,	
23	Environment Protection	IP67, IK10	
24	Day and Night	IR cut filter	



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S.No	Description	Minimum Specification	Compliance
			(Yes/No)
25	Electronic Shutter	1/3 s to 1/100,000 s	
26	On Screen Display	Should support OSD of Camera Name, Time, Date, Location Name, etc.	
27	Video Compression	H.264, H.265 or better	
28	Viewing/configuration	Support IE Browser/VMS/NVR and IOS/Android/windows	
Netwo	ork		
29	Interface	Minimum 1 RJ45 Port	
30	Network Storage	MicroSD/SDHC/SDXC card (256 GB) local storage, and NAS (NFS, SMB/CIFS), auto network replenishment (ANR)	
Image	•		
31	SNR	≥ 52 dB	
32	Image Enhancement	BLC, HLC, 3D DNR	
33	Image Settings	Rotate mode, saturation, brightness, contrast, sharpness, gain, white balance adjustable by client software or web browser	
Interfa	ace		
34	Alarm	2 inputs, 2 outputs (max. 24 VDC/24 VAC, 1 A)	
35	Audio	1 input (line in), two-core terminal block, max. input amplitude: 3.3 Vpp, input impedance: 4.7 K Ω , interface type: non-equilibrium; 1 output (line out), two-core terminal block, max. output amplitude: 3.3 Vpp, output impedance: 100 Ω , interface type: non-equilibrium	
36	On-Board Storage	Built-in micro SD/SDHC/SDXC slot, up to 256 GB	



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S.No	Description	Minimum Specification	Compliance
			(Yes/No)
Event			
37	Basic Event	Motion detection (human and vehicle targets classification), video tampering alarm, exception	
38	Smart Event	Unattended baggage detection, object removal detection, scene change detection, audio exception detection	
Deep	Learning Function		
39	Face Capture	Yes	
40	Perimeter Protection	Line crossing detection, intrusion detection, region entrance detection, region exiting detection	
41	Hardware Reset	Yes	
42	POE	Internal 802.3af POE Support	
43	ONVIF compliance	ONVIF Profile S compliant	
44	Startup and Operating Temperature	-30 to 60°C, or better, Humidity: 95% or less (non-condensing)	
45	Mounting	Vertical Pole Mount, Corner Mount, Vertical Pole Mount	
46	IRIS	Auto-iris	
47	WDR	120 dB	
48	Camera Material	Aluminium alloy body	
49	General Certification	CE, FCC, BIS	



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2. IP Bullet Camera

Make: Hikvision	, Pelco,	Axis,	Bosch,	Honeywel
Quoted Make:				

S.No	Description	Minimum Specification	Compliance
			(Yes/No)
1	Megapixel resolution	5 MP	
2	Lens Type	Vari-Focal Motorized Lens	
3	Image sensor	1/2.7" Progressive Scan CMOS	
4	Focal Length & FOV	2.7 to 13.5 mm: horizontal FOV 103° to 32°, vertical FOV 73° to 24°, diagonal FOV 142° to 40°	
Illuminato	r		
5	IR Range	2.7 to 13.5 mm: up to 60 m	
6	Min. Illumination	Color: 0.003 Lux @ (F1.4, AGC ON), B/W: 0 Lux with IR	
7	Streaming Support	Four Streaming	
8	Angle Adjustment	Pan: 0° to 360°, tilt: 0° to 90°, rotate: 0° to 360°	
9	Video analytics	Motion detection, video tampering alarm, exception	
Video			
10	Max. Resolution	2592 × 1944	
11	Main Stream	50 Hz: 25 fps (2592 × 1944, 2688 × 1520, 1920 × 1080, 1280 × 720)	
12	Sub-Stream	50 Hz: 25 fps (640 × 480, 640 × 360)	
13	Third Stream	50 Hz: 10 fps (1920 × 1080, 1280 × 720, 640 × 480, 640 × 360)	
14	Fourth Stream	50 Hz: 10 fps (1280 × 720, 640 × 480, 640 × 360)	



