

CORRIGENDUM

Consequent upon the Pre-Bid meeting held on 29.05.2019 in reference to Tender No. IIT(BHU)/IPCell/2019-20/Networking/149 dated 24.05.2019 for Supply, Installation, Integration and Commissioning of Extension of IIT (BHU) Local Area Network (Wired And Wi-Fi) in Additional Locations, the following amendments are incorporated in aforesaid Tender Document. The Referred content in Col. No. 2 and 3 may be read as appended in Col. No. 4:

Sl. No. (1)	Page no. (2)	Content mentioned in Tender document (3)	Referred content should be read as (4)
1	Page No. 48/ S.N. 8	The access point should support WPA2 , WPA 3 enterprise authentication and AES/CCMP encryption.	The access point should support WPA2 enterprise authentication and AES/CCMP encryption from day 1. Further, if required and asked for, the access point should be upgradable to support WPA3 enterprise authentication and AES/CCMP encryption, after software/ hardware upgrade, without any financial implication to the Institute.
2	Page No. 23/ Clause No. 1.21	The OEM of passive components should provide UL/ETL certification for the full copper channel link (UL/ETL 4 connector test report) with at least 5 dB NEXT headroom also the individual copper components and fiber cable should be UL/ETL listed.	The OEM of passive components should provide UL/ETL/3P certification for the full copper channel link (UL/ETL 4 connector test report, to be verified under UL/ETL/3P). Also the individual copper components and fiber cable should be UL/ETL listed.
3	Page No. 23/ Clause No. 1.22	OEM of passive components should support copper channel for 6 connections with minimum 3dB NEXT headroom (UL/ETL report need to be submitted).	Clause 1.22 has been omitted.
4	Page No. 23/ Clause No. 1.25	The Cat 6 Cable should be complied with IEC 60332-3-22 features for environment safety (UL/ETL/ABS report need to be submitted).	The Cat 6 Cable should be complied with IEC 60332-1-2 features for environment safety (UL/ETL/ABS/3P report need to be submitted).
5	Page No. 53/ S.N. 3	TIA / EIA 568-B.1, ETL Verified, UL Listed and UL channel verified- All three Certificates are mandatory	TIA / EIA 568-C.2, ETL/3P Verified, UL Listed and UL channel verified - All three Certificates are mandatory
6	Page No. 53/ S.N. 4	IEEE 802.3ab: Zero-bit Error, ETL verified	Omitted
7	Page No. 53/ S.N. 9	Insulation: Polyethylene	Insulation: Polyethylene and Jacket: LSZH
8	Page No. 53/ S.N.10	Approvals: UL Listed and UL Channel verified and ETL verified to TIA / EIA Cat 6	Approvals: UL Listed and UL/3P Channel verified and ETL/3P verified to TIA / EIA Cat 6
9	Page No. 53/ S.N.11	Frequency tested up to: 600 MHz minimum	Frequency tested up to: 450 MHz minimum
10	Page No. 53/ S.N.12	Packing: Box of 305 meters	Packing: Box of 305/ 500 meters

