

UNIVERSITY OF ENGINEERING & TECHNOLOGY, LAHORE



REQUEST FOR PROPOSALS

For

Desktop Computers, Lab Networking, GPU Cards Single Slot, WIFI Routers, UPS 3KVA, UPS Dry battery (12V 100amp), Scanner/Network Printers, Multimedia Projectors with Ceiling stand, Switches, Router/Firewall, Speaker System with MICs, Audio Conference Delegate System, Interactive Smart Touch White Board & ICT Miscellaneous Items Lot wise turnkey basis.

Last Date for Submission:

25 April 2022 at 10:00 AM

Bid Opening Date:

25 April 2022 at 10:30 AM

UNIVERSITY OF ENGINEERING & TECHNOLOGY, LAHORE

TENDER DOCUMENT

Desktop Computers, Lab Networking, GPU Cards Single Slot, WIFI Routers, UPS 3KVA, UPS Dry battery (12V 100amp), Scanner/Network Printers, Multimedia Projectors with Ceiling stand, Switches, Router/Firewall, Speaker System with MICs, Audio Conference Delegate System, Interactive Smart Touch White Board & ICT Miscellaneous Items Lot wise turnkey basis.

TERMS AND CONDITIONS

For Procurement of “Desktop Computers, Lab Networking, GPU Cards Single Slot, WIFI Routers, UPS 3KVA, UPS Dry battery (12V 100amp), Scanner/Network Printers, Multimedia Projectors with Ceiling stand, Switches, Router/Firewall, Speaker System with MICs, Audio Conference Delegate System, Interactive Smart Touch whiteBoard & ICT Miscellaneous Items” for University of Engineering & Technology Lahore.

COMPUTER CELL, RESEARCH CENTER
UNIVERSITY OF ENGINEERING AND TECHNOLOGY LAHORE.
PHONE: **(042) - 99029101**

REQUEST FOR PROPOSAL-2022

TENDER PRICE:

Rs. 2,000/-

Issue date:

06/ 04/ 2022

Last date of submission:

25 / 04 / 2022 till 10:00 AM

FOR OFFICE USE ONLY

<p>Serial No. _____</p> <p>Sold to: - M/S _____</p> <p>Date of Sale _____ Bank Challan No. _____ Date _____</p>
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COMPUTER CELL, RESEARCH CENTER
UNIVERSITY OF ENGINEERING AND TECHNOLOGY LAHORE.
PHONE: **(042) - 99029101**

OVERVIEW

University of Engineering and Technology (UET), Lahore intends to purchase the specified “Desktop Computers, Lab Networking, GPU Cards Single Slot, WIFI Routers, UPS 3KVA, UPS Dry battery (12V 100amp), Scanner/Network Printers, Multimedia Projectors with Ceiling stand, Switches, Router/Firewall, Speaker System with MICs, Audio Conference Delegate System, Interactive Smart Touch whiteboard & ICT Miscellaneous Items”. The **Firms/suppliers** will be responsible for delivery and installation of the equipment.

