

SUPPLY, INSTALLATION, COMMISSIONING AND MAINTENANCE OF LOCAL AREA NETWORK (LAN) SYSTEM, TELEPHONE CABLING SYSTEM, CCTV/IP SURVEILLANCE SYSTEM, PUBLIC ADDRESS (PA) SYSTEM AND AUDITORIUM SOUND SYSTEM FOR GENERAL SIR JOHN KOTELAWALA DEFENCE UNIVERSITY		
MAIN SUMMARY OF BILLS OF QUANTITITES		
Bill No.	Description	Amount LKR (Rs.Cts)
Bill no.01	Auditorium Sound System	
Bill no.02	Auditorium Closed Circuit Television (CCTV/IP) / IP Surveillance System	
Bill no.03	Local Area Network (LAN) and Telephone System and CCTV/IP Surveillance System	
Bill no.04	Public Address (PA) System	
Sub-total 1 (for all the Systems)		
Discount, if any (..... %)		
Sub-total 2 (Carried to Form of Bid)		
VAT (15 %)		
TOTAL INCLUDING VAT		
Tenderer's VAT registration no :		
Tender Amount (in words) Sri Lankan Rupees		
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.....		
VAT (8% of the Total Bid Sum) Sri Lankan Rupees		
.....		
.....		
Name of Bidder :		
.....		
Signature and Seal :		
Witnesses :		
1. Signature	2. Signature
.....	
Name	Name
.....	
NIC Number	NIC Number
.....	
Address	Address
.....	
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DESIGN, CONSULTANCY & SUPERVISION ON REMAINING CONSTRUCTION WORKS OF KDU

Auditorium Sound System

Item	Description	Qty	Unit	Rate (Rs.)	Amount (Rs.)
A	Auditorium Sound System				
A1	Supply, Installation and Configuration of Following System				
A1.1	Line Array system, Power Amplifiers, Speaker Cables and all other necessary accessories (Maximum program (continuous average) level in the listening areas 92dB ± 3dB SPL.).	1	Item		
A1.2	200W Active Stage Floor Monitors with all required accessories	8	nr		
A1.3	48 Channel Digital Mixer Unit with Microphone Preamps & with USB Interface	1	nr		
A1.4	16 channel DI Box	2	nr		
A1.5	24 channel snake Box with cabling	2	nr		
A1.6	18" Podium Mounting Gooseneck Microphone (2. Nos) with cables as required	1	nr		
A1.7	Wired condensor Microphone with 10m cable	2	nr		
A1.8	Wireless Handheld Dynamic Microphone System	2	nr		
A1.9	Wired Dynamic Microphone with 10m cable and boom stand (Height: 35" - 63")	4	nr		
A1.10	Headphone for Control Room	1	nr		
A1.11	8 channel audio distributor	1	nr		
A1.12	DVD Player with HDMI Interface	1	nr		
A1.13	Sound Processing System with necessary accessories	1	Item		
A1.14	Notation Pad stand adgestable type	8	nr		
A1.15	Musician chairs standard four legs	24	nr		
A2	Supply, Installation and Configuration of Following Projector System				
A2.1	Ceiling Mount Wi-Fi Multimedia Projector with Mounting Bracket	1	nr		
A2.2	300" Electric Projector Screen with Mounting Bracket (Appropriate size visible for last raw sitters)	1	nr		
A2.3	HDMI, VGA and 3.5 Audio Wall Plate	3	nr		
A2.4	HDMI male to male Patch Cords (2nos.5m, 1nos. 2m)	3	nr		
A2.5	VGA male to male Patch Cords (2nos.5m, 1nos. 2m)	3	nr		
A2.6	3.5mm AUX male to male Patch Cords (2nos.5m, 1nos. 2m)	3	nr		
A2.7	HDMI Switchers, Extenders with all other necessary accessories	1	Item		
A3	Supply and Installation of Following System Rack				
A3.1	19" Free Stand Appropriate Size Enclosure with all other necessary accessories.	1	nr		
A4	Supply and Installation of Following Snake Box and Snake Cable				
A4.1	2 Channel Snake Cables including Floor Mount 2 nos. Snake Boxes including XLR Connectors and Power sockets for Stage Floor Monitors	1	Item		
A4.2	XLR Connector (Male & Female)	1	Item		
A5	UPS for sound room equipments				
A5.1	Should be capable to cater minimum 15 mins. Back up time for sound room equipments	1	Item		
A6	Installation Charges, Testing and Required Cables				
A6.1	Installation Charges, Testing and required accessories(Including HDMI Cable,Video Cable,CAT 6 Cable,Audio Cable and XLR cables)	1	Item		
Total for Auditorium Sound System (Excluding taxes)					