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	Pagion of Interest (POI)	E fixed regions for main stream and	
15	Region of Interest (ROI)	5 fixed regions for main stream and sub-stream	
16	General Function	Anti-flicker, heartbeat, mirror, privacy mask, flash log, password reset via email, pixel counter	
17	Resolutions and frame rates	Main stream: H.265/H.264/H.264+/H.265+ Sub-stream: H.265/H.264/MJPEG Third stream: H.265/H.264 Fourth stream: H.265/H.264/MJPEG *Third stream and fourth stream are supported under certain settings.	
Audio			
18	Environment Noise Filtering	Yes	
19	Audio Sampling Rate	8 kHz/16 kHz/32 kHz/44.1 kHz/48 kHz	
20	Audio Compression	G.711ulaw/G.711alaw/ G.722.1/G.726/MP2L2/ PCM/MP3/AAC	
21	Audio Bit Rate	64 Kbps (G.711ulaw/G.711alaw)/16 Kbps (G.722.1)/16 Kbps (G.726)/32 to 192 Kbps (MP2L2)/8 to 320 Kbps (MP3)/16 to 64 Kbps (AAC)	
22	Protocol Support	TCP/IP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, RTSP, NTP, UPnP, SMTP, IGMP, 802.1X, QoS, IPv4, IPv6, UDP, SSL/TLS, PPPoE, ARP, SNMP,	
23	Environment Protection	IP67, IK10	
24	Day and Night	IR cut filter	
25	Electronic Shutter	1/3 s to 1/100,000 s	
26	On Screen Display	Should support OSD of Camera Name, Time, Date, Location Name, etc.	
27	Video Compression	H.264, H.265 or better	
28	Viewing/configuration	Support IE Browser/VMS/NVR and IOS/Android/windows	



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Networl	K		
29	Interface	Minimum 1 RJ45 Port	
30	Network Storage	MicroSD/SDHC/SDXC card (256 GB) local storage, and NAS (NFS, SMB/CIFS), auto network replenishment (ANR)	
Image			
31	SNR	≥ 52 dB	
32	Image Enhancement	BLC, HLC, 3D DNR	
33	Image Settings	Rotate mode, saturation, brightness, contrast, sharpness, gain, white balance adjustable by client software or web browser	
Interfac	е		
34	Alarm	2 inputs, 2 outputs (max. 24 VDC/24 VAC, 1 A)	
35	Audio	1 input (line in), two-core terminal block, max. input amplitude: 3.3 Vpp, input impedance: 4.7 KΩ, interface type: non-equilibrium; 1 output (line out), two-core terminal block, max. output amplitude: 3.3 Vpp, output impedance: 100 Ω, interface type: non-equilibrium	
36	On-Board Storage	Built-in micro SD/SDHC/SDXC slot, up to 256 GB	
Event			
37	Basic Event	Motion detection (human and vehicle targets classification), video tampering alarm, exception	
38	Smart Event	Unattended baggage detection, object removal detection, scene change detection, audio exception detection	
Deep Le	earning Function	· ·	



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39	Face Capture	Yes	
40	Perimeter Protection	Line crossing detection, intrusion detection, region entrance detection, region exiting detection	
41	Hardware Reset	Yes	
42	POE	Internal 802.3af POE Support	
43	ONVIF compliance	ONVIF Profile S compliant	
44	Startup and Operating Temperature	-30 to 60°C, or better, Humidity: 95% or less (non-condensing)	
45	Mounting	Vertical Pole Mount, Corner Mount, Vertical Pole Mount	
46	IRIS	Auto-iris	
47	WDR	120 dB	
48	Camera Material	Aluminium alloy body	
49	General Certification	CE, FCC, BIS	

3. 32 Channel NVR

Make: Hikvision, Pelco, Axis, Bosch, Honeywell

S.No	Description	Minimum Specification	Compliance (Yes/No)
1	Channels	32 Channels	
2	Storage	4 SATA hard drives support up to 10 TB	
3	Throughput	Incoming Bandwidth - 256 Mbps; Outgoing Bandwidth - 256 Mbps	
4	Resolution	Support 12 MP Resolution	