1. Proposal Instructions (for BOQs on FOR Basis)

- 1.1 Single stage/two envelope bidding procedure shall be applied in response to the RFP (Request for proposal). The envelopes shall be marked as “TECHNICAL PROPOSAL” and “FINANCIAL PROPSAL” separately plus “legible documents”. The financial proposal of bids found technically nonresponsive shall be returned unopened to the respective bidder. Technically responsive bidders shall be informed, and their financial bids shall be opened in the next Central Procurement Committee (CPC) meeting after informing the technically responsive bidders.
- 1.2 Responding organizations shall deliver sealed proposal of the “FINANCIAL & TECHNICAL PROPOSALS” before or on **April 25, 2022 at 10:00 AM**.
- 1.3 The Proposals will not be accepted after the due date & time, proposal shall be delivered at the address given below before time. The TECHNICAL PROPOSALS shall be opened on the same day **April 25, 2022 at 10:30 AM** in the presence of bidders or the representatives of the responding organizations.
- 1.4 Bidders are advised not to quote different options for each item (only one option is to be quoted).
- 1.5 Price should be mentioned on FOR basis and in Pak Rupee.
- 1.6 All BOQs submitted by the bidder must use the numbers and labels used in this Request for proposal.
- 1.7 The original Request for Proposal documents duly signed and officially sealed by the bidder must be submitted in whole with the proposals. Any conditional, ambiguous, incomplete, supplementary, or revised offer after the opening of tender shall not be entertained.
- 1.8 Any overwriting/crossing, etc. appearing in the offer may be properly signed by the person signing the tender. All pages of the tender must be properly signed & stamped. Offer with any overwriting/use of Blanco shall not be accepted in any circumstances.
- 1.9 Warranty for Desktop Computers, Lab Networking, GPU Cards Single Slot, WIFI Routers, UPS 3KVA, UPS Dry battery (12V 100amp), Scanner/Network Printers, Multimedia Projectors with Ceiling stand, Switches, Router/Firewall, Speaker System with MICs, Audio Conference Delegate System, Interactive Smart Touch whiteboard & ICT Miscellaneous Items as approved by the manufacturers/suppliers, but not less

than one-year replacement of Parts, Labor & Service on site must be covered for after sales and services (labor and parts) for a period of one year from the date of delivery.

- 1.10 A call at deposit equal to 2% (Rs. 0.881 M) of estimated cost of Lot: 01 (Rs. 44.05 M), A call at deposit equal to 2% (Rs. 0.106 M) of estimated cost of Lot: 02 (Rs. 5.30 M) and A call at deposit equal to 2% (Rs. 0.1034 M) of estimated cost of Lot: 03 (Rs. 5.17 M) should accompany the Tender as **Earnest Money** drawn in favor of **The Treasurer, UET, Lahore**. Tender shall not be considered without Earnest Money. Bank guarantee will not be accepted.
- 1.11 10% of the contract amount shall be deducted as security at the time of bill process. The deducted amount as security will be returned after successful completion of Defect Liability / Warranty Period, after repairing the defects in the equipment / replacement found during the warranty period.
- 1.12 The Successful Bidder will deposit blank stamp papers of value of 0.25% of the total offer / contract amount, purchased in the name of **Treasurer University of Engineering & Technology (UET), Lahore**.
- 1.13 The quantity of an order may vary depending on the quoted price and the allocated funds.
- 1.14 The decision of the committee will be a binding on all concerned and will in no case be challenged on any forum.
- 1.15 The **TECHNICAL COMMITTEE** reserves the rights to modify the conditions / specifications of the Tender Document with written intimation to all the participants those who have purchased the Tender Documents.
- 1.16 Delivery period for import items will be **4 – 6 weeks** from the date of issuance of purchase/supply order.
- 1.17 Delivery & Installation (wherever mentioned) be completed according to the agreed upon schedule of works and time.
- 1.18 In case the tenderer fails to execute the contract strictly in accordance with the terms and conditions laid down in the contract, the Security Deposit shall be forfeited.
- 1.19 The **TECHNICAL COMMITTEE** will get the equipments inspected at UET Lahore and will have the right to reject the equipment if not found according to the stated specifications.
- 1.20 UET Lahore reserves the right to claim compensation for the losses so caused by delay in the delivery of equipment by deducting 1% of the total amount payable to the supplier/contractor as penalty.
- 1.21 It is the sole responsibility of the vendor to comply with local, national, and international laws.
- 1.22 In case any supply / material is found not in conformity with the specifications provided in the tender, either on account of inferior quality, defective workmanship,

faulty design, faulty packing or is short supplied, or wrongly supplied, the supplier shall replace the same free of charges.

1.23 All the proposals submitted will become the property of the University.

2. Evaluation Criteria

All bids shall be evaluated on technical and financial merit as per **clause 1.1**.

Technical evaluation process may include, but not limited to the consideration of the following with respect to the functional requirements given ahead:

2.1 Technical specifications of proposed equipment's

2.2 The Company Should not be Blacklisted/ De Registered/in Litigation/debarred by any Government Department /Public Sector / Private Sector or any other Agency.