DESIGN, CONSULTANCY & SUPERVISION ON REMAINING CONSTRUCTION WORKS OF KDU

Auditorium Closed Circuit Television (CCTV/IP) / IP Surveillance System

Item	Description	Qty	Unit	Rate (Rs.)	Amount (Rs.)
AC	Auditorium Closed Circuit Television (CCTV/IP) / IP Surveillance System				
AC1	Supply, Installation and Configuration of Following IP cameras				
AC1.1	Indoor FHD IP Camera	12	nr		
AC1.2	PTZ IP Camera (Day / Night / Indoor)	3	nr		
AC1.3	NVR Expandable for 16 cameras with Storage for all the FHD 30 days recording including RAID 5 and 25 fps, OS and Client Licenses and display.	1	nr		
AC2	Supply, Installation and Configuration of Following CCTV Workstation and video walls				
AC2.1	Operator workstation with Two 24" monitors, DVD- RW archival, Joystick and other necessary equipment	1	nr		
AC3	Supply and Installation of Outdoor Termination Box For Cameras including cables				
AC3.1	Water and Dust Proof Termination Box (Min. IP65) with cabling (Cat 6)	12	nr		
AC4	Supply, Installation and Configuration of Following Ethernet Switches				
AC4.1	24 x 10/100/1000 Mbps PoE, 2 x 10G SFP+ Uplinks Ports L2 Manageable Access Switch (Including 02 nos. of 10G MM fiber modules)	1	nr		
AC5	Supply, Installation and Configuration of Following UPS				
AC5.1	1kVA Line Interactive UPS with 10 Minutes(Minimum) Backup time	1	nr		
AC6	Supply and Installation of Following UTP Patch Panels & Fiber Patch Panels				
AC6.1	24 Port Patch Panel-CAT 6, Fully Loaded	1	nr		
AC7	Supply and Installation of Following UTP Patch Cords & Fiber Patch Cords				
AC7.1	CAT 6, Unshielded Patch Cords/ Patch Leads (1/2m,1m, 2m, 3m, and 5m as required)	14	nr		

AC8	Supply and Installation of Following 19" Cabinets with Lockable Glass Doors				
AC8.1	Free Stand Enclosure 22U 19"(600x1100x600mm)(W x H xD) with other necessary accessories.(1 x 4 Way Power Panel (with 13A sockets), 1 x Cable Entry Plates, 1 x Cable Ladder 2 x 230V AC Fan Plates with 3 fans in each plate, 2 x Louver Plate)	1	nr		
AC9	Supply and Installation of Cable Management Panels				
AC9.1	19" Rack Mountable, 1U Cable Management Panel	1	nr		
ALT 1	Testing and Commissioning				
ALT1.1	Copper testing and issuing a Test Report	15	nr		
Auditorium Closed Circuit Television (CCTV/IP) / IP Surveillance System					

