

INSTITUTE OF TECHNOLOGY, KORBA
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Installation and commissioning of Networking & Wi-Fi

Sl	Description	Qty
01	Providing LAN (Local Area Network) and WLAN (Wireless Local Area Network) connectivity including required hardware and software for network management at IT Korba Main Building, Main Building computer lab (07 nos.), and office/faculty cabins as per given campus/building layout.	01 Job.

Sl	Required Hardware (Make as mentioned in Table-2)	Approx. Qty
Scope of Supply (Technical specification as mentioned in Table -1)		
1	Wireless Access Point, Dual radio, 300Mbps per-radio (With safety box or secure mounting kit)	52 Nos.
2	Wireless PCI Card, 2.4GHz, 108 Mbps	300 Nos.
3	24 Port 100/1000 Mbps Managed Gigabit Ethernet Switch with 4 Fiber uplink ports	18 Nos.
4	Firewall with Routing facility (suitable for 10/20 Mbps Internet connection – VPNoBB connectivity)	1 nos.
5	FOC, 6 core, SMF	2500 mtrs
6	FO PP (LIU), 12 port, Rack mount	4 Nos.
7	SMF Pigtail with SC Connector, Simplex, 1mtr.	48 Nos.
8	SC-LC Patch Cord, Duplex, SMF, 1mtr	8 Nos.
9	Fiber Transceiver (SMF)	8 Nos.
10	SC Duplex Adaptors, SMF	24 Nos.
11	Gang box	300 Nos.
12	Ethernet Cable, CAT6, 305mtrs Box	18 Nos.
13	UTP Jack Panel, 24port, CAT6, Loaded	12 Nos.
14	UTP Jack (I/O insert), CAT6	300 Nos.
15	UTP Patch Cord, CAT6, 3mtrs	300 Nos.
16	Faceplate, Simplex	300 Nos.
17	42U floor standing rack	01 No.
18	9U wall mount rack	20 Nos.
19	1" HDPE Pipe	2500 mtrs.

20	1" Casing & Capping (7 feet)	1200 Nos.
21	600VA UPS	10 Nos.
22	2KVA UPS	2 Nos.
23	Network Monitoring Software for 80 nodes (Wired and Wireless including user tracking based on username, IP and MAC)	
24	Mail Server	
25	Creating/Designing of Internal Intranet webpage on Internal web server with FTP, Local Forum, Blog, Web Image gallery, circular/New bulletin Blog/Terminal CHAT (Voice/Video/File) facilities, streaming server (Audio/Video)	
26	AMC (After completion of guarantee/warranty period)- (Optional) which includes hardware, software, maintenance, and servicing for entire network and related system	For 3 years

Notes:

- a) Tenderer/Bidder has to quote the rates and installation, commissioning charges for each above items separately on per unit basis. However, work/purchase order will be given to lowest bidder by calculating total amount of hardware/software/work for given quantity in tender.
- b) If any item which has not been included in the above tender specification but compulsorily required for operation/running of network, then tenderer may quote those items on per unit rate basis in a separate sheet with heading "Extra Essential Accessories".

Table-1: TECHNICAL SPECIFICATIONS

Required Hardware	Specification
Wireless Access Point, Dual radio, 300Mbps per-radio (With safety box or secure mounting kit)	IEEE 802.11n, Dual radio (2.4GHz and 5GHz), Minimum 2x2 MIMO configuration with 2 spatial streams, Integrated/external MIMO Antenna, Minimum 1 x 10/100/1000 Mbps Ethernet port, Capability to operate as a WIPS sensor, Certification: UL2043, WPC (WPC certificate to be enclosed). AP must be supplied with secure mounting kit or safety box. Suitable Wireless Controller (Virtual/hardware with Firewalling and WIPS features) must be supplied along with the AP with capacity up to 100 access points. POE injectors must be supplied with the access points.
24 Port 100/1000 Mbps Managed Gigabit Ethernet Switch with 4 Fiber uplink ports	19" width rack mountable, 24 x 10/100/1000Base-T ports and additional 4 x 1G SFP ports, Virtual stacking/VSS/equivalent feature, non-blocking switching capacity of minimum 56Gbps or more, Forwarding throughput of minimum 41Mpps or more, minimum 128MB RAM and 32MB Flash, MSTP, eight queues per port, IGMP and MLD snooping, STP root Guard, STP BPDU Guard, SNMP, LLDP, RMON
Firewall with Routing facility (suitable for 10/20 Mbps Internet connection – VPN/BB connectivity)	ICSA certified firewall, Minimum 8 x 1GE interfaces, 8Gbps or higher TCP/UDP stateful firewall, IPS throughput of minimum 3Gbps, Minimum 3000K concurrent connections, Minimum 80K new connections/second, Reporting to include comprehensive UTM firewall functionalities including user level information, User based secure management including bandwidth quota and user level reporting of Internet activities, Required subscription to be included for 1 st year and

	offer to be given for renewal of the same thereafter up to additional 5 years of AMC duration.
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Table-2: Make

Required Hardware	Preferred Makes
Wireless Access Point	Cisco/D-Link/Netgear/HPE
Wireless PCI Card	D-Link/Netgear/Digisol/Tenda/iBall
Managed Ethernet Switch	Cisco/D-Link/Netgear/HPE
Firewall	Cisco/HPE/Sophos/Sonicwall/Fortinet
Passive items (Fiber and Copper)	AMP/D-Link/Molex
Racks	D-Link/NetRack/Valrack
Servers	IBM/DELL/HPE