2.3 Company profile

- i. Age of the company
- ii. Financial strength of the vendor
- iii. Authorization Certificate document from the principal / manufacturer Authorization letter (For Desktop, Switches,).
- iv. HR strength/Manpower with the vendor
- v. Technical support/after sale service facilities
- vi. Vendor is not allowed to bid in partial
- vii. Vendor will be responsible to supply, install and commissioning on Turnkey Basis.
- viii. Backup support plan
- ix. Contact information of the firm.

2.4 Evaluation criteria for Lot: 2 are as follows

- I. Should include one year OEM warranty.
- II. Items being ordered should be brand new and according to the order specifications from the current production and covered under normal warranty/guarantee etc. as mentioned in the proposal. Brochures mentioned and product details must be attached.
- III. All active equipment including switches and Firewall should be from same brand to avoid interoperability issues.
- IV. Bidder & Principal should be operational in Pakistan from last 10 years.
- V. Bidder & Principal is a legally registered entity in Pakistan and must be registered with SECP. Bidder Principal are also registered with FBR for Income Tax and Sales Tax. Bidder & Principal must be Active Taxpayers and Listed.
- VI. Principal and Bidder should have to be registered from last 5 years.
- VII. Principal must have Post Sales Team in Pakistan
- VIII. Manufacturer Authorization Letter (MAL) from Principal is must.

- IX. Bidder must quote for complete LOT, partial quote will not be entertained, equipment must be Brand new obtained through proper channel.
- X. Firm should not have been blacklisted or involved in litigation in past on account of delivering tempered / low quality equipment or failure to deliver to any of its customer in public and private sector.
- XI. Principal should have warehouse in Lahore.

Financial Evaluation process may include, but not limited to the consideration of the following:

- i. Quoted price

3. Required Information

Bidders are required to include the following documents/information in their technical proposals:

- i. The Name and Address
- ii. Profile of company (Including Financial Profile)
- iii. List of Pervious/Current customer of related equipments, with contact person and telephone/fax#
- iv. Detailed product information/brochures
- v. Detailed product warranty/guarantee information
- vi. Attested copy of National Tax Registration Certificate
- vii. Attested copy of Sales Tax Registration Certificate
- viii. Copy of the valid professional tax certificate
- ix. Detailed backup support plan
- x. Bank letter of financial standing duly signed by the relevant officer of the bank clearly mentioning name and designation.
- xi. An Affidavit on Rs.100/- Stamp paper that currently they are not blacklisted or debarred by any Government/Semi Government department to participate in bidding and to supply equipment. Failure to submit such affidavit may lead to disqualification.
- xii. Any additional information the bidder may like to furnish e.g. repair/maintenance workshop owned by supplier and other concerned facility

In addition to the above, the proposal must include the following in the order given below:

- i. Detailed equipment specifications, proposed quantities duly filled on the BOQ attached with this document
- ii. Detailed information which includes the delivery of equipment mentioned in the RFP in accordance with the **clause 1.16** of the tender.

- iii. Terms and Conditions
- iv. Validity period of the quoted price, i.e. 60 days
- v. Educational discounts if available/applied to the quoted price

4. Terms and Conditions (FOR Basis)

- 4.1 All prices should be in PAK Rupees inclusive of all applied Govt. taxes.
- 4.2 All prices should be valid for at least 60 days. Withdrawal or any modification of the original offer within the validity period shall entitle the University to forfeit the earnest money in favour of the University and/or putting a ban/blacklisting on the future inquires or taking any other suitable action against the bidder.
- 4.3 Delivery of the items shall be free of charge at UET Main during the office hours with a copy of delivery challan.
- 4.4 Items being ordered should be brand new and according to the order specifications from the current production and covered under normal warranty/guarantee etc. as mentioned in the proposal. Brochures mentioned and product details must be attached.
- 4.5 All equipment should have lifetime license, UET will not pay any license fees after installation for all equipment, components, and software, where mentioned otherwise
- 4.6 The bidder is fully responsible for design, assembly, installation, networking and testing of the hardware
- 4.7 All switches should preferably be from same brand to avoid interoperability issues.

Any query regarding this proposal should be directed to the contact no's. Listed below.