DESIGN, CONSULTANCY & SUPERVISION ON REMAINING CONSTRUCTION WORKS OF KDU

Local Area Network (LAN) & Telephone System and CCTV/IP Surveillance System

Item	Description	Qty	Unit	Rate (Rs.)	Amount (Rs.)
L	Local Area Network (LAN)				
L1	Supply, Installation and Configuration of Following Ethernet Switches				
L1.1	48 x 10/100/1000 Mbps, 2 x 10G SFP+ Uplinks Ports L2 Manageable Access Switch (Including 02 nos. of 10G MM fiber modules)	1	nr		
L1.2	48 x 10/100/1000 Mbps PoE, 2 x 10G SFP+ Uplinks Ports L2 Manageable Access Switch (Including 02 nos. of 10G MM fiber modules)	2	nr		
L1.3	24 x 10/100/1000 Mbps, 2 x 10G SFP+ Uplinks Ports L2 Manageable Access Switch (Including 02 nos. of 10G MM fiber modules)	3	nr		
L1.4	24 x 10/100/1000 Mbps PoE, 2 x 10G SFP+ Uplinks Ports L2 Manageable Access Switch (Including 02 nos. of 10G MM fiber modules)	1	nr		
L1.5	12 SFP+ Ports layer 3 Core Switch including 07 nos. of MM Fiber Transceivers	1	nr		
L2	Supply, Installation and Configuration of Following UPS				
L2.1	2kVA Line Interactive UPS with 10 Minutes(Minimum) Backup time	3	nr		
L3	Supply and Installation of Following UTP Patch Panels & Fiber Patch Panels				
L3.1	24 Port Patch Panel-CAT 6, Fully Loaded	8	nr		
L3.2	24 Port Patch Panel-CAT 5e, Fully Loaded	3	nr		
L3.3	3 Duplex-Ports Fiber Patch Panel including OM3 LC fiber pigtails and Splicing	2	nr		
L3.4	6 Duplex-Ports Fiber Patch Panel including OM3 LC fiber pigtails and Splicing	1	nr		
L3.5	24 Port Patch Panel-CAT 6, Fully Loaded -CCTV	3	nr		
L4	Supply and Installation of Following UTP Patch Cords & Fiber Patch Cords				
L4.1	CAT 6, Unshielded Patch Cords/ Patch Leads (1/2m,1m, 2m, 3m, and 5m as required)	232	nr		
L4.2	CAT 5e, Unshielded Patch Cords (1/2m, 1m as required)	56	nr		
L4.3	OM3 LC to LC fiber patch Cords (1m)	12	nr		
L4.4	CAT 6, Unshielded Patch Cords/ Patch Leads (1/2m,1m, 2m, 3m, and 5m as required)-CCTV	46	nr		
L5	Supply and Installation of Following CAT 6 Outlets for Network and Telephone Points				
L5.1	Dual Faceplate with RJ45 Keystone Jacks, 4 pair UTP CAT6 Cables including PVC Conduiting	47	nr		
L5.2	Single Faceplate with RJ45 Keystone Jacks, 4 pair UTP CAT6 Cables including PVC Conduiting	49	nr		

L6	Supply and Installation of Following 19" Cabinets with Lockable Glass Doors			
L6.1		2	nr	
L6.2	Free Stand Enclosure 40U 19"(600x2000x600mm)(W x H xD) cabinet with other necessary accessories.(2 x 4 Way Power Panel (with 13A sockets), 1 x Cable Entry Plates, 1 x Cable Ladder 2 x 230V AC Fan Plates with 3 fans in each plate, 2 x Louver Plate)	1	nr	
L7	Supply and Installation of Cable Management Panels			
L7.1	19" Rack Mountable, 1U Cable Management Panel	17	nr	
L8	Supply and Installation of Following Wireless Access points and Controller			
L8.1	Wireless Access Points (with power injectors if required)	37	nr	
L8.2	Wireless Access Points Controller for 37 access points	1	nr	
L9	Supply and Installation of Following Fiber Cable for Uplink			
L9.1	6 core multimode (OM3) fiber cable (50/125 µm - Indoor - Tight Buffered) Including PVC Conduiting	500	m	
L10	Supply and Installation of Following Cables Ladders and Tray			
L10.1	300mm x 75mm (WxD) Cable Ladder with other necessary accessories	80	m	
L10.2	300mm x 75mm (WxD) Perforated Cable tray and Lid with other necessary accessories	950	m	
C	Closed Circuit Television (CCTV/IP) / IP Surveillance System			
C1	Supply, Installation and Configuration of Following IP cameras			
C1.1	Indoor FHD IP Camera	44	nr	
C1.2	outdoor FHD IP Camera	2	nr	
C1.4	NVR Expandable for 60 cameras with Storage for all FHD cameras 30 days recording including RAID 5 and 25 fps, OS and Client Licenses and display.	1	nr	
C1.5	Joystick	1	nr	
C2	Supply, Installation and Configuration of Following CCTV Workstation and video walls			
C2.1	Video wall to watch 46 cameras at one time. 3 Nos of 40" LED screens and other necessary equipment.	1	Item	
C2.2	Operator workstation with Two 24" monitors, DVD- RW archival and other necessary equipment	1	nr	
C2.3	Viewing Workstation with 32" LED Screen and other necessary equipment	1	nr	
C3	Supply and Installation of Outdoor Termination Box For Cameras including cables			
C3.1	Water and Dust Proof Termination Box (Min. IP65) with cabling (Cat6)	46	nr	
T	Telephone System			