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S.No	S.No Description Minimum Specification		Compliance
			(Yes/No)
5	Video compression	H.264, H. 265 or better	
6	Interface	2 RJ-45 10/100/1000 Mbps self- adaptive Ethernet interface, Serial Port - RS-485 (full-duplex), RS-232, Keyboard,1 eSATA interface,	
7	Alarm in/out	16/4	
8	USB interface	Front panel: 2 x USB 2.0; Rear panel: 1 x USB 3.0	
9	Network protocol	TCP/IP, DHCP, IPv4, IPv6, DNS, DDNS, NTP, RTSP, SADP, SMTP, SNMP, NFS, iSCSI, ISUP, UPnP™, HTTP, HTTPS	
10	ONVIF compliance	ONVIF version 2.4 or better and ONVIF Profile G, S compliant	
11	Backup file format	Should be viewable in VLC and Windows Media Player or equivalent	
12	Backup Mode	Media, External Hard disk Pen drive Should be able to back up the video file based on the date and time duration	
13	Operating Temperature	(-)10 °C to 55 °C (14 °F to 131 °F)	
14	Power Supply	100 to 240 VAC, 50 to 60 Hz	
15	Playback Function	Play, Pause, Stop, Rewind, Fast play, Slow Play, Full Screen	
16	Record Mode	Manual, Schedule (Regular/ Continuous), Motion Detection, Line Crossing, Perimeter Intrusion	
17	OSD	Camera title, Time, Motion detection,	
18	Monitoring and Playback	16 Channels synchronous Playback	
19	Search Mode	Time /Date, Motion detection, record type, record time	



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S.No	Description	Minimum Specification	Compliance
			(Yes/No)
20	Encryption	Should support Encrypted recording from IP Camera to NVR	
21	Certification	CE, FCC,BIS	

4. Category 6 4 pair UTP Cable 305m

Make: D-Link, Commscope, Systimax, AMP, R&M

S.No	Description	Minimum Specification	Compliance
			(Yes/No)
1		Category 6 Unshielded Twisted Pair 4 pair cable shall be compliant with ANSI/TIA-568.2-D Cat6 and ISO/IEC 11801-1 Class E with 4-connector channel	
2	Features	Category 6 UTP cables shall extend between the work area location and its associated telecommunications closet and consist of 4 pair, 23 AWG, UTP.	
3		Third party verified by Intertek Testing Services (ETL) ETL verified electrical transmission performance to the requirements of ANSI/TIA-568.2-D Cat6 and ISO/IEC 11801-1Class E with 4-connector channel	
4		All Category 6 cables shall meet or exceed the following characteristics:	
	Me	chanical Characteristics	
5	Construction	4 twisted pairs separated by internal X shaped, 4 channel, full separator. Half shall not be accepted.	
6	Conductor diameter	23 AWG	
7	Insulation	High density Polyethylene	
8	Pairing	Twisted into two core	



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S.No	Description	Minimum Specification	Compliance
			(Yes/No)
9	No. of Pair	4 Pair twisted together	
10	Jacket Material	FR-PVC	
11	Color of sheath	Grey	
12	Rip Cord	Yes	
13	Sequential meter marking	Yes	
14	Temperature Rating	(- 20 to +70 C)	
15	Filler Required	Yes	
16	Packing	305 Mtrs.	
17	Flame Properties	Flammability Test – IEC 60332-1	
18	Certification	UL Listed & ETL verified electrical transmission performance to the requirements of ANSI/TIA-568.2-D Cat6 and ISO/IEC 11801-1Class E with 4-connector channel	

5. Category 6 UTP Patch Cord 1 Meter

Make: D-Link, Commscope, Systimax, AMP, R&M

S.No	Description	Minimum Specification	Compliance
			(Yes/No)
1	Features	Category 6 Equipment cords – 1Mtr	
2		Patch cord should be ETL VERIFIED TO ANSI/TIA-568.2-D CATEGORY 6	
3		Equipped with modular 8-position modular plugs on both ends, wired straight through with standards compliant wiring.	



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S.No	Description	Minimum Specification	Compliance
			(Yes/No)
4		Conductor size: 24 AWG stranded bare copper	
5	Mechanical	Outer diameter: 6.0mm+/-0.2mm nominal	
6	Characteristics	Jacket: FR-PVC	
7		Operating life: Minimum 750 insertion cycles	
8		Contact blade: Copper Alloy	
9	RJ-45 Plug and Boot Material	Clear Polycarbonate for RJ-45 plug & Clear PVC for Boot	
10	Flame Properties	Flammability Test – IEC 60332-1	
11	Bending Radius	4 X Cable Diameter	
12	Certification	ETL verified electrical transmission performance to the requirements of ANSI/TIA-568.2-D Cat6 and ISO/IEC 11801-1Class E with 4-connector channel	