**COMPUTER CELL, RESEARCH CENTER
UNIVERSITY OF ENGINEERING AND TECHNOLOGY LAHORE.**

- **042-99029101, 99250226**

SUPPLIERS DATA FORM

1. Name of company _____

Address (Local Office) _____

_____ Telephone _____

Head Office _____

2. Number of years in relevant business (in Pakistan) _____

3. Major clients: (May attach a separate sheet, if necessary) _____

4. Is repair facility available at local office, YES NO

If yes, please provide the level of repair, maintenance and back-up facilities available at local office:

(Attach separate sheet, if necessary)

5. Biodata of the technical staff available in the local office to provide after-sale service: (Attach details on separate sheet) if necessary

6. Contact person for after-sale and service.

Name: _____

Designation: _____

Phone No: _____ Mobile _____ Fax _____

Email _____

Bid Form

Date: _____

Tender Ref: _____

To: *[name and address of Purchaser]*

Gentlemen and/or Ladies:

Having examined the bidding documents including Addenda Nos. *[insert numbers]*, the receipt of which is hereby duly acknowledged, we, the undersigned, offer to supply and deliver *[description of goods and services]* in conformity with the said bidding documents for the sum of *[total bid amount in words and figures]* or such other sums as may be ascertained in accordance with the Schedule of Prices attached herewith and made part of this Bid.

We undertake, if our Bid is accepted, to deliver the goods in accordance with the delivery schedule specified in the Schedule of Requirements.

If our Bid is accepted, we hereby agree that our Bid Security as being provided herewith this "Bid Form" will remain with the Purchaser according to Clause 1.18 of Instructions to Bidders.

We also agree to abide by this Bid for a period of *[number]* days from the date fixed for Bid opening under Clause 4.2 of the Instructions to Bidders, and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

Until a formal Contract is prepared and executed, this Bid, together with your written acceptance thereof and your notification of award, shall constitute a binding Contract between us.

We understand that you are not bound to accept the lowest or any bid you may receive.

Dated this _____ day of _____ 20_____.

[Signature] [In the capacity of]

Duly authorized to sign Bid for and on behalf of

Contract Form

THIS AGREEMENT made the []th day of [] 2021 between **Computer Cell, Research Center UET Lahore Pakistan** (here in after called “the Purchaser”) of the one part and [] (hereinafter called “the Supplier”) of the other part:

WHEREAS the Purchaser invited bids for certain Goods viz., Desktop Computers, Lab Networking, GPU Cards Single Slot, WIFI Routers, UPS 3KVA, UPS Dry battery (12V 100amp), Scanner/Network Printers, Multimedia Projectors with Ceiling stand, Switches, Router/Firewall, Speaker System with MICs, Audio Conference Delegate System, Interactive Smart Touch WhiteBoard & ICT Miscellaneous Items. has accepted a bid by the Supplier for the supply of those Goods and services in the sum of **Rupees []** (hereinafter called “the Contract Price”).

NOW THIS AGREEMENT WITNESSES AS FOLLOWS:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement, viz.:
 - (a) The Bid Form and the Price Schedule submitted by the Bidder;
 - (b) The Schedule of Requirements;
 - (c) The Technical Specification with Drawings (if any);
 - (d) The General Conditions of Contract;
 - (e) The Special Conditions of Contract;
 - (f) The Purchaser’s Notification of Award; and
 - (g) Bid Security (provided with the Bid Form)
3. In consideration of the payments to be made by the Purchaser to the Supplier as here in after mentioned, the Supplier hereby covenants with the Purchaser to provide the Goods and services and to remedy defects therein in conformity in all respects with the provisions of the Contract.
4. The Purchaser hereby covenants to pay the Supplier in consideration of the provision of the goods and services and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the contract at the times and in the manner prescribed by the Contract.

IN WITNESS: whereof the parties hereto have caused this Agreement to be executed in accordance with their respective laws the day and year first above written.

Signed, sealed, to whom delivered the (for the Purchaser)

Signed, sealed, delivered by the (for the Supplier)

Technical Specifications (Supply, Installation, Integration and Commissioning Lot wise turnkey basis.