T1	Supply and Installation of Following Telephone System				
T1.1	IP Hybrid PABX System	1	nr		
	Upgradeable up to 40 extensions SIP Connectivity, SIP call control, Name Dialing - All IP phones will have a directory service of 1,000 address. Built-in rectifier & power supply Automated Attendant with provision for Voice greetings and guidance Battery backup by maintenance free batteries (4 Hours) Other Special Features; Voice mail for all extensions, Voice recording on demand (for Digital phones), conferencing, Announcement Service, Boss - Secretary feature, Call Back/ Call back with existing network, Call Forwarding – Busy Line / Do not Answer/ All calls, Call Pickup, Call Waiting, Calling Number Display, Call Block, Call History, Hands-free Dialing/Monitoring, Last Number Called, Group Call (Multiple Conference), Phone Book, Speed Calling, SIP Terminal Authentication, Voice Call				
T2	Supply and Installation of IP Phones (Including Cat 5e cables)				
T2.1	Basic IP phones	27	nr		
T2.2	IP based operator attendant's console	1	nr		
LT 1	Testing and Commissioning				
LT1.1	Copper testing and issuing a Test Report	189	nr		
LT1.2	Fiber testing and issuing a Test Report	6	Links		
Total for Local Area Network (LAN), Telephone System and CCTV/IP Surveillance System (Excluding Taxes)					

DESIGN, CONSULTANCY & SUPERVISION ON REMAINING CONSTRUCTION WORKS OF KDU

Public Addressing (PA) system

Item	Description	Qty	Unit	Rate (Rs.)	Amount (Rs.)
P1	Supply and Installation of Following Equipment				
P1.1	System Pre-Amplifier	1	nr		
P1.2	Power Amplifier 500W, EVAC Compliant	1	nr		
P1.3	BGM Source (with DVD player, FM/AM Tuner)	1	nr		
P1.4	Message Manager	1	nr		
P1.5	Weekly Timer	1	nr		
P1.6	Microphones	3	nr		
P2	Supply and Installation of Following Rack Unit				
P2.1	Appropriate size Free Standing Enclosure 36U with Other necessary accessories	1	nr		
P3	Supply and Installation of Following Speakers and Volume Controllers				
P3.1	Supply and Installation of Ceiling Mounted Speakers of 6W (max).	30	nr		
P3.2	Supply and Installation of Wall Mounted Speakers of 6W (max).	31	nr		
P3.3	Volume Controller Fail Safe 6W	4	nr		
P3.4	Volume Controller Fail Safe 12W	3	nr		
P3.5	Volume Controller Fail Safe 24W	7	nr		
P3.6	Volume Controller Fail Safe 60W	3	nr		
P4	Supply and Installation of Following Speaker Wires (including PVC insulation)				
P4.1	Supply and Installation of 0.5 mm ² 2core cable	1830	m		
P4.2	Supply and Installation of 1.0 mm ² 3core cable	1105	m		
P5	Testing & Commissioning				
P5.1	Testing and Commissioning	Item	Sum		
	Total for PA System (Excluding taxes)				