6. Category 6 24 Port Unloaded Patch Panel

Make: D-Link, Commscope, Systimax, AMP, R&M

S.No	Description	Minimum Specification	Compliance (Yes/No)
1	Panel	SPCC, 1.5MM thickness with black colour	
2	D145.1	Housing: PBT+ Glass Fiber, UL94V-0 rated	
3	RJ 45 Jack	Operating Life: Minimum 750 insertion cycles	
4	IDC Connector	Plastic Housing: Polycarbonate, UL94V-0 rated	



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S.No	Description	Minimum Specification	Compliance
			(Yes/No)
5		IDC Contact Plating: Phosphor bronze with tin plated	
6	Standards	ISO/IEC 60603-7, ISO/IEC 11801, ANSI/TIA-568. C. 2, FCC PART 68, Subpart F.	
7		Safety Rating: UL 1863	
8	Cable Manager	19 " Rank Mountable, Metallic high Strength & 1 U height.	
9	Tomporaturo Pango	Operating Temperature: -10°C t0 60°C	
10	Temperature Range	Storage Temperature: -40°C to 70 °C	
11	Certification	UL Listed & ETL verified electrical transmission performance to the requirements of ANSI/TIA-568.2-D Cat6 and ISO/IEC 11801-1Class E with 4-connector channel	

7. Category 6 Information outlet for Rack Side

Make: D-Link, Commscope, Systimax, AMP, R&M

S.No	Description	Minimum Specification	Compliance (Yes/No)
1		Housing: Polycarbonate, UL94V-2 rated With Optional Color	
2	RJ 45 Jack	Contact Material: Phosphor Bronze with Nickel plated	
3		Contact Plating: 50 micro-inch Gold plated on plug contact area	
4		Insertion Cycle: Minimum 750 insertion cycles	
5	IDC Connector	Housing: Polycarbonate, UL94V-2rated	
6		IDC Contact Plating: Phosphor bronze with tin plated	



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S.No	Description	Minimum Specification	Compliance
			(Yes/No)
7		IDC CAP: Polycarbonate, UL 94V-2	
8		IDC Life: 200-times min.	
9		Wire Accommodation: 22-24 AWG standard and solid wire	
10	Standards	ISO/IEC 11801, ANSI/TIA-568. C. 2, ISO/IEC 60603-7	
11	Tomporaturo Pango	Operating Temperature: -10°C t0 60°C	
12	Temperature Range	Storage Temperature: -40°C to 70 °C	
13	Certification	UL Listed & ETL verified electrical transmission performance to the requirements of ANSI/TIA-568.2-D Cat6 and ISO/IEC 11801-1Class E with 4-connector channel	

8. 6 Core SM Outdoor Fiber Optic Cable

Make: D-Link,	Commscope,	Systimax,	AMP,	R&M
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S.No	Description	Minimum Specification	Compliance (Yes/No)
1		6 core OS2 Fiber	
2		Corrugated Steel Tape Armour	
3	Specification	The fiber is optimized for operation at 1310 nm and at 1550 nm.	
4		Germanium doped core with no phosphorus i.e. reduced tendency for hydrogen degradation.	
5		UV-curable dual layer acryl ate coating, which ensures excellent micro bending and abrasion resistance.	
6		Attenuation (of cable with fibers): At 1310 nm <= 0.36 dB/km At 1550 nm <= 0.22 dB/km	



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S.No	Description	Minimum Specification	Compliance
			(Yes/No)
7		Central Loose Tube With Jelly filled	
8		Glass Yarn between Steel Tape and Loose Tube	
9		Should fulfil the requirements of: IEC 793-2: 1992 EN 188101 ITU-T Recommendation G.652	
10		ITU-T G.652.D	
11	Testing methods are in accordance with the following standards	IEC 793-1	
12	5	EN 188 000	

9.	12	port	LIU	LC -	- LC
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Make: D-Link, Commscope,	Systimax,	AMP,	R&M
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Quoted Make:

S.No	Description	Minimum Specification	Compliance
			(Yes/No)
1		12 port Loaded LIU accommodate Duplex LC Single mode adapters.	
2	Specification	Cold steel base material with powder coating. Aluminium top and front cover for light mounting	
3	Specification	Removable Top & Front cover for better access to interior of LIU	
4		Rubber grommet allow for pre- terminated fiber trunk installation to protect cable and minimize dust build-up	



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10. SM 2mtr LC to LC fiber patch cable

Make: D-Link,	Commscope,	Systimax,	AMP,	R&M
Make: D-Link,	Commscope,	Systimax,	AMP,	R&M

Quoted Make:	

S.No	Description	Minimum Specification	Compliance
			(Yes/No)
1	Fiber cable	Optical fiber patch leads should comprise of Single mode 9/125µm fiber with LC-LC fiber connectors terminated at each end.	
2	Mode	Single mode	
3	Ferrule	Zirconia ceramic ferrule	
4	Ferrule	Pre-radiuses and pre-polished ferrule	
5	Туре	Duplex Type	
6	Colour	Yellow	

11. SM 2mtr SC to LC fiber patch cable

Make: D-Link	Commscope,	Systimax,	AMP,	R&M
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S.No	Description	Minimum Specification	Compliance
			(Yes/No)
1	Fiber cable	Optical fiber patch leads should comprise of Single mode 9/125µm fiber with SC-LC fiber connectors terminated at each end.	
2	Mode	Single mode	
3	Forrulo	Zirconia ceramic ferrule	
4	Ferrule	Pre-radiuses and pre-polished ferrule	
5	Туре	Duplex Type	



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S.No	Description	Minimum Specification	Compliance (Yes/No)
6	Colour	Yellow	

12. 9U Rack

	Make: D)-Link.	Netrack.	APC.	President,	Valrack
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S.No	Description	Minimum Specification	Compliance
			(Yes/No)
1	Dimension	Wall Mount 9U x 550 W x 500 D	
2	Loading capacity	35KG ± 10% or better Loading capacity	
3	Front Door	Toughened Glass door with Lock and Key	
4	Cabinet Material	Powder coated CRCA sheet	
5	Power Distribution Unit	PDU 6 socket 5AMP - 1Nos	
6	Cable Manager	1U Horizontal Cable Manager - 1No	
7	General	19"Adjustable rails in the front and rear, Top and bottom cable entry facility, Hardware Screw pocket included	
8	Fan	Roof Mounted Fan Unit 90 CFM - 1No	
9	Certification	UL Certified	



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13. 24 Port Gigabit POE Switch With 4 SFP Slots

Make: [D-Link,	Aruba,	Cisco,	Juniper,	Linksys
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S.No	Description Minimum Specification		Compliance
			(Yes/No)
1	Number of Ports	24 X RJ-45 Gigabit Ethernet PoE Ports 4 X SFP+ 10G Ports	
2	Ethernet	Should support IEEE 802.3az Energy Efficient Ethernet.	
3	Switching Capacity	128 Gbps or more	
4	Packet Forwarding rate	95 Mpps or more	
5	MAC Address Table	16K or more	
5	Hardware Specification	Should be standard 19 inch 1U rack mountable	
6		Switch should delivered 802.3at PoE+ and 802.3af PoE power to any of the RJ-45 ports.	
7		The total power available for PoE switch should be 370W or higher.	
8		Switch should have RJ-45 console port for CLI management.	
9		Operating temperature should be -5 degree Celsius to +50 degree Celsius.	
10		Certification: CE, FCC and UL.	
11		Should support Head of Line blocking prevention for lower latency and better performance.	
12	Software Specification	Support Jumbo Frame up to 11K Bytes or higher.	
13		Should support IGMP V1/v2/v3 Snooping, Able to create 250 or more IGMP groups, IGMP snooping querier and require support for IGMP Snooping Fast Leave.	
14		Should support MLD Snooping, Able to create 250 or more MLD groups, Per	