The minimum requirements of **Desktop Computers, Lab Networking, GPU Cards Single Slot, WIFI Routers, UPS 3KVA, UPS Dry battery (12V 100amp), Scanner/Network Printers, Multimedia Projectors with Ceiling stand, Switches, Router/Firewall, Speaker System with MICs, Audio Conference Delegate System, Interactive Smart Touch WhiteBoard & ICT Miscellaneous Items** are given below. The quoted systems and all other specifications should be equal or higher.

LOT # 1: Desktop Computers: (Bidders are required to quote for complete LOT, partial bid not allowed) The quoted specifications should be equal or higher.

S. No.	Specifications	Qty.	
1	Desktop Computers:	256	
	Processor Type		Processor type Core i7 9th generation (3.0 G.Hz or above), No. of cores 6 or above.
	RAM size		16GB DDR4
	Hard drive size		1TB HDD SATA / 512GB SSD
	Network		Gigabit Ethernet controller 10/100/1000 Mb/s Ethernet (RJ-45), Wi-Fi card as per manufacturer default
	Operating System		OS suitability 64 bit, Operating system DOS/Open source supportive
	Graphics		Integrated Intel® HD Graphics
	Keyboard + Mouse		USB optical keyboard & Mouse
	Display		LED 19.5" Display
	Warranty		1 Year Local/Channel Warranty
	Chipset		Intel® Chipset.
	Ports & Connector		Ports and connectors as per manufacturer default. HDMI/DP/VGA, RJ45, USB (Two USB 3.1 Gen 1 port and Four USB 2.0 Ports)
	Optical Drive		DVD/RW SATA
Casing	Tower Chassis with Standard Power Supply		
2	GPU Card:	15	
	CUDA Cores		384
	Base Clock (MHz)		902
	Standard Memory Config		4GB DDR3
	Width		1-Slot
	Warranty:		1 Year Local/Channel Warranty

LOT # 2: Network Equipment (Active and Passive work): (Bidders are required to quote for complete LOT, partial bid not allowed) The quoted specifications should be equal or higher.

1	Networking:	07	
	Switches:		
	Layer 2 Switch:		
	Ports		24*10/100/1000Base-T Ports and 4 x 1G SFP Ports
	Switching Capacity		55Gbps or above
	Packet forwarding Rate		40Mpps or above
	Stacking		Yes

	CPU	2 Cores	
	Link aggregation	1G/10GE port aggregation, Static aggregation, Dynamic/ Multi chassis aggregation.	
	Jumbo frame	Supported	
	Layer 2 ring Network protocol	STP/RSTP/MSTP	
	QoS/ACL	Must support Quality of service, Standard and extended ACLs.	
	Security	Hierarchical user management and password protection, MAC-based authentication, 802.1X, SSH2.0, HTTPs	
	OEM	Brand should be minimum in Visionaries position in Wired and Wireless LAN Infrastructure at least once in last 3 years in Gartner report	
	Warranty	1-year Local Channel Warranty	
	Cabinet:		
	9U Cabinet	9U Double Section for Switches with Lockable tempered glass door, 2 Fans, 16-18SWG with 8 Ports PDU and required complete installation.	01
	6U Cabinet	6U Double Section for Switches with Lockable tempered glass door, 2 Fans, 16-18SWG with 8 Ports PDU and required complete installation.	04
	Face Plates, RJ 45 I/O Module, Back Box	Single shutter face plate, CAT 6 tool-less (I/O), Back Box for Data Termination with complete installation.	120
	Ducting and CAT6 UTP Wire	CAT 6 UTP Cable with installation and Ducting will be as per requirements (for 120 Nodes)	1 Job
	RJ-45 Connectors	RJ 45 Connectors for the CAT6 UTP.	200 PC
2	Router / Firewall:		
	Ports	6 x1GE RJ45 Ports, 2 x1GE RJ45/SFP Ports, 1 x Console Port	02
	Firewall Throughput	3 Gbps	
	NGFW Throughput	1 Gbps	
	NGFW+IPS	1 Gbps	
	NGFW+IPS+AV	1 Gbps	
	IPSEC Throughput	2 Gbps	
	Concurrent Sessions	0.5 M	
	New Connections per second	30 K	
	USB Port	Yes	
	Storage	64 GB SD Card / HDD	
	AAA	Must support AAA	
	Firewall	Must support following features. Virtual firewall technology, which supports full virtualization of hardware resources, Protection against malicious attacks, Basic and advanced ACLs, Time-based ACL, User-based and application-based access control, Blacklist function, MAC-IP binding, MAC-based ACL, VLANs, Bandwidth control, SNMP, SSH, Telnet. HTTPS.	
	VPN	Must support IPsec, GRE, SSL, L2TP VPNs.	
	Routing	Static Routing, OSPF, RIP, BGP.	
	Antivirus	Yes	
	IPS	Yes	
	URL Filtering	Yes	

