

Functional Requirements for Passive Components

Sl.No	Description	Remarks
1	Cat 6 Cable Preferably TE-AMP- Netconnect / Schneider-Actassi /Molex/equivalent	
2	Telephone Cable (20P and 50P) Preferably Outdoor Armored jelly filled underground cable Finolex or equivalent	
3	Telephone Cable (2P) Preferably cable Finolex or equivalent	
4	The OEM should have ISO certification for Design , development , Manufacturing of copper & fiber cables and accessories for networking , Need to attach the same along with tender document	
5	The OEM should have minimum 3 years presence in India and proof of Documents be attached	
6	UTP Cabling solution should be UL listing to confirm the safety norms as per UL Certification and ETL verification to confirm the performance of Channel. (UTP cables, Information outlet, patch cords and also need to attach the same along with tender document).Zero bit Error Performance Testing by ETL.	
7	All product should conform to RoHS compliance	
8	Second Brand or Class B product of any O.E.M should not be quoted	
9	End-to-End connectivity for UTP accessories (jack panel, Patch card, Information Outlet, etc..) must be from a single brand	
10	End – to – End connectivity for Fiber accessories (LIU, Pigtail connector, etc.) must be from a single brand	
11	RJ45 connector should be from AMP or Equivalent	
12	PVC Products should be from Modi's brand or Equivalent	
13	Rack should be from HCL/APW President/VALRACK or Equivalent	
14	Site certification to be done by OEM certified installer and certificate should submit along with the tender document.	
15	The vendor must furnished wiring diagram after completion of the work.	

Functional Requirements for Active Components (As per BoQ of Networking SI. No: 7, Supply and fixing of 24 Port Switches (Managed)-15 No's)

SI. No	Specification for Access Switch	Remarks
Make:	Model:	
1	The switch should support a minimum of 24 x 10/100/1000 Mbps RJ45 Ports and 4x1G SFP Ports	
2	The Switch should support Minimum Switching Capacity of 56 Gbps or more	
3	The Switch should support Minimum Packet Forwarding Performance of 41 Mpbs or more.	
4	The Switch should support 8000 MAC addresses and 4000 VLANs.	
5	The Switch should have minimum 256 MB RAM or More	
6	<p>Management Features:</p> <ul style="list-style-type: none"> - Supports DHCP Server - SNMP, HTTPS, SSH, SFTP - Auto configuration Backup and Bandwidth Scheduling - Auto disabling of port and log notification to identify the port - Traffic analysis and troubleshooting - AAA Support - Support Radius & TACACS+ - Ping & trace route - Support Industry Standard Command Line Interface (CLI) <p>Accessories: Shall be supplied with all software's and licenses.</p>	
7	QoS: Support for automatic Quality of Service for voice, video and data traffic conditions	
8	Switch should have Safety (UL), Class A Emissions (FCC) Certification and RoHS.	
9	The switch should have 3 year warranty from the manufacturer. Replacement should be Next Business Day from Direct OEM.	

Functional Requirements for Active Components(As per BoQ of Networking SI. No: 8, Supply and fixing of 24 Port Switches (Un-Managed)-35 No's),

Sl. No	Specification for Access Switch	Remarks
Make:	Model:	
1	The switch should support a minimum of 24 x 10/100/1000 Mbps RJ45 Ports and 2 combo ports	
2	The Switch should support Minimum Switching Capacity of 40 Gbps or above	
3	The Switch should have minimum Jumbo Frame 9K or more and Forwarding rate 29 Mpbs and above, MAC table Up to 16K (16384) MAC addresses	
4	Should support Layer3 features like IPv4 routing , Classless Inter-Domain Routing (CIDR) , Layer 3 Interface , DHCP relay at Layer 3 , User Datagram Protocol (UDP) relay , DHCP Server Shall have Security Features like Secure Shell (SSH) Protocol , Secure Sockets Layer (SSL) , IEEE 802.1X (Authenticator role) , Web Based Authentication , STP Bridge Protocol Data Unit (BPDU) Guard , STP Root Guard , IP Source Guard (IPSG) , Dynamic ARP Inspection (DAI) , IP/Mac/Port Binding (IPMB) , IP/Mac/Port Binding (IPMB) , Layer 2 isolation Private VLAN Edge (PVE) with community VLAN , Port security , DoS prevention , RADIUS/TACACS+	
5	Protocols: IEEE 802.3 10BASE-T Ethernet, IEEE 802.3u 100BASE-TX Fast Ethernet, IEEE 802.3ab 1000BASE-T Gigabit Ethernet, IEEE 802.3ad LACP, IEEE 802.3z Gigabit Ethernet, IEEE 802.3x Flow Control, IEEE 802.1D (STP, GARP, and GVRP), IEEE 802.1Q/p VLAN, IEEE 802.1w RSTP, IEEE 802.1s Multiple STP, IEEE 802.1X Port Access Authentication, IEEE 802.3af, IEEE 802.3at Accessories: Shall be supplied with all software's and licenses.	
6	QoS: Support for automatic Quality of Service for voice, video and data traffic conditions	
7	Switch should have Safety (UL), Class A Emissions (FCC) Certification and RoHS Compliance.	
8	Bonjour & Link Layer Discovery Protocol (LLDP) (802.1ab) with LLDP-MED extensions should be supported on the switch	
9	The switch should have 3 year warranty from the manufacturer. Replacement should be Next Business Day from Direct OEM	