

Amendment No. – I (Technical) dated 05/12/2022 to the Bidding Documents for Package- Establishment of WiFi-Facility at NIT Jamshedpur Campus

Sr No	Ref No.	Clause No	Clause Description	Amended Clauses
1	Vol II, Section 2 Technical Specification for Wi-Fi components 2.3. General Requirement for Active Components A-3 Managed L2-Switch-24 Port POE+ Layer 2 Switch: Edge Switch	A-3.1.10	All categories of Switches & Switch OS should be from same OEM. Transceivers maybe MSA compliant	Deleted
2	Vol II, Section 2 Technical Specification for Wi-Fi components 2.3. General Requirement for Active Components A-3 Managed L2-Switch-24 Port POE+ Layer 2 Switch: Edge Switch	A-3.1.7	The switch should have consistent 30 watt per port; PoE+ budget from Day one and Per Port 30 Watt should be available from single power supply.	Deleted
3	Vol II, Section 2 Technical Specification for Wi-Fi components 2.3. General Requirement for Active Components A-3 Managed L2-Switch-24 Port POE+ Layer 2 Switch: Edge Switch	A-3.3.3	Switch should support 128 or more STP Instances.	Switch should support 16 or more STP Instances.
4	Vol II, Section 2 Technical Specification for Wi-Fi components 2.3. General Requirement for Active Components A-4 Managed L2-Switch 8 Port POE+ Layer 2 Switch: Edge Switch	A-4.1.7	The switch should have consistent 30 watt per port; PoE+ budget from Day one and Per Port 30 Watt should be available from single power supply.	Deleted
5	Vol II, Section 2 Technical Specification for Wi-Fi components 2.3. General Requirement for Active Components A-4 Managed L2-Switch 8 Port POE+ Layer 2 Switch: Edge Switch	A-4.1.9	Should have AC power supply arrangement as given below in chassis without any external adaptors with redundant power supply: AC power supply 100 to 240V AC with 50 to 60 Hz. It should have fan too.	Should have Siingle AC power supply arrangement with AC power supply 100 to 240V AC with 50 to 60 Hz.
6	Vol II, Section 2 Technical Specification for Wi-Fi components 2.3. General Requirement for Active Components A-4 Managed L2-Switch 8 Port POE+ Layer 2 Switch: Edge Switch	A-4.1.10	All categories of Switches & Switch OS should be from same OEM. Transceivers,if not from same OEM, shall be MSA compliant.	Deleted
7	Vol II, Section 2 Technical Specification for Wi-Fi components 2.3. General Requirement for Active Components A-4 Managed L2-Switch 8 Port POE+ Layer 2 Switch: Edge Switch	A-4.3.3	Switch should support 128 or more STP Instances.	Switch should support 16 or more STP Instances.
8	Vol-II, Section 2, Technical Specifiction, A-5 POE+Centralized Monitoring and Management System including Wireless Controller, AP Management, AAA, Bandwidth management, NMS, Syslog and Storage with 2 Year	A-5.5.9	Shall support Access Control Lists based on IP address, protocol types and port filtering	Shall support Access Control Lists based on MAC based/ IP based

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9	Vol-II, Section 2, Technical Specification, A-5 POE+Centralized Monitoring and Management System including Wireless Controller, AP Management, AAA, Bandwidth management, NMS, Syslog and Storage with 2 Year	A-5.6.6	It shall monitor all network elements like wireless AP, PS terminations , IP cameras etc in the network	Deleted
10	Vol-II, Section 2, Technical Specification, A-5 POE+Centralized Monitoring and Management System including Wireless Controller, AP Management, AAA, Bandwidth management, NMS, Syslog and Storage with 2 Year	A-5.10.1	Switch should support management features like SSHv2, SNMPv2c, SNMPv3, NTP, RADIUS and TACACS+ or equivalent.	Wireless Controller should support management features like SSHv2, SNMPv2c, SNMPv3, NTP, RADIUS and TACACS+ or equivalent.
11	Vol-II, Section 2, Technical Specification, A-6 POE+ powered Outdoor wifi access points	A-6.43	AP should have support for GRE and VPN tunnels	AP should have support for GRE and /or VPN tunnels
12	Vol-II, Section 2, Technical Specification, A-7 POE+ powered Indoor wifi access points	A-7.12	Must have at least 5 dBi Antenna gain on each radio	Must have at least 4 dBi Antenna gain on each radio
13	Vol-II, Section 2, Technical Specification, A-7 POE+ powered Indoor wifi access points	A-7.23	Must be plenum-rated (UL2043)	Deleted
14	Vol-II, Section 2, Technical Specification, A-7 POE+ powered Indoor wifi access points	A-7.41	AP should have support for GRE and VPN tunnels	AP should have support for GRE and /or VPN tunnels
15	Vol-II, Section 2, Technical Specification, 96 Core Armored (12 Core x 8 Tube) Single Mode Fiber Optics Cable	B.1.7	Chromatic dispersion at 1288~1339nm≤3.5ps/(nm·km), 1550nm≤18 ps/(nm·km) and at 1625nm≤22 ps/(nm·km); Operating Temperature: -40 degree Celsius to +70 degree Celsius; RoHS Compliance.	Chromatic dispersion at 1288~1339nm≤3.5ps/(nm·km), 1550nm≤18 ps/(nm·km) and at 1625nm≤22 ps/(nm·km); Operating Temperature: -20 degree Celsius to +60 degree Celsius; RoHS Compliance