	Application Control	Yes	
	Licensing	One year of Licensing which includes Anti-Virus, IPS, URL Filtering, Application Control, Deep packet inspection.	
	OEM	Brand should be minimum in Visionaries position in Wired and Wireless LAN Infrastructure at least once in last 3 years in Gartner report	
	Warranty	1-year Local Channel Warranty	
3	Switches:		
	Layer 3 Switch:		04
	Ports	24 x 10/100/1000Base T, 4 x 1G SFP Ports	
	Switching Capacity	128Gbps or above	
	Packet forwarding Rate	90Mpps or above	
	Stacking	Yes	
	CPU	2 Cores	
	MAC Address Table	16 K MAC Entries	
	VLAN	UP to 4094 VLANs	
	Layer 2 ring Network protocol	STP/RSTP/MSTP /PVST	
	QoS/ACL	Must support Quality of service, Standard and extended ACLs.	
	Multicast	Yes	
	Security	Hierarchical user management and password protection, MAC-based authentication, SNMP, Telnet, SSH, Port security, Dynamic ARP detection	
	Warranty	1-year Local Channel Warranty	
	Layer 2 Switch:		04
	Ports	24*10/100/1000Base-T Ports and 4 x 1G SFP Ports	
	Switching Capacity	55Gbps	
	Packet forwarding Rate	40Mpps	
	Stacking	Yes	
	CPU	2 Cores	
	Link aggregation	1G/10GE port aggregation, Static aggregation, Dynamic/ Multi chassis aggregation.	
	Jumbo frame	Supported	
	Layer 2 ring Network protocol	STP/RSTP/MSTP	
	QoS/ACL	Must support Quality of service, Standard and extended ACLs.	
	Security	Hierarchical user management and password protection, MAC-based authentication, 802.1X, SSH2.0, HTTPs	
	OEM	Brand should be minimum in Visionaries position in Wired and Wireless LAN Infrastructure at least once in last 3 years in Gartner report	
	Warranty	1-year Local Channel Warranty	
4	Wi-Fi Router:		
	Device Interfaces	<ul style="list-style-type: none"> • 1x 10/100/1000 WAN Ethernet • 4x 10/100/1000 LAN Ethernet • 1x USB 2.0 Support Wireless protected setup.	11
	LEDs	Power, Internet, 4 LAN LEDs, USB	
	Antenna	2x 5dBi 2.4GHz External Antennas, 2x 5dBi 5GHz External Antennas	
	Standards	IEEE 802.11 a/b/g/n/ac	

	Frequency	2.4GHz, 5GHz .	
	Transfer rate	2.4GHz: up to 300Mbps 5GHz: up to 867Mbps	
	Warranty	1 Year Local Channel Warranty	
	Installation	CAT 6 UTP Cable with installation and Ducting will be as per requirements	

LOT # 3: IT and UPS related Items: Bidders are required to quote for complete LOT, partial bid not allowed. The quoted specifications should be equal or higher.