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S.No	Description	Minimum Specification	Compliance (Yes/No)
		VLAN MLD Snooping and require support for MLD Snooping Fast Leave.	(165/110)
15		Should have 802.1D STP, 802.1w RSTP and 802.1s MSTP Spanning Tree Protocol.	
16		Should have STP Root Restriction.	
17		Should support Loopback detection (LBD) to detect the loop created by a specific port.	
18		Should support Multicast Filtering to filters or forward all unregistered groups.	
19		Switch should support IEEE 802.1Q VLAN tagging for Ethernet frames.	
20		Different type of VLAN like Port based, Auto Surveillance, Auto Voice, etc. should be available for configuration.	
21		Switch should support QoS (quality of service) IEEE 802.1P for traffic prioritization. It should support 8 queues per port.	
22		Different type of QoS priority like Strict Priority Queue and Weighted Round Robin.	
23		Port based ingress / egress rate limit function should be available with limit in increments as low as 16 Kbps.	
24		Switch should support Neighbour Discovery (ND) protocol for IPv6.	
25		Switch should support at least 4 nos. IPv4 / IPv6 IP Interfaces.	
26		Should support default routing and static routing with minimum 100 IPv4 static route entries and minimum 50 IPv6 static route entries.	
27		Support at least 700 access control entries. Each entry should be applied on single / multiple ports with permit / deny action.	
28		Should support port security to secure the access port based on MAC address.	



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S.No	Description	Minimum Specification	Compliance
			(Yes/No)
29		Should have broadcast, multicast, and unicast storm control to prevent faulty end stations from degrading overall systems performance.	
30		Support Traffic Segmentation to restricted traffic flow from a single or group of ports, to another group of ports.	
31		Should have SSH and TLS.	
32		Require prevention of DoS attacks, which include Land, Blat, Null Scan, Xmas Scan and SYNFIN.	
33		Should support 802.1X port based authentication.	
34		Should support ARP spoofing prevention.	
35		Should support DHCP snooping and DHCP server screening.	
36		Switch should able to create a binding table for IP + MAC + Port to prevent a malicious user from spoofing or to restrict the unauthorized users.	
37		Should support 802.1X RADIUS and local server database authentication.	
38		Should have option to check the status of copper cables using the cablediagnostics time domain reflectometer (TDR).	
39		Able to manage trough Web-GUI, CLI and Telnet.	
40		Should support SNMP v1, v2c, v3 and SNMP Traps and Remote Monitoring (RMON).	
41		Should have dual Image support to reduce down time for the switches.	
42		Switch should support dynamic host configuration protocol (DHCP) auto configuration of multiple switches through a boot server eases switch deployment.	
43		Should have SNTP/NTP protocol for time synchronization.	



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S.No	Description	Minimum Specification	Compliance (Yes/No)
44		Switch should be IPv6 from day 1.	
45		Should support Link Layer Discovery Protocol (LLDP) and LLDP-MED.	
46	General	Switch should be supplied with the all necessary components like Power cord, Rack-mount bracket, Installation Guide, etc. and necessary software image file to fulfil all above mention feature set from day 1.	

14. Single Mode SFP Module

Make: D-Link, Aruba, Cisco, Juniper, Linksys
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S.No	Description	Minimum Specification	Compliance (Yes/No)
1	Module	IEEE802.3z 1000BASE-LX	
2	General	Hot Pluggable, MSA Compliant and RoHS Compliant	
3	Wavelength	1310 nm	
4	Distance	10km	
5	Certification	CE, FCC, UL	
6	General	All Switches and SFP Modules/Transceiver From same OEM	



Sign and Seal

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ANNEXURE – III

Manufacturer Authorization Form

(To be individually provided for Camera, Switch, Passive and Rack OEMs in its letter head)

To, The Director, NIEPMD,	
East coast Road, Muttukadu, Kovalam (post) Chennai-603 112	
Tender No: NIEPMD/PUR 4 (31)/2023-24	
Subject: Manufacturer Authorization Form for < Camera/Passive Components/Racks/S	Switches>
reputable manufacturer of < Camera/Passive Components/ Racks/ Switches> (stri	
applicable items) having its office at	do hereby
authorize M/s req, hereinafter, the "Bidder" to the quotation, negotiate and conclude the contract with you against the above tender.	offer their
We hereby extend our warranty as per the terms and conditions of our offer to Bidd Hardware/Software related supply, installation, commissioning, services and supportation above referred tender.	
We also undertake the below mentioned Toll-free number is available for NIEPMD to coget the required technical support.	ontact and
Toll-Free Number:	
Details of OEM representative providing the MAF:	
Name:	
Designation:	
Contact No.: Address:	
Thanking You,	
For <oem name="">,</oem>	