11	Page No. 54/ S.N.1	Features and Benefits: punch-down tools	Features and Benefits: punch-down tools or tools free [Rest of the items remain the same]
12	Page No. 55/ S.N.1	Features and Benefits: The stylish unloaded Synergy Wallplates were designed specifically to accept the UTP Connector Connector. The unloaded Synergy Wallplates are available in 1, 2 and 4 port variants, in five colours, to co-ordinate with any decor and any installation size.	Features and Benefits: The stylish unloaded Wallplates were designed specifically to accept the UTP Connector Connector. The unloaded Synergy Wallplates are available in 1, 2 and 4 port variants, in five colours, to co-ordinate with any decor and any installation size.
13	Page No. 55/ S.N.1	24 Port loaded Patch/ Jack Panel 1U Height: Features and benefits: Each port features the patented spring-loaded shutter	24 Port loaded Patch/ Jack Panel 1U Height: Features and benefits: Each port features the patented spring-loaded shutter/ Dust Cap
14	Page No. 55/ S.N.5	24 Port loaded Patch/ Jack Panel 1U Height: Mechanical Characteristics: Thickness: .060" (1.52mm)	24 Port loaded Patch/ Jack Panel 1U Height: Mechanical Characteristics: Thickness: .060" (1.50 mm) or more
15	Page No. 55/ S.N.3	Wall plates / Face Plates: Material: VE10 ABS	Wall plates / Face Plates: Material: ABS
16	Page No. 55/ S.N.2	Wall plates / Face Plates: Accommodates: Accommodates UTP, STP Connector jacks Accommodates single bezel Fibre modules Accommodates media configurable modules	Wall plates / Face Plates: Accommodates: Accommodates UTP, STP Connector jacks, media configurable modules
17	Page No. 56/ S.N.9	24 Port loaded Patch/ Jack Panel 1U Height: Standards: ETL Verified to ANSI/TIA-568-C.2, ISO/IEC 11801 Category 6	24 Port loaded Patch/ Jack Panel 1U Height: Standards: ETL/3P Verified to ANSI/TIA-568-C.2, ISO/IEC 11801 Category 6
18	Page No. 56/ S.N.2	Cat 6 Patch cord: Conductor size: 24 AWG stranded copper wire	Cat 6 Patch cord: Conductor size: 24-26 AWG stranded copper wire
19	Page No. 57/ S.N.16	Cat 6 Patch cord: ETL Verified	Cat 6 Patch cord: ETL/3P Verified
20	Page No. 57/ S.N.1	Optical Fiber Cable Armored Single-Mode OS2: Cable Type: optical fibres in water blocked loose tube, taped, corrugated steel tape armoured (STA) polyethylene (HDPE) outer sheathed embedded with two steel wires on the periphery . The cables are with UV Stabilized PE Jacket and protected from Rodent attacks. complying to ISO/IEC 11801, EN50173, ANSI/TIA 568-C.3, Telcordia GR-20; suitable for use in indoor / outdoor ducts, direct burial and backbone cabling	Optical Fiber Cable Armored Single-Mode OS2: Cable Type: optical fibres in water blocked loose tube, taped, corrugated steel tape armoured (STA) polyethylene (HDPE) outer sheathed. The cables are with UV Stabilized PE Jacket and protected from Rodent attacks. complying to ISO/IEC 11801, EN50173, ANSI/TIA 568-C.3, Telcordia GR-20; suitable for use in indoor / outdoor ducts, direct burial and backbone cabling
21	Page No. 58/ S.N.5	Optical Fiber Cable Armored Single-Mode OS2: Mechanical characteristics: Max. Tensile Strength-Short Term: 1500N	Optical Fiber Cable Armored Single-Mode OS2: Mechanical characteristics: Max. Tensile Strength-Short Term: 1500N±10%
22	Page No. 58/ S.N.5	Optical Fiber Cable Armored Single-Mode OS2: Mechanical characteristics: Max. Crush Resistance-Short Term: 2000N/10cm	Optical Fiber Cable Armored Single-Mode OS2: Mechanical characteristics: Max. Crush Resistance-Short Term: 2000N (±10%)/10cm