1	Scanner/Network Printer:		04
	Print Speed	Up to 30 ppm	
	Printer Type	LaserJet	
	Functions	Print, copy, scan, fax	
	Print Resolution	Up to 1200 x 1200 dpi	
	Scan technology	Type: ADF, Flatbed; Technology: CIS	
	Connectivity	1 Hi-Speed USB 2.0; 1 Hi-Speed USB 2.0 (host); 1 Ethernet 10/100Base-TX, Wireless.	
	Display	Touch Screen display 2.7 inch, LCD (Color graphics)	
	Memory	256 MB	
	Processor speed	800 MHz	
Duty cycle (monthly)	Up to 30,000 pages		
Warranty	1 Year Local/Channel Warranty		
2	UPS:		03
	Capacity	3000VA	
	Input voltage	220/230/240 VAC, 48VDC	
	Input voltage range	145 - 275 V	
	Form Factor	Tower / Rackmount	
	Form voltage	pure sine wave	
	Current frequency	50/60 Hz \pm 1%	
	Switching time	10 ms (Max)	
	Power factor correction	0.8	
	Warranty	1 Year Local/Channel Warranty	
3	Dry Battery:		12
	Voltage	12V	
	Capacity	100Ah	
	Temperature range for Storage	-100 C - 400C	
	Nominal Operating Temperature range	25 \pm 3° C(77 \pm 5°F)	
	Maximum Charging Current Limit	30 A	
4	Speaker System with mic:		07
	Battery Timing	5 -6 hours or Higher	
	Bluetooth Range	10 Meters or Higher	
	Charging Time	2 – 4 Hours or Higher	
	Drive Unit	12 Inches	
	Mic Technology	Collar Mic or equivalent	
	Micro SD Card Supported	Yes	
	Standing	Wall Mounted as per requirements	
Warranty	1 Year Standard Warranty		
5	Audio Conference Delegate System:		01
	Central Control Unit	Central Control Unit with Connection wire	

	Chairman Unit	15 Inch Chairman Unit with built-in Speaker	01
	Delegate Unit	15 Inch Delegate Unit with built-in Speaker	20
	Amplifier	Amplifier with 3 microphone Inputs	01
	speaker	Ceiling speaker	04
	Rack	Double Section Rack with Exhaust	01
	cable	2 Core 1.00 mm PA speaker Noise cancellation cable and length will be as per requirements	01
	Installation & Commissioning	Installation & Commissioning Wiring of Speakers Supply of Equipment as per requirements	1 Job
6	Interactive Smart Touch White Board		1 System
	White Board:		
	Size	82 inch Diagonal	
	Active Screen size	78.8 inch (4:3 Aspect ratio)	
	Multi-Touch	10 points touch	
	Hot keys	2 sides	
	Frame Type	Allow frame	
	Input	Finger and Pen	
	Pen Tray	Simple Pen holder	
	Scan Rate	125 dot/second	
	Accuracy	1 mm	
	Interface	USB Type A & Type B	
	Projector:		
	Projection System	3LCD	
	Resolution	1024 × 768 pixels (XGA)	
	Lamp Life	8000 hrs on Eco	
	Lumens	3000 lumens	
	Contrast Ratio	6000:1	
	Projection Distance	0.1 – 0.51 meters	
	Keystone correction	+/- 10° manual horizontal / +/- 10° manual vertical	
	Lens	F= 1.8, f= 4.78 mm	
	Image Size (Diagonal)	61.5–116.6 inches/(4:3)	
	Inputs	2 x HDMI, 1 × VGA, 1 x RCA, 1 x RCA Audio & 1 × Stereo Mini Audio,	
	Outputs	1 × VGA	
	Wired LAN Port	1 × RJ-45	
	Wireless LAN Port	Yes	
	USB Port	1 × Type A & 1 x Type B	
MIC Input	1 × Monaural Mini Audio		
Built-in Speaker	16 W		
7	Multimedia Projector:		13
	Projection Technology	3LCD	
	Native Resolution	1024 x 768 (XGA)	
	Aspect Ratio	4:03:00 am	
	Brightness	3400 Lumens	
	Lamp Life ECO mode	15,000 Hr	
	Normal	10,000 Hr	
	Stand	Standard Ceiling stand as per requirements	
	Input	1xVGA, 1xHDMI, Composite Video,	
	Contrast Ratio:	16000:1	
	Multi-Screen Projection	Yes	