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16	Vol-II, Section 2, Technical Specification, 12/06 Core Armored (Uniloose Tube) Single Mode Fiber Optics Cable	B.2.7	Chromatic dispersion at 1285~1330nm≤3.5ps/(nm·km), 1550nm≤18 ps/(nm·km) and at 1625nm≤22 ps/(nm·km); Operating Temperature: -40 degree Celsius to +75 degree Celsius; RoHS Compliance.	Chromatic dispersion at 1285~1330nm≤3.5ps/(nm·km), 1550nm≤18 ps/(nm·km) and at 1625nm≤22 ps/(nm·km); Operating Temperature: -20 degree Celsius to +60 degree Celsius; RoHS Compliance
17	Vol-II, Section 2, Technical Specification, Fiber Optical 96 Port/ 48 Port/ 24 Port/ 12 Port LIU with SM pigtails, Splice Trays and Splice Protectors (Fully Loaded)	B.3.1	19" Rack Mount with min 96/48/24/12 nos. of OS2, 9/125µm, Low Smoke Zero Halogen (LSZH) sheath Pigtaills (1.5 metre min) depending upon BOQ . Pigtaills shall comply: ANSI/TIA-568.3-D, ITU-T G.657.A1 (Compatible with G.652.D), IEC 61300- 3-4, IEC 61300-3-6, IEC 60874-1, Telcordia GR-326 standards	19" Rack Mount with min 96/48/24/12 nos. of OS2, 9/125µm, Low Smoke Zero Halogen (LSZH) sheath Pigtaills (1 metre min) depending upon BOQ . Pigtaills shall comply: ANSI/TIA-568.3-D, ITU-T G.657.A1 (Compatible with G.652.D), IEC 61300- 3-4, IEC 61300-3-6, IEC 60874-1, Telcordia GR-326 standards
18	Vol-II, Section 2, Technical Specification, Fiber Optical 96 Port/ 48 Port/ 24 Port/ 12 Port LIU with SM pigtails, Splice Trays and Splice Protectors (Fully Loaded)	B.3.5	Each 1U LIU should be able to accommodate atleast 96 fibers in LC type connectors.	Each LIU should be able to accommodate atleast 96 fibers in LC type connectors.
19	Vol-II, Section 2, Technical Specification, Fiber Optical 96 Port/ 48 Port/ 24 Port/ 12 Port LIU with SM pigtails, Splice Trays and Splice Protectors (Fully Loaded)	B.3.16	Singlemode : Insertion Loss : ≤ 0.2 dB & Return Loss : ≥ 50.0 dB Multimode : Insertion Loss : ≤ 0.3 dB & Return Loss : ≥ 35.0 dB	Singlemode : Insertion Loss : ≤ 0.3 dB & Return Loss : ≥ 50.0 dB Multimode : Insertion Loss : ≤ 0.3 dB & Return Loss : ≥ 27.0 dB
20	Vol-II, Section 2, Technical Specification, CAT 6 UTP Cable Box Indoor and CAT 6 UTP Cable Box Outdoor	B-7.2.2	Both cables shall be confirming to ANSI-TIA 568.2-D for Category 6 & ISO/IEC 11801 for Class E, UL Listed and RoHS compliant	Both cables shall be confirming to ANSI-TIA 568.2-D for Category 6 & ISO/IEC 11801 for Class E/ UL Listed and RoHS compliant
21	Vol-II, Section 2, Technical Specification, Category 6 Angled Staggered Patch Panel, Unloaded -1U	B-8.1	24 Port 1U Unloaded ZigZag / Staggered Patch Panel to support IEEE 802.3an and ANSI/TIA 568.2-D.	24 Port 1U Unloaded Patch Panel
22	Vol-II, Section 2, Technical Specification, Category 6 Angled Staggered Patch Panel, Unloaded -1U	B-8.8	Compliant as per RoHS Directive and be tested to resistance to corrosion as per ASTM B117: 2019 (3rd Party Report to be submitted)	Compliant as per RoHS Directive