23	Page No. 59/ S.N.1	24 Port Rack Mount Fiber Panel: Rack Mount: Lockable 19" rack mounted with 1U height, Sliding Drawer Type with 4 Cable entry/exit points (covered with rubber grommets)	24 Port Rack Mount Fiber Panel: Rack Mount: 19" rack mounted with 1U height, Sliding Drawer Type with 4 Cable entry/exit points (covered with rubber grommets)
24	Page No. 60/ S.N.1	Optical Fibre Adapter Plates: Features and Benefits: Greater Asset Utilisation – Easily Expandible – allows multiple generational uses of the enclosure for the same rack area. Our blank plates and a small profile plate ensures you only pay for the adapters you need.	Optical Fibre Adapter Plates: Features and Benefits: Greater Asset Utilisation – Easily Expandible – allows multiple generational uses of the enclosure for the same rack area. [Rest of things remain same]
25	Page No. 46/ S.N.8	Switch should have IPv4 & IPv6 static routes , RIP, RIPng ,OSPF and OSPFv3 from day 1	Switch should have IPv4 & IPv6 static routes. Also, it should be upgradable, in future, to support RIP, RIPng ,OSPF and OSPFv3.
26	Page No. 46/ S.N.13	Switch should support port security, DHCP snooping, Dynamic ARP inspection, IP Source guard, BPDU Guard, Spanning tree root guard and IPv6 First Hop Security.	Switch should support port security, DHCP snooping, Dynamic ARP inspection, IP Source guard, BPDU Guard, Spanning tree root guard, IPv6 First Hop Security or similar.
27	Page No. 47/ S.N.6	Switch should have IPv4 & IPv6 static routes , RIP, RIPng ,OSPF and OSPFv3 from day 1.	Switch should have IPv4 & IPv6 static routes. Also, it should be upgradable, in future, to support RIP, RIPng ,OSPF and OSPFv3.
28	Page No. 46/ S.N.16		New item added at S.N. 16: The switch should have 1GB RAM and 1GB Internal Flash memory.
29	Page No.22/ Clause 1.9	The OEM for Active devices must be listed in Gartner Magic Quadrant / InfoTech Research / Forrester wave/ IDC Market Scape in respective latest reports. (Listing in any of the three is compulsory for being eligible)	The OEM for Active devices must be listed in Gartner Magic Quadrant / InfoTech Research / Forrester wave/ IDC Market Scape in respective latest reports. (Listing in any of the three is compulsory for being eligible). The OEM should also not have been blacklisted in any developed country.
30	Page No.48/ S.N.1	Wall/Ceiling mounted Wi-Fi access-point suitable for indoor use with at least 1 10/100/1000Mbps Ethernet ports with one port supporting standard 802.3af/at POE+.	Wall/Ceiling mounted Wi-Fi access-point suitable for indoor use with at least 2 10/100/1000Mbps Ethernet ports with one port supporting standard 802.3af/at POE+.
31	Page No.48/ S.N.2	802.11ac Wave 2 AP should operate in 2.4 GHz (300 Mbps or more) and 5 GHz simultaneously and capable of minimum 1 Gbps on 5 GHz for 802.11ac clients supporting minimum 4x4 MIMO with 4 spatial streams. It must support minimum 3 concurrent MU-MIMO users.	802.11ac Wave 2 AP should operate in 2.4 GHz (300 Mbps or more) and 5 GHz simultaneously and capable of minimum 1.7 Gbps on 5 GHz for 802.11ac clients supporting minimum 4x4 MIMO with 4 spatial streams. It must support minimum 3 concurrent MU-MIMO users.
32	Page No.48/ S.N.3	Should support minimum 16x BSSID per AP. Should have Operating Temperature of 0 – 40+ Deg Centigrade.	Should support minimum 16x BSSID per AP. Should have Operating Temperature of 0 – 50+ Deg Centigrade.
33	Page No.49/ S.N.1	Wall/Ceiling/Poll mounted Wi-fi access-point suitable for outdoor use with at least 1 10/100/1000Mbps Ethernet ports supporting standard 802.3af/at POE+.	Wall/Ceiling/Poll mounted Wi-fi access-point suitable for outdoor use with at least 1 10/100/1000Mbps Ethernet ports supporting standard 802.3af/at POE+.

		Should have additional SFP port for direct fiber termination if required.	
34	Page No.49/ S.N.2	802.11ac AP should operate in 2.4 GHz (300 Mbps or more) and 5 GHz simultaneously and capable of minimum 1Gbps on 5 Ghz for 802.11ac clients supporting minimum 4x4 MIMO with 4 spatial streams. It must support minimum 3 concurrent MU-MIMO users.	802.11ac AP should operate in 2.4 GHz (300 Mbps or more) and 5 GHz simultaneously and capable of minimum 1.7Gbps on 5 Ghz for 802.11ac clients supporting minimum 4x4 MIMO with 4 spatial streams. It must support minimum 3 concurrent MU-MIMO users.
35	Page No.49/ S.N.5	802.11ac AP should operate in 2.4 GHz (300 Mbps or more) and 5 GHz simultaneously and capable of minimum 1Gbps on 5 GHz for 802.11ac clients supporting minimum 4x4 MIMO with 4 spatial streams. It must support minimum 3 concurrent MU-MIMO users.	Must support minimum 24dBm of transmit power in 2.4GHz and 28dBm transmit power in 5GHz radios and minimum 4dB antenna gain. AP should support 20MHz, 40MHz and 80MHz channel size. EIRP should not be less than 32dBm.
36	Page No.49/ S.N.8	The access point should support WPA2, WPA 3 enterprise authentication and AES/CCMP encryption.	The access point should support WPA2 enterprise authentication and AES/CCMP encryption from day 1. Further, if required and asked for, the access point should be upgradable to support WPA3 enterprise authentication and AES/CCMP encryption, after software/ hardware upgrade, without any financial implication to the Institute.
37	Page No.49/ S.N.14	AP should support up to 100-mph sustained winds and up to 165-mph wind gusts.	AP should support up to 100-mph sustained winds and up to 135-mph wind gusts.
38	Page No.22/ Clause 1.2	The bidder should have minimum 5 years of experience for supply, installation, integration, commissioning and management of LAN Project in one of the IITs or equivalent educational institutions/ Universities/Govt. organization (Certified copies of Successful Work Completion Certificates on the letter head of concerned Institution clearly stating the nature of work to be submitted as proof.)	The bidder should have minimum 5 years of experience for supply, installation, integration, commissioning and management of LAN Project in one of the IITs or equivalent educational institutions/ Universities/Govt. organization (Certified copies of Successful Work Completion Certificates/ PO/Invoice Copies along with Payment receipts, on the letter head of concerned Institution clearly stating the nature of work to be submitted as proof. Full contact details of the concerned personnel be also provided.
39	Page No.22/ Clause 1.6	The bidder must have executed a single order of 1000 nodes or two orders of 500 nodes of the quoted Active (& Passive, as necessary) product of OEM, in last five years in one of the IITs or equivalent Educational Institution/University/Govt. Organization (Certified copies of successful work execution certificate clearly stating the no. of nodes in a single order to be submitted as proof).	The bidder must have executed a single order of 1000 nodes/ports or two orders of 500 nodes/ports of the quoted Active (& Passive, as necessary) product of OEM, in last five years in one of the IITs or equivalent Educational Institution/University/Govt. Organization (Certified copies of successful work execution certificate clearly stating the no. of nodes/ports in a single order to be submitted as proof).
40	Page No.43/	For Distribution to Access stacks, window cut OFC (with one tube, 06 core per access	For Distribution to Access stacks, window cut OFC (with one tube, 12 core per access switch), along

	S.N. 1	switch), along with 06 core unarmoured OFC up to the switch should to be used with industry grade joint enclosure.	with 12 core unarmoured OFC up to the switch should to be used with industry grade joint enclosure.
41	Page No.61 & 83: S.N. 1	Dimension: The maximum dimension of the rack should be 600W X 9U X 700 (mm)	Dimension: The maximum dimension of the rack should be 600W X 12U X 700 (mm)
42	Page No.61/83: S.N. 6	Approvals: The product should be approved by the following approved organizations: UL 2416, Underwriters Laboratories /USA ISO 9001, 14001 and 18001.	Approvals: The product should be approved by the following approved organizations: ISO 9001, 14001 and 18001.
43	Page No.45: S.N. 1	Should have minimum 24 x 1G SFP Ports with additional 4x10G SFP+ ports for dual uplink to Core in HA and Distribution Ring.	Should have minimum 24 x 1/10G SFP Ports with additional 4x10G SFP+ ports for dual uplink to Core in HA and Distribution Ring.
44	Page No.45: S.N. 2	Switch should have stacking with dedicated stacking ports and 40 Gbps of stacking bandwidth additional to above mentioned data and uplink ports from Day 1.	Switch should have stacking with dedicated stacking ports and 160 Gbps for 24x1G SFP Ports / 320 Gbps for 24x1/10G SFP Ports of stacking bandwidth additional to above mentioned data and uplink ports from Day 1.
45	Page No.45: S.N. 3	Switch should have Operating Temperature of 0-40 Degree Centigrade	Switch should have Operating Temperature of 0-45 Degree Centigrade
46	Page No.46: S.N. 1	Should have minimum 48x 10/100/1000 BaseT RJ45 Ports plus 4x 1G BaseX SFP Ports populated with 2x1G SFP. Switch would use 1G uplinks on day 1.	Should have minimum 48x 10/100/1000 BaseT RJ45 Ports plus 2x 1/10G BaseX SFP Ports populated with 2x1G SFP. Switch would use 1G uplinks on day 1 and be upgradable to 10G operations in future.
47	Page No.47: S.N. 1	Should have minimum 24 x 10/100/1000 BaseT PoE/PoE+ RJ45 Ports (minimum 370W) plus 4x 1G BaseX SFP+ Ports populated with 2x1G SFP. Switch would use 1G uplinks on day 1.	Should have minimum 24 x 10/100/1000 BaseT PoE/PoE+ RJ45 Ports (minimum 370W) plus 2x 1/10G BaseX SFP+ Ports populated with 2x1G SFP. Switch would use 1G uplinks on day 1 and be upgradable to 10G operations in future.
47	Page No.43: S.N.12		New Item Added: All the proposed active devices MUST be Enterprise Grade only.
48	Page No.43: S.N.13		New Item Added: As the acceptance criteria, the L1 Bidder shall validate that the deployment is as per the IIT(BHU) recommended architecture and complies for each equipment/item and Network as a whole. It should also validate the similarity compliance with the IITBHU Core Networking policies for Core switches, Policy manager, NMS, DNS ,DHCP, Syslog etc. to achieve uniform deployment of policies and performance for users in the newly extended LAN, falling under the scope of this tender. The L1 Bidder will also validate, test & demonstrate the 802.1x authentication of LAN Users as per IIT BHU security Policy compliance both for