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23	Vol-II, Section 2, Technical Specifcation, 24U Rack	B-12.5	It should have minimum 5Nos two-line cable entry/exit provision at top and bottom with rubber protection	It should have minimum 4Nos of one line cable entry/exit provision at top and bottom with rubber protection.
24	Vol-II, Section 2, Technical Specifcation, 6U Rack	B-13.4	It should have minimum 2 Nos two-line cable entry/exit provision at top and bottom with rubber protection	It should have minimum 2 Nos of one-line cable entry/exit provision at top and bottom with rubber protection
25	Vol-II, Section 2, Technical Specifcation, Cat6 or above Field Mount Modular RJ45 Plug	B-11.5	Plug Insertion Life @ ≥ 750 Cycles and operating temperature between -40°C to $+70^{\circ}\text{C}$	Plug Insertion Life @ ≥ 750 Cycles and operating temperature between -10°C to $+60^{\circ}\text{C}$
26	Vol-II, Section 1, Table 1.1, Sr. No. 1	1.5.2	Completed Data Requirement Sheets (As per Appendix-E of Technical Specifications Volume II)	Point-wise compliance for each clause of Vol-II, Section-II including ammendments. (The contrcator shall be required to submit detailed Data Requirement sheet during post-award stage as per sample format attached at Appendix-E of Technical Specifications Volume II)
27	Vol-II, Section 2, Technical Specifcation, Core Switch ,Performance	A-1.2.2	Forwarding rates: The switch should have minimum 600Mpps forwarding rates	Forwarding rates: The switch should have minimum 300Mpps forwarding rates
28	Vol-II, Section 2, Technical Specifcation, Core Switch ,Layer 3 Features	A-1.4.2	IPv6 Routing entry support: 12 K or more	IPv6 Routing entry support: 10 K or more
29	Vol-II, Section 2, Technical Specifcation, Core Switch ,Layer 3 Features	A-1.4.6	Must support L2 and L3 MPLS VPNs, OSPF Routed Access, Policy-Based Routing (PBR), PIM SM and BGP, VRF	Must support OSPF, Policy-Based Routing (PBR), PIM SM and BGP, VRF-Lite

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30	Vol-II, Section 2, Technical Specification, Fiber Patch Cords, LC-LC Duplex, Singlemode and Multimode OS2 Rugged, 3MT	B-5.1	LC-LC Style Single mode and Multi-mode , LSZH Sheath as per flame test method IEC 60332-1, IEC 60754-1, IEC 61034-1/ UL 1666, Duplex Patch Cord, Bend Insensitive, Fiber Optic Patch Cable (LC-LC), 10/15 Feet. Long, ISO/IEC-11801-OS2 9µ Duplex with spiral steel belt to provide additional crush resistant and rodent attack prevention. And /Or patch chord should have teste certification as per TEC GR NO TEC/GR/TX/OFJ-01/05/NOV-09	LC-LC Style Single mode and Multi-mode , LSZH Sheath as per flame test method IEC 60332-1, IEC 60754-1, IEC 61034-1/ UL 1666, Duplex Patch Cord, Bend Insensitive, Fiber Optic Patch Cable (LC-LC), 10/15 Feet. Long, ISO/IEC-11801-OS2 9µ Duplex with spiral belt/ spiral flexible steel armour to provide additional crush resistant and rodent attack prevention. And /Or patch chord should have teste certification as per TEC GR NO TEC/GR/TX/OFJ-01/05/NOV-09
31	Vol-II, Section 2, Technical Specification, CAT 6 UTP Cable Box Indoor CAT 6 UTP Cable Box Outdoor	B-7.5.1	Cat 6 Indoor Cable shall support a minimum of 4 connector Channel verified with a MTPL connector and tested upto 600 Mhz and above the standard TIA 568.2-D. UL Listed and/or 3rd Party Intertek (ETL) reports for verification of performance be submitted along with the BID containing the same components which have been quoted.	Cat 6 Indoor Cable shall support a minimum of 3 connector Channel verified with a MTPL connector and tested upto 600 Mhz and above the standard TIA 568.2-D. UL Listed and/or 3rd Party Intertek (ETL) reports for verification of performance be submitted along with the BID containing the same components which have been quoted.
32	Vol-II, Section 2, Technical Specification, CAT 6 UTP Cable Box Indoor CAT 6 UTP Cable Box Outdoor	B-7.6.1	Cat6 Indoor cable Sheath should be LSZH as per flame rating standard IEC60332-3-1, IEC 60754 Operational Temp: -10° to 60° Celsius Cat6 Outdoor cable shall have PVC Inner Sheath, Electrolytic Chrome-coated Corrugated Steel Tape Armoring covered with PE Outer Sheath. Operational Temp: -20° to 70° Celsius	Cat6 Indoor cable Sheath should be LSZH as per flame rating standard IEC60332-1, IEC 60754 Operational Temp: -10° to 60° Celsius Cat6 Outdoor cable shall have PVC Inner Sheath, Electrolytic Chrome-coated Corrugated Steel Tape Armoring covered with PE Outer Sheath. Operational Temp: -20° to 70° Celsius
33	Vol-II, Section 2, Technical Specification CAT 6 Patch chord 1 m	B-10.1	Unshielded Twisted Pair, Category 6, TIA/EIA 568.2-D Category-6, UL-listed/IEC , ETL Channel test report as per ANSI/TIA 568.2-D, or RoHS Compliant	Unshielded Twisted Pair, Category 6, TIA/EIA 568.2-D Category-6, UL-listed/IEC , ETL/ 3rd Party Channel test report as per ANSI/TIA 568.2-D, or RoHS Compliant