			wired and wireless network segments including full signal coverage with minimum – 65 dBm RSSI value inside Hostel Rooms. Further, the Peak individual performance of the users with minimum 200 Mbps with 802.11ac Client per spatial Stream i.e. 1x1 : 1 MIMO through Wi-Fi Network within the New Girls Hostel should also be validated/ demonstrated. The sustained performance shall not be +/- 10% of Peak in single user Connectivity. Similarly, the Peak individual performance of the users for minimum 800 Mbps with Gigabit Port Client through Wired Network within the Hostel should also be validated/ demonstrated. The sustained performance shall not be +/- 10% of Peak when all the ports are connected and used.
49	Page No. 23/28- Clause No.1.19/ S.N.11	An undertaking from the OEM is required stating that they would facilitate the bidder on a regular basis with technology/product updates and extend all support for the warranty in confirmation with this bid for the quoted items. In case the OEM withdraw its authorization from bidder, the above service will be provide by the OEM.	An undertaking from the OEM is required stating that they would facilitate the bidder on a regular basis with technology/product updates and extend all support for the warranty in confirmation with this bid for the quoted items. In case the OEM withdraw its authorization from bidder, the above service will be provide by the OEM directly or through another service provider.
50	Page No. 88- Item No.5	Optional (It will not be considered for determining the L1 bidder.)	It is mandatory for all the participatory bidders to quote the rate for item no. 40.01 to 40.03. Further, the L1 bidder will be determined by including the quoted rate of WLC (if it is not already available) along with quoted rates for Item No. 1.01 to 39.01.
51	Page No. 86 – Heading of Column No. 7 of Price Bid	BASIC RATE In Figures To be entered by the Bidder in Rs. P	BASIC RATE In Figures To be entered by the Bidder, either in INR or USD.
52	Page No.16 – Clause 14.1	The Purchaser will release all due payments to the supplier as per the following terms: 1. a) 70% of Contract price including duties and taxes against actual/ complete supply of materials within 30 days from the date of receipt and satisfactory report of verification of the materials, so supplied, at the purchaser’s premise. Next 10% of contract price shall be released after satisfactory	The Purchaser will release all due payments to the supplier as per the following terms: 1. For Items supplied indigenously (Price to be quoted in INR) a) 70% of Contract price including duties and taxes against actual/ complete supply of materials within 30 days from the date of receipt and satisfactory report of verification of the materials, so supplied, at the purchaser’s premise. Next 10% of contract price shall be released after

		<p>installation.</p> <p>2. b) Final 20% of payment shall be released ONLY after Verification and Acceptance of the LAN implementation, as ordered) and submission of Performance Bank Guarantee (PBG) equivalent to 10% of contract price in the specified format.</p>	<p>satisfactory installation.</p> <p>b) Final 20% of payment shall be released ONLY after Verification and Acceptance of the LAN implementation, as ordered) and submission of Performance Bank Guarantee (PBG) equivalent to 10% of contract price in the specified format.</p> <p>2. For Imported Items (Price to be quoted in USD):</p> <p>For imported items, payment will be made through irrevocable Letter of Credit (LC). Letter of Credit (LC) will be established in favor of foreign Supplier after the submission of performance security. For Imports, LC will be opened for 100% value. 80% of the LC amount shall be released on presentation of complete and clear shipping documents and 20% of the LC amount shall be released after the installation and demonstration of the equipment at the IIT (BHU) site of installation in faultless working condition after a period of 60 days from the date of the satisfactory installation and subject to the production of unconditional performance bank guarantee as specified in terms and conditions of this tender.</p>
53	Price Bid		<p>Note: It has been observed that there is a formula error in the BoQ Excel Sheet. However, The Bidder is required to submit the price-bid, both in .pdf and in .xls format. And the correct .pdf version as submitted by the bidder will be considered as final for price comparison.</p>

The remaining content of the Tender will remain unchanged.

Date: 30.05.2019

**Sd/-
(CHAIRMAN)**

**INSTITUTE NETWORK INFRASTRUCTURE COMMITTEE (INIC)
IIT (BHU), VARANASI**